IJFANS INTERNATIONAL JOURNAL OF FOOD AND NUTRITIONAL SCIENCES ISSN PRINT 2319 1775 Online 2320 7876 Research paper © 2012 IJFANS. All Rights Reserved, UGC CARE Listed (Group -I) Journal Volume 11, Iss 5, 2022

Fintech: Road Ahead

Dr. RoopkishoreSinghal, Professor, International Institute of Management Studies, Pune

Abstract

Fintech is the newest buzzword in the financial industry. The most recent development in Fintech, driven by startups, presents comparable issues for investors and authorities, especially in harmonizing the probable advantages of modernization with the potential hazards of innovative techniques in the financial services industry. Traditional financial institutions have transformed due to financial technology. "fintech" refers to the burgeoning technology advancements in the financial industry. The banking sector is progressively being shaped by fintech. The financial skill division comprises businesses that present economic services through the utilization of techniques and organizations that deliver technical creations to banks unswervingly. Fintech firms use strategies to facilitate payments between enterprises and customers. Fintech concerns have a new fascinating concentration on the business due to technological innovations, changing customer requirements for economical products, and competition in economic services. The study aims to outline the potential and difficulties that Indian fintech firms are now facing.

Keywords: Fintech; future; challenges; opportunities; India

1. Introduction

Financial technology, or Fintech, can be defined as any technique that provides financial services during agendas, like internet banking, payments via mobile applications, or cryptocurrencies. The fundamental goal of "fintech," an extensive class encompassing various techniques, is to alter how persons and companies access their funds and challenge conventional economic services. The worth of Fintech deals is anticipated to increase from US\$69 billion in 2018 to US\$145 billion in 2024 at an average annual growth rate (CAGR) of 21%.

IJFANS INTERNATIONAL JOURNAL OF FOOD AND NUTRITIONAL SCIENCES ISSN PRINT 2319 1775 Online 2320 7876 Research paper © 2012 IJFANS. All Rights Reserved, UGC CARE Listed (Group -I) Journal Volume 11, Iss 5, 2022

During the 1990s and the dawn of the internet, conventional economic organizations including financial intuitions and banks—did exceptionally well on financial technology. Consistent with the Federal Deposit Insurance Corporation, commercial bank branches expanded from roughly 13,500 in 1952 to 83,000 in 2010. In the late 1990s and early 2000s, online financial technology companies like Paytm entered the marketplace; however, it was not until the worldwide economic downturn in 2008 that they began to pose a danger to the established infrastructure. While many people lost faith in conventional banks during this time, millennials welcomed free and online banking solutions.

FinTech, or new technology for finance, has exploded globally. (2018) (Kavuri et al., A.) The term "FinTech" or "Financial Technology" describes a business that combines the latest advances in technology to offer its clients better banking services in the form of electronic payments and transactions. In 2020, Saumya Uniyaland Aakriti Suri, in the past few years, numerous startups have entered the financial technology market in India. The segment has now enlarged considerably with each startup and is also becoming known on a global level.

Inclusion in the economy has advanced significantly in India during the past few years. There has been an increase in the percentage of Indians having bank debt in recent years, estimated to be close to 80%. India's fintech industry is progressively increasing due to the government's ongoing efforts to offer financial services to the country's unbanked population. India must improve monetary inclusion to get in touch with the underbanked sectors of the populace and give a constant operating setting for financial technology companies.

Secondary data collected from the RBI was combined with regression and correlation analysis tools to investigate this collision. The goal shifted to understanding how technology and digital economy solutions impact financial accessibility in India. The results demonstrate that financial institutions have greatly increased the availability of finance in this nation, especially for the core population. The most innovative and modern technology is banking technological advances, which control how traditional financial procedures produce financial services. Technologies that increase public access to financial services include mobile banking, investment, and currency.

To succeed or increase the use of financial products and services offered by existing financial organizations, financial technology firms are made up of both startups and incumbent banking and technology companies. Alternatively stated, "fintech is an innovative financial division that utilizes a technique to increase economic behaviour." Fintech refers to novel economic applications, methods, products, or business replicas that utilize the Internet to distribute a nonstop process for one or additional finance-related supplementary services.

2. Review of the existing literature

Yoon et al. (2016) analyzed the consumer patterns for consultation of financial technology businesses, and as an analytical method, they used the causal evaluation using multiple linear regression assessment. With this approach, it was possible to analyze each independent variable's impact on the dependent variables separately. According to their outcomes, the replies for the dependable characteristics varied according to the countries in question since different users from various nations had distinct cultural and social perspectives. As a result, organizations that want to enter the global market must develop entry and customer attainment and growth strategies based on the nation where they wish to grow or create their operations (Jain et al., 2021; Kirilenko et al., 2017; Legner et al., 2017).

