FINTECH AS A BUILDING BLOCK OF THE FINANCIAL ECOSYSTEM IN INDIA

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Dedication

This research is dedicated to my esteemed mentor, whose unwavering support and guidance were pivotal at every stage of this journey. Despite numerous challenges, he remained a constant source of inspiration and motivation, always available to provide invaluable advice and insight. His tireless dedication and responsiveness were crucial in bringing this research to fruition.

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ABSTRACT

FINTECH AS A BUILDING BLOCK OF THE FINANCIAL ECOSYSTEM IN INDIA

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The financial technology (fintech) revolution in India has become a driving force in the country's economic landscape. This research looks into the evolving fintech scene in India, exploring its use, obstacles, limits, influence on financial literacy, and customer trust.

Purpose: The primary aim of this research is to provide a comprehensive understanding of fintech's role in India's financial ecosystem, with a specific focus on identifying regulatory hurdles, infrastructure deficiencies, and their impact on fintech adoption. Additionally, the study examines the relationship between financial literacy and fintech usage while delving into factors influencing consumer trust in fintech services.

Methods: This research used a quantitative approach and surveys people who have used fintech in India. Three hundred people were surveyed with a questionnaire. Ordinal regression and correlation analysis, among other statistical methods, are used to examine the data and develop conclusions.

Results: Several major takeaways may be drawn from the study's results. Complex compliance processes and strong know-your-customer standards are cited as major barriers to adoption of fintech. The smooth implementation of fintech services is hampered by

insufficient infrastructure, especially poor internet access, in rural regions. The necessity of financial education programmes is emphasised by the study's positive finding that participants' levels of financial literacy were associated with greater use of fintech. In addition, the findings reveal a considerable correlation between consumer trust concerns and the use of fintech, underscoring the importance of strong cybersecurity measures and open data handling policies.

Conclusions: In conclusion, this research highlights the importance of fintech in transforming India's financial industry and expanding access to financial services for the country's underserved population. In order to encourage innovation while protecting consumers, regulatory agencies should work actively with fintech players. To close the digital divide between cities and the countryside, investments in digital infrastructure are crucial. For fintech to be widely adopted, financial literacy must be improved, and fintech platforms must prioritise trust-building methods to win over and keep customers. The research contributes to the development of a robust and inclusive fintech ecosystem in India by offering practical recommendations for policymakers, financial institutions, fintech firms, and consumers.

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Abbreviations	**Full form**
UPI	Unified Payment Interface
RBI	Reserve Bank of India
VPA	Virtual Payment Address
QR Code	Quick Response code
CAGR	compound annual growth rate
GFC	Great Financial Crisis
ML	machine learning
AI	Artificial intelligence
DDoS	Distributed Denial of Service
2FA	Two-factor authentication
MFA	multi-factor authentication
GDPR	General Data Protection Regulation
AML	Anti-Money Laundering
KYC	Know Your Customer
NBFCs	Non-Banking Financial Companies
SEBI	Securities and Exchange Board of India
IRDAI	Insurance Regulatory and Development Authority

CHAPTER I:

INTRODUCTION

This chapter includes the introduction of this research study. In this manner, the chapter discuss the Research Problem, Purpose of Research, Significance of the Study, and Research Purpose and Questions.

1.1 Introduction

Financial technology is referred to as fintech. Financial technology, sometimes denoted as fintech, aims to rival traditional financial processes by leveraging innovation and technology to deliver a wide range of financial services. The utilisation of technology to augment financial activities is an emerging domain within the economy. One example of a technology aimed at increasing financial service accessibility for the general population is the usage of smartphones for mobile banking, investing, borrowing services, and cryptocurrency (Demir *et al.*, 2022).

"National Payment Corporation of India" developed “Unified Payment Interface” (UPI) to facilitate immediate, real-time financial transactions between consumers and businesses in India. The “Reserve Bank of India” (RBI) is in charge of the interface, which allows for instantaneous mobile money transfers between bank accounts.

As of April 2023, there are 414 banks available on UPI’s. They have a monthly volume of 8.9 billion transactions and a value of US$ 1.7 trillion recorded in the month of April 2023. UPI makes and accepts payments with the help of phones and the Internet. There are two important ways of instantly transferring funds between two bank accounts under the UPI system, Firstly, a unique ID is known as a “Virtual Payment Address” (VPA) and the last one is through a “Quick Response code” (QR Code). It is a practical method of sending and receiving money without disclosing bank account information.

UPI is an efficient, reliable, and secure method for beginning digital transactions. UPI has gained significant popularity as a widely utilised method for facilitating the transfer of funds between two bank accounts, enabling instantaneous transactions. Although UPI payments have been in existence for a considerable period, they have recently experienced a significant increase in popularity and use.

The financial technology sector is now worth billions of dollars, and its rapid expansion in India over the past five years bodes well for future expansion. Digital transactions are at all-time high, and FinTech companies are at the forefront of this trend. According to the "National Investment Promotion and Facilitation Agency," the present valuation of the Indian FinTech sector is at $31 billion, with a projected growth to $84 billion by the year 2025. This growth is anticipated to occur at a "compound annual growth rate" (CAGR) of 22 percent. India's FinTech landscape is where it is today because of the country's distinctive combination of technological enablers, government involvement, and economic prospects, among other factors. Sixty-seven percent of India's more than two thousand financial technology companies are startups. India signed 33 new FT investment transactions totaling US$647.5 million in the quarter ending in June 2020, while China closed 13 new deals totaling US$284.9million. Current value of India's FinTech industry is estimated at US$31 billion, with a rise to US$84 billion by 2025. From $66 billion in 2019, the value of FT transactions is projected to rise to $138 billion by 2023 (Tripathi and Tabassum, 2022).

1.2 Definition of Finance

The strategic management of assets, cash and commodities is included in the wide topic of finance. It makes it possible to optimally deploy resources in order to optimise value creation while also preserving a healthy balance between risk and return on investment. The study of finance incorporates essential ideas such as the time value of

money, the monitoring of market trends and balancing of potential rewards against dangers connected to those earnings. This enables individuals, organisations and governments to make informed financial decisions. Hu and Zheng (2016) Financial markets act as dynamic trading platforms, connecting investors with businesses that are in need of capital. Investment portfolios are constructed using diversification strategies to reduce risk and increase earnings. Corporate finance applies the same concepts to the management of a company's finances, from budgeting to the decisions it makes about its capital structure, with the goal of ensuring that those resources are employed in a way that is both productive and efficient in order to foster long-term growth. The same may be said about what personal finance does for an individual's financial situation. The practise of public finance involves analysing the monetary decisions made by governments in an effort to find a middle ground between provision of necessary public services & excessive expenditure. Globalisation & advancement of technology are the driving forces behind international trade and commerce, as well as the creation of fintech solutions. This, in turn, fuels economic expansion and stability, as well as the personal financial success of individuals (Xiao and Tao, 2021).

1.3 Definition of Technology

Technology refers to the body of information, skills, techniques and systems that civilizations have created to address issues, increase productivity and improve quality of life for all people. It involves using scientific concepts to develop new products & services that improve people's day-to-day lives. Carroll (2017) Technology is a living thing; it changes and grows to accommodate new requirements and goals. It includes fields such as computer science, biology, telecommunications and more. By increasing productivity, broadening the scope of human influence and facilitating global connectedness, technology is enabling previously unimaginable feats to be accomplished by people and businesses

alike. Economics, civilizations and the very fabric of human life have all been shaped by technological advances, from the discovery of the wheel and the taming of fire to the complexity of current artificial intelligence and genetic engineering. It's a key factor in the development of cutting-edge solutions to societal problems and in the acceleration of technological advancement (Ellis *et al.*, 2020). To fully realise technology's transformative potential for the benefit of mankind as we go further into the digital age, ethical issues and responsible development are emerging as important factors. In other words

"Once a new technology rolls over you, if you're not part of the steamroller, you're part of the road." -**Stewart Brand (Writer)**

"Technology is a useful servant but a dangerous master."-**Christian Lous Lange (Historian)**

Figure 1.1: Definition of technology

Source: (SWALIH, 2022)

1.4 Definition of Fintech

FinTech uses modern technologies to provide financial services to individuals and businesses. Since the Great Financial Crisis (GFC), technology firms have entered the market and started offering services formerly solely given by traditional financial institutions, a development called the “FinTech Revolution”. Dorfleitner *et al.* (2017) For several decades, traditional financial institutions such as banks, asset management firms, brokerage firms, and insurance companies have been the prominent providers of financial services. However, they are currently encountering competition from technology-focused companies, including e-commerce companies, software development firms, mobile technology providers, and data analytics platforms. A significant portion of the financial regulations governing traditional financial institutions in the United States were formulated during the previous century, mostly as a response to the Great Depression. This historical context contributes to the enigmatic nature of FinTech. The FinTech ecosystem that we are currently observing is a complex network of interconnected financial technology companies, institutions, and stakeholders. which will be discussed in the following part, can be thought of as a guide to the current state of FinTech development. Our ecosystem is unique in that it classifies innovations in digital banking, payments, lending, wealth management, insurance, and the like into "vertical sectors," while also classifying innovations in "horizontal" areas like risk, regulation, funding, and valuation. Our simplified model of the evolving financial services industry, the FinTech Ecosystem, classifies companies developing in this field according to the economic role they play (Imerman and Fabozzi, 2020a).

The technological intervention in the financial sector has helped people to save time in managing their financial records. The digitization in FinTech has made it possible to provide tailor made financial services according to needs & demands of customers

belonging to different demographics. It has given a push to economic 4 growth in many ways, by easing the digital payments and also by giving opportunities to new players to enter as start-ups. FinTech has proved to be a borderless innovation as the technological advancements can be quickly adopted across borders, which results in new competition and possibilities for existing companies. This quick innovation is ushering in entirely new financial centres and marketplaces. Instead of providing a locked and specific function, FinTech is providing various facilities and options to deliver the financial services under one roof in which the consumers can do various activities at one place by sending money and lending money etc. It has bought more transparency and new methods of managing one's funds. New ways of lending money like crowdfunding and peer-to-peer lending options have replaced traditional ways of borrowing via loans and mortgages.

Some important definitions of FinTech are following:

"FinTech is a financial technology interprets it as utilisation of a new technological improvements to products services in financial sphere" (Queiroz and Fosso Wamba, 2019).

"FinTech is an ongoing process during which finance and technology have evolved together" (Arner *et al.*, 2016).

"FinTech is an economic industry composed of companies that use technology to make financial services more efficient" (Čižinská, Krabec and Venegas, 2016).

"FinTech is innovative ideas that improve financial service processes by proposing technological solutions according to different business situations, while the ideas could also lead to new business models or even new businesses" (Vasenska *et al.*, 2021).

Figure 1.2: Fintech

Source: (Howat, 2020)

1.4.1 Traditional payment systems in India

The historical development of payment systems in India is characterised by a significant duration, including many centuries, which serves as a testament to the nation's multifaceted cultural, economic and technical dimensions. The payment systems in question have undergone a progressive evolution to adapt to contemporary requirements while preserving a link to India's historical customs and traditions. The barter system, which dates back to ancient times, was a prevalent payment method in India. It included the direct exchange of products and services, without the use of a standardised medium of exchange. Although this technique was widely used in several civilizations, it had significant importance in the early Indian economy. Nevertheless, with the progression of civilizations becoming more intricate, the inherent constraints of barter transactions became evident, hence giving rise to the development of commodity money (Sivathanu, 2019). Commodity money emerged as a logical development, whereby certain products of inherent worth, such as cereals, spices and metals, were used as means of trade. Use of ‘cowrie’ shells a form of commodity money in India may be attributed to their scarcity and ease of transportation, making it one of the oldest examples of such exchange mediums.

The shells, also referred to as "kauri," have considerable value among many locations and civilizations and were extensively used as a medium of exchange. The popularity of metallic coins as a standardised form of payment increased with the emergence of organised empires and commercial routes. The Mauryan and Gupta dynasties implemented distinct currency systems, characterised by their unique designs and denominations. The coins served not only as a medium of transaction, but also as a manifestation of the ruler's power and cultural heritage. During the mediaeval era, there was a notable infusion of Islamic and Persian influences into the financial systems of India. During the historical periods of the Delhi Sultanate and Mughal Empire, the minting of silver and gold coins with Arabic inscriptions was undertaken to accommodate the multifarious populace and extensive commercial networks prevalent during that epoch. The use of these coins proved essential in facilitating the commercial networks that linked India with the Middle East and Central Asia. With the advent of colonial powers in India, they introduced their own monetary systems (Raman and Aashish, 2021). The British colonial administration implemented the adoption of the "rupee" as the designated legal tender and subsequent to India's attainment of independence, it continued to be used as the prevailing currency. The simplicity and ease of use offered by paper money led to its progressive replacement of metallic coins, first issued by colonial governments and then by the Reserve Bank of India. Following India's attainment of independence, the payment landscape in the country saw a series of transformations in tandem with the progress of technology. Nevertheless, a number of conventional payment systems endured and adjusted to the evolving circumstances. One example of a credit-based transaction facilitator is the "hundi" system, which served as an informal bill of exchange. This system played a significant role in enabling transactions, particularly in rural regions with limited access to official banking services. The chit fund system, a conventional model of rotating savings and credit

organisation, has also endured in India. Chit funds facilitate the aggregation of individual resources, enabling participants to receive periodic lump sum payments, so serving as a crucial financial resource for personal necessities and investment purposes. Despite facing regulatory hurdles as a result of fraudulent activities, chit funds continue to be an integral component of India's financial landscape (Al-Okaily *et al.*, 2020).

The emergence of contemporary banking and digital technologies has led to the rise of alternative payment systems that provide enhanced efficiency and convenience, hence posing a challenge to established payment methods. During the colonial period, the introduction of cheques facilitated the movement of payments over significant distances. Nevertheless, the advent of digital technologies aimed to address the shortcomings of traditional methods, including delays and inefficiency.

1.4.2 Background history of fintech

The concept of "FinTech," which combines words "financial" and "technology," is a transformative phenomenon that has fundamentally altered the conventional framework of financial services by integrating innovative approaches and digital progress. The birth of FinTech as a disruptive force in the current financial ecosystem may be attributed to a complex interaction of historical, technical and economic reasons. In order to comprehend the historical context of FinTech, it is necessary to trace its inception to the nascent stages of digitization within the financial industry. The advent of computers and data processing throughout the mid-20th century established the foundation for the mechanisation of financial activities. Nevertheless, it was not until the surge in internet use throughout late 1990s and early 2000s that the genuine capabilities of technology in the field of finance started to become apparent. This era was characterised by the emergence of online banking, electronic trading and the development of the essential framework required for the digitization of financial services.

The global financial crisis of 2008, which has significant importance in contemporary history, served as a catalyst for rapid expansion of FinTech industry. The crisis exposed the vulnerability of conventional financial institutions and underscored the need for enhanced efficacy, transparency and consumer-oriented resolutions. In response, a cohort of entrepreneurs, technologists and innovators emerged inside the financial sector, seeking to challenge established norms and provide innovative methods for delivering financial services. The rapid increase in the use of mobile devices and smartphones, together with advancements in connectivity, has played a pivotal role in driving the growth of the Fintech industry. The enhanced accessibility and convenience of these gadgets have resulted in their evolution into personal financial centres, enabling users to engage in transactions, oversee investments and access financial information while on the go. The shifting user behaviour prompted established financial institutions to modify their strategies, leading to the emergence of mobile banking applications and "Digital payment systems". The integration of emerging technologies has a pivotal role in development and progression of the FinTech industry (Metwally, 2023). The emergence of blockchain technology in 2008 as the foundational framework for the cryptocurrency Bitcoin has attracted considerable interest due to its capacity to potentially transform several sectors, notably banking. The decentralised and tamper-resistant characteristics of "blockchain technology" have given rise to novel opportunities in the realm of safe and transparent transactions, hence serving as a catalyst for the emergence of cryptocurrencies, smart contracts and decentralised finance (DeFi) applications. Artificial intelligence (AI) and machine learning (ML) have emerged as transformative technologies within the Fintech sector. The aforementioned technologies have facilitated the provision of personalised financial suggestions, the evaluation of risks, the identification of fraudulent activities and the implementation of automated trading methods. The integration of big data analytics

and AI has enabled FT organisations to extract valuable insights from extensive datasets, hence enabling more informed decision-making processes and improving consumer experiences (Korreck, 2019). The democratisation of financial services emerged as a prominent feature of the FinTech revolution. The conventional financial services industry has long been associated with exclusivity, substantial entrance obstacles and restricted accessibility. The emergence of FinTech has effectively dismantled these barriers by offering consumers and companies access to a wide range of financial instruments and services that were previously inaccessible. The emergence of peer-to-peer lending platforms, crowdfunding and robo-advisory services has provided people with more autonomy in their investment, borrowing and financial management endeavours. As the FinTech industry progressed, it saw the emergence of several categories and verticals. The advent of digital wallets, mobile payment applications and contactless payment solutions has brought about a significant revolution in payment systems. Use of blockchain and cryptocurrency technologies has led to enhanced efficiency and cost-effectiveness in remittances and cross-border transactions. The lending and borrowing processes saw a significant upheaval as a result of the emergence of peer-to-peer lending platforms. These platforms facilitated direct matching between borrowers and lenders, hence minimising the involvement of intermediaries and the accompanying expenses. The insurance industry also saw a significant transformation, as insurtech businesses used technological advancements to improve the underwriting procedures, provide customised insurance plans and speed the claims handling process. The field of wealth management and investing services has seen the rise of robo-advisory platforms, which use algorithms to construct diverse investment portfolios that are customised to suit individual risk profiles and financial objectives. Nevertheless, the exponential expansion of Fintech encountered certain obstacles (Ravi Veeraraghavan *et al.*, 2021). The regulatory frameworks had

difficulties in keeping up with the rapid speed of innovation, leading to different levels of uncertainty in different jurisdictions. The need for strong cybersecurity measures to safeguard sensitive financial information has been emphasised due to security concerns, especially after notable instances of data breaches. The concept of financial inclusion has shown itself as a two-sided phenomenon, whereby the emergence of Fintech holds the promise of extending financial services to marginalised people. However, it also carries the inherent danger of intensifying the existing digital divide. In summary, the historical progression, technical advancements and economic necessities have together contributed to the intriguing growth of FinTech. The trajectory of FinTech has undergone a revolutionary journey, starting with the first integration of technology into financial operations, followed by the disruptive effects of the global financial crisis and culminating in the following emergence of creative solutions. This ongoing process has significantly reshaped the financial environment. The convergence of nascent technologies, evolving consumer patterns and regulatory frameworks has positioned Fintech as a strong catalyst capable of reshaping the landscape of financial services for future generations.

1.5 Conceptual framework of Fintech

The conceptual framework of fintech involves a comprehensive examination of the complicated integration between financial services and technology, exploring various dimensions of this dynamic relationship. The fundamental essence of this subject matter encompasses a sophisticated network of ideas, principles and concepts that serve to illuminate the intricate terrain of this ever-changing field. Within the confines of this conceptual framework lie the fundamental principles that underpin the quintessential aspects of Fintech, which are positioned to revolutionise the landscape of the financial industry.

Figure 1.3: Conceptual Framework of Fintech

Source: (Broto Legowo, Subanija and Sorongan, 2020)

The conceptual framework elucidates the strategic foundations behind the ascent of fintech, which are firmly rooted in economic theories and market dynamics. The framework elucidates the manner in which fintech not only endeavours to rectify prevailing deficiencies within financial systems, but also endeavours to redefine said systems, frequently drawing upon established theories such as disruptive innovation and network effects. The following theories provide an in-depth analysis of the mechanisms through which innovative Fintech solutions can rapidly receive widespread acceptance, leading to significant transformations in the competitive dynamics of the financial industry and undermining the dominant position held by conventional financial institutions (Nasir *et al.*, 2021). Within the established framework, a multitude of actors emerge, exemplifying the wide range of participants that define the fintech ecosystem. Various stakeholders, including start-ups, incumbents, regulatory bodies, consumers and technology providers, each assume significant roles within the context under investigation. Start-ups, as dynamic entities, introduce innovation, agility and disruption into the industry, frequently posing challenges to established norms and conventions. In the current landscape, well-established financial institutions find themselves confronted with the critical choice of embracing these emerging innovations or facing the potential consequences of becoming obsolete. Regulatory bodies strive to achieve a delicate equilibrium between promoting innovation

and ensuring the stability of the financial system, thereby influencing the ecosystem in which fintech flourishes (Rauniyar *et al.*, 2021). The beneficiaries of these new and convenient financial services are primarily consumers, who are able to enjoy the rewards that come with them. These services are specifically designed to fulfil to the unique preferences of consumers, ensuring that they are provided with tailored solutions that enhance their overall financial experience. The regulatory landscape plays a crucial role within the conceptual framework, as it establishes the boundaries and potential opportunities for fintech. The delicate balance between fostering innovation and managing risks is a prominent concern in contemporary discourse. This is particularly evident in ongoing discussions surrounding topics such as digital identity, data privacy and cybersecurity. The intricate interplay between regulatory frameworks and the fintech industry significantly shapes its developmental trajectory. Innovators and regulators alike face the intricate challenge of nurturing expansion while upholding consumer confidence and preserving the integrity of the financial system (Legowo, Subanidja and Sorongan, 2020). The framework under consideration is characterised by the presence of both challenges and opportunities, which are intricately interconnected. The field of financial technology, commonly known as fintech, encounters various challenges that require careful consideration and strategic navigation. Among these challenges are cybersecurity vulnerabilities, regulatory uncertainties and ethical dilemmas. These hurdles pose significant implications for the fintech industry and necessitate thorough analysis and proactive measures to address them effectively. On the contrary, the framework brings attention to the potential of democratising financial services, expanding access to individuals without access to traditional banking services, enhancing the efficiency of cross-border transactions and fundamentally transforming investment opportunities through the application of Fintech innovations. The comprehensive analysis of the

conceptual framework necessitates the inclusion of fintech's influence on conventional financial services. The domains of banking, payments, lending, insurance and wealth management are currently experiencing significant changes as a result of the influence of Fintech. This is leading to a transformation in how customers interact with these industries, the methods through which services are delivered and the overall value propositions offered (Restoy, 2019). The banking sector is currently facing significant challenges as it navigates the landscape of digital banking, mobile payments and the emergence of neo-banks. These technological advancements have the potential to reshape the way banks interact with their customers, necessitating a reevaluation of traditional customer relationships. The advent of peer-to-peer lending platforms has brought about a significant transformation in the lending landscape, as it offers a digitalized approach to borrowing experiences (Pashkov and Pelykh, 2021). These platforms have emerged as viable alternatives to traditional lending channels, providing individuals with new avenues to access credit and financial resources. The insurance industry has observed notable advancements in insurtech that have significantly improved risk assessment methodologies and enhanced customer engagement strategies. In the world of wealth management, there has been a notable embrace of robo-advisors, which are tools powered by artificial intelligence that facilitate the automation of investment decisions. The framework places significant emphasis on the emergence of user experience as a central focus. The customer-centric orientation of the fintech industry is influenced by prominent technology companies such as Amazon and Apple, shaping customer expectations accordingly. Fintech disruptors, in light of these transformative changes, strategically design and develop user experiences that are characterised by a seamless, intuitive and personalised nature, thereby setting new standards and serving as reference points within the industry. The framework, as a result, directs its focus towards the interdependent connection between technological

advancements and enhanced user experiences, emphasising their pivotal role as drivers for the adoption of fintech. The conceptual framework of Fintech can be described as a comprehensive and expansive landscape that involves the merging of financial services and technology. Within this framework, various elements such as innovation, competition, disruption and collaboration are encapsulated, contributing to the overall dynamics of the fintech industry (Huong, Puah and Chong, 2021). The aforementioned statement highlights the intricate interplay between various economic theories, technological advancements, regulatory frameworks, market participants, obstacles and prospects that collectively shape the fintech industry. The framework presented herein functions as a navigational tool, providing stakeholders with guidance as they traverse the dynamic landscape of fintech. This framework aids stakeholders in comprehending the complexities inherent in a transformative revolution that holds potential to redefine financial sector within context of the digital era.

1.5.1 Main components of Fintech

Online money: The way we trade, invest, and manage our money has changed as a result of the rise of online money as a disruptive force in the current financial environment. A new era of ease, availability, and efficacy in financial transactions has arrived with advent of digital age. Digital payments are foundation of internet money. The use of real cash in trade has diminished as a result of the ubiquity of cell phones and the advent of digital shopping. There is a widespread adoption of “Digital payment systems” such as mobile wallets, P2P payment applications, and online banking services (Givan *et al.*, 2021). By eliminating the need for actual currency and allowing transactions at any time and from any location, these systems enable users to conveniently transfer money, make purchases, and pay debts with just a few clicks.

The astonishing development that internet money has enabled is the widespread availability of financial services. People who were previously excluded from the financial system, such as those without access to conventional banking, may now take part in it. Mobile banking is becoming more popular in areas where traditional banks are rare, allowing for greater financial inclusion (Kasri and Chaerunnisa, 2022). Financial knowledge and stability are improved across a wide range of demographics thanks to Online Money, which enables people to save, invest, and manage their resources safely.

Figure 1.4: Online Money

Source: (NINIA, 2021)

Additionally, the era of internet money has created the path for "robo-advisors," which use algorithms to make investment suggestions automatically. In order to make investment management more accessible to the general public, this tech-driven strategy provides low-cost options and customised guidance. Those who want to optimise their portfolios depending on their risk tolerance and financial objectives may do so with the help of robo-advisors, which serve as a link between technology and finance. In addition to promoting financial awareness and stability, the accessibility of internet money has given previously neglected communities a voice. New opportunities for wealth creation and management

have emerged in the era of cryptocurrencies and robo-advisors, which have upended financial assumptions (Ho, Ho and Tanc, 2017). The availability of funds has been greatly facilitated by peer-to-peer lending and other methods of establishing creditworthiness. However, constant vigilance against cyber-attacks is essential, since the shift towards online money requires it. The importance of online money integration in transforming financial behaviours and possibilities as the digital frontier continues to develop cannot be overstated.

Blockchain Technology: Blockchain technology has become a game-changer, revolutionising business practises all over the world. Blockchain technology, at its heart, is a distributed, unchangeable electronic record that records transactions in an open and trustworthy way. Each completed transaction, or "block," is connected to the one before it in the chain. From improving data security to disrupting traditional supply chains and financial institutions, the consequences of this technology are far-reaching (Belotti *et al.*, 2019). Blockchain's associated security is a major selling point. The decentralised nature of blockchain reduces the dangers associated with traditional databases being hacked or altered. A consensus process is used to verify and record transactions, guaranteeing that all users are in agreement on the veracity of the ledger's contents. An unalterable record of events is provided after a block is introduced since it is almost hard to change or remove. Financial records, personal identifiers, and medical records are just a few examples of the sensitive data that might benefit from this degree of protection.

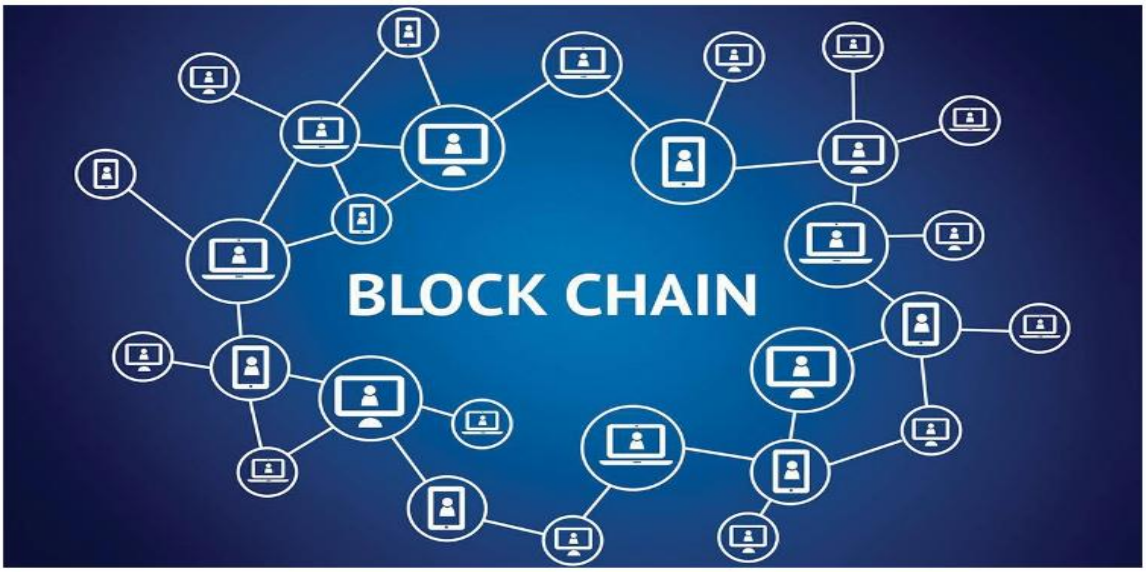

Figure 1.5: Block Chain

Source: (Wenner, 2021)

Blockchain's distributed ledger design makes traditional middlemen like banks and processors superfluous. In addition to lowering transaction costs and facilitating peer-to-peer transactions, this has far-reaching ramifications for the financial system as a whole. Bitcoin and Ethereum, two cryptocurrencies based on blockchain technology, have come to symbolise the promise of decentralised currency (Treleaven, Brown and Yang, 2017). Blockchain's promise to streamline and protect international financial transactions is revolutionary. Blockchain technology also has potential in the realm of supply chain management. Blockchain improves transparency and lowers the risk of fraud or counterfeit items by tracing the passage of commodities from their source to the customer. This is especially significant in sectors where traceability is essential, such as agriculture, medicines, and the luxury goods market. Trust in businesses and the items they provide is boosted when customers are able to check their legitimacy. When certain circumstances are satisfied, the contract will execute and be enforced automatically. This cuts out middlemen and simplifies operations in industries as diverse as real estate, insurance, and

law (Ahram *et al.*, 2017). When a predetermined event happens, a smart contract may distribute funds, such as an insurance claim, without the need for further action on anyone's part. Blockchain has the potential to revolutionise several industries, but it also has certain drawbacks. Scalability, or the speed with which a large number of transactions may be processed, is still an issue. Some blockchain networks, especially those that use Proof of Work consensus techniques like Bitcoin, have raised discussions about their potential negative effects on the environment because to their high energy usage. Furthermore, blockchain and cryptocurrencies face a very variable regulatory environment, which hinders their widespread adoption and integration.

The consequences of its decentralised and secure nature extend well beyond data management and banking to supply chains. Blockchain has the ability to transform industries and the way we conduct business and transactions by removing middlemen and increasing transparency. Unlocking the full advantages of this technology in the digital era will depend on overcoming obstacles and making the most of its disruptive potential as it develops.

Payments app: Payment apps, usually referred to as mobile payment apps or digital wallets, have become an integral part of contemporary financial system. These apps make it simple and quick for people to buy things online or in person using their smartphones or other digital devices. In contrast to more conventional payment methods that depend on physical currency or credit/debit cards, payment apps have used tech to digitise and simplify the whole payment process. All of a person's financial information may be stored digitally in one place when they use one of these apps and connect their bank account, credit card, and even cryptocurrency to it. This streamlines the payment process and reduces the danger of loss or theft associated with carrying actual cards or cash (Wiese and Humbani, 2020). The safety of transactions is further enhanced by the prevalence of

biometric verification methods like fingerprint and face recognition in payment apps. The convenience of mobile payment apps allows for a wide variety of payment options. Users may use QR codes and Near Field Communication (NFC) technology to conduct in-person and remote payments, as well as to pay bills and make purchases through the internet. The convenience of using payment apps anywhere in the world is a major benefit.

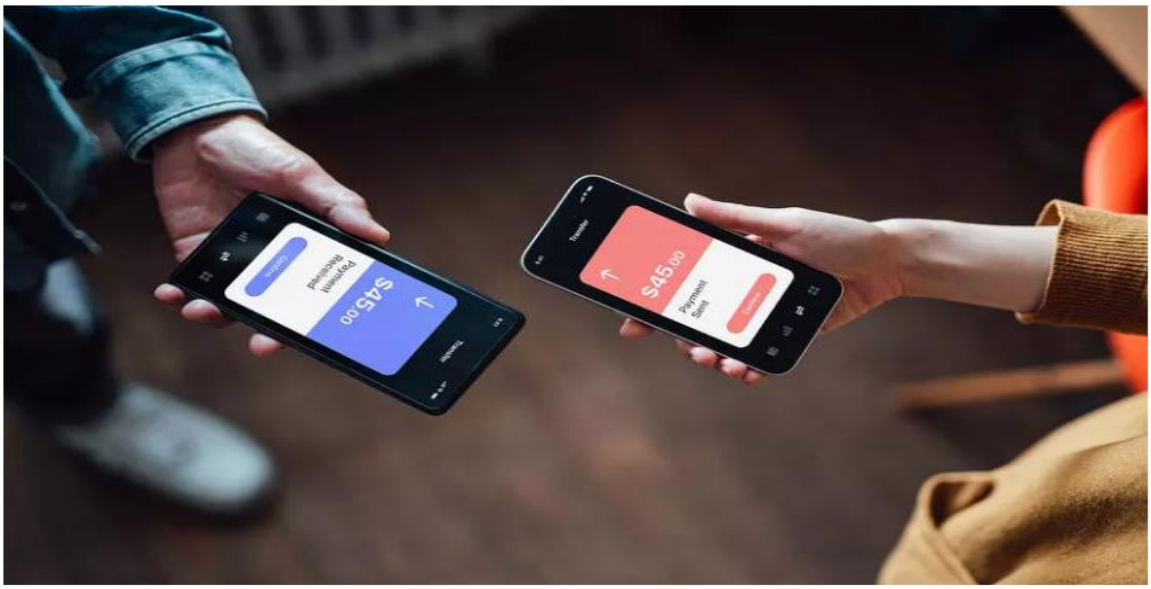

Figure 1.6: Payment app

Source: (BROCK and VELASQUEZ, 2023)

They are global, eliminating the need for currency translation or hefty costs when doing business across national borders. Travellers may avoid the inconvenience of exchanging money to pay for goods and services while overseas (Park *et al.*, 2019). In addition, many payment apps are multilingual and multicurrency, making them accessible to customers all around world. Popularity of mobile payment apps has increased because to incorporation of loyalty and rewards programmes. Incentives such as cash back, discounts, or rewards may be earned by using many different apps. In the long term, this may help save money by encouraging customers to use the same payment app. More generally, payment apps

help facilitate the transition away from a cash-based society. Reduced dependence on cash facilitates faster financial transactions and eliminates some of the security concerns inherent in dealing with cash as more organisations and people utilise these apps (Stulz, 2022). There are, however, drawbacks to using payment apps in the modern era. Despite its usefulness, users must exercise caution when disclosing personal or financial information and should only utilise encrypted networks to avoid becoming victims of hackers or fraud. The requirement for retailers to accept a wide variety of digital payment methods and the lack of compatibility between multiple payment apps also pose problems.

Trading Apps: Trading apps have revolutionised the way people purchase and sell financial assets, making them a staple of the current investing environment. These apps, which are often accessible on smartphones and other digital devices, provide consumers a simple interface to access financial markets, place trades, and monitor their investment portfolios. Trading apps fundamentally facilitate investing for the masses. Historically, individual investors who want to participate in the financial markets were compelled to use the services of brokers or financial institutions, which may be both expensive and restrictive. The convenience of trading apps lies mostly in their portability (Feyrer, 2019). The ability to track and make transactions from any location with an internet connection is a major benefit of these platforms. This allows people to keep tabs on the markets and make educated judgements regardless of where they are or how full their calendars are. By allowing users to trade bonds, equities, metals, digital currencies, and various other assets in real-time without the involvement of brokers, trading apps remove many of these obstacles.

Figure 1.7: Trading apps

Source: (KUNKLE, 2020)

Market data, news feeds, charts, technical analysis tools, and instructional materials are just some of the features you'll find in these apps. Trading apps also provide a plethora of resources to help traders make educated decisions (Nobre and Neves, 2019). These capabilities provide traders with the knowledge and information they need to analyse market patterns, weigh risks, and make educated choices. Day trading and other forms of short-term investment have also seen a boost thanks to trading apps. Users may take advantage of market changes and capture chances for possible profit with fast access to markets and the capacity to execute transactions swiftly. However, day trading is not without its dangers, what with its rapid speed and high potential for losses.

Social trading and copy trading are concepts presented by a growing number of trading apps. On a social trading platform, amateurs may keep tabs on the moves of pros and, if they like what they see, copy their trades. As a result, novice traders might get insight from seasoned investors and perhaps improve their results.

Trading apps have a lot going for them, but there are some drawbacks as well. Because of their convenience and simplicity of use, users may be tempted to make hasty deals or overtrade. Users must practise self-control while trading and stick to tried-and-true investing strategies. When utilising trading apps, safety is another important factor to consider. Strong security measures are required to protect users' personal information and financial data when they connect their accounts and make transactions inside these apps (Barber *et al.*, 2022). Encryption and multiple-factor authentication are standard safety features in today's top trading apps.

Crowdfunding: Crowdfunding has changed the way initiatives and businesses are financed in the Fintech industry by becoming a disruptive and democratising force. Crowdfunding makes use of the widespread accessibility of the internet to quickly and efficiently link those in need of financial support with a large pool of possible donors in the digital era. Because it uses technology to simplify financial transactions in new and accessible ways, this distributed method of raising cash is in perfect harmony with the tenets of Fintech (Cumming, Leboeuf and Schwienbacher, 2020). The success of crowdfunding depends heavily on technology. In order to facilitate interactions between artists and funders, fintech-driven platforms take use of ubiquitous internet connection. These sites function as an online venue where artists may introduce their works to prospective funders and have conversations with them. Online payment systems make it easy for supporters to donate to campaigns using a wide variety of payment types, regardless of their location or preferred currency. Several methods exist for crowdfunding sites to use; these sites all focus on certain demographics of projects and donors. Donation-based crowdfunding is a kind of crowdfunding in which backers do not seek any form of financial return from their investment in the project. This type of crowdfunding is frequently utilised to support creative or charitable organisations with the proceeds going

to a good cause (Chemla and Tinn, 2020). In return for their donations, reward-based crowdfunding provides donors with non-financial rewards like exclusive access to goods, services, or experiences. Equity-based crowdfunding, on the other hand, allows investors to put money into a venture in return for a stake in the business. This concept is emblematic of how Fintech is disrupting traditional banking by blurring the lines between crowdfunding and traditional investing. At its heart, crowdfunding is a shift from conventional financing structures, in which access to funds was formerly restricted to large financial institutions and rich individuals. As a result of advancements in FT, a wider spectrum of people, regardless of their means, are able to contribute as supporters on crowdfunding sites (Messeni Petruzzelli *et al.*, 2019). This openness is consistent with Fintech's goal of fostering diversity and inclusion, since it paves the way for business owners from all walks of life to share their visions and solicit feedback from potential investors.

Figure 1.8: Crowdfunding

Source: (Boogaard, 2021)

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Crowdfunding exemplifies the innovative and inclusive promise of Fintech, but it is not without its difficulties. It might be challenging for a project to stand out among the thousands of others on crowdfunding sites. This emphasises the need for efficient methods of promotion and participation. In addition, the legal responsibilities of both authors and supporters might differ from one location to the next due to differences in the legislative environment around crowdfunding. Crowdfunding websites also demonstrate the data-driven nature of Fintech. Data analytics is used by these sites to portray projects in the most effective light possible, drawing in prospective supporters who have a similar set of interests. The focus on providing consumers with detailed information is another benefit of crowdfunding (Vismara, 2019). In order to provide their supporters full picture of project they're supporting, creators must describe the project itself, their financial objectives, and how the money will be spent.

Finally, crowdfunding demonstrates how technology may disrupt established financial models. Crowdfunding platforms exemplify the concepts of Fintech by embracing digital connectedness, transparency, and inclusion, allowing people and companies to receive funds and realise their creative ideas with unprecedented support from a worldwide audience.

1.5.2 Security and Privacy in Fintech

This intersection of technology & finance has given rise to a multitude of innovative advancements, yet it has also introduced a range of potential vulnerabilities and breaches that pose a threat to the security of sensitive financial information & erode consumer confidence. The significance of cybersecurity in the FinTech sector cannot be overstated. The process of digitising financial transactions and the subsequent storage of personal and financial data in digital formats have emerged as highly appealing targets for cybercriminals. The frequency and complexity of cyberattacks have witnessed a notable increase, encompassing a wide spectrum of techniques such as Distributed Denial of Service (DDoS) attacks, which aim to disrupt services and phishing attacks, which employ deceptive tactics to deceive users into divulging their confidential information. Insufficient implementation of cybersecurity protocols within the FinTech industry may result in the occurrence of data breaches, financial ramifications and reputational harm for both FinTech enterprises and their clientele.

Authentication mechanisms play a pivotal role within the security framework of Fintech services. Traditional authentication methods, such as passwords, have been found to possess vulnerabilities that make them susceptible to hacking and social engineering attacks. Two-factor authentication (2FA) and multi-factor authentication (MFA) are security measures that enhance the protection of user accounts by incorporating an additional layer of verification. This is achieved by combining the traditional method of user authentication, which involves knowledge-based factors such as passwords, with additional factors such as possession-based elements like smartphones or hardware tokens, or inherence-based factors like biometric data. By employing these multiple factors, the overall security of the authentication process is significantly strengthened. The implementation of these mechanisms is crucial in enhancing security measures. However,

it is imperative to exercise caution during their implementation to mitigate potential usability challenges that may discourage users from embracing these protective measures.

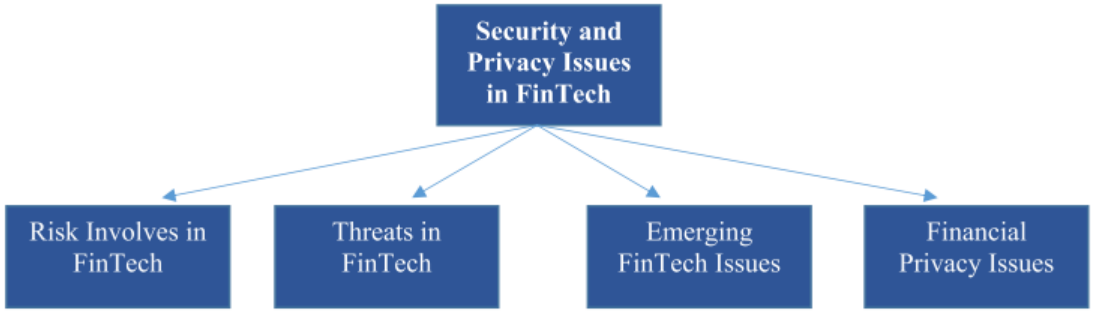

Figure 1.9: Security and Privacy in FinTech

Source: (Mehrban *et al.*, 2020)

The advent of blockchain technology has ushered in a paradigm shift, offering novel and ground-breaking resolutions in the realms of security and transparency. The inherent security of blockchain stems from its distributed and immutable characteristics, which effectively safeguard against tampering and fraudulent activities. In various financial applications, such as digital identity verification, trade finance and SC finance, the utilisation of blockchain technology serves to bolster security measures through the elimination of intermediaries and the establishment of an immutable audit trail. Notwithstanding the potential of blockchain technology to mitigate specific security concerns, it is imperative to acknowledge that it is not a universal remedy and necessitates a deliberate integration into pre-existing systems in order to optimise its advantages (Mehrban *et al.*, 2020).

Data privacy is an essential aspect of security within the FinTech industry. The acquisition, retention and exploitation of extensive quantities of consumer data require the implementation of rigorous privacy measures (Rahman, Ahmed and Shakil, 2021). Regulations such as the General Data Protection Regulation (GDPR) and the forthcoming

Indian Personal Data Protection Bill aim to enhance consumer empowerment by granting them increased authority over their personal data. In order to uphold transparent data practises, secure informed consent and facilitate user access, modification, or deletion of their data, FinTech companies are required to effectively navigate the existing regulations.

The FinTech landscape is undergoing a significant transformation due to the integration of AI and machine learning technologies. These advancements have paved the way for the development of personalised services, enhanced fraud detection capabilities and more accurate risk assessment methodologies. Nevertheless, it is important to acknowledge that the implementation of these technologies brings forth distinct security challenges. Adversarial attacks are a class of techniques that leverage the inherent vulnerabilities present in artificial intelligence (AI) algorithms, thereby deceiving them into producing erroneous outputs or making incorrect decisions. The establishment of a secure environment for AI systems necessitates the ongoing surveillance of their operations, rigorous examination of their performance and the incorporation of protective measures to counteract adversarial attacks.

The prevalence of third-party partnerships within the FinTech ecosystem is a well-established phenomenon. However, it is crucial to acknowledge that such collaborations also bring forth inherent security and privacy concerns(Anirudh Burman, 2020). The engagement of external service providers or the practise of outsourcing specific functions can introduce a heightened risk of data breaches by exposing sensitive information to additional parties. The implementation of due diligence in partner selection, the establishment of clear contractual agreements and the conduction of regular security audits are imperative measures to mitigate potential risks and guarantee that partners adhere to equivalent standards of security and privacy.

Social engineering attacks, including but not limited to phishing and pretexting, are techniques employed by malicious actors to exploit the vulnerabilities inherent in human psychology. These tactics are specifically designed to manipulate individuals into unwittingly disclosing confidential or sensitive information. The imparting of knowledge and skills to employees, customers and stakeholders regarding these tactics is of utmost importance in the development and implementation of a comprehensive security tactics. Establishment of a security-aware culture within an organisation develop a role in enhancing the ability of individuals to identify and effectively address potential threats. By fostering an environment that prioritises security consciousness, individuals are equipped with the necessary knowledge and skills to mitigate the risks associated with social engineering attacks. This proactive approach significantly reduces the likelihood of individuals becoming victims of such malicious tactics.

The role of regulatory compliance in the FinTech industry is of paramount importance when it comes to upholding security and privacy standards. Compliance requirements exhibit variations contingent upon geographical location and the specific characteristics of the services rendered. FinTech enterprises are confronted with the intricate landscape of regulatory frameworks, encompassing imperative measures like Anti-Money Laundering (AML) and Know Your Customer (KYC) regulations. These regulations serve as crucial safeguards against financial crimes, aiming to uphold transactional integrity and ascertain the authenticity of financial activities. Non-compliance with regulatory requirements not only poses legal risks to organisations but also undermines the trust and confidence of customers and partners.

In conclusion, it is imperative to emphasise the significance of incorporating security and privacy considerations within the FinTech domain. The convergence of financial services and technology accentuates the potential ramifications associated with security

breaches and infringements upon data privacy (Amrollahi, Dehghantanha and Parizi, 2020). The dynamic nature of the threat landscape compels the adoption of a proactive and comprehensive strategy encompassing resilient cybersecurity measures, strategic incorporation of cutting-edge technologies, adherence to privacy regulations and ongoing user education. By placing a significant emphasis on security and privacy measures, the FT sector has the potential to facilitate sustainable expansion, foster innovation and cultivate heightened levels of consumer confidence.

1.6 Fintech Landscape in India

Over the past decade, the financial services sector around the world has been dominated by the development of FinTech (Financial Technology). The exponential growth of processing power, broad adoption of the internet, and improvements in internet speed and coverage have all paved the way for FinTech solutions and businesses to rapidly and thoroughly permeate markets throughout the world. The development and expansion of FinTechs are supported by several factors, including the rising need for accessible financial services, rising client expectations, and the necessity for businesses to cut costs while delivering quicker, safer, and more dependable services. Digital native FinTech is rapidly expanding into areas that formerly required human capital, such as real-time payments, faster loan disbursement, transparent insurance advisory and distribution, P2P lending, and several more. While the precise number of global FinTech participants is anyone's estimation, there is consensus among experts that India has made a substantial impact on the industry by increasing the number of startups, investment amounts, userbase, and transaction volumes. With 2,565 active fintech businesses as of this writing, India is the world's 2nd largest fintech hub, surpassing the number of 737 in 2014. The 'payments' sector accounts for the lion's share of India's fintech startup industry, followed by lending, wealth tech, , insurtech, regtech and others (Ashwini, 2020).

