CONTENTS

Prof. Amrit Pal Singh
Department of Commerce, Gauhati University, Gopinath Bordoloi Nagar-784028,Assam, India. Email: spamrit@gauhati.ac.in

Prof. Sanjeeb Kumar Jena
Department of Commerce, Rajiv Gandhi University, Arunachal Pradesh-791112, India. Email: Sanjeeb.jena@rgu.ac.in

Prof. Elangbam Nixon Singh
Department of Management, Mizoram University, Tlangnuam, Aizawl-796004, India. Email: singhnixon@yahoo.co.in

Prof. Debasish Sur
Department of Commerce, The University of Burdwan, West Bengal-713104, India. Email: debasishsur@yahoo.co.in

Prof. Abhijit Dutta
Department of Commerce, Sikkim University, Gangtok, 6th mile, Samdur, Tadong, Gangtok-737102, India. Email: adutta@cus.ac.in

Prof. Parag Shil
Department of Commerce, Assam University, Silchar-788011, Assam, India. Email: drps007.aus@gmail.com

Prof. A.K.M. Matiur Rahman
College of Business, McNeese State University, Burton Business Center, 325 Lake Charles, LA, USA. Email: mrahman@mcneese.edu

Prof. Alfred Lewis
Faculty of Management, Canadian University, Dubai. Email: aolewis@gmail.com

Prof. Vittal Anantatmula
College of Business, Western Carolina University, USA. Email: vittal@email.wcu.edu

Patron's Message

"The Business Review" is the significant academic journal in the field of commerce education, published annually since 2019. All articles, research papers enlisted within the purview of this academic journal will apparently be helpful to our learners. I hope this endeavor will maintain its academic status in future. At the end, I express my deep sense of gratitude to all scholars and well wishers who helped in successful completion of the fourth issue of the journal.

Dr. Gunindra Das
Patron

Editorial

Dear Readers

It gives me an immense pleasure to release the fourth issue of the PDUAMT Business Review-an International Peer-Reviewed Annual Journal of Pandit Deendayal Upadhyaya Adarsha Mahavidyalaya, Tulungia, Bongaigaon. The journal is the outcome of the pioneer of this budding rural higher education institution in it's five years journey. I am always beholden to the architect of the journal for structuring a strong pillar for the intellectual dialogue. This issue covers ten different research articles contributed by esteemed authors on the domains like FINTECH – digital disruption, using AI for facing challenges of sustainable environmental policy, green marketing practices, financial inclusion, information seeking behaviour of household investors, Lockdown impact on Sectoral Indices of Bombay Stock Exchange, Social Progress Through Pradhan Mantri AWAAS Yojana, Cognizance Level and Opinion of Retail Investors, Economic Impact of Pandemic Covid-19 on Migrant Labours and Women Entrepreneurship. We expect that the articles published in the journal will open up a new vista in the relevant field and will enrich the exiting literature.

Finally, I am thankful to all the authors for their valuable contributions. I am also grateful to authority concerned for assigning the difficult task of editor for the three years term.

<div align="right">

Porag Pachoni
Editor

</div>

FINTECH: A Digital Disruption in Indian Banking System

DR. UDDIPANA GOGOI*

Abstract

India has the highest Fintech adoption rate in the world – at 87 percent – and significantly higher than the global average rate of 64 percent. India is amongst the fastest growing fintech markets in the world and there are 6,636 FinTech startups in India. Indian FinTech industry's market size is $50 billion in 2021 and is estimated at $ 150 billion by 2025. Over the past few years, the business of banking has witnessed a shift from traditional branch banking to digital banking. The finance minister in the budget address for FY-23 announced the proposal to establish "Digital banking Units" ("DBUs") of scheduled commercial banks in 75 districts with objectives to ensure the benefits of digital payments, banking and fintech innovations reach the grass-roots of India in a consumer-friendly manner (Niti Ayog, 2022). The Indian market is blessed with a higher proportion of young population, who are more likely to trust and adopt FinTech. This paradigm shift has been possible due to innovations in information technology (IT), growth in mobile and internet connectivity, market-based financial intermediation, and the advent of Fintech. The use of algorithms, big data, blockchain, peer-to-peer lending and crowdsourcing, means that the role of the intermediary is changing: banks now face competition from other intermediaries in their core business. Improvements in technology have also enhanced the cause of financial inclusion and tech-enabled public goods delivery. Digital-mobile, anywhere-anytime banking is becoming the order of the day. The indigenously developed Unified Payments Interface (UPI) and Aadhaar Enabled Payment Service (AePS) have become the backbone of our retail payments system (RBI, 2017). Different components of digital disruptions in banking are investment management, data driven credit rating, Mobile points of sale, mobile payments & e-wallets, P2P payment, P2P lending, dynamic pricing, comparison engines, mobile insurance, mobile banking and personal finance management. The challenges created by fintech in banking sector are concentration risk, systemic risk, market power, regulatory arbitrage, customer protection, data privacy and cyber security which create hurdles for delivery of banking services smoothly. Licensing, requirement of paid-up capital, registration with RBI, disclosure of accounts, compulsory auditing of accounts, compliance with RBI guidelines, data protection guidelines are some of such initiatives of Reserve Bank of India to minimize the fintech induced risks by regulating the digital activities of banks and other financial institutions.

Keywords: *Digital disruption, fintech, banking system, neo-bank, RBI, India*
JEL Classification: E50

Assistant professor, Nalbari Commerce College, Nalbari, Assam, India
Email id: gogoiuddipana0@gmail.com 9395041423

Introduction

"Digital innovation is redefining industries and changing the way business' function. Digitisation and innovative technologies are creating unprecedented disruption in the banking sector and the rate of change is accelerating," State Bank of India's Chairman Dinesh Khara.

Digital disruption is an effect that changes the fundamental expectations and behaviors in a culture, market, industry or process that is caused by, or expressed through, digital capabilities, channels or assets. Digital disruption is changing the provision of services in the sector, but may also be solving some of the previous competition problems in financial markets, such as high switching costs, or high transaction costs (OECD). India has emerged as a leader in the digital revolution taking place globally but there are few credible estimates on the size of digital economy which hampers evidence-based policy making. India's core digital economy (hardware, software publishing, web publishing, telecommunication services, and specialized and support services) increased from 5.4 per cent of Gross Value Addition (GVA) in 2014 to 8.5 per cent in 2019. Including the sectors that have witnessed digital disruptions, the share of digitally dependent economy hover around 22 per cent in 2019. India's digital economy grew 2.4 times faster than the Indian economy, with strong forward linkages to the non-digital sectors. The digital output multiplier has increased over time, highlighting the role of digital economy investments to drive growth (RBI Bulletin, 2022). Over the past few years, the business of banking has witnessed a shift from traditional branch banking to digital banking. This paradigm shift has been possible due to innovations in information technology (IT), growth in mobile and internet connectivity, market-based financial intermediation, and the advent of Fintech. Financial service providers are now devising new products and services and are adopting new business models for reaching out to the target customers. Retail banking is no longer solely branch-based, but can be conducted in many ways, including using mobile telephones. Banks have had to adapt their business models to deal with persistently low interest rates, low credit growth, and increasing competition in retail from FinTech and platform-based competitors, all which threaten the profitability of traditional banks. The use of algorithms, big data, blockchain, peer-to-peer lending and crowdsourcing, means that the role of the intermediary is changing: banks now face competition from other intermediaries in their core business. Improvements in technology have also enhanced the cause of financial inclusion and tech-enabled public goods delivery. Direct Benefit Transfer (DBT) through the digital mode is among the best examples of tech-enabled public goods delivery. Digital-mobile, anywhere-anytime banking is becoming the order of the day. The indigenously developed Unified Payments Interface (UPI) and Aadhaar Enabled Payment Service (AePS) have become the backbone of our retail payments system (RBI, 2017). Different components of digital disruptions in banking (figure 1) are investment management, data driven credit rating, Mobile points of sale, mobile payments & e-wallets, P2P payment, P2P lending, dynamic pricing, comparison engines, mobile insurance, mobile banking and personal finance management.

The figure 2 highlights emerging fintech market of advanced and developing economies of the world. It reveals that digital payments and remittances contributes highest share in emerging fintech market of both the economies i.e., 65 per cent in developing economies and 54 per cent in advanced economies. Digital banking (24 per cent), digital savings and deposits (22 per cent), digital lending (14 per cent) are also some of the emerging sectors of digital disruptions of developing counties. In case of developed economies digital banks (18 per cent), digital savings and deposits (12 per cent), digital lending (12 per cent), insure-tech (24 per cent), wealth-tech (24 per cent), market provisioning (18 per cent) etc. are some of the leading emerging areas of digital disruption.

Figure 1: Digital Disruption in Banking
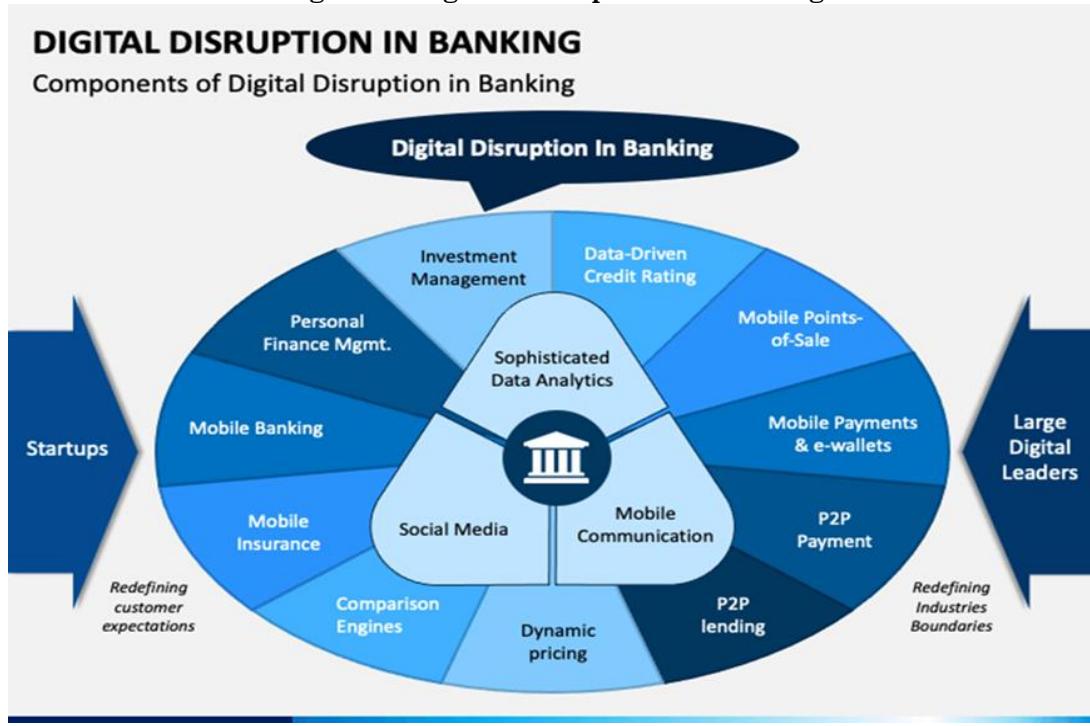
Source: cdn.sketchbubble.com

Figure 2: Emerging Fintech Market of Developing and Advanced Economies
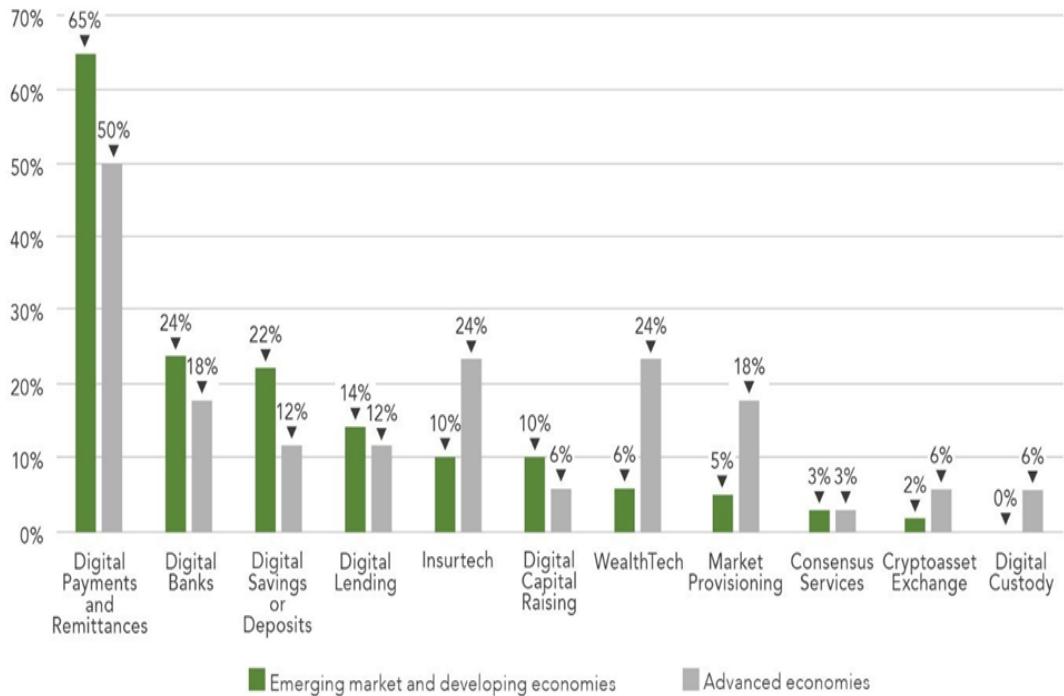
Source: World Economic Forum, 2020

Conceptual Framework
Fintech Industry in India

FinTech is generally described as an industry that uses technology to make financial systems and the delivery of financial services more efficient. It is "technologically enabled financial innovation that could result in new business models, applications, processes or products with an associated material effect on financial markets and institutions and the provision of financial services" (FSB, 2019). FinTechs are "start-ups and other companies that use technologies to conduct the fundamental functions provided by financial services, impacting how consumers store, save, borrow, invest, move, pay, and protect money" (McKinsey, 2016). The information and telecommunications (IT) revolution is regarded as the fifth 'Technological Revolution' driving growth and FinTech is at the helm of this creative disruption (Hendrikse et al., 2018). In India, FinTechs and digital players could function as the fourth segment of the Indian financial system, alongside large banks, mid-sized banks including niche banks, small finance banks, regional rural banks and cooperative banks (Das, 2020). The key enabling technologies used by fintechs are API (Application Programming Interface), Cloud Computing, Biometrics, DLT (Distributed Ledger Technology), Big Data, AI (Artificial Intelligence) & ML (Machine Learning) (mentioned in table 1).

Table 1: Key Enabling Technologies used by FinTechs

Technology	Description
API (Application Programming Interface)	APIs comprise a set of rules and specifications that software programmes use to communicate with each other. They allow new applications to be built on top of others.
Cloud Computing	The use of an online network ('cloud') of hosting processors to increase the scale and flexibility of computing capacity, generating cost savings.
Biometrics	The study of distinctive and measurable human characteristics that can be used to categorize and identify individuals.
DLT (Distributed Ledger Technology)	A digital system for recording the transaction of assets in which details are recorded in multiple places at the same time
Big Data	Voluminous amounts of structured or unstructured data that can be generated, analysed and utilized by digital tools and information systems.
AI (Artificial Intelligence) & ML (Machine Learning)	IT systems that can perform functions that would otherwise require human capabilities. ML entails computers learning from data without human intervention.

Source: RBI Bulletin November 2020

The key enabling factors for fintech revolution include the Digital India initiative, a conducive policy environment, and the presence of a sizeable talent pool (India Briefing, 2021). The hallmark of India's FinTech ecosystem is diversity of markets and applications. Though concentrated in major metropolitan cities such as Mumbai, Bangalore, Delhi-NCR, and Hyderabad, FinTech is also expanding to smaller cities. Mumbai and Bangalore lead the FinTech momentum and account for 42 per cent of the startup headquarters. Other cities like Jaipur, Pune, and Ahmedabad are also emerging as centers of FinTechs (Medici & Pisabazaar: India FinTech Report 2019). The figure 3

depicts that fintech industry of India comprises of two segments- payment and online financial products. The payment segment consists of payment banks, mobile wallets, payment gateway and payment infrastructure. The online financial products comprise lending, insurance, e-NPS, mutual fund/broking.

Figure 3: Fintech Industry in India
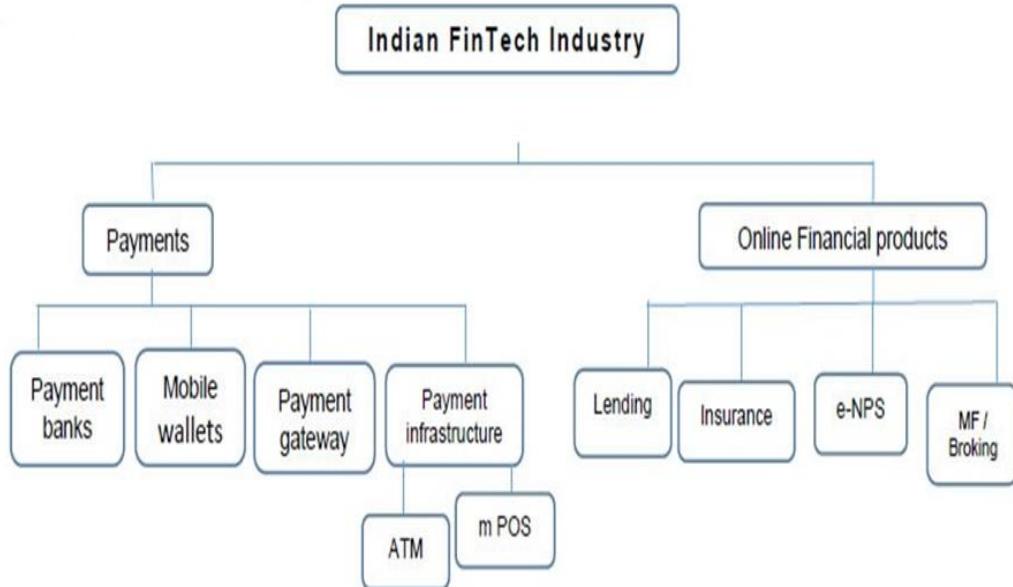
Source: Annual Report, RBI (2018)

India is amongst the fastest growing Fintech markets in the world and there are 6,636 FinTech startups in India. Indian FinTech industry's market size is $50 billion in 2021 and is estimated at $ 150 billion by 2025. India's payment landscape over the last decade has developed into the most advanced payment system with regards to digital payments by volume (CAGR 50 per cent) and value (CAGR 6 per cent). The Fintech transaction value size is set to grow from US$ 66 billion in 2019 to US$ 138 billion in 2023, at a CAGR of 20 (per cent). The Indian Fintech industry ecosystem sees a wide range of subsegments, including Payments, Lending, Wealth Technology (WealthTech), Personal Finance Management, Insurance Technology (InsurTech), Regulation Technology (RegTech), etc. The Fintech sector in India has seen a funding of $8.53 billion (in 278 deals) in FY22. As of May 2022, India's Unified Payments Interface (UPI) has seen participation of 323 banks and has recorded 5.9 billion monthly transactions worth over $130 billion.As of June 2022, India has 23 Fintech companies, which have gained 'Unicorn Status' with a valuation of over $1 billion. The Fintech segment in India has seen an exponential rise in funding over the last few years, investments worth more than $8 billion have already been witnessed across various stages of investment in 2021.While Payments and Alternative Finance segments constituted more than 90 percent of the sector's investment flows in 2015, there has been a major shift towards a more equitable distribution of investment across sectors since to include InsurTechs, WealthTechs, etc. India has 23 Fintechs which have gained 'Unicorn Status'. 1/5th Startup Unicorns are from Fintech India recorded the largest absolute number of real-time transactions in the world. India's real-time transactions crossed 48 billion, which is 6.5 times of the combined volume of the world's leading economies: U.S., Canada, U.K., France and Germany in 2021, resulting in cost savings of USD 12.6 billion for Indian businesses and consumers in 2021. The Indian FinTech industry grew 282 per cent between 2013 and 2014, and

5

reached USD 450 million in 2015. At present around 400 FinTech companies are operating in India and their investments are expected to grow by 170 per cent by 2020. The Indian FinTech software market is forecasted to touch USD 2.4 billion by 2020 from a current USD 1.2 billion, as per NASSCOM. The transaction value for the Indian FinTech sector is estimated to be approximately USD 33 billion in 2016 and is forecasted to reach USD 73 billion in 2020 (RBI).

Fintech in Banking Industry of India

The finance minister in the budget address for FY-23 announced the proposal to establish "Digital banking Units" ("DBUs") of scheduled commercial banks in 75 districts with objectives to ensure the benefits of digital payments, banking and fintech innovations reach the grass-roots of India in a consumer-friendly manner (Niti Ayog, 2022). The landscape of banking and financial sector has undergone a phenomenal transformation since 2008 Global Financial Crisis (GFC), owing to financial technology firms, popularly known as 'FinTechs. FinTechs have contributed to the modern banking and financial sector through various channels including cost optimisation, better customer service and financial inclusion (RBI, 2020). FinTechs have played an important role in unbundling banking into core functions of settling payments, performing maturity transformation, sharing risk and allocating capital (Carney, 2019). Technology is leveraged in banking segment through establishment of digital subsidiary of banks, retail neobanks as well as SME (small and medium enterprise) neobanks. Neobanks are basically digital platforms for business banks. The Fintech services employed in digital banking include conversational platforms, account aggregators, API providers and aggregators, banks with open APIs, banking as a service and core banking. Financial technology disruption is a massive shift in the banking service, from traditional banking to neobanks. Beyond offering banking services, neobanks have also helped users invest in stocks & crypto–niche, [creating a platform for stock trading](#) that traditional financial institutions are unwilling to try. Yono, Kahatabook, and Crazybee are some of the major firms with primary engagement in digital banking. Fintech brings paradigm shift in the banking service delivery system of world and also in India as well. Digital subsidiary of banks, retail neobanks (digital platform of neobanks), SME (small and medium enterprise) neobanks are some of the outcomes of fintech enabled services in banking sector. The Fintech services employed in digital banking include conversational platforms, account aggregators, API providers and aggregators, banks with open application open software (API), banking as a service and core banking. Further, Yono, Kahatabook, and Crazybee are some of the major firms that primarily engaged with digital banking. Fintech firms are breaking new ground in the formal finance sector through innovative and dynamic use of technology in the lending process. For instance, while traditional banks (around 100) and NBFCs (around 1100) in India use technology to simply calculate credit scores, fintech ventures use machine learning algorithms and alternative data points such as social media footprints, call records, shopping histories, and payments to utility service providers to increase efficiency and provide greater access to credit. The turnaround time is also much faster for the approval and disbursal of loans by fintech firms despite several banks (State Bank of India, ICICI, HDFC, and Axis bank) digitizing and speeding up these processes markedly. FinTech platform financing is further bifurcated under following sub-categories:

- **FinTech balance sheet lending:** This has been defined as electronic platforms using their own balance sheet in the ordinary course of business to intermediate between borrowers and lenders.
- **Crowdfunding:** This has been defined as matching persons/ entities needing funds with those who are willing to provide these funds for a financial return. Depending on the type of funding, it is further distinguished between loan

crowdfunding and equity crowdfunding. Crowdfunding facilitates establishment of individual contracts between those seeking funds and those seeking to invest/ lend, and the platform, by itself, does not undertake risk transformation.

Additionally, some of the fintech induced banking services are-

- **PayTech**: In this segment, the consumer centric services offered include third party application providers (TPAP), prepaid card/Wallet, bill payment, QR code payment, payment aggregator, point of sale (POS). Business centric services include corporate cards, B2B payments and invoice payments. In this segment, Fintech comes into play through use of services like payment gateway, card networks, application programming interface (API)/White label solutions, as well as payment security. Paytm, PhonePe, MobiWik, and Google Pay are the major players in this segment.
- **LendTech**: The consumer centric services offered in this segment include buy now pay later (BNPL), personal loan, salary loan, gold loan, auto loan, education loan, and P2P lending while the business centric services include corporate card, fixed term finance, as well as trade finance. Fintech services employed in this segment include collections management, credit bureau, alternate credit scoring, lending as a service and loan origination system (LOS) and loan management system (LMS). Google Pay, M-Swipe, and Razor Pay are emerging as leading lending platforms for consumers as well as merchants (India briefing, June 9, 2022).

Objectives of the Study

The present study is conducted with the following objectives-

i.   To study the trend of fintech in Indian Banking system;
ii.   To examine the challenges of fintech in Indian Banking system.

Research Methodology

The present research is descriptive in nature. The data is collected and compiled from secondary sources like annual reports of Reserve Bank of India, related research reports of Securities and Exchange Board of India, NITI Ayog, India Fintech report, Bank for International Settlement, CFA institute research foundation, World Economic Forum, International monetary fund working paper and also research articles of related fields. Data are presented in tables and charts. Discussions are made from data provided in the tables and charts.

Results and Discussion

This discussion segment of the present study highlights the explanations objective wise-

Objective 1: Trend of fintech in Indian Banking system

The table 2 and figure 4 highlights there is massive development in use of internet and smartphone during the year 2019-20. It further helps in expansion of fintech market in India. The Indian market is blessed with a higher proportion of young population, who are more likely to trust and adopt FinTech. There were 1157.75 million wireless subscribers in the country as on March 31, 2020, comprising 638 million urban and 519 million rural subscribers (TRAI, 2020). India and China lead the Global FinTech Adoption Index 2019 with an adoption rate of 87 per cent.

Table 2: Telecommunication Indicators

Parameter	Period	Cumulative amount
Telephone Subscribers	31-Mar-14 to 30-Apr-20	116.8 Crore
Teledensity	31-Mar-14 to 30-Apr-20	86.6 %
Internet Subscribers	31-Mar-14 to 31-Mar-20	74.3 Crore
Broadband Subscribers	31-Mar-14 to 31-Mar-20	68.7 Crore
Wireless Data Usage	Q3 2019-20	21,402 Petabytes
Telecom Usage (Monthly Wireless Average Revenue per User)	31-Mar-14 to 31-Dec-19	₹ 78.7
Telecom Towers	01-Sep-17 to 27-Jul-20	6,05,788
Gram Panchayats connected under BharatNet	31-Aug-14 to 30-Jun-20	1,41,098
Telecom Licenses	31-Mar-14 to 30-Jun-20	156

Source: Department of telecommunications, GOI (2020)

Figure 4: Wireless data usage and tariff
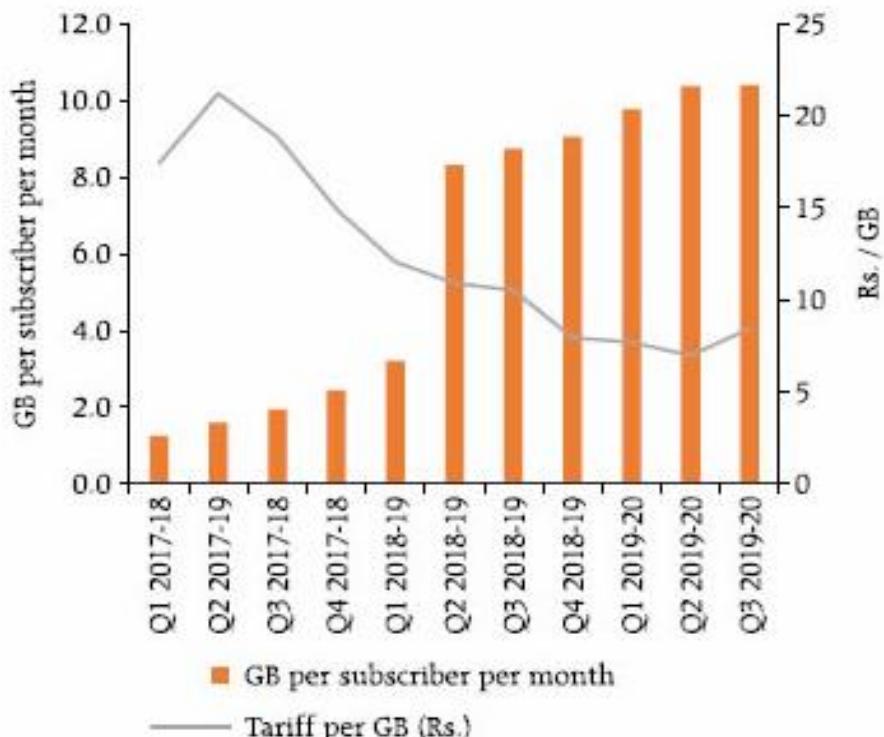
Source: Department of telecommunications, GOI (2020)

The Indian market is blessed with a higher proportion of young population, who are more likely to trust and adopt FinTech. The table 3 shows figures of top 10 counties of the world where adults goes for digital bank account in 2022 and also projection figures for the year in 2027. Here, India ranks second position in case of adults with digital only bank account with 26 per cent in 2022 and forecasted 46 per cent in 2027.

Table 3: The percentage of adults with a digital only bank account in 2022 and the percentage that will have one by 2027

Country	2022 (in per-cent)	2027 (in per-cent) (forecast)
Brazil	43	57
India	26	46
Ireland	22	34
Singapore	21	35
Hong kong	20	32
United Arab Emirates	19	41
Mexico	17	41
Spain	17	31
South Africa	15	31
Germany	15	24

Source: Finder (neo-bank adoption), 2022

The table 4 highlights figures (in per cent) of country wise gender gap in case of adoption of digital banking. Hong kong and UAE has the highest gender gap of 9 per cent, followed by 8 per cent of gender gap in Mexico, Singapore and Spain, 6 per cent of gender gap in Brazil and India, 5 per cent of gender gap in South Africa and Ireland, lowest in United States (4 per cent). Such gender divided in digital banking adoption between male and female in Indian society is due to traditional and cultural norms, economic dependency and income inequality, lack of technical literacy and skill, patriarchal mindset etc.

Table 4: Countries and regions with the biggest digital only banking gender gap

Country	Men (in percent)	Women (in percent)	Gap (in percent)
Hong Kong	25	16	-9
United Arab Emirates	21	12	-9
Mexico	22	13	-8
Singapore	25	17	-8
Spain	21	13	-8
Brazil	46	40	-6
India	29	23	-6
South Africa	18	12	-5
Ireland	25	19	-5
United states	10	6	-4

Source: Finder (neo-bank adoption), 2022

The table 5 shows the country wise and region wise adoption of digital banking by different age group. In case of India, 33 per cent falls under age group of 18-24, 29 per cent falls under the age group of 25-34, 27 per cent falls under the age group of 35-44, 24 per cent falls under the age group of 45-54, 15 per cent belongs to the age group of 56-64 and 24 per cent belongs to 65+ age group as users of digital banking. Brazil (47 per cent), Singapore (39 per cent), India (33 per cent) and UAE (31 per cent) are the leading countries where digital banking is popularly adopting by youths of 18-24 age group.

Table 5: Countries and regions with the biggest digital only banking by age

Country	18-24 (%)	25-34 (%)	35-44 (%)	45-54 (%)	55-64 (%)	65+ (%)
Brazil	47	55	46	41	30	28
Malaysia	20	14	12	14	12	6
Philippines	12	15	16	15	7	4
Ireland	28	34	27	18	17	12
Mexico	17	22	19	19	11	15
Hong Kong	21	21	22	18	18	20
Singapore	39	26	22	22	19	7
United Arab Emirates	31	21	14	16	10	19
Germany	16	15	17	16	14	12
Spain	22	17	17	16	20	13
South Africa	14	15	18	13	17	10
India	33	29	27	24	15	24
United States	11	11	8	7	5	5
Portugal	22	14	16	14	14	11

Source: Finder (neo-bank adoption), 2022

India's evolution as a progressive FinTech nation happened on the back of the 'India Stack' – an indigenous set of technologies and policies that act as enablers to innovation (RBI). The 'India Stack' encompasses two core principles - building digital platforms as public goods and incorporating data privacy and security in the design of digital public goods (D'Silva et al., 2019). As shown in figure 5, the cornerstone of the India Stack is the Aadhaar enabler, used to access a unique, verifiable identity at low marginal cost by FinTechs. Over 1.25 billion residents of India have been issued Aadhaar, and 30 million authentication requests are processed daily (UIDAI, 2019). Various publicly provided platforms for verification (e-KYC), digital signature (e-sign), cloud storage (DigiLocker) and payments have been developed over Aadhaar, which can be used by innovators to create and exchange value, obviating the need to build their own digital infrastructure. Unified Payments Interface (UPI) is a pivotal enabler, which virtualizes accounts and facilitates customers to undertake merchant payments and fund transfers.

The Indian FinTech market currently stands as the third largest FinTech ecosystem in the world behind the US and China. However, India still remains an untapped market due to lower penetration of financial services. These untapped opportunities, along with a favourable ecosystem, create large growth potential for FinTechs in India. The figure 6 depicts fintech business models developed in India over a period. These fintech business models are payments and transaction companies, lending companies, wealth and brokerage, insurance companies, neo-banks and multi-companies.

Figure 5: Development of Indian Stack
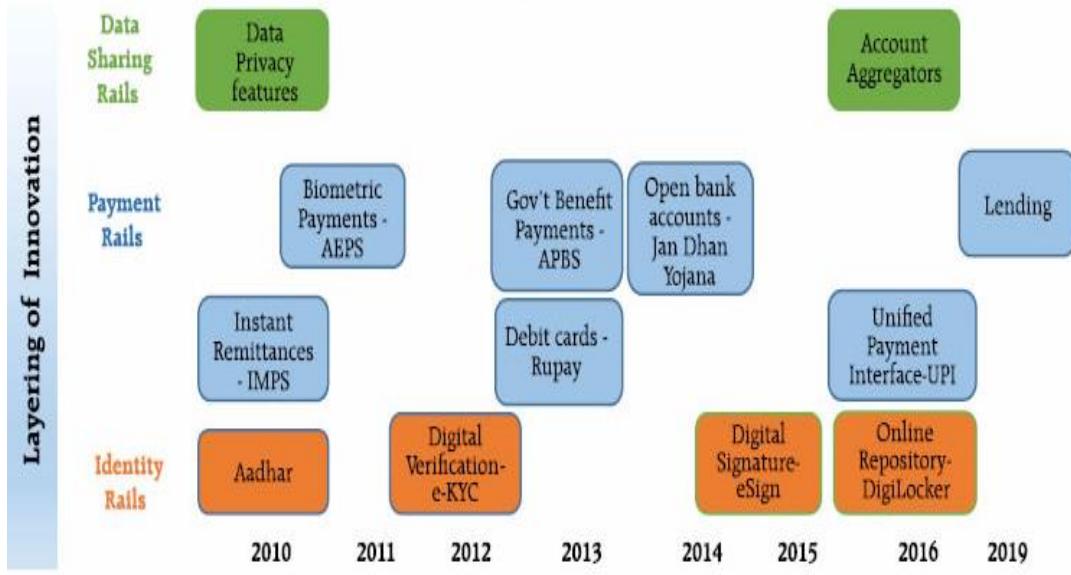
Source: RBI Bulletin, November, 2020

The table 6 and table 7 highlights the payment modes and channels and payment infrastructure of Indian banking system respectively. As mentioned in table 6 during the FY 2021-22 the figures of mobile app-based payment is Rs. 5068421.31 lakhs, Net banking is Rs. 40726.59, cash withdrawals at ATM using debit card, credit card and prepaid card is Rs. 65240.43, Cash withdrawal at point of sale (POS) using debit and credit card is Rs. 91.17 lakhs.

Figure 6: Fintech Business Model in India
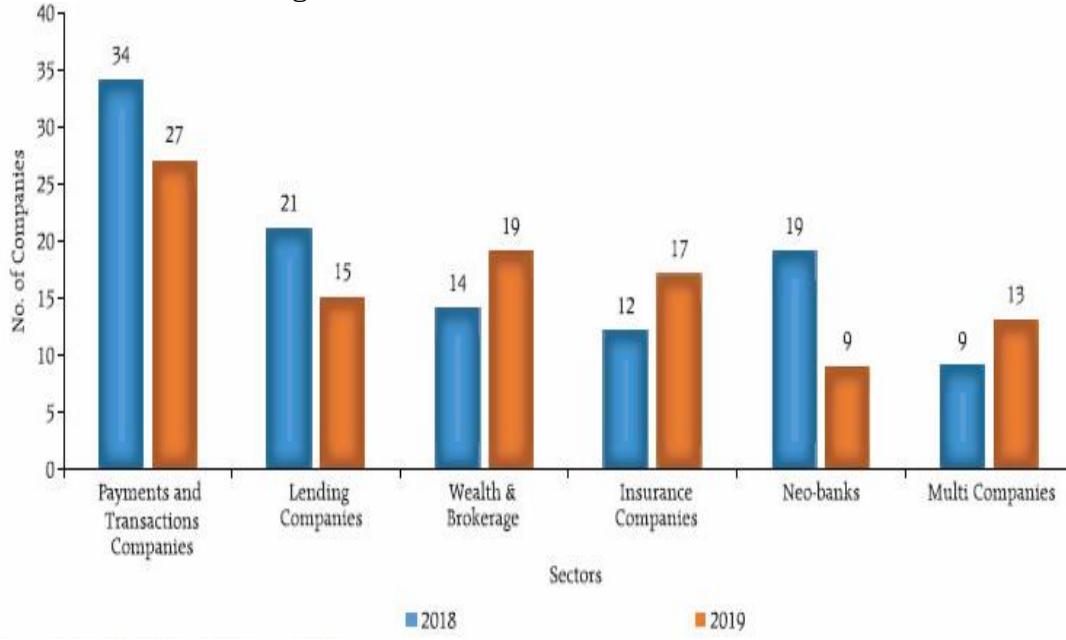
Source: RBI Bulletin, 2020

11

The figures of different payment infrastructure of banking system of India like debit card, credit card, digital wallets, ATM, PoS terminals, Bharat QR, UPI QR are quite big (Table 7). As highlighted in table 7, in March 2022, the figures of payment using card is Rs. 9912.93 lakhs, digital wallets are Rs. 12787.93, ATMs are Rs. 2.52 lakhs, PoS terminals are Rs. 60.70 lakhs, Bharat QR are Rs. 49.72 lakhs and UPI QR are Rs. 1727.34 lakhs.