Guild (2017) considered the relationship between Financial Technology and the next funding phase, including how technical advancement and innovation impact FinTech's technological advancements. Digital currency transfer services in Kenya and India are just a few FinTech developments. His paper's main argument centres on how FinTech has helped millions of individuals in emerging nations like India and China access financial services from the perspective of the regulatory framework's contribution to that process (Laura & David, 2019; Najaf et al., 2021).

IJFANS INTERNATIONAL JOURNAL OF FOOD AND NUTRITIONAL SCIENCES ISSN PRINT 2319 1775 Online 2320 7876

Research paper © 2012 IJFANS. All Rights Reserved, UGC CARE Listed (Group -I) Journal Volume 11, Iss 5, 2022

According to his analysis, technological advancement can transform worldwide finance by enhancing the egalitarian, decentralized, and inclusive nature of Financial Technology. In addition, he cautioned that there is no assurance that the strategy objective of increased entrée to finance will be realized when market intervention is conducted with force through legislative and regulatory intervention. Consideration of the efficacy of the financial techniques in increasing financial insertion was something Badruddin (2017) thought about. She introduced a conceptualized research paper that draws on supplemental data from other sources, including diaries, books, websites, and other sources. She asserted that fintech development has reduced costs while increasing work and entry of the microfinance model (Puri & Rochol, 2008; Shefrin et al., 1994).

She concluded her analysis by saying that it is clear at this point that FinTech is viable. Even though this industry faces challenges, in his work titled Prospects and Obstacles in the Business of Financial Technology: The Development of Financial Technologies in India, Vijai (2019) addressed FinTech in India: Prospects and Challenges. For the user, fintech enables a faster, more secure transaction method. His study demonstrates how the FinTech business has changed Indian financial services (Gorton & Pennacchi, 1990; Gentzkow et al., 2019).

In 2019, Priya and Anusha researched Fintech Problems and Concerns in India. The essay begins by focusing on the most important categories of financial advancement and their capabilities. It also discusses these innovations' opportunities and challenges in the Indian corporate environment. Many balancing techniques are developing in India throughout the board of financial administration. Given the surge in balance specialists, India has tremendous leadership capability (Arner et al., 2015; Buchak et al., 2018; Petersen, 2004).

In India, there are routinely around 1800 Financial Technology startup companies, almost half of which have been operating for two years.

Equilibrium technology enterprises need to be well-prepared both financially and practically. We may observe a bigger proportion of successful new enterprises in the

IJFANS INTERNATIONAL JOURNAL OF FOOD AND NUTRITIONAL SCIENCES ISSN PRINT 2319 1775 Online 2320 7876 Research paper © 2012 IJFANS. All Rights Reserved, UGC CARE Listed (Group -I) Journal Volume 11, 1ss 5, 2022

instalments sector, and it is usually anticipated that this will also hold for various financial sectors (Strahan & Yang, 2015).

3. Key Trends in the Fintech Ecosystem

The term "fintech," which refers to technological innovation in finance, has gained widespread use. Existing banks, significant technological businesses, and even regulatory organizations may work together more and promote innovation in the market. That is particularly correct for the Indian Financial Services market, as shown by the minority important tendencies followed for the analysis. The paper identifies significant trends influencing the Indian FinTech scene in 2020 by combining our secondary study, advising expertise, and conversations with a few industry veterans.

3.1 The global epidemic's unanticipated benefit: The COVID-19 epidemic has unavoidably increased the usage of digital technologies. Customers have not only dabbled in the internet world but have also plunged into incorporating it into their daily lives (via electronic payments, investment technology etc.). The acceptance goes beyond just the customer marketplace. Medium and small-scale entrepreneurs, micro, small, and average-sized businesses—use more financial technology services. These organizations comprise a detached customer group with needs dissimilar from those of persons and big corporate houses.

India's digital economy is anticipated to grow rapidly to \$800 billion by 2030 due to the expansion of UPI, digital public works, and the COVID-19 epidemic.

3.2 Lateral expansion:Additionally supporting the increase of digital disbursements, as well as the lively and quick creation of disbursements, the environment, supported by increasingrecognition of advances in knowledge and creativity, also supports the accessibility of a diversity of harmless, protected, progressive, and efficient methods of disbursement.

