

# EMERGING TRENDS IN GLOBAL BUSINESS AND ECONOMICS

## Editors

**Dr. Usman Mohideen K S**

**Prof. (Dr, CMA, CS). Pradeep Kumar Aggarwal**

**Dr. R. Usharani**



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First Edition: November 2023

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**Price: ₹. 700**

**ISBN: 978-81-964689-7-2**

**Published by and copies can be had from:**

Head Office	Branch Office
<b>UNIVERSAL RESEARCH ACADEMY</b> 1/138/5, Udayar street, Latteri, Vellore Dt, Tamilnadu- 632 202 Mobile No. +91 9626074240/ 89250 25947 Email: universalresearchacademy@gmail.com	<b>UNIVERSAL RESEARCH ACADEMY</b> No.30, Sekkiyar Nagar, Jaganathapuram, Kundrathur Chennai- 600 069 Mobile No. +91 96260 74240 / 89250 25947 Email: universalresearchacademy@gmail.com

**Printed in India**

Universal Research Academy, Vellore & Chennai -69

## **PREFACE**

The purpose of this edited book, entitled “**Emerging Trends in Global Business and Economics,**” is to facilitate the learning and research endeavors of scholars and students in the fields of global business, economics, social sciences, and economics. Its aim is to promote the understanding and use of scientific research methodologies within these disciplines.

This edited book endeavors to strengthen and promote the academic research contributions of academics in the fields of management, commerce, and economic. It aims to provide a good platform for academicians, industrialists, and research scholars to showcase their work. The text is composed in a straightforward and standard manner.

It is our earnest aspiration that this publication will adequately meet the needs of academics in the domain of commerce, Management and Economics.

Since the errors are inevitable, therefore we shall be grateful, if mistakes are brought to our notice in time. It is our expectation that the aforementioned proposed adjustments would be included into future versions.

We express our heartfelt gratitude for the assistance provided by all scholars, researchers, and industry professionals who have contributed to this project. In particular, we would like to recognize the authors and reviewers who have actively participated in the review process. The realization of this edited book would not have been possible without the invaluable help provided by many individuals.

We express our sincere appreciation to our family members, well-wishers, and friends for your invaluable and timely assistance and encouragement.

We would like to acknowledge and be grateful to **Universal Research Academy** who gave us an opening in writing this book and their involvement to make this publication successful.

**Dr. Usman Mohideen K S,**  
**Prof. (Dr, CMA, CS). Pradeep Kumar Aggarwal**  
**Dr. R. Usharani**

## CONTENT

SI No.	Title of the Paper	Page No.
1	Impact of Online Shopping on Customer Behavior. - <b>Dr. Chouturu Manoj Kumar, Dr. D. Balaji, and Prof. S. Raghunatha Reddy</b>	1-10
2	Effectiveness of Various Digital Marketing Activities with Respect to Datalligence.AI - <b>Dr.P.S.Immaculate, Dr.S.Helen Roselin Gracy and Ms. K. Nethra</b>	11-18
3	Exploring Consumer Attitudes Towards Eco-Friendly Products: A Comprehensive Study - <b>Dr. Prashanth Kumar C.P and Dr. Santhosh V</b>	19-31
4	Investor's Awareness on Usage of Financial Technology Offered by Banks in India - <b>Dr. Kanniga Prashanth and Dr. Raaja Justin T.S</b>	32-37
5	A Study on Awareness of Financial Literacy Among the Below Poverty Line (BPL) People at Bengaluru Rural District. - <b>Dr.Krishnamoorthi M and Dr.Mathiyarasan M</b>	38-43
6	Applications of Big Data Analytics in Modern Human Resource Function- A Conceptual Study- <b>Dr. Shabnam Siddiqui</b>	44-52
7	Evaluating the Role of Kaveri Grameena Bank in Promoting Rural Financial Inclusion - <b>Thanuja K A and Ashwitha</b>	53-59
8	Forensic Accounting With Artificial Intelligence: A Review <b>Ms. Meenu Gupta, Prof. (Dr.CMA,ACS) Pradeep Kumar Aggarwal and Ms. Rekha Gupta.</b>	60-72
9	Empowering Financial Inclusion: The Vital Role Of Financial Literacy - <b>Mrs. Komal Chinmay Gadhe and Dr. Ganesh Teltumbade</b>	73-84
10	The Awareness Level of Indian Post Office Schemes Among Customer at Bengaluru Rural District- <b>Dr R. Mohan Kumar and Dr Naveen Kumar R</b>	85-91
11	Impact of Unified Payment Interface (UPI) Payment System by Unorganized Sector - <b>Dr.P.Venkatesh, Mr.M.Manikandan, Mr.M.Ramu and Dr. C. R Senthilnathan</b>	92-104

SI No.	Title of the Paper	Page No.
12	An Analysis of Microfinance and Microcredit on the Development of Micro and Small Enterprise in Vellore District - <b>Dr.G.Shoba and Dr. Srinivasan K</b>	105-111
13	Fintech and Financial Inclusion: Past, Present and Future - <b>Mohd Saleem, Chanchal Chawla, Pradeep Kumar Aggarwal and Vineet Saxena.</b>	112-128
14	Elements Influencing Decision Making Behaviour During Investment: Intervening Role of Searched Information- <b>Dr Sitaram Pandey</b>	129-138
15	A Study on Effectiveness of Employee Engagement in VM Food Products Private Limited at Panruti - <b>V.Sundhara Moorthy and S.Lakshmi Priya</b>	139-148
16	The Crucial Role of Public Relations in a Manufacturing Organization - <b>Dr. Raja Kamal Ch, Dr.Elia Thagaram and Dr.Swati Saxena</b>	149-155
17	Cultivating Inclusive Excellence: Strategies and Best Practices for Diversity, Equity, and Inclusion (DEI) in the Workplace - <b>Ms. Shikha Goyal, Prof (Dr. CMA, ACS) Pradeep Kumar Aggarwal, and Dr Fatima Qasim Hasan</b>	156-163

## **IMPACT OF ONLINE SHOPPING ON CUSTOMER BEHAVIOR**

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### **ABSTRACT**

*Offline shopping is the most preferred way of doing shopping up to decade of 2010 and availing the services by large number of consumers. However, with the introduction of the internet, in the recent days the new generation preferred mostly online shopping. In India majority of the customers were converted from offline customer to online customer. Since online market have so many potential customers having varied nature of demand, hence online market becomes most important for companies to understand what they actually want. The objective of the study is to study the consumer behavior, awareness towards online shopping and to identify the factors influencing towards online shopping. The data required for the study have been collected from both primary and secondary sources. The primary data was collected through questionnaire. The researcher has collected the primary data from sample respondents of 116 on the basis of convenient sampling method. The secondary data has collected through websites, publications, books, journals and newspapers. The questionnaire has been designed keeping in view the objectives of the study. In this study, the researcher has used a percentile analysis in statistical work.*

**Keywords:** Online Shopping, Customer, Behavior, Awareness and Preferences.

### **I. INTRODUCTION**

Online shopping is the most recent significant development and online shopping has been developed which is influenced the people in India. Online shopping is any form of sale that is done over the internet (Celine, 2013). Due to endless and fast growth in technology, growth of internet, every company has to find out the new customers even though the customers are making purchase online mode. Online shopping is the most recent phenomenon in the Indian online space. Both Men and women visit the online shopping websites regularly and buy the necessities of their life. Online shopping is a form of e-commerce which allows customers to directly buy products and services from a seller over the internet using a website. Customers find the products by visiting the online shopping websites of the retailers directly and by searching among best substitute vendors, which displays the same similar products available and pricing at different. Amazon, Flipkart, Zomato, Snapdeal, Meesho, Myntra and Ajio etc., are the popular online retailers in India. The major five influencing

factors of customer perceptions for online shopping are easy to usage, availability of information, security and satisfaction for compare with the different products. Now a days everyone using the e-commerce websites regularly for online shopping. At present online shopping is most popular shopping platform for customers. Customer behavior in online shopping is different from the retail market. The growth and development of internet with an extraordinary pace over the last few decades has resulted increased the online shopping. The internet has opened up a wider and more exciting market to the new generation customers. Customers are playing an important role in online shopping. The increasing use of internet by the young generation provides the emerging prospect for online retailers.

## **II. REVIEW OF LITERATURE**

**Amit Kumar Singh & Malsawmi Sailo (2013)** in this study "Consumer Behavior in Online Shopping: A Study of Aizawl" to analyze the consumer perception and behavior towards online shopping. In this study the authors collected both primary data and secondary data. The authors found that the young generation as they feel online shopping is more comfortable, convenient and time saving. In this study found that people compare the prices of various online stores before final selection of products and decision. Online shoppers are also motivated to the customers to buy as it is easy payment process and it is time saving. The study concluded that need to increased internet penetration for free shopping environment and the response of online customers should be taken to solve defects in service. The online shoppers need to provide quality of products and services.

**Ankit Male (2018)** in this study "Study on the Impact of Online Shopping on Consumers Preference and Satisfaction in Indore City" the author studied that to know the awareness, attitude, perception, what are the factors influence and level of satisfaction levels of consumer towards online shopping services which is offering by online stores in Indore city. The data was collected from both primary and secondary sources for this study. The study found that internet usage has been increased over the few years and it is leading to increase the online shopping and also show the customers concentration towards online shopping. The authors found that more numbers of males are preferred online shopping with compared women and the important factor, which is influenced the customers towards online shopping, was convenience followed by time saving and lower prices. The study concluded that majority people using online shopping for clothing and travelling tickets and they chose payment on delivery option in online shopping for safest choice of payment.

**Lakshmi. S (2016)** in her study "Consumer Buying Behavior Towards Online Shopping" explained importance of online shopping and buying behaviour of consumer in online shopping. The



author found that the greater number of customers are preferred online shopping, the reason is behind that they feel convenience, availability of quality products with lower prices, trust and risk at minimum level. The study found that a most of students and professionals are following online shopping for saving time and money.

**Angamuthu. R (2020)** in his study “A Study on Online Shopping in India-An Overview” to analyze the merits and demerits of online shopping and to analyze the current and future status of online shopping in India. This study is purely descriptive and data was collected from secondary sources i.e., Government reports, journals, books, websites. The author found that in India young generation is attracted with the online shopping for fulfilling their needs. The author concluded that most of them are completely aware of online shopping and online shopping has opened up doors to all micro, small, medium enterprises and at the end it has been a win-win situation for both consumer and sellers.

**Aakash Alwani, Suryakanti Yadav & Tushar Pradhan (2021) in their study** “A Study of Consumer Behaviour towards online shopping in Vadodara City” objective of this paper to identify the consumer online buying behaviour, perception, satisfaction and preference towards online shopping in Vadodara city. The authors were followed descriptive research, data was collected both primary and secondary data. In this study the authors applied convenience sampling method and percentages, graphical method for analysing the data. The authors found that most of the respondents aware about the online purchasing through the advertisements, friends and social media. The study found that majority of the respondents were preferred Myntra, Flipkart, Amazon and Snapdeal for purchasing products. The study concluded that majority of the customers were satisfied with the online shopping, some of the barriers were found that in online shopping some of the customers dissatisfied with payment methods, value added tax added in some products, collecting high shipping cost and warranty claims of products. In COVID-19 period majority of the Vadodara city people preferred online shopping with compared to retail shopping and people in Vadodara purchase much frequently through online shopping.

### **III. NEED FOR THE STUDY**

It is observed from the review of literature that many of these research studies have analyzed various aspects such as merits and demerits of online shopping, consumer buying behavior, awareness, perception, satisfaction levels and preferences towards online shopping services and to analyze the current and future status of online shopping in India. But there is a scanty in the understand consumer behavior, awareness towards online shopping and to identify the factors

influencing towards online shopping. Hence, the researcher has chosen to analyze the understand consumer behavior, awareness towards online shopping with the following objectives.

#### IV. OBJECTIVES OF THE STUDY

1. To understand the customer behaviour and awareness towards online shopping.
2. To identify the factors influencing customer attitude towards online shopping.

#### V. RESEARCH METHODOLOGY

The objective of the study is to study the consumer behavior, awareness towards online shopping and to identify the factors influencing towards online shopping. The data required for the study have been collected from both primary and secondary sources. The primary data was collected from the 116 sample respondents with the structured questionnaire on the basis of convenient sampling method. The researcher has collected the primary data from sample respondents who are living in Kadapa District. The secondary data has collected through websites, publications, books, journals and newspapers. The questionnaire has been designed keeping in view the objectives of the study. In this study, the researcher has used a percentile analysis in statistical work.

#### VI. SOCIO ECONOMIC PROFILE OF THE ONLINE CUSTOMERS

The socio-economic profile of the online customers taken from both rural and urban areas. The sample respondent's profile i.e. location, gender, level of education, occupation, family monthly income, mode of income and savings per month are analyzed based on the primary data. Percentile analysis has been applied for this purpose. The analysis given in this section is purely based on the primary data. The socio-economic profile of the online customers shown in the Table-1.

**Table – 1 Socio-economic Profile of the Online Customers**

S. No.	Socio Economic Profile		No. of Respondents	In %
1	Location	Rural	73	62.90
		Urban	43	37.10
		<b>Total</b>	<b>116</b>	<b>100.00</b>
2	Gender	Male	59	50.9
		Female	57	49.1
		<b>Total</b>	<b>116</b>	<b>100.00</b>
3	Age	18-29 Years	116	100.00
		<b>Total</b>	<b>116</b>	<b>100.00</b>
4	Education Qualification	Intermediate	12	10.3

		Graduates	104	89.7
		<b>Total</b>	<b>116</b>	<b>100.00</b>
5	Occupation	Students	116	100.00
		<b>Total</b>	<b>116</b>	<b>100.00</b>
6	Family Monthly Income Rs.	<10,000	33	28.40
		10,001-20,000	36	31.00
		20,001-30,000	21	18.10
		Above 30,000	26	22.40
		<b>Total</b>	<b>116</b>	<b>100.00</b>
7	Mode of Income	Daily	32	27.60
		Monthly	84	72.40
		<b>Total</b>	<b>116</b>	<b>100.00</b>
8	Family Size	Two	06	05.20
		3 to 5	90	77.60
		Above 5	20	17.20
		<b>Total</b>	<b>116</b>	<b>100.00</b>
9	Savings Per Month (Rs.)	Up to 1,000	38	32.80
		1,001 to 5,000	38	32.80
		5,000 to 10,000	24	20.7
		Above 10,000	16	13.80
		<b>Total</b>	<b>116</b>	<b>100.00</b>

**Source:** Primary data.

It is found from the above table majority 73 (62.90 per cent) of the sample respondents are living in a rural area and only 37.10 per cent of respondents are living in urban areas under Kadapa District. The overall result shows that 49.10 per cent of female and 50.90 per cent of the male are the online customers in the study area. It is understood from the analysis of the table that the all (100 per cent) are in the age group of 18 to 29 years. It is observed from the above table among the total 116 sample respondents, a major portion of respondents educational status is graduates category. The overall analysis inferred from the table is that the major portion of respondents, i.e., 36 (31 per cent), fall in the income group of Rs.10,000 to Rs. 20,000 followed by 33 (28.4 per cent) belong to below Rs.10,000 category. The overall analysis inferred from the table is that the major portion of respondents, i.e., 84 (72.4 per cent), fall in the monthly income group, followed by 32 (27.6 per cent) belong to daily income category. In the following table-2 exhibits the awareness of online customers towards online shopping.

**Table - 2 Do You Aware of about Online Shopping**

<b>Do You Have Aware of about online shopping</b>	<b>Number of Respondents</b>	<b>In %</b>
Yes	111	95.70
No	05	04.30
<b>Total</b>	<b>116</b>	<b>100.00</b>

**Source:** Primary data.

The table exhibits that majority (95.7 per cent) of the sample respondents are aware about the online shopping. Only few respondents (04.3 per cent) of the sample respondents are not aware about the online shopping. The table-3 displays how sample respondents are know about the online shopping.

**Table – 3 How Do You Get to Know the about Online Shopping**

<b>How do you get to know the about online shopping</b>	<b>Number of Respondents</b>	<b>In %</b>
Friends	41	35.3
Family Members	11	09.50
Relatives	01	0.90
Neighbors	02	01.70
Social Media Channels	59	50.90
Newspapers	02	01.70
<b>Total</b>	<b>116</b>	<b>100.00</b>

**Source:** Primary data.

It is observed that among the 116 sample respondents the majority of 50.9 per cent of respondents have been aware about online shopping through the social media channels and 35.3 per cent of respondents aware about online shopping through the friends.

The remaining respondents aware about online shopping through the family members, relatives, neighbors and newspapers etc. In the following table-4 exhibits the which of the following websites preferred by the customers for online shopping.

**Table – 4 Which of the Following Websites You Prefer for Online Shopping**

<b>Which of the following websites you prefer for online shopping</b>	<b>Number of Respondents</b>	<b>In %</b>
Amazon & Flipkart	29	25.00
Meesho & Myntra	46	39.65
Snapdeal & Olx	33	28.45
Other Apps	08	06.90
<b>Total</b>	<b>116</b>	<b>100.00</b>

**Source:** Primary data.

It is found from the study majority (35.65 per cent) of the customers preferred Meesho and Myntra for online shopping. The following respondents (28.45 per cent) preferred Snapdeal and Olx for online shopping and the remaining sample respondents preferred Amazon, Flipkart and other online shopping apps. How long have been aware about online shopping presented in table-5.

**Table – 5 How Long Have You Been Aware of the Online Shopping**

<b>How long have you been aware of the online shopping</b>	<b>Number of Respondents</b>	<b>In %</b>
Below One Year	06	05.20
One Year to Two Years	16	13.80
Two Years to Three Years	33	28.40
Three Years to Four Years	26	22.40
Above Four Years	35	30.20
<b>Total</b>	<b>116</b>	<b>100.00</b>

**Source:** Primary data.

The table - 5 depicts the details of How long customers have been aware about online shopping. The table exhibits that majority (30 per cent) of the sample respondents are have been aware more than four years. It is observed from the study 50.8 per cent of the sample respondents aware about online shopping from two to four years. Only few customers are aware from two years onwards regarding online shopping. In the following table-6 exhibits the How long have been using the online shopping services.

**Table – 6 How Long You Have Been Using the Online Shopping Services**

<b>How long you have been using the online shopping services</b>	<b>Number of Respondents</b>	<b>In %</b>
Below One Year	06	05.20
One Year to Two Years	21	18.10
Two Years to Three Years	43	37.10
Three Years to Four Years	17	14.70
Above Four Years	29	25.00
<b>Total</b>	<b>116</b>	<b>100.00</b>

**Source:** Primary data.

It is observed from the study 39.7 per cent of the sample respondents using online shopping services from last three years. Only few customers are using online shopping services from last one year's onwards. It is found that 37.1 per cent of the sample respondents using online shopping services from last two years. In the following table - 7 exhibits the what purpose utilized online shopping services by the customers.

**Table – 7 How did you utilize the Online Services**

<b>Purpose of utilize the Online Services</b>	<b>Number of Respondents</b>	<b>In %</b>
Home	35	30.20
Self	81	69.80
<b>Total</b>	<b>116</b>	<b>100.00</b>

**Source:** Primary data.

It is observed from the above table 69.8 per cent of the respondents using online shopping services for self and 30.2 per cent of the respondents using online shopping services for home needs consumption purpose. The table – 8 exhibits what are the factors influenced to prefer online shopping.

**Table – 8 Which Factors Influenced to prefer online shopping**

<b>Factors Influenced to prefer online shopping</b>	<b>Number of Respondents</b>	<b>In %</b>
24*7 Availability	11	09.50
Better Services	04	03.40
Discounts & offers	53	45.70
Low Cost	11	09.50
Multiple Products Availability	29	25.00
Simple Procedure	02	01.70
Time Saving	06	05.20
<b>Total</b>	<b>116</b>	<b>100.00</b>

**Source:** Primary data.

The table – 8 exhibits what are the factors influenced to prefer online shopping by the customers. Majority of the customers prefer online shopping for discounts and offers given by the online stores. Some of the customers prefer online shopping for reducing costs and save the time. At present days a greater number of customers following online shopping, the reason is behind that multiple products availability, 24/7 shopping and simple procedure.

### **VII. FINDINGS OF THE STUDY**

1. The overall result shows that male and female respondents are equal in the study area.
2. It is understood from the analysis that the all are in the age group of 18 to 29 years and major portion of respondents educational status is graduates category.
3. Majority of the sample respondents are aware about the online shopping. Only few respondents of the sample respondents are not aware about the online shopping.
4. Among the total sample respondent's majority of respondents have been aware about online shopping through the social media channels and friends.
5. More number of customers preferred Meesho and Myntra for online shopping and using online shopping for discounts and offers given by the online stores. Some of the customers prefer online shopping for reducing costs and save the time.

### **VIII. SUGGESTIONS**

Based on the findings of the study the following suggestions are made by the researcher.

1. Online stores need to provide speed and better services to the online shopping customers.
2. The retailers must supply quality products and services for enhancing their sales.
3. Delivery charges need to reduce and improve quality with low cost so that it may increase the customer rate to buy the online products.

### **IX . CONCLUSION**

The study concludes that there is a need to improve quality, reduce additional charges and provide better services with low cost to the online shopping customers. Then, the online shopping business growth and development will be increased. The online stores need to provide fast delivery services to the online shopping customers. The online marketers should bring to innovative ways so that the consumers can do more online shopping while taking the full advantage of information and easy access.

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**EFFECTIVENESS OF VARIOUS DIGITALMARKETING ACTIVITIES WITH RESPECT  
TO DATALLIGENCE.AI**

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**ABSTRACT**

*In the age of digital media, marketers face new difficulties and opportunities. The use of electronic media by marketers to market their goods or services is known as digital marketing. Attracting customers and enabling them to engage with the company through digital media is the primary goal of digital marketing. This study will identify the importance of digital marketing techniques/activities. This helps B2B companies to identify whether the digital marketing activity they perform is effectively generating leads or attracting customers. Digital marketing activities/tools is important for the success of B2B companies. This study identifies the effectiveness of the digital marketing activities and provide insights with the help of the results obtained.*

**Key Words:** B2B, SEO(Search Engine Optimization), PPC( Pay-Per click).

**I. INTRODUCTION**

Digital marketing has become a critical component for businesses in today's digital age. It offers a range of techniques that businesses can use to reach their target audience, build brand awareness, and generate leads. However, the effectiveness of digital marketing techniques varies depending on the nature of the business and its target audience. In the case of a B2B, the effectiveness of digital marketing techniques will depend on the nature of the product, the target audience, and the buying process. To investigate the efficiency of various digital marketing strategies used by businesses to meet their marketing goals. This study aims to provide valuable insights on enhancing businesses' online presence, customer engagement, and overall marketing success through analyzing and evaluating diverse digital marketing techniques. It includes a comprehensive analysis of a variety of digital marketing initiatives, including Search Engine optimisation (SEO), social media marketing, content marketing, email marketing, pay-per-click

(PPC) advertising, influencer marketing, and more. Understanding how each of these actions works can help firms tailor their marketing initiatives for the most impact. Each of these activities has a specific function in the digital world when it comes to influencing and reaching target consumers.

B2B companies typically sell software products and services to other businesses. The target audience for these products is usually other businesses, which means that the buying process is longer and more complex compared to B2C products. These techniques include:

### **1. CONTENT MARKETING**

Content marketing is a highly effective digital marketing technique for B2B companies. By creating and sharing valuable content that is relevant to the target audience, B2B companies can establish thought leadership, build brand awareness, and generate leads. These channels include social media platforms, email newsletters, and industry publications. By sharing their content on these channels, B2B companies can reach a wider audience and attract more leads.

### **2. SEARCH ENGINE OPTIMISATION**

Search Engine Optimization (SEO) is another highly effective digital marketing technique for B2B companies. By optimizing their website and content for search engines, B2B companies can improve visibility and attract organic traffic. SEO involves a range of techniques, including keyword research, on-page optimization, and link building.

### **3. PAY-PER CLICK ADVERTISING:**

Pay-Per-Click (PPC) advertising is a paid digital marketing technique that B2B companies can use to drive targeted traffic to their website and generate leads. PPC advertising involves placing ads on search engines or social media platforms and paying for each click on the ad. Platforms like Google Ads and LinkedIn Ads are popular PPC advertising channels for B2B companies.

### **4. SOCIAL MEDIA MARKETING:**

Social media marketing is another effective digital marketing technique for B2B companies. By engaging with their target audience through social media channels, B2B companies can build brand awareness, establish thought leadership, and generate leads. This study intends to advance the field of digital marketing by filling knowledge gaps and providing useful advice. It will give

businesses the tools they need to navigate the rapidly changing digital environment and stay one step ahead of the competition.

## II. REVIEW OF LITERATURE

**Sanjay Bhayani & Nishant V. Vachhan (2018)** this paper recognizes the differences in consumer opinions by availing distinguished services of traditional as well as internet marketing strategies. Internet is changing ways to reach consumer fast and is a more convenient way than customary means of marketing.

**Singh, R. and Koshy, A et al. (2019)** The review paper provides a conceptual synthesis of studies carried out in the past. Future researchers can carry out a meta-analysis of empirical studies to provide more pointed results. Practical implications This study highlights the heterogeneity in B2B salespersons' performance, which makes unravelling its determinants more difficult.

**Partha P. Chowdhury et al. (2020)** This study tries to fill this gap in literature by integrating the antecedents and consequences of trust and commitment. The study is based on review of literature on trust, commitment, business to business (B2B) relationship, relationship marketing in the time period from 2015 to 2020.

**Yosep et al. (2021)** Digital Content Marketing, and Digital Story Telling are powerful tools in the hands of capable marketers to leverage and create added value. Social Media marketing content has to evoke feelings of happiness, excitement and entertainment to customers, while giving the opportunity of interaction through two-way direct communication between product/service provider and customer. Research has shown that the quality of content is of major importance to Millennials.

**Johanna et al. (2022)** This research aimed to examine the B2B customer journeys and identify barriers to purchasing a SaaS product online. The research was conducted through the means of the qualitative research method, and a case study was selected as the strategy for inquiry with a multiple-case design. The findings concluded that the barriers to purchase are manifold and differ at different stages of the purchasing process.

## III. NEED FOR THE STUDY

To evaluate the different digital marketing techniques that can be used by B2B companies to attract potential customers, generate leads, and increase sales. In the current digital age, businesses

have to adopt a digital marketing strategy to stay competitive and reach their target audience. This project title is essential to provide insights and recommendations on the most effective digital marketing techniques for B2B companies to help them achieve their business goals.