Table 6: Payment modes and channels

System	Volume (Lakh)				Value (₹ Crore)			
	FY 2021-22	2021	2022		FY 2021-22	2021	2022	
		Oct.	Sep.	Oct.		Oct.	Sep.	Oct.
	1	2	3	4	5	6	7	8
A. Other Payment Channels								
1 Mobile Payments (mobile app based) (1.1 to 1.2)	506842.31	45884.20	72862.29	78248.46	14961371	1353833	1882943	1981406
1.1 Intra-bank $	40805.69	3761.40	5133.31	5473.11	2726363	243728	348416	351595
1.2 Inter-bank $	466036.62	42122.80	67728.99	72775.35	12235007	1110105	1534526	1629812
2 Internet Payments (Netbanking / Internet Browser Based) @ (2.1 to 2.2)	40726.59	3689.87	3585.10	3628.03	83159996	6617482	8433346	7182384
2.1 Intra-bank @	9583.32	862.55	918.60	873.32	52142582	3970049	4985305	4126602
2.2 Inter-bank @	31143.27	2827.31	2666.49	2754.70	31017413	2647433	3448041	3055782
B. ATMs								
3 Cash Withdrawal at ATMs $ (3.1 to 3.3)	65240.43	6032.74	5725.75	6119.16	3111946	289887	265244	291538
3.1 Using Credit Cards $	62.37	5.64	7.24	7.67	3130	286	352	375
3.2 Using Debit Cards $	64851.61	5998.03	5684.15	6073.01	3097739	288605	263765	289951
3.3 Using Pre-paid Cards $	326.45	29.07	34.36	38.48	11076	997	1127	1212
4 Cash Withdrawal at PoS $ (4.1 to 4.2)	91.17	5.34	2.71	2.15	728	64	34	22
4.1 Using Debit Cards $	79.42	4.44	2.67	2.12	557	39	34	22
4.2 Using Pre-paid Cards $	11.75	0.90	0.04	0.03	171	25	0	0
5 Cash Withdrawal at Micro ATMs @	11126.04	946.33	1004.99	1156.16	299776	24799	26097	30463
5.1 AePS @	11126.04	946.33	1004.99	1156.16	299776	24799	26097	30463

Source: RBI Bulletin, December (2022)

Table 7: Payment Infrastructure (in Lakhs)

System	As on March 2022	2021 Oct.	2022 Sep.	2022 Oct.
	1	2	3	4
Payment System Infrastructures				
1 Number of Cards (1.1 to 1.2)	9912.93	9991.95	10162.40	10188.29
1.1 Credit Cards	736.27	663.61	777.02	793.68
1.2 Debit Cards	9176.66	9328.34	9385.38	9394.61
2 Number of PPIs @ (2.1 to 2.2)	15553.69	14450.87	15842.95	15968.37
2.1 Wallets @	12787.93	12025.10	13106.33	13195.92
2.2 Cards @	2765.76	2425.77	2736.62	2772.44
3 Number of ATMs (3.1 to 3.2)	2.52	2.41	2.55	2.55
3.1 Bank owned ATMs $	2.20	2.13	2.20	2.20
3.2 White Label ATMs $	0.31	0.28	0.35	0.35
4 Number of Micro ATMs @	9.16	6.71	12.39	12.90
5 Number of PoS Terminals	60.70	51.55	70.35	72.11
6 Bharat QR @	49.72	44.35	48.64	47.19
7 UPI QR *	1727.34	1285.05	2164.30	2253.23

Source: RBI Bulletin, December (2022)

Objective 2: Challenges of fintech in Indian Banking system

The evolution of fintech also brings some challenges to the banking system of world and India as well. Such challenges are concentration risk, systemic risk, market power, regulatory arbitrage, customer protection, data privacy and cyber security, which create hurdles for delivery of banking services smoothly.

Table 8 shows bank wise fraud cases in India in terms of number of fraud cases and amount involved. It is revealed from the table that fraud cases are highest in public sector banks and private sector banks in last three financial years. The picture of fraud cases has increased in last three financial years in private banks where number of cases were 32.2%, 50.4 % and 58.6%; amount involved were 18.5%, 33.5% and 29.1% in 2019-20, 2020-21 and 2021-22 respectively. On the other hand, public sector bank shows decline in number of frauds from 50.7% in 2019-20 to 33.8% in 2021-22 also amount involved from 79.9% in 2019-20 to 66.7% in 2021-22.

Table-8: Bank wise fraud cases in India (amount in crores)

Bank/Financial institutions	2019-20		2020-21		2021-22	
	Number of frauds	Amount involved	Number of frauds	Amount involved	Number of frauds	Amount involved
Public sector banks	4410 (50.7%)	148224 (79.9%)	2901 (39.4%)	81901 (59.2%)	3078 (33.8%)	40282 (66.7%)
Private banks	3065 (35.2%)	34211 (18.5%)	3710 (50.4%)	46335 (33.5%)	5334 (58.6%)	17588 (29.1%)
Foreign banks	1026 (11.8%)	972 (0.5%)	520 (7.1%)	3280 (2.4%)	494 (5.5%)	1206 (2.0%)
Financial institutions	15 (0.2%)	2048 (1.1%)	24 (0.3%)	6663 (4.9%)	10 (0.1%)	1305 (2.2%)
Payment banks	38 (0.4%)	2 (---)	88 (1.2%)	2 (---)	30 (0.3%)	1 (---)
Small finance bank	147 (1.7%)	11 (---)	114 (1.6%)	30	155 (1.7%)	30 (----)
Local area bank	2 (---)	---	---	---	----	---
Total	8703 (100%)	185468 (100%)	7359 (100%)	138211 (100%)	9103 (100%)	60414 (100%)

Source: RBI Annual Report, 2021

Further, table 9 shows fraud cases of banks in different areas of advances, off balance sheet, forex transactions, credit card, internet related, deposit, inter branch account, cash, cheque and demand deposit, clearing account etc. Most of the fraud cases are in advances category followed by credit card and internet related frauds. The figure of advance related frauds were 52.9 percent in 2019-20, 47.5 percent in 2020-21 and 42.2 percent in 2021-22. There is growth in number fraud cases related to credit card and internet in the last three years. The figure was 30.7 percent in 2019-20, 34.6 percent in 202-21 and 39.5 percent in 2021-22. Hence, both the table 5 and table 6 reveals that most of the fraud cases take place in private banks and public sector banks and such cases are related to loans and advances, credit card and technology-enabled transactions. Banks are facing challenges due to such fintech related issues like theft of money, data leakage, extortion, cyber security risk etc.

However, the fintech companies are complying with regulatory measures provided by different regulatory bodies like RBI, IRDA, Information Technology (data protection act), BIS etc. Some of such regulatory measures are explained below-

Regulatory Guidelines for Fintech

While Fintech adoption in India has been unprecedented, it continues to face certain challenges like risk of data security and privacy leak, platform downtimes, lack of financial literacy and awareness in India, as well as differential adoption rates among MSMEs that dominate Indian economy. Further, rapidly changing regulations due to the evolving nature of the sector also poses cost-related challenges for users and businesses. For example, regulations for investment exits, cryptocurrency, payment regulations, data, infrastructure security, and consumer protection are still evolving. The broader debate on regulatory arbitrage focuses on two aspects. Firstly, banks may shift capital-intensive activities to online lending platforms leading to regulatory leakage. Secondly, online lending platforms may continue to gradually adopt services which are at the core of bank-based financial intermediation. Lending activity, whether online or otherwise, by any legitimate lender is governed by the respective applicable legislation.

Table-9: Fraud cases in area wise operation in Banks (Amount in crore) in India

Area of operation	2019-20		2020-21		2021-22	
	Number of frauds	Amount involved	Number of frauds	Amount involved	Number of frauds	Amount involved
Advances	4608 (52.9%)	181942 (98.1%)	3497 (47.5%)	136812 (99.0%)	3839 (42.2%)	58328 (96.5%)
Off balance sheet	34 (0.4%)	2445 (1.4%)	23 (0.3%)	535 (0.4%)	21 (0.2%)	1077 (1.8%)
Forex transactions	8 (0.1%)	54 (---)	4 (0.1%)	129 (---)	7 (0.1%)	7 (---)
Credit Card/internet	2677 (30.7%)	129 (0.1%)	2545 (34.6%)	119 (0.1%)	3596 (39.5%)	155 (0.2%)
Deposit	530 (6.1%)	616 (0.3%)	504 (6.8%)	434 (0.3%)	471 (5.2%)	493 (0.8%)
Inter branch account	2 (---)	-	2 (---)	-	3 (--)	2 (---)
Cash	371 (4.3%)	63 (---)	329 (4.5%)	37 (---)	649 (7.1%)	93 (0.2%)
Cheque/Demand deposit	201 (2.3%)	39 (---)	163 (2.2%)	85 (0.1%)	201 (2.2%)	158 (0.3%)
Clearing account	22 (0.3%)	7 (--)	14 (0.2%)	4 (---)	16 (0.2%)	1 (---)
Others	250 (2.9%)	173 (0.1%)	278 (3.8%)	54 (---)	300 (3.3%)	100 (0.2%)
Total	**8703 (100%)**	**185468 (100%)**	**7359 (100%)**	**138211 (100%)**	**9103 (100%)**	**60414 (100%)**

Source: RBI Annual Report, 2021

Apart from these legitimate lenders engaged in balance sheet lending organically, there are essentially two types of entities operating in the digital lending ecosystem, which require attention:

    a. **Lending Service Providers (LSPs):** In the context of digital lending, these are essentially technology-centric entities, which act as both core and ancillary lending service providers. The services provided by LSPs include providing a marketplace for the lenders as well as the borrowers, loan sourcing, underwriting, collection services for repayments, data aggregation & analysis, rating services, etc. Within LSPs, there are two types of entities: i. Entities regulated by the financial sector regulators such as credit information companies, NBFC-Account Aggregator (NBFC-AA), NBFC-Peer to Peer Lending Platform (NBFC-P2P) regulated by RBI; and credit rating agencies regulated by SEBI. ii. Entities not specifically regulated by any financial sector regulator Technically, LSPs are not undertaking 'business of a financial institution' as defined under the RBI Act and the loans, which are sourced, appraised or serviced by them, are not their assets. Generally, LSPs are acting in partnership with a bank or an NBFC and therefore, their activities are governed by the guidelines on outsourcing of financial services issued for banks/ NBFCs by RBI. However, similar guidelines on outsourced activities by other balance sheet lenders (i.e., excluding banks/ NBFCs) are not in place thus precluding LSPs partnering with them from any specific scrutiny.

b. **Fringe lenders:** These are shadow balance sheet lenders which operate without getting themselves registered for lending activities with the concerned authorities, thus creating an informal market. Considering the anonymity and velocity provided by technology, it is a challenging task to identify and monitor such fraudulent platforms/ applications on real time basis.

c. ***Rent-an-NBFC model by digital lenders:*** A synthetic structure enabling unregulated entities to lend without complying with prudential norms is through credit risk sharing arrangements by way of a "First Loss Default Guarantee (FLDG)" extended by the LSPs. Under this, the LSP provides certain credit enhancement features such as first loss guarantee up to a pre-decided percentage of loans generated by it. From the LSP's perspective, offering FLDG acts as a demonstration of its under-writing skills whereas from the lender's perspective, it ensures platform's skin in the business. For all practical purposes, credit risk is borne by the LSP without having to maintain any regulatory capital. The loan portfolio backed by FLDG is akin to off-balance sheet portfolio of the LSP wherein the nominal loans sit in the books of the lender without having to partake in any lending process. In some cases, the LSP, as a non-banking non-financial company (NBNC) may be undertaking balance sheet ending in partnership with a bank/ NBFC or on stand-alone basis, while not satisfying the principal business criteria to remain outside regulation. Besides, there are higher operational risks which arise due to increasing reliance of lenders on third-party service providers. With increasing share of digital lending in retail/ personal space, there is a potential for risk build-up because of these platforms. This may also be adding to counter party risks posed by the platform to its lending partners.

d. **Shadow Lending:** Conduct of financial service under digital anonymity and layering under regulated entities in varied forms is also a cause of concern. Many players operating in the digital lending ecosystem are not required to be registered with a financial sector regulator. This coupled with anonymity provided by internet, country of origin, involvement of different entities in the life-cycle of a loan and lack of clear demarcation between actual balance sheet lender and LSPs raise multiple strategic concerns besides those related to money laundering.

e. **Payments Banks (PBs):** The objective of setting up Payments Banks (PBs) with a structured licensing process was to provide small savings accounts and payments/ remittance services to migrant labor workforce, low-income households, small businesses, and other unorganized users. The PBs are eligible for conversion into a Small Finance Bank (SFB) after five years of operations. Since they are not permitted to lend, currently they act as LSP for other NBFCs/ banks.

f. **Customer Data Protection (CDP):** Section 43A of the Information Technology Act, 2000, provides for payment of compensation by a body corporate in case of negligence in implementing reasonable security practices and procedures in handling sensitive personal data or information resulting in wrongful loss to any person. In terms of section 72A of that Act, disclosure of information, knowingly and intentionally, without the consent of the person concerned and in breach of the lawful contract has been also made punishable with imprisonment for a term extending to three years and fine. Hence, that data protection is generally governed by the contractual relationship between the parties, and the parties are free to enter into contracts to determine their relationship defining the terms personal data, personal sensitive data, its dissemination, etc. As such, it may be necessary to emphasize the need for an exhaustive stand-alone legislation on data

protection in India keeping in mind the innovations in FinTech and risk to personal data which comes to the possession of these entrepreneurs.

g. **Classification of Customer / Organization Data (CCOD):** The FinTech entities should classify data / information based on information classification / sensitivity criteria of the organization. It becomes important to appropriately manage and provide protection within and outside organization borders/network taking into consideration how the data/information are stored, transmitted, processed, accessed and put to use within/outside the bank's network, and level of risk they are exposed to depending on the sensitivity of the data/information.

h. **Adherence to Safe Transaction Principles (STP):** A transaction in the IT parlance is termed as successful, if the transaction does not suffer from loss of confidentiality, loss of integrity, and loss of availability. These three together are referred as the security triad / the CIA triad. The three consequences of lack of CIA leads to "Data Leakage to Unauthorized Parties", "Data Tampering / Destruction by an Unauthorized Party", "Non Availability of the Data / System at times it is really needed". The FinTech entities need to satisfy these principles in order to build faith in the new ecosystem.

i. **Network Management and Security (NMS):** The FinTech entities should establish a common / individual Security Operation Centre (SOC) to monitor the adherence to Standard Operating Procedures (SOP) of the all major IT activities. A Security Incident and Event Management Systems (SIEM) is of great help to monitor these, which the entities may induct as part of their monitoring services

Conclusion

Fintech is an evolving concept and many more is yet to evolve that will transform the traditional banking concept. The disruptions made by fintech in financial sector brings paradigm shift in banking sector. The concepts likeneo bank, digital banking, digital lending, paperless transactions, cashless transactions, peer to peer lending, digital currency, tokenization of money etc. are evolving due to use of technology in financial and banking segment as well. The traditional banking is shifting towards digital banking due to the blessing of fintech. Such Fintech brings both opportunity and challenges to the stakeholders of banking system. It enables banks to improve delivery of banking services, increase in customer base, customize banking products, easy access to banking services by all segments of customers, place and time utility to customers etc. Additionally, some challenges and risks are also associated with fintech that brings threats to privacy customer, misuse of customer data, cyber-attack, money laundering, fraud in digital lending, loss of money due to phishing activity, lack of digital education, frequent change and upgradation of technology leading to increase in operating cost of banks and financial institutions etc. However, continuous effort is made by government and other regulatory authorities like RBI, SEBI, IRDA etc. to address such fintech related risks and challenges. In banking sector, Reserve Bank of India as an apex institution undertakes policies and measures to regulate the activities related to digital transactions of financial institutions, banks, NBFCs, payment banks etc. Licensing, requirement of paid-up capital, registration with RBI, disclosure of accounts, compulsory auditing of accounts, compliance with RBI guidelines is some of such initiatives of Reserve bank of India to minimize the fintech induced risks by regulating the digital activities of banks and other financial institutions.

References

Aaron, M., Rivadeneyra, F, &Sohal, S. (2017). Fintech: Is this time different? A framework for assessing risks and opportunities for central banks. In Bank of Canada Staff Discussion Paper (No 2017-10). Retrieved from

https://www.econstor.eu/h andle/10419/200480. Allen, F., & Santomero, A. M. (2001).

Acharya, V., Naqvi, H., 2012. The seeds of a crisis: a theory of bank liquidity and risktaking over the business cycle. J. Financ. Econ. 106 (2), 349–366 November.

Acharya, V., Naqvi, H., 2019. On reaching for yield and the coexistence of bubbles and negative bubbles. J. Financ. Intermed. 38, 1–10 April.

Allen, F., Qian, M., Jing, X., 2019. Understanding informal financing. J. Financ. Intermed. 39, 19–34 July. Arner, D., Barberis, J., Buckley, R., 2016.

Appaya, M. S., & Gradstein, H. L. (2020). How regulators respond to Fintech: Evaluating the different approaches–sandboxes and beyond. In FinTech Note (No 4). The World Bank. Retrieved from https://openknowledge.worldbank.org/handle/10986/33698.

Bank for International Settlements, 2018. Sound Practices: Implications of Fintech Developments for Banks and Bank Supervisors.

Basel Committee on Banking Supervision February. Bank of International Settlements, 2018. Central Bank Digital Currencies. Committee on Payments and Market Infrastructures March.

D'Silva, D., Filková, Z., Packer, F., and Tiwari, S., (2019), "The Design of Digital Financial Infrastructure: Lessons from India" BIS Papers, December

DIGITAL BANKS, A Proposal for Licensing & Regulatory Regime for India. REPORT. July 2022. Niti Aayog

DoT (2020), Online Dashboard of Department of Telecommunications, Government of India, accessed on July 31, 2020

Kashyap, A. K., Rajan, R., & Stein, J. C. (2002). Banks as liquidity providers: An explanation for the coexistence of lending and deposit-taking. The Journal of Finance, 57(1), 33–73. https://doi.org/10.1111/1540-6261.00415

RBI, (2018a), "Report of the Working Group on FinTech and Digital Banking", February 08

The Economic Times, (2019), "BHIM UPI goes International; QR Code-Based Payments Demonstrated at Singapore FinTech Festival", November 13

The Evolution of Fintech: A New Post-Crisis Paradigm? University of Hong Kong Faculty of Law Research Paper no. 2015/047, September.

TRAI (2020), "Highlights of Telecom Subscription Data as on 31 March 2020", Press Release no. 49/2020, Telecom Regulatory Authority of India

What do financial intermediaries do? Journal of Banking & Finance, 25, 271–294. https://doi.org/10.1016/S0378-4266(99)00129-6

.....***.....

Using Artificial Intelligence for Sustainable Environmental Policy Challenge to Developing Economy: Review of Global Best Practices

DR. ILIYA GARBA* ISA USMAN** AND IBRAHIM ABUBAKAR ABUBAKAR***

Abstract

The paper examines the effects of environmental pollution on sustainable development in the developing economies, and how the adoption of artificial intelligence can address these challenges. It is well known fact that in most developing economics countries for example, Africa and other Asian countries, as the economy progresses the environment deteriorated, this does not match with the increase in technological advancement in this era of artificial intelligence. It has been noted that several problems such as monitoring, planning, controlling, diagnosis, forecasting, can be solved effectively by using artificial intelligence techniques. The paper focus on environmental problem of air pollution, and artificial neural network (ANN) Genetic Algorithm (GA), Fuzzy Logic (FL), Support vector Machine (SVM as some of the techniques used by AI was Reviewed. while artificial neural network was adopted for forecasting the daily average concentration of particulate matters PM2.5. Challenges of AI include issues of structural unemployment, security challenges, climate changes catastrophes and corporate governance etc.
Keywords: Artificial Intelligence. Artificial Neural Network, Environmental Pollution
JEL Classification: *Q56*

*Department of Accounting, Faculty of Arts and Social Sciences, Gombe State University, PMB 127, Gombe, Nigeria, Mobile +2348032078938, email address   dgarba@gsu.ng
**Department of Accounting, Faculty of Arts and Social Sciences, Gombe State University, PMB 127, Gombe, Nigeria
***Department of Accounting, Faculty of Arts and Social Sciences, Gombe State University, PMB 127, Gombe, Nigeria, Email address ibrahimbole1@gmail.com

Introduction

Artificial intelligence (AI) is a broad discipline in the real scenario; because it's contained in many diverse subfields of study and research, this assertion has been pushed forward by (Ashish and Vidhi, 2017). AI has been considered one of the remarkable progress in the history of scientific community that has capture almost all field of research and innovations (Zhiping, Jiaqian, Na Zhong, Xin, Jining and Jiade, 2021). Artificial Intelligence (AI): is simulation of human intelligence processes by a computer system or a robot controlled by a computer to do tasks that normally require human intelligence (kabir, 2022, Fisher, 2018) by obtaining and using knowledge without explicit intervention of the programmer (FSB, 2017). AI is a science devoted to making machines think and act like humans. Examples of application of AI in business include credit decisions, facial/finger recognition banking apps, security surveillance, predicting consumer behavior and product suggestions, robots that deliver food, dynamic price optimization and customer service using a chatbot and voice assistant, among others. More so, it is well known fact that in the most developing economies it has been agreed that as the economy progresses the environment deteriorated these assertions came as a result of industrial productions of goods and services which lead to serious degradation of air, water and land quality (Garba, 2022). And this does not match with the increase in technological advancement through artificial intelligence. As we all know machine learning dominated Mainstream research in this century, A I technology is rapidly

developing and so many AI methodologies are emerging and developing. A.I technology is manly refer to Artificial Neural Network (ANN), Genetic Algorithm (GA), Fuzzy Logic (FL), Support vector Machine (SVM) excetra, thus are applied in the field of Finance because it has been observed that finance rule the world but soon technology such as A.I will rule finance (Adesola, 2022), further, Climate change, education Engineering Medicine and many more (Chambers and Hong, 2018)

As a result of industrial production and release of hazardous substances on natural resources and aquatic animals and plant are facing extinction, this events which lead to damage to the environment and society in which we live in thus create huge impact to the life of human (Yougendra, 2019). Meaning the natural environment is facing new challenges from both inside and outside the environment. In response emerging economies have to rise up by investing in this new emerging technology. With the coming up of environmental technology such as environmental sensor, geo-awareness, metrological forecast excetra. Due to the high cost of environmental issues, application of artificial intelligence (AI) is becoming more demanding and favorable, specifically the polluted environment where there surrounding is at the wreck.

Majority of environmental processes have a certain degree of uncertainty, and variety of interdependency between environmental factors which consist of air, water and land pollution. Because pollution in whatever form air, water or land is of harmful to the environment. Air pollution pollutes the air that we breathe which cause serious health issues such as Asthma, Cough etc. water pollution degrades the water quality that we use for drinking purpose and irrigation. Land pollution results in degradation of the earth surface as a result of human activities, couple with lack of completed data base from the policy makers. The environmental forecasting and analysis have to deal with the uncertain knowledge. Addressing this issues demand an integrated consideration of the relevant interaction between human and environment (Sydow,Rose and Rufeger, 1998). Considering a new discipline known as environmental information (Radmacher and Page, 1994) which combine research fields such as artificial intelligence, Geographical information (GIS) Modeling and simulation, user interface etc. is emerging an important and difficult task, for this new area of research is to serve as catalyst for the integration of data information and knowledge from various sources in environmental pollution sector (Stephanopoulos, 1996).

Literature Review

As noted by Ashish and Vidhi (2017) artificial intelligence has been coined by John McCarthy as an experimental branch of computer science that pursues of creating an intelligent machine that can perform diverse tasks by using its intelligence. However, McCarthy in his book titled *"Application of circumscription to formalizing common sense (1986)" it has been reaffirmed that it is the science and engine of making intelligent machine, especially intelligent computer programme"*. As the environment is becoming more and more attractive and equally challenging on the other hand coupled with more and more science and technology innovations are therefore, increasingly receiving attention from academia and public as put forward by Micheala and Lazaros (2017) of which they assert that, for the continuous improvement of life quality in sustainable environment artificial intelligence is related directly among other to the environmental quality. This can be achieved by using adequate intelligent monitoring analysis, forecasting, decision and control system, based on the available intelligence tools and techniques such as integrated intelligence system are very useful for policy makers, for the management of the environment, critical situation such as serious air and water pollution from industries and natural disasters such as earth quake, landslide and flood. Artificial intelligence played an important role in everyday life in order to alert the entire people of a particular area in which it happened.

Jimoh (2021) posits that environmental issues in recent decades as a major aspect of discussion in the problem of economic growth and development, a policy issues that has been particular interest in recent years is cognitive computing (Matei, Chatterjee, and Raghuwashi, 2009) which also agreed with Jimoh but when further to say artificial intelligence also help environmentalist in risk reduction and increase efficiency.

It has been documented a developing approach to guide human friendly, artificial intelligence is considered one of the biggest unsolved A.I problem today (Celine,2018). As the scale of economic development, particularly in developing country and human impacts from deteriorating national environmental grow. Therefore, A.I as the technology evolved is directly or indirectly application for the environment will henceforward better understand by the majority of the populations in order to harness the opportunities. While assessing the potential risk involved and finding new approaches for mitigating them for example, A.I could be developed to improve natural disaster reliance planning and corporate social responsibilities. Hunt(1998), assert that many environmental problem such as damage to echo system, local air pollution, the separate of harmful substances by individuals and industries and global climate change challenges cannot be studied by experimentation along. Hence, with the current era of artificial intelligence computer stimulation are desperately needed as the most appropriate means to get more insight into the environmental issues. It has been predicted that AI will be able to create knowledge and enhance management of air quality by reducing air pollution (Aayush and Hammad, 2020)

Research conducted by Jayaden, Birgit, Jari, Antti and Wenlu 2018 on AI from environmental dimension, it has been put forward that artificial intelligence will enable developing economies countries take better care of the planet if is judiciously used in that direction in term of supporting waste and pollution management with the help of fuzzy inference model for side selection, but also, predictive system can be used for natural disaster management such as earth quakes and weather forecasting to better recognize the likelihood of extreme event occurrence in their country such as Hurricane and flooding . Furthermore, we can also recognize the adoption of knowledge management system integrated with deep learning technology embedded into it, that could help analyze the image of animals captured by motion sensor cameras in the wild. Such analyzed information could provide accurate, detailed and up- to - date information about the location, counts and behavior of animals in the wild, which could be useful in improvement local biodiversity and local conservative efforts.

Artificial Neural Networks (ANN)
According to (Ghedei and Vafaie, 2017, and Zhiping and Jiaquin 2021) ANNs are being broadly employed as approaches for prediction, estimation, classification and optimization in various fields due to their remarkable capacity to capture the nonlinear behavior between independent and dependent variables based on historical data using an applicable training algorithm. Although, there are several different classifications of ANNs, been used in different research paradigm this research work focuses on the typical types of configurations that have been employed in research works of environmental pollution controls, such as feed forward neural networks, specifically multilayer perceptron neutral networks (MLPNN) and radial basis function neural network (RBFNN).
Focusing on The Multilayer perceptron neutral networks (MLPNN) because is one of the simplest and most well-known types ANN used in the environmental pollution control activities because the structure of MLPNN which include input and output layers because it has a significant impact on predictive capability. Independent and dependent parameters which determine the number of neurons in the input and output layer, respectively. Neuron numbers in the hidden layers are generally determine via the

procedure using the trial and error observation rather than specified at first instance (Zonouz , and Tarjomanejad 2016)

Concept of Sustainable Development

World Bank (2012), "sustainable development is about enhancing human well-being through time while society's ability to enhance or improve human well-being depends on the choice made preference of individuals, firms, communities, and government on how to utilize their assets." Therefore, the ability of a nation to sustain a consumption flow (and therefore, to sustainable) depends on the change of its stock of assets or wealth. These assets may include natural assets, human assets, knowledge assets and manmade assets ex-cetra. For these reasons, the ability to manage these assets well is very vital to achieve sustainable development. However, there are limits to sustainability particularly for environmental and social assets that enhance human well-being though their mere existence as well as indirectly through their contribution to production and material being.

In line with UN authored one of the most-cited definitions of it: "Development that meets the   needs of the present without compromising on the ability for future generations to meet their needs" (Jayaden, Birgit, Jari, Antti and Wenlu 2018)

Several environmental problems such as (monitoring, planning, controlling, diagnosis, analysis forecasting) can be solved efficiently using A.I techniques. Therefore, this paper will focus on the problem of environmental air pollution. The approached that was adopted is the use of ruled base system that receives the value of forecasting parameters by an artificial neural network (ANN).

Air pollution forecasting: many AI based forecasting systems were found in different kinds of literature written by many great scholars, a scientist for the prediction of air pollution (Pollat, 2011). For example, the neighbor based scaling that is combined with an ANN model for prediction sulphur dioxide (SO_2)

Figure 1: show the possible some environmental critical situation which is separated to another part of environment, for example, a serious air pollution problem would directly affect the soil and the water and if the two problems combine together, the impact on the environment could likely going to increase significantly, for example if there is serious air pollution problem in a given region the impact on the water and soil will be greater and will subsequently increase the pollution level.

Figure 1: Interdependence between different environmental critical situations

22
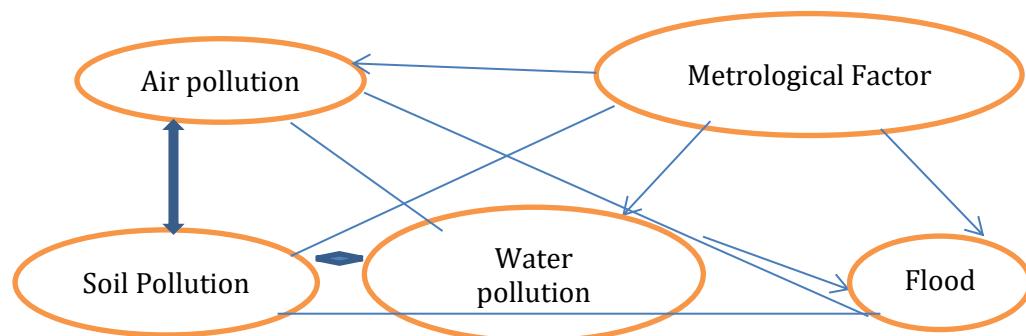
Artificial Intelligence (AI) technologies for environmental pollution controls

AI technologies have been employed extensively in dealing with wastewater, air pollution as well as solid waste, playing a leading role in modeling, optimization, prediction and control. The evolution over the time of the numbers of publications is presented in many studies related to environmental controls are rapidly increasing in the past decade. Modeling complex environmental problems using AI technologies is becoming popular in environmental field, especially in wastewater treatment. The input data are those collected from sensors environmental parameters. The model efficiently predicts the pollutant levels; the model performance is evaluated using statistical parameters, mainly involving the R2 and Root Mean Square Error (RMSE). This evaluation criterion can stress the model's performance, the R2 indicates the degree of correlation between the experimental and predictive values, which can be expressed as the equation below

$$R^2 = 1 - \sum_{t-1}^{N}(y_{p-y_x})2 / \sum_{t-1}^{N}(y_{p-y_x})2$$

Where **N** is the number of model output, $\mathbf{y_p}$ is the predictive output value, $\mathbf{y_x}$ stand for the experimental output and $\mathbf{y_x}$ denote the average value of experiments the RMSE indicate the error between the experimental value and the model output as shown by the below equation

$$\text{RMSE} = \sqrt{\frac{1}{N}} \Sigma_{t-1}^{N}(y_{p-y_x})2$$

Here, higher value of R^2 and lower value of RMSE indicate better prediction performance

Challenges

Developing economy countries like Africa and some Asian countries were actually left behind in-term of Artificial intelligence technology adoption, this has been clearly seen from the manifestation of environmental abuse is always at increase which does not match with the present reality. The following are some of the A.I to the developing economy on the bases of Literature and empirical study.

i.   Adoption of A.I: many developing economy countries are very poor economically and technologically, whereas others are extremely poor with very low GDP and are technologically at disadvantage too in order to meet its current environmental challenges as of know they are trying to make public awareness to their teaming citizens on the need to adopt A.I technology in their industry and social activities.

ii.   Fear of structural unemployment: it has been predicted as time goes on A.I technologies will bring economic changes trough an increase in productivity hence, reduce human labor input. Because with the new advance technological improvement machine is capable to form new task far better and effective which man is doing before, such as self-driving car, advance robots etc., this will create a device view in a labor market and society as a whole.

iii. Corporate Governance: the institution process, and organization involved in the corporate governance of A.I are still in the early stage in developed countries. This needed to be extended to the developing countries, and therefore, this led to the great extent the echo system overlaps the subject related to internet governance and policy. For example, the rights to privacy and data laws are good example.

iv.   Security challenges: Since the A.I agents interact with its environment; it may lead to falling in the hand of harmful behavior, which will include

indifference to the impact of its action. For example, the issues of Hackers and adversarial learning.

v.   Possible threat to Mankind: A.I machine May likely led to a clash of ideas and lead to some disagreement at some point in time between the operator and the machine itself. This is therefore, can give rise to struggling for supremacy between human being and the machine, because it has been predicted earlier that A.I machine will eventually conquer the mankind as they are exceptional good in everything compare to mankind effectively and efficiently

vi.   Climate change: climate change is the depletion of the stratospheric ozone layer has been identified as the leading environmental issues globally for more than quarter of the century (Agnus, 2001). Climate change is concerned with how carbon dioxide, methane, particulates matters and other greenhouse gas emission emitted by human activities are altering the climate system (Harvey, 2000). Climate change is the greatest pressure of global environmental problem particularly in developed countries like USA, UK,China and Germany (Wang Jin-nan, 2012). A large body of scientific evidence proves that human activities arise form industry or individual causes global warming, with its main sources been greenhouse gases; since the preindustrial era, global concentration of carbon dioxide, methane and nitrous oxide have increased markedly as a result of human activities due to increased use of fossil fuels land use charge and agriculture (IPCC, 2007). Evidence shows that many natural systems in the land water or Air were been affected by climate change, particularly by raises in temperature (UN. 2013). Climate change thus involves an externality; greenhouse gas emissions damage other on no cost attached to the agent responsible (Stern, 2006) thus leading to a market failure which justifies the need of government intervention (OECD,2011) but know the situation is affecting even the developing countries.

Conclusion and Recommendations

The paper has presented an artificial neural network (ANN) for short time forecasting depending on the type of environmental problems that need to be solved. The main purpose for this system is to give a quick answer to the communities or population on the environmental decision factors in order to reduce the impact of air pollution on the environment and on the population. Artificial intelligence is still in its phase stage and in changing continuously, it is therefore important to know that AI can gather data from various sources to create data base for environmental pollution which covered all possibility for impact so that it will be most beneficial. It has been recommended that now AI is a new technology which is desperately needed in both developed and developing countries particularly the developing economies adopting AI is of paramount important for effective environmental protection and its sustainability. The successful implementation of Artificial Intelligence (AI) in environmental policy management can be made by using drones and robots for analyzing the impact of environmental pollution.