India is quickly becoming one of the world's most prolific FinTech economies, as well as Asia's most well-funded FinTech nation. The acceptance of the digital age and rise in FinTech popularity is paved by the 2008 “Global financial crisis”. The perception of people towards banks and financial institutions has changed after the outburst of innovations, smart advancements and entry of new entrants in the field of financial world. These developments have changed the shape of the face of the FinTech Industry in India. Past few years back. Banks focused on customer-centric financial products and services of FinTech, it has seen more rise in a few years. The demonetisation drive in 2016 also has brought drastic change in the financial services especially FinTech services. The rural population, including farmers and the elderly, would benefit greatly from this. Interoperability and financial inclusion will be made possible. With this change, those who receive government assistance via direct payments might join the official Banking system. ICICI was the first Indian bank that stepped into internet banking, though with limited services like transfers within banks and viewing account details. Other financial entities and banks also started to follow the way, resulting in rapid change in the way of banking. This changed financial system has faced challenges like fraud, technical mistakes in payment methods and cross border- transactions, etc. Advanced technology of FinTech gave a modernistic look to the FinTech industry in India. There are some specific important events that triggered the rise of FinTech in India. These are as follows: In 1987, HSBC (Bombay) was the first bank to start ATM to withdraw cash. In 1980, the first credit card in India was launched by the Central bank of India. Stanford Federal credit union (1991) introduced a customer‟s card to access financial transactions via the new world wide web. The payment system has taken further after the internet boom by PayPal in 1988. In 2011, Google launched a wallet and, in 2014, Apple payment was started. These important events changed the face of Indian FinTech. Over the last few years, FinTech has been witnessing

tremendous rapid development in the adoption of FinTech by Indian customers. With advancement of new innovations, digitalisation has become the primary method for people to handle their money. Baas as banking service adopted by banks that will allow third-party service providers to access their financial data. FinTech products, services, devices and tools like mobile payment, automated investment apps, online lending businesses and crowdfunding platforms have brought revolutionary changes in the financial sector. Today, FinTech companies are trying to understand customer behaviour patterns by using innovative technology like machine learning and artificial intelligence. NASSCOM has reported that new start-ups in India have started to find space in FinTech as one of the top potential sectors in the ecosystem. Financial inclusion, wealth management, mutual funds management and insurance are also emerging key areas for driving the growth of Indian FinTech. Argued that the government's move towards digital India and cashless policy have immense support to FinTech companies. AI, ML, Digital data and Data analytics and Robotics processes have serious implications on role in the growth of FinTech ecosystem.

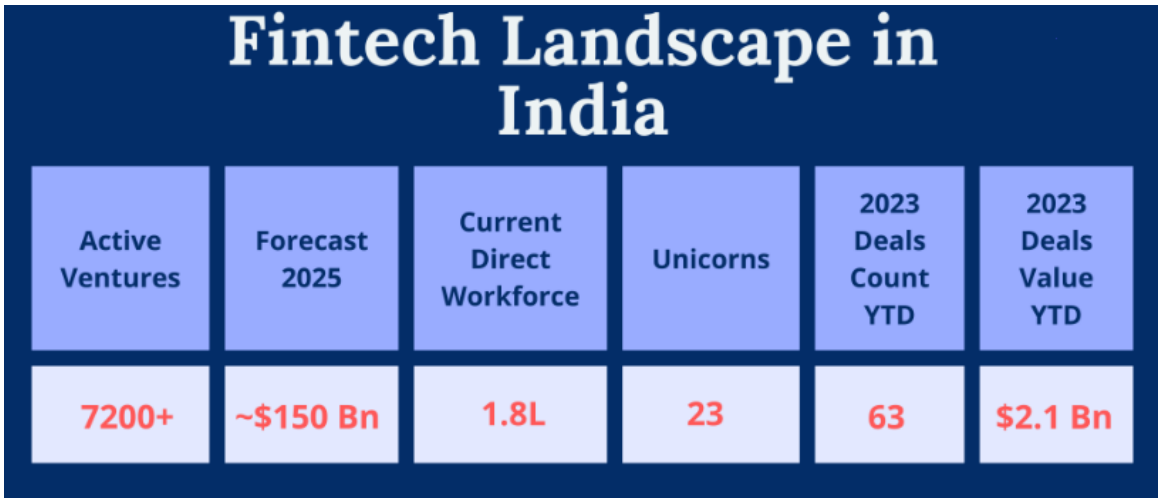

Figure 1.10: FinTech Landscape in India

Source: (Michael, 2023)

1.7 Impact of Fintech on the Financial Ecosystem in India

India's financial technology industry has expanded rapidly in recent years, making it one of the world's most dynamic and dynamic markets for this sector. S&P Global Market Intelligence reports that Asia-Pacific maintained a steady influx of investments despite the pandemic. In 2020, FinTech investments dropped to $6.8 billion, a 33% decrease from 2019's total of $7.3 billion. This trend continued in 2020, with the number of deals falling by 18% to 427. One97 Communications (Paytm, $1 billion) and JD Technology ($1.9 billion) accounted for over half of the region's total FinTech funding in 2019. Except for these, the relative drop in 2020 was only 6%. With $3.14 billion across 113 deals in the fourth quarter of 2020, APAC FT deals volume and value rebounded to highest-level for year, indicating a promising picture for the fundraising climate in 2021. In 2020, India led the “Asia-Pacific region” with 121 FinTech investment agreements, despite disruptions in the funding sector caused by the COVID-19 virus. PhonePe's $312 million in funding over two rounds contributed significantly to the total value of deals in the country. Compared to China, investments in India's FinTech sector were nearly double the size. The Tracxn database shows that there will have been $20.8 billion invested in FinTech by June 2021, with 36% of that coming in the last two years. The amount allocated for 2020 decreased by 26.7%, to US$ 3.0 billion. The emergence of new FinTech companies also dropped by 20%, reflecting a similar trend. Still, payments account for 48% of all startup funding, with alternative loans coming in second at 28% (Goh, 2021).

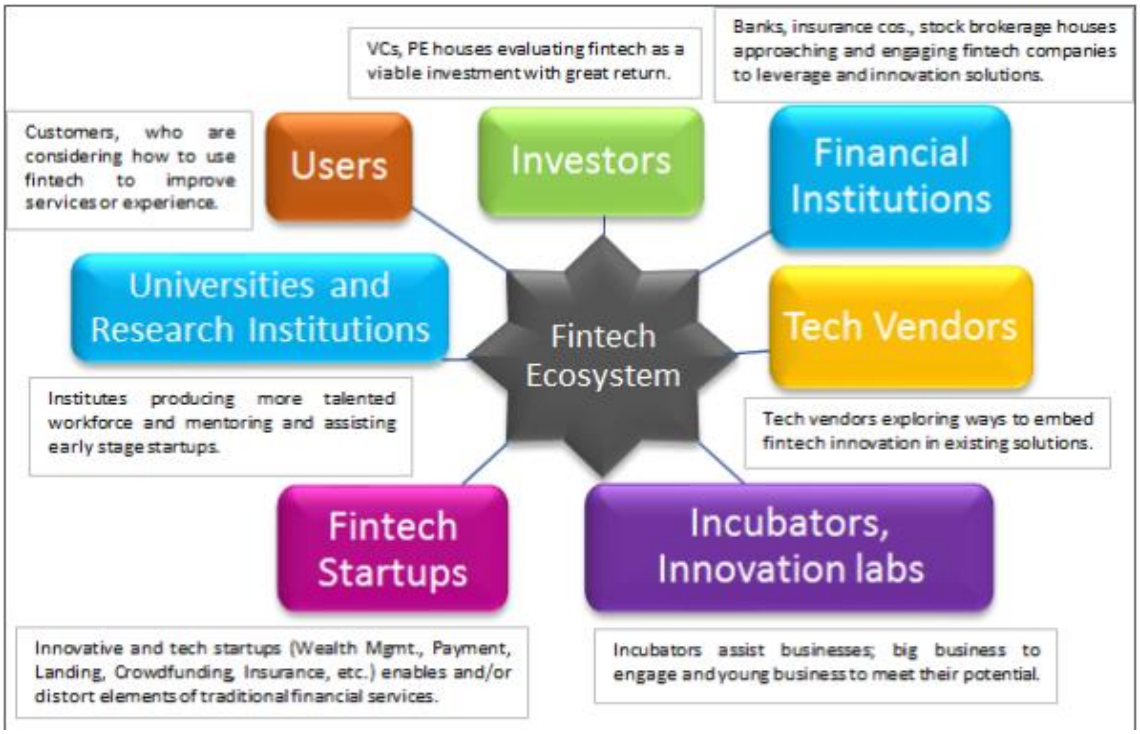

Figure 1.11: FinTech Ecosystem

Source: (Research,2018)

India has become the most used FinTech products and services country due to the quick acceptance of new solutions and financial services offered by Indian banks, financial institutions and financial entities to clients and customers.

Innovation of digital payment system has become an important part of FinTech ecosystem. Even during the coronavirus outbreak (2019) the merchants, customers, professionals and shoppers have enjoyed digital payment systems. The demonetisation drive in 2016 made people of India to switch from physical cash payments to digital and online payments. This is a favourable indicator for FinTech newcomers this time. Today, customers feel more secure and safe than handling cash physically. Digital lending operates by utilising a contactless credit evaluation method to evaluate the creditworthiness of prospective borrowers. Traditionally, banks have not done a decent job in lending and

insurance; but collaboration with FinTech has made it more viable by providing a variety of options such as online accessibility.

Bill desk empowers electronic instalments and accumulations administrations for banks, organisations and different establishments. Bill desk also empowers instalments of service charges, master card, visa instalment and ISP charges for banks like Citibank, HDFC bank, SBI and for organisations such as Bharti telecom.

Remittances refer to the financial transactions involving the transfer of funds of a non-commercial character by a foreign worker, who is a member of a diaspora community, for the purpose of supporting household income in their place of origin. There were multiple barriers in the past, such as expensive fees, no money tracking, a lot of paperwork, multiple players and plenty of time required, but now, thanks to FinTech, it has become possible to make online payments with transparency in fees, end-to-end payment tracking and multi-currency payments. India is the world's largest remittance recipient.

Wallet and unified payments interfaces are gaining popularity and are becoming one of the most pattern ways of digital transactions in India. There are many digital apps which are playing an important role as a booster to promote „cashless India". The attractive and safe features of the apps like easy and secure transactions, fast, multiple options benefits that make waves in the Indian FinTech industry. In addition to this, artificial intelligence (AI) and biometric will bring positive implications on customer personalisation payment and store multiple accounts in a single digital wallet.

Profitability, costs, liquidity, and access to credit are all aspects of the business that fall within the purview of financial management. FinTech has revolutionised the financial sector where users find drastic changes in the way they handle their finances. Banks and financial institutions have started managing finance digitally. Robo- guides or advisers also

help customers to manage finance by providing automated algorithms-derived financial planning service.

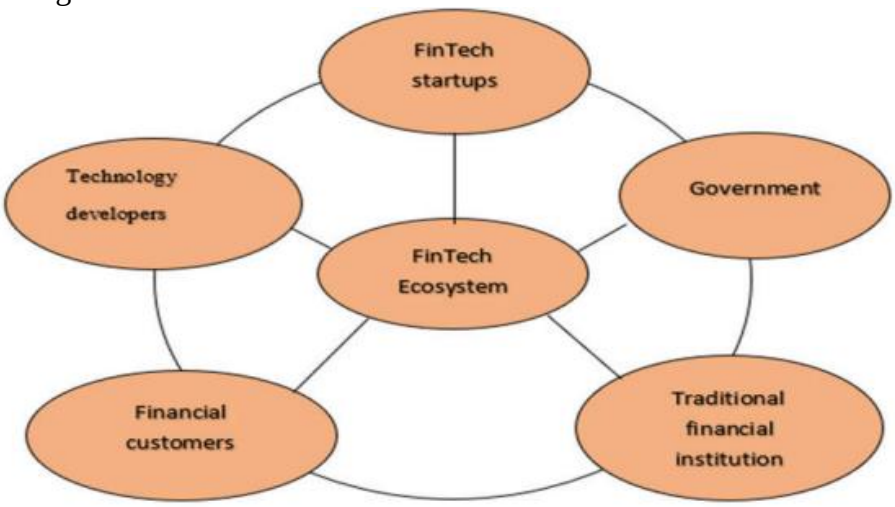

Figure 1.12: Fintech Ecosystem

Source: (Lee and Shin, 2018)

1.7.1 Regulatory Framework for Fintech in India

In past few decades, we have seen massive progress in field of financial technology. Quick development in smartphone mobile banking services enormous expansion of India's digital payment market can be attributed to the government's encouragement of this trend adoption of FinTech Products and devices by customers. Today, it has become difficult for regulators to anticipate the implications of FinTech 18 innovations on the various stakeholders and capital market of India. FinTech has been bringing profound changes such as digitalisation and smartphone applications by customers to deal with banks and non-financial institutions. Applications of FinTech innovations are also bringing systematic risks and pitfalls to users. While the IT related dangers are undeniably multiplied under FinTech. The entire issue of FinTech, particularly those of regulatory concerns, must be addressed on a priority basis by the government of India. In the present circumstances, it

is an urgent need to develop an appropriate regulatory strategy to minister the products, services, devices and tools of FinTech. On the other hand, multiple regulatory authorities, uncertainty coupled with security concerns are the critical challenges to the government of India and various stakeholders.

Regulatory agencies who frame rules and regulations to minister the working of FinTech in India:

- **Reserve Bank of India:** RBI is primary regulatory authority in India to administer working of FinTech. At the Initial stage of FinTech, RBI follows the light touch approach to handle the issues of FinTech brought drastic changes in financial transactions and as a result, RBI has responded very quickly to respond to capital market changes & technological advances in operations of FinTech. Last few years, lot of changes have been made in rules and regulations made by different legal agencies to regulate the products and services offered by FinTech.
- **NPCI:** It is a quasi-regulatory body in India that oversees the operation of retail payments and settlement systems. The RBI and the Indian Bank Association have collaborated on this initiative. The fundamental goal of this regulation is to provide a modern & reliable payment & settlement system in India. UPI payments are governed by NPCI through periodic procedural standards in India.
- **UIDAI:** The UIDAI is largest identity identification project in India. This central body will frame the rules for governing the uses of Aadhaar by FinTech. It is used as means of customers' on- boarding verification. Fintech companies have created new cost-effective ways to use the current Aadhaar ecosystem to regulate customer 19 identity verification through QR code & Masked Aadhaar files, which have grown primarily as a market standard. For non-banking players, RBI has approved digital KYC as off-line KYC options.

- **Ombudsman scheme four digital transactions:** To address the customers complaints regarding the deficiencies in products and services offered by the FinTech players, RBI has mandated FT players to establish adequate mechanisms to address the issues of customers. On 31st January, 2019, RBI appointed RBI officers as ombudsman to regulate the digital transactions of FinTech. He has power to receive the complaints from users of FinTech regarding unauthorized money transfer, failure to initiate refunds and deficiency of service. In addition, The Reserve Bank of India (RBI) has published guidelines that reduce consumer liability for fraudulent electronic money transfers.
- **Key regulations governing FinTech in India:** In India, there is no single authority which uniformly governs the various FinTech products and services launched by banks, financial institutions, financial entities and non-banking financial companies. The regulatory roadmap governing FinTech is largely fragmented. Increasing FinTech innovations in India has emerged as a potentially challenging to navigate the regulatory roadmap regulating financial markets created by fintech which mainly consists of:
  1. **The payment settlement systems act, 2007:** This statute governs the reserve bank's authorization, regulation and supervision of payments. A payment system refers to a structured mechanism that enables the transfer of funds from a payer to a beneficiary, specifically in relation to the processes of clearing payment, settlement, or both. It is important to note that this definition excludes any involvement of stock exchanges or the clearing organisations that are founded under them. The Provisions of act forbids the establishment of a payment system without RBI approval.
  2. **Banking regulation act 1949:** Section 6 of this act forbids the banking company not to engage in any form of business other than those referred to that section. According to Sec.35 A of Act, RBI is authorised to issue directions to banking

companies in public interest as well as to compliance banking policies declared by the government of India from time to time. 20 Section 17 of the payments and settlement systems Act, 2007, gives power to RBI to issue directions related to the payment system and the system's participants.

3. **NPCI guidelines governing UPI payments:** NPCI provides the bank's participating in UPI access to a system where users can download reports, raise chargebacks, upgrade the status of UPI transactions etc. UPI payments in India are governed by NPCI which is a specialised division of RBI of India. The main function of NPCI to supervise retail payments and settlement systems in India. UPI. The "National Payments Corporation of India" has approved the use of technology in mobile UPI payments services provided that certain eligibility and procedural requirements are met.
4. **Guidelines governing payment aggregates / getaways:** RBI of India constituted a high-level committee to look into the deepening of digital payments under the chairmanship of Sh. Nandan Nilekani in January, 2019. This committee after consultation with stakeholders submitted a report on17 march, 2020. RBI circulated guidelines governing payments aggregates/gateways. According to new guidelines issued regarding the payment aggregators and payment gateways on 21 March, 2021 who stored payment card data in India. These new guidelines have a backing of a legal system which is applicable to payment intermediators.
5. **NBFCS:** At present, NBFCs have become prominent in a wide range of activities like equipment lease finance, loans, investments and hire-purchase finance, etc NBFCS are governed and regulated by RBI act,1934. Periodically, the Reserve Bank of India (RBI) releases master directives and disseminates them to regulate the licencing and operation of Non-Banking Financial Companies (NBFCs) in

India. The Reserve Bank of India (RBI) has implemented certain criteria to determine the classification of a firm as a financial services company, hence necessitating the acquisition of a licence. In September, 2016, RBI issued the key regulations governing non-deposit taking companies & deposit taking NBFCS.

6. **Guidelines regulating P2P lending platforms:** On 10 august, 2020, Government of India issued notification that regulates all P2P lending platforms by RBI. P2P lending is a monetary arrangement between two individuals without the interference of any intermediary, thereby, removing margins 21 made by financial institutions. The RBI in October 2011 formally recognised P2P lending in India as NBFC -P2P lending. In 2017 RBI issued guidelines of P2P that are very comprehensive including fund transfer mechanisms, data security, business continuity and other important parameters.
7. **Anti-money laundering:** Prevention of "money laundering act, 2002", prevention of money laundering rules, 2005 & RBI"s master directors on KYC,15 February, 2016 and PMLA, 2002 was subsequently amended in 2012,2015,2019,2020 are there to take steps to regulate the money laundering. These regulators are primarily responsible for overseeing and enforcing anti-money laundering measures, such as KYC norms / anti-money laundering (AML) standards. Financial institutions in India are required to report any suspicious account openings or transactions to the director of the country's financial intelligence unit. In accordance with section 35 A of the Banking Regulators Act of 1949 and rule 7 of the Prevention of Money Laundering Rules of 2005, the RBI issues guidelines from time to time. The Anti-Money Laundering Regulations and the Banking Regulation Act both provide penalties for noncompliance.

8. **Primary data protection measures in India:** Currently India lacks specific legislation protecting privacy and security of data. However, the Indian data protection or information technology act, 2000, as well as Indian contract act of 1872, are important acts to protect privacy and security of data given by customers. Section 43-A of the information technology act, 2020 provides for payment of compensation by a corporation in the event of ignorance in adopting a reasonable security and privacy of data given by customers. According to section 72-A of Indian Contract act, 1872, the penalty for willful and malicious disclosure of private information in violation of a legitimate contract is three to five years in prison.

The Bureau of Indian standards in around mid-2021 issued new standards for data privacy assurance i.e. ISI 7428. It is divided into two sections: the prescriptive portion, which contains the standards and the suggestive part which contains particular practices to supplement the prescriptive part's criteria. On February 20, 2021, Ministry of Electronics and Information Technology of India issued new guidelines on digital media ethics code/rules.

According to the new intermediary laws, internet intermediaries must keep information about all users obtained during registration for 180 days, even if the 22 registration is cancelled or withdrawn. WhatsApp has challenged these laws in the Delhi High Court, claiming that these rules violate an individual's fundamental rights to privacy and freedom of speech & expression. This matter has yet to be heard by Delhi High Court. The Personal Data Protection Bill, 2018, is a draft of a bill on data protection that India has yet to pass. The “General Data Protection Regulation” is a piece of legislation enacted in 2018 to protect the personal data of all European Union members. GDPR applies to Indian businessmen who sell products or services in the EU, process personal data transferred from the EU, or profile EU residents' personal data.

1.8 Challenges Regarding Government Regulations

In a recent address, "Shakti Kant" Das, governor of the RBI, discussed the merits and perils of Fintech. He praised the progress made in banking technology and trade finance. Emerging alternatives to conventional loan and capital-raising models may alter the competitive landscape for established financial intermediaries. Crowdfunding, the practise of soliciting a large number of small investments online, is still in its infancy in India. Small and medium-sized businesses may benefit from the increased availability of credit made possible through peer-to-peer (P2P) financing. Eleven companies have been granted permission to run the P2P network. The Reserve Bank has also authorised the launch of operations for seven digital-only NBFCs. Although they are app-based businesses, we have ensured that there is a real location where customers can go if they have any questions or concerns. New and complex regulatory requirements are inevitable due to innovative nature of fintech products and services. However, in India, these requirements are hampered by a combination of factors, including a lack of government support and incentives to safeguard consumers' interests and a conservative attitude on the part of merchants and users who deal with cash and online transactions on a daily basis. Yadav and Shanmugam (2022) Similarly, the current regulations in Indonesia are insufficient to adequately protect customers during the transaction of loan fintech (Yuniarti and Rasyid, 2020). Kenya does not have a comprehensive law or a single regulator with clear mission to control digital lending sector. However, the industry is partially regulated by a number of different agencies and regulations. Kyari and Akinwale (2020) argues that the appropriate regulatory measures should be applied by the competent regulatory agency to inspire trust and confidence among consumers. This would increase the number of Nigerian consumers who use Fintech. Therefore, in order to increase public trust in the lending fintech company, it is necessary to develop extensive regulations that regulate this. Credit

risk, regulatory risk, operational risk, and data security are some areas of concern in the fintech industry. On August 10th, 2022, the RBI revealed a new regulatory framework for digital lenders in India. According to the new rules, only RBI-regulated companies (REs) or those permitted by law may process loan disbursements and repayments; all other entities are prohibited from participating in either process. Therefore, these standards ensure that borrowers' interests are protected within the framework, which will boost consumer confidence in digital lending ecosystem. The concept of a “First Loss Default Guarantee” is 'under examination' with RBI, and the government may write legislation to prohibit unlicensed lenders. The RBI has given its preliminary blessing to a regulatory framework for online aggregators of loan products, with the caveat that DLAs adhere to responsible advertising and marketing guidelines and avoid making deceptive promises.

The FinTech sector has experienced substantial growth, leading to a transformation in the delivery and consumption of financial services. Nevertheless, the intricate terrain of governmental regulations poses a formidable challenge for this swiftly advancing sector (Guild, 2017). Government regulations, which are designed to promote stability, safeguard consumer interests and uphold financial integrity, may inadvertently impede the progress and inventive potential of FinTech enterprises.

The regulatory landscape pertaining to the FinTech sector in India is characterised by its multifaceted nature, wherein several regulatory bodies assume responsibility for distinct facets of financial services oversight. The “Reserve Bank of India” (RBI), “Securities and Exchange Board of India” (SEBI), “Insurance Regulatory and Development Authority” (IRDAI), along with other pertinent regulatory bodies, assume pivotal roles in influencing the trajectory of the industry. The challenge at hand is rooted in the necessity to effectively manage the intricate equilibrium between promoting and nurturing innovation on one hand, while simultaneously ensuring the protection of

consumers & stability of financial system on other (Belozyorov, Sokolovska and Kim, 2020). One of the primary obstacles encountered by the FinTech sector pertains to the absence of standardised regulations across various segments and jurisdictions. The domain of Fintech encompasses a diverse range of services, which encompass but are not limited to digital payments, peer-to-peer lending, robo-advisory services cryptocurrency trading. The operation of each of these segments is subject to unique regulatory frameworks, thereby introducing intricacies for companies that provide a range of services. The lack of universally established and consistent guidelines frequently results in regulatory arbitrage, a phenomenon wherein companies opt to conduct their operations in jurisdictions that offer more advantageous regulatory frameworks. This practise hinders the establishment of a fair and equitable competitive environment (Suseendran *et al.*, 2020). The emergence of cryptocurrencies and blockchain technology has introduced a distinctive regulatory quandary. The inherent potential of blockchain technology to augment transparency and security has garnered significant recognition within the academic and industry domains. However, it is important to note that current status of cryptocurrencies, which are often built upon blockchain frameworks, continues to be characterised by a certain level of ambiguity and uncertainty. The Reserve Bank of India (RBI) has exhibited a fluctuating stance towards cryptocurrencies, vacillating between a cautious acceptance and a complete prohibition. This oscillation has engendered a climate of uncertainty among businesses and investors operating within the cryptocurrency domain. The presence of regulatory ambiguity poses a significant obstacle to the expansion of legitimate blockchain-based solutions and services, which have the potential to bring benefits to a wide range of sectors beyond the realm of finance. The acquisition of regulatory approvals and licences poses a notable challenge in this context. FinTech startups frequently encounter protracted and intricate approval processes, resulting in significant delays in the introduction of pioneering

products and services (Dabbeeru and Rao, 2021). The conventional regulatory framework, which was originally devised for traditional financial institutions, may not be optimally aligned with the dynamic and rapidly evolving landscape of FinTech startups. The impact of this phenomenon extends beyond the mere acceleration of product release timelines, as it also imposes constraints on the capacity of nascent companies to engage in iterative experimentation with their offerings. The "Know Your Customer" (KYC) process is crucial element within the realm of financial services, serving as a means to verify the identity of customers. However, advent of the digital era has presented a set of unique challenges to this process. The presence of a physical component in the KYC verification process introduces a notable degree of friction within the user onboarding journey for digital platforms. Regulatory endeavours aimed at streamlining and digitising the KYC procedure, such as the implementation of video KYC, represent commendable strides towards enhancing the process. However, it is imperative to continue fostering innovation in order to achieve an optimal equilibrium between rigorous identity verification protocols and a frictionless user experience.

Cross-border transactions and the adherence to international regulations present supplementary complexities. As the FinTech industry continues to expand its reach beyond national borders, it is imperative for companies operating in this sector to prioritise compliance with foreign regulations. The allocation of resources and the intricacies involved in this process can pose significant challenges, especially for nascent enterprises grappling with constrained resource pools. The facilitation of harmonised international regulations and the optimisation of cross-border compliance processes have the potential to foster the expansion of Indian FinTech enterprises on a global scale. The regulatory challenges pertaining to this issue are intricately intertwined with the considerations surrounding data protection and privacy. The surge in the volume of sensitive consumer

data being handled by FinTech companies can be attributed to the growing digitization of financial transactions. Achieving a harmonious equilibrium between harnessing the potential of this data for ground-breaking advancements, while concurrently upholding the principles of safeguarding data integrity and preserving individual privacy, presents an ongoing and intricate predicament. The forthcoming enactment of the Personal Data Protection Bill will have significant impact on data governance framework for FinTech enterprises and their clientele. In conclusion, it is evident that the FinTech sector in India encounters a diverse range of challenges that arise primarily from government regulations. The dynamic and multifaceted nature of FinTech services, in conjunction with the continuously evolving technological environment, necessitates the establishment of regulatory frameworks that possess qualities of flexibility, adaptability and a supportive atmosphere for fostering innovation. The task of achieving a harmonious balance between promoting innovation and ensuring consumer protection and financial stability is a multifaceted endeavour that presents a significant level of complexity. The sustainable growth of the FinTech sector in India necessitates several key factors, including clarity in regulations, uniformity across segments, streamlined approval processes and a forward-looking approach to emerging technologies such as blockchain and cryptocurrencies.

1.8.1 Challenges of FinTech sector

The rate of adoption of these digital technologies was unprecedented, and it only sped up as the CoV19 pandemic progressed. Evidently, Asia was much ahead of the rest of the world. Financial enterprises in the region demonstrated genuine disruption by providing banking services to previously unbanked segments of the population, whereas traditional institutions on other continents were left with potentially obsolete legacy technologies and unable to serve the customers they had before (Wu and Kao, 2022). In order to survive and prosper in the future, traditional banks in Asia will need to catch up to

the fintech upstarts and Big Tech giants who have already begun to grab market share in the region. They can do this through making use of APIs, which have allowed for more rapid transactions. To further enhance the customer experience and financial accounting in areas such as payments and credit scoring, cloud computing has enabled the storing and sharing of data. Although P2P lending improved service delivery at lower cost, it introduced new sources of credit risk and, by extension, new sources of systemic risk as one of the outputs of the Fintech paradigm (Ahelegbey, Giudici and Hadji-Misheva, 2019). Suryono, Purwandari and Budi (2019) Information asymmetry, assessing borrower scores, moral hazard, investment decisions, rules and policies, and the practicality of the P2P lending platform are the six recurring themes of P2P lending challenges. Similarly, Indian FinTech start-ups face challenges with transparency of regulatory issues and hiring technical staff. Increases in digital credits have been linked to rising NPLs as early as before the COVID-19 problem. But the digital knowledge gap and digital implementation, Challenges include high initial investment, difficult system integration, data security and privacy concerns, online fraud, unequal power dynamics, platform domination, and a continuing digital divide and related infrastructural problems (Buteau, 2021). The most difficult task in India is transitioning clients from analogue to digital banking methods, and linking the country's many unbanked citizens to the financial system at large. The world's financial inclusion rate has risen from 51% in 2011 to 69% in 2017, and a major challenge for banks is finding the best way to communicate with their various customer demographics to encourage them to switch to online banking. S. J. Kaur *et al.* (2021) accordingly, Financial institutions (FIs) lose visibility as a result of cashless disruptions. Primary worry is how digital lending may affect the security and reliability of credit markets (and by extension, the broader financial systems). Inexperienced new entrants exploit regulatory arbitrage, although they typically have no (or just a partial) need to report to credit reporting

or supervisory organisations, leaving the market vulnerable (Sommer, 2021). Consumers' preferences are shifting banking transactions from conventional financial institutions to the emerging Fintech loan, and FIs are feeling the effects of this shift in the form of lower profits and increased difficulty competing and cross-subsidizing individual financial products. On the other hand, we used to google scholar and the SSRN database to track down the appropriate scholarly articles. Papers with significant findings on how fintech initiatives have altered the banking and financial services sector were included in the final pool. Findings – According to this study, fintech companies may steal away some business from banks, but they won't be able to completely replace them. In order to stay competitive with fintech companies, however, banks will need to speed up their embrace of new developments and cutting-edge technologies. Banks and fintech firms are encouraged to form mutually beneficial strategic alliances and collaborate on innovative financial services. Invention and worth - The present research add to understanding of influence of fintech firms' growth on banking industry in light of increasing opportunities & risks for financial sector. Future research on effects of fintech on societal and economic well-being can benefit from the paper's suggestions as well (Zveryakov *et al.*, 2019). Due to individuals' greater trust in banks than in Fintech firms, qualitative research in financial markets suggests it is highly improbable that fintech firms will soon replace traditional banks. The FinTech sector has witnessed remarkable growth in recent years, revolutionizing the financial landscape by offering innovative solutions and services. However, this rapid evolution hasn't come without its fair share of challenges. These challenges span technological, regulatory, security and societal dimensions, impacting various stakeholders including consumers, companies and regulatory bodies.

Technological challenges stand out prominently in the FinTech sector. The relentless pursuit of innovation often introduces complex technological infrastructures, leading to

interoperability issues between traditional financial systems and emerging FinTech platforms (Kandpal and Mehrotra, 2019). Integrating legacy systems with new technologies can be cumbersome, leading to operational inefficiencies and compatibility concerns. Moreover, the fast-paced development of technologies like blockchain, artificial intelligence (AI) and machine learning demands a skilled workforce that is often in short supply, resulting in a skills gap that poses significant hurdles to the sector's growth.

The FinTech industry encounters a significant obstacle in the form of the regulatory framework. With the emergence of novel financial solutions, regulatory agencies are confronted with the challenge of effectively managing the dual objectives of promoting innovation while ensuring the preservation of financial stability and protection of consumers (D'Silva *et al.*, 2019). The absence of uniform legislation across various jurisdictions may give rise to legal ambiguities and impede the smooth functioning of cross-border activities, which are of paramount importance for the worldwide scope of FinTech services. Achieving an optimal equilibrium requires the collaborative efforts of regulators, industry participants and politicians in establishing a regulatory framework that promotes innovation, while also safeguarding consumer confidence and the integrity of the financial system.

The FinTech industry is significantly impacted by the presence of security issues. The prevalence of cyber risks poses an ongoing concern in the realm of FinTech services, given their reliance on digital transactions and data exchange. The industry has become an appealing focal point for hackers who want to capitalise on weaknesses found inside developing technology. The occurrence of data breaches and incidents of identity theft have engendered scepticism over the efficacy of security measures in online financial transactions, hence diminishing customer trust. Therefore, it is essential for FinTech businesses to allocate significant resources towards implementing cybersecurity measures,

establishing strong authentication processes and using encryption methods in order to strengthen the security of their platforms and mitigate the risk of possible breaches (Agarwal, 2018). The issue of financial inclusion is prominently highlighted within the FinTech industry. The use of technology has promise in expanding access to financial services for marginalised communities; nonetheless, there exist some obstacles that need attention and resolution. In spite of the widespread availability of smartphones and internet connection, challenges persist in terms of digital illiteracy and limited technological access, particularly in rural and isolated regions. The desire to democratise financial services via FinTech necessitates the design of user-friendly interfaces that accommodate varied user groups, including those with low technical experience.

The industry is also confronted with problems related to scalability and sustainability. Numerous Fintech businesses begin their operations by introducing pioneering solutions that cater to certain market segments. Nevertheless, when the organisation experiences growth and increases its number of users, the issue of scalability becomes apparent. The goal of ensuring that systems are capable of accommodating higher transaction volumes without affecting the user experience is a multifaceted endeavour. Moreover, the attainment of sustainable development is a formidable challenge, as the difficult task of simultaneously preserving a delicate equilibrium between expansion and profitability, while effectively controlling operating expenses, becomes increasingly complex. Consumer trust and privacy issues continue to be significant obstacles for the FinTech industry. The occurrence of data breaches, infringements on privacy and the improper utilisation of consumer data has prompted inquiries over the extent of control people possess over their personal information. The establishment of a comprehensive framework for safeguarding data security & privacy is necessary in order to preserve confidence in provision of FinTech services. In order to address these issues, it is essential

to maintain transparency in both the gathering and use of data, while also adhering strictly to data protection standards. Finally, the FinTech industry has introduced revolutionary advancements and transformational prospects, but it also encounters a diverse set of complex obstacles. The resolution of these difficulties necessitates the collective endeavours of regulators, industry stakeholders and policymakers. The establishment of regulatory frameworks is essential to ensure a harmonious integration of technological improvements, striking a delicate balance between promoting innovation & protecting the interests of consumers & maintaining financial stability. FFuture trajectory of the FinTech industry will be significantly influenced by the resolution of key challenges like as cybersecurity, financial inclusion, scalability, sustainability and consumer trust.

1.9 Research Problem

In the next 10 years, when you think of a company or bank, would you prefer physical buildings with 24/7 digital access or easy-to-use applications and as little human contact in banking processes as possible? The latter, right?

There are a lot of important concerns that need to be answered and obstacles that need to be overcome as financial technology (fintech) usage increases in India. As fintech continues to rise in India, driven by technical advancement and shifting consumer tastes, its acceptance and integration into the country's financial ecosystem are influenced by a number of crucial obstacles and considerations (Shrivastava, 2023). Understanding the regulatory challenges, infrastructural limits, financial literacy levels, and consumer trust dynamics that create India's fintech sector is crucial for ensuring its sustained growth and good effect. With the hope of illuminating the barriers to fintech acceptance, the infrastructure requirements for its spread, the role of financial literacy, and the elements behind consumer trust, this research seeks to conduct a thorough investigation of these diverse aspects.

There are numerous digital transactions in a day all over the world, most people use the traditional way of technologies. There is adoption of a wide variety of products and services. Many fintech businesses in India and abroad have begun using social networks to assess the suitability of users. Hence, this study focused on the regulatory issues, infrastructure limitation, consumer perception and trust towards the Indian FinTech.

1.10 Purpose of Research

This study focused on the following research objectives:

1. Identify and overcome the regulatory challenges obstructing the adoption of Fintech in India's financial ecosystem.
2. Assess and address the infrastructure limitations hindering the growth and expansion of Fintech in India.
3. Understand the impact of financial literacy on Indian consumers' utilization and comprehension of Fintech services, and implement measures to improve financial literacy for greater Fintech adoption.
4. Analyze the factors contributing to consumer trust issues in using Fintech services in India, and devise measures to build and reinforce consumer trust while ensuring robust data security for Fintech platforms.

1.11 Significance of the Study

The significance of this research rests in its in-depth analysis of the fintech environment in India and its myriad effects on the country's banking system, government, private sector, and individual customers. First and foremost, it elucidates the critical function of fintech in driving digital transformation and expanding access to financial services in India. Policymakers, financial institutions, and entrepreneurs all benefit greatly from a nuanced understanding of fintech uptake, problems, and prospects.

Further, the research demonstrates the regulatory barriers that prevent widespread adoption of fintech, providing important information for policymakers. Regulators can work together to stimulate innovation while protecting consumers provided, they are aware of the unique challenges faced by the fintech industry.

This study also highlights the importance of investing in physical infrastructure to support the expansion of fintech. This discovery has far-reaching consequences for the larger digital agenda in India and the country's attempts to increase financial inclusion.

Individuals and the financial sector may both gain from financial education programmes, as the study's findings show a strong association between financial literacy and the use of fintech.

Finally, the study's analysis of consumers' faith in fintech services offers direction for companies seeking to boost their competitiveness in the sector by prioritising security and trust-building initiatives. In the end, this study helps to improve the financial system in India by making decisions that are more well-informed.

1.12 Research Purpose and Questions

The primary purpose of this study was to examine Fintech in India and how it plays a role in making the financial ecosystem in India. This study also looked into the various regulatory challenges and tactics that arise in the adoption of fintech. Additionally, this study analysed the consumer perceptions towards the fintech in India.

There were several problematic questions that required solutions, in this segment, which are as follows: -

1. What are the main regulatory challenges obstructing the adoption of Fintech in India's financial ecosystem, and how can they be overcome?
2. What infrastructure limitations currently hinder the growth and expansion of Fintech in India?

3. How does the level of financial literacy among Indian consumers impact their utilization and comprehension of Fintech services?
4. What factors contribute to consumer trust issues in using Fintech services in India, and what measures can be taken to build and reinforce consumer trust, while ensuring robust data security for Fintech platforms?

CHAPTER II:

LITERATURE OF REVIEW

This chapter includes the literature review of this research study which analyse the existing studies done on the topic of fintech and other things of this research study. This chapter firstly discuss the theoretical framework of this research and give understandings related to the theory of reasoned action as well as the human society theory. This chapter also included the various literature reviews which are relevant for the topic of this study.

2.1 Theoretical Framework

Theoretical frameworks are essential components of research attempts, as they offer a systematic arrangement of concepts, principles, and models. These frameworks serve as a solid basis for comprehending and explaining particular phenomena or topics under investigation.

1. **The Technology Acceptance Model:** In the study of information systems and the spread of new technologies, the "Technology Acceptance Model" (TAM) has long since been a standard theoretical framework. It was created by Fred Davis in the 1980s and has since been used extensively to learn about and forecast how people and businesses will interact with and make use of technological innovations. According to TAM, the perceived ease of use and the perceived utility of technology are the two primary variables that affect its adoption by a person or an organization (Park and Park, 2020).
2. **Perceived User-Friendliness:** This component of TAM considers how people feel a technology can be used by them. Assessing the ease with which Indian consumers and financial institutions may use fintech platforms and their services is relevant in the context of fintech. Factors like transaction ease, user interface design, and user

training become crucial. The adoption rate of financial technology is higher if consumers find the platforms intuitive.

3. **Usefulness Perceived:** The degree to which an individual feels that embracing an innovative form of technology would improve their efficiency and effectiveness is the emphasis of this dimension. In the context of fintech in India, this would look at whether or not individuals and businesses see fintech solutions as helpful in executing and managing financial transactions and investments. Perceived usefulness is significantly influenced by factors such as convenience, cost-effectiveness, and the capacity to address certain financial demands.
4. **The Ecosystem Evolution Model:** is a theoretical framework that throws light on how complex ecosystems evolve through time. These models useful for investigating fintech's impact on India's financial system. This model shed light on the development of fintech and its place in India's monetary system as a whole. The ecosystem lifespan, often known as the ecosystem maturity model, is a popular framework. Emergence, development, maturity, and decline are typical phases in this concept. Using this framework, users can trace the development of fintech acceptance and integration into India's financial system through time. One may, for instance, look at the origins of fintech businesses in India, the difficulties they encountered, and the solutions they developed (Castro, Rodrigues and Teixeira, 2020).

Partnerships, competition, and regulatory shifts are all taken into account by ecosystem evolution models. Someone may examine how these elements have impacted the development of fintech in India. How, for instance, have partnerships between fintechs and more conventional banks influenced the industry at large? Has the adoption of digital payment legislation, for example, helped or hurt the expansion of fintech? Using models

of ecosystem development, you may provide a systematic analysis of the underlying dynamics of the Indian financial system. As a result, you may not only better understand how fintech has evolved through time, but also anticipate its future path and any obstacles it may face. To better understand the complex relationship between fintech and India's larger financial ecosystem throughout time, this article gives a solid analytical framework for your dissertation.

2.2 Theory of Reasoned Action

The Theory of Reasoned Action is a social psychology model that tries to predict human behaviour by taking into account people's views and subjective norms about a certain action, which affect people's plans and actions (Roh, Park and Xiao, 2023).

1. **Attitudes toward Fintech Adoption:** Attitudes play a crucial part in determining whether or not individuals adopt financial technology solutions.

   The advantages and disadvantages that people see while using digital financial services are reflected in their attitudes towards fintech adoption. As a result, more and more people in India start to see the value in using fintech to make their financial lives easier. These kinds of optimistic attitudes are often influenced by one's own life experiences and the impression that one's financial situation is improving. Cultural and demographic considerations should be taken seriously while researching attitudes towards fintech adoption. India is a large country with a wide range of people who all have different experiences with technology and financial literacy. Significant differences in perspective on fintech exist across various population subsets. These attitudes may change depending on a person's age, level of education, money, and whether they live in a city or a rural area (Huei *et al.*, 2018).

It is possible for people's perspectives to shift over time in response to new information, educational opportunities, and regulatory mandates. By increasing confidence in fintech platforms, regulatory measures to expand access to digital financial services, for instance, might affect attitudes. This knowledge may help stakeholders, such as policymakers and fintech firms, develop strategies that are in line with the general attitudes and expectations of customers in India. Understanding the dynamics of fintech's incorporation into the financial ecosystem requires an examination of attitudes towards adoption in India. These attitudes may change over time, are impacted by demographic variables, and include both positive and negative assessments of potential outcomes.

2. **Subjective Norms:** It is crucial to appreciate the social impacts and normative expectations that affect people' choices towards fintech adoption by gaining an awareness of subjective norms. When discussing the adoption of fintech solutions, "subjective norms" relate to the perceived social pressure and influence from family, friends, and larger sociocultural networks. These norms may have a substantial effect on a person's decisions in India because of the country's focus on family and community. If a person's immediate circle of friends and family members are heavy users of fintech services, that person may feel social pressure to join the trend. The norms of digital financial inclusion may be influenced by government efforts and campaigns. People may feel more pressure to comply with societal norms if there is widespread support for using fintech to expand people's access to and control over their financial lives (Belanche, Casaló and Flavián, 2019).

   It is important to note the importance of subjective norms in gaining insight into the spread of fintech in India. They include influences from one's family, friends,

and the larger community. Understanding the role of subjective norms in the Indian financial ecosystem may shed light on its complexities and give significant insights for policymakers and fintech businesses attempting to negotiate these social dynamics.

3. **Actual Fintech Adoption Behavior:** This demonstrated the growing popularity of fintech among Indian consumers and financial institutions. Individuals' actual fintech adoption behaviour describes how they really go about making use of fintech tools and services. This encompasses the use of various fintech applications for things like managing one's accounts, making digital payments, and investing. Because they reveal the actual effects of fintech on people's daily life, understanding these behaviours is vital. Data on the adoption rates of various fintech services among various subsets of the Indian populace might be collected as part of your study. This might help you learn which services are popular and which ones could need some work (Irimia-Diéguez, Velicia-Martín and Aguayo-Camacho, 2023).

   A similar point may be made about financial institutions; their actual fintech adoption behaviour includes implementing fintech solutions. To better serve their customers and reduce unnecessary internal procedures, banks may work with fintech firms. The degree to which fintech is becoming a cornerstone component of the Indian financial ecosystem may be gleaned from an examination of how conventional financial institutions are adjusting to new developments in the sector.

2.3 Human Society Theory

"Human society theory" is a broad term that refers to different sociological and cultural viewpoints that try to understand, explain, and analyse the structure, dynamics, and behaviour of human societies, their institutions, and their relationships. These

perspectives often look at things like culture, social norms, and power dynamics (Ignatyuk *et al.*, 2020).

1. **Digital Financial Inclusion and Social Impact:** Examining the "Digital Financial Inclusion and Social Impact" is an important field of study. The emergence of fintech as a disruptive force with the ability to revolutionise India's financial environment and increase the country's population's access to financial services is exciting. This research gathered, fintech has been a major driver of progress towards greater financial inclusion in India. It's helped underprivileged people, particularly in rural regions, get access to banking and other financial services that formerly required a more established physical presence. Those who did not have access to traditional banking institutions may now participate in the financial system via mobile banking applications, digital wallets, and P2P lending websites. Having easier access to banking services has the ability to enhance people's standard of living, cut poverty rates, and stimulate economic growth (Arner, Buckley and Zetzsche, 2018).

   But digital financial inclusion's effects extend beyond the economy. Also included is the promotion of user financial knowledge and self-determination. Many modern financial technology firms provide their customers with guides, calculators, and other resources to assist them better understand their finances. As a result, people and communities will be better able to manage their finances. To guarantee that fintech solutions are useful in India's complex society, study found that it's crucial to take into account regional differences and specific requirements. The potential of fintech is enormous, but in order to realise its full potential, it is vital to overcome the specific difficulties and openings posed by India's cultural setting.

2. **Consumer Behavior and Trust in Fintech:** This study of the effects of fintech on consumer behaviour and trust in India's financial ecosystem leads to interesting facts into how people in India are adjusting to these innovations despite worries about security and trust. To begin, it cannot be denied that changes in consumer behaviour are occurring. People's approaches to financial management have changed as a result of the growth of fintech services. The use of digital payment systems, such as mobile banking applications and digital wallets, and online investing platforms, is on the rise. Consumers, particularly younger generations comfortable with new technologies, are catching up to these convenient tools. One of the main reasons for this change is the ease, availability, and swiftness made possible by fintech (Roh *et al.*, 2022).

   This adoption is not without its difficulties. The level of trust between a business and its customers is very important. Indians are wary of exposing their financial information to up-and-coming digital firms due to the country's long-standing reliance on traditional banks. Gaining and keeping customers' confidence requires fintech businesses to take extra precautions to protect their customers' personal information. Consumer behaviour in the fintech industry in India is clearly dynamic and complex. Understanding and managing these complex dynamics is crucial to the effective integration of fintech into the financial ecosystem.

3. **Fintech and Job Market Impacts:** The job market has been profoundly impacted by fintech's rise in India. On the one hand, it has helped to create jobs, especially in the software development, data analysis, cybersecurity, and customer service sectors of fintech organisations. The expansion of fintech has also inspired new company creation, with a subsequent increase in local employment opportunities (Ojha *et al.*, 2023).

On the other hand, some people are worried about losing their jobs, particularly in more conventional banking settings. As fintech platforms automate a variety of financial services, a number of mundane administrative duties are becoming unnecessary. The effects vary by industry; for example, the rise of digital payment systems has changed the payments sector, affecting job opportunities in conventional banking and cash handling.