#### **IV. OBJECTIVES OF THE STUDY**

- To analyze and compare the effectiveness of various digital marketing techniques for a B2B company in terms of generating leads and conversions.
- To provide suggestions and insights into the most effective digital marketing strategies for a B2B company by analyzing and comparing different techniques such as email marketing, social media marketing, search engine optimization, and content marketing.
- To help businesses make informed decisions on how to allocate their marketing budgets to maximize ROI.

#### **V. SCOPE OF THE STUDY**

This study will focus on various digital marketing techniques such as content marketing, social media marketing, email marketing, search engine optimization (SEO), pay-per-click (PPC) advertising, and influencer marketing. The scope of the study will be limited to B2B companies, and the effectiveness of these techniques will be measured based on various metrics such as website traffic, lead generation, customer acquisition, and conversion rates. The study will also provide recommendations on how B2B companies can optimize their digital marketing strategies to achieve their business objectives.

#### **VI. RESEARCH METHODOLOGY**

##### **RESEARCH DESIGN**

A thorough plan used to direct a research project is referred to as the research design. This research study has a "Descriptive research design" as its method of investigation. The goal of a descriptive research design is to gather data that will help describe a population. Sampling techniques used in this research paper is "Simple random sampling".

##### **TOOLS USED FOR DATA ANALYSIS**

Percentage Analysis: One of the most commonly used analytical methods is percentage analysis, which involves calculating the percentage of a sample within a population. It aids in reducing the data.

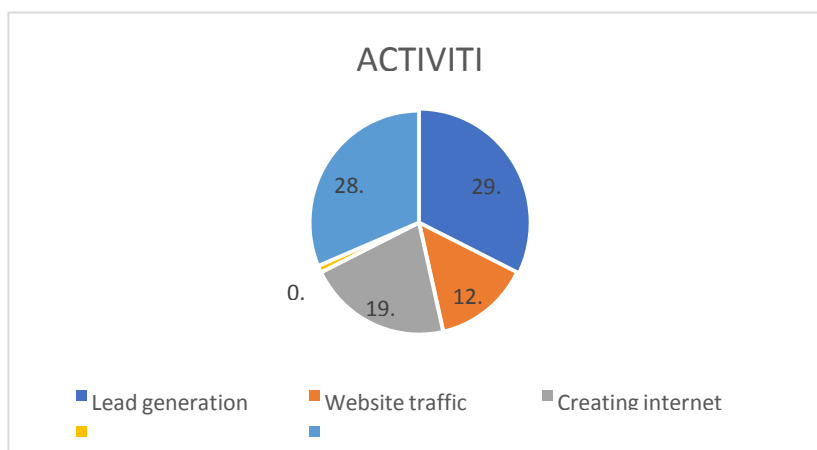
The formula used for percentage analysis is:

$$\text{Number of respondents} / \text{Total number of respondents} * 100$$

**VII. PERCENTAGE ANALYSIS**

**ACTIVITIES ACHIEVED BY DIGITAL MARKETING**

Activities	No of respondents	Percentage
Lead generation	32	29.1
Website traffic	14	12.7
Creating internet presence	21	19.1
Getting contact information	12	0.9
Customer engagement	31	28.2
<b>Total</b>	<b>110</b>	<b>100</b>



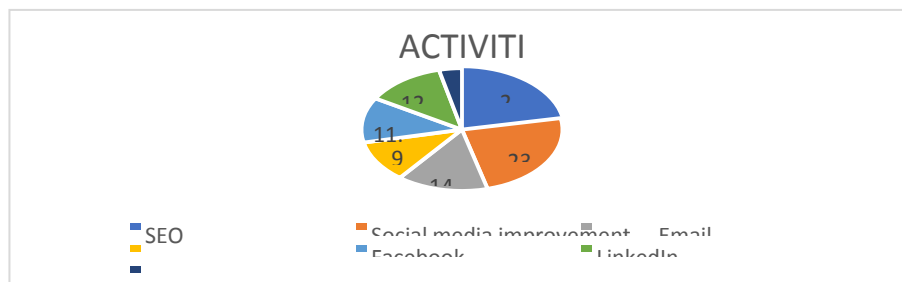
**INTERPRETATION:**

It is inferred that 29.1% of the respondents achieve lead generation by doing digital marketing, 12.7% of the respondents achieve website traffic, 19.1% of the respondents achieve creating internet presence, 0.9% of the respondents achieve getting contact information and 28.2% of the respondents achieve customer engagement

**DIGITAL MARKETING ACTIVITIES DONE BY THE COMPANY**

Activities	No of respondents	Percentage
SEO	24	22.0
Social media improvement	26	23.9

Email marketing	16	14.7
Google ads	12	11.0
Facebook ads	13	11.9
LinkedIn ads	14	12.8
Others	4	3.7
<b>Total</b>	<b>110</b>	<b>100</b>

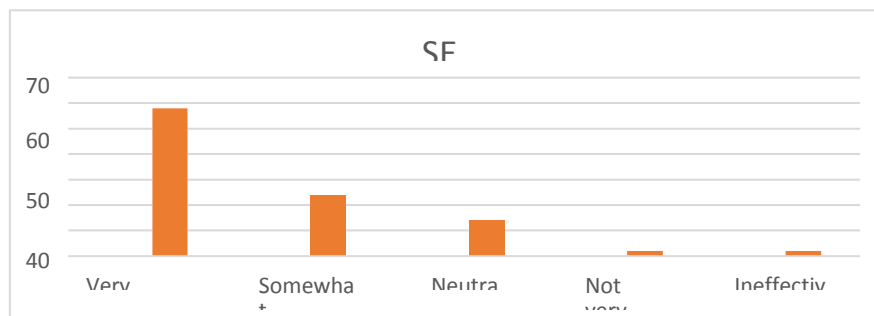


**INTERPRETATION:**

It is inferred that 22.0% of the respondents perform SEO by doing digital marketing, 23.9% of the respondents perform social media improvement, 14.7% of the respondents perform email marketing, 11.0% of the respondents perform google ads, 11.9% of the respondents perform Facebook ads, 12.8% of the respondents perform LinkedIn ads and 3.7% of the respondents perform other activities.

**EFFECTIVENESS OF DIGITAL MARKETING ACTIVITIES**

S. No	Effectiveness	No. of respondents	Percentage
1	Very effective	64	58%
2	Somewhat effective	27	24%
3	Neutral	15	14%
4	Not very effective	2	2%
5	Ineffective	2	2%
<b>Total</b>		<b>110</b>	<b>100</b>



### INTERPRETATION:

It is inferred that 58% respondents chose that SEO as very effective, 24% are somewhat effective, 14% are neutral and 2% are not very effective and ineffective.

### VIII. FINDINGS

- It is found that 26.4% of the respondents use video as content format to improve digital marketing activity and equally infographics
- It is found that 58% of the respondents chose SEO as very effective digital marketing activity.
- It is found that 48.2% of the respondents use software to help digital marketing activities
- It is found that 39.1% of the respondents are satisfied with their company's digital marketing activities
- It is found that 31.5% of the respondents believe Return on Investment (ROI) is the most crucial metric for evaluating success of B2B companies digital marketing campaign.

### IX. SUGGESTIONS:

- Email marketing should be more effective with attracting content so that frequency of opening and reading mails can be increased.
- Webinars hosted by B2B companies can be increased and it should provide valuable information to the viewers.
- Companies should improve their digital marketing activities which helps to increase employee satisfaction.
- Based on e-mail marketing campaign purchases can be increased, if it is effective.

### X. CONCLUSION:

A comprehensive strategy including content marketing, social media marketing, SEO, email marketing, PPC advertising, and influencer marketing is essential for attaining the best results,

according to a study on the efficacy of several digital marketing activities. It has been discovered that content marketing is very successful at drawing in new clients and keeping existing ones happy. While SEO improved website exposure and organic traffic, social media marketing increased brand awareness and consumer engagement.

The development of customer relationships and the production of conversions were both facilitated by email marketing. PPC marketing generated targeted traffic and leads. Influencer partnerships increase brand recognition and credibility.

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**EXPLORING CONSUMER ATTITUDES TOWARDS ECO-FRIENDLY PRODUCTS: A  
COMPREHENSIVE STUDY**

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**ABSTRACT**

*Green products have positive effects on the environment as they are less toxic, energy-efficient, recyclable, biodegradable, and renewable. Green products do not harm nature, due to which they are termed "green." The size of the global green market was estimated at 10.32 billion dollars in 2020, and it is projected to reach 76.64 billion dollars in 2030. Throughout India, 86% of Indian consumers prefer eco-friendly products while shopping; and most buyers prefer organic products. The objectives of the study accentuate on the consumer's attitude towards green products' price and quality, awareness and concern, availability and promotional activities. The study also investigates the relationship between green product usage and purchase intention with respect to demographic variables. It is found that a consumer's purchase behavior depends on level of satisfaction with the product. Purchase behavior and customer satisfaction are influenced by the attributes of green products. The study concludes that a demographic factor doesn't influence the purchasing behavior of green products. A consumer's purchase behavior depends on their level of satisfaction with the products.*

**Key words:** Green products, Availability, Attitude, Awareness, Satisfaction.

**I. INTRODUCTION:**

Green products are sustainable and reduce the environmental impact. Green products are eco-friendly products that can't harm nature. Green products are biodegradable and can be recycled. It is predicted that, if the demand for green products continuously grows, the number of job opportunities will rise to 16 million by 2030. So, the development of green products not only improves the environment but also the economic condition of society. In India, 44% of consumers prefer green products because they are more expensive compared to other products performing similar functions. A recent study

reveals that 1/3 of global consumers are willing to pay more for sustainability as demand increases for environmental products. The global green market was valued at \$10.32 billion in 2020 and is projected to reach \$74.64 billion by 2030. There are 3 reasons to buy green products: preservation of the environment (65.4%), health benefits (62.4%), and ethical aspects of the production process (49.8%). The fundamental goals of green organisations are to minimise effluents, emissions, and accidents. Reduce the use of non-renewable forms of energy and their life-cycle costs. Today, there is a huge demand for green products. It was discovered that the green market increased by around 73% in new green products and companies. Over the next five years, the majority of consumers will prefer to buy green products. Environmental changes are now a major concern for people throughout the world, and people are realising their roles and responsibilities towards the green environment. Changes are not happening so quickly; they are happening only when businesses are looking to gain an edge in the green market. Companies use effective advertising to educate the public about the green market and green products.

## II. LITERATURE REVIEW

**Dr. P. Sivasakkaravarthi et al. (2021):** Conducted "A Study on Consumer Attitude Towards Eco-Friendly Products in Coimbatore City." reveals consumer attitudes towards eco-friendly products and their influences. Advertisers need to comprehend the ramifications of green promotion. The convenient sampling technique is used for data collection, and regression analysis is used for data analysis. The study came to an end, and companies are also starting to educate the public with an increase in advertising that puts emphasis on green products and how they are more beneficial for consumers.

**Peter Ansu Mensah (2021):**In her study, "Green product awareness effect on green purchase intention of university students : an emerging market's perspectives," reveals the study's focus on awareness of green products and their effect on green purchasing among university students. The main objectives of the study are to identify the awareness, price, availability, value, and quality of green products. It is found that green products have the most significant positive impact on purchase, and availability is not a critical influencing factor when it comes to green purchase.

**Wencan Zhuang et al. (2021):** The research paper "On the factor influencing green purchase intention: A meta-analysis approach" reveals that green product purchase intention is influenced by three factors: the cognitive factor, consumer individual characteristics, and social factors. In addition, the paper examined how green perceived value, attitude, trust, behaviour control, effectiveness, and

subject norms influence green purchase intention. The study's findings provide inputs for enterprises engaged in green product diffusion and responsible for environmental protection.

**Amit Kumar Bhardwaj et al. (2020):** "Research Trends in Green Product Environment : A Bibliometric Perspective" reveals green products offer potential benefits to the environment and human health. Green products have seen significant growth since 1964.

**Shamsi et al. (2017):** "Green Product and Consumer Behaviour: An Analytical Study" reveals consumer purchasing intentions towards green products, as well as the relationship between consumer behaviour and demographic. The study concentrated on the factors that motivate people to use and buy green products. The research hypothesis is to know the relationship between green product usage and respondents' gender, age, educational qualification, income, and buying intention. For data collection, the convenience sampling method is used, and the chi-square method is used to test the hypothesis. Regardless of demographic factors, respondents are concerned about environmental protection.

**2.1 Research Gap:** The earlier literature review focused on consumer attitudes towards eco-friendly products and green promotion through advertisement. The study focuses on how green products are more beneficial for consumers. Another study enlightens the awareness and effect of green purchasing and the intention to use green products of university students. The research objectives focused on the awareness, price, availability, value, and quality of green products among a group of people, i.e., university students. The study "On the Factors Influencing Green Purchase Intention: A Meta-Analysis Approach" focused on value, attitude, trust, intention, and behaviour, as well as control, effectiveness, and subjective norms of green products and their diffusion and responsibility for environmental protection. Another study focused on consumer purchasing intentions towards green products, as well as the relationship between consumer behaviour and demographic. The study "Green Product and Consumer Behavior: An Analytical Study" illuminates the literature by considering respondents' gender, age, educational qualification, income, and buying intention. Another study, "Consumers Readiness for Green Products and its Effect on Sustainable Development," reveals the buying behaviour of respondents towards green products, which motivates them and creates awareness among them. The study also focused on price and quality, availability, perceived consumer effectiveness, information, promotional activity, and environmental attitude as influences on the purchase of green products.

The present study is mainly focused on the consumer's attitude towards green products and its factors, such as price and quality, awareness and concern, availability and promotional activities, attitude and implications, etc., among consumers who buy green products frequently in the Bangalore region. Further research can do better than the factors that are not covered in it.

### **III. OBJECTIVES OF THE STUDY**

1. To understand the consumer satisfaction towards green product price and quality.
2. To evaluate the respondent's awareness and concern about green products.
3. To study the green products availability and its promotional activity.
4. To analyze the respondent's attitude towards the green product and its implications.

### **IV. HYPOTHESIS OF THE STUDY**

1. H0: There is no statistically significant relationship between consumer satisfaction towards green products price and quality.
2. H0: There is no significant association between consumer awareness and concern with green products.
3. H0: There is no association between promotional activity and the availability of green products.
4. H0: There is no correlation between respondents' attitudes and the implication of green products.

### **V. PROBLEM STATEMENT**

It is been observed that recently people's awareness about green products has increased, which shows the importance of green products.. Non-green products have pesticides and artificial fertilizers, which create health problems for mankind like cancer, etc. understanding the impact of non-organic products and began using or adopting green products on a regular basis. The research shows interest in the positive impact of green products, so this particular study has been carried out.

### **VI. SCOPE OF THE STUDY**

Green products have a wider scope in the current scenario. Green products reduces the waste of materials and can be reusable. There is huge demand for and awareness of the environmental benefits of purchasing green products. Green products are eco-friendly; biodegradable, and environmentally friendly, and they can't harm nature. Green products are currently in high demand because they are both environmentally friendly and beneficial to human health.

## **VII. LIMITATIONS OF THE STUDY**

1. The study is restricted to consumer perception towards green products only.
2. The survey is conducted only in Bangalore city.
3. The number of respondents is limited to 200.
4. The respondent's opinion may be bias.
5. Reluctance of respondents in answering to the survey may effect on the responses.

## **VIII. RESEARCH METHODOLOGY**

### **8.1 Nature of the study:**

The study basically enlightens on consumer behaviour of green products and how consumers behave in the market. Consumers purchase products and services to satisfy their needs and wants, and while purchasing products, they consider their likes and dislikes, which influence their decisions. The present study examined the nature of buying green products with regard to attitude, concern, satisfaction, behaviour, availability, and promotional activity. Now the consumer's choice is shifting towards green products.

### **8.2 Research Design:** Analytical research has been considered.

#### *A)Data Collection Method:*

1. Primary data is gathered through survey methods such as questionnaires and interviews. Direct interaction with the respondents.
2. Secondary Data: The secondary data is collected through published sources like Journals, published reports, books, e-sources, etc.

*B) Description of variables:* The study consists of two variables, i.e., dependent and independent. Dependent variables are: a) Price and quality, b) Awareness and concern; c) availability and promotional activity; d) attitude and implication, e) satisfaction and post-purchase behaviour. Independent variables are those factors that do not depend on dependent variables.

*C)Timeline of the study:* The study covers a period of not less than a year for the collection of secondary data. The field survey was carried out from February 2023 to March 2023 for the collection of primary data. The primary date period is considered the study area. The period taken for the present study is felt to be sufficient to fulfil the objectives of the study.

D) *Application of Statistical Tools and Techniques:* the data are analyzed through factors analysis, chi-square and t-test by using SPSS.

E) *Area of the Study:* The present study focuses on consumer behavior towards green products.

F) *Sampling Framework:* For research purposes, convenience sampling can be used and Price, demand, attitude, awareness, concern, satisfaction, post purchase behaviour, availability, and promotional activity towards green products are considerable factors for study.

G) *Sampling Size:* The sample size is 200 respondents.

## IX. RESULT & DISCUSSION:

### A) Reliability Check

Cronbach's Alpha	N of Items
.828	25

**Interpretation:** In the reliability statistics all facts come with an equivalent outcome. Cronbach's alpha (0.828) results show higher reliability.

### B) Chi-Square

Table : 1

Factor – 1 The level of satisfaction towards Price and quality of green products				
Sl. No	Particular	Chi-Square	Df	Asymp.Sig.
1	I felt that the price was appropriate for the product.	215.8	4	.000
2	Green products are always overpriced.	103.0	3	.000
3	The price and quality are important aspects of the purchase of green products.	110.44	3	.000
4	Paying the premium price for green products is a mere waste of money.	92.50	4	.000
5	When buying a green product, I am influenced by the "Green Certification" on the packaging.	181.1	4	.000
6	Consumers give priority to green products because of their price, brand, quality, etc.	138.2	3	.000
7	I am completely satisfied with the quality of the product.	222.6	4	.000

8	Green products are environmental concerns that meet individual expectations.	126.3	3	.000
9	Green products and non-green products are alike.	67.9	4	.000
10	I would switch over from my usual brand of products to environmentally safe ones.	161.6	4	.000

Table : 2

Factor – 2 Awareness and concern				
Sl. No	Particular	Chi-Square	Df	Asymp.Sig
1	I am aware of the advantages of green products for health.	203.8	4	.000
2	I am aware of the benefits of green products for society.	213.7	4	.000
3	I am aware of the benefits of purchasing green products.	180.4	4	.000
4	I am aware of several brands offering green products.	175.9	4	.000
5	I am aware of different symbols, certifications, or other identifiers that indicate the product is a green product.	72.0	3	.000

Table :3

Factor – 3 Availability and Promotional Activities				
Sl. No	Particular	Chi-Square	Df	Asymp.Sig.
1	I know about green products through advertisements.	75.8	3	.000
2	I look forward to purchasing green products in the future because of their environmental advantages and it easily available	85.7	3	.000
3	Social media influences the purchase of green products.	74.0	3	.000
4	State governments should make vigorous efforts to promote the manufacturing and marketing of green products.	100.1	3	.000
5	The visual appeal of the product impressed me so much.	82.2	3	.000

Table : 4

<b>Factor – 4 Attitude and Implications</b>				
<b>Sl. No</b>	<b>Particular</b>	<b>Chi-Square</b>	<b>Df</b>	<b>Asymp.Sig.</b>
<b>1</b>	The green products matched my personal needs.	153.7	3	.000
<b>2</b>	I feel that green products are environmentally states that are generally truthful	159.1	3	.000
<b>3</b>	I have decided to purchase this product regularly.	71.8	3	.000
<b>4</b>	I am doubtful about the working performance of green products.	144.4	4	.000
<b>5</b>	I buy goods up to my requirements (quantity). (i.e., avoid unnecessary purchases and waste).	130.6	3	.000

*C) One-Sample Test*

<b>SL. No</b>	<b>Particular</b>	<b>T</b>	<b>Df</b>	<b>Sig tailed</b>	<b>(2-Mean Difference)</b>	<b>95% Confidence Interval</b>	
1	Gender	46.315	199	.000	1.605	1.54	1.67
2	Age	26.855	200	.000	2.567	2.38	2.76
3	Educational Qualification	43.064	200	.000	3.109	2.97	3.25
4	Occupation	32.568	200	.000	2.766	2.60	2.93
5	Monthly Income	18.510	200	.000	3.080	2.75	3.41
6	I felt that the price was appropriate for the	46.395	199	.000	2.320	2.22	2.42



	product.						
7	Green products are always overpriced.	44.997	199	.000	2.375	2.27	2.48
8	Price and quality are important factors in the purchase of green products.	33.160	199	.000	1.735	1.63	1.84
9	Paying the premium price for green products is a mere waste of money.	44.248	200	.000	2.985	2.85	3.12
10	When buying a green product, I am influenced by the "Green Certification" on the packaging.	38.282	199	.000	2.095	1.99	2.20
11	I am aware of the advantages of green products for health.	32.258	199	.000	1.760	1.65	1.87
12	I am aware of the benefits of green products for society.	34.305	199	.000	1.940	1.83	2.05
13	I am aware of the benefits of purchasing green products.	39.116	199	.000	2.115	2.01	2.22
14	I am aware of several brands offering green products.	45.629	199	.000	2.525	2.42	2.63
15	I am aware of different symbols, certifications, or other identifiers that indicate the product as a green product.	43.656	199	.000	2.495	2.38	2.61

16	I learned about green products through advertisements.	39.404	199	.000	2.310	2.19	2.43
17	I look forward to purchasing green products in the future because of their environmental advantages and because they are easily available.	35.201	199	.000	1.980	1.87	2.09
18	Social media influences the purchase of green products.	36.592	199	.000	2.210	2.09	2.33
19	The state government should make vigorous efforts to promote the manufacturing and marketing of green products.	32.755	199	.000	1.775	1.67	1.88
20	The visual appeal of the product impressed me so much.	41.312	199	.000	2.320	2.21	2.43
21	Green products, in my opinion, make generally accurate environmental claims.	48.425	199	.000	2.165	2.08	2.25
22	I feel that green products have environmental statements that are generally true.	48.771	199	.000	2.180	2.09	2.27

23	I have decided to purchase this product regularly.	42.227	199	.000	2.420	2.31	2.53
24	I am doubtful about the working performance of green products.	47.320	199	.000	2.775	2.66	2.89
25	I buy goods up to my requirements (quantity). (i.e., avoid unnecessary purchase and wastage).	40.272	199	.000	1.965	1.87	2.06
26	The consumer gives priority to green products because of their price, brand, quality, etc.	41.757	199	.000	2.055	1.96	2.15
27	I am exclusively satisfied with the quality of the product.	44.040	199	.000	2.180	2.08	2.28
28	Green products are an environmental concern that meets individual expectations Overall.	46.132	199	.000	2.215	2.12	2.31
29	Green products and non-green products are alike.	41.727	199	.000	3.085	2.94	3.23
30	I would switch over from my usual brand of products to environmentally safe ones.	35.946	199	.000	2.095	1.98	2.21

**Interpretation:** Under a one-sample t-test, the P-value (0.000) is less than the chosen significance level of 0.001. Thus, the null hypothesis is refuted, and we believe that there really is an association.

## **X. FINDINGS**

- Demographic :The majority of respondents are female.More than half of those polled are between the ages of 26 and 35.The majority of respondents are undergrads who work in private firms and earn more than Rs. 50,000 per month.
- Most respondents agreed that the price of green products is reasonable, and that price and quality are important factors to consider when purchasing them.
- Respondents disagree that paying more for green products is a waste of money.
- The majority of respondents are aware of and concerned about the advantages of green products in terms of gains to society, features, brands, and certifications or symbols.
- Respondents are agreeing to advertisements and social media influence on the purchase of green products.
- Respondents agree that the visual appearance of green products influences their decision topurchase them.
- The majority of respondents agrees and are satisfied with the price, quality, and brand of green products.
- More than 50% of respondents feel that green products fulfil their needs and wants.

## **XI. CONCLUSION**

The research papers have great scope for market and customer uses in the present market in Karnataka, especially Bangalore. Nevertheless, the study is limited to a small geographical area (Bangalore), and has limited generalization to conduct a larger scale. This research study has been conducted with a sample size of 200 using convenient sampling method. It is suggested that, Government, marketing agencies, media, and environmental agencies must promote green products and emphasize their importance for growth and sustainability.Marketers should formulate marketing techniques to improve consumers' perceptions of the value of green products. The government should promote green products and their benefits through social media.Companies should improve the purchase intentions of consumers for green products, so they should embed perceived value, attitude, and trust.Manufacturing companies and marketing agencies strengthen the functions of green products, enhance the brand's image, and enhance trust in them.Salesmen shouldconvey they environmental protection effect of green products to consumers.Marketing agencies and enterprises

should provide reliable information to consumers about the uses and benefits of green products. Policymakers can strengthen social norms of energy-saving behavior. Green products play a vital role in society towards hygiene and health benefits compared to non-green products. Factors such as price, quality, awareness, availability, implications, and post purchase behaviour of green products all influence purchase decisions. Based on the study it is justifiable that, green products play an important role in consumer health and safety.

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**INVESTOR'S AWARENESS ON USAGE OF FINANCIAL TECHNOLOGY  
OFFERED BY BANKS IN INDIA**

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**ABSTRACT**

*Banking is a major financial services provider. Since customers rule the market, banks must innovate business models and constantly improve consumer happiness. FinTech helps here. This research examines how FinTech awareness level among bank customer. The essay discusses how FinTech improves banking client happiness. The research is limited to Bangalore. The structured questionnaire is used to gather data has 120 replies. We employ non-probabilistic convenient sampling. The author used frequency distribution data analysis to discover their socio demographic profile and their satisfaction level with it. In India, the research is important for sustained banking expansion.*

**Key words:** Financial technology, customer satisfaction, e-banking, customer needs

**1. INTRODUCTION**

Indian banks are among the biggest in the world. It serves millions of individuals, communities, companies, etc. with different banking needs. Banking reforms affect every nation's socioeconomic progress, social fairness, regional balance, and sustainability. Digitalization, globalization, privatization, liberalization, worldwide market dynamics, and changing consumer expectations increased competitiveness. It's hard to attract new clients and satisfy old ones. It matters for sustained development. Technology helps discover new markets, close the demand-supply gap, reduce risks, and overcome obstacles. Naturally, FinTech has grown in emerging nations like India. This research examines how FinTech improves banking client happiness. Financial technology affects almost every issue, including banking. For almost 200 years, banks have operated in branches, but several technology and applications have changed financial services. ATMs replaced cashier tellers, call centers replaced bank offices, the internet replaced mail, and credit cards and electronic money replaced bank transactions. Electronic banking services achieved lower transaction costs, 24-hour trading, a bigger business area, and higher efficiency in routine banking tasks.