References

Adesola. W. A. (2022) Fintech Evolution and Future of Banking in Nigeria: *International Academic Conference on 24th -25th January, University of Calabar Nigeria,*

Angus,F.(2001) understanding the linkage between ozone Depletion and Climate change, published by Metrological Service of Canada

Ashish,Y. and Vidhi, G. (2017) Artificial Intelligence New era: International Journal of New Technology and Research, 3(3),20-33

Ceiline,H.(2018) Harnessing Artificial Intelligence for the Earth World Economy Forum

MAVA Foundation 2018

Cotes, M. Sanches, M. Poch M and Ceccoroni, L (2000) Artificial Intelligence and Environmental   Decision System Applied Intelligence,13(6)

Fisher, O., Watson, N., Porcu, L., Bacon, D., Rigley, M., Gomes, R.L. (2018). Cloud Manufacturing as   a Sustainable Process Manufacturing Route. *Journal of Manuf. Syst*. 47, 53e68. Accessed   from https://doi.org/10.1016/j.jmsy.2018.03.005

FSB- Financial Stability Board (2017). Artificial intelligence and Machine Learning in Financial   Services: Market Developments and Financial Stability Implications. Accessed from: http://www. fsb. org/2017/11/artificialintelligence-and-machine-learning-in-financialservice

Garba, I. (2020) Using environmental taxation as a tool for determination of damage cost from cement industry air pollution reduction: A Contextual approach to sustainable   environmental policy (Case study of Ashaka Cement Industrial Suburb Area Nigeria). A   paper presented at 3rd Annual international conference on taxation held at Ignebidion   University Okad, Edo State. 9th - 11th November, 2020

Ghedei, M, and Vafaie, A (2016), Ahybrid Artificial neural network and particle swap optimization   for prediction of removal of hazardous dye green from aqueous solution. Journal of Molecular 'Biomol spectrosc, 137

Harvey,D. (2000) Global Warming the Hard Science Toronto Publisher

Hurnt, L. and Heart, J. (1998), Environmental Management System a role for A.I ? Workshop Bind   Environmental   Science   and   Artificial   Intelligence (BESAL, 1998)

IPCC, 2007 Climate Change 2007:The Physical Science Basis. Contribution of Working Group to the Fourth Assessment   Report of the Intergovernmental Panel on Climate Change

Jayaden,   K. Birgit,P. Jari,P. Antti, K and Wenlu, Z. (2018), The Rise of Artificial Intelligence Under   the Lens of Sustainability *Journal of Technology,6(10) 1-18*

Kabir. T.H (2022) Digital Technology and Sustainable Business Development: Nigeria in Focus

Matei, A. Chatterjee, C. Raghuwashi, N.S (2009) Flood Forecasting using ANN, Neuro Fuzzy and   Neuro G.A Model. *Journal of Hydrologic Engineering 14(6)*
Paper Presented at the 5th National Conference Organized by the School of Business Studies,   Federal Polytechnic Bauchi, Nigeria 5th October, 2022

Polka, K. (2011). A novel data that is a preprocessing method to estimate the air pollution (SO$_2$)   neighbor based future scaling (NBFS)   Neural   Computing   and Application, Sprinter

Radmacher, F.J and Page, B (1994), Trends in environmental information processing in thirteen   world computer congress, Munich

Stephanopoulos, G.(1996) Intelligence system in process engineering. A review, Computer Chemistry   Engineering 20(6), 743 -791

Stern, N (2006) What is the economics of climate Change? World economics 7(2)

Sydow, A. , Rose H. and Rufeger,O. (1998) Sustainable Development and Integrated Assessment.   *Journal of Environmental Science 3(4)*

United Nation Framework on Climate (2013) GHG Emission profiles for annex I parties and major   groups. Data retrieved March   2013   from   URL https://unfccc.int/ghg.data   unfccc/ghgprofile/items/4625.php

Wang Jin-tan, P. GE.Cha-Zhong (2012). A separated Environmental Tax for China: Chinese   Academy for Environmental Planning Beijing,1(1),2-5

World Bank (2012), Pollution prevention and Abatement Handbook, Towards cleaner

Production the world Bank Group in collaboration with UNEP and UNIDO, IBRD/The World bank, Washington DC USA.2012

Yougendra, M. M (2019), Disaster Management Using Artificial Intelligence. *Journal of Xian University of Architecture and Technology, 11(12),1631 -1635*

Zhiping and Jiaquin(2021), Tackling Environmental Challenges in Pollution Control Using Artificial Intelligence : A review. National Natural Science Foundation of Chine (2021)

Zonoun, P.R and Tarjomanejad, A. (2016) Modelling and optimization of toluence oxidation in Using Hybrid Artificial Neural Network Genetic Algorithm Method. Journal of Taiwan Institute of Chemical Engineering, 65(3), 276-285

.....***.....

Green Marketing Practices in India: A Theoretical Approach in the Present Context of Marketing Management

DR. JOYDEV GOGOI.

Abstract

Green marketing practice is one of the solutions that can help our planet be clean and green. Marketers of green products are always concerned about environmental issues. Today, there is a growing interest among consumers all over the world regarding the protection of the environment. Green marketing has changed consumer behaviour, and marketers are also taking various initiatives to satisfy them. Green marketing practices started in India in the late 1990s. This paper gives an overview of the different issues of green marketing. It identifies some emerging issues in green marketing, viz., Greenwashing, Benefit Corporations, B Lab Global, ESG framework, Sustainable Marketing, Life Style Assessment, and LOHAS consumers. The paper highlights the concept of green marketing, development of green marketing, green marketing mix, green product, need for green marketing, consumer behaviour toward green products, and challenges of green marketing in the Indian context. Presently, it is very significant to discuss green marketing because our planet is now faced with environmental devastation, and pollution levels are getting worse daily, eventually leading to the continued deterioration of human life. The paper examines the current trends of green marketing practices in India, describes why companies are adopting it, and explore the challenges in green marketing practices.

Keywords: Green marketing, Environment, Consumer behaviour, Greenwashing, Benefit Corporation, ESG framework, Sustainable, LOHAS, Skill, Challenges.
JEL Classification: M31

Associate Professor and HoD, Department of Business Management & Faculty Member in PG Department of Commerce (Marketing) D.H.S.K. Commerce College, Dibrugarh. P.O. Dibrugarh, Dist. Dibrugarh, Assam, India, PIN: 786001 Mobile No. 9401656566 E-mail: joydevgogoidhsk@gmail.com

Introduction

Today marketers are more socially responsible and concerned about societal factors in making all marketing decisions. Marketers realize their duties and responsibilities toward sustainable development. Green marketing practice is one of the solutions that can help our earth be clean and green. Green marketing is one of the most important features of sustainable development. According to the survey reports of Euromonitor, a global market research firm, 67 percent of people ranked 'environment-consciousness' as the highest parameter. Green marketing practices started in India in the late 1990s. It leads to a radical change in consumer behavior towards green products, and people are going towards a green lifestyle. Now, green marketing has brought a change in consumer attitudes, needs, wants, desires, and expectations. Maruti Suzuki, Canon, Toyota, Philips, NTPC, Coca-Cola, Walt Disney World, Mcdonald's, Xerox, HUL, Canon, Philips are practicing green marketing worldwide. Vestas Wind Systems A/S of Denmark, a manufacturer, seller, installer, and servicer of wind turbines having manufacturing plants in 16 countries, occupies the first rank in the list of Corporate Knights' 2022 ranking of the world's 100 most sustainable corporations is based on a

rigorous assessment of nearly 7,000 public companies with revenue over US$1 billion. According to market researcher Mintel, about 12 percent of the U.S. population can be identified as True Greens, consumers who seek out and regularly buy so-called green products. Another 68 percent can be classified as Light Greens, consumers who buy green sometimes. In 1989, 67 percent of Americans stated that they were willing to pay 5-10 percent more for ecologically compatible products. By 1991, environmentally conscious individuals were willing to pay between 15-20 percent more for green products. Today, more than one-third of Americans would like to pay a little extra for green products.

Review of Literature

Before an in-depth discussion about green marketing, its practices, and different issues related to this emerging area in the present context of marketing, there is a need for a literature review.

Green marketing and product development are valuable techniques that firms use to increase competitive advantages and gain consumers' confidence to achieve the firm's mission and vision. The implementation of green marketing strategy is a relative concept that consistently differs over time (Yazdanifard R. et al. 2014). Green marketing practices pave the way toward creating a healthy, safe, and happy environment for future generations (Mani A. P. et al. 2019). Green marketing can help sustainable development. Shifting from traditional marketing to green marketing has to face many challenges (Nedumaram G. et al. 2018). The green marketing movement, much as green consumption, reflects the responsibility towards the society to ensure different activities towards the minimization of adverse environmental effects. Green marketing activities improve the environment and change consumer behaviour (Alhamad, A M, et al. 2019). Green marketing mix strategies can reduce the ecological footprint. Organisations are moving toward defining clear sustainable objectives that explain how their products can fulfill the needs of consumers using green marketing strategies (Bathmathan, V. 2019). Green products are environmental or eco-friendly and can be recycled. Green products create a market is different from the traditional market (Anitha P et al. 2020). Consumers are less familiar with terms like phosphate-free, recyclable, refillable, ozone-friendly, and environmentally friendly (Lal, B.S. 2015). Consumers are increasingly becoming concerned about various environmental issues globally. Many organizations perceive green marketing as an opportunity, changes to production processes, packaging changes, and modifying advertising. Green marketing is gaining importance in India for various issues concerning sustainable development (Yadav, R. 2013). Green indicates purity through quality, fair price, and worth in dealings. Green marketing adopts innovative techniques of product modification and dynamic production processes to maintain sustainability and diversify ways of advertising. (Pradeep M. D et al. 2016). Green marketing practices in Indian companies and factors influencing the marketers that determine green marketing orientation for a company. Marketers are to understand the ways of developing the environmental exposure of their marketing activities. (Ghodeswar, B. M. 2014). Consumers, organizations, and governments have adopted green marketing worldwide to save natural resources and protect the environment for sustainable development. Consumers should take the necessary steps to an initiative to consume green products to reduce global warming (Yoganandan, G. 2017). Green marketing has become part and parcel of corporate strategy; it requires understanding the public policy process and manipulation of the traditional marketing mix. It covers a broad range of activities (Kadyan, J.S. 2011). Green marketing and strategies can protect the environment (Eneizan, B.M. 2016). Green marketing is becoming a buzz in society nowadays. People start shifting their demands toward those products that safeguard the environment. Marketers are also showing keen interest and taking various initiatives toward green marketing (Thakur A. et al. 2018). Some critiques of green marketing and

advertising, idea, new green projects in India, and unique advertising blend are discussed in the paper. It mainly focuses on the destiny prospects of green marketing in India (Mayakkannan, R. 2019). Marketers have increased their rate of targeting green consumers, those concerned about the environment, and allowing it to affect their purchasing decisions. There are three particular segments of green consumers (Mishra P. et al. 2010). Assam possesses a substantial natural resource, and marketers can produce different green products. There is scope to bring change in many other sectors like the introduction of green buildings, more use of mass transport mode, use of CNG in vehicles, and use of energy-efficient electrical appliances. (Deb Roy, A. 2016). Green marketing is not only possible, but it ia also sustainable and profitable from various quarters (Das, S.M. et al. 2012)· Marketers must make consumers understand the importance of green products compared to non-green products. Consumers are ready to pay more to maintain a cleaner and greener environment. Green marketing should be measured regularly to regulate the malpractices of green marketers (Manuj, 2012). Various factors influence the consumers and there is good response of consumers toward green marketing. Environmental knowledge and the consciousness of consumers play a significant role in effective green marketing (Pathak, D. 2020). The widespread environmental issues in Jammu and Kashmir are leading to climatic changes resulting in floods, drought, and many more negative impacts on the environment. Consumers are familiar with green brands and the concept of green branding and sustainable development. (Mehraj, D. et al. 2016).

From the above literature review, it is observed that there are some grey areas to discuss in detail. So, an attempt has been made to bridge the gap.

Objectives of this Study
The main objectives of this study are –
- To understand the concept of green marketing and some issues related to green marketing.
- To highlight the reasons behind green marketing practices by marketers.
- To explore the different green marketing practices of Indian marketers.
- To understand the challenges in green marketing practices in India.
-

Research Methodology
It is a conceptual and descriptive paper. Secondary sources are used for the collection of data. Required information and data for this work have been collected from various published research works, journals and periodicals, books, and websites. After analyzing and discussing all the issues related to green marketing, a conclusion is drawn to fulfill the objectives of this paper.   Finally, some suggestions are put forward in favour of green marketing practices in the greater interest of the planet.

Origin and development of Green Marketing:
In 1975, American Marketing Association (AMA) held a workshop on "Ecological Marketing." The proceedings of this workshop entitled "Ecological Marketing" is considered the first books on green marketing. Green marketing became popular worldwide in the late 1980s and early 1990s. In India, the Government launched an eco-mark scheme in 1991 to increase consumer awareness regarding environment-friendly products.

According to Ken by Patie (2011), the Developmental stages of green marketing are divided into three phases. They are - Ecological green marketing stage (Stressed solving various environmental problems), the Environmental green marketing stage (emphasized clean technology, innovative designing of machines and products that could

take care of contamination and waste problems), and the Sustainable green marketing stage (Dealt with developing great quality items that could meet the consumers demands by concentrating on the quality, performance, cost, availability, convenience in an eco-friendly way).

Meaning of Green Marketing:
Green marketing means developing and promoting products that satisfy consumers' wants and needs in terms of quality, performance, affordable price, promotion, and convenient distribution without having a detrimental input on the environment. Thus, products are eco-friendly, and the entire process of marketing operation continues in an environmentally friendly way. Green marketing practices include market research, market segmentation, targeting, positioning, consumer behaviour study, new product development, existing product development, packaging, labeling, branding, pricing, promotion, and distribution process. There is 5's in green marketing practices. They are - the safety of the product, the satisfaction of the consumers, social acceptability of the products, sustainability of the products, and sustainability of the environment. According to the American Marketing Association, "Green Marketing" is the marketing of products presumed to be environmentally safe. Thus, green marketing incorporates a broad range of activities, including product modification changes to the production process, packaging changes, and modified advertising.

Green Products: Green products are generally alternative products in a market. There is no general agreement on what exactly makes a product green. There are some universal guidelines to make the product green. According to these guidelines, green products do not present a health hazard to people, animals, society, and the environment. Green products are always eco-friendly. Eco-friendly products fulfill some criteria: Products that don't contain toxic material, recyclable and disposable, don't cause pollution, produced naturally without harming any animal and nature, and not tested on animals. An electronics company HP is cutting its energy use, The Hewlett-Packard Company is delivering energy-efficient products and practicing energy-efficient operating practices, Phillips's energy-saving Marathon CFL light bulb are some examples of green products.

Reasons behind opting for green marketing practices by organizations:
- Protect the environment: By producing green products, it is possible to protect the environment. Efficient use of raw material, use of solar power, reuse of products, minimization of waste, and digital media of communication leads a green environment.
- Consumer preference and value positioning: Today, consumers have become very conscious of their health and prefer eco-friendly products that are less detrimental to human beings.
- Corporate social responsibility: Presently, marketers are starting to engage themselves in producing and distributing green products to protect the interest of consumers and society. It helps marketers in promoting CSR.
- Competition in the market: Through green marketing mix decisions, marketers can create and retain consumers. It helps in finding new markets and enjoying a competitive advantage.
- Goodwill and image in the market: Due to the higher demand for green products, a marketer can quickly build goodwill and image in the market. Most employees also feel proud and responsible for working for an environmentally responsible company.

- Cost of production and profits: Using eco-friendly raw materials in green products increases production costs. Though the cost of production is comparatively higher, efficiency and cost-effectiveness help the marketers earn more profits in the long run.
- Government regulations: To protect the interest of consumers and society, Government formulates various rules and regulations. According to such laws and regulations, marketers initiate green practices in marketing.
- Sustained long-term growth and access to new markets: Marketers always try to continue their marketing operation for an extended period and want to expand their market. Green marketing ensures sustained long-term growth along with profitability.
- To create customer social responsibility: The responsibility of the consumers toward the society and environment is very significant to save the planet. Marketers try to make awareness of green products among the consumers for sustainability development.

Reasons behind preferring green products by consumers:
- Consumers are health conscious, and green products are helpful for sound health.
- Green products are eco-friendly.
- Raw materials of green products are natural.
- Consumers are very much concerned about the degradation of the environment.
- Green products have more value than price.

Concepts related to green marketing:

- **Greenwashing:** The term "greenwashing" refers to the behaviour or practice of marketers in which they want to deceive consumers or society. In this practice, marketers adopt outwardly green acts with the underlying purpose of earning more profits. They try to capitalize on the growing number of green consumers by simply taking a green approach in marketing that might not otherwise be considered green. The main objective of greenwashing is to provide consumers with the feeling that the organization is taking all the necessary steps to manage its ecological footprint ethically. Such marketers try to position their products as a better choice for the environment. In reality, it is observed that marketers are doing very little to benefit the environment. Environmentalist Jay Westerveld first used the term "greenwashing" in 1986.
- **Benefit Corporation:** A Benefit corporation (B Corporations) is a business organisation with a dual purpose: making a profit and promoting the public welfare. While a for-profit corporation's sole objective is to make a profit for its shareholders, and a nonprofit's objective is to fulfill its mission or support its beneficiaries, a benefit corporation engages in both. Simply, a benefit corporation has two objects: earning profits and serving society. It works to create a positive impact socially and environmentally in its marketing operations, maintain Corporate Social Responsibility (CSR) in terms of considering its workers, serving low-income individuals and communities, sharing profits with charities, contributions to scientific research & development, advancement of public education, and reports its activity in the form of reports to the society and stakeholders publicly using an unbiased third-party source. Patagonia became the first brand to register for "Benefit Corporation" status in January 2012. In December 2018, the total number of B-Corps in the world was 2655 companies, while in India, it was seven.[30] There are currently over 4000 Certified B Corporations in over 70 countries and over 150 industries.
- **B Lab Global:** B Lab is the nonprofit network transforming the global economy to benefit all people, communities, and the planet. Its international network of

organizations leads economic systems to change to support our collective vision of an inclusive, equitable, and regenerative economy. B Lab Global started its journey in 2006 with the idea that a different kind of economy was not only possible but necessary for the change — and that organisation could lead the way towards a new, stakeholder-driven model. B Lab became known for certifying B Corporations, which are companies that meet high standards of social and environmental performance, accountability, and transparency. B Lab creates standards, policies, tools, and programs that shift capitalism's behavior, culture, and structural underpinnings. B Lab's standards are considered as the heart of the B Corp movement and their Theory of Change, defining the best social, environmental, and governance practices for businesses. "We won't stop until all business is a force for good" is the slogan of B Lab.

- **ESG framework:** ESG is a term that stands for the "Environmental," "Social," and "Governance" aspects of business or commercial activities. Environmental aspects assess a company's impact on the environment or the way that a company treats the environment. Social aspects examine how a company manages stakeholder relationships inside and outside an organisation, i.e., employees, consumers, and the community. Governance aspects assess how a company governs itself or runs its business. ESG and green marketing are relative terms, and both are concerned with protecting the environment. Management of ESG can directly impact the share price of a company through reputational and the risk of getting legal action. Fundamentally, the ESG framework enables investors to assess how well a company performs on ESG metrics compared to its peers. According to a recent survey by SEC Newgate, most Australian consumers still don't understand the ESG acronym. 30 percent of the 1,200 Australians surveyed reported they had heard of ESG, and only 8 percent reported a good understanding.

- **Sustainable Marketing:** Sustainable marketing is a marketing practice that promotes environmental and socially responsible products, policies, practices, and brand values. It meets the needs of everyone today without compromising the security and opportunities for future generations. Sustainable marketing is a key to any company's success as it encompasses every activity to generate revenues. Sustainable marketing helps businesses earn consumers' trust and, in turn, their loyalty. Sustainable marketing gives a new benchmark for modern marketing. Currently, a company focuses on social and environmental investments as a marketing strategy. There are five common strategies for sustainability marketing. These include - consumer-oriented marketing, consumer-value marketing, innovative marketing, sense of mission marketing, and societal marketing.[34] Sustainable marketing attracts sustainability-minded consumers and gains employees passionate about making a difference in the world. It also helps the marketers in building a solid brand image and reputation.

- **Eco Labels:** An individual's belief that an environmental claim lacks honesty can harm the consumer's attitude toward a product or brand. On the other hand, if the consumer grants credibility to the claim, the individual will behave more respectfully and consciously toward the environmental issues. Many times, the problem in extending that credibility to a brand is that consumers interested in green products have doubts about advertisements. Such doubts are due to various factors such as lack of understanding, language barriers, the absence of analytical knowledge necessary to interpret advertising messages, or deceptive advertising. To resolve this problem, business organizations may choose to guarantee messages on the environmental benefits of brands with environmental labeling systems that are sponsored by independent organizations.

- **Life Cycle Assessment (LCA):** Life cycle assessment is also known as life cycle analysis. It is a cradle-to-grave or cradle-to-cradle analysis technique to assess environmental impacts associated with all the stages of a product's life, from raw material extraction through materials processing, manufacture, distribution, and use.[35] During the late 1980s, new instruments such as Life Cycle Assessment were invented that allowed ecological considerations to be initiated into marketing decisions of an organisation. LCA model was developed according to ISO 14040. The LCA model seeks to identify the major types of environmental impact throughout the Product Life Cycle (PLC). The main purpose of the LCA is to define the energy and environmental profile of finished products. LCA assesses cumulative potential ecological impacts. In addition, the purpose was to quantify the ecological advantages deriving from the use of recycled raw material.
- **The LOHAS consumers:** LOHAS stands for Lifestyles of Health and Sustainability. LOHAS is a term used by marketers to define a particular category of people (consumers) who see the link between the health of the individual with that of the planet. Various environmental and social responsibilities influence these consumers in making their buying decisions. LOHAS consumers are more concerned for the earth, authenticity, personal fulfillment, holistic health, and being socially conscious. It is observed that the behaviour of LOHAS women is more environment-friendly than men. Worldwide about 100 million people are LOHAS. About 20 percent of the total population in Europe is LOHAS consumers. In 2019, LOHAS consumer was a $355 billion market in the USA alone, growing 10 percent per year. It is a $546 billion market worldwide.

Green Marketing Mix and Challenges of Green Marketing

The 4Ps of the green marketing mix are green product, green price, green promotion, and green place. A Green product is a less environmentally harmful product produced from renewable and recyclable material having green packaging, labeling and branding for the ultimate satisfaction of consumers. Prices for green products may be a little higher than conventional alternatives due to an increase in the cost of production. But target groups are ready to pay a premium price for the product. For example, LOHAS Consumers are willing to pay extra for green products. In promoting a green product, marketers stress the environmental aspects of a product by educating the prospects. Marketers spend money on different advertisements related to environmental protection with their products. In Green Marketing, the distribution process focuses on ecological logistics. In the case of green service marketing, important decisions related to other 3Ps, i.e., green People, green Process, and green Physical Evidence, are taken after considering societal and environmental issues. The challenges of green marketing are observed as -

- It is a new concept: green marketing is new for the common people, especially the rural people. Most companies are also unaware of it. The green movements need to reach the common people of a society, which will take time and effort.
- It is costly: green products require renewable and recyclable material, which is expensive and limited. So, all the marketers cannot go for the production of green products, and the majority of the consumer not willing to pay a premium for green products.
- It requires new technology and more research & development: Using innovative technology is a basic necessity for green marketing practices. More research and development activities are also an area of green marketing.
- Consumer education about green products and marketing: In India, nearly 70 percent of the total population lives in rural areas, and most are not concerned about green products or green marketing. Educating such people is a difficult task.

- Possibilities of unethical practice in markets: Some companies may continue unethical practices in the name of green marketing. Deceptive advertising and false claims are also some possibilities in green marketing practices.
- The apathy of the marketers towards green marketing: Apathy of the marketers to adopt green marketing practices is also a matter of great concern. Most are silent on environmental issues, Corporate Social Responsibilities, etc.
- Need for Standardization: Unless some regulatory bodies are involved in certifying ogranisations as green, there will be no verifiable means of green. There is a lack of standardization to authenticate green claims.
- Patience and Perseverance: Protecting the environment through green marketing will take a long time. Investors and corporations need to view the environment as a long-term investment opportunity, and marketers and consumers also need to look at the long-term benefits of this green movement.
- Avoiding Green Myopia: Green products will highly dissatisfy the consumers if those products do not meet the customer satisfaction criteria, and finally, it will lead to green myopia. Again, if a green product is also priced very high, it will lose its market acceptability.

Present trends in green marketing practices in India

Gradually business organizations are going towards green marketing practices. Many factors influence the marketers in making this particular decision. They believe green marketing practices can help organizations achieve their goals in this competitive market. Due to increased awareness among the consumers, they want eco-friendly products that do not harm the natural environment or human health. CNG and electric vehicles are prevalent in India, and consumers buy them considering the long-term cost and environmental factors. Different motor companies have joined in the race and started producing electric cars. Tata, Mahindra, Hyundai, Audi, Volvo, Maruti Suzuki, Renault, MG, Mercedes, and General Motors have already started their production and promotional activities in the Indian market. Considering this obligation, many business organizations have already adopted CSR philosophy to build their corporate image. Tata Consultancy Services (TCS) has a globally recognized sustainability practice. It has already topped Newsweek's top World's Greenest Company title. It also has a global green score of 80.4 percent, mainly due to its initiative of creating technology for agricultural and community benefits.

Now Indian marketers are considering green marketing practices as a marketing tool and introducing them in their marketing policies and strategies. They are actively participating in the new marketing operation and management without delay. Marketers are reducing the production and distribution of harmful goods or by-products. Initially, the marketers produced goods and services to fulfill the needs and wants of a particular segment of the market. But now, the marketers are targeting all market segments and have successfully positioned their green product brands. The Indian Government prohibits the production and distribution of harmful products and by-products under different regulations and laws. In many cases, the Government forces the firm to adopt various government policies that protect the interests of the consumers, community, and the environment.

Marketers are shifting their method of production, use of technology, types of raw materials, packaging, labeling, branding, pricing, advertising, publicity, method of distribution, and disposal. Similarly, the number of waste recycling and removal industries is also increasing to protect the environment. Tata Motors, HCL Technologies, Oil and Natural Gas Corporation, BCPL, Asian Paints, Kansai Nerolac, ITC, Adani Green Energy, Adani Power, Tata Power, Suzlon Energy, Wipro, Godrej Consumer Products, SBI, Indian Oil, and so on. Fiinovation has been urging companies to

incorporate sustainability within their business operations. Initiatives of the top ten companies toward green are highlighted here:

LG India has been a pioneer in making eco-friendly electronic gadgets. Recently, it has launched a LED E60 and E90 series monitor for the Indian market. Its USP is that it consumes 40 percent less energy than conventional LED monitors. Also, they hardly use halogen or mercury, trying to keep using hazardous materials in their products. Recently HCL has launched HCL ME 40 notebooks in the market. HCL do not use any polyvinyl chloride (PVC) material or other harmful chemicals, and the Bureau of Energy Efficiency has already given them a five-star rating. Samsung India manufactures a roaring range of LED TV screens, and now they have come up with an eco-friendly LED backlight. They use 40 percent less electricity and have no harmful chemicals like mercury and lead. Oil and Natural Gas Company makes plan to change the way with the invention of green crematoriums. IndusInd Bank is one of the first banks in India to discourage using paper for the counterfoils in ATMs and sending electronic messages against transactions. ITC has adopted a Low Carbon Growth Path and a Cleaner Environment Approach in its marketing operations. It has also introduced ozone-treated elemental chlorine-free bleaching technology that has improved the lives of millions worldwide. Wipro, has not only helped in the creation of technology that helps in saving energy and preventing waste, but its corporate headquarters in Pune is the most eco-friendly building in this sector all over India. MRF has launched the ZSLK series. This is about creating eco-friendly tubeless tyres made from unique silica-based rubber, offering extra fuel efficiency to those driving their vehicles. ArEco Green, which manufactures and exports biodegradable products such as palm leaf dinnerware, bamboo straws, coir pots, edible spoons, and more, is at the top of the list of top 10 most promising green products companies - 2021. Orissa State Cooperative Milk Producers' Federation launched milk packets with a message on energy conservation. Delhi Transport Corporation is the most extensive CNG-powered transport system in the country. McDonald's restaurant's napkins and bags are made of recycled paper. Coca-Cola pumped syrup directly from a tank instead of plastic, saving 68 million pounds annually. Badarpur Thermal Power Station of NTPC in Delhi is adopting a new way to utilize coal-ash, to control air and water pollution. PHILIPS developed Compact Fluorescent Light (CFL) that also consumes less electricity and radiates less heat. Maruti has reduced its average electricity consumption per vehicle by 20 percent, water consumption by 46 percent, and landfill waste by 67 percent. Tata Motors was the first Indian motor company to introduce vehicles with Euro (emission) norms well ahead of the mandated date. Tata vehicles meet the European End-of-Life vehicle norms for maintaining metallic and non-metallic balance in materials used for manufacturing its cars. Taj Hotels Resorts and Palaces follows green practices that conform to Green Globe Standards. It launched EARTH, an initiative that works to minimize the environmental impact. Rambagh Palace installed a 2.1 MW wind turbine generator at a wind farm at Kaladongar in Jaisalmer, which currently supplies 70 percent of the annual electricity requirements of the Palace. Pepsi Company has pledged to reduce food waste by 50 percent in its direct operations by 2025 as a part of 2025 Performance with Purpose (PWP) agenda. Reliance Power strives for excellence in environmental management and sustainable business development. Reliance continues to be committed to developing and implementing Environmental Management System (EMS) throughout the Group to measure, control, and reduce environmental impact. The guiding principle of environmental initiatives is the 5Rs: Reduce, Reuse, Recycle, Renew and Respect.

Suggestions for successful green marketing practices

Based on study and review, it is found that green marketing practice and achieving success is not an easy task for marketers. It is expected that the following

suggestion can help the marketers to go in the right direction for achieving goals:

- Marketers should not consider green marketing as an approach to marketing. It has to be pursued with greater efforts as it has an environmental and social impact.
- Still, Indian consumers are in the learning process, and marketers should take various steps to educate them how green products are beneficial for consumers and the environment.
- Marketers should follow ethics in advertising green products.
- Marketers must ensure that the value of the green product in performance, design, and visual appeal exceeds the price.
- Marketers must reduce the environmental impacts while storing, transporting, and distributing the raw materials or finished products.
- A standard quality control board must be in place to control products, labeling, and licensing standards.

Conclusion

Green marketing is a strategy that can address the concern of promoting and preserving the natural environment, which can benefit the firms, consumers, and the environment while the green product is developed. Green marketing is still in its infancy stage. There is a long way to go. There has been significant pressure on the marketers from government bodies to implement green marketing practices. To protect the environment from degradation, business organisations need to adopt green marketing management and encourage people to adopt a green lifestyle by purchasing eco-friendly products. Owing to the increasing awareness about global warming and climate change, every company must look for solutions to maintain ecology.

References

10 most Promising Green Products Companies – 2021, Retrieved on June 18, 2022, from https://industry.siliconindia.com/ranking/10-most-promising-green-products-companies-2021-rid-1321.html

10 Most Promising Green Products Companies – 2021, Retrieved on June 16 2022, fromhttps://industry.siliconindia.com/ranking/10-most-promising-green-products-companies-2021-rid-1321.html

2022 Global 100 - Corporate Knights, Retrieved on June 18, 2022, from https://www.corporateknights.com/rankings/global-100-rankings/2022-global-100-rankings/100-most-sustainable-corporations-of-2022/

Alhamad, A M, et al. (2019). *Green Marketing Strategies: Theoretical Approach,* , Vol. 2, No.2, ISSN: 2576-5973

Anitha, P, et al. (2020). *Green Marketing: Benefits and Challenges,* European Journal of Molecular & Clinical Medicine, ISSN: 2515-8260, Vol. 7, Issue 11

B Lab Global Site, Retrieved on June 5, 2022, from https://www.bcorporation.net/en-us/movement/about-b-lab

Bathmathan, V. (2019) *Green Marketing Mix Strategy using Modified Measurement Scales – A Performance of Gen Y Green Purchasing Decision in Malaysia*, International Journal of Engineering and Advanced Technology, Vol. 9, Issue-1, ISSN: 2249-8958

B-Corp – A tool to do greater good - SAGE Sustainability, Retrieved on June 8, 2022 from https://sagesustainability.in/cort-a-tool-do-greater-good, 27-Dec-2018

Das, S.M., et al.(2012). *Green Marketing Strategies for Sustainable Business Growth,* Journal of Business Management & Social Science Research, ISSN: 2319-5614, Vol. 1, No 1

Eneizan, B.M., et al. (2016). *Prior Research on Green Marketing and Green Marketing Strategy: Critical Analysis,* Singaporean Journal of Business Economics, and Management Studies, Vol. 5

Environmental Marketing (Green Marketing Rudiments), Retrieved on June 1, 2022, from http://www.iosrjournals.org/iosr-jbm/papers/7th-ibrc-volume-2/24.pdf

Environmental, Social and Governance (ESG) explained, Retrieved on June 17, 2022, from https://www.lexology.com/library/detail.aspx?g=d2998222-8a84-49e9-b2fe-fc2511520616

Frequently Asked Questions FAQs - B Corp, Retrieved on June 13, 2022, from https://www.bcorporation.net>faqs

Ghodeswar, B M. (2014). *A Study of Green Marketing Practices in Indian Companies*, International Journal of Applied Management Sciences and Engineering, 1(2), 51-69, July-Yoganandan, G, et al. (2017). *A Study on Green Products buying behaviour in Indian Market*, Internal Journal of Multidisciplinary Research and Development, ISSN: 2349-4182, Vol. 4, Issue 8, pp 80-84

Green Business Ideas for Sustainable Startups – NerdWallet, Retrieved on June 19 2022, from https://www.nerdwallet.com/article/small-business/sustainable-business-ideas

Green marketing – Wikipedia, Retrieved on June 18, 2022, from

Green marketing – Wikipedia, Retrieved on June 18, 2022, from

*Green marketi*ng – Wikipedia, Retrieved on June 18, 2022, from

Green Marketing: Definitions, Opportunities, Importance and ..., Retrieved on 4the June 2022, from https://www.economicsdiscussion.net/marketing-2/green-marketing/green-marketing/32399

https://en.wikipedia.org/wiki/green_marketing

https://en.wikipedia.org/wiki/green_marketing

https://en.wikipedia.org/wiki/green_marketing

Kadyan, J.S. (2011). Green Marketing: Concepts and Applications, *Global Journal of Business Management*, Vol. 5, Issue 2, ISSN: 0973-8533

Lal, B.S. (2015). *Green Marketing: Opportunities and Issues*, International Journal Multidisciplinary Research and Modern Education, ISSN: 2454-6119, Vol-1, Issue-1

Life-cycle assessment – Wikipedia, Retrieved on June 18 2022, from https://en.wikipedia.org/wiki/Life-cycle_assessment

Mani A. P., et al. (2019), *Green Marketing –Practices and Challenges in the Indian Context*, Journal of Era University, Vol. 7, Issue 2, 170-175, ISSN: 2456-4281

Manuj (2012). *Green Marketing – An Overview*, Asia Pacific Journal of Marketing & Management Review, ISSN: 2319-2836, Vol. 1(4)

Mayakkannan, R. (2019). A Study on Green Marketing Practices in India, Emperor International Journal of Finance and Management Research, ISSN:2395-5929, Vol.V, Issue 4

Mehraj, D., et al. (2016). *Green Marketing and Sustainable Environment: A Case Study on Dal Lake in Jammu & Kashmir*, Elixir International Journal- Environment and Foresty, ISSN: 40409-40413

Mishra, P., et al. (2010). *Green Marketing in India: Emerging Opportunities and Challenges,* Journal of Engineering, Science and Management Education, Vol. 3

Nedumaram, G., et al. (2018). *Green Marketing and Sustainable Development- Challenges and Opportunities*, International Journal of Advanced Scientific Research and Development, Vol. Issue – 3, e-ISSN – 2395-6089

Pradeep M. D, et al. (2016). *Green Marketing to meet consumer demands and sustainable development-challenges and opportunities,* Current Developments in Computer

Science, IT & its Impact on Management, Social Science and Education, ISBN: 978-93-5265-4

R Deb Roy, A. (2016). *Green Marketing: An Emerging Dimension with special reference to Assam*, Global Journal of Research Analysis, ISBN: 2277-8180, Vol. 5, Issue 12

Thakur, A. et al. (2018). *Growth of Green Marketing – A Literature Perspective of Green Marketing*, Internation Journal of Architecture and Urban Development, vol. 8, Issue 4

The LOHAS Consumer - Spa Wellness Consulting, Retrieved on June 14 2022, from https://www.spawellness.com/blog/https/wwwspawellnesscom/blog-page-url/2019/3/15/new-post-title-1

Top 10 Green Companies of India | Fiinovation, Retrieved on June 18 2022, from https://fiinovationblogs.wordpress.com › 2016/02/29

Urvasi.S. (2020). *Role of Green Marketing in Satisfying the Customers and Its Impact on Environmental Safety,* Mukt Shabd Journal, ISSN No: 2347-3150, Volume - IX Issue - IV

What is greenwashing? A brief guide | Blog - Sourceful, Retrieved on June 10, 2022, from https://www.sourceful.com/blog/what-is-greenwashing, 05-Oct-202

What Is Sustainable Marketing and Why Is It Important in 2022, Retrieved on June 18 2022, from https://greenbusinessbureau.com › Blog, 30-May-2022

Yadav, R. (2013) *Green Marketing: Initiatives in the Indian Context*, Indian Journal of Marketing

Yazdanifard, R., et al. (2014). *The concept of green marketing and green product development on consumer buying approach*, Global Journal of Commerce & Management, Vol. 3(2) 33-38, ISSN: 2319-7285

.....***.....

Financial Inclusion: A Way to Bank the Unbanked Common Man of India.