The job market may also be affected by fintech's function in promoting financial inclusion and economic expansion. Fintech has the ability to boost economic activity and, by extension, job creation in fields like retail, e-commerce, and agriculture by making financial services available to disadvantaged communities.

In order to give a detailed picture of how fintech is influencing the Indian job market, this study conducts a thorough examination of these elements using empirical data, case studies, and interviews with industry professionals. The ultimate objective is to provide insights that may assist policymakers and other interested parties in maximising the employment benefits and mitigating the risks associated with fintech's rapid expansion.

2.4 Evolution of Fintech in India

According to Gupta, Agarwal and Agarwal (2023) aimed to use an exploratory research approach to examine the growth and development of FinTech in India, with a special emphasis on the pandemic of COVID-19. The term “FinTech” is refer to the implementation of technical improvement in the financial sector. The term "FinTech" is shorthand for "financial technology," which is the utilization of new methods and tools in the financial sector to create revolutionary business practices and products. This has resulted in the growth of modern services, expanded money markets and the launch of innovative financial institutions. To become a multibillion dollar "unicorn," India's

FinTech companies will soon have access to a thriving environment. The Fintech industry in India has several goals, including regional and global growth. As a result of the expanding mobile phone and online shopping industries in India, financial technology has seen explosive growth in the country's cash-based economy.

A quantitative method was utilised by Nenavath and Mishra (2023), to examine the impact of environmentally friendly finance and Fintech on GDP growth over time. The analysis centred around the data from the states in India obtained between 2010-21. This research implies a cluster regression technique to analyse the connection among green finance, economic growth and fintech innovation using a two-step GMM ("Generalized model of moments"). Green finance, according to the results of this investigation, provides far-reaching advantages for high-quality economic growth, with significant impacts on financial framework, financial effectiveness and the development of quality environmental protection. Fintech might not have a major impact on the link among environmentally friendly finance and economic productivity, but it does magnify the already significant influence that green finance has on the monetary system and environmental protection. The outcomes of the current study inform policy proposals for legislative bodies and the Government of India.

By examining the expanding database of research on FinTech-enabled services and the benefits and drawbacks authors provide for Indian financial institutions, Virdi and Mer (2023) aimed to fill that information vacuum. The growth of FinTech has allowed previously unimaginable numbers of new companies to join the financial services industry, especially new businesses, BigTech and emerging banks or insurgent banks. Based to the findings, Fintech in India enables a wide variety of service options. Banks, virtual currencies, insurance, wire transfers, mobile banking, private finances, discretionary spending, finances, alternative lending and payment processing are all examples. Since

FinTech companies are regulated to the same extent as banks, the playing field is levelled. Non-bank FinTech companies may face battle against traditional banks in certain product categories where success is uncorrelated with what sets banks apart (i.e., their ability to accumulate deposits and the collaborative advantage it affords them with lenders).

In this study, Arora and Madan (2023) set out to learn what drives the Fintech sector and where it's headed in the future. The fast expansion of fintech may be attributed to several causes, including government regulation, numerous programmes, customer demands, a cashless society, digitalization, digitization, innovation and beyond. Connections with traditional banks are being developed by fintech businesses as a means of survival and continued competitiveness. India is rapidly becoming a world leader in the e-commerce sector. Almost different company these days appears to be launching an initial public offering. Fintech is a relatively young industry, yet it is rapidly growing in India. The work was based on analyses of existing literature. Utilising secondary data gathered from several academic journals, magazines and webpages (including Forbes magazine, The Economic Times, the RBI Portal and Startup India), it constructs an analytical framework that demonstrates the development drivers of Fintech. The global impact of COVID-19 has been severe. It is incumbent on us to find out how to utilise the difficulties as opportunities for radical new ideas that might catapult us to the forefront of human progress; there is always a bright side to a problem. The fintech industry is like a fruit that matured normally before an epidemic, but then became enormous. Their longevity is ensured by the depth of their roots.

Bhura and Amarjeet (2023) conducted a study and primary aim of the research was threefold. Firstly, it entails performing an exhaustive examination of the extant scholarly literature pertaining to the fintech sector and its impact on the productivity levels of other businesses. Additionally, this study design a theoretical structure and develop a conceptual

model that incorporates the FT sector, other sectors and the notion of efficiency. This study gives a comprehensive conceptual framework that provides a thorough understanding of the fundamental elements and theoretical underpinnings of secondary data sources, including papers, studies and websites. The banking sector and non-banking financial institutions (NBFI) have seen positive impacts, whereas the real estate industry has faced negative consequences.

According to Jhariya, Kushwaha and Puntambekar (2023) research investigated data from 119 different companies from 2019 to 2021. The amount of credit granted by using FinTech will go up by 42% and the number of new lending accounts will go up by 51%. By using modern innovations like machine learning, AI etc., several FT firms have conquered the traditional banking industry. Now more than ever, businesses are looking to the banking sector for financing. A "fintech lending" transaction is any sort of credit extended over a digital medium, such as the internet. FinTech companies help lenders by providing them with digital tools to manage the lending process. There has been a dramatic increase in both the quantity and value of loans made by FinTech companies in recent years. The value of the FinTech credit portfolio rose by 16% year-over-year. The FinTech business now has the biggest deficit growth rates of any sector after the government.

FT has been well-received by the Indian economy and numerous ideas and technologies (Afrin, 2023) are in its favour. From the beginning of the Fintech industry in India, this study's focused on the growth of this sector's contribution to the country's GDP. Fintech companies provide a vast range of banking facilities, including those based on artificial intelligence, block chain technology, remote computing and the analysis of massive datasets. New applications have emerged in recent years, including as software as a service (SaaS), integrated finance and e-wallets. There are several possible drawbacks to

today's developments, including insufficient communication and a lack of suitably skilled technical employees.

The research conducted by Jain and Dhaliwal (2022) aimed to analyse the development trajectory of the FT in India and investigate the future opportunities that may arise in this domain. Through doing a comprehensive analysis of Ring money, it becomes apparent that the Indian market exhibits a significant scale, accompanied by a notable increase in the degree of acceptance among the general population. The fintech industry in India is now seeing a notable expansion and advancement, enabling the delivery of financial services to both customers and banks by using technology. The current approach demonstrates enhanced velocity, cost-effectiveness and inclusivity when contrasted with the traditional global financial infrastructure. It enables the prompt retrieval of data based on individual preferences. In summary, clients possess the capability to use online platforms for the purpose of engaging in financial transactions that align with their specific needs, using the diverse range of instruments made available to them. The fintech industry has seen substantial expansion in recent years, necessitating a comprehensive understanding of its operating processes and its effects on customers who normally engage with financial services.

The outcomes of the “Working Group on Fintech and Digital Banking”, issued by the RBI in 2017, were utilized in a study by Goel, Kulsrestha and Maurya (2022), Their study described the significance of FT inside the financial sector. The study explores closely into the latest developments of Fintech inside the Indian banking system. The results of this research present projections for the industries and users that Fintech will eventually cater to. This research looked at the practical uses of Fintech as well as its historical development and the effects on financial inclusion. The findings suggest that examining the banking sector through the prism of new Fintech has considerable promise.

Aryan Verma and Dr. Shalini Mittal (2022) conducted exhaustive study, collecting and analysing data to generate insightful findings. This research supports the government-led Digital India plan, which aspires to make India into a society where everyone has access to the internet and the economy is based on education and training. It has been noted that the most popular method of financial services in India is now online banking. There are significant obstacles that banks in India must overcome on their path to become fully digital institutions. Providing residents of India with access to credit is difficult because of the country's large unbanked population, which is estimated to be approximately 190 million individuals. The goal of the Computerised India project was to make self-governance a priority and help India become a more open and democratic nation. The Government's Digital India programme seeks to transform the nation's governmental infrastructure by boosting productivity and efficiency via the use of digital technologies. The plan was to promote India as an advanced, data-driven economy that is respected by the international community. Banking in modern culture has seen a dramatic shift due to the rise of online banking. The convenience, speed and ease of digital financial transactions are constantly improving. The word "digital banking" refers to the process of handling all financial transactions digitally, as opposed to using physical papers like cheques, pay-in slips, or Demand Draughts. The groundbreaking development of online banking has freed customers from the inconvenience of physically visiting a bank to complete a variety of ordinary banking tasks. Because of this innovative technology, people no longer have to limit their banking activities to Monday through Friday during business hours. The term "digital banking" refers to the practise of handling monetary dealings and related tasks using electronic gadgets like computers and smartphones.

This study conducted by Srivastava and Chatterjee (2022), The authors of this research analysed the existing literature to determine the impact of Fintech on financial

inclusion and on the attainment of sustainable development objectives. The authors divided the fintech landscape's history into three time periods: 2010-15, 2016–20 and 2021–present. They've talked about the literature that's currently available there and they've come to the conclusion that, despite facing a lot of opposition, Fintech's popularity has skyrocketed over the mentioned time frame, opening up new possibilities for promoting future sustainable international trade and facilitating the SDGs. “The Sustainable Development Goals” have the potential to become the world's primary focus. This means that a stable international monetary system is essential if it is to serve its role in fostering the mobilisation of private capital in service of long-term development and steady economic expansion. Recent technical developments, especially in the financial industry, may be attributed to digital transformation and innovation. These include blockchain, IOT, massive data sets and artificial intelligence. The buzz around Fintech is being closely monitored by traditional banking institutions, government regulators and politicians.

Tripathi and Tabassum (2022) conducted a study with the objective of offering a comprehensive elucidation and evaluation of the determinants that contribute to the growth of the FT sector, along with the challenges and prospects it currently encounters within the Indian context. The FinTech industry in India has seen considerable expansion over the last five years, leading to a sizable market valuation in the billions of dollars. It is expected that this tendency will continue and grow in the near future. Given the current worldwide epidemic, it is worth mentioning that FinTech enterprises have emerged as leaders in an ever more digitalized world marked by a significant increase in digital transactions. Regarding the National Investment Promotion and Facilitation Agency, it is worth noting that the current value of the Indian FinTech sector is at $31 billion. It is predicted to see substantial development, reaching $84 billion by the year 2025. This growth trajectory signifies a compound annual growth rate of 22%. The current state of the FT industry in

India may be linked to a distinctive amalgamation of technical enablers, governmental efforts, economic prospects and other characteristics that are specific to the countries. Over the last five years, a significant proportion of FinTech firms in India, namely more than 67 percent, totaling over 2,100 establishments, have emerged. In the June 2020 quarter, India saw the cessation of 33 novel FinTech investment deals, with a cumulative value of US$647.5 million. By contrast, China's investment over the same time amounted to a sum of US$284.9 million. FT sector in India now has a value of US$31 billion, with a predicted growth to reach US$84 billion by the year 2025.

In the present investigation, the researchers, Singh and Rajni (2022) undertook an examination of the perpetual quandary surrounding the decision-making process pertaining to investment. In an endeavour to address the fundamental inquiry of the investigation, "Is cryptocurrency poised to become the forthcoming monetary platform?", the researchers meticulously scrutinised numerous facets pertaining to extant cryptocurrency platforms. Inquiring about the potential emergence of cryptocurrency as a prominent currency platform, the user poses the question, "Will Cryptocurrency Be the Next Currency Platform?" The authors of this work have made a concerted effort to provide a comprehensive analysis and elucidation of the various topics under discussion. Primary and secondary data are collected in order to fulfil the objectives of this study. The primary location for the execution of the research activities was the city of Delhi. The primary objective of the survey was to assess participants' initial perceptions regarding cryptocurrencies, specifically focusing on their perceptions of its utility, potential for expansion, credibility and future prospects. The research findings indicate a strong indication that cryptocurrency holds significant potential as a future currency framework. This assertion is supported by the substantial influx of digital currencies across diverse networks, the remarkable expansion and adoption of digital currencies and the myriad

possibilities that cryptocurrencies offer. Notwithstanding the recent decline in the value of Bitcoin and other virtual currencies, certain investors exhibit a hesitancy to completely dismiss them as an irredeemable investment.

In this study, Saluja (2022) was conducted in an effort to address a knowledge vacuum in the area of identifying and avoiding fraud and provided the base for future researches in the FinTech sector. This study may be used by businesses and government agencies to adjust their policies and procedures in light of the current international fraud scenario. The research also develops theoretically-based evidences for a better understanding of fraud's primary causes. The researchers draw the conclusion that "Identity Theft" is the most common kind of fraud in the FinTech business and present extensive supporting evidence. Many people are concerned about the prospects of the economy due to the prevalence of "identity theft" and other types of fraud in 2021, which affected customers and companies of all sizes. That's according to a report from IBS Intelligence for the year 2022. "Identity theft" is a common kind of fraud, as reported by the Association of Certified Fraud Examiners. Protective mechanisms against this kind of fraud should be developed by several FinTech firms. Several solutions are proposed to avoid corporate fraud in the FinTech industry, as suggested by the authors.

Rajpal (2022) looked at FinTech companies in India and the Fintech advancements in the country. "Fintech" is the term used in the world of finance. Since Fintech has recently expanded thanks to the efforts of startups, it is important for regulators and market actors to evaluate the positive impact of innovation against the dangers of new financial sector practices. Traditional banking institutions are increasingly using FT. The term “FinTech” is used to elaborate the advancement financial industry's use of new technology. The banking and insurance industry is being more influenced by FinTech as time goes on.

The research conducted by Souza (2022) investigated the future prospects, potential opportunities and existing patterns within the Fintech business in India. The main objective of this work endeavour was to give a comprehensive analysis of the Indian Fintech sector. The term "FinTech" indicate a set of novel digital tools that aim to enhance efficiency and ease of use in financial services. This emerging wave of Fintech is primarily propelled by startup companies, presenting distinct challenges for regulators and market participants as they evaluate the benefits of advancement and stable growth in contrast to the risks associated with venturing into uncharted territory within the financial sector. The financial business is undergoing significant transformation because of advancements in Fintech. Currently, FinTech has permeated several domains, including academics, retail banking, charity fundraising, investment management and other sectors.

Poddar *et al.* (2021), aimed to ascertain the extent of growth observed in the mobile banking sector during the pandemic. The present study also aimed to investigate the extent to which online transactions have provided assistance during the Covid-19. The banking industry has undergone a significant transformation, shifting away from the conventional brick-and-mortar model towards a more contemporary approach known as mobile banking. This innovative method allows people to access their bank accounts virtually via mobile phones, granting them the convenience of conducting transactions and accessing financial services from any location and at any time, with just a simple tap of a button. Mobile banking has revolutionised the way individuals perform various financial activities, such as checking account balances, transferring funds online, making utility payments and accessing other related services. These tasks can now be conveniently accomplished using a basic mobile handset, thanks to the innovative features offered by mobile banking. The continuous innovations and progressions in the IT sector has resulted in numerous enhancements in the design and delivery of products and services within the banking

sector. The utilisation of mobile banking, commonly referred to as M-Banking, has witnessed a notable surge in recent years. This can be attributed to the introduction of various additional services offered by banks, which have greatly facilitated customer convenience. Notably, customers have found it remarkably effortless to execute tasks such as paying their electricity bills, conducting mobile recharges, effecting immediate fund transfers and engaging in a host of other financial transactions. The introduction of diverse mobile banking applications such as “ICICI iMobile, HDFC Mobile Banking and SBI's YONO App” has had a significant impact on the global banking landscape, prompting customers to transition to financial institutions that offer mobile banking services. “The Government of India” has demonstrated its commitment to promoting mobile wallets by collaborating with multiple banks to develop partnership prototypes. This strategic initiative aims to enhance the adoption of M-Banking services among users, thereby fostering greater acceptance of this digital payment method.

According to Chandra Sekhar (2021) Fintech, short for Financial Technology, encompasses a range of software and contemporary innovations used by enterprises to provide enhanced and automated financial facilities. The rapid and groundbreaking advancements, such as Mobile Payments, have revolutionized the manner in which people handle their financial affairs. Customers who are knowledgeable about technology, particularly those belonging to the millennial generation, have high expectations when it comes to the ease, security and scalability of financial activities such as money transfers, lending, loan management and investing. Ideally, they like these processes to be conducted without the need for personal help or physically visiting a bank. FT in India using emerging innovations to tackle financial service accessibility, enhance customer satisfaction, minimise operational challenges and promote the acceptance and utilisation of digital platforms. India is considered to be one of the most rapidly expanding fintech markets

globally. The fintech industry in India exhibited a valuation of US$65 billion in the year 2019, with projections indicating a substantial growth to reach US$140 billion by the year 2023. In addition to several mergers and technical advancements, Indian Fintech firms have ushered in a modern era of banking for the country's vast population of over 63 million businesses and 190 million individuals without access to traditional banking services, who have long been on the fringes of the financial system.

Mohanasundaram, Sathyanarayana and Rizwana (2021), authors of this study made projections on how 5G would affect the future difficulties and opportunities faced by FinTech companies. The banking and financial service business has been shaken up by the rise of FinTech firms, which provide services based on technologies. But the arrival of 5G, the fifth-generation mobile network, has changed the FinTech industry's whole view. It is anticipated that the advent of 5G would give rise to a brand-new FinTech ecosystem in India. The financial and FinTech sectors are poised for a revolution thanks to the 5G characteristics like enhanced mobile broadband (eMBB), lower latency and better security. The widespread use of 5G across a variety of industries presents new opportunities for the fintech sector, or "blue ocean." The capabilities made possible by 5G technology will allow FT firms to dramatically alter the banking and finance industry. The impact of 5G on the FinTech industry has to be evaluated since the technology is on the cusp of becoming the next-G mobile network in India.

According to research Nigam, Ms. Aanchal, Mehdi and Dr. Syed Shahid (2021) An electronic component on the payment is proposed as a disruptive innovation in this study. The study approach used was descriptive in nature and it all began with a look at how various payment systems have changed through time. The data in this research comes from secondary sources and covers the five-year period (2015-2020). The RBI's yearly reports are studied in detail in order to comprehend the specific shifts and consumer preferences

and adjustments. According to the findings, consumers felt the need to adjust to the new digital reality since the traditional payment system lacked several desirable aspects. This study will be useful for analysts of FinTech businesses and anybody interested in the development potential of India's e-payment industry. It will also suggest areas of research that may be conducted experimentally to analyse the many factors customers consider when deciding how to make digital payments.

According to the study conducted by Rajeswari and Vijai (2021) Fintech has emerged as a prominent term within the financial industry, representing the newest advancement in this field. The recent progression of Fintech, mostly driven by startup companies, presents regulatory bodies and market players with many issues. These challenges primarily revolve on striking a balance between the potential advantages of innovation and the potential hazards associated with novel techniques in the finance sector. The abbreviation "FinTech" refers to the progressive technology advancements seen within the financial industry. The financial industry is being significantly influenced by the emergence and growth of FT.

Gupta and Agrawal (2021) worked into the field of FinTech in India and the significant impact it has had on the “Indian Financial Services Sector”. The goal was to acquire a more nuanced comprehension of the ways in which FT innovations are reworking the financial services industry. We used qualitative research techniques to gather empirical data from three distinct categories: specialists from traditional banks, FinTech experienced players and end-users of financial services. Several variables were identified in their research as driving client preference for FinTech over conventional banking in India. Interestingly, we discovered that whereas FinTech adoption was modest before to the global health crisis, it skyrocketed in the wake of the catastrophe. What's more, we found that consumer acceptance of FinTech was correlated with the worldwide spread of the

COVID-19 epidemic. This points to a dramatic rise in the use of FinTech, which bodes well for increased financial participation and development. People in India have access to a wider range of cutting-edge technology, which has had a profound impact on their everyday lives. FinTech, one of these disruptive technologies, has quickly become a major force in India's financial services industry. The delivery of financial services has been disrupted by FinTech startups, which is forcing banks to adapt. Questions concerning the impact of FT on the “Indian Financial System” have been raised in light of the fact that this transition has brought with it its own set of problems and uncertainty. Notably, this vital component has been relatively ignored in the past.

According to a group of researchers N. Kaur *et al.* (2021), This study examines the development of financial services and the rise of FinTech unicorns in India, including Paytm, Policy Bazaar and RazorPay. The concept of a cashless economy is now becoming increasingly popular in India. Because of how well demonetization was implemented, more and more business deals are being conducted online. Payment systems like as Aadhar Pay, IMPS, E-wallets, debit cards, RTGS, NEFT and UPI have quickly adapted to accommodate this new technology. They discover that this is a digital era where everyone is happy to take payments from digital wallets, where one can purchase a book for Rs. 100 with a Rupay card, where the Milkman happily provides his Paytm number and where the goods seller uses QR technology. New frontiers have been opened up by the advent of digitization in the contemporary period. Mr. Narendra Modi has introduced two initiatives—"Make in India" and "Digital India"—that are sure to stimulate economic growth in the country. As a result of digitalization, both immediate and future technical and corporate needs may be met. Current trends in digital technology include the pursuit of features such as increased customer happiness, better customer experiences, quicker production, big data, operational efficiency, etc. The “Digital India Campaign” was

initiated to encourage India's progress in direction of digital independence and stable development. In the context of the Indian economy, "faceless," "paperless," and "cashless" are all terms that have gained popularity.

Painoli, Dhinakaran and C.Vijai (2021) aimed to analyse Fintech, encompasses a range of technological revolution that provide alternative solutions for both traditional banking services and non-banking financial services. This work elucidates the evolutionary trajectory of the fintech business and its current manifestation in the Indian banking system. The data was gathered by RBI, SSRN and KPMG. This study presented an analysis of the historical development of the Fintech industry, as well as an examination of its market size and rate of expansion. The fintech services in India are seeing rapid growth, positioning the country as one of the fastest-growing fintech markets globally. Fintech services has the potential to significantly alter the patterns and conduct inside the financial industry of India.

According to Kaur, Singh and Bohre (2021) research examined the evolution of the FT industry in India and its importance on the banking and non-banking financial services sector. Fintech, an emerging concept in the financial industry, encompasses various subcategories such as wealth management, payments, lending, personal finance and insurance services. The study explores the emergence of FT in India and integration into the existing financial sector. Furthermore, it discusses the digital features and security aspects of fintech services, highlighting their benefits, such as reduced operating costs and enhanced user-friendliness. With India boasting one of the fastest growing fintech globally.

In this study, Kumar (2020), looked at how FinTech affected goods and services the development and profitability of India's commercial banks when the phenomenon first appeared in the country. The panel of Indian commercial financial institutions for 2014-2019 was built by combining data gathered by hand from the banks' annual statements with

information from the RBI of India's dataset. When looking at financial bank performance, the primary outcome of this research indicates a detrimental impact of FinTech goods and services on Indian commercial banks. The same correlation, however, takes on a more optimistic tone when the expansion of financial institutions is included in. As a result of these conflicting results, it is challenging to settle on a definitive response to the primary study issue. In contrast to other experiments, this one focuses on one of the world's fastest growing economies rather than a developed one it adds to the current part of knowledge. Since FinTech may understood in a different way, study results have varied widely. India is one of the nations where the rise of FinTech is being felt most strongly. India has been a leading contender for dominating the international FinTech market and a major centre for the industry internationally.

Arner *et al.* (2020) conducted a study, according to their findings, it is recommended to adopt a strategic approach that concentrates on four fundamental components. The first component necessitates the establishment of a digital identification framework, streamlined procedures for account initiation and electronic Know Your Customer (e-KYC) systems. These efforts are complemented by the second component, which focuses on the development of open electronic payment systems. third component is applicable to the utilisation of the framework that has been created through the implementation of the first and second components. This framework played a significant role in enabling the online dissemination of government services and facilitating electronic transactions. The incorporation of the fourth element, which relates to the structural design of digital trading platforms and structures, aims to facilitate broader participation in economic resources and investment prospects. The implementation of the four pillars represents a substantial endeavour for any nation, carrying the potential to yield profound impacts on the domains

of financing, economies, and our community. This may be achieved via the use of FinTech, promotion of financial inclusion and the pursuit of sustainable and balanced growth.

According to Vijai (2019), Fintech, encompasses a range of innovative solutions aimed at revolutionising the provision of banking services and non-banking finance services. The concept of fintech is currently gaining prominence within the financial industry as an emerging phenomenon. This study elucidates the evolutionary trajectory of the fintech industry and its current manifestation within the Indian finance sector. The fintech industry offers digitalization of transactions, thereby enhancing security measures for users. Fintech services have been found to yield numerous benefits, particularly in terms of reducing operational costs and enhancing user-friendliness. The fintech services in India are experiencing rapid growth, positioning the country as fastest-growing fintech markets globally. The emergence of fintech services is poised to significantly impact and reshape the behaviour of the financial sector in India.

Research conducted by Kaur and Dogra (2019), found that "Fintech" describes a group of new technologies that aim to change the way financial services are delivered by proposing a challenge to the status paradigm. This study analyses the growing phenomena of Fintech by looking closely at 10 of the most successful entrepreneurial endeavours in the Fintech sector. Fintech Asia, an authoritative Fintech-focused news outlet, provided a ratings report from which they drew our sample. This study analyses the ten most significant Fintech efforts in terms of their goals, strategies and historical growth rates in light of their most recent funding rounds. The results demonstrate that neither Paytm Payments Bank nor Fino Payments Bank have disclosed the nature of their funding. A 'D' round of funding was recently announced by Financial Software & Systems and Bank Bazaar. The most recent funding round for Policy Bazaar was announced as an E-type financing.

According to Ramesh (2019) Why banks work with FinTech startups, what obstacles they face and how the ecosystem supports them are all topics explored in this study. Traditional financial institutions are feeling the heat from the proliferation of fintech startups and the expansion plans of the world's digital heavyweights. Customers now expect nothing less than the finest DX across all of the brands they engage with from their bank. The proliferation of data has allowed fintech firms to gain traction by providing consumers with novel, high-quality solutions to their problems in a way that is both easy and inexpensive. As the number of customers who are tech savvy grows, banks and fintech companies should stop seeing each other as competitors and start working together to meet their customers' expectations.

Maindola, Singhal and Dubey (2018) aimed to analyse the emotions of digital wallet users in India across many payment apps. Researchers used the IBM Watson software tools to do sentiment analysis across many social networks, while also considering various payment systems. The authors conducted an analysis of several sources, including records, discussions, messages and other platforms, in which users expressed their opinions about wallets. The analysis covered the period from November 8th, 2016, to the 7th of November, 2017. This survey provides valuable insights about India's preparedness to embrace digital payment methods and the attitudes of people towards such changes. The digital payment sector is seeing rapid growth in the nation at an accelerated pace. Following the implementation of demonetization, a significant transformation in the payment environment has been seen. Several non-banking businesses have emerged in the payment industry as a result of the information revolution, government efforts towards a paperless economy, and the ensuing demonetization event. Since e-wallets have become more popular within the Indian economy, it is important to investigate how consumers feel about them.

2.5 Fintech Solutions and Innovations

Rane (2023) in this study presented a investigation into the revolutionary influence of fintech technologies on management accounting decision-making. Management accounting has been significantly affected by fintech, which is the convergence of financial services and cutting-edge information and communication technologies. This study examines many case studies from different sectors in India to illustrate how fintech solutions have revolutionised the decision-making process elevated productivity, and strengthened the efficacy of management accounting. Organisations may create relevant insights, automate activities, simplify reporting, and build forecasting models with the use of modern analytics, and AI algorithms, as shown in the case studies. In order to succeed in today's data-driven business climate, it is crucial to embrace technology. This study highlights the benefits and difficulties connected with applying fintech advances in managerial accounting.

In this study, Jha *et al.* (2022), The adherence to ESG (environmental, social and governance) norms is increasingly seen as a crucial objective for organisations, garnering support from both investors and consumers alike. FinTech has the potential to assist enterprises in assessing and mitigating their environmental impact, while also enabling investors to direct their activities towards more sustainable assets. The adoption of sustainable practises has emerged as a key focus for several fintech enterprises in contemporary times. Green fintech innovations have emerged as a means of using technology to address banking challenges, hence facilitating the mobilisation of capital to support equitable development efforts. Additionally, it examined the factors that drive the prospective of green fintech, specifically in relation to IoT and AI-enabled methods. Furthermore, it will present an international viewpoint on green fintech and demonstrate the solutions offered by leading.

Srivastava and Dhamija (2022), found that “The Indian banking system” faces several challenges, such as the rapid growth of new opponents, a changing population, rising consumer expectations and evolving regulations and laws. FinTech apps provide one way that technology may help. This analysis of the RBI report of working group on fintech and digital banking showed the significance of fintech to the banking industry. The research is seen to be useful since it provides such a comprehensive overview of the most current tendencies and state-of-the-art advancements in fintech for Indian banking. The Indian banking system has embraced fintech, turning a potential threat into an opportunity for more flexibility and enhanced customer care in certain departments. Authors gave a roadmap for development of fintech and its potential impact on businesses and consumers. It will delve more deeply into the connection between fintech and financial inclusion, as well as the organised development of innovations based on fintech. According to the findings, the banking sector stands to gain new knowledge and understanding as a result of research into emerging financial technologies.

According to Chorzempa and Huang (2022) Nowhere else has the domain of financial technology, often referred to as "fintech," had such significant growth and profound impact as it has in China. The emergence of fintech, mostly driven by technology firms, has facilitated a rapid transformation of China's predominantly cash-oriented and underdeveloped financial system, positioning the country as a prominent worldwide leader in the fintech industry. Simultaneously, the Chinese government established a suitable atmosphere for fostering innovation. China's encounter with Fintech is a valuable source of insights for nations seeking to modernise their financial service sectors and achieve rapid advancement comparable to developed economies in some aspects. This statement highlights the efficacy of strategic reforms in mitigating the absence of competition within the financial sector. Additionally, it underscores the need of implementing robust

regulatory and supervisory measures to adequately address the risks associated with financial innovation. The policy discussions and resolutions in China regarding the influence of large technology companies, particularly in the financial sector, have significance for a global community that is increasingly compelled to confront these matters.

According to Erić (2022) this study focused on the investigation of financial innovations, as well as the emergence and evolution of Fintech. The historical pattern of innovation within the area of finance can be traced back to the very origins of human civilization. The relationship between the techniques of innovation creation and the broader context of economic activity and social circumstances has been well-documented. Over the past 50 years, there has been a notable increase and acceleration in the breadth and intensity of economic innovations. The emergence of novel financial instruments has given rise to the development of various trading strategies. Moreover, advancements in technology and technical capabilities have necessitated a shift in the approach, processes and even the fundamental paradigm of conducting financial business within the financial services industry.

Franco-Riquelme and Rubalcaba (2021) aimed to promote modern theories and innovations in financial sector, sustainable growth and financial accessibility, FinTech companies have a critical role. Purpose of this work was to use social media analysis (SMA) driven by machine learning to evaluate how open creativeness and the “Sustainable Development Goals” are discussed in the public spheres of FinTech companies. Accordingly, they followed 21 different companies' actions using data collected from 32,716 comments as empirical evidence. Different discussions emerged depending on the actions of FinTech companies. It was discovered, that only the financial facilities borrowing and private finance industries centered on innovation and the SDGs theme.

FinTech has not yet reached the point where understanding of sustainable aims is a serious concern. However, innovation and associated concepts are a persistent theme in this field. There are also signs of the open innovation model being implemented and interest in fresh technology shown.

According to Solarz and Swacha-Lech (2021), aimed to analyse and rank the variables that effect Polish millennials' adoption of cutting-edge FinTech services. They have utilised their own set of variables spanning economic, demographic and psychological factors to study user adoption of FinTech services. This methodology allows for a thorough investigation of the problem at hand. The crucial empirical findings were gathered from a December 2019 CAWI study of a representative sample of Poles in their 25th to 40th years. In all, 1,236 valid survey responses were selected for analysis. “Logistic Regression Model” used to examine and assess the significance of several factors that influence the acceptance of FinTech. This means the findings may have far-reaching implications for those who oversee financial institutions. They give data that may be utilised in client retention efforts and in tailoring FinTech's offering to meet the needs of existing customers. Young males in Poland with high net income who are not motivated by reduced prices of banking services are the most receptive to new FinTech offerings. They are interested in cutting-edge electronics, such as the potential of utilising a wristwatch and they consider social media feedback when selecting a bank above the advice of close friends and family.

The study conducted by Zaborovskaya *et al.* (2021), study aimed to elucidate the primary transformations and potentialities pertaining to the advancement of the banking sector in light of the burgeoning influence of financial technologies. These technologies, to a significant extent, shape the future trajectory of the banking industry, thereby mandating novel modes of engagement with clientele. Financial technologies, commonly referred to as fintech, play a pivotal role in shaping the trajectory of the banking industry's

product and service offerings. This work also aimed to discern the challenges that arise in relation to their successful implementation. This study examined the contemporary progress of the financial industry, delves into the fundamental nature of banking innovations, categorises financial services and explores the potential and future prospects for innovation within the banking sector. The primary findings of this study encompass the benefits and drawbacks experienced by all individuals involved in this particular undertaking.

According to the work of Hatice Özkurt Çokgüngör (2021), it has been observed that the financial industry has undergone necessary adaptations in response to technology advancements that have significantly transformed global operations in the digital era. The advent of mobile technology has revolutionised the way financial transactions are conducted, enabling individuals to perform tasks that formerly required physical trips to financial institutions in a matter of minutes. This paper explores the advancements in financial transactions and services facilitated by technological innovations, specifically focusing on their transition to the digital realm. The year 2020 has seen a significant surge in the demand for Fintech, particularly in light of the far-reaching effects of the COVID-19 pandemic. The significance of FinTech solutions within the realm of enterprises has assumed heightened prominence in the year 2021.

According to Imerman and Fabozzi (2020b), This study presents a comprehensive taxonomy of the various forms of innovation observed within the financial services sector. The authors introduce a conceptual framework, termed the "FinTech Ecosystem," to categorise and organise these innovations. The FinTech Ecosystem is utilised to emphasise the diverse domains that hold potential value for investors seeking alternative investment opportunities within this realm. The utilisation of the authors' theoretical framework facilitates the ability of investors to scrutinise emerging technologies and FinTech verticals

by employing a sector evaluation approach. Simultaneously to gain a deep understanding of the origins and trajectory of the FinTech Revolution, researchers have employed the application of digital transformation principles within the financial services sector. This approach enables us to elucidate the intricate interplay between risk and reward inherent in the fields of FinTech.

In a study led by Broto Legowo, Subanija and Sorongan (2020), authors found that The term "FinTech" comes from the combining of "finance" and "technology." These days, the phrase "new business" is used to describe a financial venture that is novel and exciting. This study was to provide a theoretical structure that adequately characterizes FinTech's contribution to technological progress. In this investigation, they focus on how issues with technology, organisation and capital flow might affect the FinTech framework's capacity for technological advancement. This study combines a descriptive and qualitative methodology with secondary data from a number of surveys. According to the findings of the surveys and the foundational hypotheses, this research constructs a theoretical foundation of the function of the Fintech mechanism for technological advancement, suggesting that the concept of FinTech is clear for the business sector. This study's findings may inspire scholars to go further into the topic of Fintech and help practitioners advance their own FinTech-related enterprises.

According to Lemma (2020), aimed to investigate if the use of technology enhances the existing methodologies of asset management and then determine whether further regulatory measures are necessary. The findings indicate that the current regulatory framework, which is established on the UCITS Directive and the AIFMD, may be outdated and insufficient in addressing the impact of technology within this industry. The examination of prevalent fintech advancements has necessitated the development of governmental innovations to oversee services associated with “Digital Portfolio

Management". This encompasses algorithmic trading, digital ID verification, descriptive and predictive analytics, as well as machine learning trading instruments.

Caragea *et al.* (2020) focused on the rapid progress in technology has given rise to a multitude of innovative solutions within the FinTech sector. The current state of knowledge regarding innovations in the FinTech domain is hindered by a notable absence of an extensive taxonomy and standard datasets. As a result, the worldwide awareness of these advancements remains limited. In order to overcome this particular constraint, the researchers in question undertake the task of constructing a comprehensive FinTech classification. Subsequently, they proceed to meticulously annotate a collection of FinTech patent abstracts based on the established classification. The classified dataset is utilised for training machine learning models, particular the combination of recurrent neural networks and convolutional neural networks, along with the incorporation of state-of-the-art BERT transformers. The empirical findings demonstrate that deep learning models exhibit a high level of accuracy in effectively discerning FinTech innovations. The researchers employed their most effective BERT-based model to analyse an extensive collection of banking patent abstracts. Subsequently, they gathered a subset of many FT patent applications that were filed with the European and US Patent Offices from the years 2000 to 2017. The aforementioned statement elucidates the manner in which a comprehensive examination of the carefully curated collection can be employed to acquire comprehension regarding the nature of FinTech innovations. This analysis further enables the identification of the specific locations and timeframes in which these innovations arise, thereby serving as a foundation for subsequent investigations into the ramifications they have on the organisations that invest in them and ultimately on society as a whole.

According to the study conducted by Krishna Priya and Anusha (2019) India, with its massive population of nearly 1.3 billion people, has quickly become an established

market for financial technology. India has emerged as a vibrant and potential international centre for financial innovations in part because of the existence of a sizable population that lacks access to standard banking services (often referred to as the unbanked and underbanked people). There is widespread agreement that fintech is a disruptive innovation with the potential to have far-reaching effects on stabilised financial systems. FT industry in India has had rapid expansion over the last five years, and this trend is expected to continue. The primary focus of this research is on the broad classes of financial technology and their individual purposes. The study also investigates the opportunities and challenges presented by these technologies in India's business sector.

This study conducted by Tamilarasi and Cheriyan (2019), this was a descriptive study of the Fintech revolution unfolding in India. The work examined the causes of the development, the mechanisms of its operation, etc. The phrase "Fintech" may be unfamiliar to the general public. Even in the corporate sphere, it was a buzzword until 2015. Fintech, in its simplest form, is the cutting-edge combination of finance and technology for the benefit of all parties involved. Fintech refers to the process through which the financial services industry as a whole is transformed by technological innovation. The global proliferation of Fintech is a clear and present phenomenon. In India, the growth of non-financial industries paved the way for the expansion of Fintech, which in turn was accelerated by the global shift away from the closed traditional banking system and regarding open banking rules and regulations. The Fintech industry has benefited from both direct and indirect aid from the Digital India initiative of 2016. When it comes to the annual number of new fintech companies, India is second only to China. In contrast to popular belief, Fintech startups are not just concerned with the financial sector. Fintech often operates in about 9 distinct business niches. Newer iterations of Fintech are released in

tandem with other technological advancements. Artificial intelligence (AI) and blockchain technology have been game-changers for the growth of the Fintech industry.

Vivek Dubey (2019) aimed to explore and analyse the significance and impact of Artificial Intelligence, Augmented Reality and Blockchain technologies within the realm of Digital Banking.The present utilisation of augmented reality (AR) technology is yielding significant vibrational effects across various industry sectors. AR technologies are currently being utilised across various industries, including healthcare, oil and gas construction, retail and production. Their deployment aims to enhance process efficiency, minimise expenses and yield a wide array of commercial advantages. Artificial intelligence (AI) has emerged as a prominent and rapidly advancing field within the realm of technology. Currently, it is imperative to gain a comprehensive understanding of artificial intelligence (AI) due to its prominent status as a widely discussed subject on various social media platforms. This topic has garnered significant attention from millions of individuals globally. The integration of blockchain technology experienced a significant milestone in the year 2018, as it transitioned from a peripheral presence to a prominent position within various critical sectors. Based on statistical data, it has been observed that a substantial amount of $1.3 billion was invested on a global scale in FinTech projects that revolve around the innovative technology of blockchain. Financial institutions that embrace innovative approaches have observed a notable rise in their investments towards internal bank innovations, with a particular emphasis on those leveraging permanent records.

According to Anielak (2019), this research defines innovation, discusses the state of Fintech worldwide and details its growth and development in Poland. The literature does not give a comprehensive description of fintechs, which are information technology firms that provide ever-evolving alternatives for consumers participating in the world of finance. The primary objective of this investigation's endeavour was to establish a comprehensive

definition of Fintech, encompassing its various dimensions. Additionally, it aimed to illustrate the global and domestic landscape of Fintech initiatives, with a specific focus on Poland. Furthermore, the study sought to analyse the diverse manifestations and potential of Fintech firms' interactions with financial services institutions, particularly within the realm of banking. This work aimed to explore the global importance of financial developments by conducting a comprehensive analysis of relevant literature, primarily focusing on English-language research articles published within the last five years. The worth of global investments in the field of financial technology (Fintech) is presented by the author through an analysis of data derived from various reputable sources. These sources include the PWC worldwide Fintech Report, CitiGPS investigations, Capgemini publications, and KPMG. The results of the complete analysis showed that Fintech investments are rising in popularity and that the Fintech industry will expand as a result of collaboration with institutions like banks who are looking to better serve their clients by adopting cutting-edge technological solutions.

According to the study conducted by Still, Lähteenmäki and Seppänen (2019), This work investigated the development of environments within the framework of Fintech companies integrating digital technology into financial services. The exponential growth of FT companies has significantly changed the corporate environment, presenting established enterprises with innovative products and services that provide a formidable challenge. Consequently, established organisations are increasingly adopting alternative forms of collaboration, whereby hierarchically regulated value chains are being replaced by modular and decentralised ecosystems in their architectural design. Initially, a bibliometric study was undertaken to highlight the content and interconnections within the realm of Fintech research as a whole. A case investigation was done to examine the innovation linkages in the development of Distributed Ledger Technologies and associated

services between two prominent retail banks in Finland. The findings demonstrate the ability of established entities to cultivate diverse innovative partnerships inside various ecosystems, as well as across them. These examples may be seen as indicative of the development of Fintech ecosystems. This research enhances the existing body of literature by elucidating the connections between various components, specifically by investigating the contextual aspects that play a pivotal role in facilitating or impeding these interconnections.

According to the study conducted by Salampasis and Mention (2018), The area of monetary inclusion has historically been regarded as the less emphasised aspect of financial services, with limited focus from financial institutions, enforcement agencies and policymakers, regardless of its significant impact on worldwide prosperity. A significant portion of the global population, specifically those who are disadvantaged and have low income, face the issue of being financially deprived or having restricted access to essential financial services. This results in a substantial inequality gap in various regions across the globe. Within the context of this particular frame of reference, it is evident that the issue of financial exclusion continues to persist as a profoundly significant challenge, impeding the progress of developing regions across the globe in their efforts to alleviate poverty. Furthermore, it is crucial to acknowledge that the issue of financial exclusion is closely interconnected with social reliance, leading to economically disadvantaged or underserved communities largely depending on their social networks for assistance. The advent of FinTech, a convergence of financial innovation and technology, has presented a substantial obstacle to well-established financial institutions. This phenomenon exhibits potential in mitigating the discrepancy seen across societies with little or no access to banking services, societies with inadequate access to banking services, and affluent societies. Consequently, it facilitates the inclusion of these societies into the global digital economy. Consequently,

it has the potential to bring about transformative societal changes for those who have been eliminated or neglected in financial matters. Moreover, the inclusive economic growth facilitated by FinTech can contribute to the establishment of a more just and equitable society.

According to the study conducted by Zavolokina, Dolata and Schwabe (2017) The emerging field of FinTech, which encompasses the intersection of information technology and financial innovation, is seeing a notable surge in popularity and is attracting increasing interest from industry professionals, investors and scholars. The media extensively engages in discussions around FinTech, contributing to its comprehension and reflecting societal perspectives. However, it is imperative that this knowledge of FinTech be validated by concrete evidence. Consequently, the researchers investigate five Swiss FinTech enterprises using the theoretical framework to comprehend the many components of FinTech. This approach enables them to analyse the inherent characteristics of FinTech developments. In doing so, they enhance the comprehension of FT and provide a conducive environment for future scholarly investigations in this domain.

Bromberg, Godwin and Ramsay (2017) aimed to investigate and analyse the fundamental distinctions observed among the various sandbox structures that have been put into practise thus far. Additionally, this research is aimed at delving into the potential consequences and ramifications that Sandboxes may have on companies, customers and native regulatory bodies. The ongoing expansion of Fintech, denoting the utilisation of technology in the provision of banking services, persists in exerting a disruptive influence on global financial services markets. The dynamic and ever-changing nature of technology poses significant challenges to banking regulators. These challenges are particularly pronounced as authorities are currently dealing with the task of addressing a wider range of regulating targets and goals in the aftermath of the “Global Financial Crisis”. Regulatory

sandboxes, designed to foster innovation by enabling businesses to experiment with their Fintech solutions within a controlled environment, exemplify a departure from conventional regulatory strategies. They signify an endeavour to embrace the concepts of proactive, dynamic and adaptable regulation.

According to Wonglimpiyarat (2017), Author focused on the FinTech and the radical changes it has brought to the financial sector. The research focuses on the systematic aspect of developments in FinTech. The primary result of this work is a holistic innovation framework that may be used as a living, breathing instrument for monitoring the development and spread of technologies. Prompt-Pay FinTech, Thailand's electronic payments system, is the newest financial innovation discussed in this study. Case studies are used to examine the systemic features of FinTech advances in this study. This study presents a novel comprehensive innovation model that may be used as a flexible tool for monitoring the development and spread of technologies. To better understand the systemic features and trends of technology dissemination within the analytic framework of the systematic invention model, the research analyses FinTech-based innovations as case study examples. Five of the largest financial institutions in Thailand's monetary services sector participated in qualitative interviews for this study. Findings analysis reveal systemic features of worldwide and Thailand-specific FinTech-based banking sector advancements. Analyses have shown that interactions between the complexity of the invention and the ability of innovators in managing the innovation produce systemic aspects of the innovation process.

In this study, di Castri and Plaitakis (2017), focused on the regulation that allows innovation in the FinTech business is still lacking, despite the fact that technology solutions offer access to cheaper and safer financial services. Regulators have a dual responsibility to safeguard the public interest and foster an atmosphere that encourages the development

of novel products and business arrangements. As a result, several financial institutions are establishing regulatory sandboxes to allow providers a place to try out their ideas while also providing regulators a chance to have a better understanding of the potential dangers posed by such products. Although sandboxes are a step in the right direction, as we saw with mobile money, they fall short of providing a genuinely conducive environment for FinTech innovation. Public-sector actors should address systemic business obstacles and take into account the whole range of incentives encountered by FinTech businesses and investors to achieve this goal. To help governments build a comprehensive and multi-dimensional environment for FinTech innovation, the authors provide a nine-point list of changes beyond sandboxes.

According to the study conducted by Varga (2017), The primary objective of this study was to address the existing void in the contemporary scholarly discourse pertaining to the emergence and characteristics of Fintech enterprises with a specific focus on innovation. The analysis presents a comprehensive conceptual framework that elucidates the fundamental factors that drive value creation in the fintech industry. The research study presented an examination of the potential role of fintechs in facilitating innovation within the established financial sector. Additionally, it explored the potential positive impacts that fintechs can have on the triple-bottom-line, particularly in addressing the challenges faced by individuals residing at the lower end of the socioeconomic spectrum.

2.6 Fintech Regulation in India

Babu *et al.* (2023) focused on consumers, service providers and policymakers are the three stakeholder groups that they consider while analyzing the academic literature on the adoption of fintech. A significant amount of material already published has examined the adoption aspects of Fintech services. The adoption of customer-facing financial services is influenced by both macro and user-specific variables, which have been researched.

Emerging market studies often focused on certain demographic and socioeconomic groups, which limited their capacity to represent a broad range of important characteristics. They surveyed 100 people throughout the country of India in a representative manner. There was a total of 14 administrative districts among the seven administrative divisions. Through the use of "Library of Large Linear Classification" for "Multivariate Logistic Regression", they were able to pinpoint important characteristics that accurately predict the adoption of customerfacing fintech among certain responders. Based on their study findings, it was observed that customers exhibited reduced tendency towards using fintech services when they expressed higher degrees of concern about security, confidentiality of information, inadequate governmental supervision, and significant impediments to perceived service accessibility. The data presented suggests that anxiety concerns have a significant role in driving the adoption of fintech, in contrast to other factors such as demographic variables. The findings of this study have significant significance for both regulators and providers of financial technology (fintech) services. They draw recommendations for Fintech adoption research in India and comparable developing nations by combining practitioner-focused material on Fintech adoption in India. They compile these claimed into a framework that offers potential directions for further study.