3.3 Neobank: Neobanking platforms and international investments in the nonbanking sector have increased steadily over the past few years. The Indian FinTech sector has adopted a similar strategy, and the number of new banking

IJFANS INTERNATIONAL JOURNAL OF FOOD AND NUTRITIONAL SCIENCES ISSN PRINT 2319 1775 Online 2320 7876 Research paper © 2012 IJFANS. All Rights Reserved, UGC CARE Listed (Group -I) Journal Volume 11, 1ss 5, 2022

firms in the nation is increasing monthly and luring foreign sponsors to this marketplace.

The pandemic, though, gave the financial activity a boost. Investors knew the upside that neobanks had for the broader financial services sector.

3.4 Ecosystem financial services: Unlocking ecosystem value Ecosystem banking assists banks in India in enhancing customer experiences and producing long-term value for clients. Customers who previously relied on complicated and disjointed procedures across an assortment of programs which partners run are given a single solution via ecosystem banking. As a result of the high costs and intricate nature of monolithic technical applications, banks were forced to adopt a purchase or joint venture strategy to offer fresh services.

3.5 Insure Technology: It is a fresh gesticulate of product marketing and novelty. While insurance technology funding has been vigorousdiagonally in Asia in the past few years, to S & P Global Market Intelligence, the inventors in China and India are most prepared to move pastunderneath responsibilities and engage the province's established players.

The Indian Insurance Technologysector has grownconsiderably over the past numerous years, thanks to rapid financial growth—more than doubling in the last two years—and creative business strategies.

Finding a chance on alternative investing platforms such as the stocks market

3.6 Slowdown: The low prevalence of demat accounts in India indicates that historically Indians have avoided participating in capital markets and instead put their superfluous in tangible advantages, property, and fixed deposits. However, given the extraordinary expansion in the numerous depository accounts over the past few years, the last two years have depicted a quite diverse picture of the stock marketplace.

During the pandemic (2020-2021), demat accounts jumped 2.2 times combined.

© 2012 IJFANS. All Rights Reserved, UGC CARE Listed (Group -I) Journal Volume 11, Iss 5, 2022

ISSN PRINT 2319 1775 Online 2320 7876

Research paper

3.7 Conformity and regulations: Achilles' heel With an expanding dependence on technology for information, the word "fintech" describes developing technical breakthroughs in the economic services segment. Through improved authentication and verification of identity technology, FinTech companies can speed up online transactions and assist authorities in preventing online fraud. The cornerstone of governance is precise and on-time reporting, which RegTechs have been assisting industry players with improving. Regulators have been looking into recent instances of bad authority and breakdown of appropriate KYC procedures, which have revealed a weakness in several expansion-oriented financial technology firms.

4. Challenges of Fintech In India

- **4.1.** Although there are many prospects in the Indian Financial sector, getting started is not particularly simple. A listing of potential obstacles in the way of finance technology companies is provided below.
- **4.2.** Due to the strong laws intended to stop scams, markets function and operate. It serves as a significant barrier to fresh blood. They must complete several requirements before beginning the activity.
- **4.3.** Other obstacles include not being banked, weak internet connection facilities, and low literacy levels. Forty-eight per cent of Indians still have no financial institutions, which are required for purchasing by using the internet. Even though most individuals have monetary accounts, they still battle with slow Internet, which delays transactions. As a result, people typically prefer financial transactions to online ones. Despite the advantages of having a bank account and access to the Internet, many Indians are still lacking the degree of financial understanding needed to take advantage of these advantages.
- **4.4.** It is remarkably difficult to change the conventional mindset of entrepreneurs and consumers who do usual disbursements in cash. Because many senior citizens have long done these things in cash, it might be demanding to unexpectedly alter their traditions and present people with new opportunities when they are older.

- **4.5.** For clients, the various thefts resulting in financial loss during online transactions are a bitter pill. Fintech companies have a significant issue since fraudsters employ technology to steal peoples' wealth. Hence, businesses must submit much hard work to make infrastructural upgrades and become additional customer-friendly.
- **4.6.** India's financial and technological segment needs more federal subsidies and help to protect its rights. At the most fundamental level, this discourages business owners. Although it is important for developing the country's economy, they also need to receive the proper path and help to begin.
- **4.7.** Nowadays, it is moderately difficult for the financial technology segment, just like it is for each industry, to triumph over the customer's faith. The company's procedures and performance will experience as a consequence of the intricacy in timely getting the required seed money and extra investments.
- **4.8.** Internet safety: Be it smartphone banking, pay applications, or Fintech in general, it has become one of the main issues on the world wide web. As we all recognize, conventional financial services include security personnel, CCTVs, safes, and massive unbreakable locks to protect the information they store. However, issues are more complicated when it involves digital safety than they appear.
- **4.9.** For the truth that customers' private data and their funds are in danger, flaws are much stealthier and may have a better collision on customers.

