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Impact assessment and execution strategies of fintech in consumer finance: Paving the way forward

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Abstract

The increasing adoption of FinTech has revolutionized the consumer finance industry, providing innovative solutions that cater to the needs of consumers. FinTech companies disrupt established financial institutions and challenge the status quo, resulting in a dynamic and rapidly changing landscape. However, the success of FinTech in consumer finance depends on its impact execution, which involves the ability to deliver measurable and sustainable outcomes. This requires a comprehensive understanding of the market, a deep understanding of consumer needs, and the ability to effectively execute strategies that meet these needs. This paper examines the significance of FinTech in consumer finance to perform a comprehensive SWOT and PESTEL analysis of FinTech in consumer finance. Moreover, this is attempting to find out the opportunities and challenges of FinTech in the context of consumer finance and investigate trends of FinTech in consumer finance. By implementing the strategies outlined in this paper, FinTech companies can continue to drive innovation, increase access to financial services, and deliver measurable consumer outcomes.

Keywords: FinTech; Consumer Finance; Credit Score; Financial Market; Disruption.

1. Introduction

Consumer finance occurs when a lender and consumer meet at or before a point of sale to allow the consumer to split the purchase into payments (Lin et al., 2019; Purohit et al., 2022). As a result, consumers will have more cash available now and more flexibility in making payments. FinTech consumer finance refers to using technology, such as online platforms, mobile applications, and data analysis, to provide financial services to consumers (Gaurav Kumar Singh, 2022; Nguyen et al., 2020). This includes services such as loans, insurance, investments, and personal finance management tools. FinTech, consumer finance platforms, often offer lower fees and interest rates compared to traditional financial institutions, making financial services more affordable and accessible for consumers. These platforms also provide personalized financial advice to customers based on their financial goals and data analysis. They use data analytics, AI-ML to offer personalized financial solutions that are tailored to individual needs and preferences. FinTech consumer finance is transforming the financial industry by creating new business models, goods & services that are better suited to the requirements of modern consumers (MM Mijwil, KK Hiran, R Doshi, M Dadhich, AH Al-Mistarehi, 2023). The rise of FinTech consumer finance has democratized financial services and given consumers greater control over their financial lives. FinTech consumer finance has seen significant growth in India in recent years, driven by increasing smartphone and internet penetration, rising digital payments, and a growing middle class. One of the most significant areas of FinTech consumer finance in India is digital payments. Digital payment platforms have seen massive adoption in the country, enabling consumers to make payments for goods and services using their smartphones easily (Manish Dadhich, Hiran, Rao, & Sharma, 2022; Luo, Sun, Yang, et al., 2022; Schulz & Feist, 2021). These platforms have also expanded into other areas of FinTech consumer finance, such as offering digital wallets, insurance products, and investment options. Online lending is another area of FinTech consumer finance that has seen growth in India.

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FinTech companies like Lendingkart, Capital Float, and ZestMoney offer loans to consumers and small businesses with faster approval times and lower interest rates than traditional banks. Peer-to-peer lending platforms like Faircent and LenDenClub also enable individuals to lend and borrow money directly from each other. Other areas of FinTech consumer finance in India include digital banking, robo-advisory services, and personal finance management tools (Luo, Sun, & Zhou, 2022). The Indian government has also supported FinTech consumer finance, launching initiatives like the Digital India campaign and the UPI to promote the adoption of digital payments and boost financial inclusion in the country. Thus, FinTech consumer finance in India is snowballing and is expected to continue to drive innovation and growth in the financial industry in the years to come.