MRS. YASMIN. A. BARODAWALA

Abstract

While the world is thriving to extinct poverty and adversity of lower economic classes of people, India has also taken building blocks of steps to inculcate financial inclusion (FI) in the nation for its citizens. As financial stability remains the base for the welfare and betterment of individuals, Indian Government has incorporated multifarious provisions, policies and numerous schemes to uplift the banking facilities and finance set-up for the greatest good of all concerned. The aim of this paper is to showcase the whole idea of financial inclusion, penning down the progress and implementation of these schemes and programs. Since its inception till today, with the help of this study, we observe the excelling growth of this concept and go further in depths to study and analyze it`s targets and achievements. The secondary data employed in the paper displays the worldwide application of financial inclusion, and also portrays the essentiality of this pillar in sustainable development goals program. FI stands at 7th out of the prominent 17 goals, set by United Nations General Assembly, promoting the high requirement of economic elevation for the unfolding future ahead. And India has been upholding this idea in a glorious way, as reflected in this paper.
Keywords: Financial Inclusion, Unbanked, FI Programs, FI Schemes
JEL Classification: G02

Assistant Professor, Dr. Thakorbhai Patel Girl's Commerce College, Vadodara.

Introduction

The prosperous land of India, and its populace have been laying down persistent efforts to establish a good standard of living for one and all. Following the same values, government of India for overall welfare of the nation and its people, have come up with intention of Financial Inclusion commencing in 2005. It's one of the prime motives is to provide banking facilities to every person of the country. And raise the under-privileged, weaker section and poor population of society and promote economic growth and job opportunities. According to World Bank 'Financial inclusion means that individuals and businesses have access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit and insurance – delivered in a responsible and sustainable way.' As per Findex data, 1.7 billion, nearly one-third of the people all over the world are still unbanked and includes women of poor households in rural areas or belonging to the workforce. They make up to be about half of this unbanked adults. The objectives of financial Inclusion is to provide basic bank account to make and receive payments known as no-frills account, access to saving products including pension and investment, able to enjoy credit products and overdraft facilities which is linked to no-frills account, money transfer and remittance facility, insurance (Life and non-life) at micro level and pension at micro level.

Chief Aspects of an Integral Financial Strategy

In order to build it financial sector, every country has a financial integral strategy. This strategy strengthens the financial conditional of any economy. The three elements of the integral financial strategy are Financial Literacy, Financial Stability and Financial Inclusion
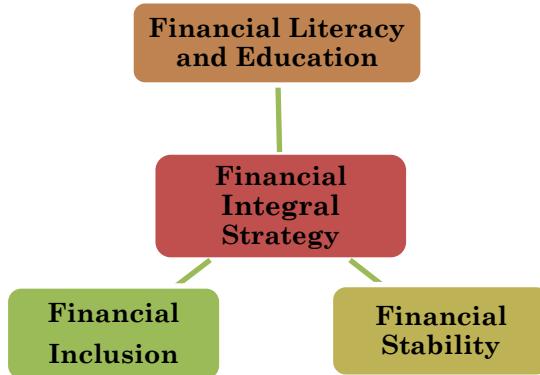
Financial Literacy or education is spreading of awareness and knowledge to the people about the financial services given by banks and other institutions. It takes care of the demand side by increasing the financial knowledge of the masses. Financial inclusion means the provision of proper access to the multiple financial services equally to all. Thus, it manifests the supply side as it caters to the end users. These two financial literacy and financial inclusion leads to financial stability.

Financial Inclusion Parameters

Financial inclusion index is based on the premises of three parameters ACCESS (35%), Usage or Availability (45%) and Quality (20%) as designed by RBI. The prominent aspect of financial inclusion is to give access to financial sources to the vulnerable. It can be further divided into extension of credit, creation of wealth and planning for contingency.

Figure 1: Access to financial system as first parameter of financial inclusion
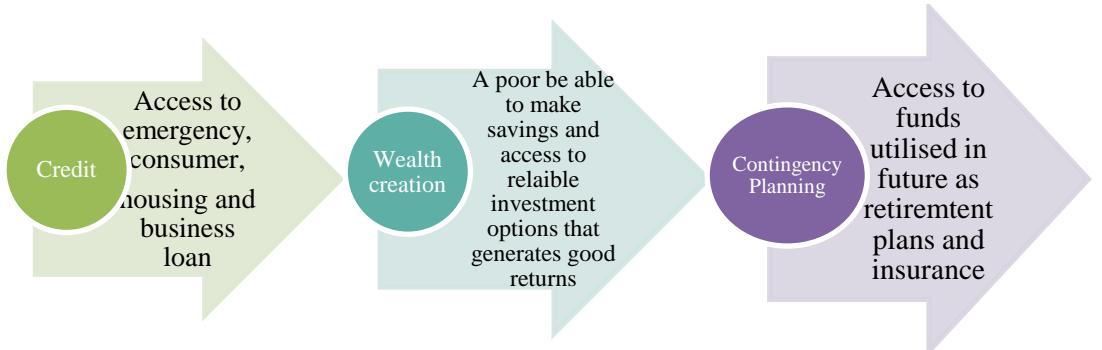
Figure 2: Usage to financial system as second parameter of financial inclusion

Availability of branches	ATM centers	Mobile Money Agents
Mobile Money transactions	Deposits and withdrawals	Loans extended and taken
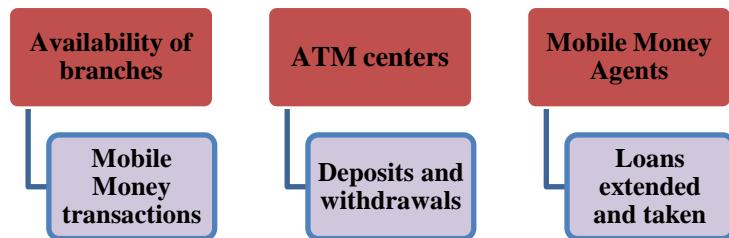
Figure 3: Quality to financial system as third parameter of financial inclusion
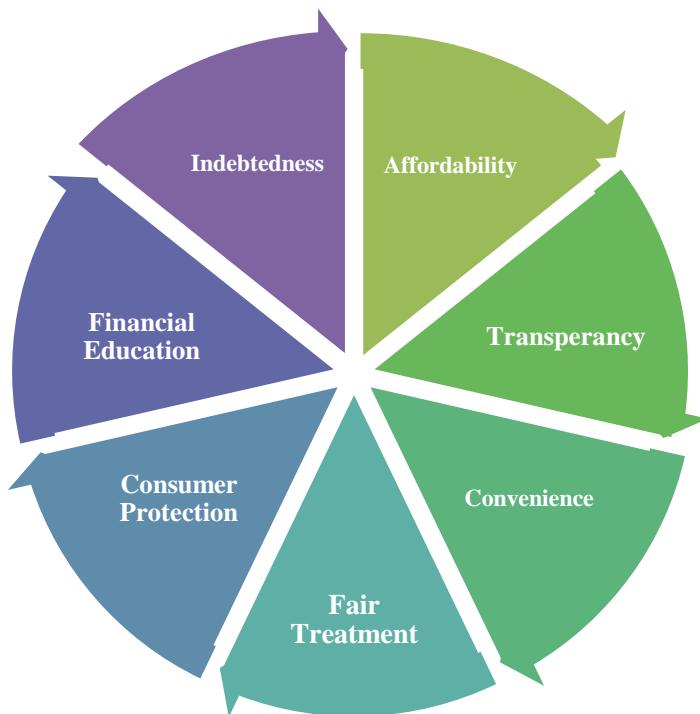
Literature Review

The study emphasizes the role of regional rural banks (RRB) in the development of the country. Two banks from the state of Uttar Pradesh namely, Aryavart bank and Purvanchal Bank is considered. 96 official's opinions were noted through questionnaire, using frequency and Chi Square test problems faced by these banks employees in functioning, channelizing, mobilizing and motivating the rural population was studied. It was found that there exists political interference as well as lack of initiative among the villagers to approach these banks for their financial needs. Also, Loan recovery and competition from post offices are few other challenges in extending financial assistance to the rural masses (Rehman, 2020). The study undertakes to assess the situation of financial inclusion state wise in India. It is known from the study that in spite of the reckless efforts of the Indian Government, the goals set for achieving the financial inclusion is less than satisfactory. Index of financial inclusion is calculated in the paper undertaking three dimensions. Employing Principal Component Analysis with SPSS

software a comparative study within the state is done. The analyses show that there is no uniformity among the states with regards to financial inclusion and its parameters (Parijat & Barua Nissar A., 2020). The value of financial inclusion is stressed in this paper by the author. About 2 billion of adults in the entire world are unable to use the formal financial affair as on the present day. To provide the financial aid to all the persons of the society be it rich or poor is the prime need for attaining inclusive growth and development for India. Thus, the study professes every individual should be brought under the umbrella of banks and other financial institutions through the efforts of RBI's program of financial inclusion (Aanchal & Bindu, 2018).

Digital finance has a vital role in the financial inclusion as it provides numerous benefits to its users, providers of financial service and the government. Discussion on certain issues and challenges which relates to e-finance is critically done in this paper. In an emerging economy like India there exists an on-going debate about how the financial inclusion can be achieved with greater development of digital finance. The author has studied the impact of fintech on financial stability and financial inclusion. The study reveals that digital finance has a positive implication as it is available at low cost and convenient to use (Ozili, 2018).

The financial inclusion strategy adopted by Zimbabwe Government. To evaluate the factors of financial inclusion is the aim of the study. Age, education, income, financial literacy and internet connectivity are the variable that are analyzed and it implies positive relationship. Documentations involved in opening the bank accounts and the distance to access point are negatively related to financial inclusion (Abel et al., 2018).

An overview of financial inclusion achieved by different economies across the globe is included in this report. It highlights the growing trend of financial literacy. Unorganized section, Poor adults and women being the most beneficiaries of this program, the study reviews the empirical evidence that savings account, payment services loan facility and penetration of insurance is on a rise. However, it states that there exist innumerable challenges in the achievement of full financial inclusion. Future direction of research is also pin pointed in this working paper (Demirguc-Kunt et al., 2017).

Thus, the financial Inclusion has been deduced by many researchers in the past, talking about their importance, explaining their parameters in detail and its effect on the growth and development of the economy. Even efforts are made by researchers to calculate the financial Inclusion Index for various states in India to showcase the increase of financial awareness and reach. However, seldom papers have been penned down specifying on particular schemes, programs, strategy, yojanas and support systems to promote the FI policy in India. And This paper explores them in greater detail by discussing and analysing the targets achieved by each of the selected schemes for the study. It also studies its implementation, progress and success through statistical data.

Objective of the Study
i.   To understand the theoretical aspect of financial inclusion;
ii.   To highlight the initiatives taken by the government to make financial inclusion a success;
iii.   To study the progress of financial inclusion schemes as launched by RBI since its inception in 2005.

Research Methodology
To fulfill the objective of checking Financial Inclusion in India since its inception and ponder upon the trend and status of its implementation, Secondary data is referred and employed. These data are collected from RBI Annual reports, RBI Publications, working papers, NABARD, SIDBI and GOI websites such as Press Information Bureau, NAFSCOB NFHS-4, Ministry of Rural Development as issued and published time to

time. Worldwide Data is taken through the medium of World bank and IMF websites. This paper is descriptive in nature.

Results and Discussion

Financial Inclusion Schemes in India
Government of India has come up with several schemes for attaining financial inclusion in the past, after due research and planning done by various experts, committees and policy makers. The main aim is to provide benefit to the poor and the weaker section of the society. The list of such scheme is as follows: Pradhan Mantri Jan Dhan Yojana (PMJDY), Atal Pension Yojana (APY), Pradhan Mantri Vaya Vandana Yojana (PMVVY), Stand Up India Scheme, Pradhan Mantri Mudra Yojana (PMMY), Sukanya Samriddhi Yojana (SSY), Pradhan Mantri Suraksha Bima Yojana (PMSBY), Jeevan Suraksha Bandhan Yojana, Credit Enhancement Guarantee Scheme (CEGS) for Scheduled Castes (SCs) and Venture Capital Fund for Scheduled Castes under the Social Sector Initiatives

Pradhan Mantri Jan Dhan Yojana (PMJDY)
It was launched in 2014 in the month of August and by the end of September 2014, 4 crore PMJDY bank accounts were already opened according to the data of Ministry of Finance. Pension, Insurance and Banking is offered to the account holders under this scheme. There are a numerous facilities attached to this bank account. One of it is having zero balance account. It is one of the revolutionary schemes set up by the Government of India.

Figure 4: Deposits in PMJDY Accounts (PMJDY)

DEPOSITS IN PMJDY ACCOUNTS
(ALL FIGURES IN CRORE RS.)

Public Sector Banks, 123197.42, 39%
Grand Total, 159878.92, 50%
Regional Rural Banks, 31979.11, 10%
Private Sector Banks, 4702.38, 1%
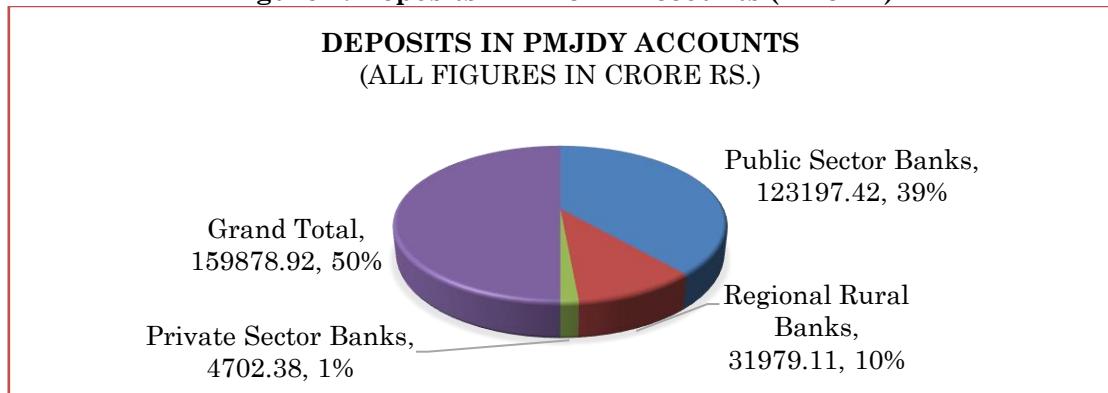
Source: pmjdy.gov.in

As directed by the Government all the schedule commercial banks have to contribute to make PMJDY scheme a success. Figure 4 surfaces that public sector banks have played a major role in moving this scheme followed by Regional Rural banks. The contribution of Private sector banks is very negligible in this counter. The success of PMJDY is accounted in amount (in crores). Out of the total of 50% of the population covered by this scheme, 39% share is of public sector banks, 10% share of RRBs and only 1% share is given by private sector banks.

Atal Pension Yojana (APY)
This scheme was announced in 2015-16 budget by the Government to help those working in the unorganized sector. Under this program pension of Rs5,000 per month, tax benefits, contribution of Indian Government is given and it is a risk-free scheme. It is a

voluntary scheme and managed by the Pension Fund regulatory and Development Authority (PFRDA).

Figure 5: Yearly APY Subscriber Addition
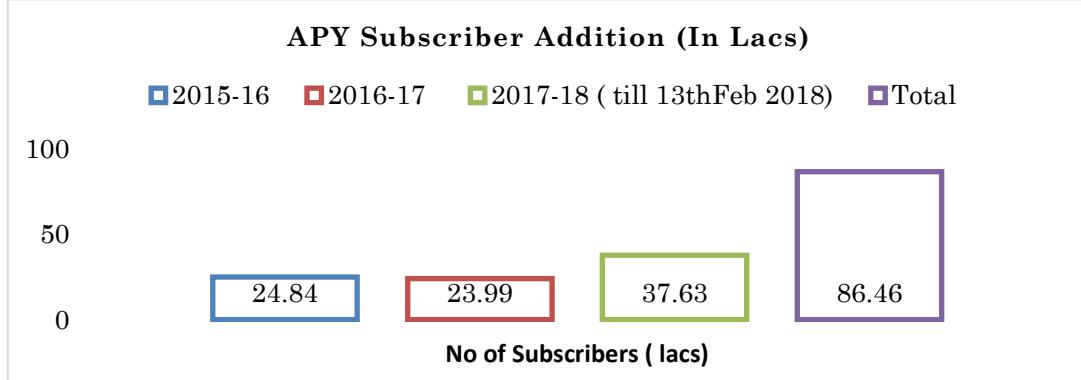
Source: npstrust.org.in/atal-pension-yojna

The subscribers are on a rise in APY scheme since 2015 to 2018 as shown in figure 5. The pensioners, belonging to the unorganized section, have increased from 24.84 lacs in 2015-16 to 37.63 lacs in 2017-18. The total pensioners as on 13th February 2018 is recorded at 86.46 lacs as per the data source.

Pradhan Mantri Vaya Vandana Yojana (PMVVY)
A Pension scheme specially designed for the senior citizens of India, wherein the policy period will be of 10 years and minimum pension will be Rs1,000, Rs3,0000 Rs6,000 and Rs12,000 on monthly, Quarterly, half yearly and yearly basis respectively. The pensioners can avail this scheme from 4 May 2017 to 31 March 2020. It can be purchased from Life Insurance Corporation (LIC) by online or offline mode. The aim is to protect the senior citizens in the times when the interest rates decline.

Stand Up India Scheme
Stand up loan scheme aims at providing bank loan from 10 lacks to 1 crore to at least one Schedule Caste (SC) or Schedule Tribe (ST) and one women borrower to start a green field enterprise involving trading, manufacturing or providing services. It is offered by all branches of Scheduled Commercial banks. It is a combination of loan and working capital given at lower rate of interest than the usual loans.

Pradhan Mantri Mudra Yojana (PMMY)
Launched as PMMY in 2015, MUDRA is an acronym for Micro- Units Development and Refinance Agency. Loan for business is given from Rs 50,000 to Rs.10,00,000 as categorized as Sishu, Kishore and Tarun to assist the small scale business houses to grow and expand. Both profit making and non -profit making companies can avail this loan. Almost all the activates that help in creating employment opportunity and income generation are funded under this scheme. Shopkeepers, vendors, transporters, traders, small businesses, agriculturists etc., can borrow loan under MUDRA scheme. Relief, Interest Subsidy and discounts on quick interest payments are some of the benefits embedded in this scheme.

Figure 6: Loans Sanctioned under PMMY (In Lacs)

Loans Sanctioned under PMMY (In Lacs)

■ 2015-16 ■ 2016-17 ■ 2017-18 ■ 2018-19 ■ 2019-20 ■ 2020-21 ■ 2021-22

Number Of PMMY Loans Sanctioned (in lakhs)
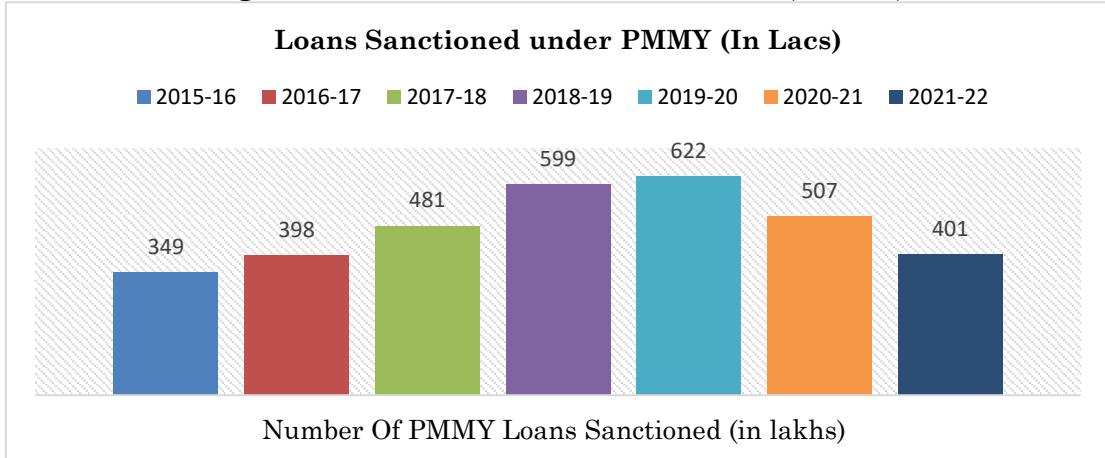
Source: Mudra.org.in

A specially designed scheme by the Indian Government to cater to the borrowing needs of all the businesses and all the sections of the society is PMMY. The number of loans sanctioned (in lakhs) from 2015-16 to 2021-22 is well portrayed in figure 6. Maximum loans that are 622 lakhs were applied and given in the year 2019-20.

Sukanya Samriddhi Yojana (SSY)

For the welfare and betterment of girl child this scheme is launched in order to encourage savings for the girl in every family. Maximum tenure of the scheme if 21 years or till she attains 18 years and gets married whichever is earlier. Interest if 7.60% p.a. is offered and investment amount can be between Rs250 to Rs1.5 lakhs p.a. maximum. Tax benefit is also attached to this scheme.

To encourage savings and build a corpus for girl child it is expected by the government that all the SCB shall contribute in implementing this SSY scheme. However, Private sector banks has only 4% distribution to its credit out of the total. Here also banks in the public sector has played phenomenal role in making this scheme a success.

Figure 7: SSY Accounts of the States

States with highest number of SSY accounts	States with lowest number of SSY accounts
Uttar Pradesh - 29,12,632	Lakshadweep - 331
Tamil Nadu - 26,03,872	Andaman and Nicobar Islands - 5,305
Maharashtra - 23,13,584	Ladakh - 6,209
Madhya Pradesh - 22,17,375	Mizoram - 10,204
Karnataka - 21,08,078	Sikkim - 11,455
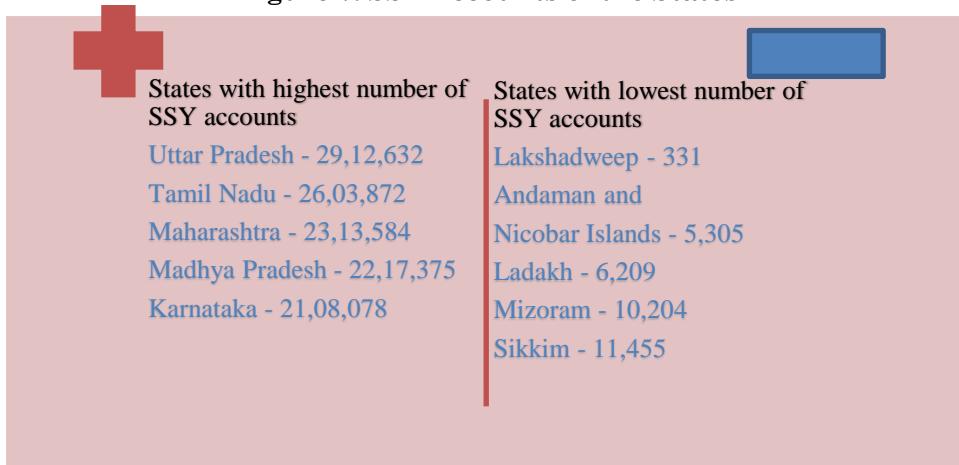
Source: pib.gov.in/Press Release Iframe Page

Figure 8: Distribution proportion of SSY

Source: pib.gov.in/ Press Release Iframe Page
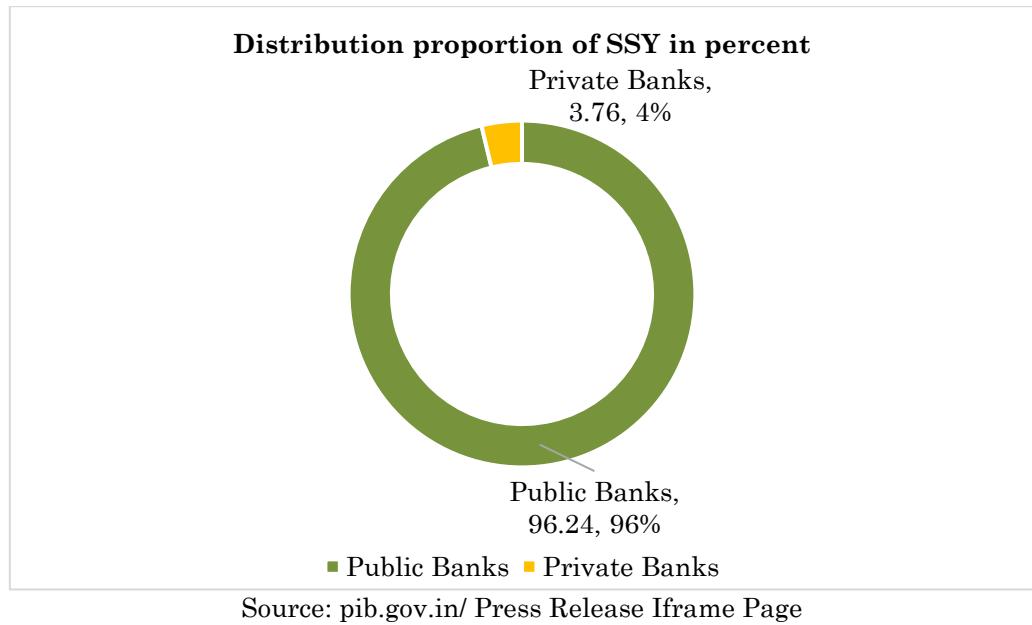
Operation of Financial Inclusion

In order to realize the goal of financial inclusion, the RBI have asked banks be it public or private sector bank, to prepare and implement FIPs- Financial Inclusion Plans, to bring maximum adults in the purview of financial system. This includes opening of branch accounts in villages and converting the unbanked into banked individuals.

Figure 9: Region-Wise Number of Branches of Regional Rural Banks
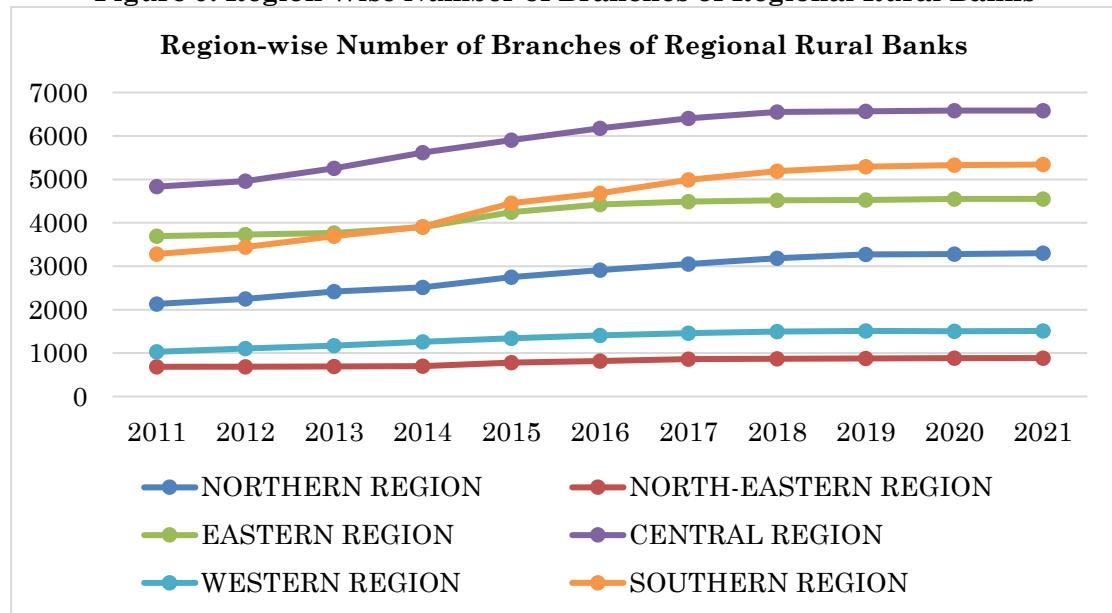
Source: RBI, Publications-Annual Handbook of Statistics on Indian Economy

Figure 9 displays the region-wise spread of RRBs all over India. Data from 2011 to 2021 mirrors the fact that the RRBs are successfully spreading their branches in all

the corners and the remotest part of the country.

With the Indian schedule commercial banks doing their portion of the job to increase financial reach, other informal groups like Self Help Groups also are playing an extremely crucial role and assisting the Government in attaining the targets of financial inclusion.

Self Help Group assisting in spreading awareness about savings, loans offered by the banks and various other scheme offered by the government for the benefit of the under privileged population is well demonstrated in figure 10. Five years Data from, 2016-17 to 2020-21 indicate that all the three facilities Loans Disbursed, Loans Outstanding and Savings with the banks in numbers has escalated in past 5 years due the efforts of the SHG in the country. The SHG's continued efforts to spread financial literacy is proclaimed in figure 11. Here all the contribution of SHG is shown in amount Rupees (crores). Concentrating on savings with banks alone, it was Rs. 38,781 (crores) in 2016-17 which peaked to Rs. 58,071(crores) in 2020-21. This is marvelous achievement as SHG has proven to be an aid in channelizing the savings from small household into the economy of the country.

Figure 10: Contribution of Self Help Group in Financial Inclusion
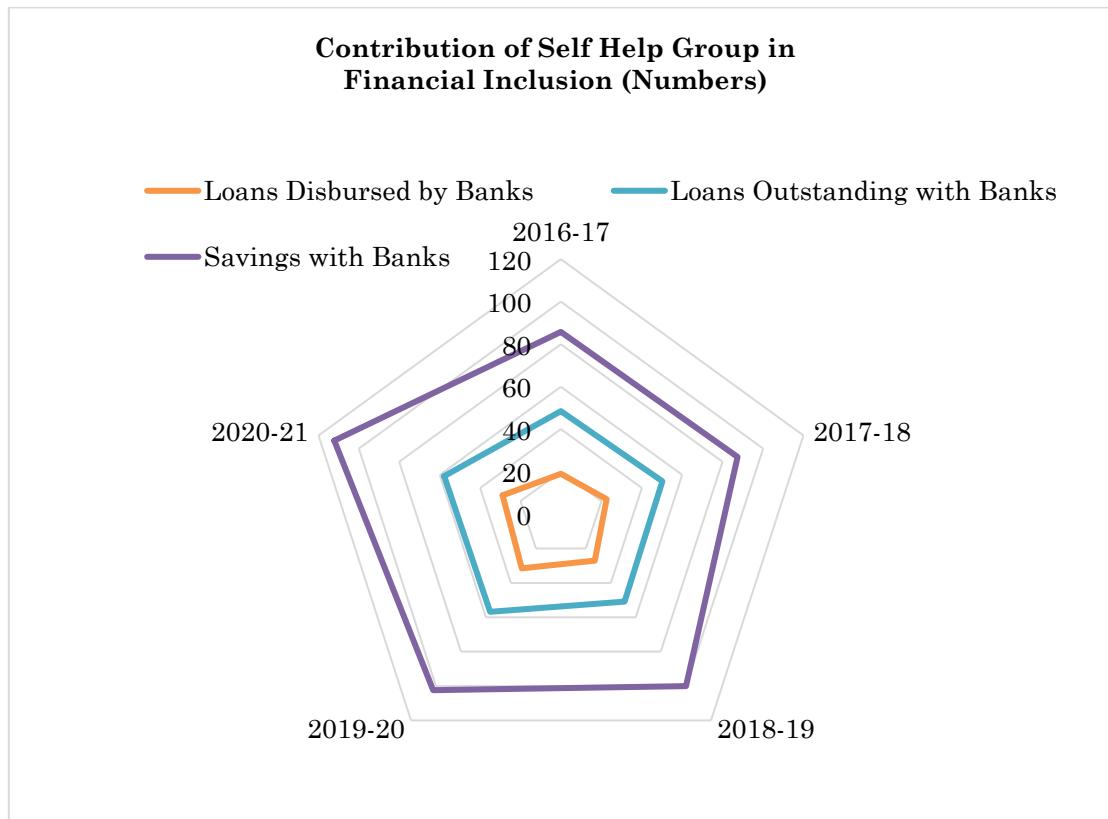
Source: RBI, SHG-Bank Linkage Programme

Figure 11: Contribution of Self Help Group in Financial Inclusion

Contribution of Self Help Group in
Financial Inclusion (Amount in Crores)

- Loans Disbursed by Banks
- Loans Outstanding with Banks
- Savings with Banks

	2016-17	2017-18	2018-19	2019-20	2020-21
Savings with Banks	16,114	19,592	23,325	26,152	37,478
Loans Outstanding with Banks	61,581	75,599	87,098	108,075	103,290
Loans Disbursed by Banks	38,781	47,186	58,318	77,659	58,071
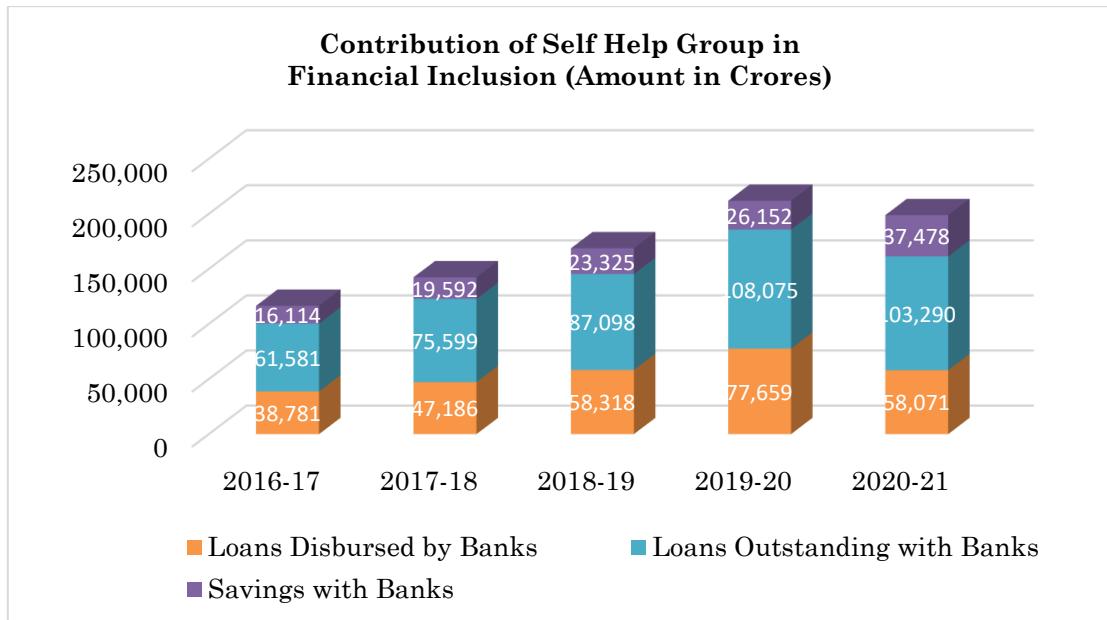
Source: RBI, SHG-Bank Linkage Programme

Women Empowerment one of the goals of Financial Inclusion

This program is very keen regarding considering and including women in it preview as it is believed that women are more capable of taking care of household. Hence, increased efforts are made to bring more and more women into financial inclusion umbrella by providing them financial literacy and involving them in financial management activities.

Figure 12: Trends in Bank Account Ownership in India

Trends in Bank Account Ownership in India (In Percent)

- 2011
- 2014
- 2017

	2011	2014	2017
ALL ADULTS	38	56.8	83.1
WOMEN	26.5	43.1	76.6
POORST 40% HOUSEHOLD	27	43.6	77.1
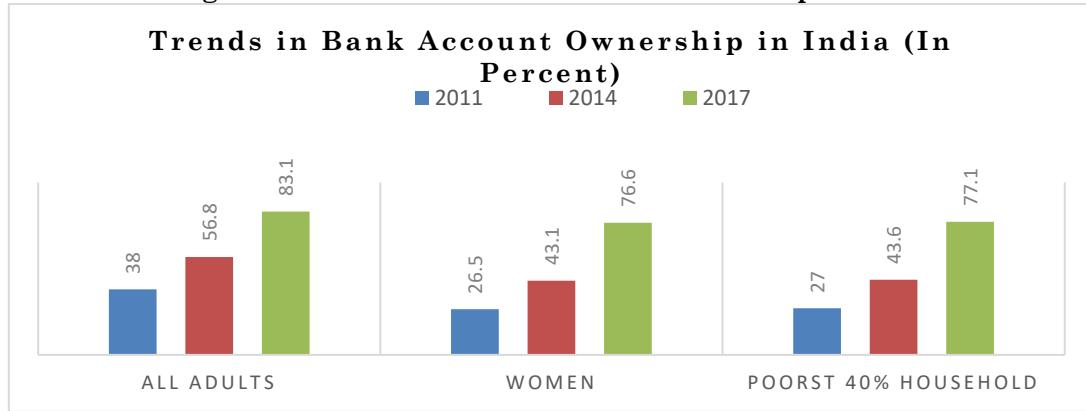
Source: Global Findex database.

Banks and other financial institutions focus on women empowerment and aim at making them financially independent by offering special rates, discounts, subsidizes, lower interest rates on loans. Even savings accounts are given with several concessions and benefits to them as compared to men.

The figure 12 reveals that bank accounts owned by women in India has grown from 26.5% in 2011 to 43.1% in 2014 and to 76.6% in 2017. There has been a drastic increase in the ownership between 2011 to 2017 according to the Global Findex survey. Also, the gap between male- female ratio of ownership has reduced and there is shrink in the rich and poor inequality.