Solution: With the assistance of a financial technology application expansion business, you may develop a sophisticated security application. The below-mentioned elements could be included in the application to augment safety:

Authorization via two mechanisms

- 1. Notifications and alerts; information compression and
- 2. Encryption; physical verification; behavior analysis

4.10. Legal Supervision and Enforcement: Several laws are unavoidably to blame for the stalling of Fintech companies in the Indian financial sector. These

laws are challenging to adhere to, making it demanding for financial technology firms to enter the Indian markets. Conformity standards are implemented as a severe legal structure to combat deception. However, they also pose considerable barriers to entry for upcoming Fintech businesses. Fintech startups have a large list of standards to fulfil before they begin operating.

Solution: Confirm its legal compliance before employing the programme or creating an app. You may, additionally, retain a legal representative to lead you through all the key rules and regulations. Before you launch, ensure your legal counsel is informed of the most current legislation so you can immediately implement the required adjustments

4.11. Need for more understanding of digital innovations: In the financial technology segment, few banks and financial institutions need more appropriate and usable mobile payment abilities. While only some banking organizations try to remind you of websites, no one in the digital world would select an application for their smartphone. Every user looks for an easy-to-use substitute.

Unfortunately, programs that fail to effectively utilize cell phones due to a lack of finance app creation expertise are not intuitive. For example, programs may not profit from NFC chips, relocation capacity, fingerprint-gaining entry, or additional functions. An amazing experience can be delivered by a digital bank using the use of these attributes and technologies.

Solution: The device you are using needs the abilities that follow in order for people to access the finance app creation service:

Fingerprint-based two-factor verification, lens-based quick credit card information reading, QR codes for purchases on transportation systems, and NFC chips in businesses.

4.12. Data mining and AI: According to Accenture, 72% of US executives and 82% of lawyers globally expect Artificial Intelligence will change how banks gather info and interact with customers.

We all understand that big data and robotics impact every company. Businesses can use big numbers to collect specific customer data, such as their social standing, financial behaviour, routines, and app usage.

This data is essential for banks, particularly when offering high-risk financial products and credit ratings.

Thanks to vast data, AI can automate fraud detection, accomplish risk analysis, and effectively handle payments.

Solution: Big data and AI should be combined, and computer intelligence must be used to train AI. You will require a large amount of data to retrain your computer. The vast bulk of financial applications need help to parse and fetch multiple data sets. Because of this, you can solve this issue by employing a one-shot intelligence model that permits you to learn your computer training algorithm on smaller amounts of data.

4.13. Government apathy or a lack of assistance: Very few state resources and subsidies are available to help FinTech companies protect their rights in the Indian financial markets. This can be quite demoralizing for emerging Fintech players. Financial technology companies are crucial for creating a stronger economy, so giving them all the tools they need to succeed is important.

Solution: For us to surprise the banking segment, we should always poise the adoption of novel technologies with loyalty to the status quo.

4.14. User Engagement and User Engagement: The fintech sector's two biggest issues are customer service and loyalty.

However, safety and accessibility should be balanced in a banking app.

Solution: When building a finance program, you must ensure the UI/UX element is secure and comprehensible.

In order to get to an app, users are also willing to use two-factor authentication. However, they could become frustrated if they have to enter their login details frequently.

4.15. Effective Client Acquisition Marketing Techniques: Financial technology businesses usually need more comprehension of their goals, target customers, and specialization. These days, emerging financial technology organizations need help overcoming this obstacle since most consumers still use banks for their financial needs.

Solution: To enhance the business and plan, ensure you are considerably superior to your rivals.

Moreover, to do that, you either need to join conventional financial institutions or invest significant cash, energy, and staff into offering your customers seamless services.

In this highly competitive marketplace, providing the best service differs from what clients expect. It would help if you advertised yourself by informing people about your work. It would help if you also created a robust and effective advertisement plan that incorporates collaboration, publicity, and other strategies. This will not only help you make yourself more well-known, but it will also assist you in building a company.

Overall, considerable developments are taking place in the Indian banking industry, such as the move towards a cashless society. The Indian government actively encourages the use of modern technologies to make India a cash-free nation using tools like UPI, digital wallets, e-KYC, and The system known as A & BHIM, among others. India saw a dramatic rise in financial technology companies following the demonetization of Peer-to-peer (P2P) operations; funding, coverage, and digital point of sale (POS) are just a few of the fintech sector segments in which these startups are

active. They begin cutting-edge economic and financial innovations. However, several challenges also limit the expansion of the financial technology industry in the Indian economy.