2. Literature review

(Huang & Lee, 2022) examined the factors influencing the adoption and usage of FinTech services in consumer finance. This includes investigating the determinants of consumer trust in FinTech platforms, the role of perceived risks and benefits, and the impact of demographics and user characteristics on adoption behavior. (Ding et al., 2022) explored the role of FinTech in enhancing financial inclusion by rendering access to economic services for underserved populations. These studies examine the impact of mobile banking, digital payment systems, and alternative lending platforms on improving access, reducing costs, and expanding financial services to unbanked and underbanked individuals. (Yang et al., 2021) analyzed how FinTech influences consumer financial behavior and decision-making. This includes investigating the effect of personalized recommendations, digital nudges, and user interfaces on consumer choices, as well as the impact of FinTech on financial literacy, savings behavior, and investment decisions. (Manish Dadhich, Poddar, et al., 2022) focused on understanding the risks and security implications associated with FinTech adoption. This includes examining the vulnerabilities of digital payment systems, the potential for data breaches and identity theft, and the role of regulations and cybersecurity measures in mitigating risks and ensuring consumer protection. (Lin et al., 2019) explored the rise of robo-advisory platforms and their impact on consumer finance. This includes investigating the performance of robo-advisors compared to traditional financial advisors, consumer trust in automated investment advice, and the challenges and opportunities of integrating human and robotic advice.

(Bollaert et al., 2021) examined the regulatory landscape and policy implications of FinTech in consumer finance. This includes studying the regulatory challenges and opportunities associated with new business models, the need for consumer protection frameworks, and the role of regulatory sandboxes in fostering innovation while ensuring financial stability. (Manish Dadhich, Doshi, et al., 2022) analyzed the customer experience and satisfaction levels associated with FinTech services. This includes investigating factors influencing customer satisfaction, such as ease of use, service quality, and personalized experiences, as well as identifying areas for improvement in FinTech platforms. These are just a few broad themes that have been explored in past studies on FinTech and consumer finance (Cornelli et al., 2023; Milian et al., 2019; Pahwa et al., 2022; Schulz & Feist, 2021). Conducting a comprehensive study will help you identify specific studies that align with your research focus and provide more detailed insights into the topic.

Objective of study

- To analyze the significance of FinTech in consumer finance.
- To perform SWOT and PESTEL analysis of FinTech in consumer finance.
- To examine the opportunities and challenges of FinTech in the context of consumer finance.
- To investigate trends of FinTech in consumer finance.

Significance of FinTech in consumer finance

FinTech's significance in consumer finance lies in its ability to enhance accessibility, improve user experience, drive technological innovation, promote financial inclusion, offer cost savings, and empower consumers with knowledge and control over their finances. It has reshaped the financial landscape, offering individuals a wide range of benefits and driving positive changes in the industry (Manish Dadhich, Hiran, Rao, Sharma, et al., 2022; Huang & Lee, 2022). There is a substantial and transformative impact on how financial services are accessed, delivered, and experienced. Some key aspects of its significance include:

Accessibility and Inclusion: FinTech has increased access to financial services for individuals previously underserved or excluded from traditional banking systems. It has brought financial services to remote areas, provided alternatives to brick-and-mortar branches, and offered tailored solutions for specific consumer segments. FinTech has contributed to financial inclusion by allowing individuals to open accounts, make payments, access credit, and manage their finances more easily (Milian et al., 2019).

Enhanced User Experience: FinTech has significantly improved the user experience in consumer finance. Through user-friendly interfaces, mobile apps, and intuitive platforms, consumers can now conveniently manage their finances, make payments, track expenses, and access various financial products and services. FinTech has simplified and streamlined processes, reducing paperwork, wait times, and bureaucracy associated with traditional financial institutions (Luo, Sun, Yang, et al., 2022).

Technological Innovation: FinTech is at the forefront of technological advancements in the financial industry. By leveraging technologies like artificial intelligence, blockchain, data analytics, and cloud computing, FinTech companies have introduced innovative solutions that optimize processes, enhance security, enable personalized financial recommendations, and automate various tasks. These technological innovations have driven efficiency, cost-effectiveness, and improved decision-making in consumer finance (Li et al., 2022).

Cost Savings and Competitive Pricing: FinTech companies often conduct with lower overhead costs compared to established financial institutions. This allows them to offer consumers competitive pricing, lower fees, reduced interest rates, and better exchange rates. FinTech's digital nature eliminates the need for physical infrastructure and enables automated processes, leading to cost savings that may be passed on to consumers (Nenavath, 2022).