Indian banks are among the biggest in the world. It serves millions of individuals, communities, companies, etc. with different banking needs. Banking reforms affect every nation's socioeconomic progress, social fairness, regional balance, and sustainability. Digitalization, globalization, privatization, liberalization, worldwide market dynamics, and changing consumer expectations increased competitiveness. It's hard to attract new clients and satisfy old ones. It matters for sustained development. Technology helps discover new markets, close the demand-supply gap, reduce risks, and overcome obstacles. Naturally, FinTech has grown in emerging nations like India. This research examines how FinTech improves banking client happiness. The research is limited to Bangalore . Banks provide several services and options. The bank offers investment and insurance products. As financial industry cooperation and integration models have developed, certain traditional distinctions between banks, insurance firms, and security businesses have vanished. People and moneylenders transacted before banks. Public funds were unprotected and loan conditions were inconsistent due to high interest rates. The government-controlled organized banking sector was created to solve these challenges (Sharma & Chaubey, 2014).

## **II. LITERATURE REVIEW**

J.W. Shin. Digital banks with novel transaction techniques have challenged and competed with conventional banks (991 Journal of Positive School Psychology). In light of this, he examined how digital banking experience, including usefulness, convenience, employee–customer engagement, and security, affected customer satisfaction and reuse intention, and how customer satisfaction mediated this relationship.

Chen, X., You, X., & Chang, V. (2021) said that the global COVID-19 epidemic affects the banking business. FinTech-backed product and service innovation may result from the issues and hazards. The research examined how FinTech products (FTPs) impact Chinese commercial bank performance.

Z. A. M. Azzam. (2014) researched in Jordan. He faced growing competition in Jordan's banking industry, so financial institutions must work hard to build and maintain solid client connections to achieve customer satisfaction. Thus, customer relationship management (CRM) is increasingly important in service businesses, especially banking.

Catalin Barbu, Dorian Florea. Et al. (2021) suggested the ‘stimulus-organismresponse (S-O-R) approach’ for Fintech customer experience analysis. Customer support, transaction speed, perceived value, and business innovativeness are the most critical elements affecting customer experience. Customer loyalty integrates them further.

Per Saleem and Rashid, (2011) Global commercial firms consider mobile banking cutting-edge. Their research evaluated Pakistani consumer contentment. Regression, correlation, and component analysis were used to analyze questionnaire results. Data shows customers' concerns about technology security, authenticity, and dependability are important. Based on the results, firms should prioritize IT applications, innovative services, security, customer trust, and risk as technology adoption indicators.

### **III. PROBLEM STATEMENT**

Volume, turnover, and market size are considerable in Indian banking. Opportunities and problems exist. It is undergoing digital revolution. for use and customization. Few academics have integrated FinTech with banking throughout Bangalore's paperless banking shift. Additionally, consumers are the main stakeholders. Growing sustainably requires their contentment. This research finds the gap and combines banking and technology to analyze consumer awareness.

### **IV. RESEARCH METHODOLOGY**

The present study based on descriptive nature, author chose Non-Probabilistic Convenient Sampling for investigation. The author gathered 120 samples to explore bank customers' views on financial technology's use in banking. The author used frequency distribution data analysis to discover their socio demographic profile and their awareness level with it. In India, the research is important for sustained banking expansion.

### **V. DATA ANALYSIS**

**Table 1 Gender of the respondents**

<b>Gender</b>	<b>No. of Respondent</b>	<b>Percentage(%)</b>
Male	78	65
Female	42	35
Non-binary/third gender	0	0
Prefer not to say	0	0
Total	120	100

The above table 1 shows the gender of the respondent Male 65%, female 35% and there is no respondent based on Non-binary/third gender and Prefer not to say category



**Table 2 Age of the respondents**

Age	No. of Respondent	Percentage(%)
Under 25	22	18.33
25-34	45	37.5
35-44	32	26.7
45-54	19	15.83
55-64	2	1.67
65 and above	0	0
Total	120	100

The above table 2 shows that the age of respondents, the most of the respondents 37.5% belongs to 25-34 age group, 18.33% from Under 25 and 45-54 age group are 26.7%

**Table 3 Educational Qualification**

Educational Qualification	No. of Respondent	Percentage(%)
High School or Below	03	2.5
Bachelor's Degree	45	37.5
Master's Degree	62	51.7
Doctorate or Professional Degree	10	8.33
Other	0	0
Total	120	100

From the above 3 data of educational qualification, 2.5% respondents were secondary school, 37.5% of respondents were under graduate and 51.7% of the respondents were post graduate and 8.33% are Doctorate or Professional Degree

**Table 4 aware of the term "Financial Technology" or "FinTech"**

Awareness of FinTech	No. of Respondent	Percentage(%)
Aware	120	100
Not Aware	0	0
Total	120	100

From the above data of awareness level of Financial Technology, 100% respondents were aware and 0% of the respondents were not aware.

**Table 5 Knowledge of FinTech**

Knowledge Level	No. of Respondent	Percentage(%)
Very Limited Knowledge	08	6.67
Limited Knowledge	40	33.33
Moderate Knowledge	52	43.33
Good Knowledge	20	16.7
Very Extensive Knowledge	0	0
Total	120	100

From the above table 5 shows the knowledge level of respondents on Fintech , there are 67.7% of respondents are having good knowledge , 43.33% are having Moderate Knowledge , Limited Knowledge of respondents are 33.33% and 6.7% are Very Limited Knowledge.

**Table 6 factors influenced your decision to use FinTech services**

factors	No. of Respondent	Percentage(%)
Convenience	28	23.33
Lower fees compared to traditional financial institutions	50	41.67
Higher returns on investments	12	10
User-friendly interface	20	16.7
Trust in technology companies	10	8.33
Total	120	100

From the above table 6 shows the factors influenced decision to use FinTech services, there are 41.67% of Lower fees compared to traditional financial institutions, 23.33% are Convenience, User-friendly interface are 16.67% and 8.3% are Trust in technology companies.

## VI. CONCLUSION

According to statistics and national and international research, FinTech has gained pace in banking. Speed, transparency, time savings, and resource optimization are its competitive benefits. It offers substantial customer assistance. While considering the impact of Financial Technology on customer awareness in the banking sector, most Bangalore banking customers confirmed that yes, the banking

applications are tailored made and people have complete faith in them as far as trust is concerned, and E-banking facilities can also understand individual customer needs. FinTech may sometimes surpass consumer expectations with awareness, training, diligent evaluations, and cautious preparation. Customer acquisition, satisfaction, retention, loyalty, and recommendation are linked. Management's service quality and business strategy affect all of these. Financial services are intangible. Financial goods and services have legal, environmental, economic, social, and psychological aspects. Few reasons hinder bank client satisfaction. Time, openness, convenience, accessibility, communication, and record updates hurt.

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**A STUDY ON AWARENESS OF FINANCIAL LITERACY AMONG THE BELOW  
POVERTY LINE (BPL) PEOPLE AT BENGALURU RURAL DISTRICT**

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**ABSTRACT**

*Financial literacy is a prevailing concern for governments around the globe. The capacity of an individual to make prudent financial choices is contingent upon possessing a certain repertoire of skills and information often referred to as financial literacy. The study's chosen research design is primarily descriptive in nature. Convenience sampling is employed in this study. Based on information gathered from 80 respondents from Below Poverty Line Families in the Rural Bengaluru District, this study was conducted. Analyses of the data are shown as percentages. The survey found that most low-income individuals are ignorant of new government programs and are content with them. Government and financial initiatives are poorly communicated to BPL households. The government must provide advice to assist low-income people access money and programs.*

**Keywords:** Financial literacy, Below Poverty Line (BPL) People, Awareness

**1. INTRODUCTION**

The biggest issue that all nations worldwide are currently facing is financial literacy. A person's ability to make wise financial decisions depends on having a certain set of skills and knowledge, which is known as financial literacy. The capacity to use financial resources to make judgments is a skill that comes from education and awareness of how money is created. Individual investment outcomes, financial education, hereditary investment biases, and other related topics are all thoroughly examined in this study. Knowing about money matters, but financial literacy also entails acting on that information. More than 60% of the population in rural areas should have adequate access to financial goods and services in developing nations like India. The Reserve Bank of India created financial literacy centers in June 2012. The ability to navigate the financial world, make wise financial decisions, and reduce the likelihood of being misled about money problems are all made possible by financial literacy abilities. The fast expansion in the creation and marketing of financial goods, along with the liberalization of the financial market share, have increased the importance of financial literacy. Giving out financial advice and information is only one aspect of financial literacy.

Understanding interest calculations, the connections between inflation and return, inflation and prices, risk and return, and the significance of diversification in risk management are all examples of financial knowledge. The individual's financial attitude expresses their belief in planning. Research has been done all across the world to gauge financial literacy. The majority of the surveys have revealed their low degree of financial literacy. This study focuses on young employees' financial literacy and assesses how prepared they are to make financial decisions. Due to low levels of literacy and a sizable population that is economically cut off from the formal financial system, the demand for financial literacy in India has become more pressing.

Being a key to education, the capacity to gather and absorb essential information, or the ability to deal with a range of different day-to-day challenges, it plays a significant part in today's modern world. Financial literacy refers to having a sufficient understanding of financial ideas as well as managing and using financial products and services to their fullest potential.

## **II. REVIEW OF LITERATURE**

Financial literacy and its determinants among Gen Y employees in Coimbatore City have been researched by Sekar, Gowri (2015). The goal of this study is to gauge financial literacy levels globally. Governments across the world have performed surveys on financial literacy. In order to determine how well-prepared Gen Y employees are to make financial decisions, this study focuses on their financial literacy. The study's findings show that age, gender, education, and income all have an impact on financial literacy.

Bhargava (2016) did research on the necessity for different government agencies, businesses, corporations, conglomerates, educators, non-governmental organizations, etc. to emphasize financial literacy and financial education more and more. Financial decision-making is hampered by a lack of financial literacy, hence it is imperative to take the required efforts to spread financial literacy throughout the populace. The conceptual study conducted includes a number of aspects of financial literacy, as well as its necessity and significance in the modern world. Effective financial literacy can be helpful in handling both contingencies and future requirements.

The degree of financial literacy among university students in Estonia, Germany, Italy, Netherlands, Poland, Romania, Russian Federation, and Turkey has been examined by John Wiley (2017). The study's objectives are to assess the degree of financial literacy among university students and explore the correlation between financial literacy and student demographics.

In-depth studies on financial literacy, financial education, individual investment outcomes, hereditary investment biases, and related topics have all been covered in depth by Haslem (2014). Financial literacy is a measure of how well someone understands fundamental financial concepts and has the skills and assurance to manage their own finances by making wise short-term decisions and prudent long-term financial plans.

### III. OBJECTIVES OF THE STUDY

1. Awareness of Financial Literacy among the below Poverty Line People at Bengaluru rural district

### IV. RESEARCH METHODOLOGY

The study's chosen research design is primarily descriptive in nature. Convenience sampling is employed in this study. Based on information gathered from 80 respondents from Below Poverty Line Families in the Rural Bengaluru District, this study was conducted. Analyses of the data are shown as percentages.

### V. DATA ANALYSIS

**Table 1 Gender of the respondents**

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Male	38	48
Female	42	52
<b>Total</b>	<b>80</b>	<b>100</b>

It is inferred that higher percentage of respondents are female that is 52% and 48% of respondents are male which is comparatively lower than that of female. Analysis shows that majority of the respondents are female.

**Table 2 Age of the Respondents**

<b>Age</b>	<b>Frequency</b>	<b>Percentage</b>
Below 20 years	2	3
20-30 years	23	29
30- 40 years	24	30
Above 40 years	31	38
<b>Total</b>	<b>80</b>	<b>100.00</b>

The above table 2 shows that 3% of the respondents belong to the age group below 20, 29% of the respondents belong to age group 20-30, 30% of the respondents belong to age group 30-40 and 38% of the respondents belong to age group of 40 and above. So with this we can conclude that majority are old aged people.

**Table 3 Education qualification of the respondents**

Education Qualification	Frequency	Percentage
Illiterate	38	47.5
PUC	18	22.5
Degree	13	16.3
Postgraduate	11	13.7
<b>Total</b>	<b>80</b>	<b>100.00</b>

The above table 3 clearly shows the education qualification of respondents. Out of 80 respondents 47.5% are illiterate, 22.5% are PUC, 16.3% are degree and 13.7% of the respondents are post graduate. Therefore, majority of respondents fall under illiterate category.

**Table 4 Awareness of Type of Bank Account**

Type of Bank Account	Frequency	Percentage
Savings Account	60	75
Current Account	5	6.3
Fixed Deposit Account	4	5
Recurring Deposit Account	11	13.7
<b>Total</b>	<b>80</b>	<b>100.00</b>

The above table 4 shows that which type of bank account BPL Family members have. Out of 80 respondents 75% of the respondents have savings account, 6.3% of the respondents have current account, 5% of the people have fixed deposit account and the 13.7% of the respondents have recurring deposit account. Therefore, majority respondents fall under the savings account.

**Table 5 Awareness of Present Financial Institutions**

<b>Financial Institutions</b>	<b>Frequency</b>	<b>Percentage</b>
Private Bank	68	85
Public Bank	10	12.6
NBFC's	1	1.2
Post office	1	1.2
<b>Total</b>	<b>80</b>	<b>100.00</b>

The above table 5 shows that 85% of people have private bank, 12.6% of the respondents have public bank, 1.2% of the respondents have NBFC's and 1.2% of the respondents are in post office. So, with this we can conclude that majority are in private bank.

**Table 6 Awareness of Banking Services- Investments**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Strongly aware	9	11.2
Aware	15	18.8
Neutral	35	43.8
Not aware	21	26.2
<b>Total</b>	<b>80</b>	<b>100.00</b>

The above table 6 shows that 11.2% of the people strongly aware about investments, 18.8% of the respondents are aware about investments, 43.8% of the respondents are neutrally know about investments and 26.2% of the respondents are not aware about investments. So, with this we can analyse that 43.8% of the people neutrally know about investments.

**Table 7 Awareness of Banking Services-Loans and Advances**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Strongly aware	13	16.2
Aware	27	33.8
Neutral	30	37.5
Not aware	10	12.5
<b>Total</b>	<b>80</b>	<b>100.00</b>



The above table 7 shows that 16.2% of the respondents strongly aware about the loans and advances, 33.3% of the respondents are aware of loans and advances, 37.5% of the respondents are neutrally know about loans and advances and 12.5% of the people not aware about the loans and advances. Therefore, we can analyse that 37.5% of the people fall under the loans and advances.

## **VI. CONCLUSION**

The capacity to make wise financial decisions on one's own is known as financial literacy. Understanding investment goods, financial concepts, addressing financial issues, choosing between managing, spending, and saving money, and responding to recent financial market reforms are all examples of this skill. Financial inclusion, a requirement of the current Indian economy, will follow from an increase in financial literacy. According to the study, the majority of people living below the poverty line are unaware of recently implemented programs, and the vast majority of them have benefited from and are satisfied with government initiatives. BPL families are not properly informed about the programs and services offered by the government and financial organizations. In order to help those below the poverty line access funding and programs, the government must offer advising services.

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## **APPLICATIONS OF BIG DATA ANALYTICS IN MODERN HUMAN RESOURCE FUNCTION- A CONCEPTUAL STUDY**

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### **ABSTRACT**

*The present study based on conceptual nature that make understand the applications of big data in human resource role in companies. The effective acquisition and allocation of human resources, as well as the motivation, training, and development of employees, are crucial aspects of organizational success. In this regard, the role of the human resource manager is of paramount importance, as they are responsible for ensuring the appropriate quantity and quality of personnel are available when needed. The human resource manager plays a vital role in facilitating the performance of employees and is integral to the functioning of the organization. If big data is utilized strategically in the right locations at the correct times in the needed areas, the advantages of big data may be applied to most of the areas of human resources management with very few limitations. This is because big data can be used to analyze patterns and trends that would otherwise be impossible to detect. This is due to the fact that the benefits of having access to large amounts of data may be discovered in the appropriate areas. This is correct provided that the activity in question is carried out in the right settings.*

**Keywords:** big data, human resource, digital transformation.

### **I. INTRODUCTION**

The advent of digital transformation has significantly impacted the strategies used by firms in the recruitment and management of their workforce. In the past, human resources (HR) specialists were required to do manual tasks related to the management of hiring, termination, and payroll duties. However, due to technological advancements, the position of HR has become more diverse, including a range of tasks related to talent management across the whole process. In contemporary times, there is an increased need for HR professionals to possess comprehensive and profound understanding of their organization's fundamental capabilities. This is essential in order to effectively recruit individuals who align seamlessly with both the job specifications and the cultural values of the firm. The HR

manager assumes a critical role in the attainment of company goals. The individuals responsible for carrying out tasks and attaining organizational objectives are the human resources or workforce of a corporation. Human resources are an essential component inside a firm.

In a contemporary context characterized by the rapid integration of digitalization into both societal and economic realms, the management and use of big data emerge as a captivating and complex undertaking for many sorts of companies. Various sorts of organizations, with a particular emphasis on profit-driven entities such as businesses, use the utilization of big data. There is a growing awareness among individuals that the utilization of big data presents both intriguing prospects and significant hazards. The accessibility of analyzing large quantities of data has significantly increased over the course of many decades, leading firms to use talent analytics as a means of workforce management. A database is a very effective instrument for presenting data and generating reports, often stored in cloud-based environments. The use of big data, which refers to the extensive volumes of structured and unstructured data generated through the routine operations of companies, has seen significant growth in popularity within the business sector in recent years. The concept of a "data lake" has garnered considerable attention and recognition within the realm of big data management. Data warehouses do not need the conversion of data to conform to a particular data model, hence enabling enterprises to store many types of data at little cost. Data warehouses are very advantageous in the context of uncovering novel insights, as opposed to doing analysis. The use of big data has the potential to enhance the comprehension of personnel and facilitate the implementation of improved employment policies by HR teams. This is shown by the manner in which the marketing department is now using big data to get insights into the perspectives of their clients. This article has conducted a comparative analysis between big data and human resources management.

## **II. REVIEW OF LITERATURE**

In order to ascertain the influence of human resources (HR) activities on company performance, it is necessary to use analytical models, experimental methodologies, reliable metrics, and comprehensive data including both input and output dimensions. This approach is crucial for establishing the causal linkages between HR activities and business performance, as highlighted by Camps and Luna-Arocas (2012), Bou-Lusar et al. (2016), and Lin et al. (2016). Boudreau and Ramstad (2002) differentiate between the provision of HR measurements and the provision of enhanced logic and analytics to facilitate decision-making pertaining to the workforce. The authors contend that there is a need for Human Resource Management (HRM) to evolve into a distinct decision science, comparable to fields such as accounting and marketing. This would enable HRM to effectively lead, evaluate, and improve

decision-making pertaining to the workforce, irrespective of whether these choices are made inside or outside the HR function.

Fitz-enz and Mattox (2014) argue that analytics is often misconstrued as being synonymous with statistics. While statistics certainly have significance, it is crucial to see analytics primarily as a cognitive framework bolstered by a collection of statistical procedures. Hence, the primary objective is in comprehending the interplay and associations among many components associated with a certain problem that necessitates resolution. If this knowledge is absent, the utility of analytics is limited since it lacks integration with an organization's strategy, comprehension by its end users, and incorporation into its processes to facilitate timely decisions. Nevertheless, there exists a strong conviction among firms that use analytics, as seen by the findings of LaValle, Lesse, Shockley, Hopkins, and Kruschwitz (2011). Their research revealed that these organizations view analytics to possess significant value.

Rasmussen and Ulrich (2015) further emphasize that the mere pursuit of analytics without a clear purpose does not provide any meaningful benefits. The essential task involves structuring the pragmatic business difficulties in order to determine the questions that need resolution via the use of analytics. Thus, the progress of Human Resource Analytics (HRA) necessitates an academic perspective that acknowledges the business environment. This approach ensures the provision of actionable, accurate, and comprehensive information to meet the decision-making requirements of relevant stakeholders. According to Lawler et al. (2004), it is crucial to provide assistance for decision-making processes that include individuals.

The aforementioned definitions of BD have significance within the context of Human Resource Analytics (HRA). Indeed, several attributes and characteristics included in the definitions of BD have a striking resemblance to those used in the description of HRA. Thus, it can be argued that the current surge in interest in Big Data (BD), driven by the continuous digitization impacting diverse company operations and societies on a broad scale (Hajkowicz, 2015, p. 107), presents novel prospects for Human Resource Analytics (HRA) as well.

The idea of big data (BD) is a topic of ongoing debate. However, Mayer-Schönberger and Cukier (2014) assert that BD has the potential to fundamentally transform traditional decision-making processes and enhance our understanding of the current state of affairs. This viewpoint is also supported by McAfee and Brynjolfsson (2012) as well as Davenport (2014). According to Mayer-Schönberger and Cukier (2014), prior to the availability of Big Data (BD), our decision-making processes relied on the use of well-defined hypotheses that were confirmed by the collection and analysis of data specifically gathered for the intended purpose. According to Mayer-Schönberger and

Cukier (2014), the use of big data (BD) has the potential to disrupt the conventional process by enabling the application of sophisticated mathematical models. This, in turn, facilitates the identification of previously unrecognized correlations between events.

As previously mentioned, it is plausible that this assertion holds true for human resources (HR) data as well. Organizations possess a substantial amount of data pertaining to different facets of their workforce, organizational performance, and external factors. When these diverse data sources are combined, they can be regarded as big data (BD) that has the potential to provide valuable insights for business-oriented decision-making. However, this can only be achieved by adopting an open-minded approach and utilizing suitable analytical tools. Nevertheless, the extensive range of benefits presented by advanced technology can give rise to ethical considerations. When addressing the handling of personal data, particularly in relation to the ethical and legal concerns arising from emerging data types and various algorithms used in artificial intelligence (AI) and machine learning (ML), it is crucial to carefully examine the solutions employed in Human Resource Analytics (HRA). For instance, Tambe et al. (2019) provide valuable insights in this regard.

### **III. OBJECTIVE OF THE STUDY**

To understand and outline the applications of Big data analytics in Human Resource Function of an organisation.

### **IV. APPLICATIONS OF BIG DATA IN HR FUNCTIONS**

#### **Recruitment and Talent Acquisition**

The process of hiring new employees and finding new talent is one of the most famous uses of big data in human resources. In a world in which human resources departments receive hundreds of resumes on a daily basis, the process of sorting through these papers to find the applicants who are the best fit for the open positions may be difficult and time consuming. In this predicament, big data analytics comes to the rescue by automating the process of resume processing. Big data technologies are able to quickly scan and classify resumes by using natural language processing (NLP) and machine learning. This allows the tools to emphasize credentials, talents, and experience. This helps HR professionals to concentrate their attention on the individuals who have the greatest potential, which in turn greatly reduces the amount of time and effort required for recruiting.

Another ground-breaking use of big data in human resources is predictive analytics. HR teams are able to estimate when roles are likely to become available by evaluating past data and trends. They are

also able to determine which talent sourcing channels provide the best candidates, as well as the chance of a candidate being successful in a certain capacity. This strategic approach to the procurement of talent has the potential to be a game-changer for businesses that want to remain one step ahead of their rivals.

### **Employee Retention and Engagement**

Organizations have a substantial challenge in the form of high employee turnover rates. A high turnover rate may be both expensive and disruptive to an organization. Big data may be of assistance in resolving this problem by offering useful insights about the retention and engagement of staff members. An example of this would be an employee sentiment study, which would include looking at input from a variety of different sources, such as questionnaires, social media, and even internal communication channels. These data sources provide HR with the ability to evaluate the levels of employee happiness and engagement.

The predictive churn analysis is just another powerful weapon in the human resources department's inventory. The Human Resources department is able to detect workers who may be departing the organization if they make use of predictive analytics. With this knowledge in hand, HR is in a better position to proactively adopt retention measures, resolve problems, and improve the overall work environment, all of which contribute to a reduction in turnover rates. Big data also enables personalized professional growth opportunities to be taken advantage of. HR is able to detect skill shortages and establish individualized development programs for each employee by doing data analysis on the workforce. This not only increases the level of happiness that employees feel, but it also gives them the ability to perform to the best of their abilities inside the firm.

### **Performance Management**

Big data has the potential to make improvements to the process of performance management, which is a key part of HR operations. The analysis of large amounts of data may give objective and data-driven insights regarding the performance of employees. This method to performance management is data-driven, which guarantees that workers are assessed based on their real contributions and achievements, resulting to a process that is more fair and transparent. Analysis of responses from all 360 degrees is yet another use. HR is able to present a more complete picture of an employee's performance since they compile input from the employee's peers, superiors, and subordinates. This all-encompassing strategy encourages self-awareness and personal development among workers, which in turn contributes to the expansion of the firm as a whole.

### **Learning and Development**

Learning and development opportunities for staff members are essential not just to individual progress but also to the overall performance of the organization. The use of big data may make these procedures more productive and successful. For instance, by doing an analysis of employee data, HR is able to provide recommendations for individualized learning materials, classes, and possibilities for professional growth. This individualized approach guarantees that workers will get training that is directly applicable to the tasks they now fill and the ambitions they have for their careers. Big data may also be used to the task of determining how successful various training programs are. HR is able to make data-driven choices on whether training programs should be continued, modified, or discontinued by following the progress of employees and evaluating the effect of training on work performance. This guarantees that resources are distributed effectively and that training programs are in line with the goals of the company.

### **Compensation and Benefits**

The level of compensation and perks offered to employees is one of the most important factors in recruiting and maintaining top talent. The successful management of these facets may be aided by HR's use of big data. One kind of benchmarking, known as compensation benchmarking, includes comparing the company's pay structure with that of other businesses in the industry. HR is able to guarantee that the firm maintains its competitive edge in the employment market and continues to recruit and retain top people by using data-driven insights. Another essential use is pay equity research and analysis. HR is able to discover and resolve pay inequalities and gender pay gaps inside the business by using big data. This ensures that the organization is both fair and in accordance with applicable labor regulations.