48

Fintech as an Aid to Financial Inclusion

The use of advanced technology in the financial sector is known as Fintech. With the advent of fintech, financial inclusion is improving all over the world. Many companies in India are meticulously working to make the process of providing financial service simply and easy and at minimal costs. Mobile phones are helpful in opening bank accounts and applying for loans in the rural areas. There are advanced options of banking available to the rural and urban people as fintech options like crowdfunding, peer-to-peer lending, digital payment systems, electronic wallets which can cater to their borrowing needs on informal grounds.

Financial Inclusion through digital payment Systems

Many electronic wallet systems is implemented by the government by which one can make payments sitting at their residence. BHIM- Bharat Interface for Money, Aadhar Pay, Unified Payment Interface (UPI), Unstructured Supplementary Service Data (USSD), Immediate Payment system (IMPS), National Electronic Fund Transfer (NEFT). People placed anywhere in the country transact with ease and convenience using their mobile phones. They sometimes offer discounts, cash backs, rewards and attractive offers to the users. This proves beneficial to the underprivileged people and they can save money. Apart from achieving financial inclusion, digital financing helps in curbing corruption.

Financial Inclusion Programs Organized by RBI
Basic Saving Bank Deposits (BSBDA) Accounts

The RBI has directed every bank in the country to offer Basic Saving Bank Deposits (BSBDA) accounts. These are no- frill accounts given to the weaker section of the society, where they need not maintain the minimum balance as required otherwise. They enjoy ATM, can use electronic payment channels for their transactions.

Table 1: Progress of BSBDA in Financial Inclusion

Financial Inclusion Plan: A Progress Report (End-March)			
Particulars	2010	2019	2020*
BSBDA - Through Branches (No. in Lakh)	600	2,547	2,616
BSBDA - Through Branches (Amt. in Crore)	4,400	87,765	95,831
BSBDA - Through BCs (No. in Lakh)	130	3,195	3,388
BSBDA - Through BCs (Amt. in Crore)	1,100	53,195	72,581
BSBDA - Total (No. in Lakh)	735	5,742	6,004
BSBDA - Total (Amt. in Crore)	5,500	1,40,960	1,68,412
OD Facility Availed in BSBDAs (No. in Lakh)	2	59	64
OD Facility Availed in BSBDAs (Amt. in Crore)	10	443	529

Source: RBI, Financial Inclusion: Policy and Progress (FIP) returns submitted by banks.

Table 1 showcases the progress report of the Financial Inclusion Plan of India over a decade from 2010 to 2020. Remarkable achievements are noted in all area of BSBDA- through branches as well as through BCs. Also, people taking benefit of OD facility has risen over these years.

Know Your Client (KYC)
KYC regulations are also made mandatory to be adhered by all banks as per the instruction of RBI. These requirements are made simple in case of low-income individuals (amount not above Rs50,000) who wants to open a bank account especially in the rural areas. In these cases, only presenting of Aadhar card is accepted as identity proof as well as address proof.

Village coverage: In spite of getting better, there are still many villages in India that are very remote and do not banks and have no access to nearby banks due to lack of transportation services. Hence the RBI has always encouraged the banks to open more and more branches in the villages and in the remotest part of the country. It is made compulsory by the RBI to open at least 25% of the total branches in the unbanked (Tier 5 and Tier6) rural center.

Table 2: Leveraging Digital Technology to Expand BC Services across Rural India

Particulars	March 2010	March 2019*	March 2020*	December 2020*
Banking Outlets in Villages—Branches	33,378	52,489	54,561	55,073
Banking Outlets in Villages>2000—BCs	8,390	130,687	149,106	851,272
Banking Outlets in Villages<2000—BC	25,784	410,442	392,069	385,537
Total Banking Outlets in Villages—BCs	34,174	541,129	541,175	1,236,809
Banking Outlets in Villages—Other Modes	142	3,537	3,481	3,440
Banking Outlets in Villages—Total	67,694	597,155	599,217	1,295,322

Source: RBI Annual Reports

Covering Villages by virtue of Digital Technology and tapping the services of Business Correspondence has helped achieve great targets. Looking at the data in Table 2, there were only 33,378 Banking Outlets in villages (Branches) in March 2010 which has climbed up to 55,073 Banking outlets in villages (Branches) in December 2020. Similarly, Total banking Outlets in villages (BCs) were merely 34,174 in 2010 which jumped to 1,236,809 Banking Outlets in villages (BCs) in December 2020 according to the RBI data.

Financial Literacy Centers (FLCs)

It has been directed by the RBI to all the scheduled commercial banks located in the rural areas to enhance and further the financial literacy efforts. Outdoor financial literacy camps are organized once a month and till March 2013, 718 FLCs have been set up and 2.2 million people were educated via choupals, seminars, awareness camps by the end of March 2013 as per RBI data. Financial Inclusion is the key agenda of Indian Government, and it's a fact that still large population is excluded financially, it is important to first take up financial literacy. To spread literacy to farmers, villagers, micro and small entrepreneurs, senior citizens, Self Help Groups, an initiative was taken to educate school children about financial services in the state of Madhya Pradesh by different Banks. 5100 schools were covered in this Financial Literacy campaign as shown in the table.

Table 3: Project of Financial Literacy in Schools in M.P.

Name of the Bank	No. of Schools	Name of the Bank	No. of Schools
Allahabad Bank	172	Indian Bank	6
Andhra Bank	7	Indian Overseas Bank	24
Axis Bank	15	IndusInd Bank	1
Bank Of Baroda	120	Madhyanchal Gramin Bank	415
Bank Of India	426	NJGB	414
Bank Of Maharashtra	112	OBC	31
Bhopal Central Co-Op Bank	5	PSB	14
Canara Bank	53	Punjab National Bank	232
Central Bank of India	677	SBBJ	3
CMPGB	539	SBI	1347
Corporation Bank	12	Syndicate Bank	35
Dena Bank	27	UCO Bank	117
HDFC Bank	18	Union Bank of India	185
ICICI Bank	19	United Bank of India	31
IDBI Bank	28	Vijaya Bank	15
Grand Total		**5100**	

Source: Central Bank of India

Special Financial Products offered for Attaining Financial Inclusion

It is fact that people of low income group residing in rural as well as in urban areas are unaware of debit cards and credit cards. They only know about the basic facility of savings account, savings schemes, crop loans and personal loans. Due them having a limited access to these financial facilities, RBI has asked the banks to offer following products to the poor and the unbanked citizens.

Figure 13: Progress in GCC in Number in Lakhs
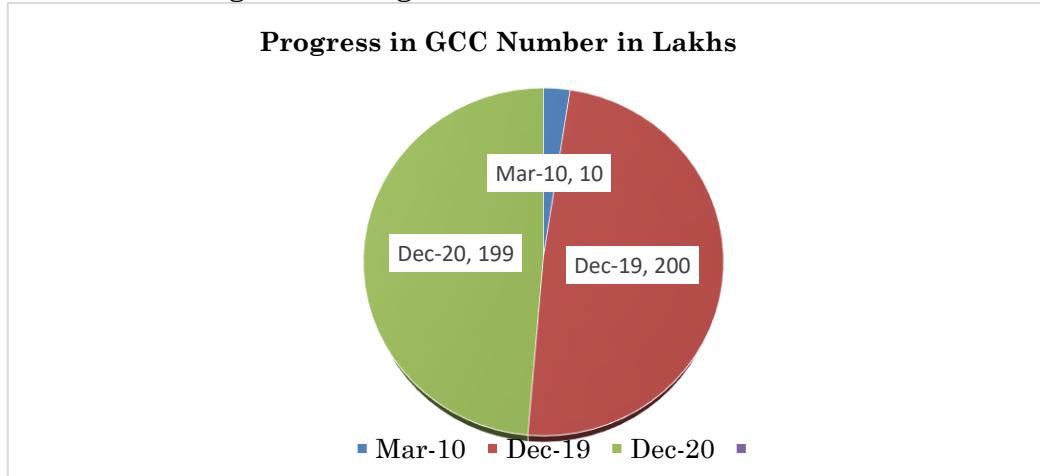
Source: Credit Delivery and Financial Inclusion, RBI Annual Report 2021

51

However, these populations cannot document a sound financial position in order to fetch the credit facilities. Hence, banks give them cost-efficient credit cards like:

General Credit Cards (GCC): Under the directives of RBI, banks launched the General Credit Cards (GCC) to the having a credit limit of RS. 25,000 from those branches that were located in rural and semi-urban areas.

The issuance of these General Credit cards grew from 10 Lakhs in 2010 to 200 Lakhs in 2019 and was 199 by the end of December 2020. Similarly, when stated in terms of Amount in crores it was merely Rs. 3,500 Cr in 2010, and then Rs.1,84,918 Cr. In 2019 and in 2020 it registered at Rs.1,73,968 Crores.

Kissan Credit Cards (KCC): Banks on the instructions of RBI are providing KCC to small marginal farmers with very low incomes. These cards will help them to purchase crop seeds, tools for farming, pesticides, fertilizers, storage warehouses tractors and land for farming. This facility will enable to become independent on not rely on landlords who many a times manipulate them by giving costlier loans in the time of need.

Table 4: Kisan Credit Card (KCC) Scheme

Year	2019-20	2020-21 (April- December) *
Number of Operative KCCs (Lakhs)	241.5	275.95
Outstanding Crop Loan (Amount is Crores)	4,23,587.80	4,12,749.23
Outstanding Term Loan (Amount is Crores)	46,555.80	47,644.70

Source: RBI, Kisan Credit Card (KCC) Scheme

Kisan Credit Card Scheme advancement is recorded in Table 4. Number of Operative KCCs grew from 241.5 in 2019-20 to 275.95 in December 2020-21. Outstanding Crop loans and term loans given in terms of rupees is also displayed which is not rising much and is more or less stable

ICT-Based Accounts: In a way to help banks to reach out the unbanked population of the country, RBI has made a plan by offering ICT- Information and Communication Technology based bank accounts via business correspondents (BCs). These accounts offer a very inexpensive and easy way to withdraw cash, deposit cash, apply for loans and other forms of credit.

The figure 14 very clearly reveals the number of branches opened by all SCB in Rural, Semi-rural, Urban and Metropolitan. In 2021, there were 28.828 Rural branches of public sector banks whereas, only 7,431 Rural branches of Private sector banks existed in the same year. To the contrary foreign sector banks registered only 124 branches in rural area in the year 2021.

Increase in ATMs: The RBI has noted that there are many parts of India that do not have ATMs (Automated Teller Machines). ATM facilitates availability of cash and depositing the money. However, there is an increase in the number of ATMs across the nation in the past few years as oer the data available. White label ATMs are also established by private entities in India under the supervision of RBI to increase this ATM facility.

Figure 14: Branches of Scheduled Commercial Banks at the End of March 2021

Source: RBI, Publication-Annual-Handbook of Statistics in Indian Economy.
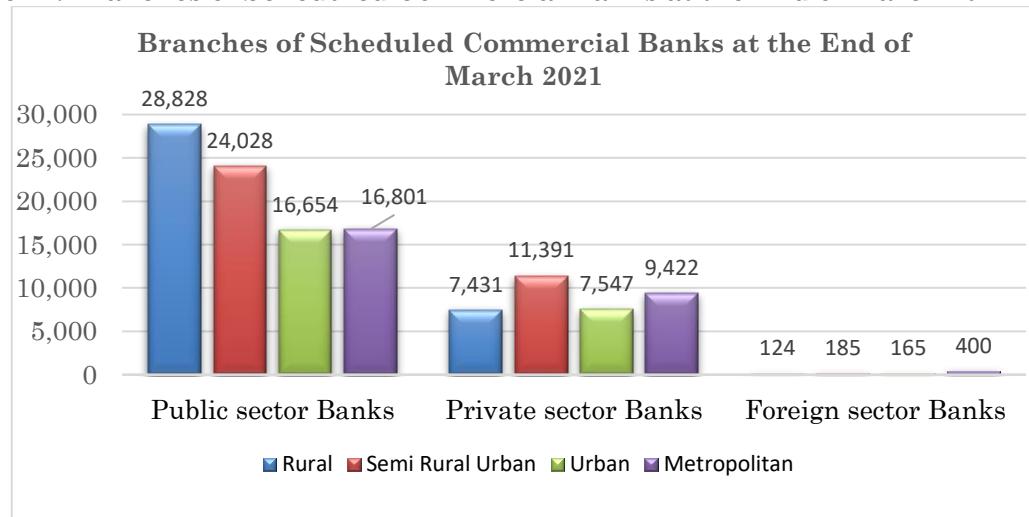
Figure 15: ATMs of Scheduled Commercial Banks in 2020 and 2021

Source: RBI, Publication-Annual-Handbook of Statistics in Indian Economy.

ATM facility is a must in today's world and chart 20 very vividly describes the reach of ATM in almost all the cities and town of the country. Offsite and Onsite ATMs are included to arrive at the culmination that public sector banks lead in this section followed by Private sector banks. ATMs of foreign sector banks also exists in the country but their share is highly insignificant as compared to other two sectors of the banking industry.

Financial Inclusion through Microfinance
Micro finance is an excellent means to provide funds to the economically challenged individuals. It refers to offering micro loans, savings instruments and other financial product and services to small scale enterprises and those who are less fortunate as they

are unable to tap the traditional banking options. This facility helps the impoverished persons to come out of their hopeless financial condition by starting a small business or get a job and improve their standard of living. It is a magnificent mode of achieving financial inclusion as it is very cost-effective. The remarkable growth of Microfinance Institutions in the form of numbers and amount for loans disbursed and outstanding with banks is set forth as per NABARD report. The number of loans disbursed and outstanding in 2016-17 were 2,314 and Rs. 19,304 (crores) which rose to 28,562 and Rs. 12,739 (crores) respectively, in 2020-21. In terms of loans outstanding with banks it was Rs. 29,225 (crores) in 2016-17 to Rs.22,6602 (crores) in 2020-21. This shows that loan outstanding with banks by the micro industries is under supervision and control.

Insurance Penetration

Financial Inclusion is usually thought of as availability to financial services at a reasonably low cost only. But it includes Insurance as well, a part of other financial services as suggested by The Committee on Financial Sector Reforms led by Chairman Dr. Raghuram G. Rajan. According to the data of IRDA – Insurance Regulatory and Development Authority life insurance penetration as on January 2021 was only 3.6% of the GDP as against 7.13% of global average. In case of non-life insurance, it reported only 0.94% of GDP as opposed to the world average of 2.88%.

Figure 16: Penetration of Life and Non-Life insurance across India
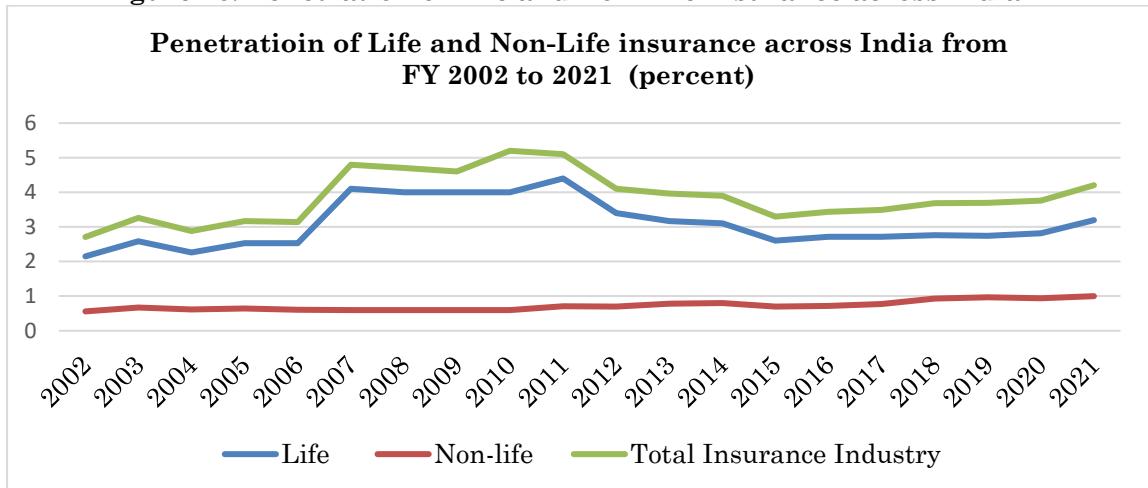
Source: irdai.gov.in

The overall insurance penetration in the country is below the average than that of the global level. The data of almost 2 decades from 2002 to 2021, in figure 16, unveils that India is very slow in catching up with the penetration of insurance in the country. Also, where the acceptance and popularity of Life insurance has gained some success, penetration of non-life insurance is very poor and is lagging behind.

Equity and MFI Penetration

Equity and Mutual fund investment is only 5% of GDP as mirrored with world average of 35%. It is the lowest as compared to other countries of the world. As clearly exhibited in the figure 17, India is lagging behind the rest of the countries in the world in respect to Equity and Mutual fund penetration. This low demand can be attributed to low level of literacy, cultural attitudes and low supply of Mutual Funds from AMC- Asset Management Companies, outside the major cities. This ratio can he increased by rising

the awareness. Easing the transitioning and laying down a structure to bring more individuals in the brackets of Equity and Mutual fund.

Figure 17: India's Mutual Fund Assets as Percent of GDP as on 2019
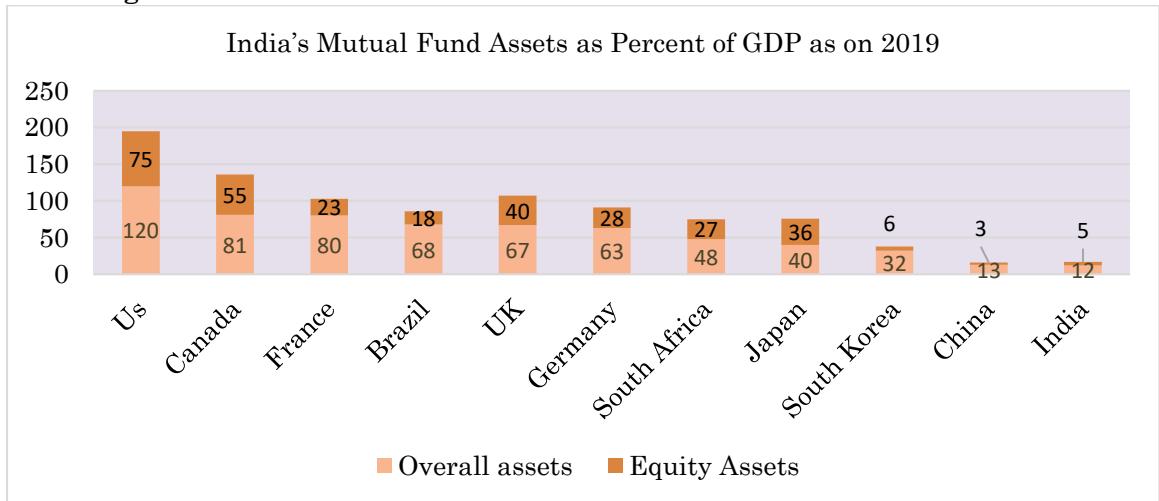
Source: World Bank

Banks Credit to MSME

The Micro, small and Medium Enterprise need regular funding in order to grow and establish. Indian Government has taken several steps and launched many schemes to provide credit to MSMEs as they contribute in building a strong economy.

Private Corporates assisting in Financial Inclusion

Along with the Government, many private corporates are contributing in gain success in the goal of financial inclusion. Several projects are organized and implemented to cover the low income individuals in the development projects. Programs like E-Choupal or E-Sagar by ITC, Haryali Kisan Bazaar by DCM, project Shakti by Hindustan Unilever and alike.

Table 5: Bank Credit to MSMEs (No. in Lakhs and Amount in Crores)

Enterprise Type		2018-19	2019-20	2020-21
Micro Enterprises	**No. of Accounts**	255.6	352.9	394.48
	Amount Outstanding	6,59,102.4	7,16,962.3	7,63,109
Small Enterprises	**No. of Accounts**	23.03	23.26	23.26
	Amount Outstanding	6,38,030.8	6,33,624.9	6,33,624.9
Medium Enterprises	**No. of Accounts**	2.6	3.52	5.32
	Amount Outstanding	1,97,419.2	1,95,487.0	2,70,924
MSMEs	**No. of Accounts**	320.68	379.69	423
	Amount Outstanding	15,10,650.5	15,46,074.2	16,86,325

Source: RBI, Annual reports

Table 5 vividly describes the increase in credit extended by banks to micro, medium and small enterprises during 2018 to 2021 in number of accounts and Amount of loans outstanding.

Conclusion

From playing a prominent role in poverty reduction to lessening the distance between financial institutions and customers, financial inclusion strategy of India has reflected its impact thoroughly with time. Tracking down its progress and potential in this paper, FI`s high rise in achieving its determined targets in almost all schemes and sectors has been observed. The study derives that by implementing National Strategy of financial inclusion, it will be a win-win situation for one and all, as the banking sector will receive stability and customers will be able to enjoy financial products and services. In spite of achieving a remarkable progress there still is a long way to tread on to accomplish the aim of the population being banked from remaining unbanked in India.

References

Aanchal, S., & Bindu, A. (2018). Financial Inclusion: Importance In India. *Ideal Journal of Management & IT*, *09*, 17–20.

Abel, S., Mutandwa, L., & Roux, P. Le. (2018). A review of determinants of financial inclusion. *International Journal of Economics and Financial Issues*, *8*(3), 1–8. http://www.econjournals.com/index.php/ijefi/article/view/5458

Demirguc-Kunt, A., Klapper, L., & Singer, D. (2017). Financial Inclusion and Inclusive Growth: A Review of Recent Empirical Evidence. *Financial Inclusion and Inclusive Growth: A Review of Recent Empirical Evidence*, *April*. https://doi.org/10.1596/1813-9450-8040

Ozili, P. K. (2018). Impact of digital finance on financial inclusion and stability. *Borsa Istanbul Review*, *18*(4), 329–340. https://doi.org/10.1016/j.bir.2017.12.003

Parijat, D., & Barua Nissar A. (2020). Financial Inclusion in India -A State-wise Analysis. *International Journal of Management*, *11*(10), 816–827. http://iaeme.com/Home/issue/IJM?Volume=11&Issue=10

ur Rehman, A. (2020). Innovation and Management by Regional Rural Banks in Achieving the Dream of Financial Inclusion in India: Challenges and Prospects. *Marketing and Management of Innovations*, *1*, 222–234. https://doi.org/10.21272/mmi.2020.1-18

Websites

https://www.crisil.com/en/home/our-product.html

https://globalfindex.worldbank.org/

https://pmjdy.gov.in/

http://pib.gov.in/PressReleaseIframePage.aspx

https://www.npstrust.org.in/atal-pension-yojana

https://www.mudra.org.in/

www.rbi.org.in/scripts/AnnualPublications

https://nrlm.gov.in/shgOuterReports.do

https://data.gov.in/

https://m.rbi.org.in/Scripts/AnnualReportPublications.aspx?Id=1288.

www.ibef.org/industry/insurance-sector-india.aspx

https://www.statista.com/statistics/

https://www.irdai.gov.in/

https://www.imf.org/en/Countries/IND

.....***.....

Information Seeking Behaviour of Household Investors –A Study in Kamrup & Kamrup Metropolitan District Assam

SABITA BHAGABATI* and DR. SANJEEB K JENA*

Abstract

Savings and investments of every household have a close relationship with their household income and expenditure. Apart from these two variables household savings-investment is also influenced by their knowledge level on financial avenues and habit of searching for information about the financial avenues so that they can gather knowledge and information about risk and return associated with that particular avenue. This paper is an attempt to understand the information seeking behaviour of household heads for investment and savings purposes from their surplus of (disposable) income. A sample of 150 households is studied to understand their monthly income, expenditure and savings-investment habits at the current time. It also studies the information-seeking behaviour of household heads based on Likert scale data.

Keywords: Information-seeking behaviour, savings, investment.

JEL Classification: G02

*Ph.D. Research Scholar, Rajiv Gandhi University, Arunachal Pradesh, E-mail Id: sabitabhagabati064@gmail.com
**Professor, Department of Commerce, Rajiv Gandhi University, Arunachal Pradesh, E-mail Id: sanjeeb.jena@rgu.ac.in

Introduction

Households' disposable income and expenditure play an important role in managing the living standard of every family. Excess income over expenditure in a household is the amount that determines the future of that particular household. Savings in the form of bank deposits and in places where fixed income can be generated can help in generating income from surplus income but at a slow speed with a low risk of return. Investment in places where income is fluctuating and where a high level of risk is associated can help in earning more in a short period or may lose it. Thus, the uncertainty is associated with a high-risk investment with chances of higher return. The census of 2011 revealed that the literacy rate in India is 74.04 per cent, 82.14 per cent male and 65.46 per cent female. For the financial year 2021-22, India's GDP at current prices was Rs.147.35 trillion. The gross savings rate in India is recorded at over 28 per cent in the fiscal year 2021. Therefore, it is important to study the savings-investment habit of households and their information searching behaviour for investment purposes. Educated people are more aware of different investment avenues if they have left sufficient surplus income. Uneducated people are largely dependent on the fixed income-bearing source of savings-investment avenues due to fear of losing their money. Therefore, it is very important to study whether people have the habit of searching for information regarding the investment of their surplus money in adequate sources where they can earn more in a short time or they can higher with a higher risk of losing their money. This study is an attempt to study that part from income and expenditure variables whether household savings-investment is also influenced by their habit of searching for information about the financial avenues so that they can gather knowledge and information about risk and return associated with that particular avenue.

Literature Review

In most of the studies, the researchers study the information-seeking behaviour of equity investors and mutual fund investors only. (Andal & Padma, 2021; Muthuswamy & Devi, 2015)) Most investors prefer the internet/web sources to collect the information for making equity-related investments. They also seek advice from stock brokers and financial advisors for information. The stock brokers and financial advisors are a reliable source of information and their advice will be realistic because they have deep knowledge of the stock and share price movements.

Another study revealed that investors search for information online for making investment decisions (Adamopoulos, 2013). The online information environment can influence investors and change their behaviour by enabling new strategies that were not previously available. Online technologies also enhance the investing experience and make it more interesting and exciting.

Most retired investors sought information from mass media, watched TV programs about stock analysis, read printed handbooks to look for stock-priced indexes and applied sought information to their stock investment plans (Sriborisutsakul & Inthong, 2018). It was found that lack of information search training had the highest mean value and coverage of information obtained from a source was also considered as a major factor in the selection of information sources among the survey respondents.

A study on the information seeking behaviour of US retired employees revealed that female investors were less likely to create information-intensive fields and this tendency is exacerbated by low educational attainment (O'Connor, 2013). In addition, male investors were more likely to adopt internet technology for their investing information seeking regardless of their educational attainment.

From the literature review, it is found that most of the study is related to the information seeking behaviour of equity investors only. It is also important for household members to search for information on low-risk savings-investment avenues also. Since 64.61 per cent of the Indian population are the rural population with a low level of education it was important for them to have minimum information-seeking habits regarding the low-risk savings-investment avenues also so that they can compare the return (interest) of different banks on their savings and they become aware of it.

Research Methodology

For the present study, 150 households are randomly selected from the Kamrup and Kamrup Metropolitan districts of Assam for understanding their habit of information-seeking behaviour. It is tried to find out the sources of information that the household head seeks before savings or investment decisions. Simple frequency tables, mean etc. are calculated to present the data collected from the primary survey. For literature review purposes different research papers and thesis from websites have been studied to find out the literature gap.

Results and Discussion

The table 1 indicates gender wise education level of the respondents. It is found that out of a total of 150 respondents 83.33 per cent are male members who were household heads. In both, the gender categories majority (50.67 per cent) of them are post-graduates. It signifies that the majority of the respondents are highly educated.

Table1: Gender-wise education level of Respondents

		EDUCATION				
		School Education	College Education	University Education	Technical/ Professional Skill	Total
GENDER	MALE	10	32	65	18	125 (83.33)
	FEMALE	7	4	11	3	25 (16.67)
Total		17	36	76	21	150

Source: Primary Data

It is found in table 2, that out of 125 male head households, the majority (42.40 Percent) are associated with business, followed by 32 per cent are associated with the profession and only 26 per cent do service. In addition, it is revealed that out of 25 female head households, most of them (48 per cent) are doing service.

Table2: Gender-wise occupation of Respondents

		OCCUPATION			
		Service	Business	Profession	Total
GENDER	MALE	32	53	40	125
	FEMALE	12	8	5	25
Total		44	61	45	150

Source: Primary Data

The majority (16.67 per cent) of the respondents under the age group 36 to 45 have completed their post-graduation study, followed by 13.33 per cent of respondents under the age category of 26 to 35 who have completed their post-graduation (Table 3). It is also found that 9.33 per cent of the respondents under the age category of 26 to 35 have completed their graduation. The study revealed that age-wise 36 to 35, 26 to 35 and 18 to 25 categories of respondents are highly educated.

Table3: Age group-wise education level of Respondents

		EDUCATION				
		School Education	College Education	University Education	Technical/ Professional Skill	Total
AGE GROUP	18-25	3	5	13	4	25
	26-35	2	14	20	4	40
	36-45	8	13	25	8	54
	46-55	2	3	7	1	13
	56-65	1	0	5	3	9
	Above 65	1	1	6	1	9
Total		17	36	76	21	150

Source: Primary Data

Table 4 reveals that the majority (40.67 per cent) of the respondents who are associated with the business are under the age category of 36 to 45 (13.33 per cent) and 26 to 35 (11.33 per cent). The category profession also reveals the same pattern. Out of 30 per cent of respondents, 12.67 per cent of respondents are under the age category of 36 to 45. Out of 29.33 per cent of respondents who are under the service category of occupation, 10 per cent are under the age category of 36 to 45.

Table4: Age group-wise Occupation of Respondents

		OCCUPATION			
		Service	Business	Profession	Total
AGE GROUP	18-25	7	10	8	25
	26-35	12	17	11	40
	36-45	15	20	19	54
	46-55	5	5	3	13
	56-65	1	6	2	9
	Above 65	4	3	2	9
Total		44	61	45	150

Source: Primary Data

Figure 1: Monthly Current Income of Respondents
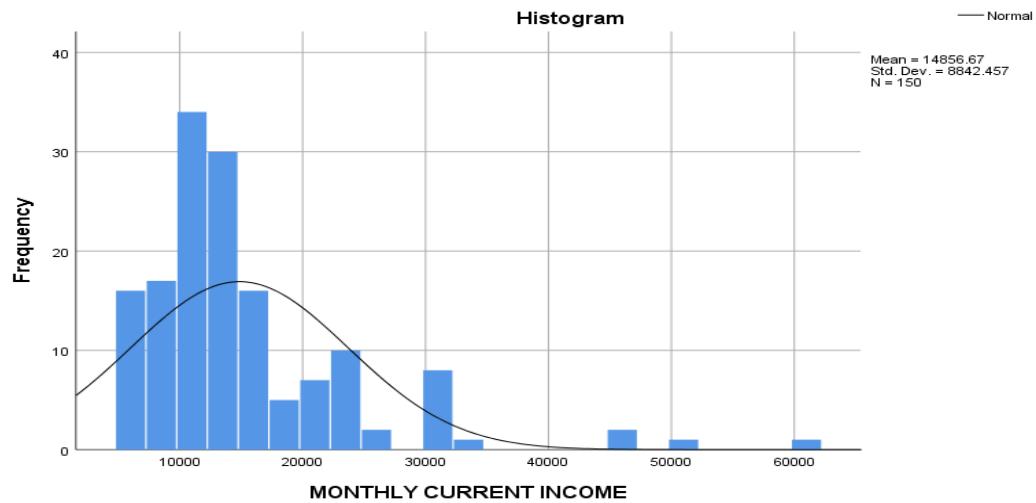
Source: Primary Data (extracted through SPSS)

The mean monthly income of 150 respondent households is found as Rs.14856.67 (Figure 1). It is found that the income of 150 households is not normally distributed.

The mean monthly expenditure of 150 respondent households is found as Rs.13276 (Figure 1). It is found that the monthly expenditure of 150 households is not normally distributed.

Figure 2: Monthly Household expenditure of the respondents

Source: Primary Data (extracted through SPSS)

60
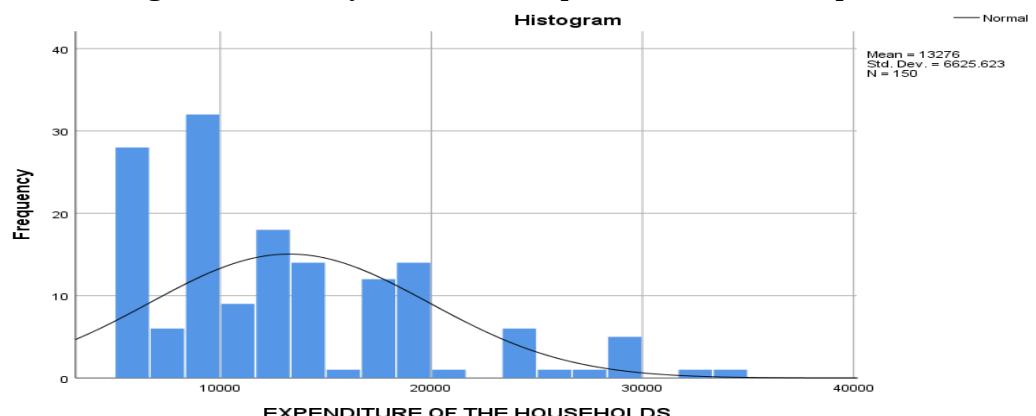
Table5: Savings-investment avenues used by the Respondents

			Frequency	Percent
POST OFFICE SAVINGS				
			Frequency	Percent
Valid	Yes		54	36.0
	No		96	64.0
	Total		150	100.0
LIFE INSURANCE SAVINGS				
			Frequency	Percent
Valid	Yes		58	38.7
	No		92	61.3
	Total		150	100.0
FIXED DEPOSIT WITH BANKS				
			Frequency	Percent
Valid	Yes		71	47.3
	No		79	52.7
	Total		150	100.0
LOCAL SOCIETIES				
			Frequency	Percent
Valid	Yes		38	25.3
	No		112	74.7
	Total		150	100.0
GOLD				
			Frequency	Percent
Valid	Yes		42	28.0
	No		108	72.0
	Total		150	100.0
REAL ESTATE				
			Frequency	Percent
Valid	Yes		40	26.7
	No		110	73.3
	Total		150	100.0
MUTUAL FUND				
			Frequency	Percent
Valid	Yes		39	26.0
	No		111	74.0
	Total		150	100.0
STOCK MARKET				
			Frequency	Percent
Valid	Yes		22	14.7
	No		128	85.3
	Total		150	100.0
DEBT MARKET				
			Frequency	Percent
Valid	Yes		28	18.7
	No		122	81.3
	Total		150	100.0

CRYPTO CURRENCY			
		Frequency	Percent
Valid	Yes	13	8.7
	No	137	91.3
	Total	150	100.0

Source: Primary Data

Table 5 shows the savings-investment avenues used by the respondents. It is found that out of 150 respondent households every household has at least one option as a savings/investment avenue. The majority of the households prefer fixed deposits, post office savings and LIC savings as a savings-investment option. Households are less aware and less willing to take risk of investment in the share market or debt market or cryptocurrencies. During the survey, it is also revealed that respondents are not interested to know about the share market. They are less likely to invest in high-risk avenues. They prefer a low-risk investment with a stable return earning source.

Table 6: Information seeking behaviour of Respondents for Savings-investment

	N	Minimum	Maximum	Mean	Std. Deviation
Television	150	1	5	3.05	1.228
Internet	150	1	5	3.03	1.228
Magazine	150	1	5	3.27	1.164
Search in Mobile Applications	150	1	5	3.18	1.221
Talk to Financial Advisors	150	1	5	3.29	1.167
Friends	150	1	5	2.97	1.195
Relatives	150	1	5	3.35	1.159
I do my investment based on information gathered	150	1	5	3.11	1.224
My income determines information seeking behaviour and investment habit	150	1	5	3.41	1.171
I save/invest anyhow a part of income after seeking information only	150	1	5	3.10	1.225

Source: Primary Data (extracted through SPSS)

The respondents agree that their income determines information-seeking behaviour and investment habit with a mean score of 3.41. It is followed by the mean score of 3.35, 3.29, and 3.27 where the respondents search for information from their relatives, financial advisors, and magazines respectively for making any financial decisions. The overall score from the study reveals that the respondents prefer low-risk investment avenues and since they prefer low-risk investment avenues, they are less interested in seeking financial information for investment in better return options. In addition, they recognise the fact that mainly the household's income determines the savings-investment capacity and interest.

Conclusion

The findings of the present study reveal that households in the studied area prefer low-risk investment avenues and their household income and expenditure determine the amount of savings-investment. They are also not interested in searching for information about high-opportunity investment avenues as those are high-risk options. The stability of income is also another factor which helps them not taking risk of

investment in high volatile investment avenues. It is also found that people are not aware of the rate of interest on their savings deposit or fixed deposit or life insurance savings. In addition, it should mention that further study can be conducted upon a large sample of household respondents for better results under the present study.