According to the study conducted by Asif *et al.* (2023), aimed to assess the influence of digital financial services on the level of Financial Inclusion in India. Economic participation of India has seen substantial improvement over the several years. In current time, there is a notable increase in the proportion of individuals from India who own bank accounts, with estimates suggesting that this percentage now stands at about 80%. The prominence of fintech enterprises in India is steadily increasing due to the Government of India's (GoI) ongoing efforts to provide financial services for the poor in banking segment of the population. In order to effectively cater to the finance sectors of the population and

provide a conducive operational landscape for fintech enterprises, it is imperative for India to prioritise the augmentation of financial inclusion. This research used regression and correlation analysis, together with secondary data obtained from the Reserve Bank of India (RBI), to examine the impact under consideration. Based on the findings, it can be seen that fintech enterprises have played a substantial role in facilitating financial inclusion inside this country, particularly among those belonging to the medium socioeconomic stratum. Outcomes of this work will provide valuable insights for policymakers who are dedicated to facilitating the inclusion of all individuals into the nation's structured financial system.

In this study, Gahlot and Ghosh (2023), focused on the FinTech sector has seen enormous expansion as a result of the development of advanced technologies for example cloud computing, AI and cryptocurrency. Using these innovations, digital-only banks (sometimes called neo, electronic, or insurgent banks) want to increase access to formal financial services into backward areas of the United States that are now hampered by a lack of necessary infrastructure. Convergence between the neo-bank and the conventional banking system is certain to be revolutionary since it expands the range of services available to the final client. The current trend among regulators indicates that they are working to reduce regulatory cholesterol by encouraging digital technologies and unifying many enactments into unified codes rather than passing several individual laws. The goal of this chapter is to examine the technical developments and their application in India in relation to those in other countries. They will depend on secondary data gathered from public sources such as databases, questionnaires and academic publications. FinTech's rising profile and the decentralisation of this sector make it all the more important to have sound laws in place to prevent any unnecessary downsides from derailing the industry's promising future. There is untapped potential in the digital industry that can be used across

international boundaries. The financial system must continue to operate normally and remain stable, but it is imperative that any new developments be based on responsible innovation that addresses interoperability concerns.

G and A V (2023) tries to get valuable insights into the current understanding of the idea by the use of an empirical qualitative approach. This methodology involves doing a comprehensive examination of previous work, performing research on Indian fintech climate and using sentiment analysis techniques. The climate problem has emerged as a pressing global issue, necessitating the implementation of climate-sustainable development as an essential component for human society. The sustainable adoption of new ideas and technology is crucial in this context. India has emerged as a prominent player in the global fintech industry, using indigenous technology such as the "Unified Payment Interface". The country's fintech sector has seen remarkable development, particularly in terms of worldwide acceptance. The examination of the climate fintech environment reveals significant potential for the climate fintech concept to contribute towards the achievement of the nation's climate objectives. It is expected that the field and its practical implementations would progress in the future, prompting the formulation of recommendations.

Dongare, Moharekar and Moharekar (2022) conducted a comprehensive investigation into the role of Fintech in India. The study aimed to examine the impact of Fintech in India and challenges faced by this emerging sector. The authors delved into the various aspects surrounding Fintech in India, shedding light on its significance and the obstacles it encounters. Numerous banks are currently undergoing a paradigm shift towards embracing digitization, thereby replacing traditional paper-based and cash-centric operations with streamlined, paperless and cashless processes. The term "Fintech" is derived from the fusion of the words "financial" and "technology", encapsulating the

intersection of these two domains. The terminology “FinTech” emerged during the 21st century as a descriptor for the technological infrastructure employed in the financial industry.

According to the research conducted by Sharma *et al.* (2022) their study first analyses the fundamental categories of financial technology and their functionalities, while also addressing the prospects and obstacles encountered within the Indian corporate landscape. This study expands upon the quantitative evaluation of client adaptability in Fintech sector, as well as qualitative investigation of technological, economic and demographic aspects that might potentially contribute to the adaptability of FinTech in India. India is an emerging Fintech industry characterised by a substantial population of around 1.3 billion individuals. India's substantial unbanked population makes it a compelling worldwide arena for FT. FT is often considered as a transformative and disruptive invention with the potential to significantly impact established financial markets. The fintech sector in India has had significant growth during the last five years and is anticipated to sustain its growth trajectory in the foreseeable future.

Anifa *et al.* (2022) Examining the connection between and the relevance of regulatory framework in ensuring a fair environment were the primary goals of this research. This was accomplished by conducting a systematic study of the literature on the topic, focusing on studies published in scholarly publications between 2014 and 2022, a time period that saw a surge in 'fintech' interest throughout the world. This research adds to the theoretical frameworks of fintech developments in the financial services sector and demonstrates the critical role these innovations will play in determining the future of business. Researchers may use this study as a starting point to get a comprehensive understanding and in-depth road map of fintech advancements.

This research shade light on the main component that have led to India's rise to prominence as a Fintech centre, the extent to which Indian Fintech seen to have aided in the advancement of financial inclusion and the challenges facing the industry as a whole Singh, Gupta and Vatsa (2021) This study also provides strategies that might assist specialists and researchers in India in realising every opportunity of Fintech while also suggesting corrective steps to reduce the prevalence of cyberattacks. In terms of both economic growth and new employment opportunities. India is witnessing this 'Fintech Boom' as well, having become the world's second-largest fin-tech centre, behind the United States. The predominant notion was that India would attain a state of being "data-rich" prior to achieving financial prosperity. However, recent events, including the Facebook data leak and the alleged Aadhar security breach, have redirected attention towards the security of data and the urgent need for all stakeholders to undertake measures that foster the sustainable growth of the Fintech industry.

According to researcher Allen, Gu and Jagtiani (2021), their goal in this research was to conduct a thorough literature review of fintech, including a discussion of important research papers and policy debates. The trading community and P2P lending, assessment of credit, the second data, open source technologies, blockchain, cryptocurrencies, robo-advising, statistical investing and trading tactics, cybersecurity, misuse of identity, computational and AI and machine learning, identity and theft prevention, prevention of money laundering, Know Your Customer, sandboxes and fintech guidelines are some of the topics covered. The tremendous increase in innovations and the whole financial landscape have been impacted by the convergence of finance and technology, or fintech. While fintech is vital in expanding financial inclusion to the world's unbanked and thin-file customers, it is also being used by the well-served to meet their needs for more timely and transparent services.

According to Venkatachalam (2020) aimed to get a deep understanding of the Indian setting with regards to two specific aspects. The role played by key stakeholders in the evolving landscape and the impact exerted by FinTech enterprises on the overall structure. This research anticipated formation of a multi-dimensional interaction between the players within a community, leading to an expansion in the area of management. The nature of these problems is contingent upon the level of risk inherent in business models and products, with technology assuming a crucial role. The rise of FinTech businesses has caused a global upheaval in the financial industry. The industry is undergoing a transformation in its operational mechanisms. Therefore, it is important to comprehend the dynamic environment within the Indian setting. The primary stakeholders mentioned within the industry landscape are regulatory bodies, conventional financial institutions and Fintech enterprises.

In this study, Chugh (2020) aimed to discuss how regulatory agencies may adjust their tools to better deal with the threats posed by fintech while preserving the benefits it presents. Finally, the study intends to kick off a dialogue on the more immediate policy challenge of how fintech should be controlled in India by explaining how it is governed in India. How is fintech governed in India? is the question this study sets out to answer. In the first part of the study, the researchers examine the various fintech consumer-facing activities that are now commonplace in India. It catalogues fourteen distinct categories of fintech services available to Indian consumers. There are fourteen distinct categories of consumer-facing fintech operations in India, which together form a typology. The research goes further by analysing and contrasting the different types of financial regulation that apply to the various fintech activities. Each fintech activity is ranked according to the level of financial regulation it attracts, using a straightforward indicator of regulatory monitoring. The regulatory environment of fintech operations aimed at consumers in India

is constructed from these rankings using a graphic. This regulatory framework illustrates the current state of financial regulation in India as it relates to fintech. The relevancy of policymakers' and regulators' supervisory stances may be evaluated more easily if the banking regulation relevant to fintech is more transparent.

Baporikar (2020) aimed to examine the position of Fintech in India and the potential for its growth through the use of an exploratory methodology informed by extensive literature assessments. In the context of the financial sector, "fintech" describes the new methods and tools that have become possible as a result of developments in modern technology. India is emerging as a prominent destination where revolutionary Fintech enterprises possess the potential to evolve into colossal multibillion-dollar entities. The objectives of the fintech industry in India encompass the pursuit of various goals, such as the exploration of untapped domains and the broadening of its consumer base to encompass previously untargeted demographics. The Fintech ability in India's cash-based economy has been encouraged to a significant extent, primarily driven by the development of e-commerce and the widespread adoption of smartphones. However, it is important to note that India's progress in terms of development does not align with that of its international counterparts. Despite having a substantial advantage in the form of a strong talent pool of IT professionals, India's overall growth rate falls short in comparison.

According to the study conducted by Krishna Priya and Anusha (2019) This study presents comprehensive investigations on specific topics derived from focused consultations with officials and educators and is grounded on a rigorous examination of existing scholarly literature. The authors delineate seven primary areas of research deficiency, accompanied by a set of inquiries that have the potential to inform the conceptualization of an educational perspective. Addressing these issues would contribute to the transformation of this place into a sustainable educational hub in the long term. The

emergence of Fintech has proliferated throughout the field. As a result, there has been a substantial growth in the body of educational literature pertaining to FinTech during the last five years. Research often lacks strong connections and a clear research timetable. There are notable research gaps and crucial inquiries that remain unanswered. A substantial amount of painting must be undertaken prior to the establishment of this field as a well-established academic specialty.

Alam, Gupta and Zameni (2019), their study examined into the imperative of regulatory measures for fintech providers and offers an in-depth examination of fintech regulation in Malaysia, a prominent centre for Islamic finance. The establishment of robust financial regulation plays a pivotal role in fostering creativity within the financial services sector. As the industry witnesses the growth of a multitude of startups specialising in payment systems, payments services, transparent banking and digital currencies, there arises a pressing need for comprehensive regulatory frameworks and diligent oversight to govern these novel respondents in the world of finance. Administrative sandboxes have emerged as a valuable platform for innovators within the financial services sector, providing them with a unique opportunity to gain insights into the expectations and preferences of customers. Sandbox experiments have the potential to assist participants in acquiring significant regulatory insights regarding design, assessing strategic approaches and formulating potentially more secure financial products.

Dhanraj (2019) looked at how Fintech may negatively impact the financial services industry throughout the world. The research narrows in on three subsets of Fintech—block chain and crypto currencies, alternative payment methods, banking, real-world data from three geographical and political regions, including India, to investigate the impact that Fintech firms have had on incumbent financial service providers, the factors that have fueled Fintech's meteoric rise and the state of the industry as a whole. Based on the research

conducted, it is clear that the present Fintech legislation in those mentioned areas is unsuitable and may have unintended consequences for the global banking sector, including the compromise of cyber security, the invasion of data privacy and the misuse of Fintech offerings for illegal activities. Therefore, Indian regulators should prioritise crafting effective Fintech legislation to limit unintended consequences. Financial services consumers, digital loan providers, authorities and the economy all stand to gain from more access to digital finance and financial inclusion. However, there are still several obstacles to be overcome before digital finance can really benefit consumers, companies and governments.

Bromberg, Godwin and Ramsay (2018) investigated the current surge in bilateral supervisory Documents of Understanding within the Fintech sector. These MoUs signify the first efforts made by regulators to create formal agreements with the purpose of enhancing collaboration in Fintech and promoting innovation. The implementation of these "Memoranda of Understanding" is a response to the recommendations made by control networks like the "International Organisation of Securities Commissions" (IOSCO) to enhance regulatory collaboration, as indicated in the recent IOSCO report on FT. However, Fintech MoUs are currently in a unique and untested phase of their evolution. To comprehend the purpose and significance of Fintech MoUs, as well as their potential to foster enhanced cooperation in regulation, this research situates Fintech MoUs within the broader spectrum of regulatory cooperation mechanisms. It examines the way in which Fintech MoUs can leverage and contribute to the advancement and expansion of existing forms of regulatory cooperation.

Pejkovska (2018) looked at how Fintech might harm the financial services industry throughout the world. Due to the breadth of the term "Fintech," this study narrows in on three subsets: blockchain and cryptocurrency, other forms of payment and spending and

banking and draws on theoretical frameworks and empirical evidence from three geographical and political regions: the European Union, India and the United States to examine the impact of Fintech firms on incumbent financial service providers, the impetus for Fintech's rapid growth and the specifics of its expansion. The research demonstrates that the current FT regulation in the aforementioned regions is inadequate, which may have far-reaching consequences for the global financial services sector, including the compromise of cybersecurity, the invasion of data privacy and the misuse of FT services for illegal activities. That's why it's so important for governments in the “European Union, India and the United States” to work on developing sensible Fintech rules aimed at limiting any unintended consequences.

2.7 Fintech and the Digital Payment Ecosystem

Kalluri and Caraway (2023) aimed to learn more about the global economy and how it affects social and economic inequality by analysing Paytm as an example. They place the rise of Paytm in perspective by highlighting the platform's connection to India's developing digital infrastructure and marginalised people, of whom a significant percentage are users. They examine the market structure, players, innovators and recipients of Paytm through the prism of political economics. The issue driving their investigation is this: What kinds of resources, facilities and regulations have given birth to India's “digital payment ecosystem” and how have they involved with economic and social inequities? As a result, from 2016 to 2020, they examined articles published in business publications in both English and Indian, as well as Paytm's internal communications. Dispelling ideas of platforms as impartial arbiters of market transactions, they highlight the contradictions between private and public interests in the wider platform ecosystem. Although they acknowledge that Paytm has some positive social effects, such as lowering transaction costs and increasing access to digital payments for underserved groups, they also point out

that the company has some negative effects, such as endangering user data and privacy and stifling competition in the platform economy.

Festa *et al.* (2023) examined the impact of several factors of Fintech, including fundraising and mobile banking on the facilitation of decision-making within a community of entrepreneurs in Tunisia, which serves as a representative case of a developing economy. A quantitative research study was conducted, using a questionnaire as the primary data gathering method. The online survey was sent electronically through email to a targeted group of young Tunisian entrepreneurs, including both prospective and established individuals in the field. A regression analysis was conducted on a sample of 93 participants. The analysis of the data indicated that the most of the linkages under study were validated. The results of the statistical tests indicated that there was a positive and substantial relationship between knowledge, availability and access to crowdfunding and planned entrepreneurship. In relation to mobile payment, a study found that there was a statistically negligible and adverse impact on the desire to business.

Wu *et al.* (2023) looked into the how and why the CBMP system complementor creates CBMP ecosystems. Using findings from the fields of platform and ecosystem studies, CBMP studies and IB studies, they argue that the development of CBMP platform competitors follows an iterative procedure governed by transaction fees and network effects. Ecosystem members, on the other hand, contribute to the module's value creation by establishing complete chain accountability, which fills in the module's network effect gaps and reduces its transaction costs. Researchers presented a modularized process model that takes into consideration the evolution of the CBMP system complementor, as supported by their study. By doing the utilisation of advanced research approaches, namely the integration of modularization and demonstrating examination, as well as the integration of traditional transactions “Cost theory” into the digital environment by considering the

system of network-related openings in the development of “CBMP task modules”, this study explores the emerging phenomenon of CBMP platform complementors. The researchers assert that their investigation provides a significant contribution to the field of International Businesses.

Sachdev and Singh (2023) their research centres on the perspectives of “micro, small and medium-sized firms” (MSMEs) about the use of Fintech tools to fulfil their financial needs. The study adopts a quantitative approach, including the collection of primary data from a sample of 400 people via the administration of a structured questionnaire. Statistical procedures such as “chi-square testing, principal component analysis and multiple linear regression” are often used for the examination of research data. The outcomes of the study suggest that there is a limited awareness among company owners about the potential of Fintech instruments as a means of securing funding for their enterprises. Furthermore, the materials used in the study resulted in the emergence of three distinct dimensions: banking, MSMEs and Fintech.

Maiti and Ghosh (2023) aimed to conduct a complete assessment of the current state of the Internet of Things (IoT) inside the fintech ecosystem and its future prospects. The research reveals that although the notion of communication between devices and Fintech is not novel, there exists a limited body of literature specifically investigating the intersection between the IoT and Fintech. Report emphasises that there is a noticeable rising trajectory in the marketspace for both the IoT and Fintech. The survey reveals that the surge in demand for blockchain technology, Internet connectivity, mobile networks, cloud storage and Internet of Things (IoT) devices inside organisations serves as the primary catalyst for the integration of IoT in the Fintech sector. Subsequently, the research posits that the expansion of neurotechnology would have a significant impact on the next generation of Internet of Things (IoT) in Fintech, serving as a catalyst. The integration of

neurotechnology-enabled Internet of Things (NIoT) into the Fintech sector has the potential to strengthen the interaction between humans, machines and memory, hence fostering innovation in business processes.

Bethlendi and Szocs (2022) their study determines who and what are considered "members" of the Fintech environment by analysing the current research on the topic. Fintech ecosystems often include a number of different types of organisations, including conventional financial institutions, startups, regulators, the investing community and technology developers, according to the literature examined. The examination then focuses on how Big Tech giants like "Google (Alphabet), Baidu, Facebook (Meta), Apple, Alibaba (Baidu) and Tencent" have entered the financial services market. It also looks at the Big Tech firms' potential as independent suppliers of financial services and the benefits they have over traditional banks. Software, marketing, social media, e-commerce and content service provision are just some of the areas in which they have previously operated and as a consequence they have amassed a sizable worldwide client base and exceptional IT development skills. Due to these considerations, they are now able to communicate with ex-Fintech ecosystem participants. They have partnered with established financial institutions, only to turn around and compete with them and now they are looking to acquire Fintech businesses. These considerations are what push large technology firms towards participation in the Fintech ecosystem as a competitive service provider. These occurrences provide concrete evidence for the importance of the regulatory measures aimed at Big Tech.

The research conducted by Ferrari (2022) suggested that the prevailing perspective on consumers is limited in its scope. It argues that the emphasis on the buyer technological autonomy tends to overshadow and obscure crucial discussions regarding the fragility of consumers in relation to data-intensive payment technologies. The responsibility for this

issue ultimately rests with the future imaginaries upon which the aforementioned image is based. The problematic nature of the digital payment infrastructure vision depicted in the documents can be attributed to two key factors. The selection of desirable technologies is primarily driven by industry interests and prevailing trends, rather than comprehensive assessments of the associated benefits and risks. Furthermore, it is important to critically evaluate the notion that a liberalised market inherently leads to an increase in the quantity and quality of choices available. This assumption overlooks the potential drawbacks associated with platformisation, such as the heightened likelihood of monopolistic practises and the potential for market power abuses. The recommendation put forth is for policymakers within this particular field to adopt a more discerning approach towards the potential risks associated with platformisation. Additionally, it is suggested that policymakers broaden their perspectives and consider alternative technological trajectories.

This study conducted by Zheng, Ab-Rahim and Jing (2022), the purpose of this research was to create a Fintech Index covering the years 2017–2019 and analyse the ASEAN–6 Fintech environment. The Fintech industry is leading the charge towards the globalisation of the digital economy. However, little effort has been made to clarify the future of Fintech in the ASEAN-6. Factors such as interest in and availability of Fintech services, as well as projections for the industry's future development, make up this index. The mathematical mean, geometric median and stochastic form averaging techniques are used in this research to accomplish this goal. Based on the data, the Fintech ecosystem in Singapore is the most developed, followed by those in Thailand, Malaysia, Vietnam, Indonesia and the Philippines. Based on the results, it seems that no one country completely dominates the index in all categories and it is recommended that the ASEAN-6 nations eliminate the most significant roadblocks to Fintech growth.

This study, Alaassar, Mention and Aas (2022) investigated the impact of interactions between actors in Singapore's fintech ecosystem on the emergence of new businesses within the sector. This research helps academics and industry professionals better comprehend the developing fintech phenomena and its implications. Empirical data from semi-structured interviews is gathered and analysed with the use of an EE framework and an exploratory-abductive strategy. The importance of entrepreneurial ecosystems (EEs) in fostering a thriving startup culture is increasingly acknowledged in the academic and business communities. Few researches have looked at how interactions among ecosystem players foster entrepreneurship, despite the fact that EEs are inherently interaction systems of hierarchically autonomous but mutually dependent entities. Both the cultural view, which includes ecosystem development and regulatory dynamics and the relational approach, which focuses on interaction and intermediation dynamics, are reflected in the results, which fall into four distinct groups. These groups clarify why and how entrepreneurs in fintech EEs experience facilitated or impeded opportunity recognition and resource exploitation.

According to a group of researchers, Rahman, Ahmed and Shakil (2021) The ecology, problems and potential of Bangladesh's fintech industry are all represented in this study. There are a lot of new cogs in the current economy that drive the good fortune of the present day. Among them is, without a question, Fintech. These online banking options form the backbone of the emerging cashless society. In recent years, financial institutions, particularly banks, have become more reliant on these cutting-edge offerings. Data for the research was acquired by a questionnaire survey employing a ranked approach of analysis with SPSS. The research shows that these innovations will benefit not just end consumers but also businesses looking to expand their offerings. The potential is huge because of the rise in international trade and the trend towards online purchasing that has accompanied it.

The paper defines fintech, as it is used in Bangladesh and explains the factors that have stifled the development of the Fintech sector.

This research conducted by Sekhar (2021), aimed to examine the Fintech, Regtech and Suptech trinity as a three-pronged strategy for online banking. Fintech, Regtech and Suptech are the three phases of digital financial deployment. Fintech, on the other hand, refers to the use of technology to improve conventional banking like online banking, electronic payments, money transfers, peer-to-peer lending, robo-advising and digital assets like Bitcoin, Litecoin and others. The phrase "Regtech," a portmanteau of "regulatory" and "technology," is used to designate the field of study concerned with regulatory tracking, reporting and conformity. The term "Suptech," a portmanteau of the words "Supervision" and "Technology," is used to keep tabs on the financial and regulatory technologies. The dominance of major "systemically important" banks and other financial institutions is often seen as the principal source of systemic risk in the financial industry. However, the emergence of Fintech will challenge this view.

According to Schilirò (2021) this research examines Dubai's favourable disposition towards the digitalization of the financial sector and the advancement of fintech as a result of the expansion of Fintech. Following an extensive examination of the existing body of literature on FT, this research brings attention to the vibrant financial ecosystem in Dubai. Specifically, it emphasises the widespread use of cutting-edge digital technology associated with fintech. The exponential expansion of Fintech in Dubai can be attributed to several key factors. These include the emergence of pioneering fintech startups that have significantly transformed the financial service sector, a private sector that exhibits a keen interest in collaborating with financial ventures, the establishment of a regulatory framework that is well-suited to the evolving nature of fintech and the implementation of government policies that actively support the growth and development of this industry. The

research posits that Dubai's efforts in the aftermath of the COVID-19 pandemic to digitally revolutionise the banking industry create a formidable model for the corporate realm.

Taymaskhanov (2021) examined the Changes in the contemporary financial industry define new paths that businesses might take in developing digital mechanisms to support their operations. Transitioning to a new way of thinking about how to run a financial institution and incorporating that way of thinking into fintech firms is becoming more important in this setting. Unlike traditional banking institutions, fintech startups put the needs of their consumers first. The finest products and services in the fintech sector are aimed at filling the holes left by traditional businesses' workers throughout the whole customer experience. Today, fintech companies have spread across the financial services industry and are a major source of innovation and disruption across the board. Digital payment processing, completely Digital insurance, banking, asset management services and the development of marketplaces for the purchase and selling of financial goods are the backbone of the FinTech industry. Even if domestic practise of adopting Fintech is at an early developmental stage and has some restrictions, the construction and growth of Smart FinTech centres in the regions of Russia helps to the development of the Russian FT business. The study's originality comes from the way it advances and substantiates the major features of the digital transformation of the regional financial system as a significant variable that impacts the vector of economic growth in the area.

According to the research conducted by Gupta and Agrawal (2021) it was found that the primary objective of this research endeavor is to discern and delineate the prevailing fintech trends that are currently emerging on a global scale. The present study employed a qualitative research methodology, which involved an in-depth analysis of relevant literature, also engaging in discussions with researchers and experts in the field. The current developments encompass the International Monetary Fund's emphasis on harnessing

Fintech to facilitate cross-border payments through the utilisation of distributed ledger technology. Additionally, there is a growing interest in utilising augmented reality to enhance customer satisfaction, as well as the adoption of digital insurance and digital invoicing. Furthermore, crowd-funding and crowd investing have gained prominence as alternative methods of financing, while robotics investment advisory services have emerged as a notable trend. The future dynamics between traditional banks and fintech firms are also being explored, alongside the evolving regulatory role of central banks in this domain. It is worth noting that while there exists a considerable body of research on fintech at the global level, the extent of research conducted on fintech in India remains relatively limited. This observation underscores the potential for additional research endeavours focused on exploring the dynamics of innovation and the growth of fintech within the Indian context.

According to Albarrak and Alokley (2021) the existing FinTech environment and ecosystem in Saudi Arabia are described in this study. The use of internet banking, deposit and billing services, peer-to-peer lending and cryptocurrency efforts are all addressed as examples of creative financial startup businesses in Saudi Arabia. Several shifts have happened within the ecosystem during the last five years, including a more cautious stance on the part of Saudi banks. despite this, FinTech projects are additionally being created internally, which is pushing technology businesses and startups to concentrate on innovations that attempt to enhance existing processes rather than introduce completely new ones. Regulatory and legislative efforts receive the bulk of government resources. Customers are looking for innovative items that will make their lives easier. They concluded with suggestions for the various players after comparing the “Saudi FinTech ecosystem” to that of the UAE.

Muthukannan *et al.* (2021) aimed to get a more comprehensive understanding of the rising Fintech landscape in Indonesia, which is comprised of a diverse, fluid and ever-changing network of organisations and novel mechanisms that may improve the sustainability of banking services. According to their research, the adaptability of financial service delivery is enhanced by the phantomization, decentralization, localisation and democratization strategies used by providers of Fintech platforms. For policymakers looking to grow, support and manage the Fintech revolution in developing nations, as well as for Fintech practitioners designing the technology-enabled delivery of financial services, this research has important implications. New technology developments are driving the global Fintech movement by attempting to demolish traditional business structures in the banking services industry. The current research on platforms focuses on the following topics: leadership, platform governance, generativity, platform modularity and the influence of platforms on agility and creativity. Few empirical studies, however, investigate how platform operators can facilitate the widespread distribution of financial services at scale.

In this research, Suryono, Budi and Purwandari (2020) investigated the current status of Fintech research, recognise insufficient research and to highlight prospective future research problems and trends. This research makes a fresh theoretical suggestion in the area of Fintech. The digital revolution is posing problems for every kind of company. FT projects, which are seen as some of the crucial breakthroughs in the financial sector, have emerged as a direct result of the growth of digital transformation. The mixed economy, new rules and advances in information technology are all contributing to the fast growth of these endeavours. The discipline of fintech research is still in its infancy, nevertheless. Services provided by the Fintech sector include crowdfunding, payment processing (including digital wallets), aggregators, dealings, assurance and virtual currencies like

Bitcoin. This is an excellent chance to go further into the research obstacles and emerging trends in the fintech industry. The findings of this investigation offer a theoretical foundation for conducting research on fintech from an information technology (IT) standpoint. This includes exploring the development and expansion of fintech tools and principles. The investigation employs a systematic evaluation of the literature approach, following the methodology established by Kitchenham.

Bălţoi (2020) focused on the investigation was to conduct investigation on electronic payment systems in Romania, examining the progression of fintech apps and the contextual factors influencing their development. In order to achieve this objective, qualitative research will be implemented, focusing on the analysis of existing scientific literature pertaining to fintech apps. Specifically, the investigation will examine scholarly works that explore the subject of electronic payments and delve into the many functionalities provided by fintech applications for users. The first section will provide an introductory overview and a statistical examination of the data pertaining to fintech applications and market dimensions. The subsequent investigation aims to examine the FT ecosystem in Romania, focusing on the perspective of Romanian fintech services. Additionally, a comprehensive SWOT analysis will be conducted to evaluate the strengths, weaknesses, opportunities and threats present in the Romanian market.

According to research conducted by Rachmawati *et al.* (2019), Authors focused on the contextual aspects of individuals' responsibilities and behaviours in shaping the evolution of the digital payment landscape. This study involved doing a thorough examination of the literature on fintech models, specifically focusing on the utilisation of electronic wallets (e-wallets) as an illustrative example. The literature analysis findings suggest that the payment services sector in Indonesia has significant prospects, particularly for non-cash payment methods like e-wallets. Furthermore, the quick shift may be

attributed to the fundamental demographic and economic forces. Indonesia has seen a substantial growth in the use of cashless payment systems, with the belief that local fintech businesses may leverage alternative payment platforms to access larger markets. The growth of the FT sector in Indonesia has generated a significant demand and potential, which is being harnessed by domestic fintech entrepreneurs via the provision of diverse and innovative services. The market acceptance process involves the participation of suppliers and stakeholders. Nevertheless, the comprehensive documentation of their involvement within fintech ecosystems is lacking. This study aims to address the inquiry on the respective responsibilities of service providers and stakeholders in promoting the use of digital payment systems.

Yazici (2019) aimed to examine the factors at play in the development of a successful FinTech Ecosystem. We'll utilise Turkey as a case study to learn what makes up a thriving FinTech Ecosystem elsewhere. The methodological framework for this study is one of introspection. The author is a co-founder of FinTech Istanbul Platform, a hub for the Turkish FinTech industry that has been operating since 2016 to bring together all of the sector's constituent parts. These observations are grounded on the author's own experience in both Turkey and other global centres. New methods and instruments allowing developments; telecommunications and technology firms which develop infrastructure for supply; new businesses that create creative company models; regulators and governments that establish the guidelines of the contest; financial organisations that work together with startups; customers and users who enjoy the benefits of creativity; investors, development centres and accelerators that allow both fiat and digital currencies to flourish.

This study conducted by CCAF, ADBI and FinTechSpace (2019), the purpose of this research was to learn more about FinTech in the ASEAN area and how it has developed in each nation. Companies in the Fintech sector, financial institutions, investment firms,

accelerators/incubators and government regulators and policymakers all play vital roles in the ecosystem. The ASEAN FinTech Ecosystem Benchmarking Study looks at how the industry has developed, what clients are being serviced, what technologies are being used and what business strategies have been used. In addition, the study allows FinTech companies to voice their opinions on the most pressing issues facing the industry, including the influence of legislation on their operations, the degree to which they are innovating and the most significant risks that might prevent them from reaching their full potential. Below, we'll refer to a FinTech taxonomy that was designed to categorise the various FinTech companies. The top five FinTech business models in terms of response rate are the subject of the investigation. In addition, the top five ASEAN nations (based on the number of replies) are profiled in depth, with critical insights and opinions on the FinTech scene provided.

Study conducted by Anshari *et al.* (2019), this research presented a conceptual framework for the development of an online marketplace that incorporates Fintech solutions, including crowdfunding and payment systems, with the aim of enhancing the sustainability of the agricultural sector. The proposed model establishes a platform that facilitates the integration of many stakeholders in the agricultural sector, including farmers, landowners, investors and consumers. This platform aims to enhance transparency, empower participants, foster resourcefulness and encourage public involvement in agricultural activities. Agriculture assumes a significant role in ensuring food security and sustainability for the populace of any given nation. Nevertheless, farmers sometimes encounter challenges in achieving sustainability due to insufficient finance and restricted distribution methods for reaching clients. The enhancement of agriculture's sustainability may be achieved by the incorporation of innovative services, such as Fintech and digital marketplaces. The integration of Fintech into a digital marketplace has the potential to

renovate the agricultural industry by enhancing the sustainability of its business processes, particularly in terms of finance and distribution. Fintech provides farmers with accessible methods for accessing capital via crowdsourcing and digital payment systems. Therefore, the digital marketplace has the potential to serve as a platform through which FinTech may effectively incorporate novel financial solutions into the wider ecosystem of the agricultural industry.

According to the study conducted by Khiewngamdee and Yan (2019), the objective of this research was to examined the impact of Fintech e-payment on economic development within APEC nations, with a specific focus on its influence on earnings growth, efficiency, volatility in prices and inequality of earnings. The e-payment index developed by RMIT University and TRPC is used and quantile regression analysis using the generalised method of moments (GME) technique is applied. The quantile levels of 0.25, 0.50 and 0.75 are taken into consideration. At the lower levels of economic growth, the impact of Fintech on these variables is found to be more pronounced when compared to the medium and high levels of economic development. In essence, it may be argued that Fintech not only facilitates modest levels of economic expansion and efficiency, but also mitigates the occurrence of minimal price fluctuations and disparities in income distribution. Additional research reveals that the use of e-payment systems and the empowerment of technology have a positive impact on economic development, namely in terms of fostering growth and enhancing efficiency.

According to research, Muthukannan *et al.* (2018) Conventional financial service infrastructures are being swiftly and significantly disrupted by the growth of Fintech Ecosystems in underbanked cultures. There has been a lack of study into the potential economic and social advantages of developing such ecosystems. This report outlines their continuous work on an investigation of the Fintech Industry in Indonesia, which is

drastically enhancing the everyday lives of the country's underbanked, with the goal of filling this knowledge gap. To identify the major drivers, medication, nature and results of ecosystem growth throughout three separate stages, they will propose a tentative process framework according to the data they have presently gathered. In doing so, they want to give academics and practitioners with insights into releasing the groundbreaking potential of Fintech by laying the groundwork for establishing a comprehensive and empirically validated conceptual structure for Fintech Environmental Growth.

According to Soloviev (2018), It is widely regarded as a topic of great importance, as it pertains to the future trajectory of the financial sector. Moreover, it is not merely a theoretical concept, but rather a domain that has witnessed the emergence of tangible projects that actively transform the landscape of banking and financial services. This research elucidates the various features and characteristics that define the current landscape and ecosystem of the fintech industry in Russia. The discussion revolves around various innovative financial services in Russia, encompassing online banking and accounting, novel payment and transfer services, platforms dedicated to crowdfunding and peer-to-peer lending, as well as initiatives related to blockchain technology. The current trend observed in Russian banks involves the active pursuit of fintech initiatives, wherein these financial institutions are fostering the development of technological advancements within their own frameworks. This strategic approach entails fostering collaborations with technology companies and fintech startups, with a specific emphasis on directing their endeavours towards enhancing existing processes rather than venturing into unexplored markets. The primary focus of the Government lies in directing its efforts towards initiatives pertaining to the regulation of cryptocurrency circulation, as well as the integration of blockchain technology in the fields of regulatory technology (regtech) and cybersecurity. The demand for enhanced functionality in mobile applications has piqued the interest of customers.

They eagerly anticipate the emergence of novel value propositions, such as expeditious international money transfers, roboadvising capabilities, personal financial management tools and peer-to-peer lending services.

Baiju and Radhakumari (2017) their research focused on the top three FinTech firms in the nation. The purpose of a study named "Fintech Revolution: a step towards digitization of payments" was to gather data on the state of DPS in India and the role they play in the country's economy today. A programme named "MAXQDA" is used to sift through and make sense of the vast quantities of secondary data that are readily accessible. Qualitative research is used to determine what factors facilitate the adoption of digital currency. To supplement the qualitative research, they used a pre-tested questionnaire to examine digital wallet adoption and use and then we analysed the results using IBM's "Statistical Product and Service Solutions package" (SPSS).

2.8 Impact on Traditional Financial Institutions

According to research, Haddad and Hornuf (2021) The authors analyzed how fintech startups affect the success and failure of conventional banks. Using data from 2005–2018 and a broad sample of banking organisations from 87 economies, they discovered a favourable correlation between FT start-up formations and the profitability of incumbent banks. They went even farther and looked at how the rise of fintech companies affects the probability of failure for established banks. The emergence of FT start-ups reduces financial organizations' systemic risk exposure and the unpredictable nature of their stock returns. According to the results, lawmakers and financial regulatory agencies should keep a close eye on the growth of fintech startups since they not only boost the efficiency of the financial industry but also increase financial stability.

According to Lacasse *et al.* (2016), the first research problem encompasses the components of theoretical models, despite the intricate nature of the FinTech industry.

Qualitative data offers a conceptual framework for the business strategies of emerging financial services. The models exhibit originality and intuitiveness, drawing upon a sequence of events and illustrations as their foundation. The primary objective of the study was to provide a comprehensive understanding of the innovative disruption landscape and the extensive use of online platforms in the banking industry. This statement elucidates the intricacies of the financial services ecosystem and delves into the evolution of novel business models. Considerable emphasis is placed on the several business concepts within the remarkable domain of crowdfunding. In conclusion, this work will indicate novel insights into the field of Fintech and put out an ambitious research plan.

In this study, Panda and Joy (2019) aimed to learn how clients feel about the new banking technology, an inquiry was conducted for this research. The Indian banking industry stands to benefit greatly from technological advancements. There is little room for Indian banks to postpone and oppose technological improvements due to the rapid dissemination of technology and the entrance of non-banking companies like fintechs, bigtechs and e-retailers into the financial sphere. It is challenging to directly analyse significance of technology to the performance and profitability of Indian banks in light of the significant technological changes that have occurred in Indian banking. Customers' needs for financial services have been simplified thanks to the value proposition delivered by technology. In the past few years, consumers have shown a growing preference for services that are both easy to use and available across several channels simultaneously. The online presence of Indian banks is expanding rapidly, yet clients still value face-to-face service. While banks see technology as a fantastic customer centric facilitator for inducing innovation, clients are more interested in the safety and individualization of the services they get than in the technology itself. Banks in India now have a responsibility to educate the public about the benefits of these cutting-edge technology and to assist their clients in

making the transition to the digital age by providing them with individualised assistance and a human touch as they make the transition.

Migozzi, Urban and Wójcik (2023) focused on the sector's capacity to alter the distribution of financial services and its associated clusters. They used a financial ecology technique to analyse the Indian FinTech industry, which included combining numeric data on business development and financing with insights from corporate interviewees. Their analyses provide insight on how the rise of FT as a state-supported, technology-driven "Tech-Fin-State" ecosystem has been enabled and influenced by export-oriented ICT sectors, the implementation of large-scale, open digital infrastructures and supporting regulatory frameworks at the national level. The study shows how FinTech is changing the financial landscape of India's cities in both directions. To begin, due to trends in investment and population, New Delhi and Bangalore have surpassed Mumbai as the world's foremost centres of Fintech. Second, the advancement of regional integration outside India may be attributed to the re-intermediation of finance by FT businesses, which connects the two unique but similar communities of Bangalore, India's FinTech hub and Mumbai, the incumbent financial capital.

According to the study conducted by Liang and Reichert (2012), Authors did Empirical investigations that only focus on the association between economic growth and financial sector expansion, while excluding the inclusion of “non-bank financial institutions”, are prone to producing biassed empirical findings. This research presents empirical evidence indicating that NBFIs may have a statistically substantial adverse influence on economic development. The evidence is derived from cross-country data including both developing and mature economies. This discovery implies that non-bank firms, which are often subject to lax regulations, have the potential to bring an elevated degree of risk into both the financial sector and the broader economy. The introduction of

an excessive degree of risk into the global economy by NBFIs such as investment banks and insurance corporations align with the prevailing worldwide financial crises. Therefore, it is essential for policy-makers to contemplate the implementation of more prompt and efficient regulation of NBFIs while also guaranteeing sufficient openness and disclosure for all players in financial markets.

This study conducted by Raj and Upadhyay (2020), this study derives perspectives from the endeavours of prominent FinTech companies that prioritise the improvement of financial inclusivity within our nation. Additionally, consultations were conducted with industry experts and officials who spearhead the FinTech initiatives within our country. The proposal suggests expediting the advancement of financial inclusion by leveraging innovation and presents potential solutions for leveraging FinTech to address this issue. The research further explores the significance of fostering an ecosystem that fosters collaboration, emphasising the imperative for banks and FinTech firms to engage in cooperative endeavours to advance their shared interests. The paper explores the strategies for effectively leveraging the advantages of Fintech while simultaneously addressing the critical issues surrounding data confidentiality and safeguarding customer protection. The discussion also encompasses the examination of potential risks and the corresponding measures for risk mitigation. In this context, the significance of RegTech and SupTech, which are technological advancements aimed at enhancing operational efficiency by means of automation, the introduction of novel functionalities and the optimisation of workflows, is duly acknowledged and explored. The essence of achieving success in the realm of Fintech lies in effectively leveraging the advantages it offers, all the while diligently mitigating the associated risks. Consequently, this study culminates by emphasising the necessity of establishing a suitable regulatory and supervisory framework that can effectively foster the expansion of the Fintech sector. Such a framework is crucial to ensure

that FinTech continues to play a pivotal role in expediting the process of achieving financial advancement in India.

According to Abidi (2021), The financial ecosystem in India has significant opportunities for expansion. The financial resources of India amount to a modest 1.58 times its GDP, in contrast to developing countries which exhibit a ratio of 3.14 and advanced economies which demonstrate a ratio of 6.73. Significantly, the cumulative financial assets in India have shown a more rapid growth rate of 15.32% throughout the period of 2005-2019, in comparison to the growth rates seen in developing and advanced countries, which stood at 14.72% and 4.57% respectively. The Fintech industry is anticipated to capture a significant portion of the potential value generation within the financial services sector. This assertion is supported by the observation of venture capital (VC) investments, which are widely seen as an educated indication of future development. In the previous fiscal year, Fintech enterprises secured a significant portion of venture capital (VC) financing, amounting to 39.7% within the financial industry. The investment in Fintech by venture capitalists has had a compound annual growth rate of 35.6% for the period of 2006 to 2020, which is double the rate of development observed in the banking, financial services and insurance industry. It is worth noting that a total of six out of the 37 Indian Unicorns are categorised as Fintech companies. In the field of Fintech, the vertical of Payment has emerged as the predominant sector, attracting a significant portion of venture capital (VC) investments from 2006 to 2020. Specifically, Payment has received 59% of the total VC flow during this period, leading to the establishment of four very successful and valued companies known as Unicorns. The Insurance sector, albeit relatively small in terms of overall venture capital investment, has produced the last two Fintech Unicorns. In the foreseeable future, the fintech industry is anticipated to see a broader range of expansion as a result of recent legislative measures and the facilitative environment for fintech

enterprises. The non-bank lending sector has emerged as a promising area, exhibiting substantial growth and capturing a significant portion of fintech investment rounds from 2015 to 2020, up to 43% of the total. The emergence of Account Aggregators and Open Credit Enhancement Network has laid the foundation for substantial future expansion within this sector.

In this study, Manish and G (2022) used a qualitative approach by analysing recently published studies, reports from major participants in the fintech sector and government regulatory bodies and major news outlets. They discover that the term "FinTech," which originally referred to new businesses, has become synonymous with "technological innovation in financial services." Existing banks, major technological companies and even regulatory bodies are all working together and coming up with new ideas. It is clear from a few key patterns they have seen that this is the case for the Indian FS sector in particular. With youthful FinTech firms at the forefront and established institutions fighting back with enhanced digital products, the Indian FinTech environment is one of a kind. Customer service, creativity and cooperation while keeping an eye on the controlled environment will continue to be the top priorities, despite variances in strategy across FinTech's many segments and stakeholders. The primary causes driving this enormous development and trends defining the Indian Fintech sector include the country's increasing importance as both an innovator and buyer of Fintech solutions.

Ozili (2018) aimed to initiate a comprehensive examination of the various challenges and concerns relating to digital finance, a subject that has yet to get substantial investigation within academic research. Utilisation of digital finance and the promotion of financial literacy have been found to yield numerous advantages for users of financial services, suppliers of digital finance, authorities and the overall economy. However, it is important to acknowledge that certain challenges continue to exist. By effectively addressing these

issues, the potential of digital finance can be fully harnessed to enhance the experiences of individuals, businesses and governments alike. The relevance of the digital finance issues addressed in this study lies in their pertinence to the current discussion and country-level projects aimed at enhancing financial accessibility through the utilisation of digital finance in emerging and developing nations.

In this study, Chang *et al.* (2020), discussed the subjects of FinTech and Blockchain are widely discussed by professionals in the finance and technology sectors at present. This study elucidates the profound influence and transformative nature of Fintech and Blockchain inside the financial sector, while also describing the key attributes of these technologies. Subsequently, the authors proceed to outline three pivotal problems and three ethical concerns pertaining to the use of Blockchain technology. Subsequently, the participants engaged in a discourse pertaining to the advancement of Blockchain technology within the domain of finance. Furthermore, the authors elucidated the underlying incentives that drive banks to delve into the realm of Blockchain technology, while also highlighting the challenges encountered in this pursuit. To get a comprehensive comprehension of the industry, a qualitative approach was used, including the interviewing of sixteen specialists. The prevalence of information concealing within the context of Blockchain technology has been acknowledged and a comprehensive examination of the underlying reasons has been conducted using the theoretical framework of the Theory of Planned Behaviour (TPB). The findings of the investigation indicate that information concealing may be attributed to emotional, behavioural and intellectual assessments. The respondents also offered various ideas and identified key success criteria for addressing the existing challenges in the implementation of Blockchain technology. Hence, four significant assertions have been formulated. This report proposes recommendations for

financial services on how to effectively adapt to the adoption of new technologies and implement a more organised approach to information exchange.

2.9 Summary

This chapter provided a comprehensive literature review for the research study on fintech, outlining the theoretical frameworks that underpin the investigation. It discusses the Technology Acceptance Model, emphasizing perceived user-friendliness and usefulness. The Theory of Reasoned Action is explored, focusing on attitudes toward fintech adoption, subjective norms, and actual fintech adoption behavior. Additionally, the chapter delves into the Human Society Theory, examining digital financial inclusion's social impact, consumer behavior, trust in fintech, and its implications on the job market in India. This review sets the stage for a deeper understanding of the multifaceted dynamics surrounding fintech adoption and its societal consequences in India.

CHAPTER III:

METHODOLOGY

This chapter includes whole methodology which was employed in this study. This chapter discuss the research problem, theoretical constructs, research purpose and questions, research design, population and sample, participants selection, instrumentation, data collection procedures, data analysis, and research design limitations.

3.1 Overview of the Research Problem

In the next 10 years, when you think of a company or bank, would you prefer physical buildings with 24/7 digital access or easy-to-use applications and as little human contact in banking processes as possible? The latter, right?

There are a lot of important concerns that need to be answered and obstacles that need to be overcome as financial technology (fintech) usage increases in India. As fintech continues to rise in India, driven by technical advancement and shifting consumer tastes, its acceptance and integration into the country's financial ecosystem are influenced by a number of crucial obstacles and considerations (Shrivastava, 2023). Understanding the regulatory challenges, infrastructural limits, financial literacy levels, and consumer trust dynamics that create India's fintech sector is crucial for ensuring its sustained growth and good effect. With the hope of illuminating the barriers to fintech acceptance, the infrastructure requirements for its spread, the role of financial literacy, and the elements behind consumer trust, this research seeks to conduct a thorough investigation of these diverse aspects.

There are numerous digital transactions in a day all over the world, most people use the traditional way of technologies. There is adoption of a wide variety of products and

services. Many fintech businesses in India and abroad have begun using social networks to assess the suitability of users.

Have you ever received a call from a credit card company when you made a purchase? How do they know about the transaction that you need a loan or convert that amount into EMI?

Hence, this study focused on the following research objectives:

1. Identify and overcome the regulatory challenges obstructing the adoption of Fintech in India's financial ecosystem.
2. Assess and address the infrastructure limitations hindering the growth and expansion of FT in India.
3. Understand the impact of financial literacy on Indian consumers' utilization and comprehension of Fintech services, and implement measures to improve financial literacy for greater Fintech adoption.
4. Analyze the factors contributing to consumer trust issues in using Fintech services in India, and devise measures to build and reinforce consumer trust while ensuring robust data security for Fintech platforms.

3.2 Operationalization of Theoretical Constructs

Research relies heavily on operationalizing theoretical structures since it converts intangible ideas into quantifiable ones. The current endeavour entails operationalizing four major theoretical constructs within the framework of the study on fintech uptake in India: regulatory challenges, infrastructure limitations, financial literacy, and consumer trust.