### **Planning of Workforce**

Planning one's workforce is necessary in order to guarantee that a company has the appropriate individuals working in the appropriate positions at the appropriate times. The use of big data may be of assistance to HR in this attempt. HR is able to make educated judgments on the requirements for the future workforce by doing data analysis on past workforce patterns, changes in the industry, and internal issues. The use of predictive analytics may assist in forecasting workforce needs, which enables human resources to efficiently prepare for recruiting and succession. Planning for several possible outcomes is yet another useful use. In order to handle possible difficulties with the workforce, HR may make use of big data to simulate a variety of different situations, such as reorganizations or

changes in the business environment. This preventative strategy guarantees that the business is ready to face any unforeseen challenges that may arise.

### **Value of Inclusivity and Diversity**

Many businesses have made it one of their highest priorities to foster an inclusive and diverse environment in the workplace. The Human Resources department may assess, monitor, and generally enhance diversity and inclusion activities with the use of big data. Diversity metrics make it possible for HR to monitor the make-up of the workforce. This makes it much simpler to pinpoint problem areas and evaluate the degree to which progress has been made over time. In addition, the use of big data may be an asset in the fight against prejudice in HR procedures. It is possible to train machine learning algorithms to reduce biases in the recruiting and promotion processes, so assisting firms in building teams that are more diverse and inclusive.

### **Administration of Compliance and Risk Management**

In the human resources department, data analytics may also be utilized for compliance and risk management. It is the responsibility of HR departments to ensure that they comply with all applicable labor laws, regulations, and corporate rules. The use of big data analytics may automate the monitoring of compliance, draw attention to areas of concern, and lessen the likelihood of breaking the law. This not only protects the corporation, but it also guarantees that the workers will be treated properly and in compliance with the law.

### **Employee Health and Safety**

The health and happiness of workers should always be a top priority for human resources. The use of big data in the planning and execution of initiatives to improve the health and well-being of employees is possible. HR is able to develop well-being programs that are tailored to the individual demands of the workforce if they analyze data pertaining to the preferences and wants of employees. These programs may include assistance for both physical and mental health, as well as activities to promote a healthy work-life balance and tools for managing stress.

### **Employee Experience "EX."**

The extent of the employee's general contentment with their position is an essential component of their level of productivity. Big data may be used by HR to assess and enhance the experience of working for the company. HR is able to discover areas in which the experience of the employees may be improved by conducting surveys, analyzing comments, and measuring performance indicators.



Enhancements in this domain that are driven by data lead to increased levels of work satisfaction and staff retention.

## V. CONCLUSION

The Human Resources department will explore for creative methods in order to utilize big data. Big data have the potential to revolutionize not only a company but also the working environment of every person. Despite this, big data do not provide enough ideas for their implementation and use. about large amounts of data. For example, gamification and augmentation are used in the field of human resource management (HRM) far less often. Gamification is recognized as a developing trend within HRM, despite the fact that the majority of programs are purchased off the shelf and are not connected to specific enterprises. There is a possibility that gamification may become much more than merely an operational element. I implemented a radical type of gamification, and after staff are properly taught and a functioning HR daemon and HR centaur are in place, individuals will begin to experiment with big data as well as their working environment. Everything becomes more dynamic and more tailored to the individual's preferences. In the not too distant future, augmentation and applications for augmented reality will have an increasingly significant impact on the working environment. Even more reality and the digital world will be mixed together thanks to technological advances such as Magic Leap. It's feasible that in the not-too-distant future, we may be able to achieve a total merging of the digital overlay with the actual world. This significantly expands the possibilities of big data and has the potential to bring about profound shifts in the way we do our jobs. However, HRM will be the study stream that produces ideas that are suitable for this new working environment. This is because technology and particularly big data offer up all options.

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**EVALUATING THE ROLE OF KAVERI GRAMEENA BANK IN PROMOTING RURAL FINANCIAL INCLUSION**

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**ABSTRACT**

*This study explores the pivotal role of RRBs in promoting rural economic development in India, with a specific focus on the enactment of Kaveri Grameena Bank in Karnataka. Rooted in the Gandhian perspective that views the "real India" in its villages, we emphasize the rural economy's significance as the backbone of India's overall economic landscape. The establishment of RRBs in 1975 was a milestone, driven by the need to provide tailored financial services to rural areas. In the face of a changing rural landscape marked by increasing consumer purchasing power and a desire for an improved standard of living, the study underscores the pressing need for upgrading various facets, including employability, literacy, irrigation, infrastructure, advanced technologies, and basic telecommunications. Moreover, efficient financial systems are paramount to meet these evolving needs. This research, relying on preexisting data, scrutinizes the performance of Kaveri Grameena Bank in fostering agricultural development and identifies its impact on the broader rural economy. It aims to shed light on how RRBs can restructure the financial landscape in rural India and facilitate economic progress in these areas.*

**Key Words:** Regional Rural Banks, rural economy, upliftment, buying power, Performance.

**I. INTRODUCTION**

Agriculture holds significant importance in India, serving as a crucial livelihood source for the majority of the impoverished rural population for the past six decades. Agricultural finance plays a vital role in facilitating to access the financial services for farmers and rural business people. However, Indian farmers face financial challenges due to factors such as limited land holdings, low productivity, insufficient income, and high domestic consumption.

Traditionally, agricultural finance was predominantly supplied by cooperatives, land development banks, and private moneylenders. Nevertheless, following the nationalization of commercial banks in 1969 and the inception of Regional Rural Banks in 1975, both these categories of entities commenced

providing credit services for the agricultural sector. Agriculture employs around 40% of the global workforce and is faced with the challenge of doubling food production by 2050 in developing countries. This necessitates technological advancements, especially in high-yielding crop varieties, to enhance agricultural productivity.

Despite the increased availability of agricultural credit, several weaknesses have emerged, affecting the sustainability and effectiveness of these financial institutions. Changing dietary preferences in rural areas have highlighted the importance given this evolving agricultural landscape, there is a pressing need for robust and sustainable agricultural financial institutions to provide financing for the development. Agriculture now requires a mission-driven approach, similar to the Green Revolution of the 1970s, to ensure that the poorest individuals in rural India, particularly small and marginal farmers, have access to credit and financial services.

RRB in Karnataka

+	Karnataka Vikas Grameena Bank	Syndicate Bank	Karnataka
+	Kaveri Grameena Bank	State Bank of Mysore	Karnataka
	Pragathi Krishna Gramin Bank	Canara Bank	Karnataka

Source: Annual Reports of RRB.

□

## II. LITERATURE REVIEW

Ibrahim (2012), This paper aims to analyze rural credit and the role played by Regional Rural Banks (RRBs) in both priority and non-priority sector lending. It highlights significant achievements in loan disbursement to these sectors. The study adopts a diagnostic and exploratory approach, utilizing secondary data. The findings and conclusions indicate that RRBs have made substantial contributions to the rural economy in India..

Roy (2014), A study was conducted on rural development in India, with a specific focus on the roles played by NABARD. The government's development policy prioritizes sustainable economic growth, recognizing the need for rapid expansion of employment and income opportunities alongside social transformation in the rural economy. This paper explores various government programs and policies aimed at rural development, provides a concise introduction to NABARD and RRBs, examines the schemes and programs initiated by NABARD, and evaluates their contribution to the development of rural India. Our findings highlight the significance of organizing

awareness programs for beneficiaries to ensure their understanding of the intricacies of different schemes. Without this knowledge, the overarching goals may remain elusive.

Ibrahim(2010), In the present study, the performance of Regional Rural Banks, an attempt has been made to analyze the Several committees have underscored the necessity of enhancing the performance of rural banks, which play a crucial role in India's rural credit market. This paper aims to examine whether the merger or amalgamation of Regional Rural Banks (RRBs) in India, carried out in 2005-06, has contributed to performance improvement. The paper's findings indicate that there is a need to reduce the disparity between the Credit-Deposit (CD) ratios of commercial banks and RRBs. Moreover, the study reveals that the performance of RRBs in India witnessed significant improvement following the amalgamation process initiated by the Indian government.

Geetha (2016), the research indicates that the performance of Krishna Pragathi Gramina Bank in Shivamoga District branches has shown significant improvement over time. These improvements were initiated by the Government of India after the amalgamation process. The study focused on assessing the financial performance of Regional Rural banks in Shivamogga District and evaluating the progress of the Pragathi Gramina Bank in Shivamoga District. Regional Rural Banks (RRBs) have successfully achieved their objectives, such as bringing banking services to rural households, especially in underserved areas, providing accessible and affordable credit to economically weaker sections in rural areas, promoting rural savings for productive endeavors, generating employment opportunities in rural regions, and reducing the cost of providing credit in rural areas.

### **III. STUDY OBJECTIVES:**

- To spotlight the significance of RRB in India, with a specific focus on their role in Karnataka
- To assess the performance of banks with regard to loans issued and their recovery status
- To highlight the interest on deposits and borrowings of the bank; and
- To analyze the performance of Kaveri Grameena Bank through profitability; and

### **IV. RESEARCH METHODOLOGY:**

The current research is diagnostic and exploratory in nature, based on a review of secondary data sources. The relevant secondary data were primarily sourced from the databases of the Reserve Bank of India (RBI), National Bank for Agricultural and Rural Development (NABARD), and the Annual Report of Kaveri Grameena Bank. In addition, pertinent information was extracted from

journals like "The Banker" and "The Journal of the Indian Institute of Bankers." This study has a limited scope, concentrating on specific areas, including the number of branches, district coverage, deposits mobilized, recovery performance, interest rates on deposits and borrowings, and profitability, for the period spanning from 2012-2013 to 2015-2016.

## V. PERFORMANCE OF KAVEERI GRAMEENA BANK – KARNATAKA:

### a. Branch Expansion:

Table 1 illustrates the expansion of branches throughout Karnataka over the study duration. The performance indicator reflects the branch development in rural, semi-urban, urban, and metropolitan areas within ten districts of Karnataka. Upon analyzing the data presented in Table 1, it becomes evident that a significant majority of the branches are primarily located in rural areas, accounting for 77.8% (350 branches) in the year 2014-2015. This emphasis on rural placement is attributed to the bank's status as an RRB, leading to a relatively lesser focus on semi-urban, urban, and metropolitan areas.

**Table No. 1 Details of Branches in KGB – 2012-13 to 2015-16**

<b>Branches</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>
i) Rural	253 (75.7)	310 (77.5)	350 (77.8)	373 (76.5)
ii) Semi Urban	51 (15.26)	5 (1.25)	52 (11.6)	52 (10.6)
iii) Urban	22 (6.58)	28 (7)	33 (73.3)	42 (8.6)
iv) Metropolitan	8 (2.39)	11 (2.75)	15 (3.33)	20 (4.1)
<b>Total</b>	<b>334</b> <b>(100)</b>	<b>400</b> <b>(100)</b>	<b>450</b> <b>(100)</b>	<b>487</b> <b>(100)</b>

Original Source: Compiled from the annual reports of KGB Govt. of Karnataka.

During the period from 2012-13 to 2015-16, there is a discernible trend of significant branch expansion by the bank. By the conclusion of the 2015-16 financial year, the number of branches had substantially increased to 487. This analysis suggests that Kaveri Grameena Bank is dedicated to extending its branch network across rural regions in Karnataka to better serve the financial requirements of farmers and the local community.

### b. Loans Issued:

Table No. 2 presents data regarding loans disbursed to various sectors. Notably, in the fiscal year 2012-13, there was a growth rate of 19.71%, while in the year 2015-2016, this growth rate increased

to 30.54%. It's worth mentioning that the priority sector experienced a substantial growth spurt in the year 2013-2014, amounting to 180.415 crores. The bank consistently favored priority sectors when disbursing loans among various sectors. Furthermore, loans in the categories of small, medium, and agriculture saw a noteworthy increase, surging from 496.37 crores in 2012-2013 to 1071.34 crores in 2015-2016. This analysis indicates that KGB's positive growth from 2012 to 2016 can be attributed to the bank's concerted efforts to expand its branch network.

**Table No. 2. Loan Issued to Various Sectors** (in Crores)

	Loans	2012-13	2013-14	2014-15	2015-16
	Loans Issued	9.02	34.93	61.6147	382.235
	Growth%	19.71	23.91	24.48	30.54
	Priority Sectors	1432.19	2180.4158	2734.7644	3163.2346
	Non- Priority Sectors	268.88	452.6862	622.0263	660.3106
	SF/MF/AL	496.37	513.19	565.15	1071.3478

Source: compiled from the annual reports of KGB Govt. of Karnataka.

Note: SF/MF/AL = Small Farmers, Medium Farmers, Agricultural labour.

### c. Recovery Position:

Table No. 3 showed the recovery performance of the KGB during the study period. The recovery details were centered on the requirements, retrieval process, outstanding payments, and the recovery rate.

**Table No. 3 Recovery Position – 2012-13 to 2015-15**

( in Crores)

Recovery	2012-13	2013-14	2014-15	2015-16
Demand	1254.47	2429.38	2396.5571	4158.632
Collection	1009.07	1790.69	1799.0894	3146.5465
Over dues	245.40	638.69	597.4676	1012.0856
Recovery (%)	80.44	73.71	75.07	75.66

Source: Annual reports of KGB, Govt. of Karnataka.

Analyzing the data from the table reveals some significant trends. Notably, there was an increase in demand and an improvement in the recovery percentage from the financial year 2012-13 to 2013-2014. However, a notable decline in demand, amounting to 2396.557 crores, occurred in 2014-15 when compared to the previous fiscal year (2013-14), which had a demand of 2429.38 crores. The highest recovery rate was achieved in the year 2012-13 at 80.44%, while the lowest recovery rate was observed in the year 2013-14 at 73.71%. These fluctuations suggest an uncertain trend in the future, indicating a concerning downturn in the recovery performance of KGB in the rural agriculture sector.

**d. Interest on Deposits and Borrowings :**

Table 4 illustrates the performance of Kaveri Grameena Bank in terms of deposits and borrowing interest rates during the study period. The table provides details on the interest paid on both deposits and borrowings. Notably, there was a substantial improvement in the growth of deposits, particularly in the year 2015-16, where the deposits increased by 34.63%. Over the years from 2012-13 to 2015-16, a significant upward trend in deposits was observed. In contrast, the borrowing interest rate showed a slight decline in the year 2013-14, followed by a substantial growth of 43.06% in the year 2015-16.

From these findings, it can be inferred that Kaveri Grameena Bank offers competitive interest rates compared to nationalized banks. Moreover, the bank's extensive branch network across ten districts in Karnataka plays a pivotal role, as rural customers prefer depositing their funds in nearby branches. This suggests that there is ample potential for the bank to attract even more deposits in the future, provided it maintains its current performance standards.

**VI. FINDING SUGGESTIONS AND CONCLUSION FOR THE STUDY:**

The study highlights several key points related to Kaveri Grameena Bank's performance and rural development in India. The study emphasizes the need for KGB to increase its branch network to better serve the growing population, particularly small and medium-scale farmers. It also calls for improvements in credit facilities for agricultural communities. India is primarily an agrarian economy with a high population density in rural areas, emphasizing the significance of financial support and rural-oriented policies for rural development. Regional Rural Banks (RRBs) play a pivotal role in advancing the socioeconomic conditions of underprivileged agricultural communities. Kaveri Grameena Bank (KGB) stands as a prominent player in Karnataka, dedicated to serving the financial needs of impoverished farmers. KGB's commitment extends to expanding its branch network across rural Karnataka, thus alleviating the financial burdens of farmers. The bank has consistently demonstrated improvement across all its key performance areas.



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## **FORENSIC ACCOUNTING WITH ARTIFICIAL INTELLIGENCE: A REVIEW**

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### **ABSTRACT**

*Artificial intelligence has got huge implications for forensic accounting. With the ever increasing electronic element of frauds in the present age of digitalization, and complexity of financial transactions and instruments, the challenges are growing multifold for the forensic accounting profession. The use of artificial intelligence due to its ability of processing large data in almost no time simplify the task of forensic accountant to a large extent. Artificial intelligence cannot be a substitute for the forensic accountant/auditor, but definitely can enhance the quality of decision making and simplify the process. This paper discusses the applications of Artificial intelligence in forensic accounting and how these can facilitate the work of forensic accountants and auditors.*

**Key-words:** Forensic accounting, Fraud auditing, Artificial Intelligence, White-collar crimes.

### **1. INTRODUCTION**

In the present VUCA (*Volatile Uncertain Complex Ambiguous*) world, the frauds and scams are increasing at an exponential rate. Instances of asset misappropriation, money laundering, cybercrimes, financial statements manipulation, insider trading, Ponzi schemes and accounting frauds are only increasing day by day. The advancements in technology has proven to be an additional tool in the hands of perpetrators of crime and combatting them is a new challenge. Until recently, the popular belief was that the ‘conventional’ accounting and auditing function are sufficient for detecting fraud (White-collar) crimes. It was assumed that the fraud was something the internal or external auditors were supposed to guard against by their periodic audits. But it is a well-known fact that auditors can only check for the compliance of a company’s books to GAAP (Generally Accepted Accounting Principles), auditing standards and company’s accounting policies. Financial auditing is limited to the unearthing of material deviations, exceptions, oddities, errors and variances from the acceptable and

applicable standards of accounting & auditing practices. But the fraud is something which by its very nature is 'hidden' in the accounting systems of organizations and therefore, the necessity for forensic accounting, which is about probing deeply into the financial transactions & business situations, so as to rule out any possible fraudulent activity.

The recent wave of increased fraudulent practices and white collar crimes has paved the way for emergence of new branch of accounting, called 'Forensic accounting & auditing' which is simply the employing of accounting, auditing & investigative skills taken together. It is the combination of auditing skillset of an accountant and investigative abilities of a detective. According to Webster Dictionary, "Forensic" means "belonging to, used in or suitable to courts of judicature or to public discussion and debate ". Thus, it essentially involves the utilization of scientific techniques and analytical methods in order to detect frauds in a manner, which can be used in courts of law. This is often done by using reliable methods of inquiry (such as statistical techniques) and evaluative concepts like organization's code of ethics, which enables to get credible findings. Forensic Accounting has come to the limelight only recently, thanks to rapid increase in frauds and white-collar crimes. In the opinion of Oyedokun<sup>1</sup>, and Owojori and Asaolu<sup>2</sup> "forensic accounting has existed for several years. With the growing complexity of the business environment and therefore the growing number of business related investigations, forensic accounting professionals are increasingly asked to help with the investigations of monetary as well as non-monetary business related issues".

## **II. FORENSIC ACCOUNTING AND FRAUD AUDITING**

Forensic accounting is often described as a specialized field of accountancy, which investigates fraud and analyzes financial information to be used in legal proceedings. It is an amalgam of numerous varied disciplines. Its roots extend not only to accounting and auditing, but also to law, criminology, psychology, sociology, economics and finance. "Forensic accounting may be a challenging discipline that substantially interacts with auditing, economics, finance, information systems, and law".<sup>3</sup> Huber and DiaGabriele<sup>4</sup> have given the foremost comprehensive definition of forensic accounting as : "A multidisciplinary field that encompasses both a profession and an industry, where civil or criminal economic and financial claims, whether business or personal, are contested within established political structures, recognized and accepted social parameters, and well-defined legal jurisdictions, and informed by the theories, methods, and procedures from the fields of law, auditing, accounting, finance, economics, psychology, sociology, and criminology."

## **2.1 The Lexicon**

Forensic accounting can be called as an ‘umbrella term’ encompassing the other popular terms in accounting literature. Oladele<sup>5</sup> argues that, “the lexicon of accounting terms such as forensic accounting, fraud auditing, fraud accounting, forensic auditing and investigative accounting are not clearly defined. Therefore, the term forensic accounting profession is prominent in existing forensic accounting literature as well as the legal system”. “Forensic auditing is an aspect of forensic accounting that applies auditing, accounting and investigative skills that have legal consequences”.<sup>6</sup> Forensic audits are generally ordered by the regulators, revenue authorities and banks, while the forensic accountants are appointed by the business themselves when they suspect a fraud or data leakage. “In spite of the rapidly growing demand for forensic accounting globally, this concept is still confined mainly to economies of developed countries with simplified application in emerging economies”.<sup>7</sup> In India, there are very few accounting firms offering forensic accounting services, whereas, the forensic audit firms are fairly large in numbers due to the regulatory requirements. Reserve Bank of India’s requirement of forensic audit before a company can avail Corporate debt restructuring, is also paving way for volume increase in the forensic activities, be it accounting or audit. “Enforcement of insolvency act created new avenues for the forensic auditors”.<sup>8</sup>

## **2.2 Ineffectiveness of Financial Auditing**

Auditing of accounts has been proved ineffective in detection and prevention of frauds. It has been observed in many cases of fraud that while the financial statements were duly approved by the auditors, it contained material omissions and misstatements which ultimately led to bankruptcy and sinking of the corporate, leading to massive losses to the poor investors and other stakeholders. It led to emerging of forensic auditing, which is popularly called fraud auditing. While there’s a uniform procedure for conducting an audit of financial statements, there can’t be any simple formula for conducting a fraud audit, nor there are any generally accepted check lists or patterned interview structure. This is because fraud is a human phenomenon and humans tend to behave differently in various circumstances. Most frauds, embezzlements & misappropriation of corporate assets aren’t discovered in course of financial audits. While in auditing, a more or less standardized report is given back to the management with the assistance of standardized procedures to function as base; in forensic accounting, the auditor is assigned the responsibility of probing the books of accounts in a high risk prone environment. With detailed planning of tasks, he conducts and documents a deterministic and calculative analysis to support legal and administrative decisions. The period covered and format of the report is flexible, as necessary and stipulated by the client or judiciary requirements.<sup>9</sup>

### ***2.3 Scope of Forensic Accounting***

It is just not possible to completely rule out the possibility of any fraud from happening in any organization, but taking the services of forensic accountant/auditor can surely reduce the probabilities of fraud, and risk of fraud can be managed to a great extent. The scope of forensic accounting services in a business set up is immense. “The world of forensic accounting, in the past decade, has expanded in scope and has become more specialized in skills”.<sup>10</sup> Besides their main function of auditing and fraud detection, they can play a bigger role in the organizations by resolving many critical challenges faced by them. Usually the big public accounting firms like Deloitte, PwC, Ernst and Young and KPMG have a separate department dealing with the forensic investigation assignments, wherein they absorb forensic accountants. They can help to strengthen the various information systems of the company and their mere presence can improve management accountability, corporate governance, the statutory audit function and the financial reporting system of the organization. “They can prove to be catalyst in strengthening auditors’ independence and in securing additional assurance for audit committees of the organization”.<sup>11</sup> Forensic accountants have the expertise in fraud detection, prevention as well as within the area of alternative dispute resolution and they can also render arbitration and mediation service for the business organization. The corporate can use the services of forensic accountants to unravel the cases regarding contract dispute, construction claims, product liability claims, patent and trademark etc. The insurance firms can use their services for accurate assessment of the claims to be settled. Policyholders seek their help to question the claim sanctioned by the insurance company.

In every other study, the banking and the financial services industry emerge as the sectors, which are prone to the frauds the most. Not only this, the frequency, volume and therefore, the gravity of instances of fraud is also gone up exponentially over the past few years, thanks to the tremendous upsurge in the scope and magnitude of banking transactions witnessed in the past few decades, the emergence and growth of hybrid financial products, the voluminous number of cross border financial transactions and the increased use of the electronic modes of payments due to their lower cost and almost real time impact. The high vulnerability of financial sector for the frauds calls for the regular services of forensic accountants and auditors.

In big organizations, there are large number of daily routine transactions and therefore, the probability of incidence of fraudulent activities is more. In such a scenario, there could be considerable delays in reporting frauds to appropriate authorities, and thus, by the time investigation is conducted and accountability is fixed, irreparable damages are done. Employing of forensic accountants on regular basis becomes imperative in such cases. The idea is to make them a part of the overall accounting and

internal control system, so that any kind of laxity is brought to the notice of the authorities in due time without unnecessary delays, and timely corrective action is taken.

### **III. ROLE OF ARTIFICIAL INTELLIGENCE (AI) IN FORENSIC ACCOUNTING**

A lot many studies have proved that weakness in internal control systems of the organisations result in fraud in majority of cases, and thus the role of forensic accounting and the use of AI has assumed prominent place in the field of fraud protection. An increasing number of organisations are using these for their risk management.<sup>12</sup> As compared to the traditional approach, where the forensic auditor has to employ sampling methodology; now with the help of AI techniques, it becomes lot easier to analyse the financial data of multiple years to identify the high-risk transactions which need to be reviewed, and that too within a significantly reduced timeline and the increased efficiency. It was predicted by ACFE (Association of Certified Fraud Examiners) that organisations making use of AI in fraud detection would be tripled by 2021, in a span of only one year.<sup>13</sup>

#### ***3.1 Combinatorial Explosion***

Handling the massive data volumes and complexities of financial data are big challenges for forensic accounting, and thus the use of AI techniques has become inevitable. To start with, very few organizations were using AI and machine learning to detect and deter fraud, but quite a sizeable number of organizations are gradually planning to adopt such technologies soon. While a larger part of time by the forensic accountant was spent in sifting through large volumes of data searching for evidence and trying to get a clue as to where to head to further in the investigation, now AI helps save that time and let him focus on the case itself by getting him reach where he needs to be quickly. Thus, AI complements his services. Artificial intelligence is based on the assumption that it is possible to describe precisely the ‘human intelligence’ and the same can be simulated on a machine. The way humans apply their intelligence in solving puzzles and making logical deductions, in the same manner, step-by-step reasoning algorithms were developed to deal with uncertain or incomplete information through artificial intelligence modelling.<sup>14</sup> With the passage of time, as these algorithms started proving to be slower and ineffective in dealing with bigger reasoning problems in face of "combinatorial explosion", advancements in the field and refinements in the technology were made, resulting in fast solving of problems. But still, intuitive judgement of human has no parallel.

#### ***3.2 Machine Learning***

One of the sub-theme of AI is Machine learning (ML), which has existed since its inception. It consists of algorithms, that have ability to learn from their experience and thereby, improve their

functioning. It has two types- unsupervised learning and supervised learning, where the former does not require the human labelling of inputs for generating the patterns in a stream on input. The supervised learning methods of fraud detection make use of existing fraudulent and non-fraudulent cases to build a model, which provides a suspicion score to apply in new cases. In unsupervised learning, existing observations are not available, instead a baseline distribution representing normal behavior is modelled and the observations detected departing from the baseline are considered outliers and are more closely observed to check whether they are fraudulent or not, as in the case of Benford's Law.<sup>15</sup> With the use of ML, a company's expense policy may be read and a scrutiny of receipts and expense claims can be done at a faster speed to ensure compliance and then, the questionable claims can be reviewed by the forensic accountant to check for any discrepancies, which can guide for further cause of action. Thus, a lot of time and effort is saved through the use of AI.