Financial Education and Empowerment: FinTech has played a role in empowering consumers by providing educational resources, tools, and personalized financial guidance. Consumers can access budgeting apps, investment platforms, and financial literacy resources that help them make informed decisions, improve their financial literacy, and take control of their finances. FinTech has the potential to democratize financial knowledge and enable individuals to make more informed choices (Khai Nguyen & Cuong Dang, 2022).

Disruption and Competition: FinTech has disrupted traditional financial systems by challenging established players and introducing innovative business models. This has led to increased competition, forcing traditional financial institutions to adapt and improve their services to remain relevant (Manish Dadhich, Hiran, Rao, & Sharma, 2022). The presence of FinTech companies has encouraged innovation, efficiency, and customer-centricity in the broader financial industry (Schulz & Feist, 2021).

3. SWOT analysis of FinTech in consumer finance

3.1. Strengths

Technological Innovation: FinTech companies leverage advanced technologies such as cloud, AI-ML-DL, blockchain, and big data analytics to offer innovative solutions in consumer finance. This allows for faster and more efficient processes, improved customer experiences, and cost savings.

Enhanced Convenience: FinTech platforms provide consumers with convenient access to financial services through mobile apps and online platforms. This accessibility eliminates the need for physical visits to banks or financial institutions, saving time and effort for consumers.

Customized Offerings: FinTech firms can tailor their services to individual consumer needs. By leveraging data analytics, they can offer personalized financial solutions, such as personalized budgeting tools, investment recommendations, and loan offerings based on creditworthiness.

Competitive Pricing: FinTech disruptors often offer more competitive pricing compared to traditional financial institutions. With lower overhead costs and streamlined processes, they may pass on cost savings to consumers through diminished fees, lower interest rates, or better exchange rates.

3.2. Weaknesses

Limited Physical Presence: Some consumers still prefer face-to-face interactions and physical branches for financial services. FinTech companies that operate exclusively online may struggle to capture this market segment. Trust and security concerns may deter certain consumers from fully embracing digital financial services.

Regulatory Challenges: The regulatory environment surrounding FinTech is evolving and can pose challenges. Compliance with various financial regulations, including anti-money laundering (AML) and Know Your Customer (KYC) requirements, can be complex and time-consuming. FinTech companies must ensure they stay updated with regulatory amendments and adapt their operations.

3.3. Opportunities

Untapped Market Segments: Many individuals and businesses, especially in emerging markets, still lack access to basic financial services. FinTech companies can bridge this gap by offering inclusive and affordable solutions tailored to the needs of underserved populations, thus expanding their customer base.

Partnership with Traditional Institutions: FinTech firms can collaborate with traditional financial institutions to leverage their existing customer base, infrastructure, and regulatory expertise. Such partnerships can help FinTech companies reach a wider audience and gain credibility, while traditional institutions benefit from FinTech's technological capabilities and agility.

3.4. Threats

Cybersecurity Risks: FinTech companies handle sensitive customer data and financial transactions, making them fascinating targets for cybercriminals. Data breaches and security vulnerabilities can undermine consumer trust and lead to financial losses. FinTech firms need to invest in robust cybersecurity measures to mitigate these risks.

Increased Competition: As FinTech continues gaining traction, competition among FinTech companies intensifies. FinTech companies need to differentiate themselves by offering unique value propositions and staying ahead of technological advancements. Established financial institutions also invest in their digital transformation efforts, posing a competitive threat to standalone FinTech firms.

Economic and Regulatory Uncertainty: Economic downturns and regulation changes can significantly impact the FinTech industry. Volatile market conditions and shifting regulatory frameworks can disrupt business models and hinder growth. FinTech companies need to remain agile and adaptable to navigate such uncertainties successfully.

It's relevant to note that the SWOT mentioned above is not exhaustive and can vary based on specific market conditions, geographical locations, and individual FinTech companies.