References

Adamopoulos, A. (2014). Information Behaviour of Online Investors. [Doctoral dissertation, RMIT University]. https://s3-ap-southeast-1.amazonaws.com/ap-st01.ext.exlibrisgroup.com

Andal, C.K. & Padma, D. (2021). Information-seeking behaviour of individual equity investors with special reference to Coimbatore district. *NIU International Journal of Human Rights, Volume-8, Issue-VII,* https://www.researchgate.net/profile/Padma-Dhandayuthapani/publication/353954185

Baldwin, N. S., & Rice, R. E. (1997). Information-seeking behaviour of securities analysts: Individual and institutional influences, information sources and channels, and outcomes. *Journal of the American Society for Information Science, Vol-48, Issue-8,* Pp.674-693.

Muthuswamy, P R; Devi, R R. (2015). Investors' risk perception and investors' information seeking behaviour on investment decisions. *International Journal of Management Research and Reviews, Vol. 5, Issue- 2,* Pp.91-100.

O'Connor L.G. (2013).The information-seeking and use behaviours of retired investors. *Journal of Librarianship and Information Science, Vol-45, Issue-1,* Pp.3-22. doi:10.1177/0961000611434761

Sriborisutsakul, S. & Suchawadee Inthong, S. (2018).Retired Investors' Information Seeking Behaviors Toward Decision-Making on a Stock Market Investment in Thailand. *American Scientific Publishers, Vol.12, Issue-1,* Pp.343-348. https://www.proquest.com/openview

.....***.....

Impact of Announcement of Lockdown on Sectoral Indices of Bombay Stock Exchange

MAHESH DAHAL*, JOY DAS** AND PAULAMI RAY***

Abstract

The outbreak and the rapid spread of the Coronavirus have significantly impacted society and is inflicting rising cost of lives worldwide. Isolation and lockdowns are supposed to be the only measures to resistor the spread of the virus but it has turned the health crisis into a situation of severe economic distress. With increasing uncertainties in the economy, confusion and panic among investors and dramatic reaction of the financial markets, it is necessary to study the impact of the remedial measures on the stock market. The present study focuses on examining the performance of all the sectoral indices of the Bombay Stock Exchange based on the event study methodology. The results reveal that the sectors including Auto, Basic materials, CD&S, Realty, Power show negative abnormal returns on and after the day of announcement of the lockdown. While, sectors like Healthcare, FMCG, and Telecom showed positive abnormal returns in the post announcement period.

Keywords: *COVID 19, Nation Wide Lockdown, Bombay Stock Exchange, BSE Sectoral Indices, Event Study Methodology*

JEL Classification: C58, G4, G1, G140

*Assistant Professor, Department of Commerce, PDUAM, Tulungia, Bongaigaon-783383, Assam Email: maheshdahal118@gmail.com (Corresponding Author)

**Assistant Professor, Department of Commerce, Tripura University, Tripura- 799022, Email: joy.kxj@gmail.com

***Guest Faculty, Department of Management, Tripura University, Tripura- 799022, Email: paulamiray18@gmail.com

Introduction

The sudden outbreak of the Coronavirus disease has adversely impacted lives, businesses, and the global economy at large. The first case of Coronavirus, also known as COVID-19, was identified in December, 2019 in Wuhan, China which in the following months has spread to several nations resulting in a global health crisis. The highly contagious nature of the disease posed serious challenges for the healthcare system all over the world to devise ways of controlling the spread. The WHO (World Health Organization) on 30th of January, 2020 declared the outbreak as Public Health Emergency of International Concern and it was declared as pandemic on 11th of March 2020 (Zhu et al., 2020). Millions of lives succumbed to this deadly virus and the most effective route available at that moment for slowing its spread was identifying, isolating and treating the patients. Thus, strict restrictions on travel, social events, public gathering were imposed which gradually slowed the spread of the virus but at the same time had serious negative impacts on the economy (Ashraf, 2020; Jones et al, 2021, Gogoi et al., 2022).

India being a highly populated country with a healthcare system not strong enough to handle the pressure of rapidly increasing number of coronavirus cases had to implement the world's strictest lockdown at the very onset of the pandemic (Ministry of Finance, 2021). These strict measures adopted by the government brought several sectors to a standstill and resulted in loss of livelihoods of hundreds of workers, disrupted education, and severely impacted the economy. Significant downfall and high volatilty

was noticed in the share markets due to the uncertainty related to the coronavirus and billions of rupees were reported to be withdrawn from the Indian stock markets in the month of March (Singh & Neog, 2020; Nadkar, 2020). Moreover, a fall of 22.6% in the BSE SENSEX and 31% in the Nifty was observed during that period (Thomas et al., 2020; Mishra et al., 2020). Negative emotions among investors contribute to further rise in volatility in the market (Lee et al., 2002). Thus, it is important to study the impact of an event as rare as COVID-19 pandemic on the stock market for better understanding of investors' behaviour.

Review of Literature

The pandemic being an unforeseen event with grave consequences have attracted a lot of attention from researchers and there have been numerous studies on various aspects of the COVID-19 pandemic. Numerous studies have been conducted to understand the impact of the pandemic on the global economy and financial markets, thus the researcher looks into the existing literature to form a better understanding of the devastating effects of the pandemic on the stock markets and the findings are presented below:

Sahoo (2021) studied the impact of COVID-19 on Indian stock market and found that the day- of-the-week effect is present on the returns of all the indices for the period of COVID-19 health crisis. Whereas, for the period prior to the COVID-19 health crisis, the day-of-the-week effect is noticed on the returns of a few indices-, i.e., Nifty 100, Nifty Midcap 100 and Nifty Midcap 50. No day-of-the-week effect was found for the other indices during this period.

Bora & Basistha (2021) investigated the effect of COVID-19 on the volatility of the stock prices in the Indian stock market and further tries to record the changes in return in the stock markets for the pre- COVID-19 era and during the COVID-19 era. During the pre-COVID-19 era, positive return for both the markets (NSE and BSE) was observed, while the returns for the COVID-19 period were negative and volatile.

Mishra et al., (2020) compared the impact of COVID 19 with that of Demonetisation and GST and observed that During the COVID-19 phase, BSE Sensex stock prices show negative growth but it was positive during the period of demonetisation and GST.

Sinha et al., (2020) found that stock markets show downward trend from January to last week of march and after that gradually start showing upward movement. In the banking sector, all the banks except HDFC bank, the IT software sector, the power generation sector, housing sector also shows negative CAR, whereas the FMCG sector has shown positive impact.

Chaudhary et al., (2020) showed that during the crisis period, all the indices show negative return as compared to the pre- crisis period. Only the healthcare sector showed positive return during the crisis period. The banking sector index, capital goods index and the realty sector index did the poorest performance.

Singh et al., (2020) studied the impact of pandemic on stock market of G-20 countries and reported that the period post- COVID-19 outbreak reported negative return and also showed greater volatility. The stocks markets of the developing countries experienced a greater negative impact as compared to developed countries. Alam et al., (2020) studied the behaviour of the Australian stock market during COVID 19 pandemic and observed that the healthcare and pharmaceutical sector shows positive abnormal returns before and after the event as the event has positive impact on the return of these sectors.

Mishra & Mishra (2020) examined the behaviour of selected Asian countries during the COVID 19 pandemic and the results indicated that the Coronavirus pandemic has negative impact on all the selected stock markets. O'Donell et al., (2021) on analysing

65

the stock markets of China, UK, USA, Spain, and Italy observed that the COVID-19 cases negatively impacted all the selected stock markets except that of China.

Zaremba et al., (2020) findings suggest that apart from the impact of the pandemic, strict measures adopted by the government result in higher volatility in the market. Among all the measures taken by government, campaigns with Coronavirus related information and cancellation of all public events are the policies responsible high volatility in the market Topcu & Gulal (2020) examined the behaviour of market indices for 26 emerging economies and show that Covid-19 has negative impact on all the emerging markets but the Asian markets have been most affected by the Coronavirus outbreak.

The existing literature consists of several studies on the impact of COVID-19 outbreak on the stock markets in different parts of the world including India which reveal that the COVID-19 outbreak had a negative impact on the stock markets. There are a very few studies examining the impact of the outbreak on the different sectors of the stock market, however, a dearth of studies depicting the reaction and also the performance of different sectors with reference to the announcement of the lockdown has been noticed. Thus, the present study has been under taken to understand the immediate impact of the lockdown on the different sectors of the Indian stock market.

Objective of the Study
The present study is undertaken in order to analyse the impact of the official announcement of the lockdown in India on different sectors of the stock market.

Research Methodology
Data Source: To study the impact of the lockdown announcement on the different sectors of the economy, all the 19 sectors under the Bombay Stock Exchange (BSE) of India are taken into consideration. The lockdown announcement was made on the 24th of March, 2020 at 8 pm and thus 25th of March, 2020 is taken as the event date and defined as t=0. The estimation period is from 4th July, 2019 to 31st December, 2019 i.e., 120 trading days (Peterson, 1989) and the event window considered here is 10 days prior to the event and 10 days post event i.e., from 11th March, 2020 to 13th April, 2020. All the data related to stock prices are collected from BSE India official website and BSE 500 is chosen as the proxy of Indian market.

Table 1: Sectors of Bombay Stock Exchange

1. Basic Material	2. Healthcare
3. AUTO	4. Industrials
5. BANKEX	6. IT
7. CAPITAL GOODS	8. Telecom
9. CDG&S	10. Utility
11. Energy	12. Consumer Durables
13. FMCG	14. Metal
15. Power	16. Oil & Gas
17. Realty	18. Teck
19. Finance	

Source: Author's Calculation

Tools and Techniques: The present study is an empirical work which relies on the event study methodology to analyse the impact of the lockdown announcement on the sectoral indices of the Indian stock market. The event study methodology developed by Fama (1969) is considered as one of the most popular and suitable method to study the impact of an event on security returns for a period of time.

Calculation of Return

To calculate the daily returns, a log return is used as it minimises the skewness and maintain the normality of the data. The following formula is used to calculate the daily stock returns-

$R_{j,t} = \ln(P_{jt} / P_{j,t-1})$...1

Where $R_{j,t}$ is the return of the security 'j' on time 't', P_{jt} is the price of the security 'j' on time 't' and $P_{j,t-1}$ is the price of the security 'j' on time 't-1'.

Calculation of expected return

Using the OLS market model developed by Sharpe (1963), the expected returns are calculated-

$E(R_{j,t})$ $=a_j+$ $\beta_j R_{m,t}$...2

Where $E(R_{j,t})$ is the expected return of security 'j' on time 't', $R_{m,t}$ is the market return and α, β are estimated through OLS in estimation period.

Calculation of abnormal returns

Now the abnormal returns are calculated using the following formula-

$AR_{j,t} = R_{j,t} - E(R_{j,t})$...3

Where, $AR_{j,t}$ is the abnormal return of security 'j' on time 't', $R_{j,t}$ is the return of the security 'j' and $E(R_{j,t})$ is the expected return of the security 'j'.

To check if the abnormal returns are statistically significant, the following t-test is performed-

T-test=

$AR_{j,t}/S.E$...
.........4

Where, $AR_{j,t}$ is the abnormal return and S.E is the standard error of the security 'j'.

Calculation of average abnormal return

Now the Average abnormal returns (AAR) are calculated by cross-sectional aggregation of the abnormal returns to understand the impact of the event on all the sectors-

$AAR_t = \frac{1}{N}\sum_{j=1}^{N} AR_{j,t}$...5

Where, AAR_t is the average abnormal return for the day 't', AR_j is the abnormal return and N is the number of securities.

To check if the average abnormal returns are statistically significant, the following t-test is performed-

T-test= AAR_t / SE...6

Where AAR is the average abnormal return for day 't' and SE is the standard error of the estimation period.

Calculation of cumulative average abnormal returns

In order to observe the impact of the event over multiple days, the cumulative average abnormal returns are calculated using the following formula-

$CAAR_{(t1,t2)} = \sum_{t=t1}^{t2} AAR_t$...7

Where, $CAAR_{t1,t2}$ is the cumulative average abnormal return for the period t1 to t2 and AAR_t is the average abnormal return calculated for the time 't'.

In this study, CAAR is calculated for seven-time windows- [-2,0], [-1,0], [0,1], [0,2], [-1,1], [-2,2] and [-10,10].

To check if the cumulative average abnormal returns are significant, the following t-test is performed-

$T-test = CAAR_{(t1,t2)}/SE * \sqrt{t1,t2}$...8

Where $CAAR_{(t1,t2)}$ is the cumulative average abnormal returns for the period t1 to t2 and SE is the standard deviation of the average abnormal returns.

Results and Discussion
Abnormal Returns of BSE sectoral indices
The abnormal returns show the impact of the announcement of the lockdown on the individual sectors during the event window. From the table 2, it can be seen that on the event day, the abnormal return of the basic material sector is negative and significant which clearly indicates the negative impact of the announcement on the index.

Table 2: Abnormal Returns and T-statistic for the Sectoral Indices

	Basic Material		AUTO		BANKEX		CAPITAL GOODS	
Day	AR	T-Stat	AR	T-Stat	AR	T-Stat	AR	T-Stat
ED-10	-0.012	-1.914	-0.008	-0.798	0.004	0.567	0.007	0.930
ED-9	0.015	2.325*	0.052	5.416*	0.024	3.694*	0.030	4.096*
ED-8	-0.010	-1.603	-0.028	-2.959*	-0.002	-0.244	-0.011	-1.464
ED-7	0.025	3.847*	0.056	5.881*	0.017	2.524*	0.032	4.422*
ED-6	0.012	1.812	0.030	3.195*	-0.014	-2.111*	0.020	2.724*
ED-5	0.026	3.973*	0.036	3.785*	0.007	0.994	0.033	4.555*
ED-4	-0.008	-1.279	-0.014	-1.451	0.017	2.597*	-0.022	-2.979*
ED-3	-0.004	-0.670	-0.043	-4.496*	-0.059	-9.012*	-0.044	-6.016*
ED-2	0.029	4.474*	0.071	7.501*	0.011	1.672	0.023	3.148*
ED-1	-0.030	-4.695*	-0.018	-1.845	-0.015	-2.276*	-0.033	-4.488*
ED -0	-0.028	-4.359*	-0.034	-3.582*	0.005	0.792	-0.016	-2.169*
ED+1	-0.028	-4.251*	-0.047	-4.977*	0.002	0.314	0.013	1.744
ED+2	-0.003	-0.539	-0.018	-1.881	0.015	2.242*	0.003	0.473
ED+3	0.022	3.469*	0.000	0.001	-0.010	-1.463	0.016	2.190*
ED+4	0.001	0.085	-0.042	-4.438*	-0.030	-4.633*	-0.032	-4.349*
ED+5	0.019	2.940*	0.037	3.905*	-0.007	-1.040	0.019	2.588*
ED+6	0.000	-0.047	0.000	-0.028	-0.029	-4.384*	0.018	2.416*
ED+7	-0.020	-3.110*	-0.026	-2.733*	-0.005	-0.692	-0.067	-9.160*
ED+8	-0.003	-0.408	0.017	1.761	-0.010	-1.556	0.010	1.358
ED+9	-0.006	-0.902	0.038	4.024*	0.000	0.009	-0.032	-4.392*
ED+10	0.030	4.637*	-0.006	-0.611	-0.006	-0.927	0.052	7.054*

Source: Author's calculation *Significant at 5% level (±1.96)

Moreover, in the pre-announcement event window, day ED-1 shows significant negative abnormal return indicating leakage of some information and its early impact on the index. Significant negative abnormal returns are also observed on days ED+1 and ED+7, thus it shows that the announcement of the lockdown had negative impact on investors' behaviour. The negative performance may be due to the reason that the lockdown will result in disruption of the economic activities in the sector. Some positive abnormal returns are observed on days ED+7 and ED+10 along with negative abnormal returns which show the presence of volatility in the market.

In the auto sector, the announcement results in significant negative abnormal return on the event day which continues to the post-announcement window as is evident from the negative returns on days ED+1, ED+4 and ED+7. The negative performance is because of the disruption in the value chain of major industries in India and also due to the decline in demand for passenger vehicles due to COVID-19. In the pre-announcement window, significant negative abnormal returns on days ED-3 and ED-8 and positive abnormal returns on days ED-9, ED-7, ED-6 indicate the presence of a certain level of volatility due to COVID-19 related uncertainties.

Table 3: Abnormal Returns and T-statistic for the Sectoral Indices

Day	CDG&S		Energy		FMCG		Finance	
	AR	T-Stat	AR	T-Stat	AR	T-Stat	AR	T-Stat
ED-10	-0.004	-0.846	0.021	1.778	0.003	0.547	0.005	0.960
ED-9	0.027	5.548*	-0.019	-1.568	-0.009	-1.664	0.020	3.781*
ED-8	-0.031	-6.430*	0.014	1.186	-0.021	-3.879*	0.010	1.857
ED-7	0.024	4.907*	-0.014	-1.182	-0.005	-0.863	0.010	1.844
ED-6	0.015	3.002*	0.013	1.133	0.029	5.237*	-0.016	-3.034*
ED-5	0.009	1.850	0.013	1.060	0.009	1.646	-0.006	-1.190
ED-4	-0.011	-2.186*	-0.033	-2.794*	0.012	2.181*	0.014	2.667*
ED-3	-0.017	-3.425*	0.051	4.270*	0.040	7.273*	-0.040	-7.642*
ED-2	0.023	4.808*	-0.023	-1.914	-0.009	-1.699	0.006	1.122
ED-1	-0.016	-3.231*	0.024	2.020*	0.016	2.903*	-0.019	-3.649*
ED -0	-0.019	-3.912*	0.051	4.267*	-0.020	-3.564*	0.011	2.170*
ED+1	-0.020	-4.230*	-0.034	-2.888*	0.025	4.540*	0.006	1.138
ED+2	-0.004	-0.813	-0.003	-0.268	0.000	-0.013	0.004	0.811
ED+3	0.008	1.698	0.004	0.319	0.033	5.978*	-0.025	-4.765*
ED+4	-0.022	-4.599*	0.046	3.827*	0.030	5.507*	-0.021	-4.020*
ED+5	0.020	4.167*	0.001	0.049	-0.011	-1.913	0.006	1.070
ED+6	-0.004	-0.808	0.018	1.491	0.022	4.048*	-0.020	-3.776*
ED+7	-0.019	-3.946*	0.032	2.719*	0.025	4.460*	-0.021	-3.962*
ED+8	0.002	0.361	-0.010	-0.819	0.002	0.431	-0.003	-0.598
ED+9	0.015	3.010*	-0.009	-0.744	-0.024	-4.386*	0.006	1.190
ED+10	-0.011	-2.226*	-0.010	-0.833	-0.008	-1.409	-0.013	-2.485*

Source: Author's calculation *Significant at 5% level (±1.96)

On the event day, the abnormal return of the bankex index is positive but statistically insignificant. However, on days ED+4 and ED+6, significant negative abnormal returns is observed which can be due to the reason that COVID-19-induced lockdown may adversely impact the asset quality and future income of the banks. In the pre-announcement event window, initially there is positive abnormal return on days ED-9, Ed-7 and ED-6 but on days ED-1, ED-3 and ED-6 significant negative abnormal returns are observed. This again indicates that the market anticipated the event and was volatile.

The impact of the announcement on the capital goods sector is negative which is evident from the significant negative abnormal return on the event day. The negative performance may be because covid-19-induced lockdown will disrupt the normal functioning of the units and add to the working capital stress. Moreover, negative abnormal returns are observed on days ED-4, ED-3 and ED-1 in the pre-announcement time window indicating early reaction in the market due to leakage of some information related to the event.

The CDG&S sector yields significant negative abnormal return on the event day and it continues on days ED+1, ED+4, ED+7 and ED+10. This is possibly because the pandemic has disrupted supply chains and led to reduction in consumer demands. However, for a very few days in the post-announcement period, positive abnormal return is observed on days ED+5 and ED+9. In the pre-announcement window, on days ED-1, ED-3, ED-4 and ED-8 negative abnormal return is observed whereas positive abnormal return is observed on days ED-2, ED-6, ED-7 and ED-9 indicating volatility in the market.

On the event day, significant positive abnormal return is observed in the energy sector; however, on day ED+1, negative abnormal return can be noticed which is possibly

because the lockdown will result in a sharp fall in the demand for energy negatively impacting the sector. In the pre-announcement window, the abnormal returns are positive and significant on days ED-1 and ED-3.

In case of the FMCG sector, significant negative abnormal return is observed on the event day, however, the abnormal returns are positive on days ED+1, ED+3, ED+4, ED+6 and ED+7 which is possibly because in the initial stages of the lockdown there was high demand for such goods as people resorted to panic buying & hoarding. Negative return was observed only on day ED+9. Even in the pre-announcement window, the abnormal returns are mostly positive on days ED-6, ED-4, ED-3 and ED-1; return is negative only on day ED-8.

Table 4: Abnormal Returns and T-statistic for the Sectoral Indices

Day	Healthcare		Industrials		IT		Telecom	
	AR	T-Stat	AR	T-Stat	AR	T-stat	AR	T-stat
ED-10	-0.011	-1.564	-0.002	-0.479	-0.015	-1.211	0.008	0.373
ED-9	-0.033	-4.812*	0.019	3.702*	-0.074	-5.951*	0.022	1.050
ED-8	0.013	1.937	-0.017	-3.258*	0.008	0.651	0.032	1.539
ED-7	0.006	0.835	0.026	5.012*	-0.070	-5.566*	0.003	0.133
ED-6	0.014	2.005*	0.018	3.479*	-0.026	-2.101*	-0.016	-0.784
ED-5	-0.013	-1.920	0.027	5.257*	-0.019	-1.525	-0.051	-2.480*
ED-4	0.000	0.052	-0.017	-3.312*	-0.010	-0.815	0.042	2.051*
ED-3	0.018	2.682*	-0.042	-8.253*	0.072	5.765*	0.007	0.318
ED-2	0.000	0.014	0.030	5.982*	-0.075	-5.985*	0.002	0.100
ED-1	0.010	1.494	-0.022	-4.320*	0.064	5.117*	-0.021	-1.012
ED -0	-0.020	-2.908*	-0.027	-5.399*	0.017	1.391	0.007	0.321
ED+1	-0.012	-1.828	-0.003	-0.557	0.031	2.451*	0.056	2.711*
ED+2	0.004	0.584	0.004	0.700	0.003	0.209	-0.051	-2.456*
ED+3	0.033	4.848*	0.019	3.815*	-0.019	-1.545	-0.009	-0.430
ED+4	0.011	1.610	-0.019	-3.723*	0.024	1.894	-0.006	-0.308
ED+5	0.006	0.889	0.018	3.560*	-0.052	-4.148*	-0.013	-0.618
ED+6	0.047	6.873*	0.012	2.401*	-0.026	-2.060*	0.023	1.119
ED+7	0.039	5.720*	-0.063	-12.331*	0.065	5.160*	0.023	1.115
ED+8	0.037	5.402*	0.014	2.773*	-0.015	-1.174	-0.012	-0.571
ED+9	0.013	1.932	-0.016	-3.224*	0.012	0.929	0.021	1.030
ED+10	0.021	3.176*	0.039	7.594*	-0.005	-0.429	0.056	2.713*

Source: Author's calculation *Significant at 5% level (±1.96)

In the finance sector the abnormal returns are positive and significant on the event day, however the returns are negative on days ED+3, ED+4, ED+6, ED+7 and ED+10 indicating negative impact of the lockdown announcement on the index and no significant positive return can be observed in this period. This is possibly due to the reason that the normal operation of the companies in the financial sector will be adversely impacted due to the lockdown. In the pre-announcement period, negative abnormal returns are noticed on days ED-1, ED-3 and ED-6 and positive returns on days ED-9 and ED-4 are present representing the volatility in the market in this time period.

The healthcare sector experiences significant negative abnormal return on the day of the announcement but positive abnormal return is observed on days ED+3, ED+6, ED+7, ED+8 and ED+10 which is probably because of the positive impact of the lockdown by curbing the spread of the virus and also because the pandemic led to increase in demand for medical supplies and equipments will have positive impact on the index.

The industrial sector experiences significant negative abnormal return on the

event day and on the days ED-1, ED-3, ED-4 and ED-8 which continues to the post-announcement period as evident from the negative abnormal returns on days ED+3, ED+4, ED+7 and ED+9. This is possibly because the lockdown will cause disruption in normal functioning of the units resulting in heavy losses. Positive abnormal return is noticed on days ED-9, ED-7, ED-6, ED+8 and ED+10.

Table 5: Abnormal Returns and T-statistic for the Sectoral Indices

Days	Utility		Consumer Durables		Metal		Oil & Gas	
	AR	T-stat	AR	T-stat	AR	T-stat	AR	T-stat
ED-10	-0.009	-1.184	-0.008	-0.714	-0.014	-1.056	-0.018	-2.044*
ED-9	-0.036	-4.531*	0.005	0.460	0.031	2.311*	-0.012	-1.414
ED-8	0.014	1.753	-0.020	-1.719	0.008	0.621	0.020	2.245*
ED-7	-0.023	-2.860*	0.002	0.144	0.012	0.900	0.021	2.401*
ED-6	0.001	0.141	0.005	0.409	0.024	1.799	0.013	1.540
ED-5	-0.040	-5.123*	-0.003	-0.232	0.057	4.315*	0.025	2.916*
ED-4	0.004	0.510	-0.017	-1.452	-0.029	-2.172*	-0.015	-1.693
ED-3	0.033	4.159*	-0.031	-2.664*	0.000	0.019	0.032	3.705*
ED-2	0.010	1.216	-0.005	-0.458	0.078	5.868*	0.013	1.482
ED-1	-0.011	-1.380	-0.016	-1.342	-0.023	-1.716	-0.018	-2.103*
ED -0	-0.009	-1.165	0.012	1.008	-0.056	-4.219*	-0.022	-2.549*
ED+1	0.002	0.233	-0.001	-0.061	-0.063	-4.750*	-0.026	-2.972*
ED+2	0.002	0.261	0.006	0.550	0.011	0.827	-0.011	-1.268
ED+3	0.009	1.104	0.009	0.791	0.021	1.577	0.025	2.823*
ED+4	0.015	1.906	-0.014	-1.157	0.001	0.069	0.047	5.394*
ED+5	0.002	0.236	0.024	2.020*	0.029	2.160*	0.014	1.625
ED+6	0.020	2.591*	-0.008	-0.718	0.007	0.518	0.040	4.617*
ED+7	-0.007	-0.869	-0.013	-1.081	-0.032	-2.414*	-0.008	-0.866
ED+8	0.018	2.239*	-0.016	-1.334	-0.010	-0.732	0.003	0.296
ED+9	0.007	0.870	0.036	3.109*	-0.006	-0.425	-0.012	-1.407
ED+10	0.005	0.614	-0.028	-2.385*	0.038	2.860*	-0.003	-0.299

Source: Author's calculation, *Significant at 5% level (±1.96)

On the event day, the IT sector yields positive but insignificant abnormal return. Significant positive abnormal returns on days ED-1, ED-3 and negative on days ED-2, ED-6, ED-7, ED- 9 indicate volatility and leakage of some information. However, in the post-announcement window, positive return is seen on days ED+1 and ED+7, and negative returns on days ED+5, ED+6.

Similarly, even in the telecom sector the return on the event day is positive but insignificant. The analysis also shows significant negative abnormal return on days ED-5 and ED+2.

However, in case of utility sector, the abnormal return on the event date is negative but insignificant. Also, no significant negative return can be seen in the post announcement period but significant positive abnormal return is observed on days ED+6 and ED+8 as there is no decline in demand for basic necessities like water etc. due to the pandemic.

The data analysis also brings to our notice that the consumer durables sector experienced insignificant positive abnormal return on the event date. However, on ED-3, negative abnormal return is seen and there has been no significant positive abnormal return in this period. These negative returns can be because of leakage of information.

Negative and statistically significant abnormal return is observed on the event

date in the metal sector. This indicates negative reaction of the index. Moreover, significant volatility can be noticed as the abnormal returns in the post-announcement period are positive on days ED+5 and ED+10 but negative on days ED+1 and ED+7.

Table 6: Abnormal Returns and T-statistic for the sectoral indices

Days	Power		Realty		Teck	
	AR	T-stat	AR	T-stat	AR	T-stat
ED-10	0.002	0.186	-0.019	-1.681	-0.010	-0.884
ED-9	-0.030	-3.602*	0.007	0.641	-0.061	-5.257*
ED-8	0.009	1.101	-0.017	-1.448	0.012	1.069
ED-7	-0.018	-2.180*	0.005	0.428	-0.058	-5.059*
ED-6	0.011	1.346	0.002	0.187	-0.027	-2.375*
ED-5	-0.030	-3.595*	0.006	0.539	-0.021	-1.820
ED-4	0.009	1.111	0.009	0.799	-0.002	-0.162
ED-3	0.015	1.795	-0.034	-3.024*	0.063	5.489*
ED-2	0.012	1.469	0.058	5.088*	-0.065	-5.624*
ED-1	-0.009	-1.050	-0.045	-3.989*	0.051	4.442*
ED -0	-0.015	-1.861	-0.041	-3.619*	0.016	1.384
ED+1	0.002	0.263	0.005	0.418	0.035	3.058*
ED+2	0.006	0.725	-0.003	-0.283	-0.007	-0.574
ED+3	0.009	1.117	-0.028	-2.489*	-0.018	-1.592
ED+4	0.002	0.245	-0.024	-2.103*	0.019	1.636
ED+5	-0.005	-0.644	0.019	1.635	-0.048	-4.154*
ED+6	0.008	0.930	0.022	1.954	-0.018	-1.549
ED+7	-0.018	-2.169*	-0.032	-2.825*	0.061	5.276*
ED+8	0.016	1.910	-0.018	-1.600	-0.014	-1.217
ED+9	0.003	0.362	-0.015	-1.322	0.014	1.206
ED+10	0.009	1.082	-0.037	-3.226*	0.003	0.299

Source: Author's calculation *Significant at 5% level (±1.96)

Similar negative abnormal return on the event date is observed in the oil & gas sector, where the return is negative on the day ED-1 and continues to be so on the day ED+1 representing the immediate negative reaction to the announcement. This is because of the decline in the price of oil due to oversupply and also demand contraction due to pandemic.

The power sector also reacts negatively on the event day and significant negative returns are observed in both pre and post-announcement period. This is possibly due to the decline in demand for power as a result of closed businesses and industries.

Even the realty sector shows similar impact with significant negative return on the event day and also on days ED-1, ED-3, ED+3, ED+4, ED+7 and ED+10. The reason can be that during the lockdown there were no transactions in the realty sector.
However, a positive but statistically insignificant return is observed in the teck sector on the event day. In the pre-announcement period, there has been negative abnormal returns on days ED-2, ED-6, ED-7 and ED-7 indicating leakage of information and early reaction of investors' due to anticipation of the event. Again, on day ED+5, negative abnormal return is present which is may be because due to the implementation of the lockdown the companies had to be closed for a particular time period.

Conclusion

In the present study the impact of the lockdown announcement on the sectoral indices of BSE have been studied using event study methodology. In the present study, the lockdown announcement has been considered as the event and 25th of March, 2020 is

taken as the event date. Estimation period of 120 trading days and an event window of 21 days i.e. 10 days prior to the event and 10 days post event has been considered.

The study shows the instant reaction and the short-term fluctuations experienced in the market due to the official announcement of the lockdown. The results reveal that the sectors like Auto, Basic materials, CD&S, Realty, Power show negative abnormal returns after the announcement of the lockdown. However, some sectors like Healthcare, FMCG, and Telecom show positive abnormal returns in the period post announcement. The healthcare sector experiences positive returns as a strong rise in demand for medical supplies and medical equipments is experienced due to the pandemic whereas due to panic among consumers, hoarding of consumer goods have resulted in significant returns for the FMCG sector. Similarly, greater dependence on telecommunications for distance learning and remote working has resulted in positive returns for the telecom sector. But certain other sectors like CD&S, Bankex, Financial services and Industrials experience negative returns post announcement as the consumers postpone their consumption of non-essential goods, the companies providing banking & financial services face several challenges due to deterioration of asset quality & uncertainty related to future income and most of the industries suffer due to the unavailability of working capital and inability of completing orders on time.

References

Alam, M. M., Wei, H., & Wahid, A. N. (2020). COVID-19 outbreak and sectoral performance of the Australian stock market: An event study analysis. Australian Economic Papers.

Bora, D., & Basistha, D. (2021). The outbreak of COVID-19 pandemic and its impact on stock market volatility: Evidence from a worst-affected economy. *Journal of Public Affairs.*

Brown, S. J., & Warner, J. B. (1985). Using daily stock returns: The case of event studies. *Journal of Financial Economics*, 14(1), 3-31.

Chaudhary, M., Sodani, P. R., & Das, S. (2020). Effect of COVID-19 on Economy in India: Some Reflections for Policy and Programme. *Journal of Health Management*, 22(2), 169-180.

Chaudhary, R., Bakshi, P., & Gupta, H. (2020). The Performance of the Indian Stock Market During Covid-19. *Investment Management and Financial Innovations*, 17(3), 133-47.

Chen, M.-P., Lee, C.-C., Lin, Y.-H., & Chen, W.-Y. (2018). Did the S.A.R.S. epidemic weaken the integration of Asian stock markets? Evidence from smooth time-varying cointegration analysis. *Economic Research*, 31(1), 908-926.

Chiang, T. C., Jeon, B. N., & Li, H. (2007). Dynamic Correlation Analysis of Financial Contagion: Evidence from Asian Markets. *Journal of International Money and Finance*, 26(7), 1206-1228.

Dhall, R., & Singh, B. (2020). The COVID-19 Pandemic and Herding Behaviour: Evidence from India's Stock Market. *Millennial Asia*, 11(3), 366-390.

Donadelli, F., Kizys, R., & Riedel, M. (2016). Dangerous infectious diseases: Bad news for Main Street, good news for Wall Street. *Journal of Financial Markets*, 35.

Dornbusch, R., Park, Y. C., & Claessens, S. (2000). Contagion: Understanding How It Spreads. *The World bank Research Observer*, 15(2), 177-197.

Dyckman, T., Philbrick, D., & Stephan, J. (1984). A comparison of event study methodologies using daily stock returns: A simulation approach. *Journal of Accounting Research*, 22, 1-30.

Fama, E. F., Fisher, L., Jensen, M. C., & Roll, R. (1969). The Adjustment of stock prices to New Information. *International Economic Review*, 10(1), 1-21.

Gogoi, M., Buragohain, P. P., Gogoi, P., & Hazarika, A. (2022). An Analysis of Economic

Issues During First and Second Wave of Covid-19 Pandemic in India: A Literature Survey. *Journal of Economic Research & Reviews*, *2*(3), 252-256.

IMF. (2020). World Economic Outlook Update: A Crisis Like No other, An Uncertain Recovery. *Washington, D.C.: International Monetary Fund*.

International Monetary Fund. (2020). World Economic Outlook Update: Tentative Stabilization, Sluggish Recovery? Washington, D.C.: International Monetary Fund. Retrieved from https://www.imf.org/en/Publications/WEO/Issues/2020/01/20/weo- update-january2020.

Jones, L., Palumbo, D., & Brown, D. (2021). Coronavirus: How the pandemic has changed the world economy. BBC NEWS.

Kishore, R. (2020). India's economy was facing worst-ever deceleration before Covid-19 hit. *Hindustan Times*.

Lee, W. Y., Jiang, C. X., & Indro, D. C. (2002). Stock market volatility, excess returns, and the role of investor sentiment. *Journal of Banking & Finance*, 26, 2277-2299.

Loh, E. (2006). The impact of SARS on the performance and risk profile of airline stocks. *International Journal of Transport Economics*, 33(3), 401-422.

MacKinlay, A. C. (1997). Event Studies in Economics and Finance. *Journal of Economic Literature*, 35(1), 13-39.

Ministry of Finance. (2021). Economic Survey 2020-21. Volume-1. New Delhi: Government of India.

Mishra, A. K., Rath, N. B., & Dash, K. A. (2020). Does the Indian Financial Market Nosedive because of the COVID-19 Outbreak, in Comparison to after Demonetisation and the GST? *Emerging Markets Finance and Trade*, 56(10), 2162-2180.

Mishra, P. K., & Mishra, S. K. (2020). Corona Pandemic and Stock Market Behaviour: Empirical Insights from Selected Asian Countries. *Millennial Asia*, 11(3), 341-365.

Mulenga, M. (2018). Review of Accounting Variables Affecting Stock Price Movements. *Amity Business Review*, 19(1), 91-105.

Nadkar, N. (2020). FPI withdraw funds from capital markets in March 2020. Centre for Monitoring Indian Economy- *Economic Outlook*.

O'Donell, N., Shannon, D., & Sheehan, B. (2021). Immune or at-risk? Stock markets and the significance of the COVID-19 pandemic. *Journal of Behavioral and Experimental Finance*, 30, 100477.