In order to evaluate the difficulties associated with regulatory matters, a Likert scale questionnaire is utilised. The participants are provided with statements that indicate their opinions of the barriers to regulatory compliance in the implementation of financial technology (fintech). This tool measures subjective evaluations using a scale that spans

from "strongly disagree" to "strongly agree." This approach allows for the transformation of subjective viewpoints into objective measurements, hence enabling the application of statistical techniques to assess the magnitude of perceived obstacles related to regulations.

Infrastructure limits are measured and quantified by the use of certain indicators, such as the quality of internet connection, the presence of digital payment infrastructure, and the rates of mobile device adoption. The aforementioned indicators are taken from reputable sources of data, such as government papers and industry publications. The subsequent quantification of these factors is typically expressed as percentages or indices, providing a numerical depiction of the condition of fintech-related infrastructure.

The assessment of financial literacy, a crucial construct, involves the use of a series of questions that evaluate individuals' comprehension of essential financial principles, including interest rates, loans, and investments. The numerical score is influenced by the accuracy of the answers provided to these questions, so serving as a metric to gauge an individual's proficiency in financial literacy. This methodology offers a neutral and uniform assessment of individuals' financial understanding.

The establishment of consumer trust plays a crucial role in the widespread acceptance and utilisation of fintech. In order to examine this particular construct, Likert scale inquiries are utilised to gauge consumers' level of trust in fintech service providers as well as their perceptions pertaining to the safeguarding of their personal data. The responses submitted by the participants are assigned numerical values, allowing for the potential to undertake quantitative analysis in order to evaluate levels of confidence. This methodology facilitates the examination of trust dynamics within the financial technology (fintech) sector.

The objective is to convert abstract theoretical concepts into measurable variables by operationalizing these constructs in a precise and methodical manner. This procedure guarantees the empirical rigour of the study, enabling the examination of the complex

interaction between regulatory obstacles, infrastructural limits, financial literacy, and consumer trust in influencing the uptake of fintech in India. In essence, the use of these operationalized constructs enables researchers to extract significant insights into the factors that influence the adoption of fintech and its impact on India's financial ecosystem.

3.3 Research Purpose and Questions

The primary purpose of this study was to examine Fintech in India and how it making the financial ecosystem in India. This study also looked into the various regulatory challenges and tactics that arise in the adoption of fintech. Additionally, this study analysed the consumer perceptions towards the fintech in India.

There were several problematic questions that required solutions, in this segment, which are as follows: -

1 What are the main regulatory challenges obstructing the adoption of Fintech in India's financial ecosystem, and how can they be overcome?

2 What infrastructure limitations currently hinder the growth and expansion of Fintech in India?

3 How does the level of financial literacy among Indian consumers impact their utilization and comprehension of Fintech services?

4 What factors contribute to consumer trust issues in using Fintech services in India, and what measures can be taken to build and reinforce consumer trust, while ensuring robust data security for Fintech platforms?

3.4 Research Design

This study used a quantitative research design. The necessity of collecting numerical data and doing statistical analysis in order to properly address the study objectives justifies this selection (Weyant, 2022). This setup permits the systematic gathering of data that may

be used to assess regulatory hurdles, infrastructural constraints, financial literacy levels, and consumer trust variables associated with fintech uptake in India. Findings that are statistically significant may be guaranteed thanks to the quantitative method, which offers a rigorous and impartial technique of analysing the study issues.

3.5 Population and Sample

The study's demographic encompasses persons residing in India who are either current users or prospective consumers of fintech services, such as Unified Payment Interface (UPI) and e-wallets, among others. The population under consideration exhibits a wide array of individuals spanning different age cohorts, income brackets, and educational attainment within the geographical boundaries of India.

The utilisation of a convenience sampling approach was implemented as a result of practical restrictions and resource limits. The study encompasses a sample size of 300 participants, who were chosen from various places across India. The participants in this study consisted of persons who are now engaged in or have prior experience with financial technology (fintech) services. Although the sample size in question may not accurately represent the total population, it is deemed adequate for performing significant statistical analysis and deriving insights pertaining to the study aims.

3.6 Participant Selection

This study used a convenience sampling technique to choose its participants. To collect information from people familiar with fintech services in the Indian context, especially Unified Payment Interface (UPI) and e-wallets, convenience sampling is used (Isaac, 2023; Sedgwick, 2013).

Participants was recruited through various means, including online platforms, social media, and local community outreach. The inclusion criteria for participants was as follows:

1 Residency in India.

2 Age 18 years or older.

3 Experience or active usage of fintech services, such as UPI and e-wallets.

Convenience sampling was used to recruit participants who fit these descriptions. While this approach might not provide a statistically valid representation of the Indian population at large, it does enable the collection of useful information from real-world users of fintech services in the country (Etikan, 2016).

3.7 Instrumentation

In this study, a questionnaire was the main method of data collecting (Sara L. McLafferty, 2016). The questionnaire is a thorough instrument for collecting information from respondents about their personal encounters with and thoughts on fintech adoption in India, with a focus on issues like regulatory hurdles, infrastructure constraints, financial literacy, and consumer trust.

Key aspects of the questionnaire instrumentation include:

1. **Question Design:** Only closed-ended questions (those with set answer choices) are included in the questionnaire. Each of the study goals is adequately addressed by the questions (Price, 2012).
2. **Demographic Information:** The demographics portion of the questionnaire asks for basic information about respondents, such as their age, gender, income, and level of education. This information is useful for assessing replies according to respondent demographics.

3. **Structured Sections:** Each portion of the questionnaire is structured to achieve a certain goal in the study. Fintech adoption, fintech services, financial literacy, regulatory hurdles, and consumer trust are just some of the topics covered, and respondents will appreciate the sectioned format.
4. **Likert Scale:** There are questions using a Likert scale to gauge how much respondents agree or disagree with certain assertions. The participants' thoughts and feelings may be evaluated in a systematic fashion with the use of this scale. Five-point Likert scale was used in this research, from strongly disagree to strongly agree (Mumu *et al.*, 2022).

The overall study goals were met and new insights into the use of fintech in India were uncovered with the help of the quantitative data collected through the structured questionnaire and analysed statistically.

3.8 Data Collection Procedures

The first step in gathering information for this study was to give the structured questionnaire to the randomly selected group of 300 participants. Quantitative information about fintech uptake in India is sought, and this survey aims to provide that by asking questions about regulatory hurdles, infrastructural constraints, financial literacy, and customer trust.

- **Data Collection Process:** The questionnaire was made available to respondents when they open the online survey form. They were urged to answer every question, and they were given the freedom to skip any that they didn't want to or make any remarks they wanted.
- **Data Collection Platform:** The survey itself was administered using a various social media platforms and other online platforms. This platform was selected so

that respondents may complete the survey from any device, regardless of their location (Jain, Sahoo and Kaubiyal, 2021).

- **Data Validation:** Data was validated to make sure that answers were full and correct. Responses were constantly checked for discrepancies and outliers during data collection.
- **Data Storage and Security:** The acquired data from the participants were safely stored in accordance with the applicable data protection laws. Participants' identities and privacy were protected by a number of ways. Only authorised people were granted access to the data collected (Wilms, 2012).
- **Ethical Considerations:** Ethical guidelines were followed religiously all through the data gathering phase. All elements of data collecting followed ethical standards, and participants' rights and privacy were protected.

By following this comprehensive data collection process, the study aimed to acquire reliable and pertinent quantitative data, contributing to a deeper understanding of the factors influencing fintech adoption in India.

3.9 Data Analysis

Statistical analysis was performed with the help of SPSS (Statistical Package for the Social Sciences). SPSS is a powerful programme that facilitates the analysis of numerical data through the use of several statistical methods (K, 2022; Čaplová and Švábová, 2020). Several statistical methods were used in this investigation. These methods included frequency analysis, ordinal regression, and the Spearman correlation.

- **Frequency Analysis:** Useful for quickly summing up large amounts of categorical data and getting a feel for how people as a whole answered various survey questions, frequency analysis is a cornerstone of statistical analysis (Hansen, 2023). In this study, frequency analysis was used to look at how people answered the

survey's many items. Topics including regulatory hurdles, infrastructural constraints, financial illiteracy, and consumer trust were examined to reveal preferences and trends among participants.

- **Ordinal Regression:** When the dependent variable contains ordered categories and the independent variables are generally continuous or categorical, ordinal regression is used. An ordinal dependent variable (such as degree of adoption or trust in fintech services) was used in this study to examine the association between a number of ordinal independent factors (such as regulatory obstacles and infrastructural limits) and an ordinal dependent variable. The aim of this work was to establish which independent factors had a substantial effect on the ordinal outcome variable and to what degree (Tutz, 2022).
- **Spearman Correlation:** The strength and direction of the association between two or more ordinal or interval variables can be evaluated with the help of Spearman correlation analysis, a non-parametric technique (Rahman *et al.*, 2023). The purpose of this analysis was to determine whether or not there was a connection between the many aspects involved in fintech adoption, and the variables studied.

3.10 Research Design Limitations

While the methodology used in this study was appropriate for those aims, it does have certain restrictions. Because of the potential influence on the study's generalizability and robustness, acknowledging these constraints is essential.

- **Sampling Bias:** Convenience sampling is one important caveat. Due to potential sample bias, this approach relied on convenience and cooperation in selecting participants. This suggests that the sample may not accurately reflect the demographics of India's fintech user base as a whole. Potentially missing factors

that contribute to variation include age, socioeconomic level, and geography (Etikan, 2016).

- **Self-Reported Data:** Data for the study came from a questionnaire completed by the participants themselves. The accuracy of participants' reported experiences and opinions of fintech adoption may be impacted by biases like as memory bias and social desirability bias (Latkin *et al.*, 2017).
- **Limited Scope:** Regulatory hurdles, infrastructural constraints, financial literacy, and customer trust were prioritised in the study plan. Despite the importance of these considerations, little research has been done on additional variables and contextual factors that may impact fintech adoption, such as cultural norms or technical preparedness (Aldboush and Ferdous, 2023).
- **Generalizability:** The findings may not be immediately transferable to other countries or areas with different fintech ecosystems and cultural settings because of the sample technique and the emphasis on the Indian environment (Jinasena *et al.*, 2023).

In spite of these caveats, the study approach used here nevertheless sheds light on the state of fintech acceptance in India. Future study might address these gaps by using more robust sample strategies, integrating qualitative and quantitative methodologies, and performing longitudinal investigations of this dynamic topic.

3.11 Conclusion

This chapter has provided a detailed description of the research methodology taken throughout this investigation of financial technology adoption in India. It has defined the problem, outlined the theoretical framework, outlined the study's goals, and explained why a quantitative approach was chosen. Population and sample, participant selection, instrumentation, data collecting processes, and data analysis methods, such as frequency

analysis, ordinal regression, and Spearman correlation, were also covered in this chapter. Furthermore, it accounted for the caveats of the study's methodology. To better understand this ever-changing ecosystem, this technique lays the groundwork for a comprehensive study of the variables driving fintech adoption in India.

CHAPTER IV:

RESULTS

This chapter discuss the main findings that was found in this research. Firstly, this chapter discuss the whole results based on the frequency analysis. Also, this chapter include the major findings of the hypothesis testing on the basis of various statistical tests such as ordinal regression and spearman correlation.

4.1 Reliability Statistics

This section includes reliability statistics of the dataset which was done with the help of "Cronbach's alpha test".

Table 4.1: Reliability Statistics

Cronbach's Alpha	N of Items
.977	44

According to reliability statistics (Table 4.1), the number of items is 44. Cronbach alpha value is .977 and according to rule of thumb data is excellent and acceptable.

4.2 Frequency Analysis

This section includes the findings of the frequency analysis, this section represents the findings in the form of various table and graphs.

4.2.1 Demographic Profile

Table 4.2: Demographic Details of Respondents

		Frequency	Percent
Gender			
	Female	218	72.7

	Male	82	27.3
Age			
	18-25 years old	114	38.0
	26-30 years old	78	26.0
	31-35 years old	33	11.7
	36-40 years old	26	8.7
	41-45 years old	17	5.7
	More than 45 years	32	10.7
Education Level			
	High School	12	4.0
	Undergraduate	51	17.0
	Graduate	77	25.7
	Post Graduate	126	42.0
	Professionally Qualified	34	11.3
Income			
	Less than 1,00,000	37	12.3
	1,00,00-5,00,000	52	17.3
	5,00,000-10,00,000	56	18.7
	10,00,000-20,00,000	30	10.0
	More than 20,00,000	43	14.3
	Prefer not to say	82	27.3

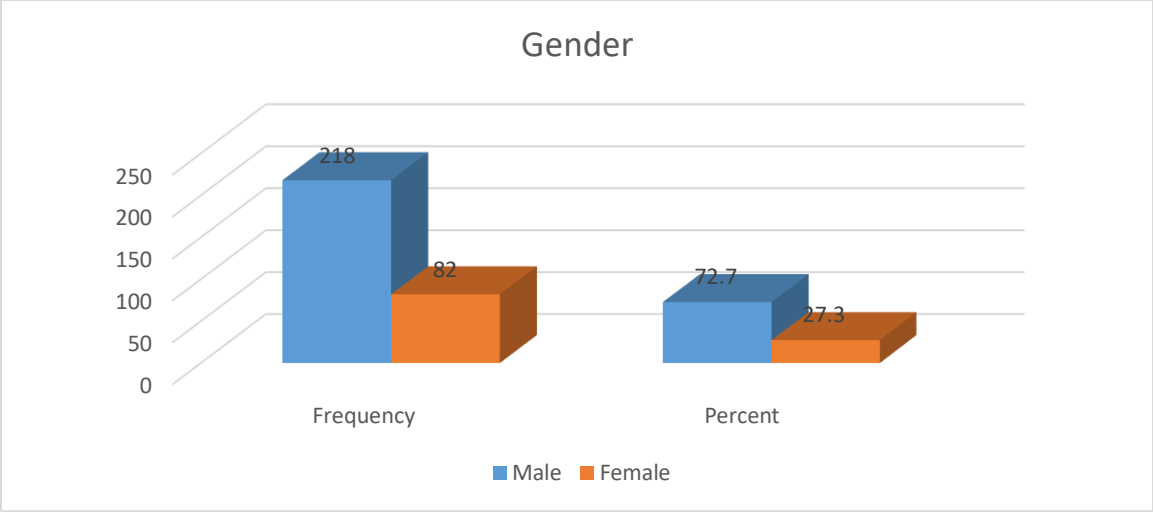

Figure 4.1: Gender of the Respondents

According to fig. 4.1, number of respondents is 300. More than 27% were female and more than 72% were male respondents.

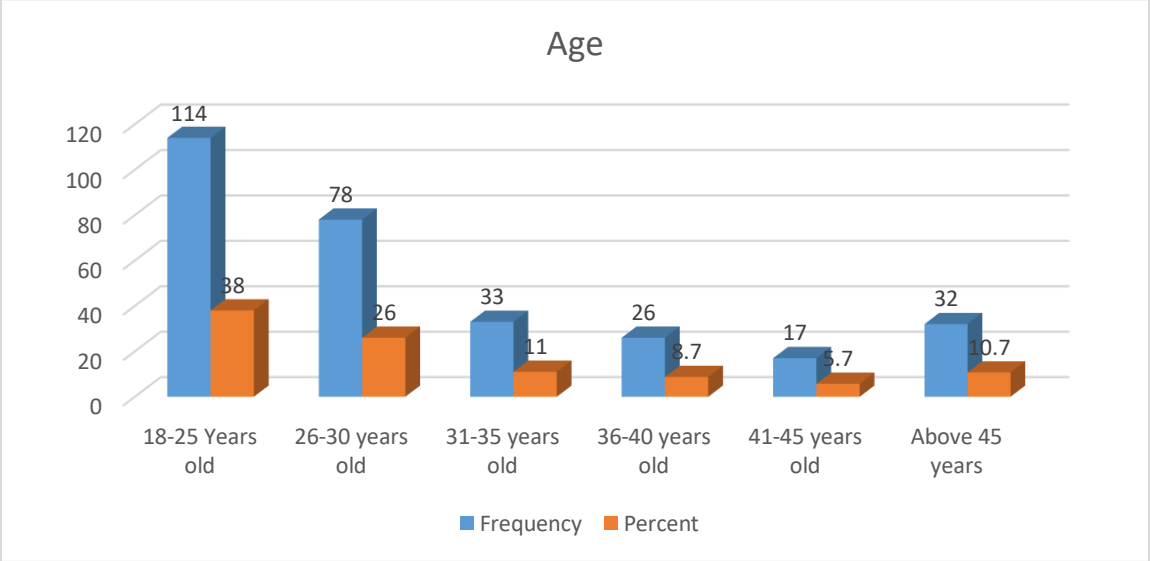

Figure 4.2: Age of the Respondents

According to figure 4.2, out of 300 respondents 38% individuals were between 18-25 years, 26% individuals were 26-30 years old, 11% individuals were 31-35 years old, more than

8% individuals were 36-40 years old, more than 5% individuals were 41-45 years old and less than 1% individuals were above 45 years.

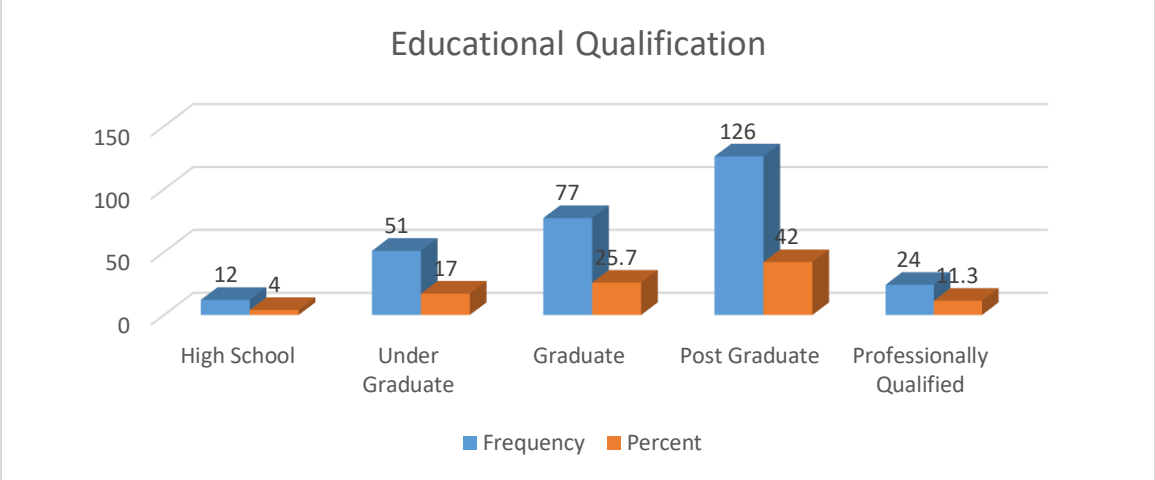

Figure 4.3: Educational Qualification of the Respondents

According to fig. 4.3, out of 300 respondents 4% individuals were high school pass-outs, 17% individuals were undergraduates, more than 5% individuals were graduates, 42% individuals were postgraduate and only less than 2% individuals were professionally qualified.

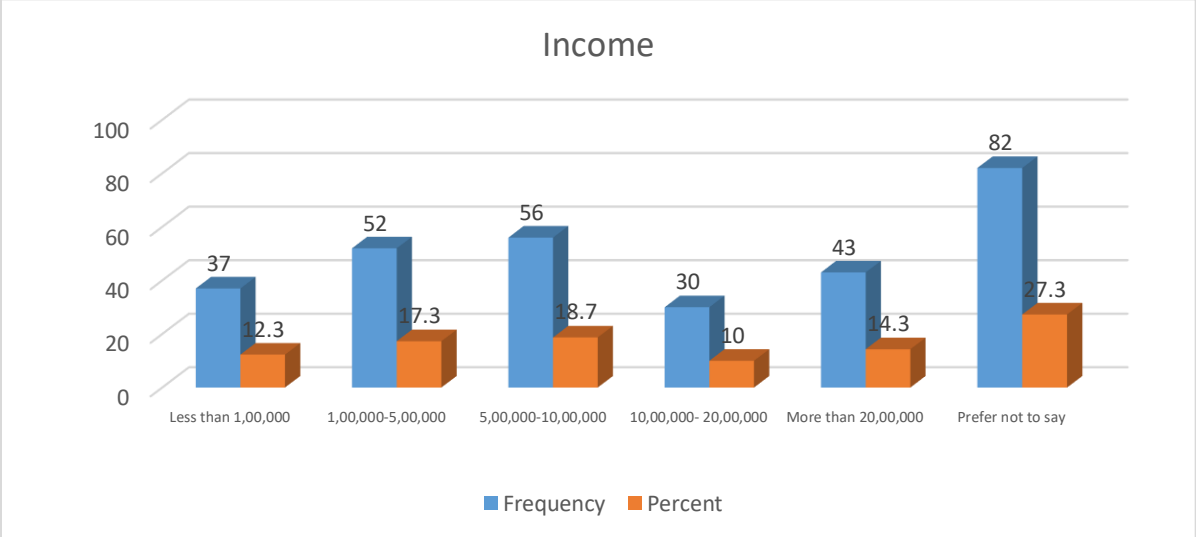

Figure 4.4: Income of the Respondent

According to fig. 4.4, out of 300 respondents less than 3% individuals were earning 1,00,000 annually, more than 7% individuals were earning less than 5,00,000 annually, more than 8% individuals were earning less than 10,00,000 annually, 10 % individuals were earning less than 20,00,000 per annum, more than 4% individuals were earning more than 20,00,000 per annum and more than 7% individuals preferred not to disclose.

4.2.2 Fintech And Its Usage

Table 4.3: Fintech And Its Usage Among Respondents

		Frequency	Percent
Usage of Digital Payments in Daily Life			
	Prefer not to say	217	72.3
	Weekly	39	13.0
	Monthly	15	5.0
	Rarely	20	6.7
	Never	9	3.0
Preferred Digital Payments Method			
	UPI (Unified Payments Interface)	156	52.0
	Mobile Wallet (e.g. Phone pe, Google Pay, Paytm)	94	31.3
	Debit Card/ Credit Card	30	10.0
	Internet Banking	13	4.3
	Other	7	2.3
Reasons for Using Digital Payments Method			
	Convenience	213	71.0

	Cashback/ Rewards	13	4.3
	Government Initiatives (e.g. Digital India)	11	3.7
	Speed of Transactions	49	16.3
	Security	14	4.7

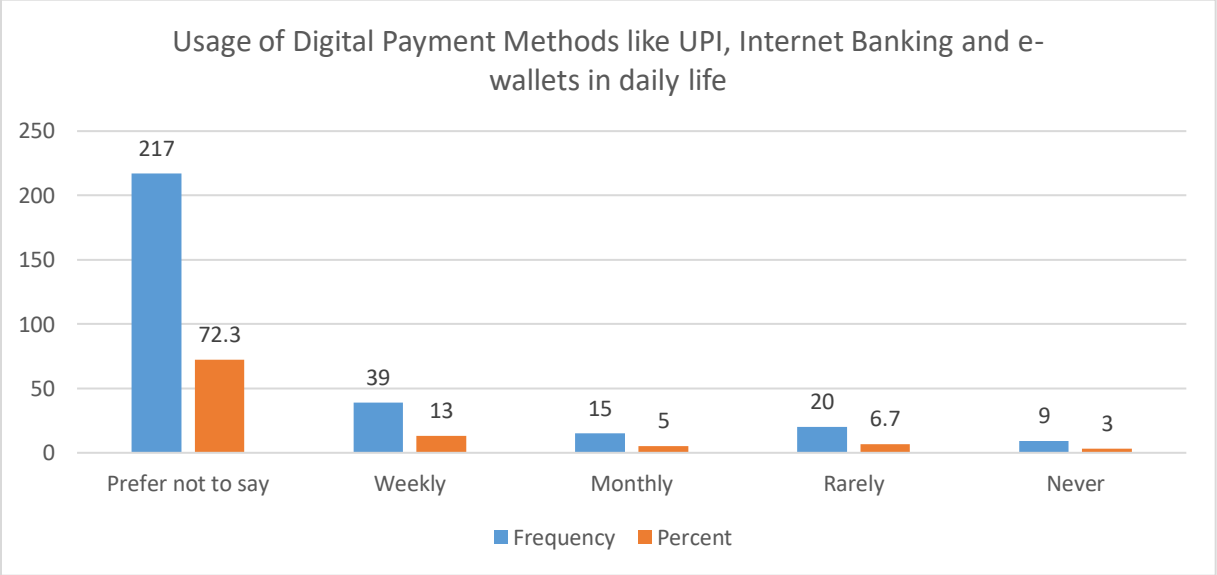

Figure 4.5: Usage of Digital Payment Methods like UPI, Internet Banking and e-wallets in daily life

According to figure 4.5, out of 300 respondents 3% individuals never use digital payments methods, more than 6% individuals rarely use digital payment methods, 5% individuals use digital payment methods on monthly basis, 13% individuals use digital payment methods on weekly basis, and more than 72% individuals preferred not to say.

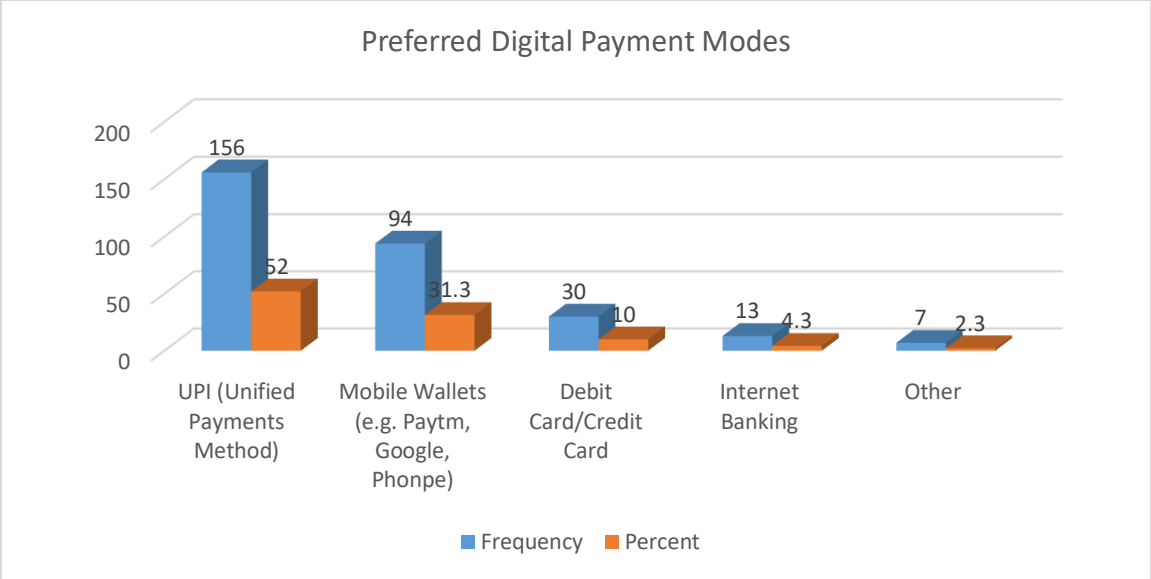

Figure 4.6: Preferred Digital Payment Modes

According to fig 4.6, out of 300 respondents 52% individuals preferred UPI payments, less than 2% individuals preferred mobile wallets, 10% individuals preferred debit or credit cards, less than 5% individuals preferred internet banking and less than 3% individuals prefer other methods.

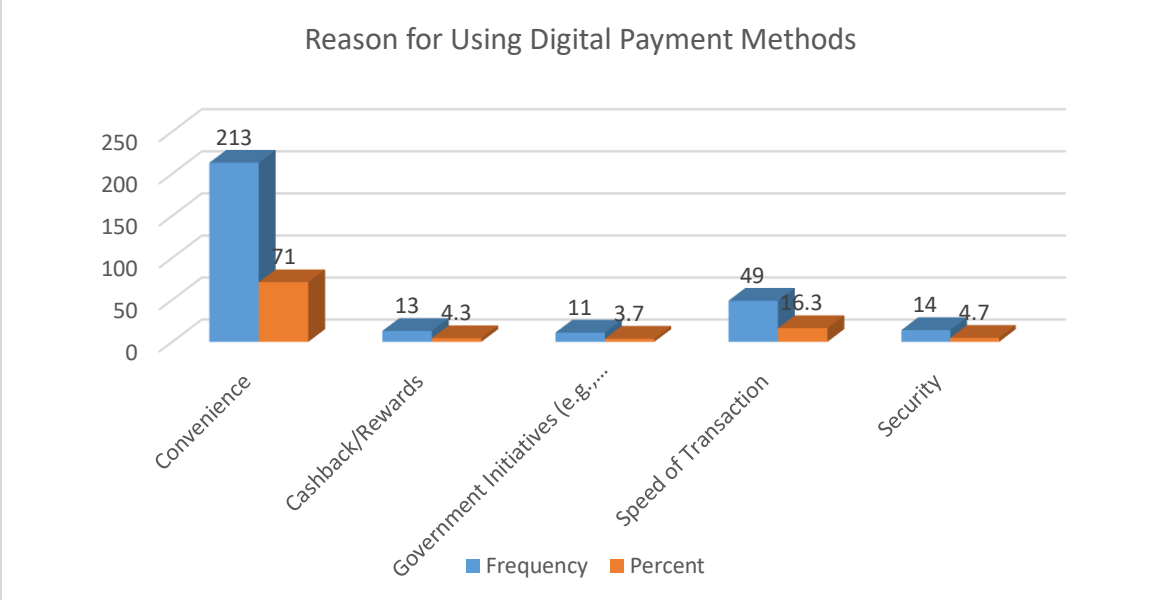

Figure 4.7: Reason for Using Digital Payment Methods

According to figure 4.7, more than 300 respondents 71% individuals use digital payments because of convenience, less than 5% individuals use digital payments method because of cashback and rewards, less than 4% individuals use digital payments methods because of governments initiative and campaigns, more than 5% individuals use digital payments methods because of speed of transaction, and less than 5% individuals use prefer digital payments methods because of security.

4.2.3 Fintech Services and Its Utillisation

Table 4.4: Fintech Services and Its Utillisation

Statements		**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
I find fintech services user-friendly and easy to use	Frequency	17	10	61	107	105
	Percent	5.7	3.3	20.3	35.7	35.0
Fintech platforms provide a variety of financial services that are suitable for my needs	Frequency	13	16	70	125	76
	Percent	4.3	5.3	23.3	41.7	25.3
The customer support provided by Fintech companies in India	Frequency	21	25	111	94	49
	Percent	7.0	8.3	37.0	31.3	16.3

is responsive and helpful						
Fintech companies regularly introduce innovative features and services.	Frequency	17	12	80	131	60
	Percent	5.7	4.0	26.7	43.7	20.0
I regularly use fintech services such as UPI, mobile wallets, or online banking for various financial transactions.	Frequency	14	21	53	95	117
	Percent	4.7	7.0	17.7	31.7	39.0
For some transactions, I prefer to utilise fintech services instead of traditional banking techniques.	Frequency	19	11	62	116	92
	Percent	6.3	3.7	20.7	38.7	30.7
Fintech services have made managing my	Frequency	12	17	85	110	76
	Percent	4.0	5.7	28.3	36.7	25.3

finances easier for me.						
Government initiatives such as Digital India have encouraged my use of Fintech services.	Frequency	11	19	79	119	72
	Percent	3.7	6.3	26.3	39.7	24.0
I trust the security of my financial transactions when using Fintech services.	Frequency	13	19	78	121	69
	Percent	4.3	6.3	26.0	40.3	23.0
My access to financial services has improved due to fintech services.	Frequency	14	25	66	118	77
	Percent	4.7	8.3	22.0	39.3	25.7

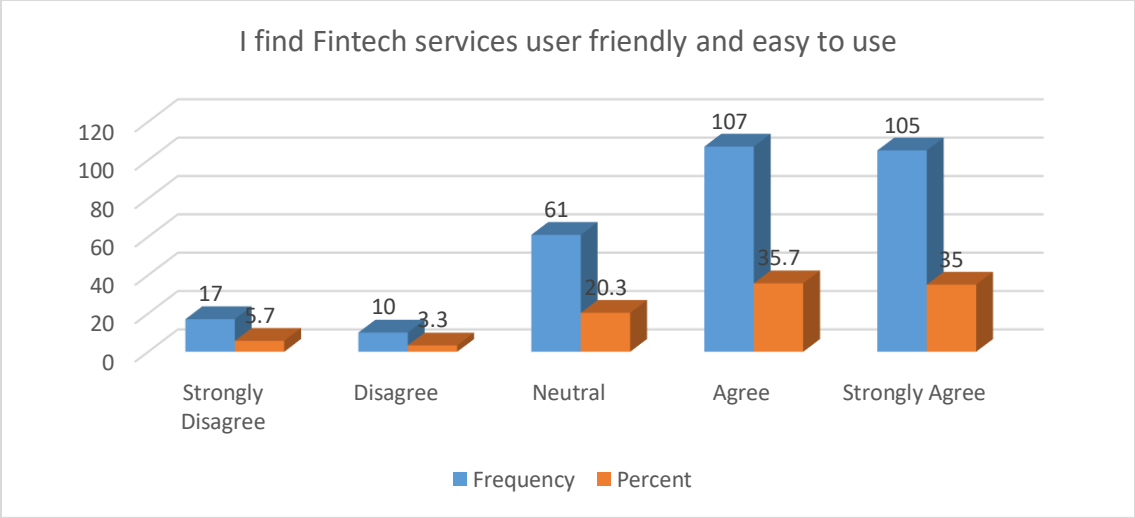

Figure 4.8: I find Fintech services user friendly and easy to use

According to fig. 4.8, out of 300 respondents less than 6% individuals strongly disagreed that fintech services are user friendly or easy to use, less than 4% individuals disagreed on this, less than 21% individuals were neutral about it, more than 35% individuals agreed that fintech is user friendly and 35% individuals strongly agreed that fintech services are user friendly and easy to use.

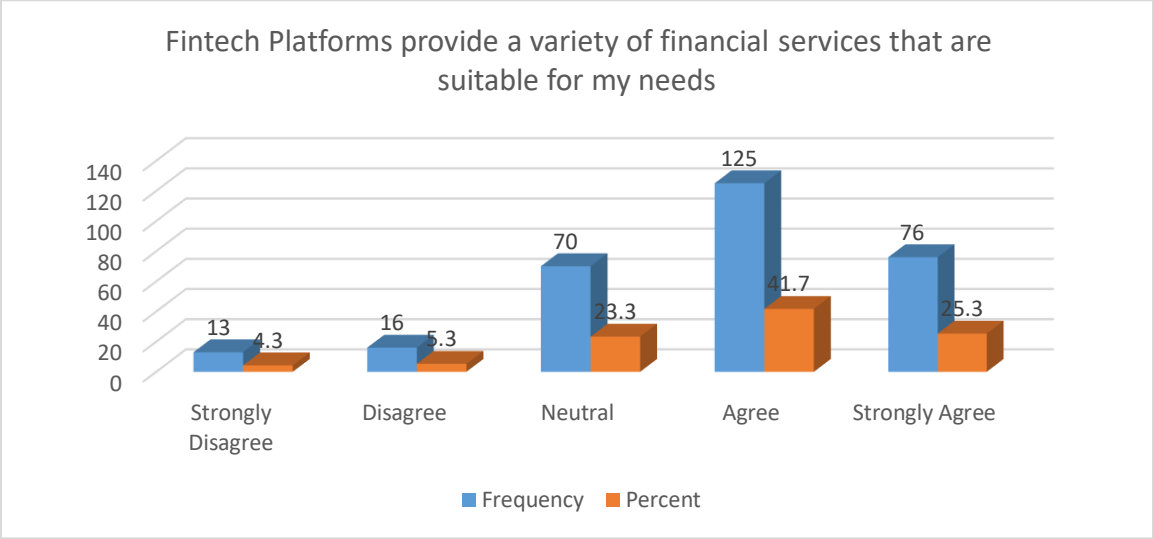

Figure 4.9: Fintech Platforms provide a variety of financial services that are suitable for my needs

According to fig. 4.9, out of 300 respondents more than 25% individuals strongly agreed that fintech platforms provide variety of financial services that are suitable for their needs, less than 42% individuals agreed on this, more than 23% individuals were neutral about it, more than 5% individuals disagreed that fintech platforms provide variety of financial services that are suitable for their needs and less than 5% individuals strongly disagreed that fintech platforms provide variety of financial services that are suitable for their needs.

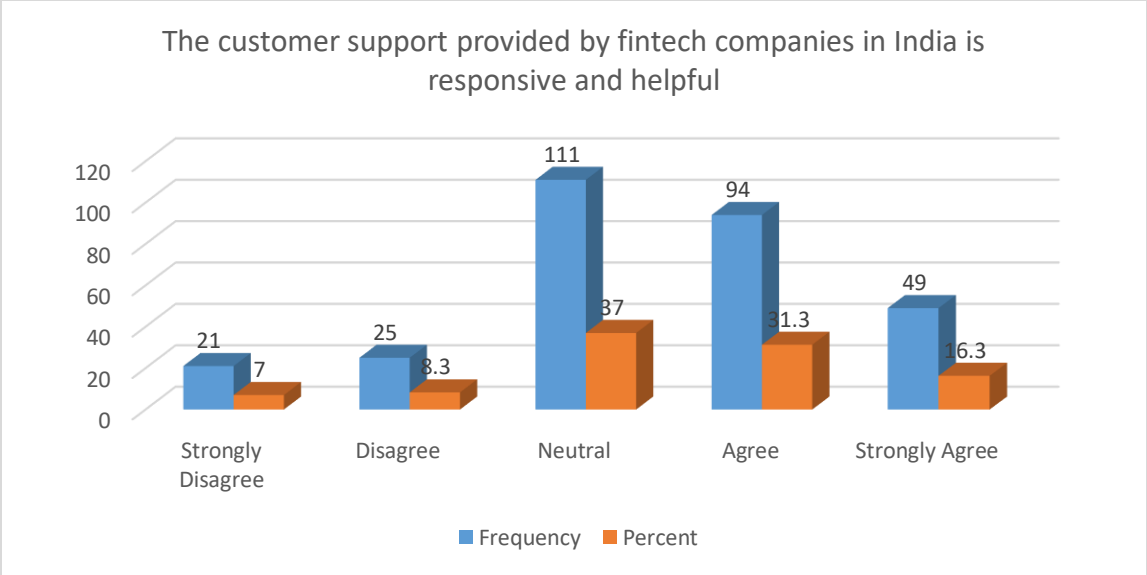

Figure 4.10: The customer support provided by fintech companies in India is responsive and helpful

According to fig. 4.10, out of 300 respondents more than 16% individuals strongly agreed that customer support provided by fintech companies in India is responsive and helpful, more than 31% individuals agreed on the same, 87% individuals were neutral about it, more than 8% individuals disagreed and 7% individuals strongly disagreed on customer support responsiveness and helpfulness.

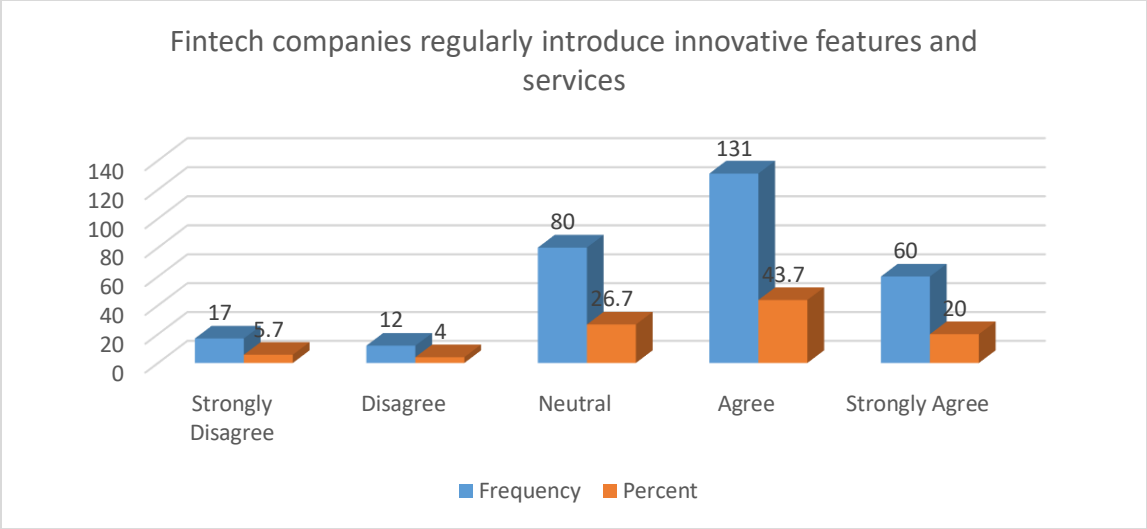

Figure 4.11: Fintech companies regularly introduce innovative features and services

According to fig. 4.11, out of 300 respondents 20% individuals strongly agreed that fintech companies regularly introduce innovative features and services, more than 43% individuals agreed on the same, more than 26% individuals were neutral about it, 4% individuals disagreed and more than 5% individuals strongly disagreed that fintech companies regularly introduce innovative features and services.

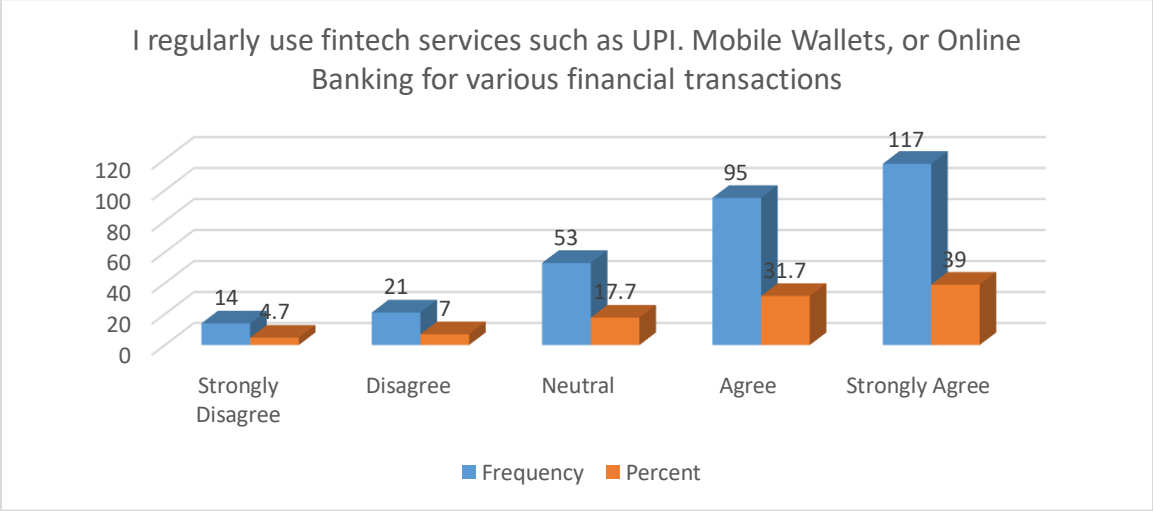

Figure 4.12: I regularly use fintech services such as UPI. Mobile Wallets, or Online Banking for various financial transactions

According to fig. 4.12, out of 300 respondents 89% individuals strongly agreed on regularly using fintech services such as UPI, mobile wallets or online banking for various financial transactions, more than 31% individuals agree on the same, less than 18% individuals were neutral about it, 7% individuals disagreed on this, and less than 5% individuals strongly disagreed on regularly using fintech services such as UPI, mobile wallets or online banking for various financial transactions.

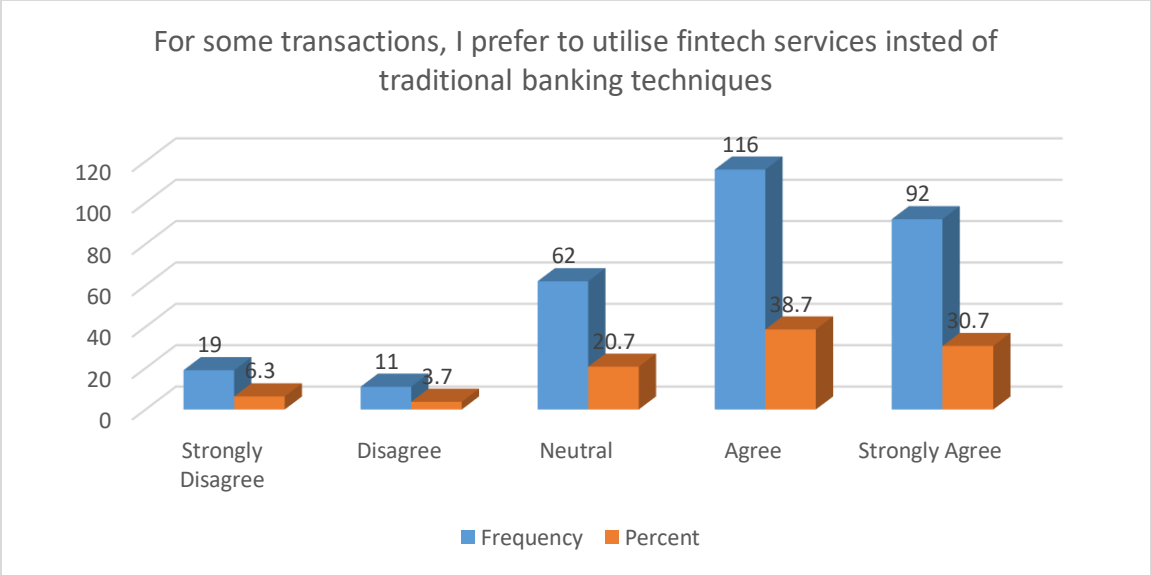

Figure 4.13: For some transactions, I prefer to utilise fintech services insted of traditional banking techniques

According to fig. 4.13, out of 300 respondents more than 6% individuals strongly disagreed on preferring to utilize fintech services instead of traditional banking techniques, less than 4% individuals disagreed on the same, more than 20% individuals were neutral about it, more than 38% individuals agreed on preferring to utilize fintech services instead of traditional banking techniques. And more than 30% individuals strongly agreed on the same.

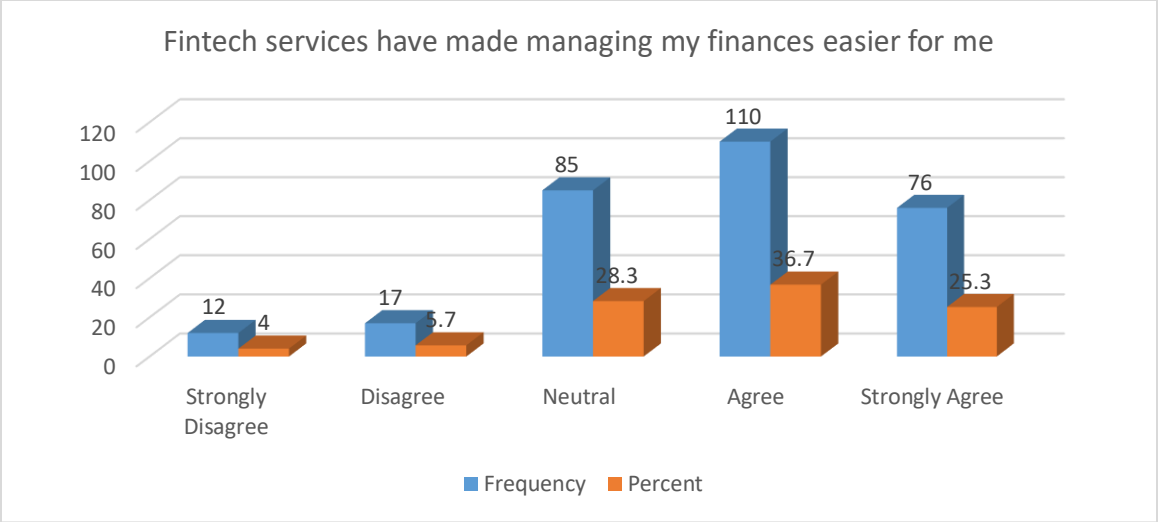

Figure 4.14: Fintech services have made managing my finances easier for me

According to fig. 4.14, out of 300 respondents more than 25% individuals strongly agreed that fintech services have made managing their finances easily, more than 36% individuals agreed on the same, less than 29% individuals were neutral about it, more than 5% individuals disagreed that fintech services have made managing their finances easier, and 4 % individuals strongly disagreed on the same.