5. Future of Fintech in India:

The digitization of cash and banking makes it feasible to create more effective and equal banking solutions and promote economic growth. More than 2100 financial technology firms have been established in India, while more than 67 per cent did so in the previous five years. Investments totalling over eight billion dollars were made in India's Biotech sector in 2021, a country that has likewise seen astronomical growth in the financial sector. The worth of financial technology transactions is projected to increase from US\$73 billion in 2020 to US\$142 billion by 2024 at an average yearly rise of 21%. India had experienced substantial development in electronic payment systems as of June 2020, with an annual amount of more than 5.7 billion, about \$2 trillion worth of transactions.

There are now 192 unicorns in the financial sector, 22 of which are in Mumbai. The titles of those companies the following companies: Acko, Bharti Pe, Bill Desk, Charge Bee, Paytm, Oxyzo, Phone Pe, Pine Labs, Inc., Bit DCX, Coin flip Kuber, CRED, Slice, Razor wages, Cred Avenue, DIGIT, Groww, Policy Bazaar, Zerodha, the Zeta, and Open.

Most of these websites have now embraced bank re-bundling to monetize the data and user base, bringing together a variety of offerings under a single roof. These businesses are cross-selling a variety of financial products and services.

6. Conclusion

Established banks are facing competition from fintech, which employs technology to offer customers more effective and convenient financial services due to the growing usage of electronic devices and the Internet. Online settlements, peer-to-peer borrowing, robo-advice, blockchain technology, and other cutting-edge financial goods and services are just a few examples of how fintech has facilitated their rise. Additionally, FinTech has made it possible for neglected and without banks people who had previously been kept out of the conventional banking system to access financial services. However,

IJFANS INTERNATIONAL JOURNAL OF FOOD AND NUTRITIONAL SCIENCES ISSN PRINT 2319 1775 Online 2320 7876 Research paper © 2012 IJFANS. All Rights Reserved, UGC CARE Listed (Group -I) Journal Volume 11, Iss 5, 2022

fintech is not without its difficulties. Regulations have a hard time keeping up with inventions as the industry develops, which leads to uncertainty and grey areas in the law. Because of sensitive economic data and operations, there are also worries regarding data privacy and vulnerability.

Fintech has a bright future despite these obstacles. With individuals and businesses progressively turning to technological advances to satisfy their financial demands, the COVID-19 epidemic has sped up implementing of digital financial services. The fintech sector is anticipated to continue to expand and see upheaval. Fintech has much promise to develop more advanced financial goods and services because of modern technologies like machine learning, artificial intelligence, and quantum computers. Additionally, the development of cryptocurrency and decentralized finance has the potential to upend the established financial system further, posing both new opportunities and difficulties for the fintech sector.

References

- Kumar, A., Nayak, N. R., Ray, S., &Tamrakar, A. K. (2022). Blockchain-based Cloud Resource Allocation Mechanisms for Privacy Preservation. In *The Data-Driven Blockchain Ecosystem* (pp. 227-245). CRC Press.
- Wawale, S. G., Bisht, A., Vyas, S., Narawish, C., & Ray, S. (2022). An overview: Modeling and forecasting of time series data using different techniques in reference to human stress. *Neuroscience Informatics*, 2(3), 100052.
- Batool, A., Ganguli, S., Almashaqbeh, H. A., Shafiq, M., Vallikannu, A. L., Sankaran, K. S., ... & Sammy, F. (2022). An IoT and Machine Learning-Based Model to Monitor Perishable Food towards Improving Food Safety and Quality. *Journal of Food Quality*, 2022.
- 4. Verma, K., Sundararajan, M., Mangal, A., Ray, S., & Kumar, A. (2022, April). The Impact of COVID-19 to the Trade in India Using Digital, IOT and AI Techniques. In 2022 2nd International Conference on Advance Computing and Innovative Technologies in Engineering (ICACITE) (pp. 01-05). IEEE.
- Bangare, J. L., Kapila, D., Nehete, P. U., Malwade, S. S., Sankar, K., & Ray, S. (2022, February). Comparative Study on Various Storage Optimisation Techniques in Machine Learning based Cloud Computing System. In 2022 2nd International Conference on Innovative Practices in Technology and Management (ICIPTM) (Vol. 2, pp. 53-57). IEEE.
- Kiziloglu, M., & Ray, S. (2021). Do we need a second engine for Entrepreneurship? How well defined is intrapreneurship to handle challenges during COVID-19?. In SHS Web of Conferences (Vol. 120, p. 02022). EDP Sciences.
- Samajpaty, S., & Ray, S. (2020). Innovation strategies in health economics: a force that makes blood move and game of gravity in it-futuristic economic plans. *Московскийэкономическийжурнал*, (9), 397-409.
- 8. Nikam, R. U., Lahoti, Y., & Ray, S. (2023). A Study of Need and Challenges of Human Resource Management in Start-up Companies. *Mathematical Statistician and Engineering Applications*, 72(1), 314-320.