OECD. (2020). OECD Interim economic Assessment- Coronavirus: The World Economy at Risk. OECD. Retrieved from https://doi.org/10.1787/7969896b-en

Pendell, D. L., & Cho, C. (2013). Stock Market Reactions to Contagious Animal Disease Outbreaks: An Event Study in Korean Foot-and-Mouth Disease Outbreaks. *Agribusiness- An International Journal*, 29(4), 455-468.

Peterson, H. E. (2020). India becomes country with second highest number of Covid cases. *The Guardian*.

Peterson, P. P. (1989). Event Studies: A Review of Issues and Methodolgy. *Quarterly Journal of Business and Economics*, 28(3), 36-66.

Ramakumar, R., & Kanitkar, T. (2021). Impact of COVID-19 Pandemic on the Indian Economy: A Critical Analysis. *Investigación Económica*, 80(315), 3-32.

RBI. (2020). Reserve bank of India Annual Report 2019-20. New Delhi: Reserve bank of India.

Sahoo, M. (2020). Even before Covid19, India's economy was slumping. *Deccan Chronicle*.

Sahoo, M. (2021). COVID-19 impact on stock market: Evidence from the Indian stock

market. *Journal of Public Affairs*. doi: https://doi.org/10.1002/pa.2621

Sahoo, P., & Ashwani. (2020). COVID-19 and Indian Economy: Impact on Growth, Manufacturing, Trade and MSME Sector. *Global Business Review*, 21(5), 1159-183.

Sharma, M. (2020). Over 15,000 frontline workers tested positive for coronavirus in India. *India Today.*

Sharpe, W. F. (1963). A Simplified Model for Portfolio Analysis. *Management Science*, 9(2), 277-293.

Singh, B., Dhall, R., Narang, S., & Rawat, S. (2020). The Outbreak of COVID-19 and Stock Market Responses: An Event Study and Panel Data Analysis for G-20 countries. *Global Business Review*, 1-26. doi:10.1177/0972150920957274

Singh, M. K., & Neog, Y. (2020). Contagion effect of COVID-19 outbreak: Another recipe for disaster on Indian economy. *Journal of Public Affairs*, 20(4).

Singhal, T. (2020). A Review of Coronavirus Disease-2019 (COVID-19). *Indian Journal of Pediatrics*, 87(4), 281-286.

Sinha, P., Sawaliya, P., & Sinha, P. (2020, November 03). Surviving coronavirus scare - A journey of stock market amid slowdown in Indian economy. *MPRA Paper No. 103902*. Retrieved from https://mpra.ub.uni-muenchen.de/103902/

Stankeviþienơ, J., & Akelaitis, S. (2014). Impact of public announcements on stock prices: relation between values of stock prices and the price changes in Lithuanian stock market. *Procedia- Social and Behavioral Sciences*, 156, 538-542.

Thomas, T., Sankararaman, G., & Suresh, S. (2020). Impact of COVID-19 announcement on NIFTY stocks. *Journal of Critical Reviews*, 7(13).

Topcu, M., & Gulal, O. S. (2020). The impact of COVID-19 on emerging stock markets. *Finance Research Letters*, 36.

World bank. (2020). Global Economic Prospects Slow growth, Policy Challenges. *Washington, D.C: World Bank Publications*.

World Bank. (2020). Global Economic Prospects. June 2020. *Washington, D.C.: World bank*. Retrieved from http://hdl.handle.net/10986/33748

Zaremba, A., Kizys, R., Aharon, D. Y., & Demir, E. (2020). Infected Markets: Novel Coronavirus, Government Interventions, and Stock Return Volatility around the Globe. *Finance Research Letters*, 35.

Zhu, N., Zhang, D., Wang, W., Li, X., & Yang, B. (2020). A Novel Coronavirus from Patients with Pneumonia in China, 2019. *Massachussets Medical Society*.

.....***.....

Social Progress Through Pradhan Mantri AWAAS Yojana -   GRAMIN (PMAY-G) Scheme in North Eastern States

BIJAY DAS* AND PROF. R.C. PARIDA**

Abstract

Human beings are social in nature and always want to be lived in a progressive society. The Pradhan Mantri Awas Yojana – Gramin is a central government most flagship scheme under which needy and poor rural people get an affordable house in addition with some basic amenities which help them in living quality standard life   in the society. The main focus on the present study is deliberating upon how the PMAY-G scheme is helpful for the rural people of north eastern states in social progress. The study is completely based on secondary sources of data and descriptive in nature. The main finding of the study that PMAY-G scheme does not discriminate the people based on their caste and gender for getting the benefits of the scheme in the north eastern states. Overall, the scheme is quite helpful for the rural people to achieve the social progress.

Key words - Pradhan Mantri Awas Yojana – Gramin, Rural people, social progress, Affordable house.

JEL Classification– R21, R28, R38, R58

*Ph. D. Research Scholar, Department of Commerce, Rajiv Gandhi University, Arunachal Pradesh, E-mail – bijaydas475@gmail.com, Mobile No. - 7002625718
**Professor Department of Commerce, Rajiv Gandhi University, Arunachal Pradesh, E-mail – rama.parida@rgu.ac.in, Mobile No. - 94236043129

Introduction

"Anyone who knows anything of history knows that great social changes are impossible without feminine upheaval. Social progress can be measured exactly by the social position of the fair sex, the ugly ones included."   ---------   Karl Marx.

Every human being in the world wants to live in progressive society where they get all the freedom, benefits and equality from the society. And they are not judged by the society based on their social status, caste etc. The   society is to provide the fundamental needs of its people, lay the foundation for citizens and communities to improve and sustain the quality of their lives, and foster an environment in which every person can realise. A progressive society simply implies that where all the people have freedom and right and they are not neglected based on their gender and social status. The economic growth of developing countries and progress is possible when they have a progressive society. India is also a developing country and the same thing is also applicable to it.

North eastern states viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim are also the states of India and majority of the people   belong to the rural areas. The north eastern states are popularly known for their natural beauty and majority of the part belongs to rural areas. Out of total population only 15.51 percent people live in urban areas and while remaining 84.49 percent people live in rural areas. So, for the development and growth of the rural society, the central government introduced a rural housing scheme named Pradhan Mantri Awas Yojana – Gramin (PMAY-G) where all the needy and poor people get the equal right to get an affordable house in addition with some basic amenities to live their life in the society and they are not deprived based on their caste and gender. Under this scheme the central government strives to improve the social growth and progress and   ensures that the rural needy and poor people   get the equal opportunity to get the benefits of this scheme.

Review of Literature

Gupta (2018) in his article "How Pradhan Mantri Awas Yojana is changing the rural landscape" states that this scheme enhanced the living standard of the people in the society. Transparency in allocation and convergence with the other programmes made this scheme for the rural people to uplift their social life. National Institute of Public Finance and Policy (2018) in their report mentioned that the Pradhan Mantri Awas Yojana – Gramin (PMAY-G) scheme has a great impact on the employment and income generation of the rural people in India. The scheme is helpful in both direct and indirect employment generation of the rural people. Carvalho and Serio (2020) states that the performance of a nation can be measured in a new way i.e., more focus to be provided on social development and progress as compared to the economic development. They also found that the basic human needs much more helpful in social progress.

Radha and Mary (2020) states Pradhan Mantri Awas Yojana – Gramin (PMAY-G) scheme increases the living quality of poor as this scheme converge with the various other government schemes like Swattcha Bharat Mission (SBM) under which people get toilet, Pradhan Mantri Sahaj Bijli Har Ghar Yojana – Saubhagya scheme under which people get electricity, Pradhan Mantri Ujjwala Yojana under which people get LPG gas connection, Jal Jeevan Mission under which people get drinking water and Pradhan Mantri Jan Dhan Yojana (PMJDY) under which people get banking facility. These schemes improve the living standard of people.

Objective of the Study

The objective of the present study is to figure out the social progress of the Pradhan Mantri Awas Yojana – Gramin (PMAY-G) scheme in the north eastern states.

Research Questions

  i.   Is PMAY-G is benefited and included all social status people in the society of North eastern states?
  ii.   Is PMAY-G is benefited and included all the genders in the society of North eastern states?

Research Methodology

The present study is based on secondary data and descriptive in nature. The secondary data are collected and compiled from the various research papers, articles, books and official website of the Ministry of Rural Development (rural.nic.in).

Pradhan Mantri Awas Yojana – Gramin (PMAY-G)

Pradhan Mantri Awas Yojana (PMAY) is the most ambitious scheme launched by the Ministry of Rural Development of India in April, 2016 with a tag line "Housing for All" in 2022. The poor and needy people get the benefit of an affordable house in addition with the necessary basic amenities under this scheme which are required to living a standard life in the society. Basically, Pradhan Mantri Awas Yojana (PMAY) has two components - Pradhan Mantri Awas Yojana - Urban (PMAY-U) and Pradhan Mantri Awas Yojana – Gramin (PMAY-G). Pradhan Mantri Awas Yojana - Urban (PMAY-U) scheme provides the benefits of an affordable housing to the urban poor and needy people and Pradhan Mantri Awas Yojana – Gramin (PMAY-G) scheme provides the needy and poor rural people who cannot afford an adequate house with their own.

The Government of India's previous housing scheme Indira Awas Yojana (IAY) for the rural people cannot get that much of appreciation and success as expected. There were some loopholes like lack of visibility in assortment of beneficiaries, low quality in construction of houses and lower technical supervision, lack of proper loan facility and convergence etc. observed by the Comptroller and Auditor General (CAG) of India during

the audit process. And to overcome those loopholes and betterment of the needy and poor rural people, the Government of India restructured the Indira Awas Yojana (IAY) in a new way as Pradhan Mantri Awas Yojana - Gramin (PMAY-G).

The basic features of Pradhan Mantri Awas Yojana – Gramin (PMAY-G) are as follows –

(i)   The parameter for selection and identification of beneficiaries are done through the criteria prescribed under Socio Economic Caste Census (SECC) 2011 after verified by the Gram Sabha.

(ii)   The financial assistance increased from Rs. 70,000 (IAY) to Rs. 1.20 lakh in plain areas and from Rs. 75,000(IAY) to Rs.1.30 lakh in Hilly States, NE States.

(iii)   The unit size of the constructed house increased from 20 sq.m.(IAY) to 25 Sq.m.

(iv)   The beneficiaries are also getting financial assistance of Rs. 12,000 for construction of toilet under SBM-G scheme.

(v)   Under MG-NREG scheme the unskilled labour are getting 90/95 days wages those who are willing to do the unskilled work.

(vi)   Under PMAY-G scheme, the beneficiaries are also getting loan from the financial institution up to Rs. 70,000 and also getting the 3% subsidy benefits on loan which may be extended up to maximum of Rs. 2,00,000.

Social Progress and Pradhan Mantri Awas Yojana – Gramin (PMAY-G) Scheme

The social progress and Pradhan Mantri Awas Yojana – Gramin (PMAY-G) scheme are very closely related. The rural housing scheme Pradhan Mantri Awas Yojana – Gramin (PMAY-G) is play a very important role and very much helpful in social progress of India. The Pradhan Mantri Awas Yojana – Gramin (PMAY-G) scheme provides attention to all the caste and gender in the society. The social progress in the North Eastern states through the Pradhan Mantri Awas Yojana – Gramin (PMAY-G) scheme describe with the help of some tabular evidence are given below –

Table   1: Category-wise houses sanctioned under PMAY-G scheme in North Eastern States as on 14/05/2022

State	Target fixed by States	Sanctions Made	Breakup of sanction				
			ST	SC	Minorities	PH	Others
Arunachal Pradesh	38041	34522	32944	0	550	23	1578
Assam	1485457	1242958	181303	98358	574634	1237	963297
Manipur	42850	30534	19611	749	2989	7	10174
Meghalaya	76651	61533	57074	355	3833	38	4104
Mizoram	17711	13532	13460	9	62	1	63
Nagaland	24774	22273	21975	1	92	8	297
Tripura	225099	206575	93012	37424	14365	46	76139
Sikkim	1383	1361	637	132	62	1	592
Total	**1911966**	**1613288**	**420016**	**137028**	**596587**	**1361**	**1056244**

Source – Complied by researcher (rural.nic.in)

The table 1 depicts the category wise houses sanctioned under Pradhan Mantri Awas Yojana – Gramin (PMAY-G) scheme in the north eastern states. The table shows that maximum number of housing units under Pradhan Mantri Awas Yojana – Gramin (PMAY-G) scheme sanctioned are in Sikkim and Tripura. In the north eastern states, under this scheme mainly the houses are sanctioned against the ST and minority

community people. The SC, PH and other social status category people also getting benefits under this scheme.

Table 2: Category-wise houses completed under PMAY-G scheme in North Eastern States as on 14/05/2022

State Name	Target fixed by States	Completed	Breakup of completion				
			ST	SC	Minorities	PH	Others
Arunachal Pradesh	38041	4245	4107	0	49	11	138
Assam	1485457	530496	95317	43561	195795	935	391618
Manipur	42850	14901	9378	367	1626	7	5156
Meghalaya	76651	28744	27476	116	970	29	1152
Mizoram	17711	5514	5506	0	7	1	8
Nagaland	24774	4239	4119	0	14	3	120
Tripura	225099	47297	30024	4758	3485	12	12515
Sikkim	1383	1070	470	77	60	1	523
Total	**1911966**	**636506**	**176397**	**48879**	**202006**	**999**	**411230**

Source – Complied by researcher (rural.nic.in)

The table 2 shows the category wise houses completed under Pradhan Mantri Awas Yojana – Gramin (PMAY-G) scheme in the north eastern states. The above table shows that maximum number of housing units under Pradhan Mantri Awas Yojana – Gramin (PMAY-G) scheme completed in Sikkim and Meghalaya in terms of target fixed by the central government. In the north eastern states, under this scheme maximum number of houses are completed against the ST and other community people. The SC, Minority and PH social status category peoples completed houses come after the ST and others categories peoples completed houses in the north eastern states.

Table 3: Gender-wise houses sanctioned under PMAY-G scheme in North Eastern States as on 14/05/2022

State	Target fixed by States	Sanctions Made	Breakup of sanction			Percentage of sanctioned made against target fixed
			Women	Men	Joint (Wife and Husband)	
Arunachal Pradesh	38041	34522	3615	3907	26999	90.75%
Assam	1485457	1242958	248220	423201	571523	83.68%
Manipur	42850	30534	4505	8699	17328	71.26%
Meghalaya	76651	61533	13325	6422	41786	80.28%
Mizoram	17711	13532	1896	646	10989	76.40%
Nagaland	24774	22273	2020	2275	17978	89.90%
Tripura	225099	206575	28814	53988	123771	91.77%
Sikkim	1383	1361	112	266	983	98.41%
Total	**1911966**	**1613288**	**302507**	**499404**	**811357**	**84.38%**

Source – Complied by researcher (rural.nic.in)

The table 3 presents the gender wise houses sanctioned under Pradhan Mantri Awas Yojana – Gramin (PMAY-G) scheme in the north eastern states. The table shows that maximum number of housing units under Pradhan Mantri Awas Yojana – Gramin (PMAY-G) scheme sanctioned are in Sikkim, Tripura and Arunachal Pradesh. Under this

scheme men, women and joint (husband and wife) all got equal preference in when the housing units are sanctioned.

Table 4: Gender-wise houses completed under PMAY-G scheme in North Eastern States as on 14/05/2022

State	Target fixed by States	Completed	Breakup of completion			Percentage of completed against target fixed
			Women	Men	Joint (Wife and Husband)	
Arunachal Pradesh	38041	4245	522	916	2807	11.16%
Assam	1485457	530496	116213	207613	206660	35.71%
Manipur	42850	14901	2534	4559	7807	34.77%
Meghalaya	76651	28744	7078	3494	18172	37.50%
Mizoram	17711	5514	576	453	4485	31.13%
Nagaland	24774	4239	495	544	3200	17.11%
Tripura	225099	47297	5709	9873	31715	21.01%
Sikkim	1383	1070	89	174	807	77.37%
Total	**1911966**	**636506**	**133216**	**227626**	**275653**	**33.29%**

Source – Complied by researcher (rural.nic.in)

The table 4 shows the category wise houses completed under Pradhan Mantri Awas Yojana – Gramin (PMAY-G) scheme in the north eastern states. It is observed in the table that maximum number of housing units under Pradhan Mantri Awas Yojana – Gramin (PMAY-G) scheme completed in Sikkim, Meghalaya and Assam in terms of target fixed by the central government. In Arunachal Pradesh and Nagaland very smaller number of housing units' completed in comparison to number of housing units target fixed by the central government.

Findings of the Study

Pradhan Mantri Awas Yojana – Gramin (PMAY-G) scheme covers all the gender and social status people in the society. It cannot neglect the beneficiaries based on their caste and gender. The total number of housing units target fixed by all the state governments of north eastern region under PMAY-G scheme is 19,11,966 where only 16,13,288 number of housing units sanctioned made i.e., 84.38 percent. Among all the north eastern states, Sikkim has the highest number of housing units sanctioned i.e., 98.41 percent as compared to the target fixed by the state. Manipur has the lowest number of housing units sanctioned i.e.; 71.26 percent as compared to the target fixed by the state. The total number of housing units target fixed by all the state governments of north eastern region under PMAY-G scheme is 19,11,966 and out of which only 33.29 percent housing units construction completed i.e., 6,36,506. Among all the north eastern states, Sikkim has the highest number of housing units construction completed i.e., 77.37 percent as compared to the target fixed by the state. Among all the north eastern states, Arunachal Pradesh has the lowest number of housing units construction completed i.e., 11.16 percent as compared to the target fixed by the state.

Conclusion

People like to live in a place where they are not judged by the society based on their social status and caste. They have the freedom to live their life in their own way and terms. Pradhan Mantri Awas Yojana – Gramin (PMAY-G) scheme is a rural development and social development scheme which provides the needy and poor rural people an affordable house in addition with some basic amenities who cannot afford an adequate house with

their own. Moreover, this scheme provide advantage to the north eastern states rural people to solve their housing problems and also helpful for their social progress and development in recent time.

References

Célio, Í., Carvalho, S. De, Carlos, L., Serio, D., Maria, C., Guimarães, C., Furlanetto, K. S., & Paulo, S. (2020). *The social progress on the development of global competitiveness.* https://doi.org/10.1108/CR-12-2018-0078

Chowdhury, M. M., & Ahmed, A. (2015). *The Impact of Rural Development Program on Poverty Alleviation: A Case of Bangladesh. 15*(4).

Hussain, M. (1967). *Rural Housing and Accommodation : A Case Study of Indira Awaas Yojana (IAY) Scheme in Kashmir. 6*, 48–57.

Impact Of Pradhan Mantri Awaas Yojana -Gramin (Pmay-G) On Income And Employment. (2018). *April.*

On, A., Name, D., Ph, M., St, S., Breakup, M., Ph, M., St, C., Ph, M., Register, S. T., Sc, D., Sc, O., Sc, O., & Total, O. (2022). *17 14790 2.* 5–6.

On, A., Name, S., Ph, M., St, S., Breakup, M., Ph, M., St, C., Ph, M., Register, S. T., Sc, S., Sc, O., Sc, O., Total, O., & Hal, A. (2022). *No Title.*

Radha, K., & Mary, J. F. (n.d.). *Progress And Prospects Of Pmay Scheme In India. XII*(1887), 1887–1895.

Sharma, N. (2021). *Pradhan Mantri Awas Yojana Urban : Are There Any Bottlenecks ?March.* https://doi.org/10.33771/iibm.v5i1-2.1227

.....***.....

Cognizance Level and Opinion of Retail Investors with Reference to Mutual Fund as an Investment Option: A Study in Guwahati City

Dr Rimakhi Borah

Abstract

Mutual fund is a type of financial vehicle made up of pool of money collected from investors to invest in securities like stocks, bonds, money market instruments and other assets. The aim of the study is to understand the awareness of retail investors regarding mutual funds, to explore different investment avenues that retail investors prefer and to determine the investor's preference for different mutual fund schemes. For analyzing the retail investors preferences descriptive study has been conducted. Data has been collected from the respondents using structured questionnaires cum google forms. Secondary information has been obtained from various websites, journals and published articles. To analyze and interpret the study further simple statistical tools have been used for the data collected. The research reveals that mutual fund is now seen as a safe alternative for retail investors and it has been observed that maximum respondents prefer equity and balanced fund among all other mutual fund schemes. The analysis has also revealed that growth schemes, balanced schemes and tax savings schemes are the schemes that investors are mostly aware of and they invest in. It has been found that, though many are aware of the mutual fund options but a large portion of investors rely on low return mode of investment due to safety of capital. Even though this investment avenue has gained popularity but the safety of capital is still a concerning factor for which expert management of portfolio must be given higher priority.

Assistant Professor, Department of Accountancy, Nalbari Commerce College, Nalbari, Assam, India. Email id.: rimakhiborah600@gmail.com, Contact: +91-9864726871

Introduction

Cognizance is a formal word meaning awareness or knowledge. Cognizance level refers to the level of understanding or knowledge one has in a subject matter hereby referring to Mutual Funds awareness among retail investors. A retail investor is a non-professional investor, also known as individual investor. Retail investors have an increasing impact on the market. Anyone who doesn't do investing as a career is considered as a retail investor. Mutual fund in simple words is a type of financial vehicle made up of a pool of money collected from many investors to invest in securities like stocks, bonds, money market instruments and other assets. Mutual funds are operated by professional money managers, who allocate the funds and attempt to produce capital gains or income for the funds invested. A mutual fund's portfolio is structured and maintained to match the investment objectives stated in its prospectus. Mutual funds give small or individual investors access to professionally managed portfolios of equities, bonds and other securities. Each shareholder, therefore, participates proportionally in the gains or losses of the fund. Mutual funds invest in a vast number of securities, and performance is usually tracked as the change in the total market capital of the fund - derived by the aggregating performance of the underlying investments. Mutual funds provide the best option to the investors who have no knowledge of the stock market. It is

the most suitable investment for the common man as it offers an opportunity to invest in a diversified, professionally managed basket of securities at a relatively low cost.

Review of Literature

From the past few years, it has been observed that Indian mutual fund has gained a lot of popularity. Earlier only UTI enjoyed monopoly in this industry but now other players have entered the market, making it more diverse (Saini S. et.al, 2011). The industry is growing rapidly and this is reflected in the increasing assets under management of various fund houses. The preference of retail investors towards mutual fund has helped the companies to create new and innovative product on the orientation of investor's equity-based schemes (Aswathy B.A., et.al. 2015). A survey conducted by Ranganathan K. (2004) on mutual fund in Mumbai revealed that investors prefer performance records, brand name, expense ratio, portfolio of investment, reputation of portfolio manager, withdrawal/exit facility, products with tax benefits and load charges for taking decision on investments in mutual funds. Return on investments, capital appreciation and tax savings are found to be the most influencing factors in inducing most of the investors to opt for the mutual fund (MF) schemes, and this was found from a study conducted on 200 investors by Chalam, G.V. (2003). A study among the investors of the North Eastern region towards equity and mutual funds investment portfolio revealed that the salaried and self-employed formed the major investors in MFs primarily due to tax concessions (Sikidar S. et.al., 1996). Surveys have reported changes to be found in financial decision-making and investors' behaviour, due to investors' participation in investment education programs. In India, SEBI started such awareness program for small investors, which has started giving benefits, in terms of value investing and informed investing from retail investors (Philip, 1995).

Multiple studies have been conducted on mutual fund and its investment pattern explaining how mutual fund has gained popularity and how investors have become more aware regarding different investment options available. However, only limited studies have been conducted on retail investors' cognizance level on different mutual fund avenues that are available, specifically in Guwahati city of Assam. This study attempts to know the retail investor's behaviour regarding investment in mutual fund schemes and to ascertain the reason for different choices. The study also tries to understand the retail investors' cognizance level and their opinion of mutual funds as an investment option.

Significance of the Study

In today's date mutual fund is an investment avenue basically for salaried employees as it has various tax benefits. A big boom has been witnessed in mutual fund in recent times. A large number of new players have entered the market trying to gain market share in this rapidly growing market. Mutual funds are an excellent source of investment. There are different traditional investments available such as gold investment, government bonds, real estate, post office saving schemes, insurance and fixed deposit etc. Most of the investors are gaining awareness of mutual fund irrespective of age, gender, and income. In reality, most people investing in mutual funds are not clear regarding its different functioning and management. Subsequently, the business organizations which are offering mutual funds need to provide absolute and accurate information to the investors regarding all the different options available. The study helps in understanding the retail investor's outlook towards mutual fund investments in relation to other investment avenues. It also helps in creating awareness among the people as all the respondents considered for the study do not have the adequate knowledge on mutual fund options. Thus, the study also provides a scope to create awareness among the potential as well as existing investors.

Objective of the Study

The study has been conducted keeping into view the following objectives:

i. To explore the retail investors' cognizance level and outlook towards mutual fund investments in Guwahati city of Assam.

ii. To determine the investor's preference for different mutual fund schemes in the studied area.

Research Methodology

The data for this study have been collected both from primary and secondary sources. The primary data on cognizance, preference, affordability, opinion, knowledge etc., of the respondents have been collected. The secondary sources of information have been attained from various journals, websites, articles, etc. relating to the subject matter.

Retail investors from the selected areas of Guwahati city have been ascertained for the purpose of collecting primary data. For the data collection purpose, google forms have been circulated to 300 retail investors in the month of August 2022. The data of around 3000 investors have been received from a mutual fund advisor of Guwahati region. The google form was then circulated on a convenient basis to 300 investors (10% of the total investors of the region), out of which 209 responses have been received within the stipulated time (August-October 2022). Due to time constraints the survey had to be restricted to 209 respondents and therefore analysis and interpretation was conducted on 209 retail investors.

Results and Discussion

Age Group of Investors

The respondents of the study area were categorized into certain divisions as per their age group. The age brackets were 18-30 years, 31-40 years, 41-50 age group, 51-60 age group and above 61. Majority of the respondents (investors of mutual funds) in the study area were seen to fall under the age bracket of 41-50 followed by 31-40 and then below 30. The least responses have been received from the age group above 61. The surveyed area had more investors from the 41-50 age groups as they were more aware of all the investment prospects. From the survey it could be analyzed that above 61 age group, the respondents have already been through their investment phase and now they are reaping the benefits of those investment, hence they are reluctant to make any new investments.

Gender of Investors

On finding the male female ratio of the respondents/retail investors it clearly indicates that there wasn't a vast difference in their ratio - it was 55:45, which portrays an image that the ratio of female investors has increased considerably compared to female investors in the past.

Occupation of Investors

The study has revealed most of the respondents to be salaried employees, as the salaried employees have limited source of income and are always in search of different modes of earnings. So, they are more aware of the different investment schemes available. The least response was received from other categories which were mostly business owners, as their investment priorities are different and they prefer investing in business rather than investing in the mutual fund market.

Income of Respondents

The incomes of maximum investors in the study area were between Rs 20,000-50,000, followed by investors whose earnings were above 100,000 rupees. This shows that the retail investors of the study area prefer to invest after they have a stable income or when they have enough money to spare on investments after all the expenditure incurred. The least response was attained from below 20,000 income group as this income group people

has very less dispensable amount to invest in MFs. Mostly students and fresher's fall under the category of below 20,000 incomes.

Investment in Mutual Funds

The study has shown almost 70% of the respondents to invest in mutual funds, which shows the awareness level of mutual funds among people of the study area. The study on the awareness of mutual funds has become easier as many retail investors are consciously investing in mutual funds and in different schemes.

Respondents Mutual Fund Investment Preference

Table 1 clearly indicates the respondent's preference towards different mutual fund options. Majority of the retail investors invest or prefer equity funds followed by balanced funds. These two mutual fund schemes are widely known and used. Equity funds scheme provides retail investors an opportunity to invest in equity market with lower risk compared to share market. And balanced funds, is popular among the retail investors as it gives a safety net along with higher market return.

Table 1: Table showing respondents investment preference

Particulars	Frequency	Percentage
Equity Funds	138	94.5%
Fixed Income Funds	34	23.3%
Balanced Funds	106	72.6%
Income Funds	25	17.1%

Source: Online survey through Google form, 2022

Percentage of income invested in mutual funds

From table 2 it can be seen that majority of the respondents invest 11-15% of their investible amount on mutual funds, this percentage is a reasonable amount that retail investors prefer. The study found 26% of the investors to invest 16-20% of their investible amount on mutual funds, followed by 31.5%. Percentage of investment 'less than 5%' has received the least response as mutual fund is a safer market compared to other volatile markets and hence retail investors are not reluctant to invest higher amount in mutual funds.

Table 2: Respondents percentage of income invested in mutual funds

Percentage of Investment	Frequency	Percentage
Less than 5%	14	9.6%
6-10%	28	19.2%
11-15%	46	31.5%
16-20%	38	26 %
More than 21%	20	13.7%
TOTAL	146	100%

Source: Online survey through Google Form, 2022

Ranking in terms of preference of retail investors apart from MFs

Table 3 shows the preference of retail investors who invest in options other than mutual funds. The retail investors who do not invest in mutual funds mostly invest in fixed deposit and bonds. These investors can be categorized as risk averse and hence they want a safe investment which fixed deposit can provide them. These investors are looking for higher return and safety of capital invested. Retail investors also prefer gold savings over mutual funds for the same reason as they are safer investment compared to mutual funds. Some retail investors who have the knowledge of stock market prefer investing in stocks as mutual funds are time bound but in stocks there is no lock-in period and is more liquid compared to mutual funds. There were least investors investing in crypto-currency as it is highly volatile and retail investors are not keen on investing in

such risky investments.

Table 3: *Preference of retail investors apart from Mutual Funds*

Ranking in terms of preference of retail investors apart from MFs	*Percentage*	*Ranking*
FIXED DEPOSIT	6.8%	1
BONDS	6.2%	2
STOCKS	5.3%	3
GOLD SAVINGS	5%	4
INSURANCE	4.8%	5
NATIONAL PENSION SCHEME	4%	6
REAL ESTATE	3.6%	7
PROVIDENT FUND	3.8%	8
CRYPTOCURRENCIES	3.3%	9

Source: Online survey through Google Form, 2022

Schemes Opted by Mutual Fund Investors

The table below shows the popular schemes that mutual fund investors invest in. Majority of them were seen investing in Growth Schemes, Balanced Schemes and Tax saving schemes. These schemes serve the retail investors purpose of yielding higher returns.

Table 4: *Schemes Opted by Mutual Fund Investors*

| *Schemes Opted by Mutual Fund Investors*	*Frequency*	*Percentage*
Growth Schemes	138	93.2%
Income Schemes	14	9.5%
Balanced Schemes	112	75.7%
Tax saving Schemes (ELSS, ULIP)	79	53.4%
Money Market Schemes	21	14.2%
Index Schemes	17	11.5%
Fixed Income Schemes	31	20.9%

Source: Online survey through Google Form, 2022

Investment Term Investors Prefer

The study clearly indicates that majority of the respondents prefer to invest in mutual funds for a long-term period as mutual funds yield better returns when invested for a longer period of time as compared to short term.

Mode of Deduction

Figure 1: Mode of Deduction of Investment

86
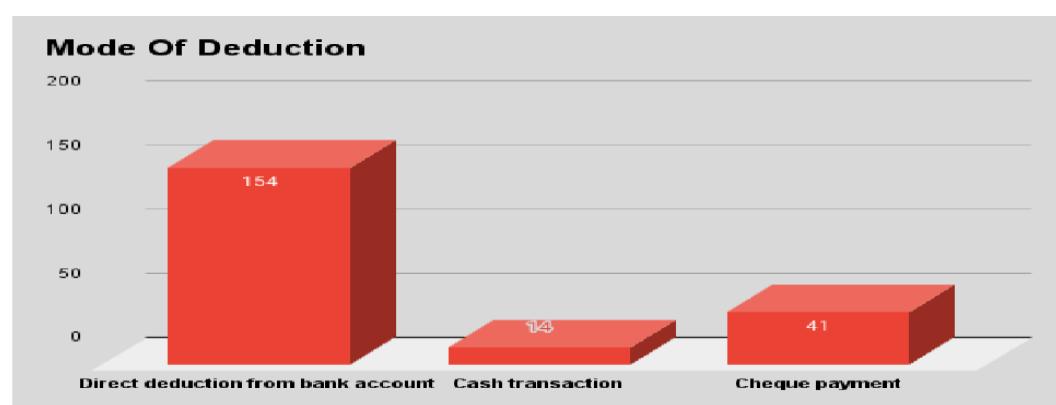
The mode of deduction of investment is clearly evident from the figure 1 above. It could be seen that majority of the investment transactions are made directly through bank account. These days every individual has a bank account and it is easier to make monthly or yearly investment payments through the bank as it is hassle free. Cash transaction is rarely used by investors to make payments as it is time consuming and troublesome for an investor on a regular basis.

Different Factors that Influence the Retail Investors Investment Pattern

Table 5 above shows 'Professional management' to be the most influencing factor compelling the investors to invest in MFs, as the investors do not need to manage the investment on their own. It is followed by 'flexibility of investing', as mutual funds have a high range of flexibility of investing in equity, debt and balanced funds. The third important factor that occasionally influences the investors to invest in mutual fund is 'tax benefit' as mutual funds provide high tax savings on the investment. The factor that does not influence is also professional management as some investors do not invest in mutual funds for the management but because of the higher return.

Table 5: D*ifferent Factors that Influence the Retail Investors Investment Pattern*

Particulars	Mostly Influenced	Influenced	Occasionally Influenced	Not Influenced
Safety of Capital	16.5%	50.4%	31.1%	1.8%
Flexibility of investing	24.7%	70.6%	3.6%	0.9%
Higher return	30.2%	60.5%	6.4%	1.8%
Tax Benefits	44%	23%	30.3%	2.7%
Professional Management	66%	19.3%	3.7%	11%
Diversification	27.5%	55%	16.5%	1%
Liquidity	11%	70.6%	14.6%	3.8%

Source: Online survey through Google Form, 2022

The table shows that 66.9% of the investors are influenced by safety of capital and 32.9% of the investors are not influenced by it. Flexibility of investing is a highly influential factor of investment; it has 95.3% investors who are influenced as mutual funds have various schemes for every investor purpose and a nominal 5.5% of investors are not influenced by this factor. 90.7% of investors are influenced by higher return, it is one of the main reasons for investing in mutual funds. 81.6% of the investors are influenced by liquidity as most investors invest for long-term and the money invested is locked for a certain period that is in alignment with the investor's investment pattern.

Conclusion

Mutual fund in simple words is a type of financial vehicle made up of a pool of money collected from many investors to invest in securities like stocks, bonds, money market instruments, and other assets. A mutual fund's portfolio is structured and maintained to match the investment objectives stated in its prospectus. Mutual funds give retail investors access to professionally managed portfolios of equities, bonds, and other securities. The study is very important in order to judge and understand the investment preference of retail investors regarding mutual funds. Investors behaviour, level of awareness, opinion and preferences for different mutual fund schemes are studied in this study. The research outlined that mostly the investors have moderate level awareness and positive approach towards investing in Mutual Fund. This study gives a clear picture about the cognizance of investors in the Guwahati city which was

the main aim of this research. The retail investors are mostly aware but some percentages of respondents are still unaware of this investment prospect. This study showcases that investor prefer equity funds the most compared to any other funds and most of them were seen investing in Growth Schemes, Balanced Schemes and Tax saving schemes. Transparency and liquidity were seen to be the major influencing factors for retail investors as every investor wants to know and understand how and where their investment is and what is the actual return they are incurring from such investment.

From the research we can conclude that mutual funds are the modern-day safe investment prospect but more emphasis needs to be given to good expert management as it is a key factor in attaining the desired investment goals. This is also the reason why some investors are unsatisfied with the lock-in period. Retail investors are aware of the mutual fund but not every investor has complete knowledge of the various schemes and how those schemes can benefit them, hence they invest in equity funds rather than investing in balanced funds or income funds. More awareness can be circulated to retail investors and potential investors through free seminars and different education programmes on the said topics so that the investors can reap the benefits of different schemes.

Reference

Association of Mutual Funds India (2013), Mutual Funds retrieved from: https://www.amfiindia.com/

Aswathy B. A., Nair A., Sai A. P. and Pravitha N. R. (2015) Growth and Performance of Indian Mutual Funds. *Industry Journal of Economic and Financial Studies,* Vol. 05, No.02, pp. 26-38.

Chalam G.V (2003), Investors Behavioural Pattern of Investment and their Preferences of Mutual Funds. *Southern Economist*, Feb 2003, Vol. 41, No. 19, pp 13-19.

HDFC (2013), Benefits of Mutual Funds retrieved from: https://www.hdfcfund.com/learn/beginner/mutual-funds/benefits- mutual-funds

Madhusudan V. J. (1996), "Marketing Strategies of Mutual Funds – Current Practices and future Directions", Working Paper, UTI -IIMB Centre for Capital Markets Education and Research, Bangalore

Phillip, G. M., (1995). Increased Debt and Industry Product Markets: An Empirical Analysis, *Journal of Financial Economics*.

Ranganathan K. (2004), A Study of Fund Selection Behaviour of Individual Investors Towards Mutual Funds with reference to Mumbai City. *Indian Institute of Capital Markets 9th Capital Markets Conference Paper*.