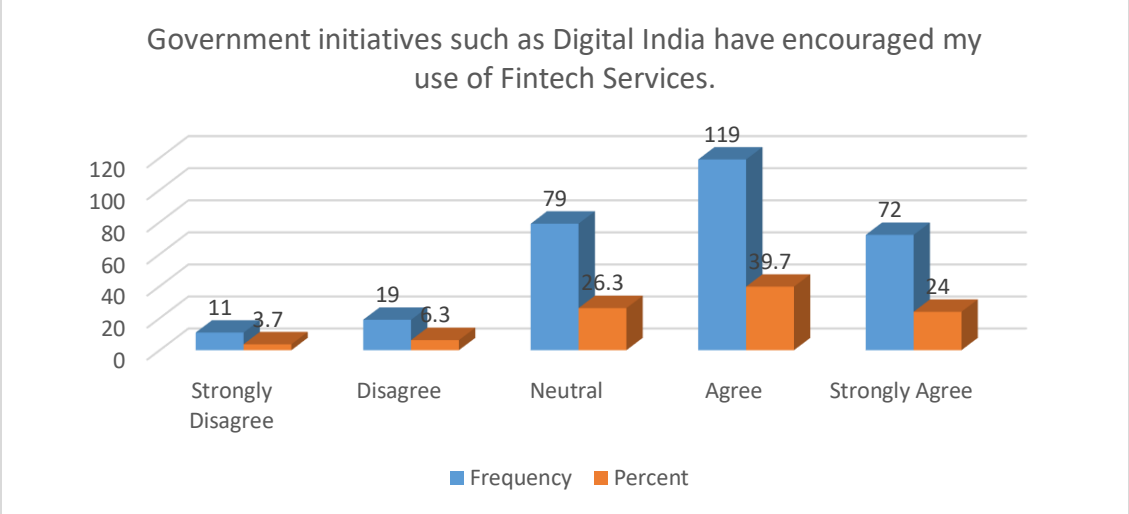

Figure 4.15: Government initiatives such as Digital India have encouraged my use of Fintech Services

According to fig. 4.15, out of 300 respondents 24% individuals strongly agreed that government initiatives such as Digital India have encouraged their use of fintech services, less than 40% individuals agreed on the same, more than 26% individuals were neutral about it, more than 6% individuals disagreed that government initiatives have encouraged use of fintech services and more than 3% individuals strongly disagreed on the same.

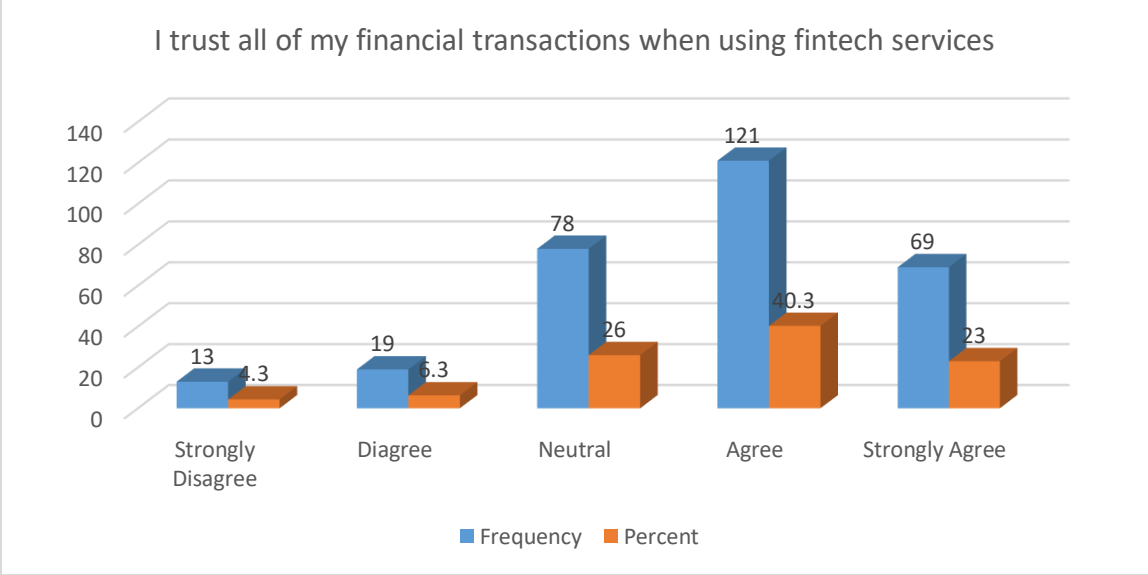

Figure 4.16: I trust all of my financial transactions when using fintech services

According to fig. 4.16, out of 300 respondents 23% individuals strongly agreed on trusting financial transactions when using financial services, more than 40% individuals agreed on the same, 26% individuals were neutral about it, more than 6% individuals disagreed on trusting transactions when using financial services and more than 4% individuals strongly disagreed on the same.

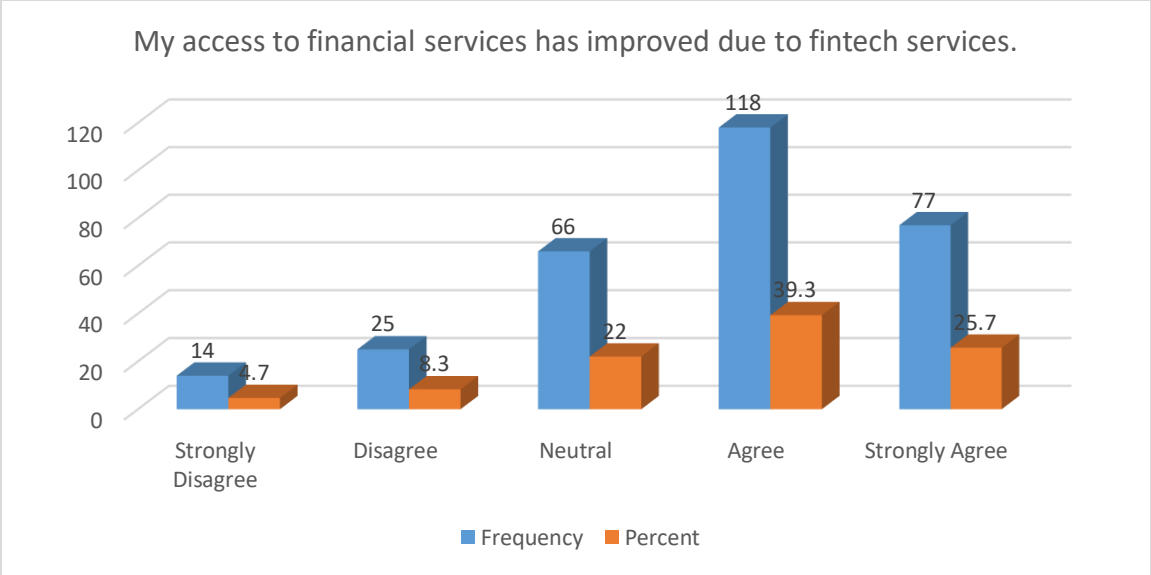

Figure 4.17: My access to financial services has improved due to fintech services.

According to fig 4.17, out of 300 respondents more than 25% individuals strongly agreed that their access to financial services has improved due to fintech services, less than 40% individuals agreed on the same, 22% individuals were neutral about it, more than 8% individuals disagreed on that, and more than 4% individuals strongly disagreed that their access to financial services has improved due to fintech services.

4.2.4 Fintech Adoption in India

Table 4.5: Fintech Adoption in India

Statements		**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
Using fintech services is convenient for my financial transactions	Frequency	15	19	66	112	88
	Percent	5	6.3	22	37.3	29.3

Fintech services provide me with a variety of financial options	Frequency	14	14	81	125	66
	Percent	4.7	4.7	27	41.7	22
I find fintech platforms easy to use and navigate	Frequency	9	25	56	126	84
	Percent	3	8.3	18.7	42	28
Fintech has made managing my finances more efficient	Frequency	15	33	76	112	64
	Percent	5	11	25.3	37.3	21.3
I recommend to adopt the fintech services	Frequency	13	15	74	114	84
	Percent	4.3	5	24.7	38	28

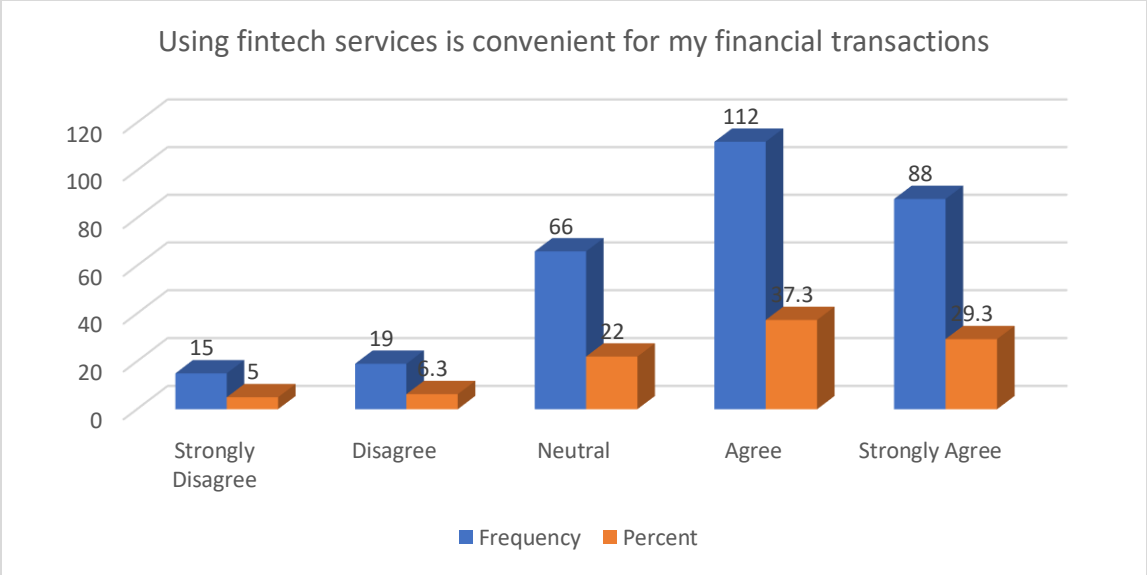

Figure 4.18: Using fintech services is convenient for my financial transactions

According to fig. 4.18, out of 300 respondents more than 29% individuals strongly agreed that using financial services is convenient for their financial transactions, more than 37% individuals agreed on the same, 22% individuals were neutral about it, less than 7% individuals disagreed on using financial services is convenient for their financial transactions and 5% individuals strongly disagreed on the same.

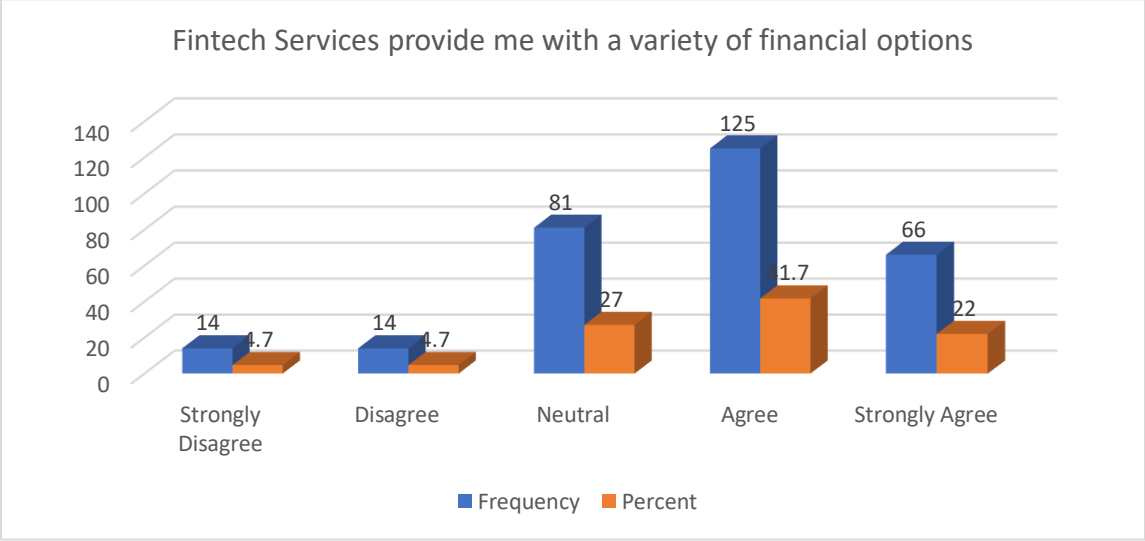

Figure 4.19: Fintech Services provide me with a variety of financial options

According to fig. 4.19, out of 300 respondents 22% individuals strongly agreed that fintech services provide a variety of financial options, more than 41% individuals agreed on the same, 27% individuals were neutral about it, less than 5% individuals disagreed and less than 5% individuals strongly disagreed that fintech services provides variety of financial options.

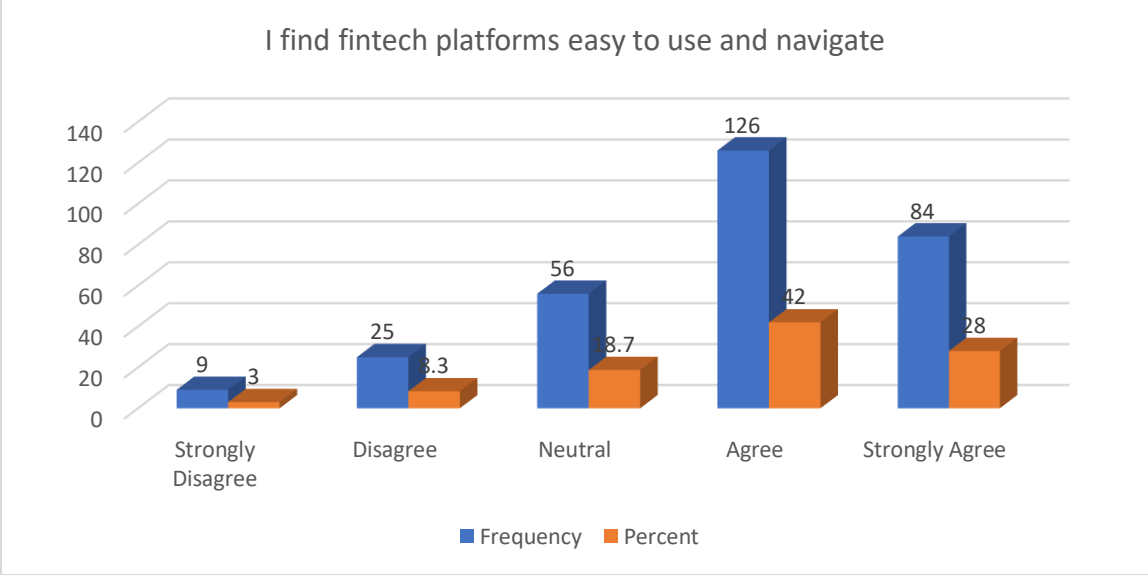

Figure 4.20: I find fintech platforms easy to use and navigate

According to fig. 4.20, out of 300 respondents 28% individuals strongly agreed that they find fintech platforms easy to use and navigate, 42% individuals agreed on the same, more than 18% individuals were neutral about it, less than 9% individuals disagreed and 3% individuals strongly disagreed that fintech platforms are easy to use and navigate.

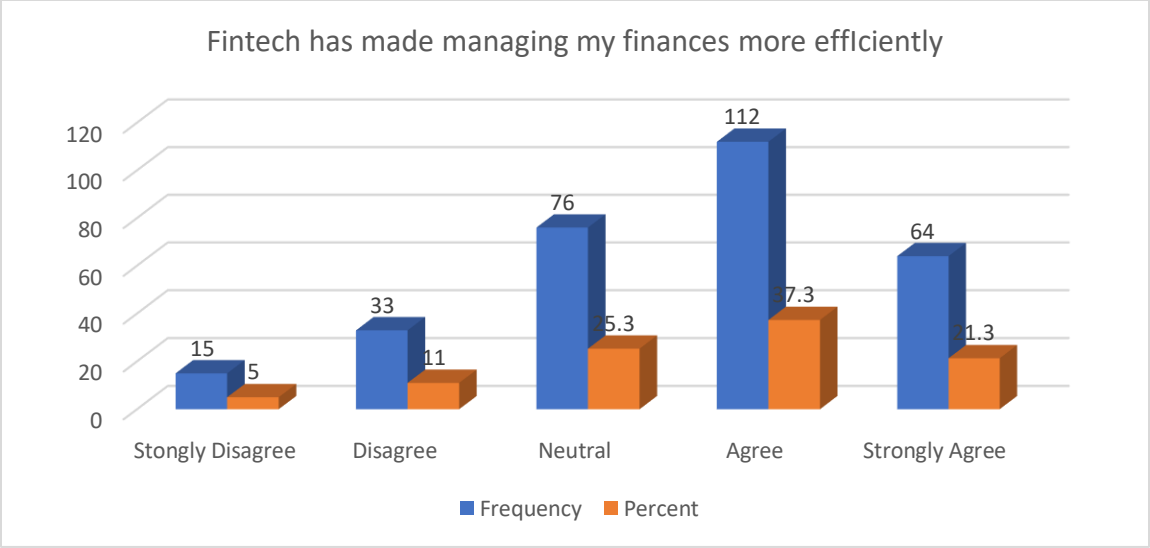

Figure 4.21: Fintech has made managing my finances more efficiently

According to fig. 4.21, out of 300 respondents more than 21% individuals strongly agreed that fintech has made managing finances more efficiently, more tan 37% individuals agreed on the same, more than 25% individuals were neutral about it, 11% individuals disagreed that fintech has made managing their finances more efficiently, and 5% individuals strongly disagreed on the same.

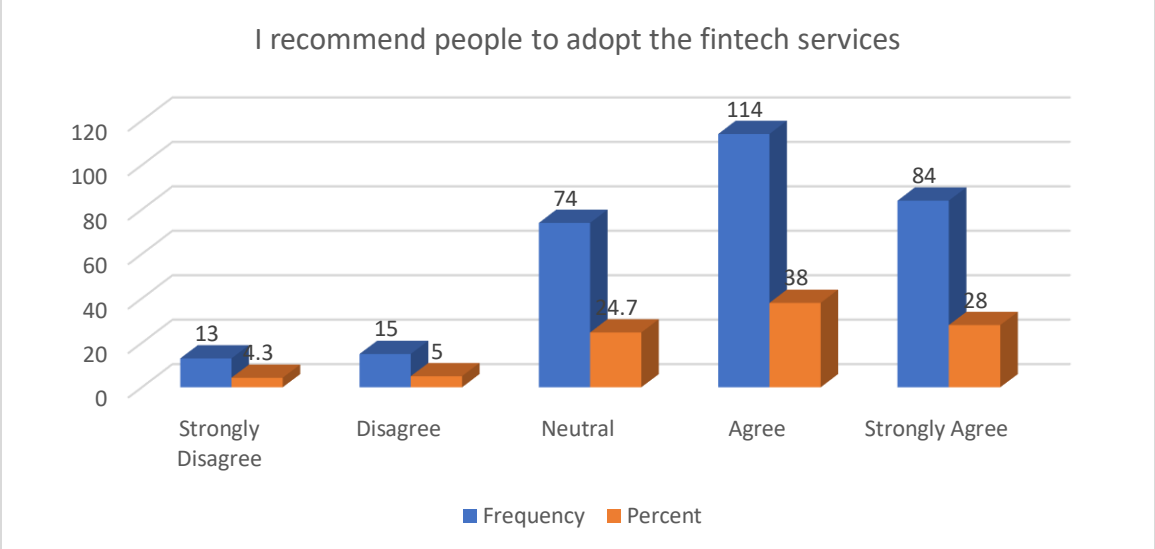

Figure 4.22: I recommend people to adopt the fintech services

According to fig. 4.22, out of 300 respondents 28% individuals strongly agreed on recommending people to adopt the fintech services, 38% individuals agreed on the same, less than 5% individuals were neutral about it, 5% individuals disagreed on recommending people to adopt the fintech services, less than 5% individuals strongly disagreed on the same.

4.2.5 Growth and Expansion of Indian Fintech

Table 4.6: Growth and Expansion of Indian Fintech

Statements		**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
Fintech Services have become ore accessible in India over the past few years	Frequency	18	16	50	105	111
	Percent	6.0	5.3	16.7	35.0	37.0
I have noticed a noteworthy development in the number of fintech companies operating in India	Frequency	10	14	62	126	88
	Percent	3.3	4.7	20.7	42.0	29.3

I believe that fintech has the potential to promote financial inclusion in India.	Frequency	8	24	65	110	93
	Percent	2.7	8.0	21.7	36.7	31.0
Fintech platforms have played an important role in shaping India's financial landscape.	Frequency	13	22	78	94	93
	Percent	4.3	7.3	26.0	31.3	31.0
I have noticed an increase in fintech adoption among my peers and within my community.	Frequency	13	14	65	120	88
	Percent	4.3	4.7	21.7	40.0	29.3

Fintech companies have introduced innovative solutions that enhance financial services.	Frequency	13	19	64	125	79
	Percent	4.3	6.3	21.3	41.7	26.3
I am optimistic about the future growth of fintech in India.	Frequency	12	20	59	111	98
	Percent	4.0	6.7	19.7	37.0	32.7

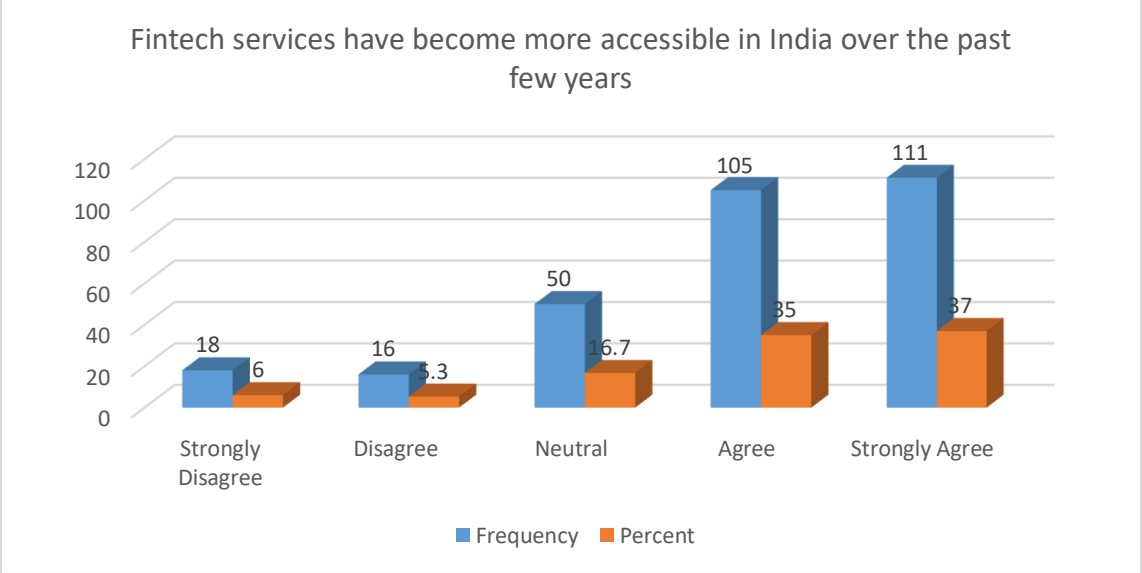

Figure 4.23: Fintech services have become more accessible in India over the past few years

According to fig. 4.23, out of 300 respondents 22% individuals strongly agreed that fintech services provide a variety of financial options, more than 41% individuals agreed on the

same, 27% individuals were neutral about it, less than 5% individuals disagreed and less than 5% individuals strongly disagreed that fintech services provides variety of financial options.

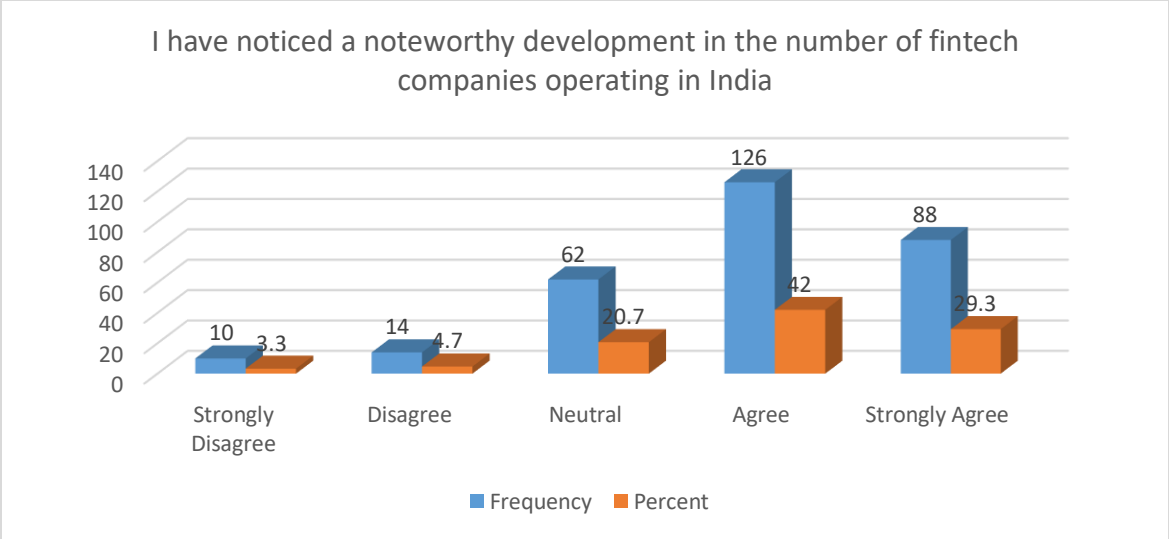

Figure 4.24: I have noticed a noteworthy development in the number of fintech companies operating in India

According to fig. 4.24, out of 300 respondents more than 29% individuals strongly agreed on noticing development in the number of fintech companies operating in India, 42% individuals agreed on the same, more than 20% individuals were neutral about it, less than 5% individuals disagreed on this, and more than 3% individuals strongly disagreed on this.

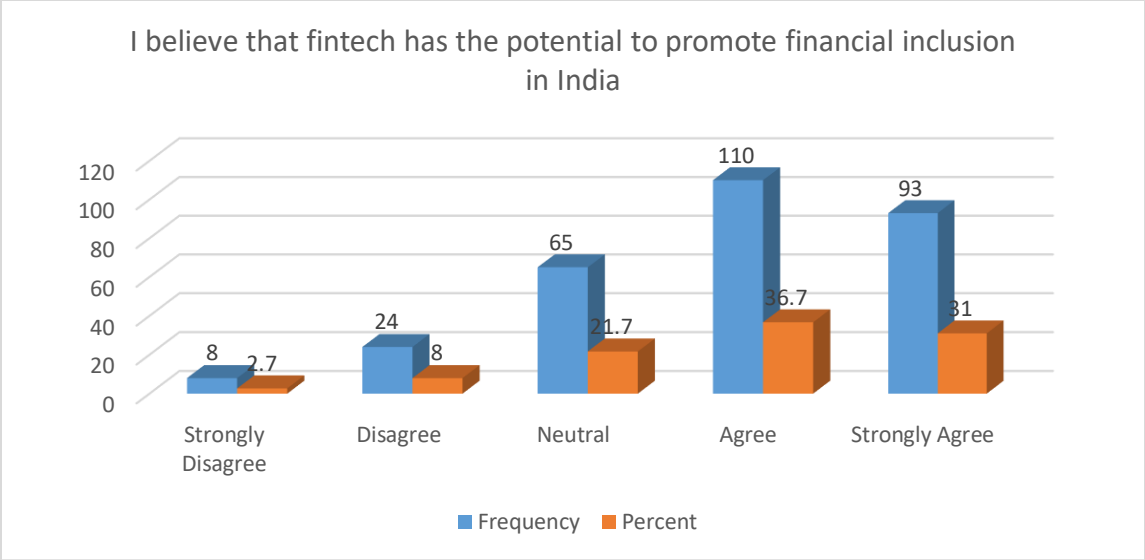

Figure 4.25: I believe that fintech has the potential to promote financial inclusion in India

According to fig. 4.25, out of 300 respondents 31% individuals strongly agreed on believing that fintech has the potential to promote financial inclusion in India, more than 36% individuals agreed on the same, more than 21% individuals were neutral about it, 8% individuals disagree on that, and less than 3% individuals strongly disagreed that fintech has the potential to promote financial inclusion in India.

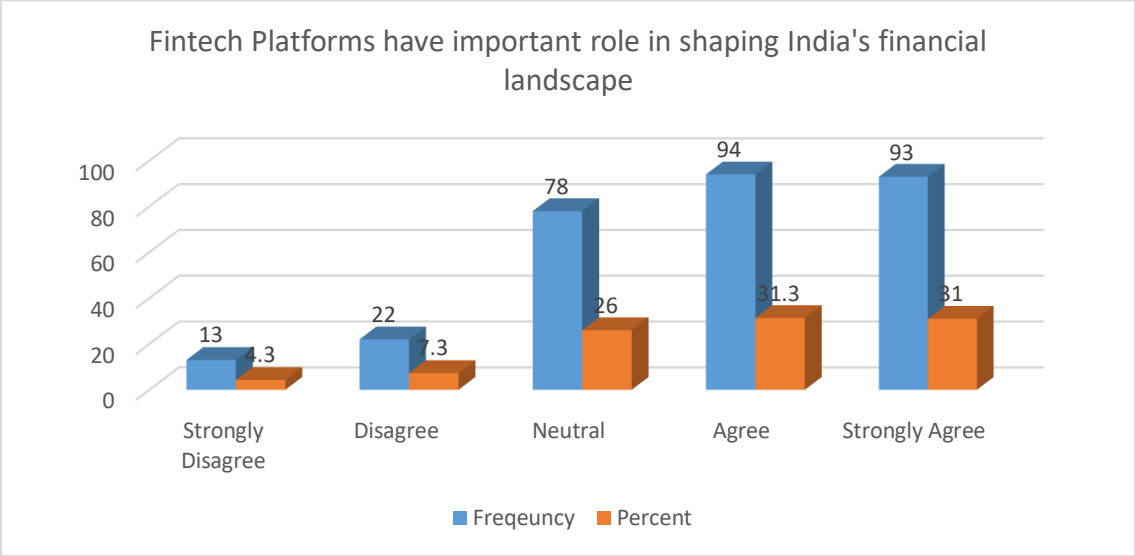

Figure 4.26: Fintech Platforms have important role in shaping India's financial landscape

According to fig. 4.26, out of 300 respondents 31% individuals strongly agreed that fintech platforms have important role in shaping India's financial landscape, more than 31% individuals agreed on the same, more than 26% individuals were neutral about it, less than 8% individuals disagreed on this, and more than 4% individuals strongly disagreed on this.

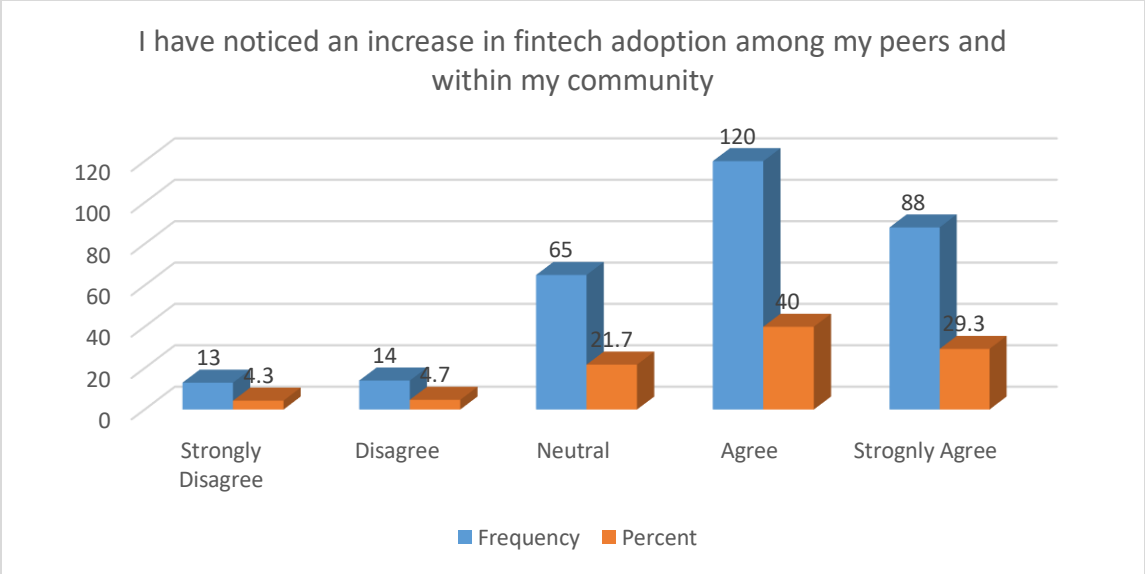

Figure 4.27: I have noticed an increase in fintech adoption among my peers and within my community

According to fig. 4.27, out of 300 respondents more than 29% individuals strongly agreed on noticing an increase in fintech adoption among their peers and community, 40% individuals agreed on the same, more than 21% individuals were neutral about it, less than 5% individuals disagree on that, and less than 4% individuals strongly disagreed on noticing an increase in fintech adoption among their peers and community.

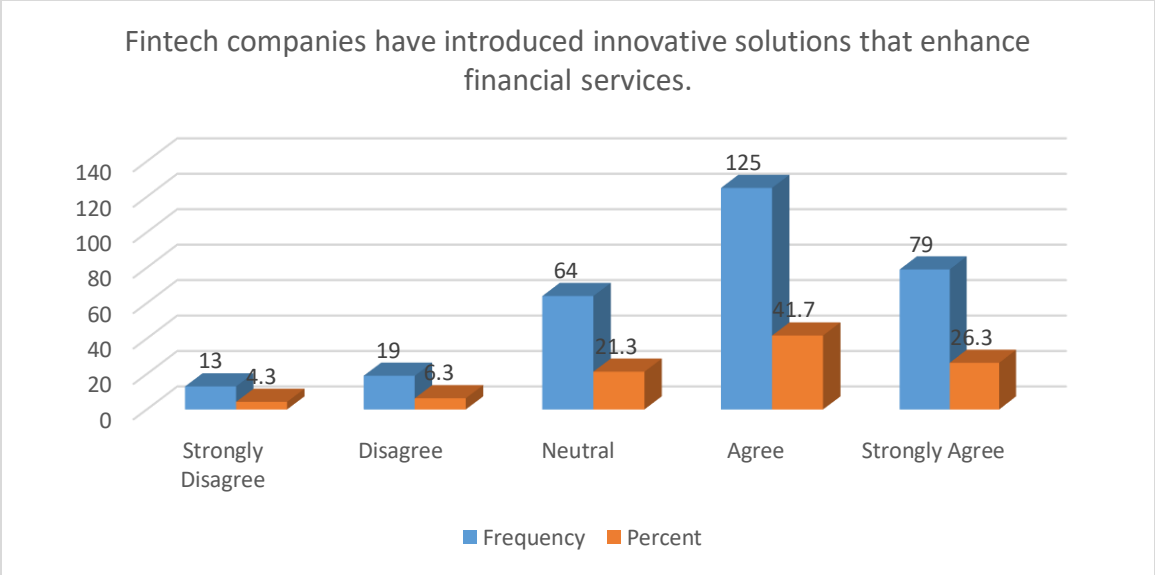

Figure 4.28: Fintech companies have introduced innovative solutions that enhance financial services

According to fig. 4.28, out of 300 respondents more than 26% individuals strongly agreed that fintech companies have introduced innovative solutions that enhance financial services, more than 41% individuals agreed on the same, more than 21% individuals were neutral about it, less than 7% individuals disagreed on this, and more than 5% individuals strongly disagreed that fintech companies have introduced innovative solutions that enhance financial services.

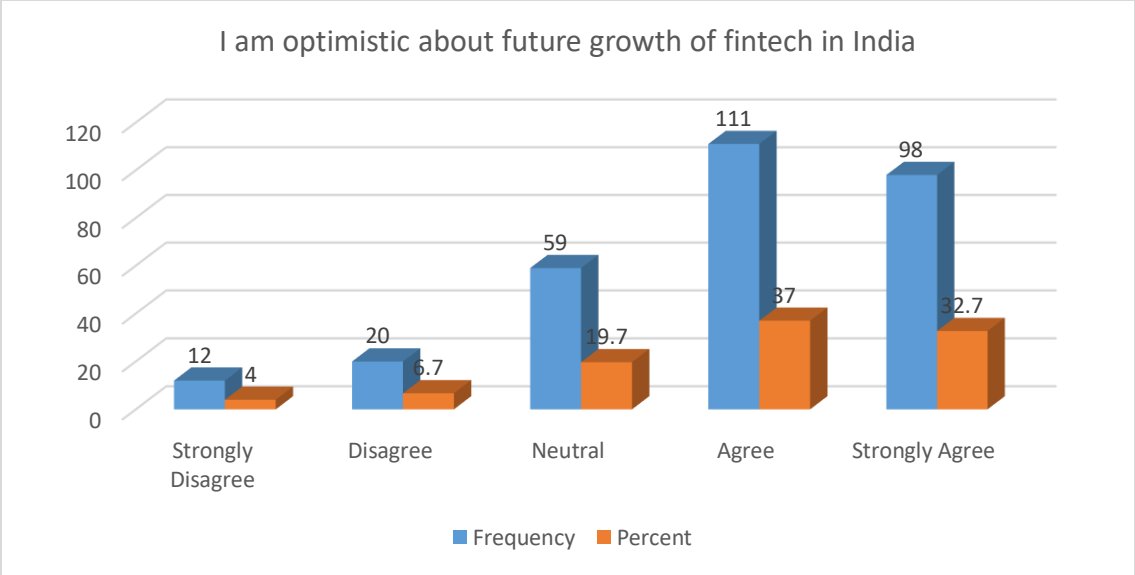

Figure 4.29: I am optimistic about future growth of fintech in India

According to fig. 4.29, out of 300 respondents more than 32% individuals strongly agreed that they are optimistic about future growth of fintech in India, 37% individuals agreed on the same, more than 19% individuals were neutral about it, less than 7% individuals disagreed on this, and 4% individuals strongly disagreed that they are optimistic about future growth of fintech in India.

4.2.6 Regulatory Challenges in Indian Fintech

Table 4.7: Regulatory Challenges in Indian Fintech

Statements		**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
Regulatory challenges hinder my ability to use fintech	Frequency	22	43	130	75	30
	Percent	7.3	14.3	43.3	25.0	10.0

services effectively						
Complex compliance requirements associated with fintech services discourage me from using them	Frequency	26	75	99	71	29
	Percent	8.7	25.0	33.0	23.7	9.7
To address the regulatory problems, fintech companies should work closely with regulatory authorities	Frequency	12	26	98	102	62
	Percent	4.0	8.7	32.7	34.0	20.7
I believe that regulatory	Frequency	12	11	87	100	90

challenges are necessary to ensure the 6 and integrity of fintech services.	Percent	4.0	3.7	29.o	33.3	30.0
Regulatory challenges have obstructed the growth of fintech companies in India.	Frequency	31	41	126	65	37
	Percent	10.3	13.7	42.0	21.7	12.3

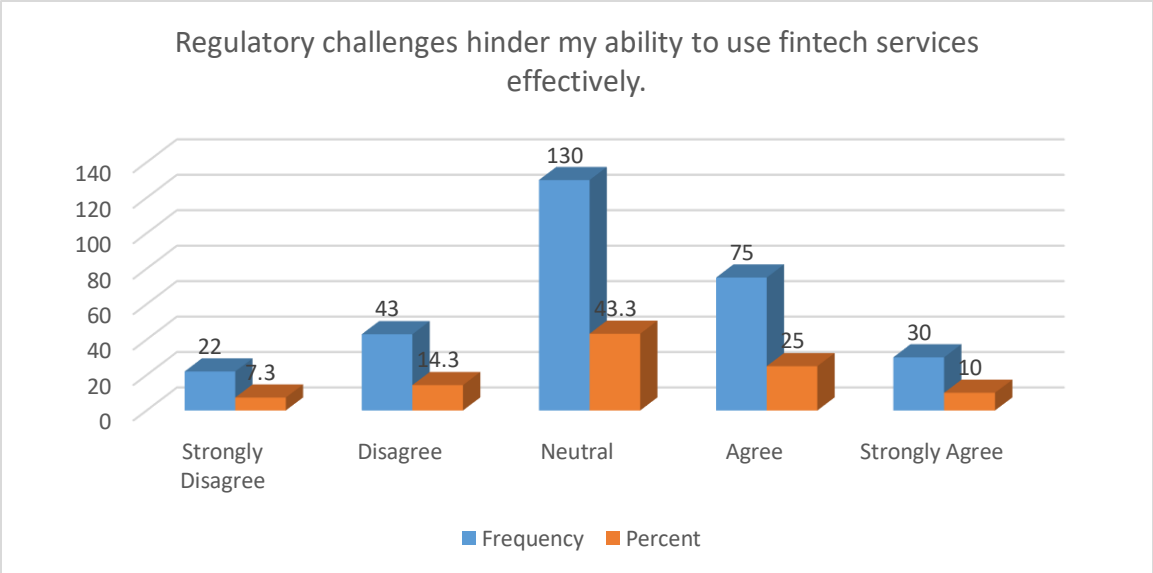

Figure 4.30: Regulatory challenges hinder my ability to use fintech services effectively.

According to fig. 4.30, out of 300 respondents 10% individuals strongly agreed that regulatory challenges hinder their ability to use fintech services effectively, 25% individuals agreed on the same, more than 43% individuals were neutral about it, less than 14% individuals disagreed on this, and 8% individuals strongly disagreed that regulatory challenges hinder their ability to use fintech services effectively.

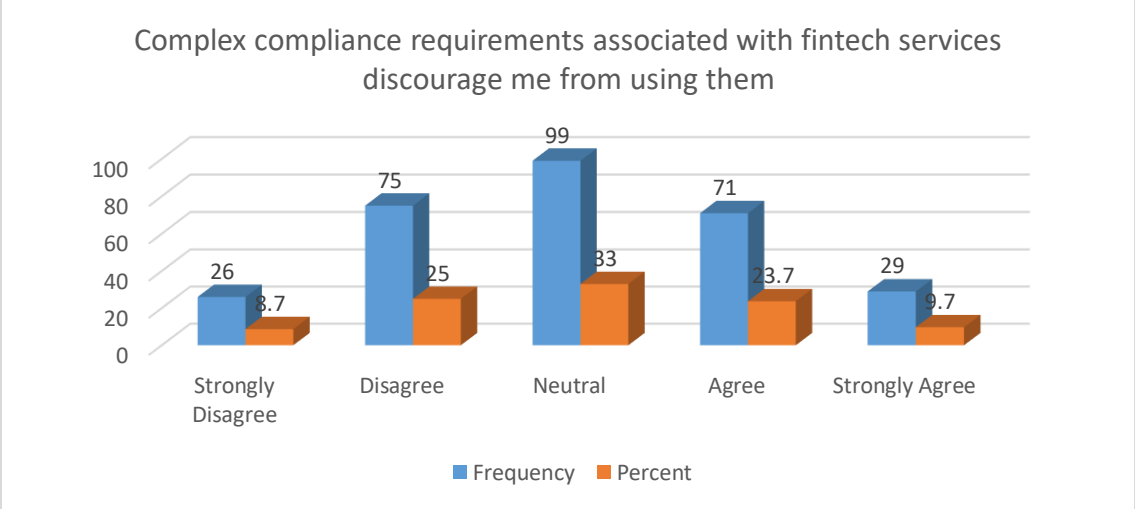

Figure 4.31: Complex compliance requirements associated with fintech services discourage me from using them

According to fig. 4.31, out of 300 respondents less than 10% individuals strongly agreed that complex compliance requirements associated with fintech services discourage them using services, less than 23% individuals agreed on the same, more than 33% individuals were neutral about it, 25% individuals disagreed on this, and more than 8% individuals strongly disagreed that complex compliance requirements associated with fintech services discourage them using services.

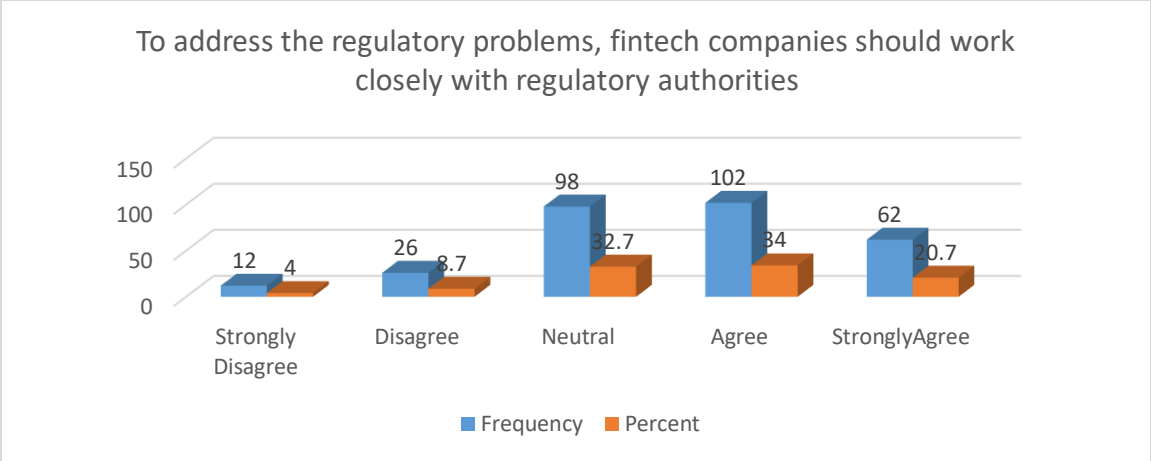

Figure 4.32: To address the regulatory problems, fintech companies should work closely with regulatory authorities

According to fig. 4.32, out of 300 respondents more than 20% individuals strongly agreed that to addressing the regulatory problems, fintech companies should work closely with regulatory authorities, 34% individuals agreed on the same, more than 32% individuals were neutral about it, more than 8% individuals disagreed on this, and 4% individuals strongly disagreed that to addressing the regulatory problems, fintech companies should work closely with regulatory authorities

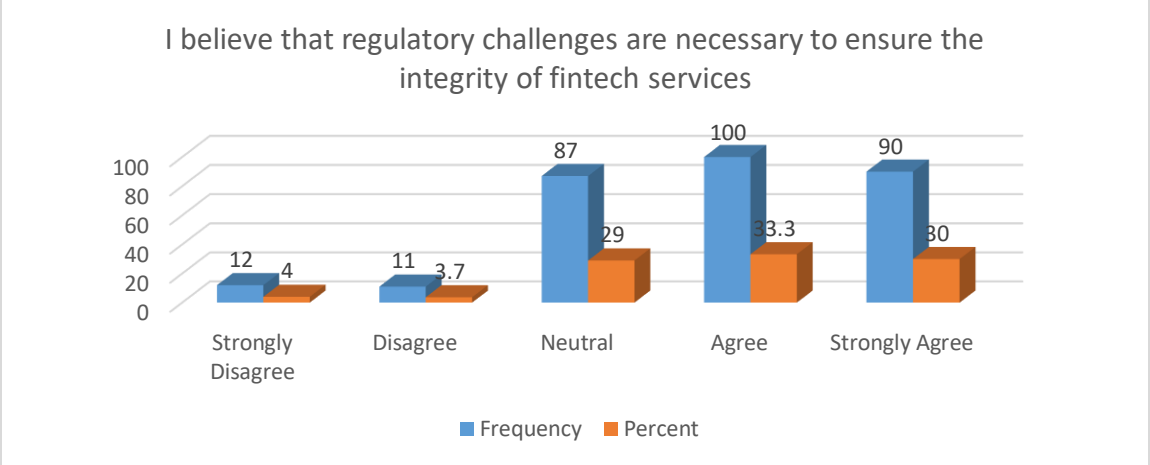

Figure 4.33: I believe that regulatory challenges are necessary to ensure the integrity of fintech services

According to fig. 4.33, out of 300 respondents 30% individuals strongly agreed that regulatory challenges are necessary to ensure the integrity of fintech services, more than 33% individuals agreed on the same, 29% individuals were neutral about it, more than 3% individuals disagreed on this, and 4% individuals strongly disagreed that regulatory challenges are necessary to ensure the integrity of fintech services.