Another prominent area in the field of forensic accounting is the risk assessment, wherein information is required to be pulled from the previous projects and analyzed for doing a comprehensive assessment of the proposed project. With the limited available time in hand and given the large scale of the project, the task can be quite tedious. ML can ensure the completion of such tasks at relatively a much faster speed with more accuracy. It has been found that ML algorithms many times outperform the forensic experts at picking up pervasive but subtle patterns.<sup>16</sup> In many cases, data to be processed may be highly unstructured which may make it very difficult to process. Analyzing this unstructured data in the form of text documents, contract papers, returns filed, legal documents, press releases, e-mails etc. becomes easier with ML. The recent developments in ML have expanded to the areas of analyzing the financial statements; identification of red flags and predicting default by customers and bankruptcy of organizations.

### ***3.3 Natural Language Processing***

According to a survey conducted by AICPA (American Institute of Certified Public Accountants) in 2014<sup>17</sup>, big data emerged as the top issue for forensic and valuation professionals. Another sub-theme of AI, Natural Language Processing (NLP) provides solution to this issue. NLP refers to ability of machine to read and understand human language and allows for applications like- information retrieval and text-mining. The application of information retrieval, 'Metadata' is of particular significance. It literally means "data about data" and can be used to extract basic information about data to help tracking the means of creation of the data, its purpose, its creator, the process used and the location of computer network where it was created. It can also help in searching for the times, origins and destinations of all kinds of telecommunications viz. telephone calls, e-mails, electronic messages etc. Another application, called 'Data virtualization' which emerged in 2000s helps in stacking

metadata in servers as permanent persistent repository, which can easily facilitate the recovery of data whenever required. Similar technology is the 'Data warehousing', wherein correct, "cleaned" and timely data is stored in a standardized, structured, consistent and integrated manner, which is extracted from various operational systems in an organization and helps in providing an enterprise-wide perspective on the problem in hand.

### ***3.4 Deep Learning***

The deeper a fraud gets into the system of an organization, the more difficult it is to identify its origin. 'Deep learning' variant of AI can spot and recognize relationships and similarities between the data from the organization as well as from the unstructured data on the social media. Events that do not conform to an expected pattern in a data set can be detected and worked upon further for anomaly detection. This system is also equipped to improve the range of detection by uncovering new patterns. It is also possible with this technology to prioritize the cases where anomaly is detected in the new patterns and thereby reducing the probability of a similar case, which allows to speed up the whole process of fraud detection at an early stage. This application would be particularly helpful in conducting of forensic audits of banks, as it has been seen in many cases that the fraud perpetrators engage in deploying similar fraud tactics in conning different banks at the same time. Deep learning provides an innovative solution to problems of corrupted data, where the criminal may change the file format and may also add the malicious content, which can destroy the evidence.<sup>18</sup>

### ***3.5 Stages to undergo***

AI techniques are still gaining ground in accounting and auditing and thus will take time for forensic accounting also. Talking about the application of AI in auditing, Wen<sup>19</sup> is of the opinion that there are three stages of application of AI- early application stage, mid-term application stage and the peak stage. The early application stage may witness the risk of unemployment for the potential and new incumbents in the industry, but still there would be no parallel to their professional audit expertise and judgement including the issuing of audit report, though the basic audit work would be done by AI technology. In the mid-term application stage, AI itself would bring new challenges which would create newer jobs in the industry, for example, the job of audit data analyst. According to his assessment, the peak period would see the integration and application of multi-domain artificial intelligence technologies and thus, only those who hold these types of expertise in audit rules defining and developing integrated technologies will be retained by the industry. The profession of forensic accounting and auditing is expected to undergo the similar phases.



In a cross-sectional case-based field study conducted by Vasarhelyi and Romero<sup>20</sup>, the state of technology adoption by audit teams was explored. They analyzed four audit engagements in a large audit firm. These audit engagements were from insurance sector, banking sector, manufacturing, and chemical company. They all had their ERP (Enterprise Resource Planning) systems in place. This facilitated the work of audit teams as all the data required was present in the same source and more consistency was being reflected in the data. In the insurance company and the banking company, IT team was supporting the works of auditors by checking internal controls before start of the audit. In the chemical company, auditors were having expertise with the audit software and thus didn't request for the support of IT. However, the manufacturing company had changed its ERP system, and thus the forensic team was involved. The findings revealed that in three out of the four firms studied, the forensic team made use of AI.

#### **IV. LIMITATIONS OF AI IN FORENSIC ACCOUNTING**

Stancheva<sup>21</sup> found that AI is not foolproof and is susceptible to some new forms of errors and frauds. False alarms, missed frauds and technical risks are some of the limitations attached with the use of AI in forensic accounting. It is not possible to design any system with hundred percent accuracy, and it is the suspicious cases which are highlighted by the system which need to be probed further to classify them as fraudulent. There is huge cost involved in examining all such transactions, and the cost involved may outweigh the benefit associated with it. False alarms may prove detrimental to valuable customer relations, if any innocent customer is falsely implicated.

##### ***4.1 Element of Error***

Though AI can provide good assistance in terms of enhancing the quality of decision making by the forensic accountant, it cannot substitute the decision maker completely.<sup>22</sup> Because of the lack of ability of AI in making audit judgements, communication and observation and to guarantee information security, it cannot completely replace the auditor.<sup>23</sup> Financial robots cannot have the features present in a human forensic accountant.<sup>24</sup> The Probabilistic ML methods, which make use of probability theory in making predictions, always have an element of error in their results. Although the minimization of error can be achieved by using larger datasets to train the models, this might not be always possible especially for smaller organizations.

##### ***4.2 Costly affair***

Developing a technology takes a whole lot of time, energy and efforts, the cost of which may actually outweigh the benefits associated with it. It has been observed that there hardly are the cases of frauds

which are identical to each other, that's why the development of technology to fight frauds may not be a worthwhile proposition itself, as the system may not be able to learn from the experience. The decisions offered by technology may have a trace of solution only, which may not be a satisfactory explanation of the decision. Then, the technology might not be aware of its limited scope and limitations. The applications so designed can support the decision making of an experienced user only, replacement of human element is completely ruled out. Concerns have also been raised over the continuous use of AI in decision making, for it adversely affects the auditors' skillset.<sup>25</sup> The forensic auditors' skillset gets refined and better with completion of each engagement, for each case is very different. The basic elements could be same in every case, but a newer approach is called for success. This kind of expertise is difficult to be mechanized.

#### ***4.3 Assistance Required***

The use of AI in the forensic accounting largely depends upon the various aspects of an organization like its culture, practices, employees' technological competencies and aptitude to use the technology. There could be various ways to integrate AI for the FA work, one of which could be the building a support system in form of an IT team, who can assist the auditors in understanding the usage and application of tools. The IT team should be able to identify the requirements of the auditor, and then only they can facilitate the adoption of requisite technology. It is highly likely that wherever the organization is already using the technology for internal auditing and systems are largely automated, the use of AI in carrying out forensic accounting can become feasible. Whenever the use of AI tools is to be made by the auditor, his salient beliefs and attitude for adopting of tools and technology, as also the perceptions about its characteristics shape his ultimate choice of technology adoption.<sup>26</sup> If his attitude, belief and perceptions make him exercise the choice of non-adoption of technology, use of mediator becomes necessary, who can provide the requisite suggestions, assistance and feedback.

## **V. CONCLUSION**

There is increased funding for empowering the forensic accountants and increasing awareness towards this profession, especially in developing countries, by the United Nations, the World Bank and other international fund agencies. The AICPA issued new professional standards for its members who perform forensic accounting services, applicable for the engagements accepted on or after Jan 1, 2020. The other professional bodies of accounting in various countries are likely to follow soon. The Institute of Chartered Accountants of India (ICAI) has also issued standards for forensic audit, called Forensic auditing and Investigation standards(FAIS) which will be mandatory on members of ICAI for all forensic engagements. However, these are not mandatory for non-members, as these have not

been made compulsory by the government as yet and it is not necessary to have any professional qualification to render the forensic accounting services presently.

Worldwide, in many developing countries like India, the developments in forensic accounting are hindered by a number of challenges like investment by foreign companies which sometimes make it difficult to get hands on evidences, involvement of political leaders, preference of companies for settlements outside the courts, low awareness about the discipline, fewer accountants with requisite skills and no framework or guidelines for the application of forensic accounting and auditing. The scenario becomes even more complicated for the forensic accountant, when in the corporate set up, the data is stored at offsite locations across places or across the globe due to advances in cloud technology. With the increased use of sophisticated technology all the time by the fraudsters, it becomes highly critical for the forensic accountants to use AI technologies to deliver results in timely manner. Risk mitigation and fraud prevention in the present times has more focus on digital metadata, wherein forensic accountants are required to make use of robust IT techniques and tools. Use of experiential learning methods is required to teach the forensic accountants, so as to simulate real forensic accounting add technical, theoretical and ethical dimensions.

The integration of AI in forensic audits yield lots of benefits in terms of savings in manpower, reduced timelines, reduced errors and improved data analytics. The biggest advantage arises in case of ongoing frauds as the time required to identify the fraud and its causes is reduced significantly with the use of AI. The clerical errors, typing errors and formula applications errors get minimized. In addition, the various kind of anomalies and inconsistencies in the data set can also be identified with the use of AI, which helps to locate the human errors. With the advent of ML and NLP, AI platforms can be conveniently customized to individual organizational systems and requirements without doing specific programming. Moreover, AI enables summarizing and presentation of large volumes of data in a user-friendly manner to report the findings, which results in improved data analytics in terms of timeliness, accuracy and understandability. The requirement of the hour is that forensic accountants and auditors should have access to right technology knowledge, together with deep understanding of the business conditions surrounding the data. The industry needs to recognize the importance of using AI to make better business decisions and ensure better risk management and compliance.

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## **EMPOWERING FINANCIAL INCLUSION: THE VITAL ROLE OF FINANCIAL LITERACY**

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### **ABSTRACT**

*The Government of India is taking many efforts to promote financial inclusion as national mission of the country. Financial Literacy impacts the financial inclusion in the country. A strong financial system is the need of the hour. Every section of the society should get the benefits of financial services. Hence, people should be educated about technology change in finances as well as other methods to improve their standard of living. This paper focuses on overview of financial literacy and financial inclusion and various initiative taken under financial literacy to enhance financial inclusion in country. Many initiative are taken by government to foster financial literacy in rural areas as well as boost the financial inclusion index. Current Financial Inclusion Index is 60.1 as of March 2023.*

**Keywords:** Financial Literacy, Financial Inclusion, Financial Initiatives

### **I.INTRODUCTION:**

Every person should have hassle free access to financial services for development of the country. In India, to foster growth and to empower people major focus is given to financial inclusion and financial literacy. To ensure security to people India have recently widened the scope for financial literacy in turn raising financial inclusion. Government of India has launched a number of programs to encourage financial literacy among citizens. The Reserve Bank of India has launched many programs to increase financial literacy level in India. As per the survey of World Bank 1.2 Billion adults worldwide have gotten access to account till 2017. Financial Inclusion is an International policy agenda and can be achieved through financially Literate people, who can make informed financial decisions and improve individual's well-being (Dr. Muhammad Siddiqi and Dr. Salma Imtiaz, 2022). The scope of financial inclusion is widened than before but still many people face problems to access financial services. According to reports of RBI, Financial Inclusion Index (FI Index) for March 2023 stands at 60.1 as against 56.4 in March 2022. FI- Index includes information on factors such as investment, banking insurance and postal services based on three dimensions i.e., Quality, Access and Usage.

## **II. OBJECTIVES**

1. To study the concept of Financial literacy and Financial Inclusion In India
2. To enumerate various measure taken to promote financial inclusion.
3. To Study the role of financial Literacy to promote financial inclusion

## **III. RESEARCH METHODOLOGY:**

The study is carried out using secondary sources. For study purpose various articles, paper, reports, surveys, journals are referred as primary source for research. Information is collected from journal papers that helped to overview the steps taken to increase financial literacy.

## **IV. LITERATURE REVIEW:**

Dr. Supravat Bagli and Papita Dutta, mentioned in their study about achievement of Indian States regarding financial inclusion. They studied about applying the methodology of Rotated Principal Component analysis. It concluded that mass financial literacy and awareness among marginalized section of society is necessary.

As per World Bank Universal Financial Access 2020, in 2014, around 2 billion adults lacked access to a transaction account and were excluded from financial system. The UFA goal envisions that by 2020 adults globally will be able to have access to transaction amount to store, send and receive payments.

According to Dr. Jatan Kunwar Jain, there are many challenges and issue to financial inclusion in India. It need to be equitably distributed to attain economic growth. Progress of financial inclusion since the launch indicates that banks are developing in opening of outlets, deploying BC's, opening of BSBD accounts and grant of credit through KCCs and GCCs.

Peterson K. Ozili, did a review of recent studies of Financial Inclusion from all regions of the world. He found that financial inclusion is affected by level of financial innovation, poverty levels, stability of financial sector, state of economy, financial literacy and regulatory framework.

Sonu Garg and Dr. Parul Agarwal examined financial inclusion and its importance for economic growth of country. It also focused on approaches taken for financial inclusion by Government. Bank should use mobile banking services to deliver banking and financial services to the customer.



## V. THEORETICAL FRAMEWORK

### FINANCIAL LITERACY

According to Definition of Indian Census, Literacy is defined as “acquiring the skills of reading, writing and understanding” . Financial Literacy refers to the capacity to handle investment, budgeting, management and personal finance. It comprise of principles based on time value of money, compound interest, managing debt and financial planning it helps individual to be self-reliant and achieve financial stability. One can improve financial literacy by studying factors like creating budget, track expenses, retirement planning and strategy to clear debts. Financial literacy requires experience to manage personal finances for savings, real estate, tax planning, retirement, budgeting. It is an individual’s perception and usage towards money. It enables a person to make wise decision related to their income, expenses and liabilities.

Five principles every person should follow are earn, save and invest, protect, spend and borrow that helps to enlighten financial knowledge. The Reserve bank of India has selected “Go Digital, Go secure” as this year’s theme of Financial literacy. According to survey conducted by Global Financial Literacy Excellence Centre, 24% of Indian Adult population is literate. As compared to other countries India is the lowest. According to the reports published by National Survey of India, The literacy Rate of India in 2023 is 77.7 percent.

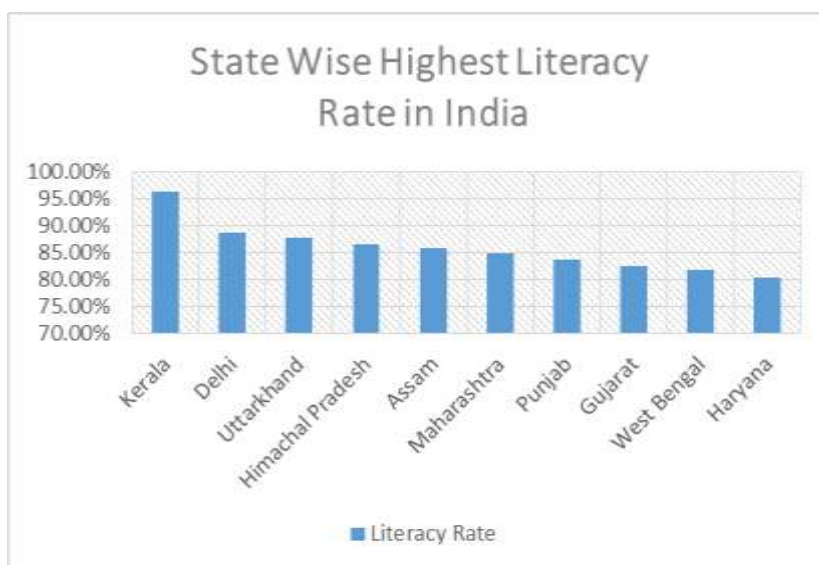
	Fig. (as per 2023)
Literacy Rate of India	77.7%
Male	84.7%
Female	70.3%

Source: National Survey of India

#### State- Wise Highest Literacy Rate in India:

State	Literacy Rate
Kerala	96.2%
Delhi	88.7%
Uttarakhand	87.6%
Himachal Pradesh	86.6%
Assam	85.9%
Maharashtra	84.8%
Punjab	83.7%
Gujarat	82.4%
West Bengal	81.69%
Haryana	80.4%

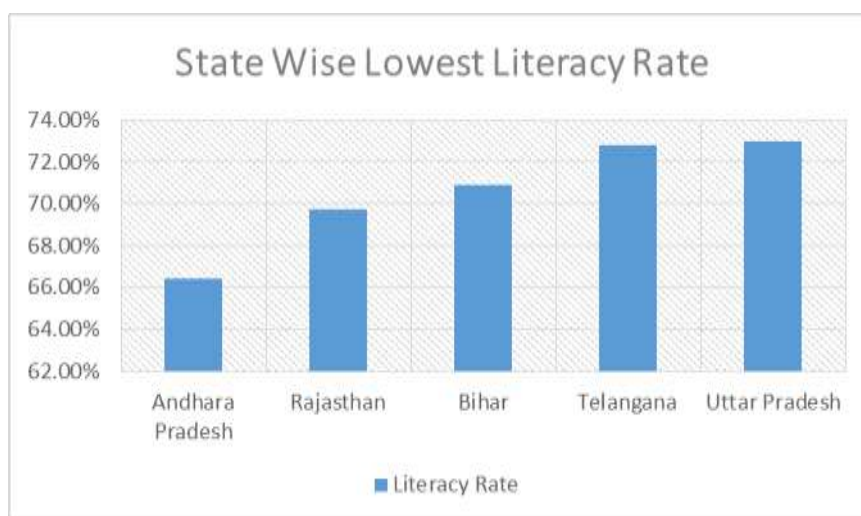
Source: The Global Statistics



**State-Wise Lowest Literacy Rate In India:**

State	Literacy Rate
Andhra Pradesh	66.4%
Rajasthan	69.7%
Bihar	70.9%
Telangana	72.8%
Uttar Pradesh	73%

Source: The Global Statistics



As per report of National Strategy for Financial Education (2020-2025), the term financial education and Financial Literacy are not same. People achieve Financial Literacy through the process of financial Education. It empowers users to make sound financial decisions which result in financial well-being.



### **Importance of financial Literacy in India:**

Financial Literacy is the set of skills and knowledge that one possess to make effective decisions of their finances. A person is said to be literate when he gains information. Hence it is important to be financially literate so that one can take wise decisions in following areas:

1. **Saving Habit:** Young people are unable to maintain balance between savings and consumptions. Investment is still a newer concept for many youngsters. Hence, saving habit is to be inculcated so as to help then in wise decision making.
2. **Develop Credit Discipline:** According to RBI 42% of people borrow money from informal sources like commission agents and money lenders they charge high rate of interest. Proper information about sources will help an individual to take rational decision for borrowing money from appropriate sources.
3. **Manage risk:** Many people in metro cities are still not very sure about their investments and future planning. They still lack knowledge about risk management. Large section of them still do not have cover for their life and health. Hence proper information on insurance is to be given to people for managing their savings.
4. **Participate in financial market:** by gaining proper knowledge people will dare to participate in financial market. Fear of loss pulls them back. Hence, people should be given proper knowledge so as to help them participate and make wise investment decisions
5. **Improve usage of Digital Financial Services:** Due to increase in digital transformation one should possess knowledge about digital financial services to make their transactions easy and quick.

**Recent Initiatives towards Financial Literacy:**

1. National Strategy for Financial Education Report 2020-2025
2. Project Financial Literacy

**Government has initiated various programs to increase financial literacy in following ways:**

**1. Financial Literacy Campaigns:**

Government arranges campaigns to increase awareness and make people aware about using money wisely. These include advertisements, workshops. Seminars etc.

**2. School Curriculum Integration:**

Government has initiated to inculcate topics on financial literacy in school curriculum in order make students aware about financial services and its usage right in their early days.

**3. National Strategies**

National strategies have been implemented by government to set specific goals and actions to improve financial knowledge and skills.

**4. Financial Education programs:**

Government arranges many seminars, workshops and courses in collaboration with financial institutions to offer financial education.

**5. Regulatory Authorities:**

Many Countries establish various regulatory authorities to promote financial literacy.

**6. Collaboration with finance industry:**

Government tie up with various financial institutions to deliver financial education programs that in turn helps to get affordable financial products.

**7. Financial Inclusion Initiatives:**

These includes having basic and formal knowledge about financial system to enhance financial inclusion in the country.

**FINANCIAL INCLUSION:**

Financial Inclusion means individual and business have access to affordable financial that all people and business have access to and are empowered to use- affordable, responsible, financial services that meet their needs. These services include payments, savings, credit and insurance. According to Mckinsey, everyone can access financial services that can help build wealth, including savings, credit, loans, equity and insurance. As per World Bank, Financial Inclusion facilitates day to day living and help families and business plan for everything from long term goals to unexpected emergencies.

The concept of financial inclusion is gaining more popularity in India as government is initiating various programs like digital banking and cashless transactions. According to the report by Google and Boston Consulting Group, the number of digital payments in India is expected to reach 1 trillion by 2023. Financial Inclusion Index (FI Index) is an index released by RBI to access the level of financial inclusion across the nation. It includes 3A's i.e. Accessibility, Availability, affordability of financial products and services for general population of India. It is calculated on the basis of three parameters – Access (35%), Usage (45%), and Quality (20%). The value of FI Index as of March 2023 is 60.1 as against 56.4 in March 2022.

### Financial Inclusion in India:

In India, the concept of financial Inclusion was first introduced in 2005 by Reserve Bank of India, It was started with the motive to reach out to each and every part of the society. In 2008, Khan Committee Report was released that discussed about rural credit and microfinance. It laid emphasis on opening bank account so as to access easy financial service. The Indian Government initiated “Pradhan Mantri Jan Dhan Yojana” with the sole purpose to encourage poor people to open bank accounts and get access to reasonable financial services formally.

According to Outlook India, The Jan Dhan, Aadhaar and Mobile (JAM) eco-system has brought about a major shift in the field of financial inclusion and several initiatives have been taken to universalize digital payment in a convenient, safe, secure, transparent and affordable manner.” The National Strategy for financial inclusion (2019-2024) aims to provide access to financial services in affordable manner – banking for the unbanked and insurance for the uninsured. The two important motive of it is to promote financial literacy and consumer protection. As per World Bank’s Global Findex Data Base, till 2021 “78% Indian Adults had a Bank account”

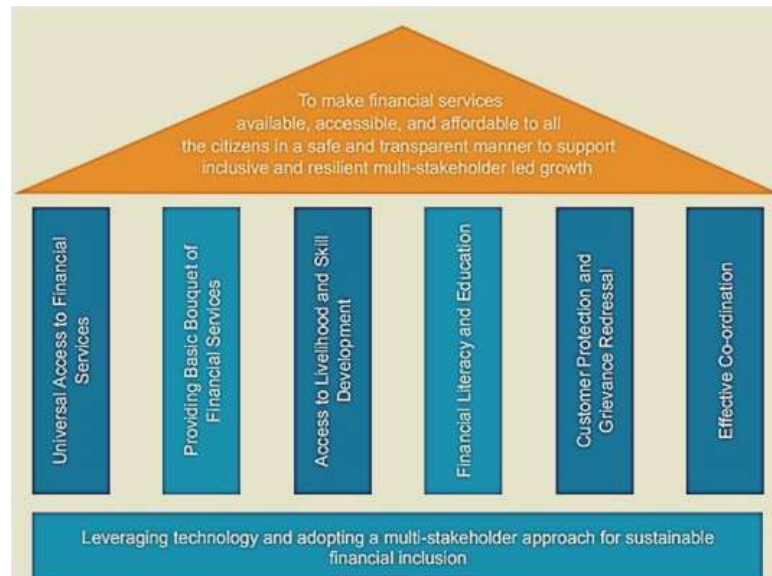
### IMF Financial Service Access Data 2023 – India

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Number of ATMs per 100,000 adults	12.75	17.62	19.50	21.00	21.78	21.40	20.69	21.23	21.21	24.64
Number of borrowers from all microfinance institutions per 1,000 adults	30.86	31.90	34.40	28.59	25.77	29.41	31.23	31.23	29.92	31.74
Number of borrowers from credit unions and credit cooperatives per 1,000 adults	71.87	72.58	71.23	64.20	76.95	75.23	75.37	79.07	75.51	73.33
Number of all microfinance institution branches per 100,000 adults	1.08	1.10	1.03	0.94	1.03	1.18	1.21	1.39	1.41	1.60
Number of commercial bank branches per 100,000 adults	11.74	12.75	13.43	14.10	14.35	14.30	14.42	14.57	14.42	14.31
Number of credit union and credit cooperative branches per 100,000 adults	13.39	13.05	12.94	12.76	12.81	12.61	12.52	12.29	12.78	12.50
Number of deposit accounts with commercial banks per 1,000 adults	1,150.12	1,324.25	1,525.19	1,710.73	1,862.98	1,915.00	1,943.22	2,005.58	2,023.67	2,130.48
Number of household sector deposit accounts with commercial banks per 1,000 adults	999.36	1,203.74	1,373.05	1,546.95	1,715.32	1,780.48	1,899.23	1,958.13	1,974.23	2,079.82
Number of deposit accounts with credit unions and credit cooperatives per 1,000 adults	88.57	88.85	88.28	88.73	217.44	218.81	216.65	216.67	218.35	215.04
Number of depositors with credit unions and credit cooperatives per 1,000 adults					123.27	124.97	124.19	130.40	132.78	133.77
Number of loan accounts with all microfinance institutions per 1,000 adults	33.20	35.23	39.77	31.87	28.98	36.54	38.20	37.87	36.07	36.64
Number of loan accounts with commercial banks per 1,000 adults	141.18	149.78	152.78	168.75	175.81	197.34	228.80	264.13	285.22	303.10
Number of household sector loan accounts with commercial banks per 1,000 adults	137.47	146.16	148.82	164.68	171.11	189.29	221.25	255.58	275.55	292.80
Number of active mobile money accounts per 1,000 adults							827.64	1,155.57	1,171.50	339.71
Number of registered mobile money accounts per 1,000 adults	4.40	13.12	72.79	220.17	439.14	535.71	1,249.12	1,650.86	1,917.04	1,151.11

Source: data.imf.org

**Strategic objective for financial inclusion:**

RBI has identifies six strategic objective of national strategy for financial inclusion:



Source: National Strategy for Financial Inclusion report.