4. PESTEL Analysis of FinTech in consumer finance

4.1. Political Factors

Regulatory Environment: FinTech companies operate within a regulatory framework set by governments and regulatory bodies. Changes in regulations, such as licensing requirements, data privacy laws, and financial regulations, can impact the operations and growth of FinTech firms in consumer finance.

Government Support: Some governments actively support the growth of FinTech through initiatives, incentives, and policies. Supportive measures, such as sandbox environments, tax benefits, and funding programs, can create a conducive environment for FinTech innovation in consumer finance.

4.2. Economic Factors

Economic Stability: The overall economic conditions of a country or region can impact consumer finance and FinTech. Economic downturns or instability can lead to reduced consumer spending and borrowing, affecting the demand for FinTech solutions. Conversely, a growing economy can provide opportunities for FinTech companies to expand and thrive.

Interest Rates and Monetary Policy: Changes in interest rates and monetary policies implemented by central banks can influence borrowing costs, investment decisions, and consumer behavior. These changes may impact FinTech companies offering lending or investment services, affecting their profitability and growth.

4.3. Social Factors

Consumer Behavior: Consumer attitudes and behaviors towards technology and financial services play a crucial role in adopting FinTech solutions. Factors such as trust in digital platforms, preferences for convenience, and acceptance of new financial technologies can influence the success of FinTech in consumer finance.

Financial Inclusion: FinTech has the potential to promote financial inclusion by rendering retrieve to financial services for underserved populations. Social trends toward promoting financial inclusivity can create opportunities for FinTech firms to develop innovative solutions catering to unbanked or underbanked individuals.

4.4. Technological Factors

Technological Advancements: FinTech heavily relies on technological advancements such as artificial intelligence, blockchain, cloud computing, and mobile technologies. Ongoing developments in these areas can drive innovation in consumer finance, enabling FinTech companies to offer more advanced and efficient solutions (Dadhich, Manish, Shalendra Singh Rao, Renu Sharma, 2021).

Data Security and Privacy: The increasing use of data in FinTech operations raises concerns regarding data security and privacy. FinTech companies must comply with collecting, storing, and using customer data regulations (Manish Dadhich, 2017). Data breaches or mishandling can severely affect the company and its customers.

4.5. Environmental Factors

Sustainability and Green Finance: Growing environmental concerns have led to the emergence of green finance initiatives. FinTech companies can play a role in promoting sustainable investments, renewable energy financing, and environmentally friendly financial products. Consumer demand for such solutions can impact the growth and direction of FinTech in consumer finance.

4.6. Legal Factors

Intellectual Property Protection: FinTech companies heavily rely on intellectual property, including patents, trademarks, and copyrights, to protect their innovative technologies and business models. Strong legal protection of intellectual property rights encourages FinTech innovation and provides a competitive advantage.

Cross-Border Regulations: FinTech companies operating across borders must navigate various legal and regulatory requirements. Compliance with cross-border regulations, such as anti-money laundering laws, data protection regulations, and licensing requirements, can pose challenges to expansion and international operations. It's important to consider that the PESTEL factors can vary significantly across countries and regions, and their impact on FinTech in consumer finance may differ accordingly.

5. Opportunities of FinTech in consumer finance

FinTech has transformed the consumer finance industry by leveraging technology to provide innovative financial products and services. There could be numerous opportunities for FinTech in consumer finance, which are as follows:

FinTech has expanded access to financial services, particularly for underserved populations. It allows individuals in remote or underdeveloped areas to access and manage their finances, enabling them to participate in economic activities (Jain & Hudnurkar, 2022; M. Dadhich, R. Doshi, S. Mathur, R. Meena, 2021; Milian et al., 2019). By leveraging digital platforms and mobile technology, FinTech companies can reach consumers who were previously excluded from traditional financial systems. FinTech has the potential to promote financial inclusion by providing services such as mobile banking, digital payments, and microloans. Such companies prioritize user-centric design and provide seamless, convenient, and personalized experiences. They leverage data analytics, artificial intelligence, and machine learning algorithms to understand customer behavior, preferences, and needs, delivering tailored financial solutions (Schulz & Feist, 2021). FinTech encourages innovation in the consumer finance industry. It has spurred the development of new business models, such as peer-to-peer lending, crowdfunding, robo-advisors, and digital wallets. These innovations challenge traditional players, foster competition, and drive industry-wide improvements. FinTech can significantly reduce costs associated with financial services. By leveraging automation, streamlined processes, and digital platforms, FinTech companies operate with lower overheads than traditional financial institutions. This cost advantage can lead to more affordable products and services for consumers.

6. Challenges of FinTech in consumer finance

Regulatory Environment: The regulatory landscape for FinTech is complex and evolving. FinTech companies must comply with various regulations, such as data privacy, cybersecurity, anti-money laundering, and know-your-customer requirements (Dadhich, Manish, Shalendra Singh Rao, Renu Sharma, 2021; Luo, Sun, Yang, et al., 2022). Hitting the right balance between fostering revolution and ensuring consumer protection poses a challenge.

Data Security and Privacy: FinTech companies handle vast amounts of sensitive consumer data, including financial and personal information. Protecting this data from breaches and unauthorized access is a critical challenge (M. Dadhich et al., 2018). Maintaining robust security measures, complying with privacy regulations, and building consumer trust are paramount.

Risk Management: FinTech introduces new risks, including operational risks, cybersecurity threats, and fraud. Consumer finance involves managing credit risk, fraud detection, and compliance. FinTech companies must invest in advanced risk management systems and practices to mitigate these risks effectively.

Trust and Consumer Adoption: Building trust with consumers is crucial for FinTech companies to succeed. Many individuals remain skeptical of new financial technologies and prefer the familiarity of traditional institutions. Overcoming resistance to change, educating consumers about the benefits of FinTech, and ensuring transparent and ethical practices are essential to driving consumer adoption.

Legacy System Integration: Integrating FinTech solutions with existing legacy systems of traditional financial institutions can be challenging. These institutions often operate on outdated infrastructure, which hinders seamless integration and data exchange. Overcoming technical hurdles and fostering collaboration between FinTech startups and established institutions is necessary for widespread adoption (Cornelli et al., 2023).

FinTech in consumer finance offers immense opportunities to increase access, improve customer experiences, and drive innovation (Dadhich, Manish, Shalendra Singh Rao, Renu Sharma, 2021; Jarvis & Han, 2021; Milian et al., 2019). However, addressing regulatory complexities, ensuring data security, managing risks, building trust, and overcoming integration challenges are key to the industry's sustainable growth.

7. Trends of FinTech in Consumer Finance

India has one of the fastest growth rates among global FinTech markets. More than 2,000 DPIIT-recognized Financial Technology (FinTech) companies are operating in India, which is rising quickly. By 2021 and 2025, it is projected that the Indian FinTech market will be valued \$50 billion and \$150 billion, respectively. The Indian FinTech sector is projected to generate \$200 billion in revenue and manage \$1 trillion in assets by 2023. Payments, loans, and insurance were the most well-liked industries (Manish Dadhich et al., 2021). The Indian FinTech business ecosystem is made up of several subsegments, including payments, lending, wealth technology (Wealth Tech), personal finance management, insurance technology (Insures), regulation technology (Retch), and many others. The Indian FinTech business has garnered around \$29 billion in finance (January 2017–July 2022) from around. Platforms for wealth technology are being used more and more for the delivery of wealth management services. In the recent past, there has been a massive increase in ticket sizes, demand from Tier-II, III, and IV markets, improved risk management, and service delivery models. Approximately 440+ WealthTech start-ups in India offer services like robo advisers, digital brokerage, financial research, and personal finance management. The Government of India is continuously providing a foundation for sector growth and innovation through programs like the Inter-Ministerial Steering Committee (IMSC) on FinTech, Joint Working Groups on FinTech, GIFT City, etc. Using blockchain technology on a large scale for various uses, particularly in the BFSI and healthcare sectors (Manish Dadhich & Tiwari, 2022). Additionally, during the past few years, renowned Indian developers and service providers in the sector have arisen, enabling a broad range of use cases for these technologies.