IJFANS INTERNATIONAL JOURNAL OF FOOD AND NUTRITIONAL SCIENCES

ISSN PRINT 2319 1775 Online 2320 7876

Research paper © 2012 IJFANS. All Rights Reserved, UGC CARE Listed (Group -I) Journal Volume 11, Iss 5, 2022

- Yanbin, X., Jianhua, Z., Wang, X., Shabaz, M., Ahmad, M. W., & Ray, S. (2023). Research on optimization of crane fault predictive control system based on data mining. *Nonlinear Engineering*, 12(1), 20220202.
- Ray, S., Abinaya, M., Rao, A. K., Shukla, S. K., Gupta, S., &Rawat, P. (2022, October). Cosmetics Suggestion System using Deep Learning. In 2022 2nd International Conference on Technological Advancements in Computational Sciences (ICTACS) (pp. 680-684). IEEE.
- Bhaskar, T., Shiney, S. A., Rani, S. B., Maheswari, K., Ray, S., &Mohanavel, V. (2022, September). Usage of Ensemble Regression Technique for Product Price Prediction. In 2022 4th International Conference on Inventive Research in Computing Applications (ICIRCA) (pp. 1439-1445). IEEE.
- Kanade, S., Surya, S., Kanade, A., Sreenivasulu, K., Ajitha, E., & Ray, S. (2022, April). A Critical analysis on Neural Networks and Deep Learning Based Techniques for the Cloud Computing System and its Impact on Industrial Management. In 2022 2nd International Conference on Advance Computing and Innovative Technologies in Engineering (ICACITE) (pp. 325-331). IEEE.
- 13. Pallathadka, H., Tongkachok, K., Arbune, P. S., & Ray, S. (2022). Cryptocurrency and Bitcoin: Future Works, Opportunities, and Challenges. *ECS Transactions*, *107*(1), 16313.
- 14. Li, Y. Z., Yu, Y. H., Gao, W. S., Ray, S., & Dong, W. T. (2022). The Impact of COVID-19 on UK and World Financial Markets. *Jundishapur Journal of Microbiology*, 373-399.
- Samrat, R., Elkadyghada, E. G., Rashmi, N., & Elena, K. (2022). UPSKILLING AND RESKILLING FOR A GREENER GLOBAL BUSINESS ECOSYSTEM: WEB 4.0 PERSPECTIVE. Журналприкладныхисследований, 1(11), 49-60.
- 16. Ray, S. (2022). Fraud detection in e-Commerce using machine learning. *BOHR International Journal of Advances in Management Research, 1*(1).
- 17. Samrat, R. (2021). WHY ENTREPREUNERAL UNIVERSITY FAILS TO SOLVE POVERTY

ERADICATION?. ВестникТувинскогогосударственногоуниверситета.№ 1 Социальные и гуманитарныенауки, (1), 35-43.

- 18. Ray, S. (2021). Are Global Migrants At Risk? A Covid Referral Study of National Identity. In *Трансформацияидентичностей: опытЕвропы и России* (pp. 26-33).
- Saravanan, A., Venkatasubramanian, R., Khare, R., Surakasi, R., Boopathi, S., Ray, S., &Sudhakar, M. POLICY TRENDS OF RENEWABLE ENERGY AND NON RENEWABLE ENERGY.
- 20. Varma, A., & Ray, S. (2023). The case of amazons E-commerce digital strategy in India.
- Ray, S. (2023). Can Change Management Be Disrupted Through Leadership Stretegies?: Evidence From Start-Up Firms in Asia. In *Change Management During* Unprecedented Times (pp. 100-127). IGI Global.
- 22. Al Noman, M. A., Zhai, L., Almukhtar, F. H., Rahaman, M. F., Omarov, B., Ray, S., ... & Wang, C. (2023). A computer vision-based lane detection technique using gradient threshold and hue-lightness-saturation value for an autonomous vehicle. *International Journal of Electrical and Computer Engineering*, *13*(1), 347.
- 23. Nayak, N. R., Kumar, A., Ray, S., &Tamrakar, A. K. (2023). *Blockchain-Based Cloud Resource Allocation Mechanism for Privacy Preservation* (No. 9700). EasyChair.
- 24. Ray, S. (2023). XA-GANOMALY: AN EXPLAINABLE ADAPTIVE SEMI-SUPERVISED LEARNING METHOD FOR INTRUSION DETECTION USING GANOMALY IN GLOBAL ECONOMIC DYNAMIC SHIFTS©. ЭКОНОМИЧЕСКАЯ СРЕДА, 4.
- 25. Zamani, A. S., Rajput, S. H., Bangare, S. L., & Ray, S. (2022). Towards Applicability of Information Communication Technologies in Automated Disease Detection. *International Journal of Next-Generation Computing*, *13*(3).
- 26. Korchagina, E. V., Barykin, S. E., Desfonteines, L. G., Ray, S., Shapovalova, I. M., &Repnikova, V. (2022). Digitalisation of Ecosystem-Based Management and the