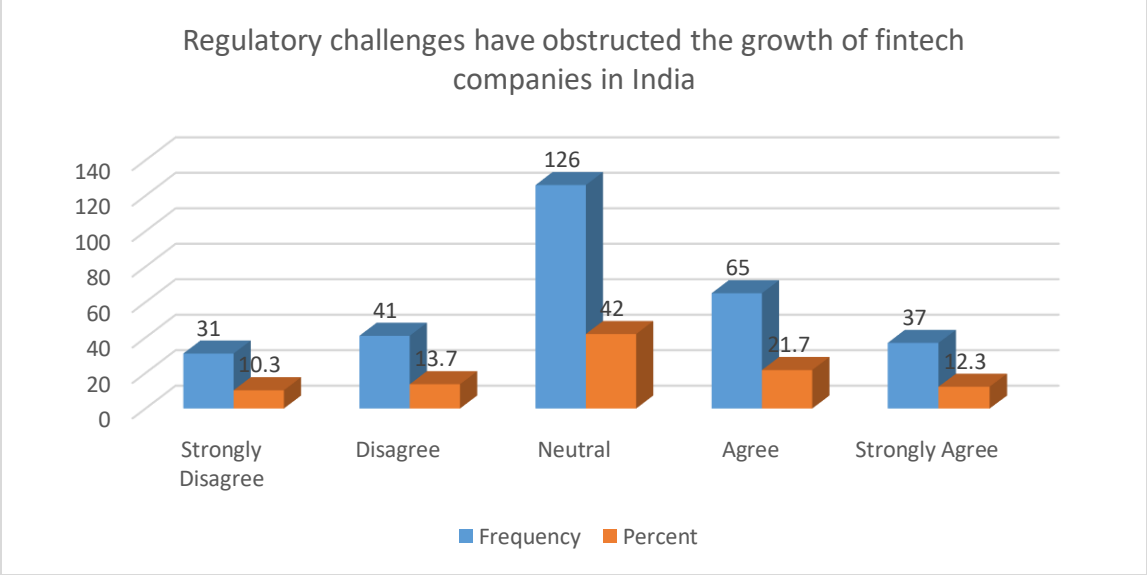

Figure 4.34: Regulatory challenges have obstructed the growth of fintech companies in India

According to fig. 4.34, out of 300 respondents more than 12% individuals strongly agreed that regulatory challenges have obstructed the growth of fintech companies in India, more than 21% individuals agreed on the same, 42% individuals were neutral about it, more than 13% individuals disagreed on this, and more than 10 % individuals strongly disagreed that regulatory challenges have obstructed the growth of fintech companies in India.

4.2.7 Infrastructure Limitations of Indian Fintech

Table 4.8: Infrastructure Limitations of Indian Fintech

Statements		**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
Poor internet connectivity in some areas hinders my use of fintech services	Frequency	23	19	72	105	81
	Percent	7.7	6.3	24.0	35.0	27.0
Inadequate infrastructure affects the speed and reliability of my fintech transactions	Frequency	11	33	85	104	68
	Percent	3.7	10.7	28.3	34.7	22.7
Infrastructure limitations have caused disruptions in my fintech usage	Frequency	14	35	105	84	62
	Percent	4.7	11.7	35.0	28.0	20.7
	Frequency	16	42	100	83	59

I am less likely to look into new fintech options in places with poor infrastructure	Percent	5.3	14.0	33.3	27.7	19.7
I believe that infrastructure improvements are necessary for the growth of fintech in India	Frequency	12	18	79	108	83
	Percent	4.0	6.0	26.3	36.0	27.7
The availability of better infrastructure would encourage me to use	Frequency	10	16	86	88	100
	Percent	3.3	5.3	28.7	29.3	33.3

fintech services more frequently						

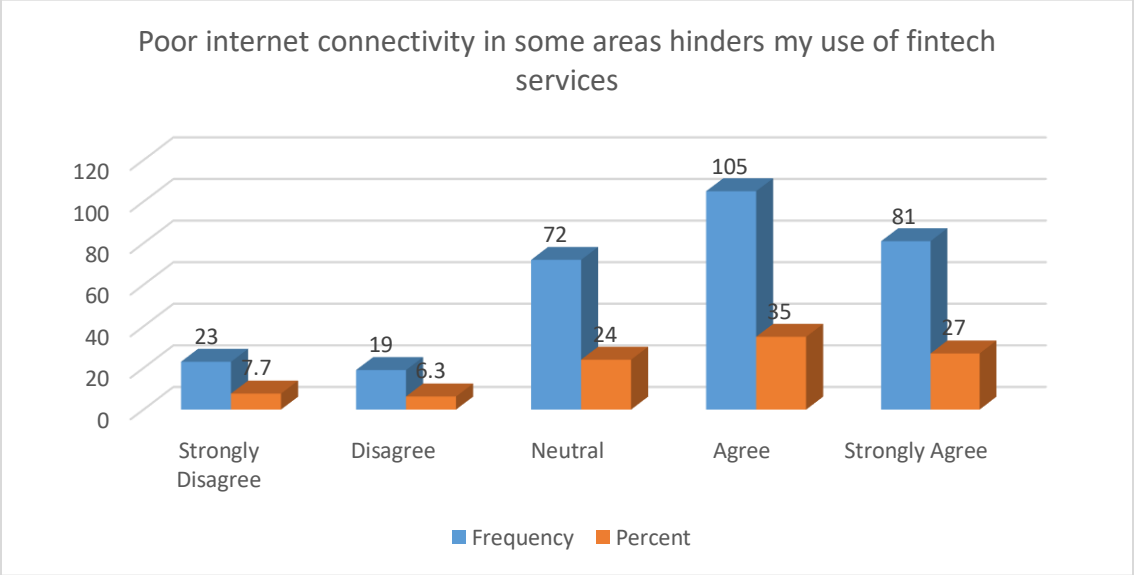

Figure 4.35: Poor internet connectivity in some areas hinders my use of fintech services

According to fig. 4.35, out of 300 respondents 27% individuals strongly agreed that poor internet connectivity in some areas hinders their use of fintech services, 35% individuals agreed on the same, 24% individuals were neutral about it, more than 6% individuals disagreed on this, and more than 7 % individuals strongly disagreed on poor internet connectivity in some areas hinders their use of fintech services.

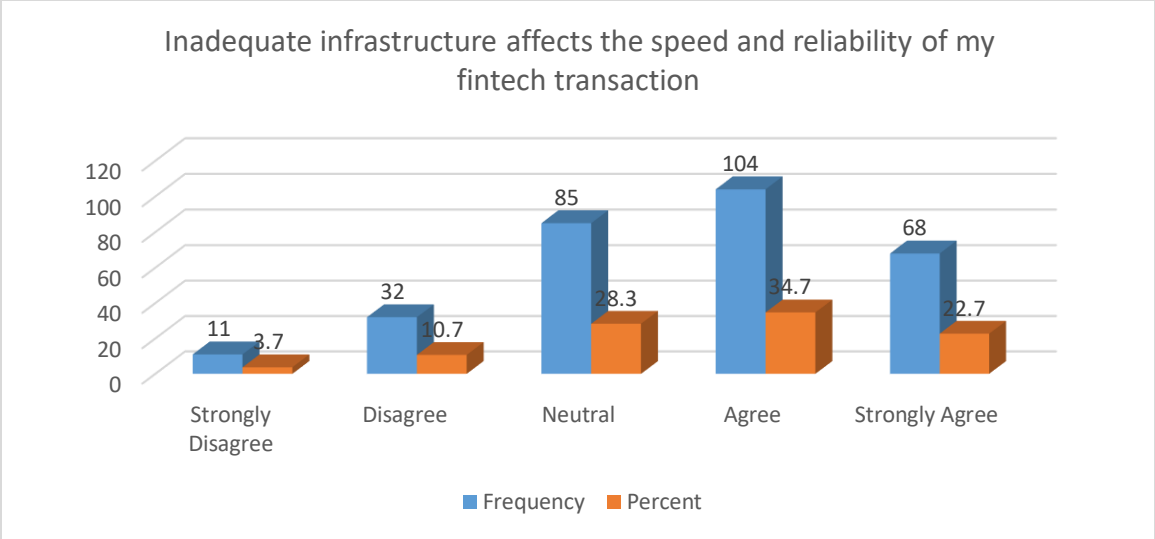

Figure 4.36: Inadequate infrastructure affects the speed and reliability of my fintech transaction

According to fig. 4.36, out of 300 respondents more than 22% individuals strongly agreed that inadequate infrastructure affects the speed and reliability of their fintech transactions, more than 34% individuals agreed on the same, more than 28% individuals were neutral about it, more than 10% individuals disagreed on this, and more than 3% individuals strongly disagreed that inadequate infrastructure affects the speed and reliability of their fintech transactions.

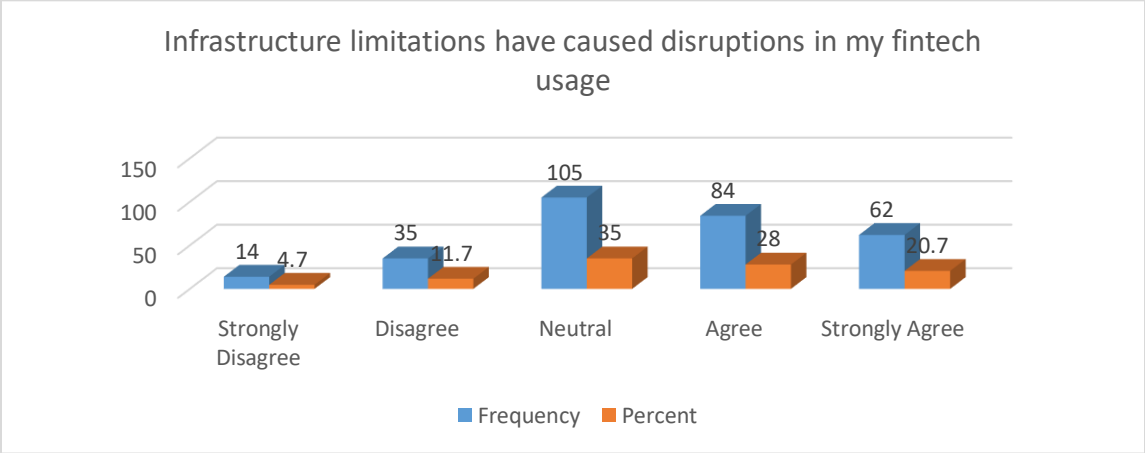

Figure 4.37: Infrastructure limitations have caused disruptions in my fintech usage

According to fig. 4.37, out of 300 respondents more than 20% individuals strongly agreed that infrastructure limitations have caused disruptions in their fintech usage, 28% individuals agreed on the same, 35% individuals were neutral about it, more than 11% individuals disagreed on this, and more than 4% individuals strongly disagreed that infrastructure limitations have caused disruptions in their fintech usage.

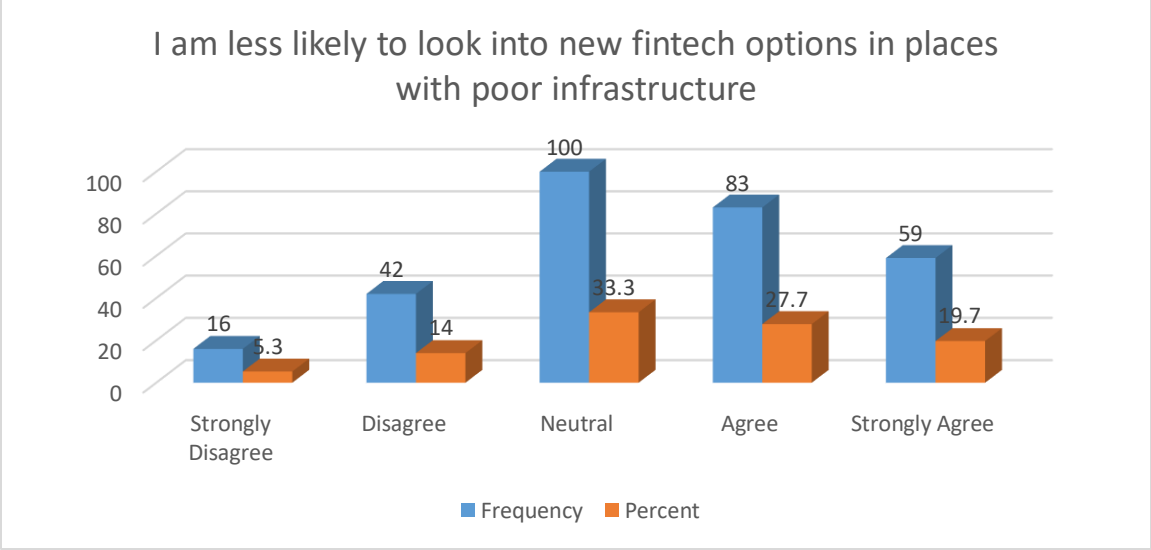

Figure 4.38: I am less likely to look into new fintech options in places with poor infrastructure

According to fig. 4.38, out of 300 respondents more than 19% individuals strongly agreed that they are less likely to look into new fintech options in places with poor infrastructure, less than 28% individuals agreed on the same, less than 34% individuals were neutral about it, 14% individuals disagreed on this, and more than 5% individuals strongly disagreed they are less likely to look into new fintech options in places with poor infrastructure.

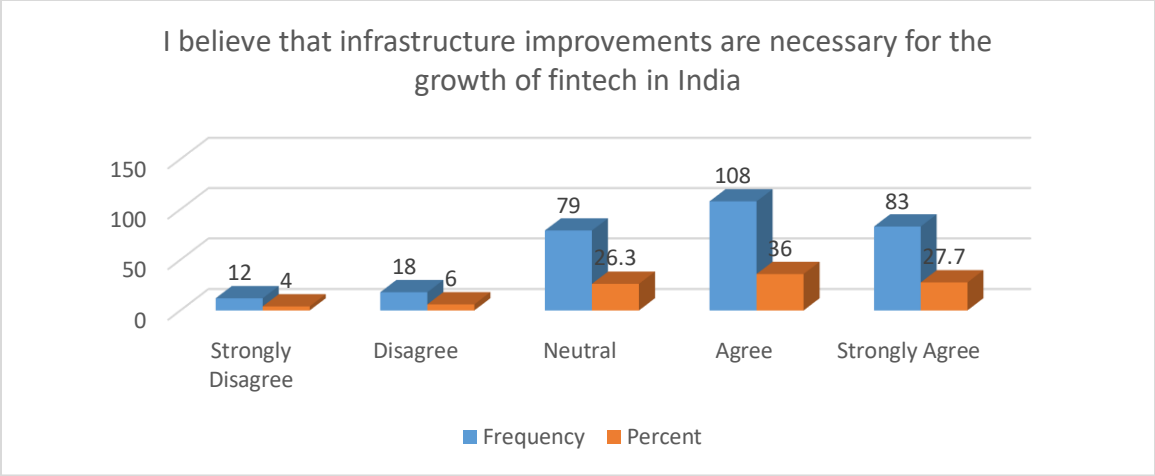

Figure 4.39: I believe that infrastructure improvements are necessary for the growth of fintech in India

According to fig. 4.39, out of 300 respondents more than 27% individuals strongly agreed that infrastructure improvements are necessary for the growth of fintech in India, 36% individuals agreed on the same, more than 26 % individuals were neutral about it, 6% individuals disagreed on this, and 4% individuals strongly disagreed that infrastructure improvements are necessary for the growth of fintech in India

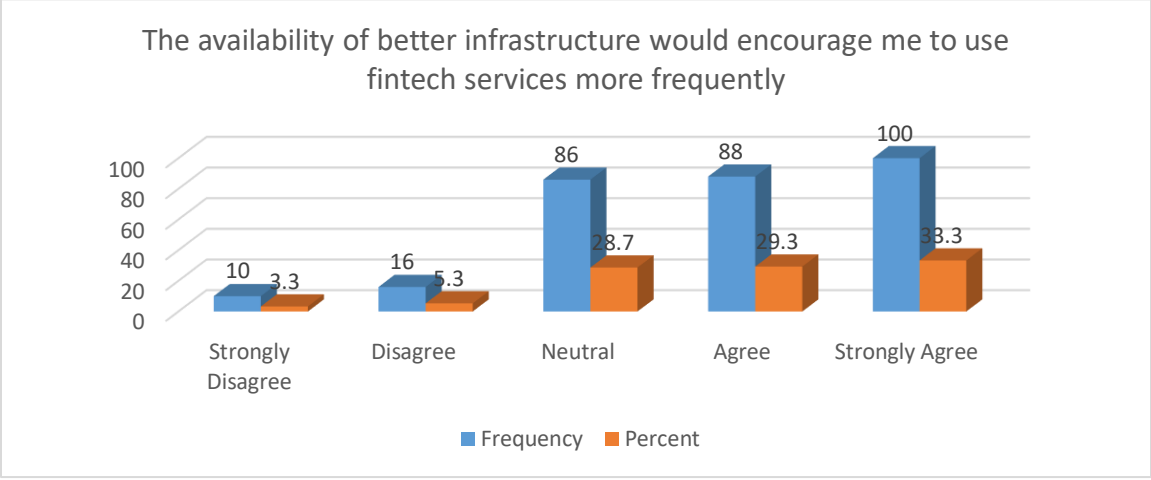

Figure 4.40: The availability of better infrastructure would encourage me to use fintech services more frequently

According to fig. 4.40, out of 300 respondents more than 33% individuals strongly agreed that availability of better infrastructure would encourage them to use fintech services more frequently, more than 29% individuals agreed on the same, more than 28% individuals were neutral about it, more than 5% individuals disagreed on this, and less than 4 % individuals strongly disagreed that availability of better infrastructure would encourage them to use fintech services more frequently.

4.2.8 Financial Literacy Regarding Fintech

Table 4.9: Financial Literacy Regarding Fintech

Statements		**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
I have a good understanding of financial concepts and services	Frequency	17	22	88	106	67
	Percent	5.7	7.3	29.3	35.3	22.3
I actively seek information and education on financial matters	Frequency	13	19	92	101	75
	Percent	4.3	6.3	30.7	33.7	25.0
Due to my financial knowledge, I find it easier	Frequency	14	14	75	122	75
	Percent	4.7	4.7	25.0	40.7	25.0

to comprehend and use fintech services						
I am confident in my ability to manage my personal finances effectively	Frequency	14	17	70	125	74
	Percent	4.7	5.7	23.3	41.7	24.7
I believe that my level of financial literacy positively influences my ability to make informed decisions about using fintech services	Frequency	15	19	67	127	72
	Percent	5.0	6.3	22.3	42.3	24.0

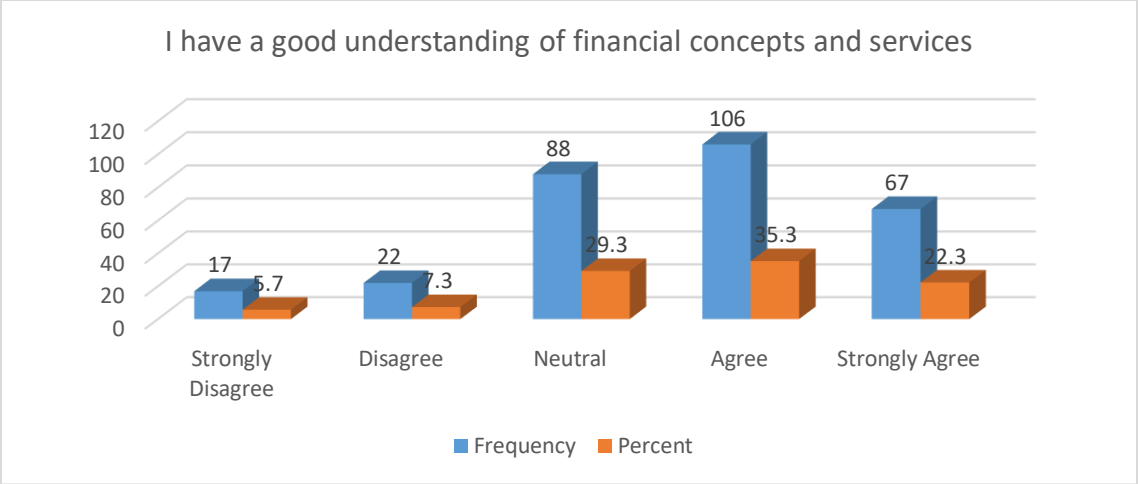

Figure 4.41: I have a good understanding of financial concepts and services

According to fig. 4.41, out of 300 respondents more than 22% individuals strongly agreed to have good understanding of financial concepts and services, more than 35% individuals agreed on the same, more than 29% individuals were neutral about it, more than 7% individuals disagreed on this, and more than 5% individuals strongly disagreed to have understanding of financial concepts and services.

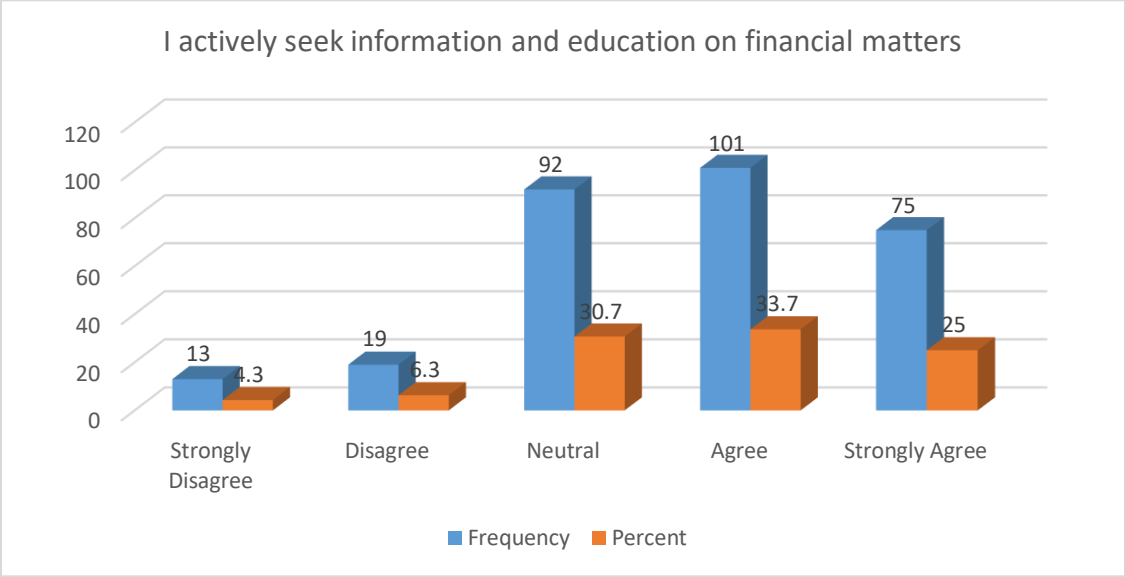

Figure 4.42: I actively seek information and education on financial matters

According to fig. 4.42, out of 300 respondents 25% individuals strongly agreed to actively seek information and education on financial matters, more than 33% individuals agreed on the same, more than 30% individuals were neutral about it, less than 7% individuals disagreed on this, and less than 5% individuals strongly disagreed to actively seek information and education on financial matters.

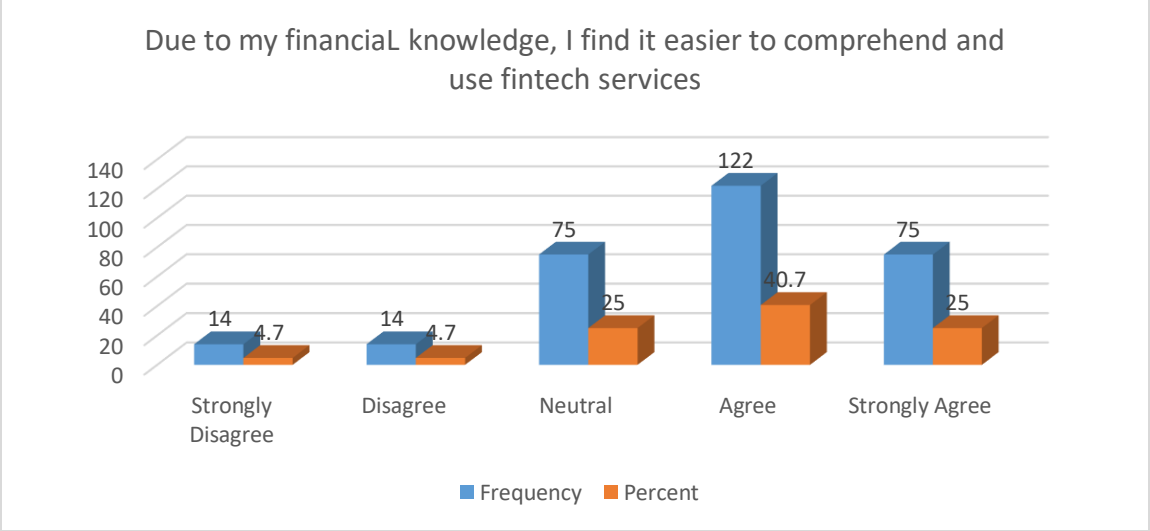

Figure 4.43: Due to my financial knowledge, I find it easier to comprehend and use fintech services

According to fig. 4.43, out of 300 respondents 25% individuals strongly agreed to find it easier to comprehend and use fintech services, more than 40% individuals agreed on the same, 25% individuals were neutral about it, less than 5% individuals disagreed on this, and less than 5% individuals strongly disagreed find it easier to comprehend and use fintech services.

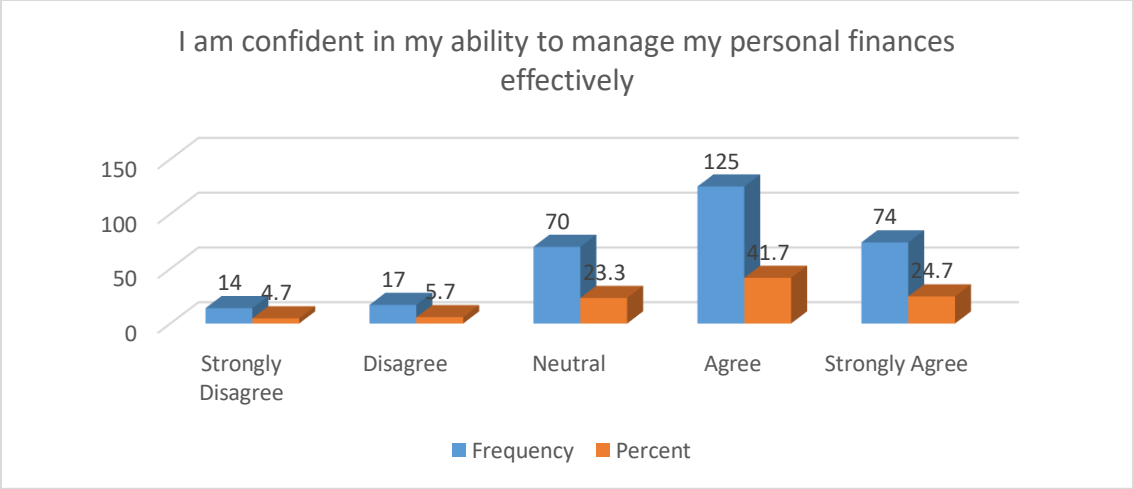

Figure 4.44: I am confident in my ability to manage my personal finances effectively

According to fig. 4.44, out of 300 respondents less than 25% individuals strongly agreed that they are confident in their ability to manage their personal finances effectively, more than 41% individuals agreed on the same, more than 23% individuals were neutral about it, more than 5% individuals disagreed on this, and less than 5% individuals strongly disagreed that they are confident in their ability to manage their personal finances effectively.

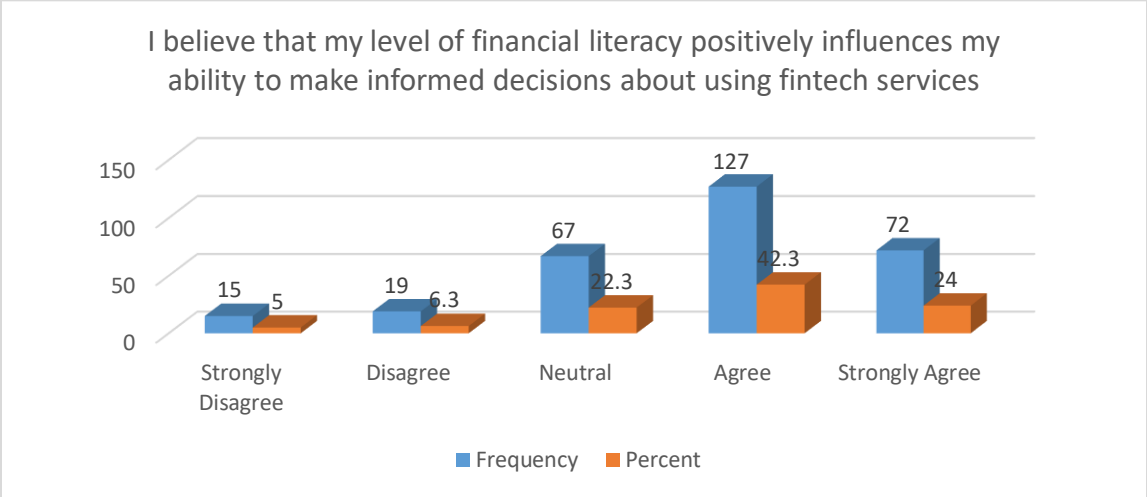

Figure 4.45: I believe that my level of financial literacy positively influences my ability to make informed decisions about using fintech services

According to fig., out of 300 respondents 24% individuals strongly agreed that their level of financial literacy positively influences their ability to make informed decisions about using fintech services, more than 42% individuals agreed on the same, more than 22% individuals were neutral about it, more than 6% individuals disagreed on this, and 5% individuals strongly disagreed that their level of financial literacy positively influences their ability to make informed decisions about using fintech services.

4.2.9 Factors Contributing to Consumer Trust

Table 4.10: Factors Contributing to Consumer Trust

Statements		**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
Concerns about privacy and data breaches affect my trust in Fintech platforms	Frequency	16	31	76	99	78
	Percent	5.3	10.3	25.3	33.0	26.0
Effective data encryption procedures are essential for fostering trust in	Frequency	15	20	63	115	87
	Percent	5.0	6.7	21.0	38.3	29.0

fintech services						
Fintech companies should provide options for users to control their data sharing	Frequency	15	21	66	97	101
	Percent	5.0	7.0	22.0	32.3	33.7
Transparency in how Fintech companies handle user data is important for building trust	Frequency	12	18	59	107	104
	Percent	4.0	6.0	19.7	35.7	34.7
My trust could be reduced by a clear discussion regarding	Frequency	15	23	102	96	64
	Percent	5.0	7.7	34.0	32.0	21.3

data procedures						
I am willing to provide personal information if it means enhanced on Fintech platforms	Frequency	21	45	87	89	58
	Percent	7.0	15.0	29.0	29.7	19.3

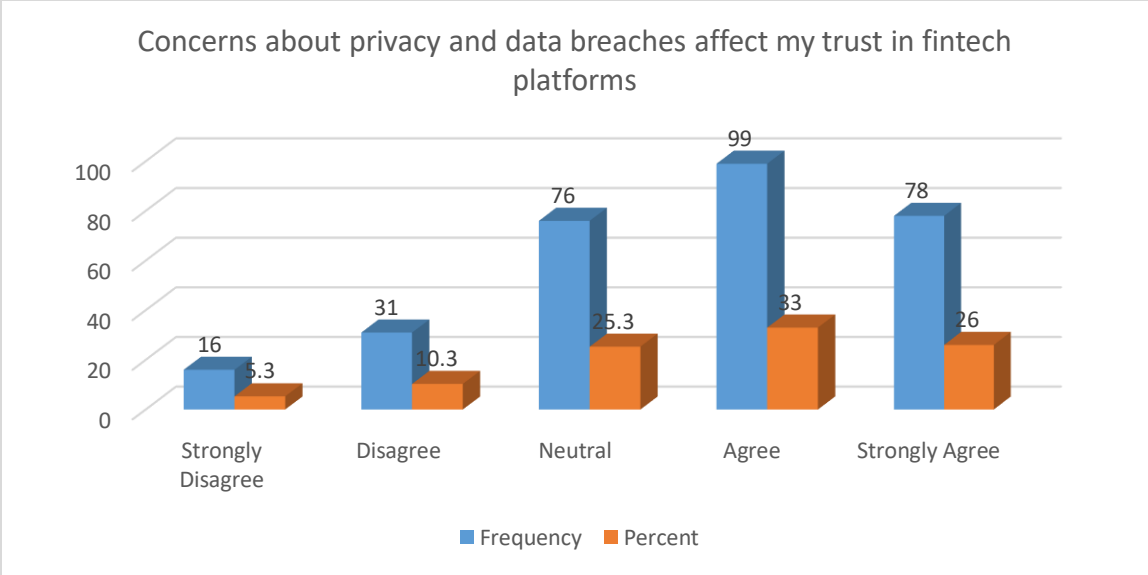

Figure 4.46: Concerns about privacy and data breaches affect my trust in fintech platforms

According to fig., out of 300 respondents 26% individuals strongly agreed that their concern about privacy and data breaches affect their trust in fintech platforms, 33% individuals agreed on the same, more than 25% individuals were neutral about it, more

than 10% individuals disagreed on this, and more than 5% individuals strongly disagreed that their concern about privacy and data breaches affect their trust in fintech platforms.

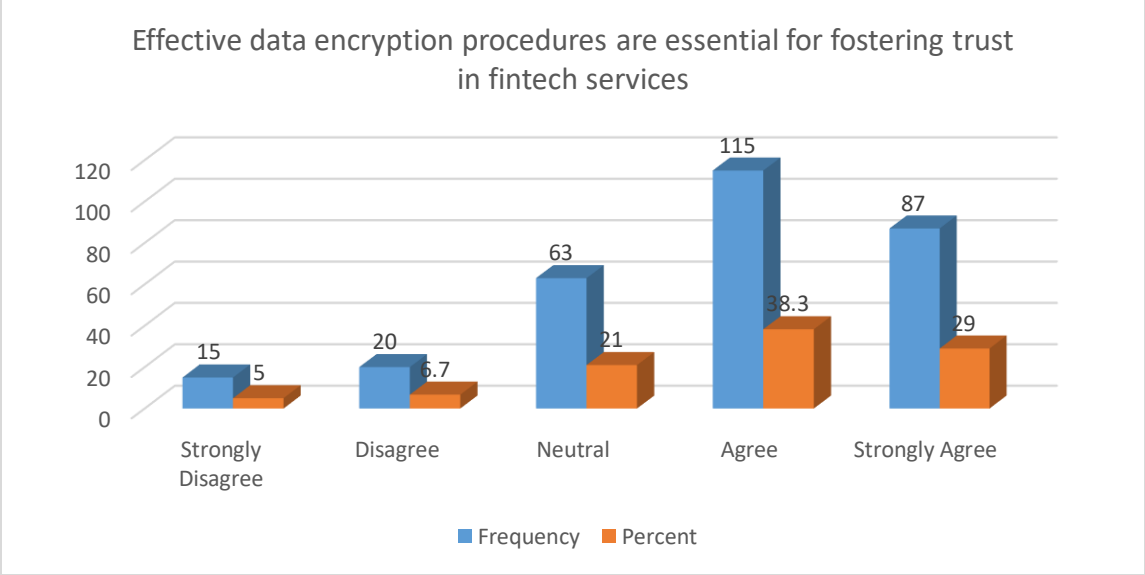

Figure 4.47: Effective data encryption procedures are essential for fostering trust in fintech services

According to fig., out of 300 respondents 29% individuals strongly agreed that effective data encryption procedures are essential for fostering trust in fintech, more than 38% individuals agreed on the same, 21% individuals were neutral about it, more than 6% individuals disagreed on this, and 5% individuals strongly disagreed that effective data encryption procedures are essential for fostering trust in fintech.

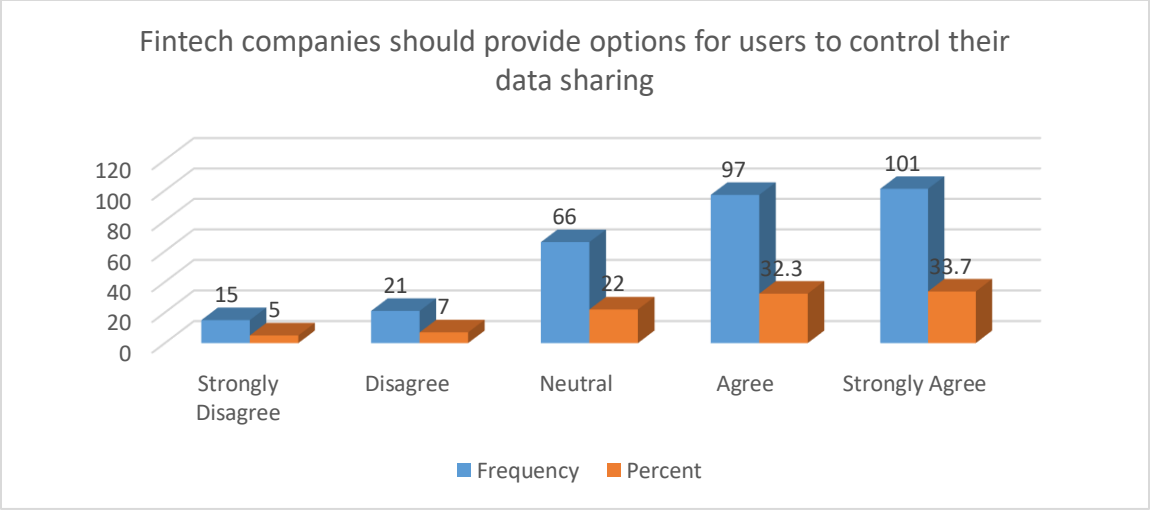

Figure 4.48: Fintech companies should provide options for users to control their data sharing

According to fig., out of 300 respondents more than 33% individuals strongly agreed that fintech companies should provide options for users to control their data sharing, more than 32% individuals agreed on the same, 22% individuals were neutral about it, 7% individuals disagreed on this, and 5% individuals strongly disagreed that fintech companies should provide options for users to control their data sharing.

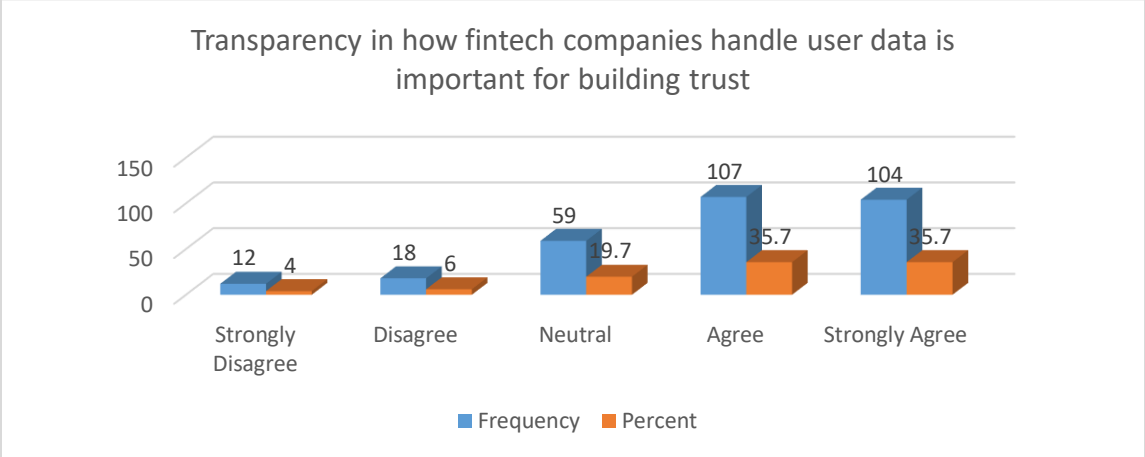

Figure 4.49: Transparency in how fintech companies handle user data is important for building trust

According to fig., out of 300 respondents more than 34% individuals strongly agreed that transparency in how fintech companies handle user data is important for building trust, more than 35% individuals agreed on the same, less than 20% individuals were neutral about it, 6% individuals disagreed on this, and 4% individuals strongly disagreed that transparency in how fintech companies handle user data is important for building trust.

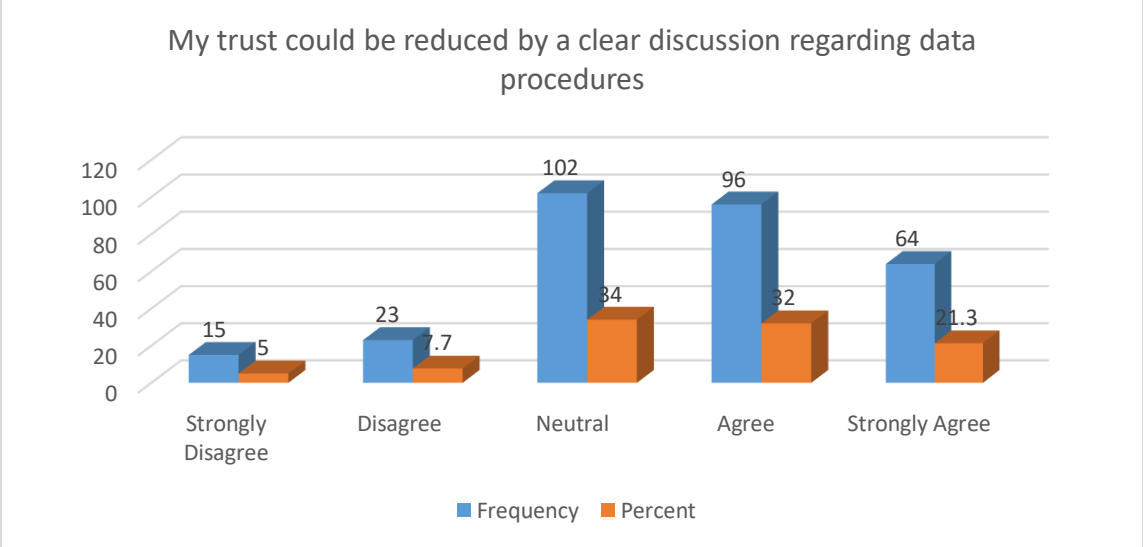

Figure 4.50: My trust could be reduced by a clear discussion regarding data procedures

According to fig., out of 300 respondents less than 22% individuals strongly agreed that trust could be reduced by a clear discussion regarding data procedures, 32% individuals agreed on the same, 34% individuals were neutral about it, more than 7% individuals disagreed on this, and 5% individuals strongly disagreed that trust could be reduced by a clear discussion regarding data procedures.

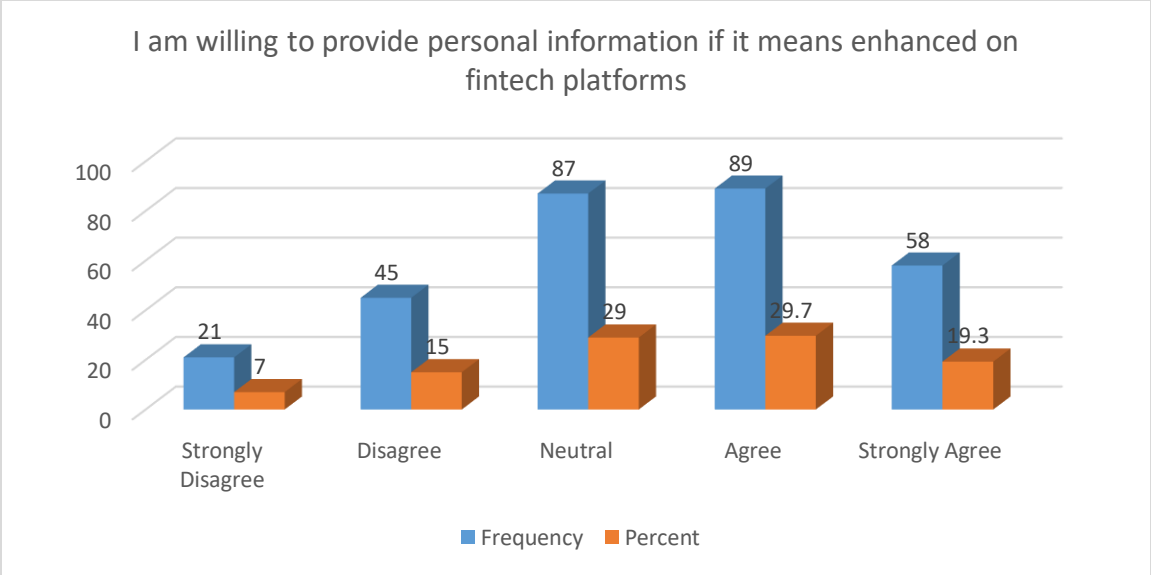

Figure 4.51: I am willing to provide personal information if it means enhanced on fintech platforms

According to fig., out of 300 respondents less than 20% individuals strongly agreed that they are willing to provide personal information if it means enhanced on fintech platforms, more than 29% individuals agreed on the same, 29% individuals were neutral about it, 15% individuals disagreed on this, and 7% individuals strongly disagreed that they are willing to provide personal information if it means enhanced on fintech platforms.

4.3 Hypothesis Testing

This section includes the findings of the hypothesis testing. Hypotheses which are formulated based on the research question were tested in this section. These finding will lead to the conclusion of this research.

4.3.1 Research Question One

Question 1: What are the main regulatory challenges obstructing the adoption of Fintech in India's financial ecosystem, and how can they be overcome?

- Null Hypothesis (H0): Regulatory challenges do not have a significant impact on the adoption of fintech in India.
- Alternative Hypothesis (H1): Regulatory challenges have a significant negative impact on the adoption of fintech in India.

In this study for testing the above hypothesis "Ordinal Regression" Test is applied. In this "Adoption of fintech in India" was considered as dependent variable and "Regulatory challenges" considered as independent variable.

Table 4.11: Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	207.514			
Final	163.024	44.489	1	.000
Link function: Logit.				

The above table presents "Model fitting information" for a logistic regression analysis with an "Intercept Only" model and a "Final" model. The "Final" model is statistically significant (Chi-Square = 44.489, df = 1, Sig. = .000), indicating that it provides a better fit than the "Intercept Only" model. The link function used in the analysis is Logit. In summary, the "Final" model is a significant improvement over a model with no predictors.

Table 4.12: Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	124.538	15	.000
Deviance	113.852	15	.000
Link function: Logit.			

The above table shows "Goodness-of-Fit" statistics for a logistic regression model with a Logit link function. Both the Pearson chi-square (Chi-Square = 124.538, df = 15, Sig. = .000) and Deviance chi-square (Chi-Square = 113.852, df = 15, Sig. = .000) tests indicate

that the model fits the data well. The low p-values (.000) suggest that the model's predictions are significantly different from random chance, indicating a good fit to the data.

Table 4.13: Pseudo R-Square

Cox and Snell	.138
Nagelkerke	.148
McFadden	.056
Link function: Logit.	

Table illustrates the "Pseudo R-Square" of the model. In this table, the value of Cox and Snell is 0.138, the value of Nagelkerke is 0.148, and finally, the value of McFadden is 0.056.

Table 4.14: Parameter Estimates

							95% Confidence Interval	
		Estimate	**Std. Error**	**Wald**	**df**	**Sig.**	**Lower Bound**	**Upper Bound**
Threshold	[FINTECH_ADOPTION_IN_INDIA = 1.00]	-1.043	.477	4.789	1	.029	-1.977	-.109
	[FINTECH_ADOPTION_IN_INDIA = 2.00]	.619	.386	2.574	1	.109	-.137	1.376
	[FINTECH_ADOPTION_IN_INDIA = 3.00]	2.064	.394	27.513	1	.000	1.293	2.835

	[FINTECH_ADOPTION_IN_INDIA = 4.00]	4.135	.446	85.998	1	.000	3.261	5.009
Location	REGULATORY CHALLENGES IN INDIAN FINTECH	.866	.119	52.674	1	.000	.632	1.100
Link function: Logit.								