Limitations of study

The study consists of information related to India only. The paper used secondary data that have their own limitation. Secondary research relies on existing data and may not lead to new insights or discoveries. The researcher may not be able to access all the data needed to answer their research questions, which can limit the scope of the research. Secondary data can be used to replicate previous studies or verify earlier research findings. Replication studies contribute to the credibility and robustness of scientific knowledge by confirming or challenging existing results. While secondary data offers many advantages, it also has limitations. Researchers should consider the data source's quality, reliability, relevance, and potential biases or limitations associated with the original data collection methods. Additionally, the availability of certain variables or the inability to customize data collection may restrict the scope of analysis. It is crucial to critically evaluate and appropriately interpret secondary data to ensure its suitability for the research objectives.

8. Conclusion

The impact execution of FinTech in consumer finance is crucial for delivering sustainable outcomes and driving innovation in the industry. While FinTech companies have disrupted traditional financial institutions, their success depends on their ability to execute strategies that meet the needs of consumers effectively. FinTech companies' challenges include regulatory compliance, cybersecurity, and the need for collaboration with traditional financial institutions. However, by adopting best practices for impact execution and leveraging emerging technologies such as blockchain and artificial intelligence, FinTech companies can overcome these challenges and continue to drive growth and innovation in the consumer finance industry. The way forward for the FinTech industry is to prioritize delivering measurable outcomes that meet the needs of consumers while ensuring safety, security, and compliance with existing regulations. By doing so, FinTech companies can continue to disrupt traditional financial institutions, increase access to financial services, and drive innovation in the consumer finance industry. The impact of FinTech in consumer finance has been significant and transformative. FinTech companies have disrupted traditional banking models and introduced innovative products and services that have made financial transactions more efficient, affordable, and accessible. Technology in consumer finance has also increased financial inclusion and provided individuals with access to financial services that were previously unavailable to them. Moving forward, FinTech companies need to continue to focus on the execution of their products and services to ensure that they are providing value to consumers. This demands a deep understanding of customer needs and preferences and a commitment to transparency, security, and compliance with regulatory requirements. FinTech companies must also continue to invest in R&D to stay ahead of the competition and meet the evolving needs of consumers. The impact of FinTech in consumer finance has been positive, and there is a lot of potential for further growth and innovation in the industry. With the right execution strategies and a focus on delivering value to customers, FinTech companies can continue transforming the financial services industry and improving millions worldwide's lives.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare that they have no conflict of interest

References

- [1] Bollaert, H., Lopez-de-Silanes, F., & Schwienbacher, A. (2021). Fintech and access to finance. *Journal of Corporate Finance*, 68(12), 1–14. <https://doi.org/10.1016/j.jcorpfin.2021.101941>
- [2] Cornelli, G., Frost, J., Gambacorta, L., Rau, P. R., Wardrop, R., & Ziegler, T. (2023). Fintech and big tech credit: Drivers of the growth of digital lending. *Journal of Banking and Finance*, 148, 106742. <https://doi.org/10.1016/j.jbankfin.2022.106742>
- [3] Dadhich, Manish, Shalendra Singh Rao, Renu Sharma, R. M. (2021). Analytical Study of Stochastic Trends of Non-Performing Assets of Public and Private Commercial Banks in India. *2021 3rd International Conference on Advances in Computing, Communication Control and Networking (ICACCCN) Analytical*, 71–76. <https://doi.org/10.1109/ICAC3N53548.2021.9725463>
- [4] Yang, Y., Su, X., & Yao, S. (2021). Nexus between green finance, fintech, and high-quality economic development: Empirical evidence from China. *Resources Policy*, 74, 1–11. <https://doi.org/10.1016/j.resourpol.2021.102445>
- [5] Dadhich, M., Pahwa, M. S., & Rao, S. S. (2018). Factor Influencing to Users Acceptance of Digital Payment System. *International Journal of Computer Sciences and Engineering*, 06(09), 46–50. <https://doi.org/10.26438/ijcse/v6si9.4650>
- [6] Dadhich, Manish. (2017). An analysis of factors affecting on online shopping behavior of customers. *ZENITH International Journal of Business Economics & Management Research*, 7(1), 20–30.