Saini S., Anjum B. Dr, and Saini R. (2011) Investors Awareness and Perception about Mutual funds. *International Journal of Multidisciplinary Research*, Vol. 1.

SEBI- NCAER, *Survey of India Investors,* SEBI, Mumbai, 2010

Sikidar S. and Singh A.P. (1996), Financial Services: Investment in Equity and Mutual Funds: A Behavioural Study (in Bhatia B S., and Batra G.S., ed.) Management of Financial Services, Deep and Deep Publications, New Delhi, Vol.10, pp. 136 – 14

Singh J. and Chander S. (2004). An Empirical Analysis of Perception of Investors Towards Mutual Funds. *Finance India.*

Vyas R. Dr. (July 2012) Mutual Funds Investors Behaviour and Perception in Indoor City, *International Referenced Research Journal*, Vol-3

.....***.....

Economic Impact of Pandemic COVID-19 on Migrant Labours' in India

Dr. Raju Subba

Abstract

Migration has been a global and growing phenomenon since the period of human civilization. Migration takes place due to the many factors such as transferring of family from one place to another place, job and employment, to take the advantages of education by the students in the different cities, some are of forced migration due to the conflicts and natural disasters etc. etc. Of late, the migration has been tremendously seen for employment. Most of India's labor markets are being dominated by migrant workers. The cities and town have been experiencing the shortage of semi skilled laborer and the results the employer often have to bring laborers from the rural areas. This paper is attempted to highlight the economic impact of Pandemic COVID-19 virus on Indian migrants' workers. Due to the rapid expansion of COVID-19 virus like a forest fire and implementation of the control measures by the Government of India in the different phase; namely JANATA CURFEW followed by 21 days total country lockdown and 19 more days of lockdown and so on in the country has severely caused the economic conditions of migrant laborers. The migrant workers fall under the unorganized sector labor. They are not protected with social security measures announced by the Government such as Insurance, Provident Fund and other benefits. These labourers are paid wages by the employer on a daily basis. Some of bread-and-butter earners in the family have also died in COVID-19 due to the unaware of its prevention measures. This has brought uncountable number of problems in the many hundreds of migrant workers in the country.

Keywords: Migrant Labour, Economic Condition, Occupation, Structure
JEL Classification: J61

Assistant Professor, Department of Management, Pandit Deendayal Upadhyaya Adarsha Mahavidyalaya, Tulungia, Bongaigaon Assam India – 783383, Email: subbajames@gmail.com
Phone no: +919864852955

Introduction

As per the definition provided by the Wikipedia migrant workers are person who is either migrates to home country or outside the country for seeking job. Migration can be understood by way of movement of movement of people from one place to another place for different purpose. When a person is moving to other places for seeking job and employment than that phenomenon is basically known as migrant workers. Migrants' workers are generally seen on seasonal basis hence this is also said to be seasonal migrants. Migration of laborer in India has become an important factor for the socio-economic development. According to the National Sample Survey 2007-08 data available in the census 2011 total of 28.3% workers are seen migrants. Thus, the migrant workforce has become an important human capital for fueling the economic growth of the nation. The Ministry of Programme Implementation, Government of India on January 2017 states that, the total GDP of the country was seen growing 7.9% in the year 2015-16 with the help of migrant workers. The gradual rise of GDP with the help of migrant laborers in the country has led the government on India to launch Make in India Program in September 2014 which sets as a part of economic reform. The aim of

launching the make in India programs is to accelerate GDP by 25% in manufacturing sector. But the Covid-19 has totally changed the scenario of migrant workers activity. The pandemic has stopped all the migrant and non-migrant workers from to moving from one place to another place for their survival.

Objectives of the Study:
The researcher has undertaken following objectives for preparing the paper;
  i.   To know the percentage of migrant workers in the country,
  ii.   To know the economic impact of COVID-19 on Migrants workers in India
  iii.   To know the relief measures announced by the Government of India to Migrant workers
  iv.

Research Methodology
       The research paper is fully based on the secondary source of data. The data has been collected from the publications of National Sample Survey 2007-08, Census of India 2001 & 2011, Report of the working group on migration prepared by Ministry of Housing and Poverty Alleviation 2017 and the various publication relating to migrant labours in India. The data were collected and analysed in a best possible manner to bring the outcome of the study.

Review of Literature
       There are some important articles and writes up on these issues. Some of the relevant works and literatures on the migrant workers and its economic impact by the covid 19 have been considered for this study.
       McNeill (1984), the country India has a long history of migration which has bent its culture, social history, and pattern of development. The spread of the population during the pre-colonial era were mainly for business and religious purposes.
       Hutton (1986), migration taking place due to the military agitation, also played a significant role. People had to travel long distance for searching pastures for their livestock. The shifting of nomadic migration even for the short distances was a significant characteristic of the Gatwick Valley. This kind of practices are still seen in some parts of Madhya Pradesh and Rajasthan in central India, which is one of the oldest forms of migration in the history of human civilization.
       Kingsley Davis (1951), in his work on India argued that Indians were seen less mobile in case of migration. His findings were based on inter-provincial and state migration. This shows 3.6 per cent in India in 1931 in-comparison to 23 per cent in the United States in the year 1940. Davis has attributed the fact that the prevalence of the joint families, wide diversity of culture and languages, caste system, traditional values, the lack of education, semi-feudal land relations and the predominance of agriculture system in India. Moreover, it is seen that Indian migration is predominated within the state.
       Boyle et al. (1998), India has faced particular difficulties as a result of the coronavirus. The main causes of this include the 1.3-billion-person population living in many States with varying degrees of health infrastructure as well as social, cultural, and economic disparities. There have been significant differences in how prepared state governments have been to combat the virus. Kerala used thorough testing, contact tracing, etc. after contracting the Nipah virus in 2018 to stop the spread. Similar to this, the State of Odisha has had a number of natural calamities, and the State administration responded appropriately in each case. Migration can be defined as the temporary migration of people from one location to another.
       Mishra and Sayeed (2020), The virus drastically altered the existing systems and created a whirlwind of difficulties that the people had never encountered before and

had no idea how to handle. Due to the novelty of the crisis, the uncertainty it brought with it about how and when things will return back to normal, as well as the sense of impending catastrophe, this finally caused overwhelming panic and increasing anxiety among the population.

Results and Discussion
Intercensal Migration Streams:
Since the dawn of human civilization, migration has become an international phenomenon. As a result, employment has emerged as the main driver of migration. The following table categorizes the types of movements that people make in search of job, including rural to rural, rural to urban, urban to urban, and urban to urban. It can be seen from the table-calculated statistics of the censuses in 2001 and 2011 that the percentage of persons moving for job has varied from region to region and year to year.

Table 1: Streams of Intercensal Migration

Area	2001	2011	% Change
Rural to Rural	12.3%	11.20%	-1.1%
Rural to Urban	39.6%	42.55%	+2.95%
Urban to Rural	19.2%	15.58%	-3.62%
Urban to Urban	28.87%	30.64%	+1.77%
Total	100%	100%	-

Source: Authors calculation using data from census 2001 and 2011

12.3% of persons moved from rural-to-rural areas in the year 2001; by 2011, this number had dropped to 11.20%. There has been a -1.1% change in percentage during the past two years. More migrant workers were observed in the rural to urban group. It has contributed 39.6% in 2001 and 42.55% in 2011, while from 2001 to 2011, urban to urban contributions ranged from 28387% to 30.64%. The percentage of migratory labour has increased from rural to urban by 2.95% and from urban to urban by 1.77%. It's interesting to note that both rural to rural and urban to rural migration of labour is experiencing a drop in two phenomena. The majority of the migratory labour is seen to be migrating to metropolitan regions. The previous section said that foreign workers make up the majority of the labour force in India. They typically travel from the countryside in search of seasonal work in industries like manufacturing, public service, construction, etc.

The movement of labour is a significant factor influencing India's socioeconomic development. About 28.3% of the workforce in India is made up of migrants, according to data from the National Sample Survey (NSS) in 2007–08 (the scant data from Census 2011 does not include employees). By transporting human capital to areas where it is required, migrants help the Indian economy by facilitating the development of new talents and a higher standard of living (Korra 2011). In the past, rural-urban migration has contributed significantly, if not primarily, to the urbanization process (Mitra and Murayama, 2011). In addition, there has been concern over the economic, social, and political marginalization of these migratory workers. Table no. 2 shows the 73% of total female have their shared on the migrant record from the rural whereas a significant percentage i.e. only 6% contribute by male of rural areas. When we see the variance with the rural and urban than the urban migrants amongst the male and female does not show much differences. However, the percentage has significant difference in number i.e., share of male migrants specially in urban is 33% and 56% are from female categories.

The result shows that more female workers are contributing the share in migrant workers record in the difference sectors of activities. The activities taken into the consideration are primary, manufacturing, public sector, construct, traditional service and modern service.

Table 2: Share of Migrant Workers in Total Workers by Major Sectors

Sectors	Rural		Urban	
	Male	Female	Male	Female
Primary	4%	75%	20%	65%
Manufacturing	13%	59%	38%	51%
Public service	16%	69%	40%	56%
Construction	8%	73%	32%	67%
Traditional service	10%	65%	29%	55%
Modern service	16%	66%	40%	52%
Total	**6%**	**73%**	**33%**	**56%**

Source: NSS 2007-08 * Using the National Industrial Classification codes of 2004 (NIC)

This discussion seems to suggest that, on the whole, migrant workers' access to employment is not a significant binding constraint. We examine this problem in depth. To evaluate if there are any notable differences in the makeup of migrant and non-migrant workers, we first take a look at their occupational structure. The fluctuation in the share of migrant employees in Table 2 suggested that certain differences can be anticipated. However, Table 3 suggests that this might not be a significant issue. First, there are not many differences in the occupational composition of female migrant and non-migrant workers in urban or rural locations, with the exception that migrants are slightly overrepresented in primary sectors and underrepresented in manufacturing.

The occupational structure of migrant workers and non0migrant workers shows significant differences in the different types of industry. It is noticeable that the percentage of migrant worker is higher than the non-migrant workers in the different occupational structure in rural and urban areas.

Table 3: Occupation Structure of Migrant and Non-Migrant Male Workers

Industry Type	Rural		Urban	
	Migrant	Non-migrant	Migrant	Non-migrant
Primary	65%	37%	7%	3%
Manufacturing	8%	17%	22%	27%
Public service	4%	11%	8%	11%
Construction	8%	10%	10%	9%
Traditional service	12%	20%	41%	33%
Modern service	2%	5%	12%	16%
Total	**100%**	**10%**	**100%**	**100%**

Source: NSS 2007-08* Using the National Industrial Classification codes of 2004 (NIC)

While there is an expected significant difference for males in rural areas, where non-migrants are significantly more involved in primary activities, the gap in urban areas is not very pronounced. Although there is a slight underrepresentation of immigrants in traditional services and a slight overrepresentation in manufacturing, it would be difficult to conclude from these overall trends that immigrants are systematically excluded from urban labour markets. This does not imply that there have not been attempts to do so, as will be addressed later; it only means that those attempts

have not been clearly successful. We should keep up the pressure to prevent any form of discrimination against immigrants on the job market.

Economic impact of COVID-19 on Migrants workers

The COVID-19 pandemic-related countrywide shutdown in India has severely uprooted its immigrant community. Hundreds of thousands of migrants were forced to travel hundreds of kilometers back to their home towns since they had neither employment or money, and public transit had been shut down. Some of the migrants perished on the route. As soon as there were 500 or more COVID-19 cases in India, the national government ordered a lockdown and shut down all enterprises. Millions of migrant laborer's were left stranded as local authorities implemented tough containment zones to block off hotspots. The swift response of the nation stopped the disease's spread, but it also sparked worries that it would exacerbate already-existing disparities and vulnerabilities.

Research on 'how the Covid-19 outbreak's lockdown has affected the migrant workers in the nation' reveals a very high level of economic suffering, with many of them being driven dangerously near to famine. Only 51% of the more than 11,000 workers surveyed in research by the NGO SWAN (Stranded Workers Action Network) had enough food for less than a day, and 72% predicted they would run out in two days, according to the report(*No Country for Workers: Latest Stranded Workers Action Network Report | Center for Contemporary South Asia*, n.d.) . Many people had been eating sparingly and some had even been on the verge of famine due to a lack of money and food. This research also emphasizes that the respondents experienced severe physical and psychological pain and trauma, as well as a desperate desire to go back home.

The report makes the important point that the rate of hunger and suffering was significantly higher than the pace at which migrant workers are being helped. Only 1% of the trapped workers had gotten meals from the government two weeks into the lockdown, and only 4% had received rations after three weeks. The study also emphasizes that 96% of people had not received government rations. 70% hadn't got any cooked meals, 78% of people have less than Rs 300 in their pockets and 89% of workers have not received any pay from their companies during the shutdown.

According to the report, while millions of migrants made it to their home states successfully only to be imprisoned in camps, many others are still trapped far from their homes with little access to food or money. The report considers 11,159 migrant employees, of which roughly 17% are wage earners on a daily basis and factory/construction workers, 8% are wage earners on a daily basis who are not part of a group (such domestic workers and drivers), and 8% are self-employed. (Vendors and sari employees). The workers' median daily wage is Rs 400 and their average daily wage is Rs 402.

The research claims that the majority of stranded workers were unable to recall the name of the primary builder or business they had been employed by. They had no access to a social network at their place of employment. Their contractor was the only person they had contact with in the town or city where they were working. They were only able to identify their contractor, and they had no idea who owned the registered business that the contractor was affiliated with. Contractors typically had their phones off, allowing employees to fend for themselves. According to the report, 89% of the stranded workers were not paid by their employers during the shutdown despite a Ministry of Home Affairs decree requiring businesses to do so. 74% of the migrant workers polled had less than half their daily income left over for the duration of the lockdown. With only Rs 200 in their pockets, they were forced to buy things like soap, oil, cooking gas, sanitary pads, medicines, phone recharges, and transportation costs in order to get back home after the lockdown in addition to their meagre rations. At a period when

they had no income, they had to pay rent (in the range of Rs 2,000-3,000) for their housing.

Relief Measures

Nirmala Sitharaman, the finance minister, unveiled a spending plan for the underprivileged that included 1.7 lakh crore (US$21 billion) immediately after the announcement of the statewide lockdown in late March. This included food security measures and cash handouts. By 3 April, the central government had given states and UTs under the NDRF a total of 11,092 crore to pay for migrant food and housing needs. As of 1 April, the average daily wage under the MGNREGA was raised from 182 (US$2.30) to 202 (US$2.50), in an effort to help offer jobs and pay to workers. On May 13, the PM CARES Fund designated Rs. 1 billion for the support of migrant workers. The Garib Kalyan Rojgar Abhiyaan effort was started by the Government of India to address COVID-19's effects on migrant labourers in India. A rural public works programme with an initial budget of 50,000 crore (US$6.3 billion) for 116 districts in 6 states was introduced on June 20, 2020. About 8 Crore migrant workers who were not covered by NFSA or State scheme PDS cards received food grains free of charge under the Atma Nirbhar Bharat package at a rate of 5 Kg per month for two months, i.e. May and June 2020. The Government of India took a responsibility for covering the estimated total cost of Rs. 3500 Crore to implement this scheme. Under this program, 8 lakh metric tonnes of food grains will be distributed throughout India.

Food Corporation of India had started delivering food grains under this program. The governments of Tamil Nadu and Kerala received 1109 MT and 151 MT of rice, respectively, for distribution to the qualified migrant workers. All necessary arrangements were established for the delivery of food grains under this programme across the nation, and ample supplies have been placed in each Indian state and union territory (UT) (*Atma Nirbhar Bharat Scheme to Provide Free Food Grains to Migrant Labour Kicks Off*, n.d.).

However, the relief measures given by the government to the migrant workers were not sufficient. The scheme did not reach to the masses of migrant worker. Many migrant workers were not registered as migrant therefore, they did not receive benefit from these schemes.

Conclusion

The country has experienced high unemployment, inactivity, and economic stagnation during the pandemic covid-19. It was a great challenging to effectively interact with or reach out to domestic migrant workers in order to provide financial help, food security, or healthcare services due to the lack of detailed data on them. Despite, the migrant labour constitutes the backbone of many industries in the nation, making substantial contributions to the development of the infrastructure, the food and manufacturing industries, the textile industry, the security sector, domestic service, and even tea and cardamom plantations, these industries severely affected as the workers were not allowed to work in the factories. The immigrant workers were substantially affected causing vulnerabilities, including a higher incidence of poverty, and a high concentration in unemployment because of closure of industries. To get the nation back on track, the government of India implemented different methods. The government's 20 lakh crore relief package, also known as the "Atmanirbhar Bharat Package," was one of the major plans that it came up with. It was expected to increase the economy's GDP and improve the conditions of migrant workers. However, due to the non-registration of migrant worker, the government grants such as Atmanirbhar Bharat and other special package designed for them did not cover all the migrants' workers.

Reference

McNeill, W.1984 Human migration in historical perspective. Population and Development Review, 10 (1): 1–18.

Hutton, J.H. 1986 Census of India 1931: With Complete Survey of Tribal Life and Systems, Vol. 1, Gian Publishing House, Delhi.

Davis, K. 1951 the Population of India and Pakistan. Princeton, Princeton University Press, New Jersey.

Sharma, R.S. 2005 India's Ancient Past, Oxford University Press, New Delhi.

Boyle P, Halfacree K, Robinson V. Exploring contemporary migration. Essex: Pearson Education Limited; 1998. [Google Scholar]

Korra, Vijay. 2011. "Short-duration Migration in India." In Migration, Identity and Conflict: India Migration Report 2011, by S. Irudaya Rajan (ed.), 52-71. New Delhi: Routledge.

Mitra, Arup, and Mayumi Murayam. 2011. "Rural-to-Urban Migration in India: A District-level Analysis." In Migration, Identity and Conflict: India Migration Report 2011, by S. Irudaya Rajan (ed.), 25-51. New Delhi: Routledge.

Mishra A, Sayeed N (2020) Covid-19 and migrant workers: clinical psychologists' viewpoints. L. S. S. Manickam (Ed.), COVID-19 pandemic: Challenges and responses of psychologists from India. The Editor, Thiruvananthapuram, p. 43–56

Atma Nirbhar Bharat scheme to provide free food grains to migrant labour kicks off. (n.d.). Retrieved December 2, 2022, from https://pib.gov.in/pib.gov.in/Pressreleaseshare.aspx?PRID=1624518

No Country for Workers: Latest Stranded Workers Action Network Report | Center for Contemporary South Asia. (n.d.). Retrieved December 2, 2022, from https://watson.brown.edu/southasia/news/2021/no-country-workers-latest-stranded-workers-action-network-report

.....***.....

Women Entrepreneurship through Self-Help Groups (SHGs)- A study of select Villages of Lakhimpur District

DR. PARTHA PRATIM BORA

Abstract

A self-help group is a small, economically homogeneous & attractive group of 10-20 rural poor people which comes together to save small amounts regularly in order to lend it, to its members for individual gainful work or to jointly undertake economic activities which may fetches some profit to the group. Self-Help Group is a method of organizing the poor people and organizing them to come together to solve their individual problems. Women Self-Help Groups are informal associations where the women come together to undertake their common pursuit for gainful activities. They are associated with various economic activities like fishery, tailoring, weaving and embroidery, processed food products, poultry farming, etc. These activities help to establish themselves as entrepreneur in the society. This Paper mainly focuses on to identify the economic activities and to evaluate the performance of selected women self-help group. For this purpose researcher have deliberately selected some SHGs of the Bihpuria Block in Lakhimpur District. The data were collected through both primary and secondary method. To make the study more authentic and reliable a field survey was undertaken to assess the ground reality in select SHGs at Bihpuria village. Secondary data have been collected from various published sources relating to the concerned subject under study. Newspaper publishing, journals, books, internet, etc. were also used as a source of the study.

Key Words: Self-help group, women entrepreneur, economic activities

JEL Classification: L26

Assistant Professor, Dept. of Accountancy, B.H. College, Howly, Barpeta

Email ID- partha.gccbh@gmail.com

Introduction

Women in our society feels isolated for more than one reasons. However, they are always encouraged when they find themselves in group initiatives. This group when composes of members of their own sex can save them from many social blemishes which are attributed upon them. The experiment of self initiative, self support and self sustenance have been the declared tools of the modern developmental process for boosting up the economic power in self empowerment of specified groups or category of people. Women constitutes 48.92% of the Assam's total population (Total population is 3,12,05,576 and female population are 1,52,66,133 Statistical handbook Assam 2021). They are considered as the better half of the society. So, without the development of women, it is quiet impossible to hope for a developed nation. If women are not contributing actively towards the economy, then it means that half of our human resources are unutilized or under-utilized. As development is a continuous phenomenon, empowerment of women in all sectors like educational, economic, social and political is necessary for a meaningful nation building process. Women contributed substantially to the economic prosperity of India. In earlier days, they were associated with the household activities only. Now-a-days, they have come out of the four walls to participate in all sorts of activities like, academics, politics, administrative, social work and so on.

Entrepreneurship is a process through which an individual hopes to become self-sustained by harnessing his/her capacity by exploring the opportunities. Entrepreneurship is a weapon to overcome all the economic hindrances. The economic

progress of our country is closely linked to its capabilities to manufacture and export the quality products in a highly competitive global market. Entrepreneurship plays an important role in developing and contributing to the economy of a nation. The term entrepreneurship is a relatively newer term & concept used in economic sphere. It is defined differently by different people such as risk-bearing, innovating, creative, dynamic, thrill- seeking, etc. Entrepreneurship involves changing, revolutionizing, transforming, introducing new approaches.

Entrepreneurship is an economic activity which is undertaken by an individual or group of individuals. Entrepreneurship can be defined as the "making of a new combination of already existing materials and forces; that entrepreneurship throws up as innovations, as opposed to inventions and that no one is entrepreneur forever, only when he or she is actually doing the innovative activity" (Schumpeter Joseph, 1961).

Women entrepreneurship is the process where women organize all the factors of production, undertake risks, and provide employment to others. According to Medha Dubhashi Vinze, a woman entrepreneur is a person who is an enterprising individual with an eye for opportunities and an uncanny vision, commercial acumen, with tremendous perseverance and above all a person who is willing to take risks with the unknown because of the adventurous spirit she possesses (Medha Dubhashi Vinze, Women Entrepreneurs in India, Mittal Publication, New Delhi, 1987). Thus, Women entrepreneurship is an economic activity of those women who think of a business enterprise, initiate it, organize and combine the factors of production, operate the enterprise and undertake risks and handle economic uncertainty involved in running a business enterprise.

Self-Help Groups act as an important tool for women which help members to establish as an entrepreneur in the society. A self-help group is a small, economically homogeneous & attractive group of 10-20 rural poor people which comes together to save small amounts regularly in order to lend it, to its members for individual gainful work or to jointly undertake economic activities which may fetch some profit to the group. Self-Help Group is a method of organizing the poor people and organizing them to come together to solve their individual problems. Women Self-Help Groups are informal associations where the women come together to undertake their common pursuit for gainful activities. They are associated with various economic activities like fishery, tailoring, weaving and embroidery, processed food products, poultry farming, etc. These activities help to establish themselves as entrepreneur in the society.

Guiding Principles for Formation of SHGs
- The strong belief by the individual to bring about change through collective efforts
- Effort is built on mutual trust and mutual support.
- Every individual is equal and responsible.
- Every individual is committed to the cause of the group.
- Decision is based on the principles of consensus.
- The belief and commitment of an individual that through the group their standard of Living will improve.
- Savings is the foundation on which the collective action of the group is to be built.

Membership of SHGs
- An SHG shall have a membership of 10 to 20 persons.
- Members should reside in the same village.
- Membership should be based on affinity.
- The groups could be male or female.
- The members of the groups should preferably be from the low- income group.

Management of the SHGs

SHGs elect a member as a chairman and Secretary of the group for a period of one year. The chairman acts as the representative of the groups and chairs group meeting while the secretary maintain records. All decisions of the group must be shared consulted and agreed by every member. The group frames rules and regulations. The group must open an account with a bank. They must meet at least once a month. The record maintained by SHG - Register of Minute, Register of accounts (Cash Book/ ledger/ vouchers/ receipts etc.), admission register, attendance register. SHGs will close the annual account on the 31st march every year and the secretary will present the annual reports related to savings loans activities etc. The agenda of each group meeting shall consist of the monthly savings accounts reports and bank account report, monthly savings and other matters.

Income Generating Activities and Loan System

SHGs must save for at least 6 months before they can be linked to a bank credit or provide loans to its members. The rate of interest in lending among members from the groups fund will be decided by the group as well as the amount to be given and the rate of interest to be charged. Loans may be given to members for either productive or consumption purposes subject to the group's decision. All income - generating activities require functional skills. SHGs must promote its members to be trained in their selected activity to enhance their capability for sustainable surplus production.

Disqualification of Members from SHGs

A member being absent consecutively 3 times from SHG meetings. A member who violated the objectives, principles and management of the group and the rules and regulation set by the group and found in its written constitution.

Objectives of the Study

i. To examine the participation of women in various economic activities through formation of SHGs.
ii. To make a field level study in order to examine the economic viability of SHGs in select villages of Lakhimpur District.
iii. To identify the problems confronted by the SHGs.

Research Methodology

The study aims at examining the economic activities performed by Self Help Groups and their economic viability together with an objective to examine if there is any problem being faced by Self Help Group in the study area. The data were collected both through primary and secondary methods. To make the study authentic and reliable a field survey was undertaken to assess the ground reality of select Self Help Group in Bihpuria Block of Lakhimpur district of Assam. The researchers have undertaken direct personal interview with personnel of selected Self Help Group. Secondary data have been collected from various published sources relating to the concerned subject under study. Statistical abstracts, newspapers, journals, books, statistical handbooks, economic survey, internet, etc. were the source of secondary study.

Economic viability of any enterprise depends upon a host of criteria, among which profitability is undoubtedly the most prominent one. Continuity of existence, integration of members with perpetuity of membership, further addition of family person to SHGs membership, frequency in operational activity, diversification of activity, assets creation, fund acquisition through successful performance, repayment of liability are the other important determinants for assessment of efficacy and performance of the SHGs. Registration and submission of annual reports to concerned authority is also indicative of sound management performance.

The samples of SHGs are mainly available in three clusters. They are namely-Block Panchayet level, Town Committee level and District Headquarter level. While Block Panchayet level SHGs can be wholly covered for our purpose, the town committee level SHGs are also being taken within the population of the study; Since, these towns are small semi-urban centers which are not very well developed, where the existence of SHGs are very scanty. However, no sample has been drawn from the district level as it is considered expedient only to include Block level and town committee level SHGs as they are fully rural based organization. Bihpuria Block has been constituted in four Panchayet level, namely-Badoti panchayet, Pub-Dikrong panchayet, Bahgorah panchayet and Bihpuria Gaon panchayet. 143 SHGs are officially registered under Badoti, 225 are registered under Pub-Dikrong, 194 are registered under Bahgorah and 207 are under Bihpuria Gaon Panchayet. Therefore, 769 SHGs are registered under Bihpuria Block Development Office (Block Development Office, Bihpuria). On the otherhand 65 SHGs are registered in Town Committee level (Bihpuria Town Committee). Researchers for their own convenience selected 25 registered SHG from Bihpuria Gaon Panchayot and 15 SHG from town committee level. Therefore, total sample of the study is forty.

Table 1: Block wise SHG in Bihpuria Development block

Name of Block	No of SHG
Badoti panchayet	143
Pub-Dikrong panchayet	225
Bahgorah panchayet	194
Bihpuria Gaon panchayet	207
Total	769

Source- Field Survey Block Development Office, Bihpuria

In actual visit however, many registered SHGs were found to be physically nonexistent. Interestingly, a few groups are seen to be active in economic pursuit without least concerned about formal registration. For paucity of time, information was sometimes gathered through telephonic conversation with the member/functionary of SHGs.

Results and Discussion

Total population of Lakhimpur District is 10,42,137 and out of which 5,12,463 is female population i.e.,49.17%. Rural population of Lakhimpur District is 9,50,804 (*Statistical handbook Assam 2021)*. It comprises of two Sub-Division, namely – North Lakhimpur and Dhakuakhana. The major activities carried out by women SHGs in Lakhimpur District are- fishery, tailoring, weaving and embroidery, textile and handloom, processed food products, poultry farming, interest earning by lending, handicraft, etc.

The women SHGs members are seen to be engaged in basic Textile and Handloom activities namely- traditional designed Gamusa, Mekhela- Chadar, handmade handkerchief, Muffler,etc. They are also associated in processed food product like bason, pickles, kharoli, bamboo-shoot, laru, pitha,etc. The study observed that women SHGs member of tribal communities prepared rice-beer for commercial purpose. Assamese traditional handmade fan which is used in during summer season, Jakoi and khaloi which are used as fishing equipment in villages of Assam have also made by the women SHG members. The researchers have also found that some of the SHGs organized an Annanda Mela/ Food festival during the occasion of Bihu and Puja festivals, such Melas are very common in Bihu festivals. In this research study, it has been observed by the Researchers that some of the members of the SHGs in collaboration with selected interested NGOs had organized "training camp/workshop" for the benefit of the members. In this workshop, the members were being taught how to make doll, ambush, pickles,

fruit jam and juice, etc. On the basis of that, they always make an arrangement of Handloom and Handicraft exhibition during the time of Durga puja festivals.

The study observed that among the total sample SHGs, many of them are frequently engaged in their all operational objectives. The members of the SHGs have taken order of making gamusa, mekhela- Chador, pickles etc. on special occasion like marriage. Some of the SHGs also provide fish on special occasion. They also provide lend money to the outsiders at five rupees in an average in a month, this type of activities bring some profit to the SHGs. The profit is distributed among the members of the SHGs on annual basis; in the month of April. Majority of the sample SHGs have utilized the loan amount or financial assistance received from bank or Government in a productive purpose like in fishery, poultry farming, piggery farming or many other economic activities. Some of the SHGs distribute the loan amount or grant among the members, which is considered as a non-productive and non-professionalism objective. In this study, Researchers have found that some of the SHGs have taken loan from bank for their initial operation whereas some of SHGs contribute by themselves on monthly basis while starting their operational activities. Majority of the member of SHGs contributed some amount in a monthly basis and keep it in to the bank. After contributing more than 6 months they have to start lending money for their own member in initial stage and after 2 years they lend money to the outsiders. In this research study the researchers reveal that the SHGs have yet not received the adequate amount of loan provided by bank, it is very difficult for the SHGs to take initiative in any activity without sufficient fund. In this research study, researchers found that 15% of the sample SHGs group had been included further membership for their own family. The researchers also found that 17.5% (7) SHGs have not been engaged for any operational activities and 20% (8) SHGs were found to be occasionally associated their operational activities. Rest of them i.e.,25 SHGs (62.55%) have been actively associated their operational activities.

NABARD has been playing the role of propagator and facilitator with the help of different Commercial banks and NGOs providing conducive policy environment, training and capacity building besides extending financial support for the healthy growth of the SHGs linkage programme over the years. Training is provided by SIRD (State Institute of Rural Development) to select SHGs in textiles and handloom, weaving & embroidery, processed food product, etc. in collaboration with different NGOs. Government of India (Ministry of Rural Development) in collaboration with state Government have taken different inspiring steps for SHGs under the scheme of NRLM (National Rural Livelihood Mission) which replaced the IRDP (Integrated Rural Development Programme) and SGSY (Swarnajayanti Grameen Swarojgar Yojana), programmes.

After amalgamation of the scheme like IRDP and SGSY etc. schemes into a new vision proggamme; namely, NRLM which has now been adopted as the main instrument for bringing about economic empowerment to the rural folk. The training for entrepreneurship of micro-enterprises has been provided by SIRD and accredited NGOs, IIE (Indian Institute of Entrepreneurship) and also by NIDC of India and the MSME (Micro Small Medium Enterprise)-DI (Development Institute). The survey result revealed that the SHGs became beneficiary of loans under NRLM and those which acted with well throughout plans have been proved to be successful. The SHGs which acted under appropriate plan have become successful in returning loans with good profit for the member. However, in cases where there were shortfalls in providing loans by the bank to the SHGs against their estimated investment, the loan amount failed to meet the actual requirement and the members shared the amount for their private uses making it difficult to return in time. Reason being the loan amount couldn't fulfill their requirement for specific purpose for which it was intended. In course of the study, it was experienced that a few members of some SHGs who have desired to return their part of share, however, found it difficult for the reason that refund of loans demands whole some

amount from all members and comprehensive return of the loan amount. In such a situation a default in payment of loan becomes a forthcoming eventuality in which honest loaners are also converted into defaulter.

Conclusion

As it has been experienced that SHGs often fail their objectives. Wherever financial assistance sought is not adequately supplied by the financing agency. A few SHGs lack spirit of professionalism as their outlook and attitude towards credit assistance received from Government is fought with lack of clarity and vision. It has also been experienced that a few SHGs operational achievement is satisfactory at the first instance while integration of the group is fragile for subsequent incentives owing to either difference among members or lack of co- ordination among the group or diversion of interest for other subsidiary occupation.

Reference

Borah Ajit, Women Empowerment through Self Help Groups – A case Study of Barhampur Development Block In Nagaon District of Assam, ISOR Journal of Economics and Finance (IOSR-JEF). Volume 4, Issue 3. (May-Jun.2014) PP 55-62.

Statistical Hand Book Assam 2021, Directorate of Economics and Statistics, Government of Assam.

Schumpter Joseph, The Theory of Economic Development, Oxford University Press, Newyork,1961.

Sharma Preeti, Varma Shashi Kanta, Women Empowerment through Entrepreneurial Activities of Self Help Groups, Indian Res. J. Ext. Edu.8 (1). January 2008.

Vinze Medha Dubhashi, Women Entrepreneur in India, Mittal Publication, New Delhi,1987.

.....***.....

Subscription Form

I wish to subscribe **PDUAMT BUSINESS REVIEW** for the period of:

One Year ☐   Two Years ☐   Three Years ☐

I am enclosing Demand Draft/Cheque number……….. Dated………….drawn in favour of Principal, Pandit Deendayal Upadhyaya Adarsha Mahavidyalaya, Tulungia, forRs… payable at Bongaigaon, Assam.

Name:………………………………………………………………………

Designation:………………………………………………………………………

Name of the Organization:……………………………………………………….........

Mailing Address:…………………………………………………………………………

City:……………………….State:………………...Country:……………….

Pin:…………………………………..Mobile:…………………….........

Email:……………………………………………………………………….

Subscription Rate:

Year/Subscriber	One Year	Two Years	Three Years
Individual	Rs. 300	Rs. 500	Rs. 700
Institutional	Rs. 500	Rs. 1000	Rs. 1500
International	$ 20	$ 40	$ 60

Mail this form to:
Porag Pachoni
Editor
PDUAMT BUSINESS REVIEW
Pandit Deendayal Upadhyaya Adarsha Mahavidyalaya, Tulungia, P.O: North Salmara Dist.: Bongaigaon, State: Assam Country: India Pin: 783383, Email:editorpduamt@gmail.com
In case of payment made through direct bank transfer/NEFT/REFT etc. contact the Editor.

Guidelines for Contributors

PDUAMT BUSINESS REVIEW is an International Annual Peer Reviewed official journal of Pandit Deendayal Upadhyaya Adarsha Mahavidyalaya (A Government Model College), Tulungia, Bongaigaon, Assam, India. The primary aim of the journal is to promote research by disseminating the results of research in the area of accounting, finance, banking, management, economics and other allied subjects. PDUAMT BUSINESS REVIEW invites the submission of theoretical and empirical manuscripts in the previously mentioned subjects.

Manuscript Submission Guidelines:

1) The first page should mention title of the article/research paper and author(s) details (affiliation, address, mobile number and email). The title of the paper should be bold-faced, centered and fully capitalized in a 12 point-Times New Roman font style.

2) All manuscripts must be accompanied by a brief abstract. The abstract should elucidate in brief the background, objectives, methodology, findings and conclusion. Abstract including key words should not exceed 300 words.

3) An appropriate number of JEL codes should be provided.

4) Manuscript should be typed in 11 point-Times New Roman font style with a single space and single column with 1 margin on a standard A4 size portrait setting paper. The text should be fully justified. The article/ research paper should not exceed 5000 words.

5) All the headings of the main text must be bold-faced, left aligned and fully capitalised.

6) The titles of the tables and figures must be bold-faced, centered and above the respective tables and figures. Source(s) must be mentioned below the respective tables and figures.

7) The authors should list all references by following APA 7th Edition. The reference cited in the text must also be written in the reference list and vice-versa.

8) Before submitting the manuscript, author(s) should check the following list:
- *The language of the manuscript is in English.*
- *The submission of the paper is in Microsoft Word file.*
- *The paper has not been previously published or submitted to be published elsewhere.*
- *Author(s) of the research paper/article should check Plagiarism, if any.*

The author(s) of each accepted paper will have to sign the Declaration and Copyright Form and revert the scanned copy of the same to the Editor.

Peer Review Process: After a research paper/article is received and shortlisted, it will be sent to the subject expert for blind review. It is performed to maintain the quality and suitability of the manuscript for publication. This process will take 2-5 months. After, the review process is completed, the authors will be informed about the decision of the reviewers through email.