The above table examine the parameter estimates from a logistic regression analysis with a Logit link function. The analysis analysed the relationship between the adoption of fintech in India (categorized into different levels) and the impact of regulatory challenges specific to Indian fintech, as represented by the "Location" variable.

Starting with the estimates for “fintech Adoption in India” these represent the threshold values for each level of fintech adoption. The negative estimate of -1.043 for “Fintech Adoption in India = 1.00” indicates that at the lowest level of adoption, there is a lower log-odds of adopting fintech compared to the reference category. However, the estimate is statistically significant = 0.029, suggesting that this level still has a meaningful impact on fintech adoption. Conversely, as adoption levels increase, the estimated thresholds also rise, indicating a higher log-odds of adoption. The estimate for " Fintech Adoption in India = 4.00" is 4.135, indicating the highest level of adoption, and it is statistically Sig. = 0.000, signifying a substantial impact.

Regarding "Location" and its association with “Regulatory Challenges in India Fintech” the estimate of 0.866 signifies that an increase in regulatory challenges is associated with an increase in the log-odds of fintech adoption. This estimate is statistically

Sig. = 0.000, suggesting that regulatory challenges have a meaningful influence on fintech adoption in India.

The parameter estimates in this logistic regression model indicate that higher levels of fintech adoption are associated with higher threshold values. Additionally, the presence of regulatory challenges, as represented by " Regulatory Challenges in India Fintech" is positively linked to fintech adoption in India, with both variables being statistically significant predictors in the model.

According to tests, results indicated that Alternate Hypothesis accepted and Null hypothesis rejected.

4.3.2 Research Question Two

Question 2: What infrastructure limitations currently hinder the growth and expansion of Fintech in India?

- Null Hypothesis (H0): Infrastructure limitations do not have a significant impact on the growth and expansion of fintech in India.
- Alternative Hypothesis (H1): Infrastructure limitations have a significant negative impact on the growth and expansion of fintech in India.

In this study for testing the above hypothesis “Ordinal Regression” Test is applied. In this “Adoption of fintech in India” was considered as dependent variable and “Regulatory challenges” considered as independent variable.

Table 4.15: Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	281.981			
Final	153.726	128.255	1	.000
Link function: Logit.				

The above table presents “Model fitting information” for a logistic regression analysis with an "Intercept Only" model and a "Final" model. The "Final" model is statistically significant (Chi-Square = 128.255, df = 1, Sig. = .000), indicating that it provides a better fit than the "Intercept Only" model. The link function used in the analysis is Logit. In summary, the "Final" model is a significant improvement over a model with no predictors.

Table 4.16: Goodness-of-Fit

	Chi-Square	**df**	**Sig.**
Pearson	140.924	31	.000
Deviance	93.363	31	.000
Link function: Logit.			

The above table shows “Goodness-of-Fit” statistics for a logistic regression model with a Logit link function. Both the Pearson chi-square (Chi-Square = 140.924, df = 31, Sig. = .000) and Deviance chi-square (Chi-Square = 93.363, df = 31, Sig. = .000) tests indicate that the model fits the data well. The low p-values (.000) suggest that the model's predictions are significantly different from random chance, indicating a good fit to the data.

Table 4.17: Pseudo R-Square

Cox and Snell	.348
Nagelkerke	.374
McFadden	.162
Link function: Logit.	

Table illustrates the “Pseudo R-Square” of the model. In this table, the value of Cox and Snell is 0.348, the value of Nagelkerke is 0.374, and finally, the value of McFadden is 0.162.

Table 4.18: Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[GROWTH_AND_EXPENSION = 1.00]	.980	.475	4.254	1	.039	.049	1.911
	[GROWTH_AND_EXPENSION = 2.00]	2.580	.444	33.845	1	.000	1.711	3.449
	[GROWTH_AND_EXPENSION = 3.00]	4.198	.477	77.504	1	.000	3.263	5.132
	[GROWTH_AND_EXPENSION = 4.00]	6.714	.567	140.335	1	.000	5.603	7.825
Location	INFRASTRUCTURE_LIMITATIONS_OF_INDIAN_FINTECH	1.472	.136	116.702	1	.000	1.205	1.739
Link function: Logit.								

The table presents parameter estimates from a logistic regression model, with a focus on the independent variables “Growth and Expansion” and “Infrastructure Limitations of

Indian Fintech" and their impact on the dependent variable. Starting with the "Threshold" section, which corresponds to different levels of "Growth and Expansion" it is evident that each level has a distinct estimated threshold value. When "Growth and Expansion" is at the level of 1.00, the estimated threshold value is 0.980, and it is associated with a statistically significant Wald statistic of 4.254 (p-value = 0.039). As "Growth and Expansion" increases to 2.00 and 3.00, the threshold values rise to 2.580 and 4.198, respectively, and the significance (Sig.) values become highly significant (p-values = 0.000), indicating that these levels are strong predictors of the dependent variable. The pattern continues with a higher "Growth and Expansion" level of 4.00, which has a threshold estimate of 6.714 and a significant Wald statistic. In the "Location" section, the independent variable "Infrastructure Limitations of Indian Fintech" has an estimate of 1.472, and it is highly statistically significant with a small Sig. value (p-value = 0.000). This implies that "Infrastructure Limitations of Indian Fintech" plays a substantial role in predicting the dependent variable. The 95% confidence interval for this estimate ranges from 1.205 to 1.739, further underscoring its significance.

The parameter estimates from the logistic regression model demonstrate that "Growth and Expansion" at various levels and "Infrastructure Limitations of Indian Fintech" are both important predictors of the dependent variable. As "Growth and Expansion" levels increase, their impact becomes increasingly significant and "Infrastructure Limitations of Indian Fintech" consistently exhibits a strong predictive power. The model's link function is specified as Logit, indicating that it is a logistic regression analysis.

According to tests, results indicated that Alternate Hypothesis accepted and Null hypothesis rejected.

4.3.3 Research Question Three

Question 3: How does the level of financial literacy among Indian consumers impact their utilization and comprehension of Fintech services?

- Null Hypothesis (H0): Financial literacy does not has a significant positive impact on the utilization of fintech services in India.
- Alternative Hypothesis (H1): Financial literacy has a significant positive impact on the utilization of fintech services in India.

In this study for testing the above hypothesis "Ordinal Regression" Test is applied. In this "Adoption of fintech in India" was considered as dependent variable and "Regulatory challenges" considered as independent variable.

Table 4.19: Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	283.432			
Final	128.982	154.450	1	.000
Link function: Logit.				

The above table presents "Model fitting information" for a logistic regression analysis with an "Intercept Only" model and a "Final" model. The "Final" model is statistically significant (Chi-Square = 154.450, df = 1, Sig. = .000), indicating that it provides a better fit than the "Intercept Only" model. The link function used in the analysis is Logit. In summary, the "Final" model is a significant improvement over a model with no predictors.

Table 4.20: Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	286.603	31	.000
Deviance	56.006	31	.004
Link function: Logit.			

The above table shows “Goodness-of-Fit” statistics for a logistic regression model with a Logit link function. Both the Pearson chi-square (Chi-Square = 286.603, df = 31, Sig. = .000) and Deviance chi-square (Chi-Square = 56.006, df = 31, Sig. = .000) tests indicate that the model fits the data well. The low p-values (.000) suggest that the model's predictions are significantly different from random chance, indicating a good fit to the data.

Table 4.21: Pseudo R-Square

Cox and Snell	.402
Nagelkerke	.420
McFadden	.163
Link function: Logit.	

Table illustrates the “Pseudo R-Square” of the model. In this table, the value of Cox and Snell is 0.402, the value of Nagelkerke is 0.420, and finally, the value of McFadden is 0.163.

Table 4.22: Parameter Estimates

							95% Confidence Interval	
		Estimate	**Std. Error**	**Wald**	**df**	**Sig.**	**Lower Bound**	**Upper Bound**
Threshold	[FINTECH_SERVICES_AND_ITS_UTILLISATION = 1.00]	1.450	.491	8.729	1	.003	.488	2.411

	[Var_1_FINTECH_SERVICES_AND_ITS_UTILLISATION = 1.50]	1.755	.476	13.573	1	.000	.821	2.688
	[FINTECH_SERVICES_AND_ITS_UTILLISATION = 2.00]	2.577	.464	30.873	1	.000	1.668	3.486
	[FINTECH_SERVICES_AND_ITS_UTILLISATION = 2.50]	3.011	.466	41.754	1	.000	2.098	3.924
	[FINTECH_SERVICES_AND_ITS_UTILLISATION = 3.00]	5.159	.521	97.944	1	.000	4.137	6.181
	[FINTECH_SERVICES_AND_ITS_UTILLISATION = 3.50]	5.518	.531	107.877	1	.000	4.477	6.559
	[FINTECH_SERVICES_AND_ITS_UTILLISATION = 4.00]	8.089	.622	168.889	1	.000	6.869	9.308

	[FINTECH_SERVICES_AND_ITS_UTILLISATION = 4.50]	8.319	.629	174.944	1	.000	7.086	9.551
Location	FINANCIAL_LITERACY_REGARDING_FINTECH	1.685	.143	139.688	1	.000	1.406	1.965
Link function: Logit.								

The table presents parameter estimates from a logistic regression model. In the context of the model, the estimates are crucial for understanding the relationship between the independent variables and the dependent variable.

First, the "Threshold" section provides estimates for various categories of the independent variable "fintech services and its utilization." Each estimate represents the threshold value at which the log-odds of the dependent variable being 1 (or in a specific category) is considered significant. These threshold values are essential in logistic regression, and the table indicates that all of them are statistically significant based on the low p-values (Sig. values). This suggests that different levels of " Fintech Services and Its Utilization" have a significant impact on predicting the dependent variable.

Second, the "Location" section provides an estimate for the independent variable “Financial Literacy Regarding Fintech.” The estimate is 1.685, and it is highly statistically significant, as indicated by the small Sig. value. This estimate signifies that an increase in “Financial Literacy Regarding Fintech” is associated with an increase in the log-odds of the dependent variable being 1. In other words, higher financial literacy regarding fintech

is a strong predictor of the dependent variable, and the positive estimate suggests a positive relationship between these variables.

In summary, the table's estimates and significance values provide valuable insights into the logistic regression model. They reveal the importance of different levels of "Fintech Services and Its Utilization" as well as “Financial Literacy Regarding Fintech” in predicting the outcome variable, with all estimates being statistically significant.

According to tests, results indicated that Alternate Hypothesis accepted and Null hypothesis rejected.

4.3.4 Research Question Four

Question 4: What factors contribute to consumer trust issues in using Fintech services in India, and what measures can be taken to build and reinforce consumer trust, while ensuring robust data security for Fintech platforms?

- Null Hypothesis (H0): There is no significant relationship between factors contributing to consumer trust issues and the use of fintech services in India.
- Alternative Hypothesis (H1): There is a significant relationship between factors contributing to consumer trust issues and the use of fintech services in India.

Table 4.23: Correlations

			FACTORS CONTRIBUTING TO CONSUMER TRUST ISSUES	**FINTECH SERVICES AND ITS UTILLISATION**
Spearman's rho	FACTORS CONTRIBUTING	Correlation Coefficient	1.000	.506**
		Sig. (2-tailed)	.	.000

	TO CONSUMER TRUST ISSUES	N	300	300
	FINTECH SERVICES AND ITS UTILLISATION	Correlation Coefficient	.506**	1.000
		Sig. (2-tailed)	.000	.
		N	300	300
**. Correlation is significant at the 0.01 level (2-tailed).				

Positive correlation

The Spearman correlation test was used to analyse the nonparametric partnership between two variables, "Factors Contributing to Consumer Trust Issues" and "Fintech Services and Its Utilisation."

With a correlation value of 0.506, the findings indicate a positive and statistically significant relationship between the two variables of interest. This implies that the demand for, and supply of, fintech services is growing in tandem with the reasons leading to consumer trust difficulties. There is a significant association between these variables; the correlation is statistically significant at the 0.01 level (2-tailed). In layman's terms, growing acceptance and use of fintech services tend to correspond with heightened awareness of customer trust concerns.

According to Spearman Test, results indicated that Alternate Hypothesis accepted and Null hypothesis rejected.

4.4 Summary of Findings

The findings of this comprehensive study on fintech's role in the financial ecosystem of India reveal several critical insights that hold significance for policymakers, financial institutions, fintech companies, and consumers alike.

Firstly, regulatory challenges were identified as a substantial hindrance to fintech adoption in India. The complex compliance requirements, stringent KYC norms, and uncertainties around data privacy have deterred potential users from embracing fintech platforms. Simplifying regulatory processes and creating a more accommodating environment for fintech innovation are imperative steps for the industry's growth.

Secondly, the research highlighted the detrimental impact of infrastructure limitations on the expansion of fintech services. Inadequate internet connectivity, particularly in rural areas, has hindered the seamless integration of fintech platforms into the daily lives of many Indians. Bridging the digital divide through investments in digital infrastructure is essential for inclusive fintech growth.

Thirdly, the study underlines the positive correlation between financial literacy and fintech utilization. Individuals with a better understanding of financial concepts and digital tools are more likely to embrace fintech services. Because of this, there is a pressing need for programmes and efforts that educate people about money so they can make educated choices regarding fintech.

The study also shows that there is a strong connection between customer trust concerns and the adoption of fintech. Consumers lose faith in fintech companies when their personal information is compromised or they face cyberattacks or other forms of fraud. In order for fintech platforms to earn and keep their users' confidence, they must adhere to open data policies and employ stringent security precautions.

The repercussions of this study can be felt far and wide. It highlights the importance of fintech in promoting financial inclusion and digital transformation in India's financial system. Authorities charged with regulating fintech must work with the industry's many stakeholders to find a middle ground between encouraging innovation and protecting consumers.

To ensure that people in rural regions, for example, have easy access to fintech platforms, it is essential to invest in digital infrastructure. The research further highlights the importance of financial literacy programmes in raising fintech adoption rates, arguing for more widespread financial education campaigns.

4.5 Conclusion

In conclusion, the results of this research contribute to an enhanced comprehension of the disruptive impact of fintech inside India's financial ecosystem. The insights they offer are practical and may be used to shape a regulatory environment that promotes innovation while still protecting the interests of consumers. Furthermore, the authors emphasise the need of fostering digital infrastructure development, conducting financial literacy programmes, and implementing trust-building measures to effectively promote the sustainable expansion of the fintech sector in India.

CHAPTER V:

DISCUSSION

This Chapter presents a detailed analysis of the research findings, which sheds light on the intricate and multifaceted nature of the fintech adoption environment in India. The study's overarching goal was to shed light on the complex web of factors driving fintech development in India's financial sector. Extensive research and careful statistical analysis have yielded a plethora of data that provides a clear picture of the current state of the "fintech industry in India".

5.1 Discussion of Results

IMPACT OF REGULATORY CHALLENGES ON FINTECH ADOPTION:

One of the most important takeaways from our research is the severe negative effect that regulatory hurdles have on fintech adoption in India. A piece of strong evidence has been found supporting the alternative hypothesis (H1), which highlights the significant barrier posed by the regulatory landscape to the development and spread of fintech in the country.

- Null Hypothesis (H0): Regulatory challenges do not have a significant impact on the adoption of fintech in India.
- Alternative Hypothesis (H1): Regulatory challenges have a significant negative impact on the adoption of fintech in India

Here, the Alternative Hypothesis has been Accepted.

- **Formidable Barriers:** The regulatory issues confronting India's fintech industry pose significant roadblocks to the sector's development. These problems cover a wide range of concerns, each of which has its own set of complexity.
- **Data Privacy Concerns:** Data privacy is a major concern for regulators. To deliver effective and customized financial services, fintech platforms heavily rely on the

collection and processing of user data. However, fintech startups in India face substantial obstacles due to the country's ever-changing data protection rules and regulations. Maintaining the privacy and integrity of sensitive user information while meeting all applicable regulations is a constant issue.

- **Licensing Requirements:** The Reserve Bank of India (RBI) and other regulatory bodies in India have implemented a plethora of rules and regulations pertaining to the fintech industry. Startups and smaller fintech organizations face significant barriers to entry due to the time and complexity involved in meeting these standards. Fintech companies cannot grow without the requisite innovation and agility, but obtaining the necessary licenses can be time-consuming and expensive.
- **Need for Regulatory Clarity:** In order to promote innovation and expansion in the fintech industry, regulatory clarity and uniformity are essential. There has to be a consistent regulatory framework for fintech companies that encourages innovation and enables them to adapt to new market realities without compromising consumer protection or data security.
- **Changing Legal Frameworks:** The fast growth of fintech isn't always matched by regulatory frameworks. This discrepancy may put fintech businesses in a legal uncertainty. It may be difficult for these enterprises to expand if the legislation is constantly changing.
- **Collaborative Solutions:** Government agencies, corporate leaders, and politicians must work together in coordination. It's crucial to start dialogues and establish systems that accommodate both the demand for entrepreneurship and the want for regulatory oversight. In this sense, regulatory sandboxes may be a helpful tool since they provide a risk-free environment in which to try out innovative monetary concepts.

INFRASTRUCTURE LIMITATIONS:

The research provides strong evidence that India's outdated and inadequate infrastructure is a key hindrance to the growth and improvement of fintech. Since H1 has been unanimously accepted, it is clear that a strong and easily accessible infrastructure is crucial to the growth and dissemination of financial technologies. Fintech's ability to boost financial inclusion and economic progress in India's large and diversified landscape is hampered by a number of infrastructure constraints. Due to a lack of infrastructure, many people in less developed areas are unable to use online banking or other digital financial services. Disparities in digital access, which include internet prevalence and smartphone ownership, compound these difficulties. Disruptions to the smooth functioning of fintech platforms due to constraints in payment gateways and digital infrastructure might also dissuade potential users. A holistic approach is required to deal with these complex restrictions. Broadband Internet access and electronic payment systems are only two examples of the kinds of essential infrastructure that might benefit greatly from public-private partnerships, in which government agencies work with private sector stakeholders to speed up development. At the same time, investments in digital infrastructure, especially in rural and disadvantaged areas, can help close the digital divide and open up new customer bases for fintech companies. India can realize the full promise of digital finance by addressing these infrastructure issues and using fintech to increase financial inclusion, empower underprivileged groups, and boost national economic growth.

- Null Hypothesis (H0): Infrastructure limitations do not have a significant impact on the growth and expansion of fintech in India.
- Alternative Hypothesis (H1): Infrastructure limitations have a significant negative impact on the growth and expansion of fintech in India.

Here, the Alternative Hypothesis has been accepted.

FINANCIAL LITERACY'S POSITIVE IMPACT

The findings shed light on an important and compelling revelation about the beneficial and substantial impact of financial literacy on the adoption and use of fintech services within India's changing financial landscape. As the null hypothesis (H0) has been unanimously rejected, the importance of financial literacy in encouraging the adoption of fintech advances has been highlighted. Strong evidence is established for a correlation between consumers' knowledge of fintech products and their openness to using and adopting digital financial solutions in India, a country with a wide range of demographics and a wide range of financial literacy and inclusion.

- Null Hypothesis (H0): Financial literacy does not have a significant positive impact on the utilization of fintech services in India.
- Alternative Hypothesis (H1): Financial literacy has a significant positive impact on the utilization of fintech services in India.

Here, Alternative Hypothesis has been accepted.

If someone is going to go into this phenomenon, individuals need to acknowledge that people who are more financially literate are more likely to be able to handle the complexities of fintech services. As a result of their increased awareness of the merits and perils of utilizing digital financial services, they are more willing to adopt these cutting-edge tools. Consumers who are financially literate are more likely to embrace the fintech revolution and take advantage of its many benefits, such as convenient digital payment and investment possibilities and simplified financial management.

The empowering effects of a well-rounded understanding of personal finance and the use of fintech go well beyond the individual. There are bigger societal ramifications as well. Consumers' growing financial literacy and enthusiasm for fintech make widespread access to financial services a more realistic prospect. Financial literacy programs that equip

underserved and marginalized communities to make informed decisions about and efficient use of fintech services have the potential to have a significant impact on their lives.

Therefore, the findings stress the critical need for widespread financial education programs in India. These initiatives not only help people become more financially savvy, but they also help speed up the widespread acceptance of new fintech products. India can help make the benefits of fintech more widely available by investing in financial education so that people from all economic backgrounds can make use of it. In the end, financial education serves as a catalyst for the development and expansion of fintech in India, which in turn aids the country's economy and makes it possible for more people to participate in the financial system.

CONSUMER TRUST AND FINTECH ADOPTION

The extensive research not only accepts the alternative hypothesis (H1) that there is no correlation between customer trust issues and the use of fintech services in India but also finds a strong association between these two variables. The importance of trust as a driving factor in the widespread adoption of fintech technologies in the Indian setting is highlighted by this acceptance. Trust is a subtle but crucial factor in the digital realm that might determine the ultimate fate of fintech platforms. Data security, privacy breaches, and digital theft are among the most pressing issues, and they have a direct bearing on consumers' trust.

- Null Hypothesis (H0): There is no significant relationship between factors contributing to consumer trust issues and the use of fintech services in India.
- Alternative Hypothesis (H1): There is a significant relationship between factors contributing to consumer trust issues and the use of fintech services in India.

Here, the Alternative Hypothesis has been accepted.

- **Data Security Concerns:** Concerns about their personal information being compromised are a major reason why people are hesitant to use fintech services. Due to the nature of the data they handle, fraudsters often target fintech websites. Consumers may be hesitant to use digital banking solutions if they have reason to fear a data breach or other security flaw (Stewart and Jürjens, 2018).
- **Privacy Breaches:** Consumers' paranoia about their personal information being stolen online is growing. Loss of trust occurs when sensitive information is misused or disseminated without permission. There needs to be openness in the privacy rules of fintech companies so that customers know what happens to their data and how it is used (Hussain *et al.*, 1AD).
- **Digital Fraud Concerns:** As the number of digital transactions has grown, so have the number of complex scams. People are wary of making purchases online for fear of fraud, phishing, or other forms of theft. Consumers' reluctance to use fintech services stems in large part from these trust issues (Saluja, 2022).

Consumer confidence can be increased if financial firms implement rigorous data security procedures. Users can be assured that their financial information is secure if modern encryption technologies, multi-factor authentication, and routine security audits are put into place. A commitment to protecting user data can be demonstrated by open and easily understood privacy policies.

Strong methods of assisting customers are also essential. Prompt and efficient problem-solving for users demonstrates the company's commitment to client satisfaction and builds confidence. In this context, regulatory agencies are crucial. Consumer trust is bolstered when regulatory agencies enforce strict data protection standards and hold fintech firms accountable for compliance. Trust in fintech services is boosted by a safe atmosphere characterized by clear norms and severe punishments for violations.

DISCUSSION OF RESEARCH QUESTION ONE

RQ1: What are the main regulatory challenges obstructing the adoption of Fintech in India's financial ecosystem, and how can they be overcome?

The study's findings prove beyond any reasonable doubt the severe detrimental effect of regulatory obstacles on fintech uptake in India. This result is consistent with the alternative hypothesis (H1), which is accepted here, and which emphasises the significant challenges created by regulatory impediments within the Indian fintech sector. While the fintech industry in India has grown and displayed impressive innovation, it is nevertheless held back by an intricate web of regulatory restraints. Since fintech platforms handle highly confidential financial information, complying with data privacy requirements is one of the biggest issues facing regulators. Non-compliance with data privacy laws not only poses legal risks but also erodes consumer trust, a crucial element for fintech adoption. However, navigating the complex landscape of data protection regulations and ensuring compliance can be a daunting task for fintech companies. Startups and new entrants to the fintech industry may find the regulatory landscape's stringent licensing procedures to be prohibitively expensive, time-consuming, and confusing. Operating at the crossroads of finance and technology, fintech is also vulnerable to changes in growing regulatory frameworks, making it difficult for businesses to foresee and handle these transformations, hence fostering uncertainty and hesitance. The Indian government, regulatory organizations, and business players must work together to find a solution to these regulatory difficulties that strike a compromise between consumer protection and innovation. This involves making it easier for fintech businesses to operate by simplifying and expanding access to regulatory sandboxes and clarifying compliance standards. In addition, it is crucial for regulatory bodies to take a consumer-centric approach, with a concentration on user data protection and the enforcement of fair practices in the fintech

sector via clear standards and regulations. Finally, the regulatory landscape needs to be flexible, with constant evaluation and adaptation to the ever-changing fintech environment made possible through cooperative interactions between regulators, industry actors, and experts.

DISCUSSION OF RESEARCH QUESTION TWO

RQ2: What infrastructure limitations currently hinder the growth and expansion of Fintech in India?

The thorough analysis of the Indian financial technology industry confirmed the undeniable negative impact of infrastructural limits on the development and spread of financial technology in India. The results support the claim that infrastructure is the foundation for technological development and innovation. Because of the importance of ubiquitous digital access in the financial technology industry, the infrastructure plays a critical role in establishing the breadth and depth of fintech offerings. The lack of reliable Internet service is one of the biggest problems facing the financial technology industry in India. Although India's vast and varied terrain is ripe with opportunity, achieving widespread digital access faces significant obstacles. The widespread use of fintech services is hampered by the fact that many rural and underserved communities still lack constant access to the internet. The reach of fintech companies is hampered by these connectivity issues, which in turn restricts the availability of financial services. The issue of the digital divide is another major one. While most people in the city have easy access to the internet and a high degree of digital literacy, those living in rural areas typically have neither of these things. Closing this digital gap is crucial if fintech is to play a role in expanding access to financial services. Expanding internet infrastructure to unserved areas, along with widespread digital literacy initiatives, is essential for resolving these inequalities. Despite their importance, payment gateways can pose major expansion barriers for the financial technology industry. Delays in payment

processing, unreliable gateways, and interoperability problems can all negatively impact the user experience and slow down or even stop adoption. To ensure safe, secure, and efficient fintech transactions, it is crucial to streamline and improve the payment gateway infrastructure. A multipronged strategy is needed to address these infrastructure restrictions so that fintech can reach its full potential in India. The expansion of digital infrastructure to unserved areas can be greatly aided through public-private partnerships. For nationwide connectivity, it is crucial to invest in digital infrastructure like expanding broadband networks and building strong mobile networks. Initiatives aimed at rural communities should train residents in the use of digital technologies and not just bring them online. Fostering financial inclusion and increasing the fintech footprint requires giving people in underserved areas the tools they need to feel comfortable using these services. Companies in the financial technology sector can contribute by creating cutting-edge solutions optimized for use on low-end mobile devices and networks with limited bandwidth. These developments have the potential to efficiently close the digital divide. In conclusion, the findings of our study show that inadequate infrastructure is a major barrier to the development and expansion of the fintech industry in India. Nonetheless, there is hope in the form of concerted efforts, which may include public-private partnerships, infrastructure investment, rural initiatives, and new solutions. India may become a world leader in the digital financial revolution if its infrastructural issues are resolved. This will allow for increased financial inclusion and faster adoption of fintech.

DISCUSSION OF RESEARCH QUESTION THREE

RQ3: How does the level of financial literacy among Indian consumers impact their utilization and comprehension of Fintech services?

The findings of this extensive study are powerful and irrefutable: higher levels of financial literacy are associated with greater adoption of fintech services among Indian consumers.

This result provides strong support for the acceptance of the null hypothesis (H0), which rejects the importance of financial literacy in fostering fintech adoption. Consumers' tendency to adopt new digital financial innovations is directly correlated with their familiarity with these new technologies. The capacity to understand and competently use a variety of financial instruments (financial literacy) emerges as a powerful catalyst in the fintech adoption process. Consumers who are educated on the complexities of digital financial services are more likely to use FT services. They are more likely to use and benefit from fintech, which includes things like mobile banking, digital payment systems, and investment marketplaces. In the context of fintech, where cybersecurity and data privacy are essential concerns, financial literacy equips individuals with the abilities to analyse risks responsibly. Customers who have taken the time to educate themselves about the financial system are in a better position to assess the security precautions taken by fintech providers, which in turn increases faith in the systems. In addition to helping people adopt fintech for themselves, financial literacy also moves the needle on broader financial inclusion initiatives. More people, especially in rural and underserved areas, will be able to benefit from financial inclusion initiatives as they gain the knowledge and confidence to use digital financial services. Widespread financial literacy programmes in India's urban and rural areas are needed to boost fintech adoption. Digital financial services, budgeting, saving, investment, and cybersecurity awareness are just some of the many areas that might benefit from these programmes, which should be designed with India's diverse population in mind. The efficacy of financial education initiatives is enhanced when private sector fintech firms, public sector organizations, and academic institutions work together. To guarantee that their customers have access to important financial information, fintech companies might incorporate educational tools and lessons into their platforms. To reach people at all points in their lives, outreach initiatives should be implemented in a variety

of settings, including educational institutions and community hubs. In conclusion, our study demonstrates the importance of financial literacy on the path to adopting fintech. It gives people the ability to assess risks, make educated financial decisions, and use fintech services with self-assurance. India can strengthen its position as a center for fintech innovation and advance financial inclusion goals by adopting comprehensive financial literacy programs that cater to the different demands of the Indian populace. Ultimately, financial literacy is not merely a means of encouraging the use of fintech; it is also essential to thriving economically in the digital age.

DISCUSSION OF RESEARCH QUESTION FOUR

RQ4: What factors contribute to consumer trust issues in using Fintech services in India, and what measures can be taken to build and reinforce consumer trust, while ensuring robust data security for Fintech platforms?

This in-depth research reveals an intriguing discovery about the interconnected nature of the elements that influence customer trust and the adoption of fintech services in India. The acceptance of fintech is greatly influenced by trust, a nuanced yet essential aspect of the digital landscape. Trust among consumers is both a driving force and a by-product of fintech's rapid evolution and subsequent acceptance. Based on our findings, following points needs to be considered for fintech companies and their products.

- **Data Security Concerns:** Concerns about the safety of their personal information is a major contributor to the lack of trust among consumers. Many different types of private financial data, from user credentials to transaction histories, are handled by fintech platforms. Data security precautions of the highest kind are required here. The cybersecurity procedures, encryption standards, and data protection techniques used by fintech firms must be state-of-the-art. In addition to protecting

sensitive user data, a well-implemented data security infrastructure may earn users' trust by showing they value their privacy (Gai *et al.*, 2017).

- **Privacy Breaches and Transparency:** Another major threat to consumers' faith is the infringement of their right to privacy. The trust that customers have in fintech companies can be severely damaged by incidents like data breaches or unauthorised access to user information. It becomes clear that transparency is a potent remedy for this worry. Clear and transparent privacy rules outlining the collection, usage, and security of user data are essential for fintech companies. Further improving transparency by giving users fine-grained control over their data and consent processes can enable consumers to make educated decisions about their data (Dorfleitner, Hornuf and Kreppmeier, 2021).
- **Apprehensions About Digital Fraud:** Concerns about cybercrime are a major contributor to consumers' lack of faith. To put these fears to rest, fintech platforms must offer reliable fraud detection and prevention tools. Increased consumer knowledge and resistance to fraud attempts can be achieved by education about prevalent fraud threats, phishing attempts, and best practises for secure digital transactions. Quick responses to customer concerns about potential fraud require easily available customer service and grievance resolution systems (Zakaria, 2023).
- **Regulatory Assurance and Data Protection:** Consumer confidence in fintech services also benefits greatly from the work of regulatory agencies. Consumers are reassured by the strict data protection legislation and monitoring systems that are in place. To guarantee compliance with data protection and cybersecurity standards, regulatory organisations should proactively monitor and audit fintech platforms. Consumer confidence can be boosted greatly by instituting a regulatory system that

promptly responds to complaints and imposes fines for noncompliance (Rupeika-Apoga and Thalassinos, 2020)

- **Collaborative Measures:** Consumer trust is built and maintained by the combined efforts of fintech firms, government agencies, and individual customers. It is imperative that companies providing financial technology adhere to the highest standards of data privacy and openness. Regulatory agencies need to keep their guard up, responding quickly to new dangers and making sure fintech firms follow the rules. In response, consumers should keep an eye out for unusual activity, learn more about digital security, and report it immediately (Lehmann, 2023).

The investigation concludes that consumer trust is crucial to the success of the fintech adoption process. The causes contributing to trust difficulties must be actively addressed as fintech continues to transform India's financial ecosystem. Fintech businesses may increase trust and customer acquisition by placing a premium on protecting user information, being transparent about fees, and detecting and preventing fraud. However, regulatory agencies have a responsibility to foster conducive conditions through effective monitoring and strict implementation of regulations. Taken together, these reforms have the potential to provide a fertile environment for India's fintech industry to flourish, supporting both financial inclusion and innovation in the digital era.

CHAPTER VI:

SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

This chapter incudes the final sections of this research project. In this final chapter, summary of the study, its implication, recommendations for future researches and the final conclusion are discussed.

6.1 Summary

The study titled "Fintech as a Building Block of the Financial Ecosystem in India" digs into the ever-changing environment of fintech in India, analyzing its effects on the financial sector and identifying key problems and possibilities. In just five years, India's financial technology industry has gone from being worth $31 billion to an estimated $84 billion by 2025. India is becoming a fintech powerhouse because to a rare confluence of technical innovation, government support, and economic possibilities. The primary objectives of the research are to learn how customers' financial literacy influences fintech adoption, to identify and remove regulatory impediments, and to discover what makes people believe in fintech.

The current situation of the Indian financial technology business, including prominent companies like Paytm and Mobikwik, is described in the literature review section. In light of these shifts, a quantitative research strategy was adopted, with participants being surveyed about their experiences with fintech. It stresses the significance of financial literacy and dives into the interconnectedness of legislative barriers, infrastructure constraints, and the uptake of fintech. Statistically robust techniques, such as ordinal regression and spearman correlation, are used to examine the data.

The research provides crucial information that illuminates the state of India's financial technology sector at now. It is evident that regulatory barriers have a major impact

on fintech uptake, which highlights the importance of the need for regulatory reforms to foster innovation. Fintech is seeing rapid growth, but the industry's current infrastructure can't keep up with the surge in popularity. Consequently, new facilities are urgently needed. Furthermore, the study emphasises the necessity of education and awareness in enticing customers to adopt fintech. It does so by exhibiting the link between financial literacy and the utilisation of fintech and by stressing the significance of education and awareness in enticing customers to utilise fintech. Last but not least, the research reveals a substantial link between consumer trust concerns and fintech adoption, highlighting the significance of trust-building initiatives and adequate data security processes for fintech platforms.

This research concludes with a detailed picture of the growth of fintech in India, including the opportunities and challenges that the industry now confronts. It helps consumers, financial institutions, and regulators make sense of the current financial system. This analysis comes at a pivotal time, exposing the next steps towards realising fintech's full potential as a cornerstone of India's financial ecosystem, as the fintech industry in the nation continues to grow.

6.2 Implications

This research carries several profound implications that extend to various stakeholders, including policymakers, financial institutions, consumers, and the broader Indian economy. These implications are discussed as follows:

- **Policy and Regulatory Implications:** The research highlights the significance of regulatory frameworks in promoting the development of fintech while protecting consumer interests. It is imperative that policymakers recognise the weighty effect that regulatory hurdles have on the spread of fintech. Regulators should maintain an open channel of communication with fintech firms and interested parties to encourage innovation, simplify compliance, and guarantee consumer protection. To

keep up with the ever-changing fintech ecosystem and provide a fertile ground for financial technology innovation, it is crucial to conduct regular reviews of the regulatory landscape.

- **Infrastructure Development:** The study found that infrastructural constraints are a potential barrier to the development and spread of fintech in India. Both public and private organisations may learn a lot from this discovery. To support the expanding fintech ecosystem, it is crucial to invest in strong digital infrastructure, such as high-speed internet access and secure payment channels. Addressing these infrastructural issues through public-private partnerships is crucial to supporting fintech innovation and financial inclusion.
- **Financial Literacy Initiatives:** The findings show that using fintech increases with financial literacy. In light of this, there is a need for collaboration between financial institutions, universities, and governments to improve financial education initiatives. Increasing fintech adoption and encouraging responsible financial behaviour requires providing customers with the information and tools they need to make educated choices when using these services.
- **Trust-building Measures:** Given the strong correlation between trust and fintech adoption, it is imperative that platforms put trust-building tactics at the forefront. Building and maintaining customer confidence requires openness about data privacy rules, security measures, and data processing procedures. In order to gain and keep their customers' trust, fintech businesses should make clear their dedication to data privacy and ethical trade practises.
- **Innovation and Collaboration:** Innovation and cooperation are becoming increasingly important as India's fintech industry expands. In order to take advantage of new technologies and better serve their customers, traditional

financial institutions should consider forming collaborations with fintech firms. Models of cooperation that draw on the best practises of both industries can boost financial creativity and diversify service provision.

- **Rural Financial Inclusion:** The study emphasises potential influence of fintech on enhancing financial inclusion within rural regions. It's imperative for fintech start-ups policymakers, & financial institutions to collaborate in order to devise customised strategies that effectively tackle the distinctive obstacles encountered by rural communities. The expansion of FT services to places that have been historically underserved holds the potential to open economic possibilities, mitigate the digital gap, and advance the objectives of financial inclusion.
- **Sustainable Finance:** Sustainable finance is something that can be greatly aided by the use of fintech. The research demonstrates that fintech has the potential to promote eco-friendly banking. Responsible investing, green financing, and ethical monetary decision-making are all bolstered by sustainable fintech solutions. Both established banks and innovative fintech companies need to consider how they might better contribute to global efforts to achieve sustainable development.
- **Global Comparisons:** By contrasting the fintech scene in India with those in other countries, the research fosters a more global perspective. By comparing data from other countries, India may pick some tips on how to improve its fintech environment and better compete internationally.

In sum, the study of fintech in India yields important findings and practical suggestions for a wide range of interested parties. By accepting these consequences, the Indian financial sector, would be able to profit from a thriving and diverse fintech ecosystem. The findings of this study may be used to create a more secure and progressive financial future for India as fintech develops.

6.3 Recommendations for Future Research

This research work is a deliberate attempt to identify the factors which affect the adoption of FinTech by customers and also to suggest workable policy measures to improve the adoption processes of FinTech. A humble effort is also made to minimise the risks involved in adopting the products and services of FinTech. The findings of this study will be helpful to prepare a database which will assist the academics and practitioners to identify the emerging issues and problems related to adoption of products, services, tools and devices offered by FinTech Companies. This research could be beneficial to establish clear research propositions for FinTech adoption by masses in future. This will also help the FinTech industry for enhancing the knowledge in the field of adoption which will further facilitate the financial sector in developing and improving the adoption trends in future. This research will also provide valuable information to FinTech firms to win the trust and confidence of present and prospective customers.

Still there can be more work that could be conducted on this kind of study. Future Researchers can focus on the following points for their research study on the topic of Fintech sector:

- This study's generalisation is limited due to standardised research parameters, small sample size and coverage area of all over India. Research may be conducted in other country as well as comparison of states with a large size of sample and customers with a diversity of demographics.
- Most advanced statistical techniques like the bibliometric, meta-analysis and mathematical geography method may be used to know how much data there is on the topic of how consumers are adopting FinTech services that businesses are presently providing and how that data is structured throughout time. Research work

will also help the policymakers in minimising the risk involved in adopting financial services raised by FinTech companies.

- Carry out extensive research projects to monitor the development of fintech in India over a longer time frame. Analyse the long-term effects of factors like as new regulations, innovations in technology, and shifts in the market on the fintech ecosystem.
- Explore the possibilities of blockchain and digital currency in India's financial sector. Examine the regulatory potential and obstacles in this new field.
- As the value of data continues to grow, studies on effective cybersecurity and data privacy in fintech platforms are becoming increasingly important. Analyse the dangers and weaknesses of dealing with fintech.
- Study how fintech is affecting SMEs. Consider how fintech may improve business processes, open up new funding avenues, and inspire new venture creation.
- Investigate how government programmes and policies affect the development of financial technology. Examine the results of programmes like "Digital India" and how they have affected financial inclusion and the use of fintech.
- Maintain research into India's financial technology regulatory landscape. Analyse how well existing regulatory structures foster innovation while protecting consumers.
- Look at how sustainable finance and financial technology connect. Investigate the role that fintech may play in achieving sustainable development goals and promoting ecologically sound banking practises.
- A study may be conducted to study the factors impacting on the intention of adopters and non-adopters of FinTech.

- To conduct a study to examine adoptability of digital payment depending on applied technology, forecasting & social change.

6.4 Conclusion

As a result of its widespread implementation and rapid growth within the financial sector, FinTech is now widely discussed within the financial sector, as well as the scientific and technological communities. The financial services industry in India has begun its digital transformation and is rapidly catching up to its international counterparts in terms of acceptance. In spite of the expansion of Fintech, only in recent years has academic study in Fintech adoption arisen in India. This study has shed light on the dynamic role of fintech as a fundamental building block within the financial ecosystem of India. The financial technology sector in India has witnessed remarkable growth in recent years, catalysed by a unique combination of technological enablers, government initiatives, and economic prospects. The adoption of fintech has permeated various aspects of financial services, transformed the way consumers access and engage with financial products.

The advent of UPI by National Payment Corporation of India (NPCI) has been major step forward, allowing for instantaneous digital transactions and greatly aiding the spread of online payment systems in India. By bridging the gap between traditional banking and innovative digital alternatives, the UPI has developed into a trustworthy and secure method of transferring funds.

This study provided further evidence that regulatory hurdles significantly hinder fintech adoption in India. Consumers & financial institutions alike have been hindered by tight Know Your Customer (KYC) standards, lack of clarity surrounding data privacy, & other compliance regulations. Potential roadblocks to widespread use of fintech platforms include lengthy & laborious Know Your Customer (KYC) process.

It was also discovered that a key obstacle to growth & dissemination of fintech in India was the country's inadequate infrastructure. As a result of slow internet speeds, especially in rural regions, & a dearth of reliable digital payment options, many Indians have struggled to adopt fintech services into their daily life. A lack of reliable internet service, for instance, may make it difficult for people in rural areas to use some financial technology applications.

In fact, it was discovered that contrary is true; greater financial literacy greatly increased adoption of fintech in India. Individuals are more inclined to choose fintech services when they have a solid grasp of financial concepts and digital technologies. A person who has a firm grasp of financial concepts is more likely to embrace new financial technologies, such as mobile payment and investment applications.

Finally, study analyses statistically significant correlation between customer trust difficulties & adoption of fintech services in India. Consumer confidence can be damaged when fintech companies experience data breaches, cyberattacks, or fraudulent activity. High-profile data breaches have discouraged customers from revealing personal information online and using financial services as a result.

Policymakers, financial institutions, fintech firms, and consumers may all benefit from this study's findings. Inclusive economic growth requires overcoming infrastructural constraints, encouraging collaboration between conventional and fintech industries, and extending fintech services to rural areas.

Sustainable finance, worldwide comparisons, and the incorporation of emerging technology like blockchain and cryptocurrencies are all areas where India's fintech industry might thrive in the future. To ensure that innovation is harnessed to drive financial inclusion, economic growth, and responsible financial practises, all stakeholders in India's financial ecosystem must work together to navigate the changing landscape as fintech

becomes increasingly central to the country's financial system. A better appreciation of fintech's revolutionary impact in India and its ability to alter the future of finance in the country is provided by the study's findings and suggestions.

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APPENDIX

DEMOGRAPHIC DETAILS

1. **Gender:**
   1 Male
   2 Female
2. **Age:**
   1 18-25 years old
   2 26-30 years old
   3 31-35 years old
   4 36-40 years old
   5 41-45 years old
   6 Above than 45 years
3. **Education Level:**
   1. High School
   2. Under Graduate
   3. Graduate
   4. Post Graduate
   5. Professionally Qualified
4. **Income Level (Per Annum):**
   1 Less than ₹1,00,000
   2 ₹1,00,000 - ₹5,00,000
   3 ₹5,00,000 - ₹10,00,000
   4 ₹10,00,000 - ₹20,00,000
   5 More than ₹20,00,000
   6 Prefer not to say

5 How often do you use digital payment methods like UPI, Internet Banking and e-wallets in your daily life?

1 Daily

2 Weekly

3 Monthly

4 Rarely

5 Never

6 Which of the Digital Payment Method you prefer?

1 UPI (Unified Payments Interface)

2 Mobile Wallet (e.g., Paytm, Google Pay, PhonePe)

3 Debit/Credit Card

4 Internet Banking

5 Other

7 What is the main reason for you to use the Digital Payment Method?

1 Convenience

2 Cashback or rewards

3 Government initiatives (e.g., Digital India)

4 Peer influence

5 Speed of transactions

6 Security

7 Other

STRUCTURE QUESTIONNAIRES

Please rate your level of agreement with the following statements regarding the Fintech system in India:

1 = Strongly disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly agree

- **FINTECH SERVICES AND ITS UTILLISATION**

Statements	1	2	3	4	5
I find Fintech services user-friendly and easy to use.					
Fintech platforms provide a variety of financial services that are suitable for my needs.					
The customer support provided by Fintech companies in India is responsive and helpful.					
Fintech companies regularly introduce innovative features and services.					
I regularly use fintech services such as UPI, mobile wallets, or online banking for various financial transactions.					
For some transactions, I prefer to utilise fintech services instead of traditional banking techniques.					
Fintech services have made managing my finances easier for me.					
Government initiatives such as Digital India have encouraged my use of Fintech services.					
I trust the security of my financial transactions when using Fintech services.					
My access to financial services has improved due to fintech services.					

- **FINTECH ADOPTION IN INDIA**

Statements	1	2	3	4	5
Using fintech services is convenient for my financial transactions.					
Fintech services provide me with a variety of financial options.					
I find fintech platforms easy to use and navigate.					

Fintech has made managing my finances more efficient.					
I recommend others to adopt the fintech services.					

- **GROWTH AND EXPANSION OF INDIAN FINTECH**

Statements	1	2	3	4	5
Fintech services have become more accessible in India over the past few years.					
I have noticed a noteworthy development in the number of fintech companies operating in India.					
I believe that fintech has the potential to promote financial inclusion in India.					
Fintech platforms have played an important role in shaping India's financial landscape.					
I have noticed an increase in fintech adoption among my peers and within my community.					
Fintech companies have introduced innovative solutions that enhance financial services.					
I am optimistic about the future growth of fintech in India.					

- **REGULATORY CHALLENGES IN INDIAN FINTECH**

Statements	1	2	3	4	5
Regulatory challenges hinder my ability to use fintech services effectively.					
Complex compliance requirements associated with fintech services discourage me from using them.					

To address the regulatory problems, fintech companies should work closely with regulatory authorities.					
I believe that regulatory challenges are necessary to ensure the security and integrity of fintech services.					
Regulatory challenges have obstructed the growth of fintech companies in India.					

- **INFRASTRUCTURE LIMITATIONS OF INDIAN FINTECH**

Statements	1	2	3	4	5
Poor internet connectivity in some areas hinders my use of fintech services.					
Inadequate infrastructure affects the speed and reliability of my fintech transactions.					
Infrastructure limitations have caused disruptions in my fintech usage.					
I am less likely to look into new fintech options in places with poor infrastructure.					
I believe that infrastructure improvements are necessary for the growth of fintech in India.					
The availability of better infrastructure would encourage me to use fintech services more frequently.					

- **FINANCIAL LITERACY REGARDING FINTECH**

Statements	1	2	3	4	5
I have a good understanding of financial concepts and services.					

I actively seek information and education on financial matters.					
Due to my financial knowledge, I find it easier to comprehend and use fintech services.					
I am confident in my ability to manage my personal finances effectively.					
I believe that my level of financial literacy positively influences my ability to make informed decisions about using fintech services.					

- **FACTORS CONTRIBUTING TO CONSUMER TRUST ISSUES**

Statements	1	2	3	4	5
Concerns about privacy and data breaches affect my trust in Fintech platforms.					
Effective data encryption procedures are essential for fostering trust in fintech services.					
Fintech companies should provide options for users to control their data sharing.					
Transparency in how Fintech companies handle user data is important for building trust.					
My trust could be reduced by a clear discussion regarding data security procedures.					
I am willing to provide personal information if it means enhanced security on Fintech platforms.					