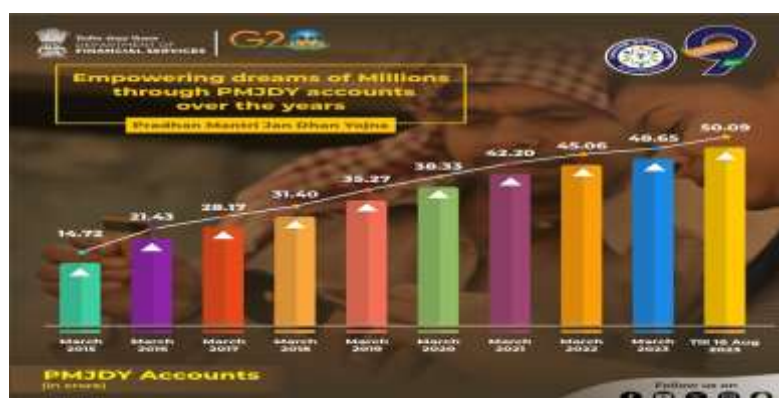
**Objectives of Financial Inclusion:**

1. It helps to secure financial services and products at affordable prices such as deposits, loans, etc
2. It help to establish proper financial institution to cater poor people
3. It help to maintain financial sustainability
4. It tends to increase awareness and literacy among people.
5. It intends to bring mobile banking services to poorest people of the nation

**Initiatives for Financial Inclusion in India:**

**1. Pradhan Mantri Jan Dhan Yojana:**

It is the scheme launched by Government of India in August 2014, to provide easy access to financial services such as credit, savings, deposits, pension and remittances to the needy section of the society. PMJDY offers benefits such as o minimum balance required, overdraft facility is provided of Rs. 10000 to one account in a family, Accidental cover of Rs. 2 lakh under RuPay scheme.



PMJDY Accounts

Source: PIB Report

## 2. Atal Pension Yojana

It is a scheme that focuses on helping the working poor have a steady income after retirement. It was launched on 9<sup>th</sup> May 2015. In the event of premature death, government gives an option to spouse of the holder to pay the remaining amount till the policy period and till the holder attains age of 60 years. The spouse is entitled to receive the same amount of pension as the holder would have received.

## 3. Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY):

The PMJJBY is available to people in the age group of 18 to 50 years having a bank account who give their consent to join /enable auto debit. The life cover of Rs. 2 Lakh is for one year period. The risk coverage is Rs. 2 lakh in case of death of insured.

## 4. Pradhan Mantri Mudra Yojana

It was started by government with the aim of financing of small business enterprises in manufacturing, trading and service sector. It was launched on 8<sup>th</sup> April 2015. Under this scheme loan up to Rs. 50000 is given under 'Shishu', between 50000 to 5 Lakhs under 'Kishore', 5 Lakhs to 10 Lakhs under 'Tarun'.

## 5. Pradhan Mantri Suraksha Bima Yojana (PMSBY):

This scheme is available to people in the age group of 18 to 70 years with a bank account. The risk coverage under the scheme is Rs. 2 Lakh for accidental death and full disability.

## 6. Stand Up India Scheme:

Government of India launched the Stand-up India scheme on 5<sup>th</sup> April 2016. This scheme offers loan of Rs. 10Lakh to Rs. 1 Crores to at least one SC/ ST, and /or women borrower for setting up of green

field project. It is started with the motive to promote entrepreneurship in the part of society that lacks advice, mentorship and adequate credit.

**Details of SC/ST and Women beneficiaries as on March 2023.**

SC		ST		Women		Total	
No. of A/Cs	Sanc. Amount	No. of A/Cs	Sanc. Amount	No. of A/Cs	Sanc. Amount	No. of A/Cs	Sanc. Amount
26889	5625.50	8960	1932.50	144787	33152.43	180636	40710.43

Source: Data from PIB report

**7. Pradhan Mantri Vaya Vandana Yojana:**

This scheme is launched by Government of India for people aged 60 and above for fall in interest rate due to market uncertainties. It is implemented through Life Insurance Corporation of India mode of pension payment under this scheme is on monthly, quarterly, half yearly and annually.

**8. Digitalisation of monetary transactions:**

The government of India intends to carry out digital financial transactions with the help of Unified Payment Interface (UPI), Unstructured Supplementary Service Data (USSD), Immediate Payment Service (IMPS), National Electronic Fund Transfer (NEFT), Aadhaar Pay, BHIM Pay.

**Digital Financial Inclusion:**

CGAP defines "Digital Financial Inclusion as digital access to and use of formal financial services by excluded and underserved population. The three main components of digital financial services are a digital transactional platform, retail agents and use of device by agents and customers. Jim Yong Kim (President World Bank group) studied "Universal access to financial services is within reach – thanks to new technologies, transformative business models and ambitious reforms. As early as 2020, such instruments as e-money accounts, along with debit cards and low cost regular bank accounts can significantly increase financial access for those who are now excluded"

BRICS Report, RBI explains digital financial inclusion as the use of digital financial services to further the goal of financial inclusion. The Government of India have broadened the scope digital financial transactions with the help of Unified Payment Interface (UPI), Unstructured Supplementary Service Data (USSD), Immediate Payment Service (IMPS), Aadhaar Pay, debit cards, BHIM and credit cards. Most popular e-wallet in India is Paytm, Free charge, MobiWik, Vodafone M-Pesa, Etc.



The Digital Village Programme is an initiative by Reserve Bank of India to transform 75 Villages into Digital payment enabled villages. It means adoption of these villages by payment system operators. Akodara Village of Gujarat is the First digital village of India, ICICI Bank in 2015 adopted it and made cashless by using digital technology.

### **Role of Financial Literacy in Financial Inclusion**

Financial Literacy makes a difference not only in the quality of life that individuals can afford but also the integrity and quality of markets. It can provide individuals with basic tools for budgeting, help them to acquire the discipline to save and thus ensure that they can enjoy a dignified life after retirement. (Ramakrishnan Ramachandran, 2012). The National Strategy for Financial Education (2020-2025), recommended 5 C's approach for financial education that includes Content in the curriculum , Capacity in providing financial services, Community led model for financial literacy, Communication Strategy and Collaboration among stakeholder.

## **VI. CONCLUSION**

Financial Inclusion is an important topic because it helps increase the economic growth, promote financial stability. Business and individuals have opportunity to participate in economy by increasing access to financial services and promoting financial literacy. According to report of Reserve Bank of India, only 35% adults in India have basic financial literacy and around 53% have an account at Formal Financial Institution. Various Initiatives are taken by Government for financial inclusion. The national mission launched by Government of India in 2015 was Pradhan Mantri Jan Dhan Yojana.

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**THE AWARENESS LEVEL OF INDIAN POST OFFICE SCHEMES AMONG  
CUSTOMER AT BENGALURU RURAL DISTRICT**

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**ABSTRACT**

*The desire of people and institutions, as well as their attitudes and views, are often related to the investment in postal services. The development of a savings mentality among rural residents is the primary purpose of this program, which aims to remove barriers to that end. The ability to save money has emerged as an essential instrument in the fight against poverty. The purpose of this research is to determine the level of knowledge and understanding that investors have about the post office savings program. In this research, the characteristics of the population that is being utilized to conduct the study are described. Its primary emphasis is on elaborating on the characteristics of a particular demographic subgroup. As a result, this research is more descriptive than anything else. The primary data for this research study was gathered via conducting an in-person survey, developing a comprehensive questionnaire, and planning out an interview schedule. The sampling strategy known as probability, which may include both basic random sampling and stratified sampling, is now being used. The sample size for the research conducted is around 163 total samples. In conclusion, this research came to the conclusion that the majority of people do not have a good understanding of the savings programs offered by the post office. However, if the government were to make an effort to educate the general public on postal savings programs, it is possible that people's propensity to save money would improve thanks to these programs.*

**Key Words:** Investment, savings,. Awareness, Income, Post office

**I. INTRODUCTION**

Both saving money and investing it are essential activities for the expansion and development of any economy. A thrifty mentality is necessary for every Indian, regardless matter whether they live in a city or a countryside. Post office savings plans are one of the ways in which individuals may put aside some of the money they have earned. Those residents of India who do not have access to a bank in their region may take use of the services provided by the Indian postal system to deposit money in postal accounts. The desire of people and institutions, as well as their attitudes and views, are often

related to the investment in postal services. The development of a savings mentality among rural residents is the primary purpose of this program, which aims to remove barriers to that end. The ability to save money has emerged as an essential instrument in the fight against poverty. People are unable to maintain their day-to-day lives without funds. The amount of money someone can save is directly proportional to their lifestyle. The accumulation of personal savings inside a country is a significant factor in the rate of economic growth experienced by less developed nations. Our national economy may need some help, therefore the post office has come up with a number of savings programs that customers of the post office can participate in. Because India is mostly made up of villages, its population is unable to be informed about the Post Office Saving Schemes.

The importance of savings as a significant instrument for alleviating poverty is becoming more widely recognized. Postal savings funds play an important part in the financing of public debt, and in a number of countries, the funds are intermediated via a range of policy-based financial organizations with developmental aims, returning the money to the direct benefits of the community of savers who contributed them. The difference between what is earned and what is spent on consumption is savings. The purpose of savings is to provide financial security against unforeseen events and to improve one's level of life. Numerous financial organizations, including as commercial banks, cooperative banks, the post office savings bank, and the public limited company of the life insurance corporation, provide a wide variety of investment choices available to its customers. The Post Office Savings Bank is perhaps the most important of the institutions that have been discussed so far. It offers a huge range of advantages to the investors, and it is the most important financial establishment in the nation.

Although they first began as a side company to provide additional revenue, the Post Office's financial services have now grown into a thriving enterprise in their own right. In addition to their primary responsibility of delivering mail, post offices are also responsible for a vast array of agency services. These services include Postal Life Insurance, Money Orders, Postal Orders, and Savings Banks.

Because of this, the Postal Service is able to generate money that accounts for around 45 percent of its total budget revenue. The purpose of the establishment of SB was to provide banking services to millions of low-income and middle-class individuals who lived in the most remote areas of the country, to enable these individuals to save money, to enable them to accumulate savings, and to enable the government to meet its administrative needs and requirements. It was also intended to inspire more frugal behavior. India Post is dedicated to provide essential postal services throughout the nation at prices that are accessible to the general public.

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## II. LITERATURE REVIEW

According to Erwin Normany and others (2009), it is highly difficult for post offices to manually sift through letters; hence, this issue may be handled by using a letter sorting machine. Its goal is to build a machine that will make the job of post offices more efficient and effective, and that is its current focus.

R Ganapathi and S. AnbuMalar (2010) conduct research on the attitudes and views of investors with regard to the many different deposit programs offered by the Post Office. The schemes are intended to encourage increased habits of thriftiness and savings among investors and are designed to do so. They are able to effectively compete in the market because to the tax-saving strategies, safety, and high interest rates that they provide.

In his article, Subrahmanian (2010) emphasizes how critical it is for workers in the Department of Post to have appropriate training. Training is unavoidable since it helps workers improve their knowledge and skill levels. This helps individuals become better prepared to take advantage of new possibilities and challenges as they arise. Training has a primary emphasis on enhancing quality movement in order to facilitate continual progress. The India Post Corporation has adopted. To improve the overall quality and efficiency of the training programs, the AIM model proposes several assessment, intervention, and measurement strategies. A robust training approach has been implemented by India Post.

In their research study, Rajeshwari and K.J. sunmista (2011) compare and contrast the ways in which consumers in the districts of Virudhunagar and Madurai perceive the quality of the services provided by the Post Office. The quality of customer service provided by the Post Office may be evaluated using SERVPERF dimensions. Regarding the services provided by the Post Office, customers are more likely to have a favorable opinion than a negative one. The respondents are content with the services and strategies that they provide.

In her research, Ritika Agarwal (2012) draws conclusions about the many elements that concentrate on encouraging investors to invest among the various savings plans offered by post offices. It states that the educational qualifications of the investors as well as the vocations that they hold has a big influence on the saving pattern as well as to pick among the many investment plans and services that are offered with post offices. According to the findings of the research, investments in senior citizen programs have a very low preference among customers, and the study authors recommend expanding the communication network of post offices instead. The variety of money-saving options offered by

post offices is unmatched. The postal services are looking forward to the most to the revolution in information technology.

In their article, Moez and Jamel-Eddine Gharbi (2012) study the customer satisfaction in delivering services by the Postal department in Tunisian cities pertaining to mail services. Secondly, they study the loyalty of consumers towards the services provided by the post. The study comes to the conclusion that the pleasure of consumers with the services they get from the post has a beneficial influence on the loyalty of the customers.

### III. OBJECTIVE OF THE STUDY

- To identify awareness level of investors about post office savings scheme at Bengaluru rural Districts

### IV. RESEARCH METHODOLOGY

In this research, the characteristics of the population that is being utilized to conduct the study are described. Its primary emphasis is on elaborating on the characteristics of a particular demographic subgroup. As a result, this research is more descriptive than anything else. The primary data for this research study was gathered via conducting an in-person survey, developing a comprehensive questionnaire, and planning out an interview schedule. The sampling strategy known as probability, which may include both basic random sampling and stratified sampling, is now being used. The sample size for the research conducted is around 163 total samples. The Chi-Square test used to analyse the data.

### V. DATA ANALYSIS AND INTERPRETATION

#### HYPOTHESIS 1

H<sub>0</sub>: There is no relationship between gender of the investor and level of awareness among investors.

H<sub>a</sub>: There is relationship between gender of the investor and level of awareness among investors.

**Table 1 Pearson Chi-Square Values**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.947 <sup>a</sup>	5	.352
Likelihood Ratio	6.842	5	.175
N of Valid Cases	163		

According to the data shown in Table 1, the P-value associated with the Pearson Chi-Square test is more than 0.05 (P>0.05). Therefore, the null hypothesis is deemed to be accepted, whereas the

alternative hypothesis is deemed to be rejected. Hence, there exists no substantial correlation between the gender of the investor and their level of knowledge.

**HYPOTHESIS 2**

H<sub>0</sub>: There is no relationship between age of the investor and level of awareness among investors.

H<sub>a</sub>: There is relationship between age of the investor and level of awareness among investors.

**Table 2 Pearson Chi-Square Values**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.566 <sup>a</sup>	20	.562
Likelihood Ratio	19.895	20	.542
N of Valid Cases	163		

According to the data shown in the table 2, the P-value of the Pearson Chi-Square test is more than 0.05 (P>0.05). Therefore, the null hypothesis is accepted, whereas the alternative hypothesis is rejected. Hence, a lack of substantial correlation exists between the age of the investor and their level of knowledge.

**HYPOTHESIS 3**

H<sub>0</sub>: There is no relationship between educational qualification of the investor and level of awareness among investors.

H<sub>a</sub>: There is relationship between educational qualification of the investor and level of awareness among investors.

**Table 3 Pearson Chi-Square Values**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.856 <sup>a</sup>	15	.369
Likelihood Ratio	18.752	15	.175
N of Valid Cases	163		

According to the data shown in the table 3, the P-value of the Pearson Chi-Square test above the significance level of 0.05 (P>0.05). Therefore, the null hypothesis is accepted, whereas the alternative hypothesis is rejected. Hence, a lack of substantial correlation exists between the age of the investor and their level of knowledge.

**HYPOTHESIS 4**

H<sub>0</sub>: There is no relationship between occupation of the investor and level of awareness among investors.

H<sub>a</sub>: There is relationship between occupation of the investor and level of awareness among investors.

**Table 4 Pearson Chi-Square Values**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.952 <sup>a</sup>	20	.892
Likelihood Ratio	13.159	20	.910
N of Valid Cases	163		

According to the data shown in the table, the P-value associated with the Pearson Chi-Square test is more than 0.05 (P>0.05). Therefore, the null hypothesis is accepted, whereas the alternative hypothesis is rejected. Hence, a discernible correlation between the age of the investor and awareness is lacking.

**VI. CONCLUSION**

The efficacy of the post office saving initiative has been seen in the rural areas around Bangalore. The phenomenon has significantly influenced the growth of the savings propensity among the local population. The post office savings system offers several benefits and distinctive features in comparison to other savings schemes. The post office savings bank in India has provided a range of efficient savings programs, such as the post office monthly income scheme, post office time deposits, Kisan Vikas Patra, public provident fund, and national savings certificate, catering to diverse segments of the population. The majority of individuals expressed a preference for the post office monthly savings program among the options provided.

The factors contributing to the satisfaction of the schemes are the efficacy and satisfying nature of the scheme's returns. The research reveals a lack of awareness among individuals about post office savings programs. If the government were to undertake initiatives to educate the public about these postal schemes, it is likely that people's propensity to save would rise via engagement with post office savings schemes.



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**IMPACT OF UNIFIED PAYMENT INTERFACE (UPI) PAYMENT SYSTEM BY  
UNORGANIZED SECTOR**

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**ABSTRACT**

*Every day, hefty transactions take place in and around by unorganized sector. The medium of exchange popularly known as cash and most of the merchants believed that cash is the best source of payment which gives value for money. Even today, cash is the most trusted and loyalty payment mode for transactions across the world. In India, the policy approach to build cash-less economy is gaining momentum. India is moving towards becoming a cashless economy with the launch of Unified Payment Interface (UPI); with this new payment avenue and the emergence of Smart Phone Technology with the help of Artificial Intelligence, the unorganized sector is getting ample opportunities in gripping the customers with variety of payment channels present for their transactions. It is also believed by most of the merchants that; through e-payment channels, accurate account of their daily business can be maintained and not even a single penny is missing, just like in case of cash transaction in the form of inexpressible discount. The research paper completely concentrates on the application of Artificial Intelligence by means of Unified Payment Interface (UPI) to restraint the limitations of traditional payment system and adoption of new payment methodologies to gain an absolute account on their money. The aim of the paper is to know the impact of UPI based payment system on their sales and other applications backed by Artificial Intelligence as well as creating awareness among unorganized sector with reference to pros and cons of various payment methods and necessary precautions or safety measures to be taken into consideration.*

**I. INTRODUCTION**

Now-a-day's world is becoming digitalized in every field and one of the best example of this is various countries in the world are moving towards becoming a cashless society. A cashless society is the one which doesn't use cash for any of its transaction instead all the transactions are done digitally. There are various countries in the world which have more than 50% of their

transactions through cashless methods. Due to the Demonetization act already existing mobile payment applications came into the limelight like Paytm, Google pay, Phone Pe etc. Government of India is also encouraging various digital payment apps such as Aadhaar Payment app, UPI App, Bharat Interface for Money (BHIM) app along with private sector apps like Paytm, Mobikwik, Freecharge etc. Such new apps are beneficial to transfer funds across various parts of our country. Digital payments industry in India is growing on a rapid pace providing a highly attractive platform for foreign investors to invest in India

**WHAT IS DIGITAL PAYMENT** Digital Payment means when any goods or services are purchased through the use of various electronic modes of payments which means there is no use of physical cash or cheques in digital payment. Now-a-days people use Digital Payments more is because Digital payment methods are easier and more convenient and they also provide customers the flexibility to make the payment from anywhere at any time which proves as a good alternative to the traditional methods of payment and which fastens the transaction cycles.

#### **WHAT IS A DIGITAL WALLET**

An electronic device or online service that allows an individual to make electronic transactions is called a digital wallet. An individual's bank account can also be linked to the digital wallet. One in five customers in Asia are now using a digital wallet. Some of the popular digital wallets are PayTM, Freecharge, LIME, Jio Money, Airtel Money, State Bank Buddy, Citrus, Mobikwik, PayUMoney etc

#### **Various digital wallets apps in India.**

##### **PayTM:-**

Pay TM is an Indian e-commerce operator and Financial Technology company. Paytm was founded in August 2010 by its founder Mr. Vijay Shekhar Sharma. In 2014, the company launched its first Digital E-wallet known as Paytm Wallet. Paytm offers Digital wallet payment, mobile payments, online shopping, Paytm Payments Bank etc.

##### **Google Pay:-**

Google Pay also known as G Pay or Pay with Google it is also one type of Digital Wallet and online payment system developed by Google. The services of Android Pay and Google wallet merged in January 2018 and the name was changed to Google Pay.

**Phone Pe:-**

PhonePe or PhonePe Private Limited it is an Indian e-commerce payment service and digital wallet company. PhonePe was founded in the year 2015 by its founders, Mr.Sameer Nigam and Rahul Chari and it was the first payment app in India which was built on Unified Payments Interface i.e (UPI)

**Mobikwik:-**

MobiKwik is also another Indian company app which acts as a digital wallet, as a mobile payments system. MobiKwik is an app founded by Bipin Singh and Upasana Taku in the year 2009. Mobikwik also provides financial services such as providing loans, various insurances such as life insurance, accident insurance, fire insurance as well as mutual funds. In the year 2017, MobiKwik ,s biggest competitor was Paytm.

**UPI BHIM App:-**

BHIM stands for Bharat Interface for Money. BHIM App is developed by National Payments Corporation of India i.e (NPCI) and it is based on Unifies Payment Interface i.e (UPI). Our Prime Minister Shri Narendra Modiji had launched this app. BHIM App was launched on 30th December 2016 and is currently available in 20 languages. BHIM App accepts all Indian banks which works on UPI system and which is built over IMPS i.e Immediate Payment System which allows the user to transfer money to Bank accounts of any two parties. Using UPI system user can make transactions in an easy, quick and simple manner

**AMAZON:-**

Amazon or Amazon.com is an American e-commerce company based in Seattle. Amazon is considered as one of the big four technology based companies along with Apple, Microsoft, and Google. Amazon is a company which focuses on E-commerce, Digital streaming, Cloud Computing, and Artificial Intelligence. Amazon is considered to be world’s largest internet based company by its revenue.

**SCOPE FOR FURTHER RESEARCH & FUTURE OF DIGITAL PAYMENT IN INDIA**

Smartphone and mobile phone users, internet users as shown in the above projections are increasing with the increase in population in India. The above graph is compared between two years i.e 2015 and 2020. With greater access to internet and growth and development of infrastructure and greater usage of smart phones there is significant development of digital payments in India. India is witnessing exponential growth in Digital payment industry as India is considered as the second largest in the

world in case of mobile users with a Billion connections in the country. In India nearly 1.5 billion transactions take place every single day and most of these transactions are P2M transactions i.e person to merchants which means purchases like grocery, newspaper, mobile recharges, DTH recharges, ticket bookings, cab booking etc. Easrlier in the year 2015 all the transactions were cash transactions now it is estimated that by 2023 transactions in India will be more digitally and will rule the market with the increasing number of Smartphone and internet users.

## **II. OBJECTIVES OF THE STUDY**

- To study the impact of online payment applications on consumers
- To analyze the problems faced by the users while using online modes of payment.
- To know whether going cashless has helped the Indian economy.
- To study the growth of Digital Marketing
- To know the right way of writing proper content for the E-mailers.
- To study the role of digital marketing

## **.III. REVIEW OF LITERATURE**

**Mamta, Prof. Hariom Tyagi and Dr. Abhishek Shukla** (2016) The article entitled “The Study of Electronic Payment Systems”. This study aims to identify the issues and challenges of electronic payment system and offer some solutions to improve the e-payment quality. The successful implementation of electronic payment system depends on how the security and privacy dimensions perceived by consumers as well as sellers are popularly managed in turn would improve the market confidence in the system.

**According to Sujith T S, Julie C D** (2017) The article entitled “Opportunities and Challenges of E-Payment System in India”. This study aimed to identify the issues and challenges of electronic payment systems and offer some solutions to improve the e-payment system. E-Payment system not only provides more opportunities but many threats also. The study found that, the reach of mobile network, Internet and electricity is also expanding digital payments to remote areas. This will surely increase the number of digital payments.

**Sanghita Roy and Dr. Indrajit Sinha** (2014) The article entitled “Determinants of Customer’s Acceptance of Electronic Payment system in Indian Banking sector”. The objective of the study was

finding out the most popular electronic payment system among the various payment options. This study also analyzed the level of awareness and the usage of E-payment technologies

**Ashish Baghla** (2018) This research paper titled “A Study on the Future of Digital Payments in India” focused on the adoption of Digital payments in India. This paper identifies the problems or challenges faced by the people of India in adopting Digital modes of payment. One of the objectives of this study was to find out the attitude of the people towards the adoption of digital payment in India. The research methodology used in this research i.e the data is collected from both the primary and secondary sources, the primary has been collected through a questionnaire from 110 people.

**K. Suma Vally and Dr. K. Hema Divya** (2018) this research paper titled “A Study on Digital Payments in India with perspective of consumers adoption.” focuses on the analysis of the level of adoption of these digital payments by the consumers. The research methodology used that is the data collected is a primary data and is collected through a structured questionnaire and the results has been collected through 183 respondents. The research tool used to analyze the data is Chi-square technique. The main objective of this study was to verify the customer’s perception on Digital Payment with the concept of Digital banking in our country. This study also suggested that appropriate measures should be taken to create awareness about various technology and security of the usage of digital payments in India.

**Prof. Sana Khan and Ms. Shreya Jain** (2018) This research titled “A Study on Usage of E-payments for Sustainable Growth of Online Business” focuses on the on the frequency and the problems faced by consumers while using online payment methods. The researchers also examined the effect of e-payments contribution towards the sustainability of the business growth in India, these were the main objectives of this research paper.

**Priyanka. S. Kotecha** (2018) The research paper titled “An Empirical study of Mobile Wallets in India” focuses on the meaning of M-Wallet and highlights the advantages and disadvantages of M-Wallet in India. The researcher studied various categories in Mobile Wallets in India. The research methodology used for data analysis in this research is a conceptual study and also descriptive in nature.

**Dr Hem Shweta Rathore** (2016) The study titled “Adoption of Digital Wallet By Consumers” focuses on the factors which influence customers decision about using digital mode of payment for a particular transaction. The researcher also tried to analyze the various risks and challenges faced by the customers while using various digital wallets.

**Dr S. Manikandan and J.Mary Jayakodi** (2017) The research titled “An Empirical study on Consumers Adoption of Mobile Wallet with special reference to Chennai City” focuses on to explain the usage of mobile wallets and this paper also states the challenges faced by the users while using various mobile wallets which affects the decision of consumer adoption of mobile wallets.