IJFANS INTERNATIONAL JOURNAL OF FOOD AND NUTRITIONAL SCIENCES

ISSN PRINT 2319 1775 Online 2320 7876

Research paper © 2012 IJFANS. All Rights Reserved, UGC CARE Listed (Group -I) Journal Volume 11, Iss 5, 2022

Logistics Potential of the Arctic Region. *Journal of Environmental Assessment Policy and Management*, 24(03), 2250034.

- 27. Zamani, A. S., Rajput, S. H., Bangare, S. L., & Ray, S. (2022). Towards Applicability of Information Communication Technologies in Automated Disease Detection. *International Journal of Next-Generation Computing*, *13*(3).
- Ray, S., Korchagina, E. V., Druzhinin, A. E., Sokolovskiy, V. V., &Kornev, P. M. (2022, April). Emergence of the New Start Up Ecosystem: How Digital Transformation Is Changing Fintech and Payment System in Emerging Markets?. In *International Scientific Conference "Digital Transformation on Manufacturing, Infrastructure & Service"* (pp. 621-638). Cham: Springer Nature Switzerland.
- Wagh, S., Nikam, R., & Ray, S. (2022). Exploration of the Higher Education System's Mechanism and Impact on More Than Just the Effective Growth of the Indian Economy. *Globsyn Management Journal*, *16*(1/2), 85-91.
- Ray, S., Korchagina, E. V., Druzhinin, A. E., Sokolovskiy, V. V., &Kornev, P. M. (2022, April). Emergence of the New Start Up Ecosystem: How Digital Transformation Is Changing Fintech and Payment System in Emerging Markets?. In *International Scientific Conference "Digital Transformation on Manufacturing, Infrastructure & Service"* (pp. 621-638). Cham: Springer Nature Switzerland.
- Chakraborty, T., & Ray, S. (2022). STRATEGIES OF CYBERLOAFING AND PHUBBING WHICH AFFECT WORKPLACE DIGITAL TRANSFORMATION. *Московскийэкономическийжурнал*, (10), 430-446.
- Ray, S., & Pal, R. P. (2022). IMPORTANCE OF ENTREPRENEURSHIP AND INNOVATION IN THE HEALTHCARE INDUSTRY DURING THE COVID-19 PANDEMIC. *Beneficium*, (2 (43)), 85-93.
- 33. Samrat, R., Pratap, P. R., &Korchagina, E. V. (2022). WORLD ECONOMY AND INTERNATIONAL COOPERATION · МИРОВАЯ ЭКОНОМИКА И МЕЖДУНАРОДНОЕ СОТРУДНИЧЕСТВО.
- 34. Ray, S., & Pal, R. P. (2021). ARE WE TRANSFORMING OUR PAYMENT THROUGH INNOVATION IN FINTECH AND THE DIGITAL ECONOMY? PERSPECTIVES FROM ASIAN DRAMA IN FINTECH INNOVATION©.
- 35. Samrat, R. (2021). NEUROMARKETING EVIDENCES FROM THE ECONOMICS OF BOOKSELLERS ON THE STREETS: COVID-19 PERSPECTIVES AND IMPLICATIONS ON LUXURY BRANDS GLOBALLY. Экономика и управлениеинновациями, (2), 83-90.
- 36. Korchagina, E. V., & Ray, S. (2021). TRIPLE HELIX CONCEPT IN INNOVATIVE UNIVERSITY DEVELOPMENT MODEL.
- 37. Ray, S., & Pal, R. P. (2021). ARE WE TRANSFORMING OUR PAYMENT THROUGH INNOVATION IN FINTECH AND THE DIGITAL ECONOMY? PERSPECTIVES FROM ASIAN DRAMA IN FINTECH INNOVATION©.
- 38. Самрат, Р. (2021). НЕЙРОМАРКЕТИНГ В ЭКОНОМИКЕ КНИЖНЫХ МАГАЗИНОВ НА УЛИЦАХ: ПЕРСПЕКТИВЫ ГЛОБАЛЬНОГО ВЛИЯНИЯ COVID-19 НА ЛЮКСОВЫЕ БРЕНДЫ. ЭКОНОМИКА И УПРАВЛЕНИЕ, (2), 83-90.
- 39. Ray, S., Muhammad, G., & Adnan, M. The administrative role of principals: Insights and implication in secondary schools of.
- 40. Pradhan, D., Ray, S., & Dash, A. A Critical Review on Sustainable Development of Green Smart Cities (GSCs) for Urbanization. *communities (Fig. 1)*, *13*, 15.
- 41. Van Minh, N., Huu, N. N., & Ray, S. Responses of varied quinoa (Chenopodium quinoa Willd.) genotypes grown in Central Highlands, Vietnam.
- 42. Ray, S., Nikam, R., Vanjare, C., &Khedkar, A. M. Comparative Analysis Of Conventional And Machine Learning Based Forecasting Of Sales In Selected Industries.
- 43. Van Minh, N., Huu, N. N., & Ray, S. Responses of varied quinoa (Chenopodium quinoa Willd.) genotypes grown in Central Highlands, Vietnam.