- [7] Nguyen, H. V., Tran, H. X., Van Huy, L., Nguyen, X. N., Do, M. T., & Nguyen, N. (2020). Online Book Shopping in Vietnam: The Impact of the COVID-19 Pandemic Situation. *Publishing Research Quarterly*, 36(3), 437–445. <https://doi.org/10.1007/s12109-020-09732-2>
- [8] Dadhich, Manish, Doshi, R., Rao, S. S., & Sharma, R. (2022). Estimating and Predicting Models Using Stochastic Time Series ARIMA Modeling in Emergent Economy. In R. Kumar, C. W. Ahn, T. K. Sharma, O. P. Verma, & A. Agarwal (Eds.), *Soft Computing: Theories and Applications* (pp. 295–305). Springer Nature Singapore.
- [9] Dadhich, Manish, Hiran, K. K., Rao, S. S., & Sharma, R. (2022). Impact of Covid-19 on Teaching-Learning Perception of Faculties and Students of Higher Education in Indian Purview. *Journal of Mobile Multimedia*, 18(4), 957–980. <https://doi.org/10.13052/jmm1550-4646.1841>
- [10] Lin, T., Liu, D., Zhang, L., & Lung, P. (2019). The information content of realized volatility of sector indices in China's stock market. *International Review of Economics and Finance*, 64(3), 625–640. <https://doi.org/10.1016/j.iref.2019.08.008>
- [11] Luo, S., Sun, Y., Yang, F., & Zhou, G. (2022). Does fintech innovation promote enterprise transformation? Evidence from China. *Technology in Society*, 68, 1–13. <https://doi.org/10.1016/j.techsoc.2021.101821>
- [12] Dadhich, Manish, Hiran, K. K., Rao, S. S., Sharma, R., & Meena, R. (2022). Study of Combating Technology Induced Fraud Assault (TIFA) and Possible Solutions: The Way Forward. In V. E. Balas, G. R. Sinha, B. Agarwal, T. K. Sharma, P. Dadheech, & M. Mahrishi (Eds.), *Emerging Technologies in Computer Engineering: Cognitive Computing and Intelligent IoT* (pp. 715–723). Springer International Publishing.
- [13] Dadhich, Manish, Pahwa, M. S., Goswami, S., & Rao, S. S. (2021). Analytical Study of Financial Wellbeing of Selected Public and Private Sector Banks: A CAMEL Approach. *2021 IEEE International Conference on Emerging Trends in Industry 4.0, ETI 4.0 2021*, 1–6. <https://doi.org/10.1109/ETI4.051663.2021.9619424>
- [14] Jarvis, R., & Han, H. (2021). Fintech Innovation: Review and Future Research Directions. *Int J Bank Fin Ins Tech*, 1(1), 79–102.
- [15] Dadhich, Manish, Poddar, S., & Kant, K. (2022). Antecedents and consequences of patients' adoption of the IoT 4.0 for e-health management system: A novel PLS-SEM approach. *Smart Health*, 25(5), 1–14. <https://doi.org/10.1016/j.smhl.2022.100300>
- [16] Dadhich, Manish, & Tiwari, H. (2022). Quantum Blockchain for Smart Society: Applications, Challenges, and Opportunities. In *Advancements in Quantum Blockchain With Real-Time Applications, IGI Global* (pp. 178–198). <https://doi.org/10.4018/978-1-6684-5072-7.ch009>
- [17] Ding, N., Gu, L., & Peng, Y. (2022). Fintech, financial constraints and innovation: Evidence from China. *Journal of Corporate Finance*, 73(4), 1–15. <https://doi.org/10.1016/j.jcorpfin.2022.102194>
- [18] Gaurav Kumar Singh, M. D. (2022). Assessment of Multidimensional Drivers of Blockchain Technology (BoT) in Sustainable Supply Chain Management (SSCM) of Indian Cement Industry: A Novel PLS-SEM Approach. In *International Journal of Logistics Systems and Management*. <https://doi.org/10.1504/IJLSM.2022.10045308>
- [19] Huang, S. Y. B., & Lee, C. J. (2022). Predicting continuance intention to fintech chatbot. *Computers in Human Behavior*, 129(130), 107027. <https://doi.org/10.1016/j.chb.2021.107027>
- [20] Jain, P., & Hudnurkar, D. M. (2022). Sustainable packaging in the FMCG industry. *Cleaner and Responsible Consumption*, 7(9), 1–12. <https://doi.org/10.1016/j.clrc.2022.100075>
- [21] Khai Nguyen, Q., & Cuong Dang, V. (2022). The effect of FinTech development on financial stability in an emerging market: The role of market discipline. *Research in Globalization*, 5, 100105. <https://doi.org/10.1016/j.resglo.2022.100105>
- [22] Li, J., He, Z., & Wang, S. (2022). A survey of supply chain operation and finance with Fintech: Research framework and managerial insights. *International Journal of Production Economics*, 247, 1–15. <https://doi.org/10.1016/j.ijpe.2022.108431>
- [23] Luo, S., Sun, Y., & Zhou, R. (2022). Can fintech innovation promote household consumption? Evidence from China family panel studies. *International Review of Financial Analysis*, 82(3), 1–16. <https://doi.org/10.1016/j.irfa.2022.102137>
- [24] M. Dadhich, R. Doshi, S. Mathur, R. Meena, R. K. G. and P. D. (2021). Empirical Study of Awareness towards Blended e-learning Gateways during Covid-19 Lockdown. *2021 International Conference on Computing, Communication and Green Engineering (CCGE), Pune, India*, 1–6. <https://doi.org/10.1109/CCGE50943.2021.9776386>