**Rachna and Priyanka Singh** (2013) The research paper titled “Issues and Challenges of Electronic payment systems” aims to identify the issues and challenges faced while using electronic payment systems and this paper also offer some solutions to improve the quality of e-payment system. This paper stated some issues such as lack of security, lack of trust in such payment services by the consumers, lack of awareness by the consumers, online payment services are not feasible in rural areas of our country.

**N Ramya, D Sivasakthi and Dr. M Nandhini** (2017) The research paper titled “Cashless transactions: Modes, advantages and Disadvantages” focuses on to state the efforts by the RBI and the Government of India to promote the digital modes of payments and to achieve the goal of a Less cash society.

**IV. RESEARCH METHODOLOGY**

Descriptive research design is a powerful tools used by scientists and research to gather information about a particular group or phenomenon. This type of research provides a detailed and accurate picture of the characteristics and behaviors of a particular population or subject. Primary data is also known as the data collected for the first time through the field survey. Such data are collected with specific set of objectives to assess the current of any variable studied. 1. Interviews, 2. Questionnaire

**V. ANALYSIS & DISCUSSION**

**AGE OF RESPONDENTS**

<b>Age</b>	<b>No of respondents</b>	<b>Percentage</b>
18-20	21	42%
20-40	17	34%
40 above	12	24%
<b>Total</b>	100	100%

**INTERPRETATION** :As per the research report 42% of respondents are (18-20) age of persons with Digital marketing, 34% of respondents are (20-40) age persons with digital marketing and 24% of respondents are 40 above the age persons with digital marketing helpful .

**GENDER OF RESPONDENTS**

<b>Gender</b>	<b>No of respondents</b>	<b>Percentage</b>
Male	28	56%
Female	22	44%
<b>Total</b>	<b>50</b>	<b>100%</b>

**INTERPRETATION:** As per the research report 56% of respondents are male with Digital marketing and said digital marketing really helps their business and 44% of respondents are Female with digital marketing, they said Digital marketing is really helpful.

**HELPING THE BUSINESS OF DIGITAL MARKETING**

<b>Particulars</b>	<b>No of respondents</b>	<b>Percentage</b>
Yes	46	92%
No	4	8%
<b>TOTAL</b>	<b>50</b>	<b>100%</b>

**INTERPRETATION:** As per the research report 92% of respondents are happy with Digital marketing and said digital marketing really helps their business and 8% of respondents are not happy with digital marketing, they said Digital marketing is really helpful.

**DIGITAL FREQUENCY**

<b>Particulars</b>	<b>No of respondents</b>	<b>Percentage</b>
Low	13	26%
Moderate	11	22%
High	18	36%



Very high	08	16%
TOTAL	50	100%

**INTERPRETATION :**As per the research report most people's spend their maximum time being online , As per the response of respondents 16% of peoples being online is very high and 36% of peoples are high, moderate, 26% low and 22% very low.

#### **BRAND AWARENESS OF VARIOUS MARKETING**

<b>Particulars</b>	<b>No of respondents</b>	<b>Percentage</b>
Brand recall	12	24%
Brand recognition	16	32%
Brand dominance	22	44%
TOTAL	50	100%

**INTERPRETATION:**As per the research report 44% of people's use Brand dominance to aware and of peoples use of the awareness of the peoples, 24%Brand recall and Brand recognition are used by 32% peoples each

#### **TO USE DIGITAL MARKETING EFFORTS**

<b>Particulars</b>	<b>No of respondents</b>	<b>Percentage</b>
Strongly	17	34%
Agree	13	26%
No opinion	06	12%
Disagree	08	16%

Strong disagree	06	12%
TOTAL	50	100%

**INTERPRETATION:** As per the research report 34% are peoples of strongly agree to use Digital marketing in their marketing efforts , 26% of peoples are agree to use Email activities in their marketing efforts and 12% of peoples have no opinion 16% peoples are disagree and 12% of peoples are strongly disagree

#### DIGITAL PRODUCTS PURCHASING

Particulars	No of respondents	Percentage
Strongly agree	19	38%
Agree	16	32%
No opinion	06	12%
Disagree	07	14%
Strongly Disagree	04	08%
TOTAL	50	100%

**INTERPRETATION:** As per the research report 38% of respondent are strongly agree to use online purchasing products and as per the research report 28% respondent are agree to use online purchasing products in the digital marketing research report, 12% peoples (respondent) have no opinion to use online purchasing products in digital marketing, 14% .

#### USAGE OF DIGITAL MARKETING

Particulars	No of respondents	Percentage
Yes	43	86%
No	7	14%

TOTAL	50	100%
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**INTERPRETATION:** As per the research report 86% of respondents are happy with online purchase and said traditional Purchasing really helps their business and 14% of respondents are not happy with online purchasing, they said traditional Purchasing is really helpful.

#### **RISK FACTOR ON DIGITAL MARKETING**

Particulars	No of respondents	Percentage
Yes	18	36%
No	33	64%
Total	50	100%

**INTERPRETATION:** As per the research report 40% of respondent are risk factor with Digital marketing said digital marketing really helps their business and 60% of respondents are non risk factors with digital marketing, they said digital marketing is really non risk factor each.

#### **BENEFITS OF DIGITAL MARKETING**

Particulars	No of respondents	Percentage
Yes	27	54%
No	23	46%
TOTAL	50	100%

**INTERPRETATION:** As per the research report 54% of respondents are happy with offline marketing and said offline marketing really helps direct dealing with customers and their business and

46% of respondents are non-understanding with offline marketing, they said traditional marketing is a really helpful relationship between customer and suppliers.

### CHI-SQUARE (X<sup>2</sup>) TEST

**NULL HYPOTHESIS (H<sub>0</sub>):** There is no significant marketing between the Companies of the respondents and the development of improving marketing other companies for the respondents.

**ALTERNATIVE HYPOTHESIS (H<sub>1</sub>):** There is significant marketing between the Companies of respondents and the development of improving marketing other companies in the respondents.

Calculations of  $(O-E)^2/E$

$$X^2 = (O-E)^2/E \quad X^2 = 25.4$$

O	E	O <sub>i</sub> -E <sub>i</sub>	(O <sub>i</sub> -E <sub>i</sub> ) <sup>2</sup>	(O <sub>i</sub> -E <sub>i</sub> ) <sup>2</sup> /E <sub>i</sub>
20	10	10	100	10
17	10	7	49	4.9
6	10	-4	16	1.6
5	10	-5	25	2.5
2	10	-8	64	6.4
ΣO <sub>i</sub> =50				Σ(O <sub>i</sub> -E <sub>i</sub> ) <sup>2</sup> /E <sub>i</sub> = 25.4

The degree of freedom = n-1

Degree of freedom = 5-1 = 4

### RESULT

Calculated value = 25.4

Degree of freedom = 4

Level of significance = 95%

Tabulated value = 9.49

Calculated value > Tabulated value

Null hypothesis is rejected

Alternate hypothesis is acceptance

**INTERPRETATION:**

Here the calculated value (25.4) is less than the tabulated value (9.49) Their null hypothesis is rejected and the alternate hypothesis is acceptable. Hence there is significance between the Companies of respondents and the development of improving marketing other companies in the respondents.

**VI. SUGGESTIONS:**

- Many respondents felt that the hindrance in adopting cashless economy is the digital and technological illiteracy among the people of India, so to overcome this problem government need to take initiatives in educating the people about the same.
- As majority of the crowd in our country belong to the rural areas it is very important to educate the people about cashless transactions and about e-wallets.
- Many of the respondents felt that cashless mode of transactions in India is not safe so the government should make electronic payments infrastructure completely safe and secure.
- To increase more digital payments the government should bring transparency and efficiency in the transactions.
- The government should conduct a financial literacy campaign to educate the population about the digital modes of payment.
- Government should make the infrastructure capable and secure so that there are minimum fraud and thefts.

These are some of the suggestions which can help better implementation of cashless society in India.

**VII. CONCLUSION**

This paper then focused on various digital wallets or online payment application in India like Google pay, Paytm, Phonepe, Mobikwik, etc, then complete explanation about Amazon and amazon pay is stated with the advantages and disadvantages of using amazon pay. An online survey was conducted through structured questionnaire which receive responses some of the respondents did not answered the questions accurately which proved to be the limitation of the study. From the survey conducted it can be seen that many people are adopting cashless mode of payment as it has its own pros like it reduces time and is convenient to use as well as various online payment apps offers various cash back offers and discounts as well for encouraging people to use digital mode of payment. A consumer can track all their expenses with online payment. The concern that consumers have is their security, their

privacy being hacked or leaked, high transaction charges etc. With the increase in the usage of smart phones the world has come closer and with a single touch any payment can be done. In our study it can be seen that the consumers or the respondents are satisfied with the use of Amazon pay for making various payments and that online modes of payments are increasing day –by-day with the increase in various technologies which facilitate the entire process of a transaction. As it can be seen that cashless economy or the use of online payment application has its various advantages and disadvantages so if any government is planning to adopt cashless economy should carefully analyze the situation of the country.

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**AN ANALYSIS OF MICROFINANCE AND MICROCREDIT ON THE DEVELOPMENT OF MICRO AND SMALL ENTERPRISE IN VELLORE DISTRICT**

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**ABSTRACT**

*This study examines the effect of Microfinance and Microcredit Institutions on the development of Micro and small Enterprise in Vellore district. This study is both descriptive and analytical in nature. Both primary and secondary sources of data were used in this analysis. Simple random sampling technique was adopted to collect the data. The both primary and secondary sources of data were used. The primary data was collected from 70 Micro Small Enterprises through structured questionnaire by using nominal, ordinal and 5-point likert scale. The secondary sources of data are collected through District Industrial Centre, Journals and websites. The collected data was analyzed through Statistical package for social science. This statistical tool used such as percentage, chi-square, mean and correlation for analysis. Chi-square result reveals that there is a significant association between the Micro Institution and type of business. Mean analysis results found that types of savings accounts offered by the MFIs affect the financial performance of the business was ranked first. Correlation analysis found that there is a significant relationship between training on proper use of loans and training on investment areas. The study concludes that accessibility to the products offered by microfinance institutions affects the financial performance of Micro Small Enterprises positively.*

**Keywords:** Micro Finance, Financial performance, Micro credit

**1. INTRODUCTION**

Micro Small and Medium Enterprises (MSMEs) have been playing a pivotal role in country's economic growth, and have achieved steady progress over the last couple of years. From the perspective of industrial development in India, and hence the growth of the overall economy, MSMEs have to play a prominent role, given that their labor intensiveness generates employment. MSMEs are the backbone of all economics and are a source of economic growth, dynamism and flexibility in advanced industrialized countries, as well as in emerging and developing countries. "Microfinance is the supply of loans, savings, and other basic financial services to the poor." It is a general term to describe financial services to low-income entities or to those who do not have access to typical

banking services. Microfinance refers to financial services provided to low-income people, usually to help support self-employment. Examples include: small loans, savings plans, insurance, payment transfers, and other services that are provided in small increments that low-income individuals can afford. These services help families to start and build “micro” enterprises, the very small businesses that are important sources of employment, income, and economic vitality in developing countries. Micro-finance does not only cover financial services but also non-financial assistance such as training and business advice. According to MIFOS (2005) micro-finance is sometimes called “banking for the poor.” It is an amazingly simple, proven idea that empowers very poor people around the world to pull themselves out of poverty. Relying on their traditional skills and entrepreneurial instincts, very poor people, mostly women, obtain small-unsecured loans, usually less than \$200, from local organizations called micro-finance institutions (MFIs).

## **II. RESEARCH OBJECTIVES**

- To examine the effects of micro savings on financial performance of MSEs.
- To evaluate the effects of Micro Credit on financial performance of MSEs.
- To assess the effects of Micro insurance and training on financial performance of the MSEs.

## **III. LITERATURE REVIEW**

Chijoriga (2000) revealed that there are limits to the use of credit as an instrument for poverty eradication, including difficulties in identifying the poor and targeting credit to reach the poorest of the poor. Added to this is the fact that many people, especially the poorest of the poor, are usually not in a position to undertake an economic activity, partly because they lack business skills and even the motivation for business. According to Mosley (1999), microfinance makes a considerable contribution to the reduction of poverty through its impact on income and also has a positive impact on asset level. But the mechanism through which poverty reduction works varies between institutions. Generally, institutions that give, on average, smaller loans reduce poverty much more by lifting borrowers above the poverty line, whilst institutions giving larger loans reduce it much more by expanding the demand for labour amongst poor people.

## **IV. LIMITATIONS OF THE STUDY**

- The sample size is limited to 70 Micro Small Enterprise only.
- The main limitations of the study is the reliance on information supplied by Micro and Small business operators who normally do not want to make a full disclosure of their business to an unknown person for fear of being subjected to tax payment.



## V. RESULTS AND DISCUSSION

### 5.1 Socio-Economic Profile of the Respondents

Socio Economic profile of the Micro Small Medium Enterprise studied through simple percentage analysis and presented in Table 1.

**Table 1 Socio-Economic Profile of the Respondents**

Demographic Characteristics	Factors	Frequency	Percentage
<b>Gender</b>	Male	50	71.4%
	Female	20	28.6%
<b>Age</b>	Less than 28 years	9	12.9%
	29-39 years	35	50%
	40-49 years	24	34.3%
	More than 50 years	2	2.9%
<b>Age of Business</b>	Below 2 years	5	7.1%
	3-4 years	17	24.3%
	5-6 years	20	28.6%
	6 and above	28	40%
<b>Type of Business</b>	Micro	48	68.5%
	Small	20	28.5%
	Medium	2	3%
<b>Major activity</b>	Services	32	45.7%
	Manufacturing	38	54.3%
<b>Number of Employees of the Enterprise</b>	1-5 Employees	32	45.7%
	6-10 Employees	16	22.9%
	11-20 Employees	8	11.4%
	21-30 Employees	9	12.9%
	31-50 Employees	3	4.3%
	50 and above Employees	2	2.9%
<b>Net annual revenue of the Enterprise</b>	Less than Rs. 50,000	3	4.3%
	Rs.51,000-Rs.100,000	28	40%
	Rs.101,000-Rs.250,000	11	15.7%
	Rs.250,000-Rs.1000,000	9	12.9%
	Rs.1000,000-Rs.2000,000	7	10%
	More than Rs.2000,000	12	17.1%
<b>Frequency of loan taken by the Enterprise</b>	Once in 6 months	2	2.9%
	Once in a year	18	25.7%
	Once in 2 years	5	7.1%
	Once in 3 years	6	8.6%
	Never	39	55.7%
<b>Sources of fund to the Enterprise</b>	Savings	13	18.6%
	Borrow from friends	15	21.4%
	Borrow from family members	8	11.4%

	Borrow from Financial Institution	34	48.6%
<b>Form of Ownership in the business of the Enterprise</b>	Sole Proprietorship	55	78.6%
	Partnership	15	21.4%

Source: Primary Data

It is found that 71.4% respondents are male, 28.6% respondents are female, 50% of respondents are from the age group of 29-39 years, 40% of respondent's age of business are more than six years, 68.5% respondents are micro enterprise, 28.5% respondents are small enterprise, 3% respondents are medium enterprise, 54.3% major activities are manufacturing, 45.7% enterprises 1-5 employees are working, 40% of enterprise net annual revenue are between Rs.51,000-Rs.100,000, 25.7% enterprise frequency of loan obtained by them is once in a year, 48.6% enterprise sources of funds are borrowed from financial institution and 78.6% enterprise ownership are sole proprietorship only.

## 5.2 Chi- Square Analysis

The chi-square analysis is done to find out whether the microcredit institutions have impact on type of business.

**H0:** There is no association between Microcredit Institution and Type of Business

**H1:** There is association between Microcredit Institution and Type of Business

**Table 2 Chi-square value for Micro Institution and types of Business**

<b>Pearson Chi-Square Statement</b>	<b>Chi-Square Value</b>	<b>df</b>	<b>Significant value</b>
Money used for starting up business borrowed in FIs	1.246	3	0.742
Training given by Microfinance	2.362	4	0.670
Microfinance bank guided area to invest	10.047	4	0.040
Microfinance bank encouraged saving and starting business	6.724	4	0.151
MCI's do not insist on collateral	3.785	4	0.436

Source: Primary Data

### Inference:

From the above table it is clear that only one variable has significant (0.040) association between the micro institution (micro finance bank guided area to invest) and type of business i.e., accept the alternate hypothesis (H1). The remaining variables such as money used for starting up business borrowed in FIs, training given by microfinance, microfinance bank encouraged saving and starting business and MCI's insist on collateral have no significant association with type of business. i.e., accept the null hypothesis (H0).

### 5.3 Mean Analysis

Mean analysis is used to identify the average (mean) value of a variable or a set of variables in a dataset. This analysis helps in understanding the central tendency of the data, providing a single representative value of a dataset.

**Table 3 Effects of Micro savings on financial performance**

Statement	Mean	Rank
The minimum savings allowed by the MFIs affect the financial performance of the business	3.2143	III
The interest rate on savings offered by the MFIs affect the financial performance of the business	3.3143	II
The various types of saving accounts offered by the MFIs affect the financial performance of the business	3.5000	I
Savings through mobile banking allowed by the MFIs affect the financial performance of the business	3.2000	IV
Micro savings service offered by the MFIs is important.	2.9714	V

**Source:** Primary Data

#### **Inference:**

From the above table indicates the mean score value for five statements on the financial performance is obtained. The various types of saving accounts offered by the MFIs affect the financial performance of the business is ranked first with mean score of 3.5000, followed by the interest rate on savings offered by the MFIs affect the financial performance of the business with a mean score of 3.3143 ranked second, followed by the minimum savings allowed by the MFIs affect the financial performance of the business with a mean score of 3.2143 is ranked three, followed by the Savings through mobile banking allowed by the MFIs affect and Micro savings service offered by the MFIs is ranked four and five respectively.

### 5.4 Correlation Analysis

Correlation analysis helps to understand how changes in one variable are associated with change in another variable. It describes the direction and degree of relationship between two variables. Null hypothesis (H0): There is no significant relationship between the effects of training.

Alternate hypothesis (H1): There is a significant relationship between the effects of training.

Table 4 Effects of training on financial performance of the MSEs

		Frequency of training offered	Training on management skills	Training on record keeping	Training on proper use of loans	Training on investment areas
Frequency of training offered	Pearson Correlation	1	0.434**	0.422**	0.635**	0.421**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000
	N	70	70	70	70	70
Training on management skills	Pearson Correlation	0.434**	1	0.434**	0.462**	0.252*
	Sig. (2-tailed)	0.000		0.000	0.000	0.035
	N	70	70	70	70	70
Training on record keeping	Pearson Correlation	0.422**	0.434**	1	0.506**	0.383**
	Sig. (2-tailed)	0.000	0.000		0.000	0.001
	N	70	70	70	70	70
Training on proper use of loans	Pearson Correlation	0.635**	0.462**	0.506**	1	0.596**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000
	N	70	70	70	70	70
Training on investment areas	Pearson Correlation	0.421**	0.252*	0.383**	0.596**	1
	Sig. (2-tailed)	0.000	0.035	0.001	0.000	0.000
	N	70	70	70	70	70

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Source: Primary Data

#### Inference:

From the above table 4 indicates that there is very strong positive correlation between Training on investment areas and Frequency of training offered ( $r=0.635^{**}$ ,  $P<0.01$ ) followed by Training on investment and Training on proper use of loans ( $r=0.596^{**}$ ,  $P<0.01$ ). However, there is a weak positive correlation between Training on management skills and Training on Investment areas ( $r=0.252^*$ ,  $P<0.05$ ).

## VI. SUGGESTIONS

The suggestion of this study is only on the bases of descriptive statistics result of each of the independent variables. The stakeholder of the sector, especially Micro and Small Development Agencies should work on providing short term training that helps enterprises in their business work. The loan repayment schedule should not be so tight and should consider harvesting time, the support MFIs supposed to provide to their clients on their business should be improved.

## VII. CONCLUSION

This study examines the outreach performance of Microfinance Institutions in Vellore district. This study uses the financial accessibility approach to the impact of microfinance and microcredit on the development of Micro and Small enterprise in Vellore district. Chi-square result reveals that there is a significant association between the Micro Institution and type of business. Mean analysis results found that types of savings accounts offered by the MFIs affect the financial performance of the business was ranked first. Correlation analysis found that there is a significant relationship between training on proper use of loans and training on investment areas. The study concludes that accessibility to the products offered by microfinance institutions affects the financial performance of Micro Small Enterprises positively.

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## **FINTECH AND FINANCIAL INCLUSION: PAST, PRESENT AND FUTURE**

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### **ABSTRACT**

*From the historical development of FinTech to the current status of financial inclusion programs, this chapter takes readers on a historical tour and provides a look ahead. We examine the issues and worries that accompany these revolutionary forces and consider how technology may act as a catalyst to bring about global financial inclusion.*

**Keywords:** FinTech, Financial Inclusion, Inclusive Banking, Mobile Banking, Economic Empowerment

### **I. INTRODUCTION**

The convergence of finance and technology, or FinTech, has transformed the financial landscape and holds the key to addressing one of the most urgent issues facing the world today: financial inclusion. This is a time marked by rapid technical innovation. We are entering a world where accessibility and innovation coexist and where the limits of conventional financial services are constantly being redefined as we set out to investigate the dynamic interaction between FinTech and financial inclusion.

Presenting FinTech, the financial industry disruptor. FinTech, which has its roots in technology innovation, presents a ray of hope for closing the gap in financial inclusion. A financial revolution has occurred in the last few decades, driven by innovators who have used technology to provide financial services to the under banked and unbanked. FinTech has the ability to democratize money, empower people, and build a more inclusive global economy through anything from mobile payment platforms to digital identities enabled by blockchain technology.

**1.1 Overview of Financial Inclusion in India:** The idea of financial inclusion—giving all people and businesses, regardless of their geography or economic standing—access to reasonably priced and dependable financial services—is both a long-term objective and a recurring difficulty (Ozili, 2021). Due to social, economic, and geographic constraints, billions of people globally are still not able to access the formal financial system (Demirgüç-Kunt & Klapper, 2012). Solutions are desperately needed as the gap between the banked and the unbanked grows. An essential component of India's development process is financial inclusion. The National Strategy for Financial Inclusion (NSFI) 2019–2024 states that the main goals of India's financial inclusion policies are to increase and deepen financial inclusion, foster consumer protection and financial literacy, and enable affordable access to formal financial services. Reports on financial inclusion in India have been released by the Reserve Bank of India (RBI). The most recent study, which was released on January 10, 2020, offers a thorough strategy paper for accelerating financial inclusion in order to advance prosperity, well-being, and sustainable development. The paper outlines the current state of financial inclusion in India as well as its strategic goals, suggestions, and progress tracking system. The research states that in 2017, there were 572 deposit accounts per 1000 adults, up from 517 in 2014. In 2014, there were 139 credit accounts per 1000 adults; by 2017, there were 220. Adults with bank accounts made up 80% of the population in 2017 compared to 53% in 2014. From 49% in 2014 to 33% in 2017, the proportion of adults without access to official or informal credit fell (Chafa et al., 2023).

Access and use of Financial Services in India										
Indicator	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Automated Teller Machines (ATMs) per 100,000 adults	12.87	17.80	19.7	21.24	22	21.65	20.95	21.5	21.21	24.64
Branches of commercial banks per 100,000 adults	11.85	12.87	13.54	14.06	14.51	14.5	14.58	14.74	14.42	14.31
Deposit accounts with commercial banks per 1,000 adults	1,160.72	1,337.41	1,541.79	1,731.27	1,881.54	1,937.25	1,967.61	2,030.71	2023.67	2130.48
Loan accounts with commercial banks per 1,000 adults	141.18	149.78	152.78	168.75	175.81	197.34	228.8	264.13	285.22	303.1
Mobile money transactions: number per 1,000 adults	35.98	116.06	270.11	627.69	1662.4	3031.52	4078.93	4111.97	3822.87	5008.21

India's financial scene underwent a significant shift in 2021 when 78% of people over the age of 15 were discovered to have a bank account—a significant rise from the 44% reported in 2011. Furthermore, in the 2020–2021 fiscal year, almost 90% of people who were 18 years of age or older had access to an account at a formal financial institution, indicating a growing trend towards financial

inclusion. Remarkably, of the 23.87 crore Jan-Dhan account holders, more than half, or 55.47%, are female (Ahmed, 2023). This suggests a shift in favour of women's financial empowerment. Moreover, the data indicates that a noteworthy 66.69% of Jan-Dhan account holders—28.70 crore people—live in rural and semi-urban areas, highlighting the accessibility of financial services in these areas. India is noteworthy for having reached gender parity in account ownership, demonstrating that men and women have equal access to financial resources. India's 'Financial Inclusion Index' as of the end of March is a commendable 53.9, indicating the progress achieved in extending financial services and access across the nation (Borah, 2022).

The National Strategy for Financial Inclusion (NSFI) 2019–2024 lists a number of obstacles that India faces in its efforts to promote financial inclusion. The large unbanked population dispersed over wide geographic areas, the difficulty in obtaining credit, the lack of skill and productivity, the vulnerability to small-scale and marginal farmers, the rural landlessness, the urban poor, and the lack of financial and technological literacy are a few of the demand-side problems (Sunio et al., 2023). On the supply side, a number of significant gaps continue to impede financial inclusion. These include low telecom and internet connectivity in rural areas, socio-cultural barriers, a lack of market participants in the payment product space, and inadequate infrastructure in some parts of the rural hinterland and remote Himalayan and northeastern regions (Chakravarty, 2023). The government is working to encourage financial inclusion, but there are still a number of issues that need to be resolved. Some of the obstacles that need to be addressed are, for example, the weak technological infrastructure, the lack of knowledge and confidence in digital payments, and the low penetration of financial services (Kandpal et al., 2023).

**1.2 Financial Inclusion Index in India:** The Reserve Bank of India created a composite Financial Inclusion Index (FI-Index) to measure the level of financial inclusion throughout the nation in conjunction with the relevant parties, including the government (Lenka, 2022). The FI-Index was first released in August 2021 for the fiscal year that ends in March 2021. The degree of financial inclusion in a nation is gauged by the Financial Inclusion Index (FI-Index), a single number with a range of 0 to 100. Information from the postal, insurance, banking, and investing sectors is included (Kumar & Pathak, 2022). Three primary parameters comprise the index, each having a corresponding weight:

- Access (35%): Evaluates people's ease of access to financial services, taking into account factors including infrastructure and service provider proximity.
- Usage (45%): Evaluates the degree of active involvement with financial services, including the frequency of transactions and the use of digital services.