IJFANS INTERNATIONAL JOURNAL OF FOOD AND NUTRITIONAL SCIENCES

ISSN PRINT 2319 1775 Online 2320 7876

Research paper © 2012 IJFANS. All Rights Reserved, UGC CARE Listed (Group -I) Journal Volume 11, Iss 5, 2022

- 44. Ray, S., Nikam, R., Vanjare, C., &Khedkar, A. M. Comparative Analysis Of Conventional And Machine Learning Based Forecasting Of Sales In Selected Industries.
- 45. Gaidhani, S., Arora, L., & Sharma, B. K. (2019). Understanding the attitude of generation Z towards workplace. *International Journal of Management, Technology and Engineering*, *9*(1), 2804-2812.
- Arora, L., Singh, P., Bhatt, V., & Sharma, B. (2021). Understanding and managing customer engagement through social customer relationship management. *Journal of Decision Systems*, 30(2-3), 215-234.
- 47. Arora, L., & Mail, B. K. S. (2018). Influence of review quality, review quantity and review credibility on purchase intention in context of high involvement products. *European Journal of Applied Business and Management*, *4*(4).
- 48. Choubisa, L., & Babel, H. (2018). Morphometric study of pedicles of dried adult human lumbar vertebrae in Udaipur zone. *Int J Anat Res*, *6*(3.3), 5660-66.
- 49. Paliouras, K., & Siakas, K. V. (2017). Social customer relationship management. *International Journal of Entrepreneurial Knowledge*, *5*(1).
- Irshad, M., Ahmad, M. S., & Malik, O. F. (2020). Understanding consumers' trust in social media marketing environment. *International Journal of Retail & Distribution Management*, 48(11), 1195-1212.
- 51. Arora, L., &Dhingra, R. (2006). Unusual nerve supply of biceps from ulnar nerve and median nerve and a third head of biceps. *Indian Journal of Plastic Surgery*, *39*(02), 172-174.
- 52. Singh, P., Arora, L., & Choudhry, A. (2022). Consumer Behavior in the Service Industry: An Integrative Literature Review and Research Agenda. *Sustainability*, *15*(1), 250.
- 53. Maharshi, N., Arora, L., &Chaturvedi, R. (2013). Management Education in India: From Challenges to Opportunities. *Asia Pacific Journal of Management & Entrepreneurship Research*, *2*(1), 72.
- 54. Kalyani, P., & Arora, L. (2014). CMAT an Ambitious tool of AICTE, Contemporary State of Management Education in Rajasthan after Courts Decision about MBA. *Gobal Journal of Commerce and Management Perspective*, *3*(1).
- 55. Umer, H. N. U. D., Shahzad, N., Arora, L., & Khalid, A. (2021). Analyzing the Determinants of Household's Micronutrients Consumptions in Pakistan. *Indian Journal of Economics and Business*, *20*(2).
- Sharma, B. K., Bhatt, V. K., & Arora, L. (2021). Influencer marketing-an instrument to proliferation of the digital occurrence. *International Journal of Enterprise Network Management*, 12(4), 340-357.
- 57. Maharshi, D. L. A., Chaturvedi, M. R., Nandamuri, P. P., Gowthami, M. C., Muthukumar, N., Jeyakumaran, M., ... & Jain, C. D. Y. (2013). & Name of the Author (s) Page No 1 The Influence of Perceived Franchisor Support toward Franchisee Satisfaction in the Food and Beverage Industry in Thailand, KhanungnitHnuchek, Ishak Ismail, HasnahHaron. *Asia Pacific Journal of Management*, 2(1).