- [25] Milian, E. Z., Spinola, M. de M., & Carvalho, M. M. d. (2019). Fintechs: A literature review and research agenda. *Electronic Commerce Research and Applications*, 34(1), 1–14. <https://doi.org/10.1016/j.elerap.2019.100833>
- [26] MM Mijwil, KK Hiran, R Doshi, M Dadhich, AH Al-Mistarehi, I. B. (2023). ChatGPT and the Future of Academic Integrity in the Artificial Intelligence Era: A New Frontier. *Al-Salam Journal for Engineering and Technology*, 2(2), 116–127. <https://doi.org/10.55145/ajest.2023.02.02.015>
- [27] Nenavath, S. (2022). Impact of fintech and green finance on environmental quality protection in India: By applying the semi-parametric difference-in-differences (SDID). *Renewable Energy*, 193, 913–919. <https://doi.org/10.1016/j.renene.2022.05.020>
- [28] Pahwa, M. S., Dadhich, M., Saini, J. S., & Saini, D. K. (2022). Use of artificial intelligence (AI) in the optimization of production of biodiesel energy. *Artificial Intelligence for Renewable Energy Systems*, 229–238. <https://doi.org/10.1002/9781119761686.ch11>
- [29] Purohit, H., Dadhich, M., & Ajmera, P. K. (2022). Analytical study on users' awareness and acceptability towards adoption of multimodal biometrics (MMB) mechanism in online transactions : a two-stage SEM-ANN approach. *Multimedia Tools and Applications*, 1, 1–25. <https://doi.org/10.1007/s11042-022-13786-z>
- [30] Schulz, K., & Feist, M. (2021). Leveraging blockchain technology for innovative climate finance under the Green Climate Fund. *Earth System Governance*, 7, 1–10. <https://doi.org/10.1016/j.esg.2020.100084>