- **Quality (20%):** Assesses how fair, secure, and effective financial services are.

The 97 indicators that make up the Index are responsive to factors such as service quality, availability and utilization, and ease of access (Tok & Heng, 2022). The Quality parameter, which measures the quality of financial inclusion as reflected by consumer protection, financial literacy, and disparities and service deficiencies, is one of the Index's distinctive features. Since there is no "base year" in the construction of the FI-Index, it represents the collective efforts of all stakeholders over time towards financial inclusion. Compared to 43.4 for the period ending in March 2017, the annual FI-Index for the period ending in March 2021 is 53.9. The FI-Index will be released in July of each year.

In an effort to encourage financial inclusion in rural areas, the Reserve Bank of India (RBI) and the National Bank for Agriculture and Rural Development (NABARD) have taken the initiative. These initiatives include a range of tactics, including the opening of bank branches in underserved and remote areas, the issuance of Kisan Credit Cards (KCC) to support agricultural financing, the connection between banks and self-help groups (SHGs) to promote grassroots credit and savings activities, the expansion of automated teller machines (ATMs) for increased accessibility in rural areas, and the adoption of the Business Correspondents Model of Banking. When taken as a whole, these policies are critical in guaranteeing that rural populations have better access to basic banking services, which in turn promotes economic development and financial empowerment in India's rural communities.

We encourage you to go with us on this journey into the past, present, and future of a world where technology, finance, and humanity merge as we explore the domains of FinTech and financial inclusion.

## **II. HISTORICAL EVOLUTION OF FINTECH**

The history of financial technology, or FinTech, dates back to the early stages of human civilization, when barter, commerce, and record-keeping were still in their infancy. On the other hand, the modern definition of "FinTech" encompasses a relatively recent and revolutionary historical path.

**2.1 Early Roots:** The creation of financial instruments and inventions that aided in trade and commerce is where FinTech first emerged. Promissory notes, banking systems, and the introduction of standardized money were all developed in ancient civilizations to enable financial transactions. One example of a forerunner to modern ledger systems is the 2000 BCE use of clay tablets in Mesopotamia to record financial transactions (Sahabuddin et al., 2023).



**2.2 The Rise of Digital Banking and Payment Systems:** When we go back to the 20th century, digital payment and banking systems start to appear. When credit cards were invented in the middle of the 20th century, it completely changed how people made purchases and did away with the necessity for cash. The introduction of automated teller machines (ATMs) in the 1960s significantly changed the way people accessed their money (Indriasari et al., 2022).

**2.3 Internet Impact:** The development of the internet in the late 20th century, however, was the major game-changer for FinTech. Due to its ability to facilitate online financial service delivery, the World Wide Web completely changed the financial environment. Digital wallets, electronic trading platforms, and online banking quickly become essential components of contemporary financial operations (Pushp et al., 2023). People could handle their money, buy stocks, and make payments from the convenience of their homes in this era of digital technology.

**2.4 Emergence of Blockchain and Cryptocurrency:** As we enter the twenty-first century, blockchain technology and cryptocurrencies present us with yet another transformative force. The launch of Bitcoin in 2009 by the unidentified figure known as Satoshi Nakamoto signaled a fundamental change in the way we view and handle money (Santana & Albareda, 2022). The underlying technology, known as blockchain, is a secure, decentralized record that ensures financial transactions are transparent, unchangeable, and trustworthy. The advent of smart contracts, decentralized finance (DeFi) solutions, and digital assets has been made possible by the rise of hundreds of cryptocurrencies (Boakye et al., 2022).

From the oldest forms of trade and cash to the digital age of cryptocurrencies and blockchain, the historical growth of FinTech symbolizes a journey. Technology has changed how we handle, access,

and conduct business with each passing day, paving the path for FinTech's revolutionary contribution to solving the urgent problem of financial inclusion.

### **III. FINANCIAL INCLUSION - A GLOBAL CHALLENGE**

**3.1 Defining Financial Inclusion:** Fundamentally, the purpose of financial inclusion is to guarantee that all people and organizations have access to reasonably priced, dependable, and easily accessible financial services (Pushp et al., 2023). These services cover, among other things, payments, insurance, credit, savings, and banking. Financial inclusion aims to provide people with the means to invest, accumulate assets, and protect themselves from unexpected financial shocks in order to empower them both socially and economically (Chakravarty, 2023).

**3.2 The Global & India's Financial Inclusion Landscape:** There is still a significant difference between the number of people who have access to banking and those who do not, even with advancements in technology and finance (Ambarkhane et al., 2022). Over 1.7 billion persons globally, according to World Bank estimates, still do not have a bank account. The term "underbanked" refers to a larger group of people who have restricted access to financial services, in addition to the unbanked. Individuals in both rich and developing economies are impacted by the financial inclusion gap, which has no geographic bounds (Demirgüç-Kunt & Klapper, 2012). India has a unique set of obstacles when it comes to achieving financial inclusion because of its large and diversified population. The nation is divided into both affluent urban centers and isolated rural communities, many of which lack standard banking facilities. Still, a sizable section of the populace lives in impoverished and economically isolated places. The following quantitative information relates to financial inclusion in India presently:

- Financial Inclusion Index: In March 2023, the Financial Inclusion Index (FI Index) was 60.1, up from 56.4 in the same month the previous year. The Usage and Quality dimensions were mostly responsible for the improvement.
- Bank Accounts: 40% of households possess bank accounts.
- Regional Rural Banks (RRBs): RRBs primarily provide loans and advances to rural artisans, agricultural laborers, and small and marginal farmers.
- Inequality of credit according to gender: A 2020 study found that in India, women are only given credit equal to 27% of the deposits they make, whilst males are given credit equal to 52% of their deposits.

### ***3.3 Obstacles to Financial Inclusion:***

- Geographical Restrictions: A lot of people who live in remote or rural areas have trouble getting to physical banks because of these restrictions (Ambarkhane et al., 2022).
- Cultural Customs: People's preferences for unofficial financial networks over traditional financial institutions can be influenced by cultural norms and practises.
- Economic Challenges: Low income and a lack of collateral are two economic factors that make it more difficult to achieve financial inclusion (Amit et al., 2023).
- Legal and Regulatory Barriers: Accessing financial services can occasionally be hampered by legal and regulatory frameworks.
- Absence of Physical Banking Infrastructure: People in many isolated villages and tribal communities in India are forced to travel great distances in order to receive financial services due to the lack of physical banking infrastructure in these areas.
- Cultural Aspects: Cultural aspects come into play, as some groups are reluctant to interact with official financial institutions (Mossie, 2022).
- Accessibility to Credit and Savings: A lot of people have trouble getting credit and savings accounts because of financial limitations like low income and no collateral.

***3.4 Government Initiatives and Technological Advancement:*** The Indian government has made impressive efforts to improve financial inclusion in light of these difficulties. The goal of programs like the Pradhan Mantri Jan Dhan Yojana (PMJDY) is to give every household access to a debit card, insurance, and a bank account. The know-your-customer (KYC) procedure has been transformed by the Aadhaar digital identity system, which has made it simpler for people to open bank accounts and obtain financial services (Pandey et al., 2022).

### ***3.5 Role of FinTech in Financial Inclusion in India:***

- FinTech Integration: An important turning point in India's financial inclusion journey has been the integration of FinTech. Millions of Indians now have greater mobile phone access to financial services thanks to the rise of digital wallets, peer-to-peer lending platforms, and mobile banking (Goswami et al., 2022).
- Accessibility of Mobile Banking: With the development of digital financial tools, people can now readily obtain credit, make payments, and receive government benefits from even the most remote locations. Mobile banking makes this possible.
- Technological Innovation: India is making significant strides towards providing financial services to underserved groups by means of technological innovation. The nation's

unwavering dedication to attaining universal financial inclusion has established the groundwork for a fairer and more just economic future.

- Even though significant progress has been made, there are still obstacles in the way of full financial inclusion. Positive change is nevertheless being driven by India's resolve to close the gap and offer financial services to everyone.

#### **IV. THE PRESENT STATE OF FINTECH IN INDIA AND ITS GLOBAL IMPACT**

**4.1 FinTech as a Transformative Force in India:** FinTech has been a major driver of change in India's financial sector in recent years, with a major contribution to the expansion of financial inclusion. India's embrace of FinTech has been crucial in solving the difficulty of providing financial services to the unbanked and underbanked, given its constantly expanding population and different economic landscapes.

**4.2 Digital wallets and mobile banking:** These services have become incredibly well-liked all around the country. Millions of Indians, even those living in distant places, now have unparalleled ease of access to and management of their funds because to these developments. From the palm of their hand, users may invest, move money, and make digital payments.

**4.3 Government-Sponsored projects:** The FinTech revolution has been greatly accelerated by government-sponsored projects. Millions of bank accounts have been opened and connected to digital platforms as a result of the Pradhan Mantri Jan Dhan Yojana (PMJDY), revolutionizing the financial services industry. Furthermore, the Aadhaar digital identity system has expedited the KYC procedure, enabling a larger population to obtain banking services more quickly.

**4.4 FinTech's Worldwide Impact:** Not only have Indian FinTech inventions changed the country's financial environment, but they have also had a significant worldwide impact. Global interest has been sparked by the emergence of peer-to-peer lending, computerized credit scoring methods, and mobile payment platforms. Indian FinTech companies are expanding their reach into international markets by providing their knowledge and services to nations facing comparable obstacles related to financial inclusion.

**4.5 Global Impact of India's Digital Payment Ecosystem:** The Unified Payments Interface (UPI), which represents India's digital payment ecosystem, has been a remarkable success story. UPI has grown to become a model for other nations aiming to improve financial inclusion through digital payments, with millions of transactions performed every day. It has established the foundation for international FinTech relationships and cooperation that cut beyond national borders.

When we look at FinTech in India now, we can see that the country's dedication to financial inclusion is setting an example for other countries looking to tackle comparable issues. In addition to completely changing how Indians access and manage their finances, the digital financial services ecosystem is becoming a global role model for attaining financial inclusion.

## **V. TECHNOLOGICAL INNOVATIONS IN FINANCIAL INCLUSION**

**5.1 Blockchain and Decentralized Finance (DeFi):** The development of blockchain technology and decentralized finance (DeFi) is one of the most significant developments in FinTech. The immutability, security, and transparency of blockchain technology make it a promising tool to revolutionize the provision of financial services. Blockchain-based solutions for digital identity creation, land record streamlining, and cross-border remittance facilitation are being investigated in India. DeFi platforms provide a global window into a future in which decentralized exchanges and smart contracts will take the place of traditional intermediaries, enabling access to financial services without the need for traditional banks (Dos Santos et al., 2022).

**5.2 Peer-to-peer Lending Platforms:** As an alternative to traditional lending institutions, peer-to-peer (P2P) lending platforms have gained popularity in India and outside. These platforms facilitate loans for individuals and small enterprises by putting lenders and borrowers in close contact. P2P lending has given those in India who don't fit the traditional banking requirements a way to get loans. P2P lending is tackling financial inclusion globally by increasing marginalized people's access to money (Taleizadeh et al., 2022).

**5.3 Artificial Intelligence and Credit Scoring:** Artificial intelligence (AI) is a key factor in this revolution. In India, people without traditional credit histories can now apply for loans thanks to AI-driven credit scoring models that evaluate a borrower's creditworthiness by analyzing massive volumes of data. People who were previously thought to be too hazardous for traditional loans are finding more opportunities because to AI-driven credit rating on a global scale (Sadok et al., 2022).

**5.4 Big Data and Microfinance:** By leveraging big data, microfinance is changing and becoming more efficient and accessible. Big data is used in India to evaluate credit risk, establish loan eligibility, and create financial solutions that are specifically tailored to the needs of underprivileged populations. Microfinance institutions are reaching more people worldwide who require small loans to launch or grow their enterprises thanks to the use of big data (Singh et al., 2023).

The way financial services are offered and accessed in India and around the world is changing as a result of these technology advancements. By offering individualized and easily accessible financial

solutions to people and communities that were previously shut out of the official financial system, they have the ability to close the gap in financial inclusion.

## **VI. CHALLENGES AND CONCERNS**

**6.1 Data Security and Privacy:** As financial services become more digitally based, worries regarding data security and privacy have gained prominence. Data breaches and cyberattacks in India have brought attention to the importance of strong cybersecurity measures. Stricter data protection laws are being developed by the government and regulatory organizations. Data security and privacy continue to be major global concerns as financial services become more digitally connected. Encouraging financial inclusion requires establishing confidence in the security of digital financial transactions (Dash et al., 2022).

**6.2 Digital Literacy and Access:** Although financial services are becoming more digitally literate, there are still barriers to digital literacy in India and other countries. Many people lack the digital skills needed to access and use digital financial services, especially in rural and isolated places. Encouraging digital literacy and bridging the digital gap are essential to guaranteeing that the advantages of FinTech extend to every societal class (Erdem et al., 2023).

**6.3 Consumer protection and regulatory challenges:** As the FinTech industry changes, so too must regulatory frameworks. It's difficult to strike a balance between innovation and consumer protection. Regulators in India are always adjusting to new technology, with an emphasis on fostering innovation while protecting consumers. Finding the ideal balance between promoting FinTech expansion and safeguarding customers continues to be difficult on a global scale (Noor et al., 2022).

**6.4 Scalability and Sustainability:** It is important to guarantee that FinTech solutions are both scalable and sustainable, both in India and around the world. FinTech innovations have showed potential, but scaling them up to reach a large audience remains a substantial challenge. Furthermore, long-term success of FinTech programs depends on preserving their sustainability, especially in disadvantaged regions (Macchiavello & Siri, 2022).

The difficulties and worries discussed in this section highlight how complicated the global and Indian financial inclusion landscapes are. FinTech has great potential to address these problems, but it also presents a number of challenges that call for cooperation from the FinTech community, governments, financial institutions, and technology companies.

## VII. FUTURE TRENDS AND PROSPECTS

Looking ahead, the intersection of financial inclusion and FinTech offers an environment rich with amazing possibilities. This section offers a thorough analysis of what's next, emphasizing India's special place in this global revolution.

**7.1 Future Predictions:** It is anticipated that the FinTech sector would never stop innovating. Prominent figures in the domain anticipate significant advancements in the near future, with blockchain, digital identity, and artificial intelligence leading the way. The most remote and underserved areas of India may soon be able to access banking services because to these advancements (Macchiavello & Siri, 2022). Millions of Indians will have access to financial inclusion as digital banking, mobile wallets, and microfinance are expected to grow. Innovation in the FinTech industry is ongoing. Industry estimates indicate that India will have been a major contributor to the global FinTech industry's growth, which is expected to reach a valuation of over \$300 billion by 2027. Artificial intelligence and blockchain technology are expected to increase financial inclusion by 25% in India alone (Nguyen, 2022).

**7.2 The Role of Emerging Technologies:** The FinTech revolution will be propelled by emerging technologies, as per their role. Credit assessment is about to undergo a revolution thanks to artificial intelligence, which will make it more effective and inclusive (Hoang et al., 2022). Digital identities that are safe and unchangeable will be made possible by blockchain-based solutions, making financial services easier to access—especially for individuals who were previously shut out. These innovations will transform established financial institutions globally, bringing about improvements in inclusivity, transparency, and security. The FinTech revolution will persist in being propelled by emerging technology (Rani et al., 2023). In India, those who were previously denied credit because they lacked traditional credit histories can now obtain credit 15% more easily because to the use of artificial intelligence in credit evaluation. The blockchain market is predicted to expand at a compound annual growth rate of 69.4% on a global scale, offering safe, open, and effective financial systems.

**7.3 Increasing Financial Inclusion for Marginalized Populations:** The goal of expanding financial services to underserved groups is a major theme for FinTech and financial inclusion in the future. Efforts will be focused on women, low-income people, rural areas, and other underprivileged groups in India and around the world (Asif et al., 2023). Customized financial services and products will help people who have traditionally been shut out of the formal financial system, fostering social justice and economic progress. Extending financial services to excluded people is a key subject in the future of FinTech and financial inclusion (Kumar & Pathak, 2022). Data suggests that gender-neutral financial



services have the potential to generate \$330 billion in income annually on a worldwide scale. In a similar vein, initiatives aimed at integrating low-income and rural populations might bring millions more people into the financial system.

**7.4 Prospective Policy Advancements and Regulatory Shifts:** The future of FinTech will be significantly shaped by governments and regulatory agencies. We may anticipate seeing the development of laws and policies in India that strike a balance between consumer protection and innovation. These advancements will protect consumer interests while fostering an atmosphere that is favorable to the FinTech industry. International FinTech partnerships and global financial inclusion initiatives will be facilitated by a trend toward cross-border collaborations and regulatory harmonization, which will further lower barriers to financial services. Governments and regulatory agencies will be crucial in determining how FinTech develops in the future. Recent legal improvements in India have resulted in a 30% rise in FinTech businesses, demonstrating the government's dedication to promoting innovation. International FinTech cooperation are predicted to rise by 20% as a result of regulatory harmonization efforts worldwide.

## **VIII. DISCUSSION & CONCLUSION**

This chapter explores the convergence of FinTech and financial inclusion in India and worldwide, offering perspectives on the advancements, obstacles, and boundless possibilities in these fields. It provides a historical overview of the evolution of financial technology, identifies the barriers to financial inclusion, and emphasizes how technology can transform these divides. FinTech, which is noteworthy, has its origins in prehistoric trading networks and creative financial techniques. Presently, it is propelling developments in digital banking, blockchain technology, and artificial intelligence. These advancements portend a time when financial services will be more inclusive and widely available than in the past.

Achieving financial inclusion is a national necessity in India, not just a social goal. Millions of lives have been positively impacted by initiatives like the Pradhan Mantri Jan Dhan Yojana (PMJDY) and the Aadhaar digital identity system, which have greatly increased the accessibility of financial services. Financial exclusion is still a major problem in the world, affecting billions of adults who do not have access to basic financial services. FinTech, on the other hand, shows itself to be a formidable force, providing creative answers that go against conventional wisdom and advance the cause of financial inclusion.

The FinTech sector in India and around the world is expanding rapidly; estimates indicate that by 2027, it may surpass \$300 billion in value. Through the use of technologies like blockchain and

artificial intelligence, this expansion is anticipated to improve financial inclusion and lead to more accessible credit and transparent financial systems. This growth path is not without difficulties, though. To maintain the longevity and success of FinTech and financial inclusion initiatives, concerns about data security, digital literacy, and regulatory flexibility need to be addressed in order to strike a balance between innovation and protection.

A more equitable and inclusive financial ecosystem in India and around the world is being propelled by the convergence of cutting-edge technologies, flexible regulations, and a common commitment to financial inclusion in a world that is constantly changing. As time goes on, the goal of ensuring that financial services are available to everyone becomes more attainable. In summary, innovative technology, flexible regulations, and a shared commitment to financial inclusion could make the future of FinTech and financial inclusion bright. These factors could result in a more accessible and equitable financial landscape. In this exciting age of development, this future is getting closer and closer to reality. With its thorough examination of the history, development, and prospects of FinTech and financial inclusion, this chapter has left us feeling excited about the revolutionary shifts that are yet to come.

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**ELEMENTS INFLUENCING DECISION MAKING BEHAVIOUR DURING INVESTMENT: INTERVENING ROLE OF SEARCHED INFORMATION**

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**ABSTRACT**

*This study examines the variables influencing the behaviour of investors in making decisions by using information searches as a mediator. The dependent variable in this study is the investment decision-making behaviour, while the independent variables are the overconfidence bias and economic expectations. The mediating variable in this case is information search. To evaluate the hypothesis for this, a survey questionnaire was employed. The participants in this poll were investors in the stocks listed in National Stock Exchange and Bombay Stock Exchange of India. A total of 300 questionnaires were distributed; only 275 of them were returned, and 25 of those were deemed incomplete and thus excluded from analysis. Thus, 275 surveys were employed in the examinations. As a statistical tool, simple and multiple regression analysis were employed. The findings indicated a positive and substantial association between investment decision-making behaviour and economic expectations, but the relationship changed to a negative one when information search was considered as a mediator. This shows that full mediation is necessary in the case of economic expectations. A partial mediation in the case of overconfidence was suggested by the finding that overconfidence bias had a positive and substantial association with investment decision making behaviour. This link persisted even after information search was introduced as a mediator.*

**Keywords:** Economic Expectations, Searched Information, Decision Making Behaviour, Overconfidence Bias

**I. INTRODUCTION**

To invest is to put money into a venture with the intention of earning more money. Many people appear to find it fascinating because it allows them to participate in the decision-making process. People can evaluate their decision-making skills by examining the outcomes of their decision-making exercises. Conventional finance theories assume that people who participate in the financial markets are reasonable, practical individuals who want to maximise their wealth. To reconcile traditional financial and economic theories with the behavioural approach, a new field of finance called as "Behavioural Finance" was created to explain why investors nowadays make irrational investment decisions. The study of internal and external behavioural elements influencing investors' financial

decisions is known as behavioural finance. In relation to behavioural finance, this study explores the impact of different elements on investment behaviour. A relatively new field of study in finance called "behavioural finance" looks at market results and the impact of various psychological biases on the attitudes of investors and company managers. However, a variety of elements, including emotions, prior experiences, and beliefs, frequently influence investing decisions, leading to unexpected, irrational, and foolish behaviour on the part of investors. A new area of finance has evolved to analyse the impact of these factors on investor decisions.

### **Information Search**

Consumers' degree of information search can be effectively predicted by individual differences related to investments (e.g., one's subjective knowledge and amount invested), personal attributes (e.g., attitudes towards risk and innate novelty seeking), and demographic characteristics (e.g., age and income) (Lin & Lee, 2002).

Searching for information entails consulting a variety of sources for guidance prior to making any decisions on purchasing investment products. To reduce the risk involved in these decisions, information is crucial when making investments. Financial investing preferences are significantly influenced in a good way by heuristics. The abundance of digital information resulting from increased advice-seeking information searches and reliance on heuristics has the potential to stimulate investor interest in mutual fund investments. We explain how individual information searches for investments make a difference in income (Tseng, 2012).

Investors strive to get more market data to reduce uncertainty in their investment decisions since more informed investors can make better decisions. Since knowledge helps investors minimise uncertainty while making stock market investments, well-informed investors may manage risk more effectively. Professional counsel is necessary to verify the authenticity of required information because the financial markets and their products are quickly changing these days, making it difficult to make better financial judgements. When making investment selections, intelligent investors—especially institutional investors—must consider all the operational, financial, and growth potential of stocks.

### **Overconfidence Bias**

A bias is a predisposition to be either in favour of or against someone or something. Bias in finance refers to an investor's propensity to make financial decisions based on preexisting beliefs and trusts. These biases have a significant impact on how stock exchanges and companies frame investor



decisions when it comes to investing. The researchers have investigated a wide range of biases. The current study focuses on overconfidence bias.

Self-assurance that results from having faith in one's own abilities, judgement, and capabilities is called confidence. It is a person's inner perception of themselves. Overconfidence is a biased approach to a given circumstance. Someone who is overconfident overestimates his abilities, knowledge, opinions, and beliefs and exudes more confidence than is necessary in a given circumstance. Due to their overconfidence, investors believe that other people's perceptions, emotions, sentiments, and moods influence their investment decisions. However, they make their own conclusions based on thoughtful and well-reasoned concepts. Their mindset pushes them to the point where they consider everything that goes against the opinions of others to be absurd and nonsensical. The amount of risk included in their financial strategy doesn't really concern them. These people engage in excessive trading. Not only do they trade more, but they also take on more risk. Being overconfident is not always a bad thing.

The purpose of this study is to ascertain how overconfidence affects investment decision-making behaviour and how it relates to information search.

### **Economic Expectations**

Forecasted expectations about the economy that indicate the kind of performance a company will exhibit in the upcoming time, such as next month, next year, or another duration, are known as economic expectations. These expectations may include projections regarding the amount of work, the organization's output and growth, the trade balance, and the rate of inflation in the economy. Economic expectations are a major factor in choosing investments. These projections cover both the company's potential earnings in the future and the general state of the national economy. Well-known variables that influence financial decisions about investments include the company's past success, projected increases in capital and bonuses, plans for dividend distribution, and the company's expected profitability, among others.

## **II. OBJECTIVES OF THE STUDY**

Following are the objectives of the study:

1. To ascertain how the overconfidence bias affects the way that people make financial decisions.
2. To investigate how economic expectations impact the way people make investment decisions.

3. To investigate how the overconfidence bias affects the way people look for information.
4. To determine how economic expectations affect the search for information.
5. To ascertain how information search influences the behaviour of those who make investment decisions.

### **III. LITERATURE REVIEW**

Lin (2002) in their study concluded that to gain a better understanding of how customers seek for information when making investment decisions. A conceptual model was developed to examine the scope of consumers' information search, drawing on methodologies from the fields of economics, psychology, and information processing. This study conducted an empirical investigation into the elements influencing consumers' information search behaviour and the amount to which they use information sources when looking for investments, an intangible product. The data used in the investigation came from the 2000–01 MacroMonitor. The findings of this study add to our understanding of the two primary information search issues: how much and where consumers look for information about investment goods. These issues are further explored in the literature on the nature of investment decisions and consumer information search.

Tseng (2012) studied on the information search elements by talking about the impact of heuristics—a condensed information search technique—on specific investment decisions. They also investigated how income affects their extended information search model in a moderating way. A survey of 378 investors who had participated in investment experiments from financial holding organisations was conducted using multiple-group structural equation modelling. The results, which focus on two aspects of investing in stocks, options, and mutual funds, indicate that those who are more risk averse are more likely to look for additional information. The preferences for financial investments are significantly influenced positively by heuristics. Investor interest in mutual fund investments may rise because of an abundance of digital information through increased advice-seeking information search and reliance on heuristics. They clarified income differences in individual information searches in investment decision-making.

According to published research of Qasim, Hussain, Mehboob, & Arshad (2019), some biases affect how investors make decisions. Although the foundation of fundamental analysis is the idea that investors make logical decisions, actual investor behaviour may differ. This study illustrates how Pakistani investors' decision-making is influenced by herd mentality and overconfidence biases. 150 respondents who were active in the stock market were given questionnaires, of which 100 were completed, to gather the necessary data for the proposed study. Using the Ordinary Least Square

(OLS) method, it was empirically evaluated if herding behaviour and overconfidence biases were related to investors' decision-making. The findings demonstrate that overconfidence biases and herding behaviour had a major impact on Pakistani investors' decisions.

Adiputra (2021) examined how psychological characteristics, such as overconfidence, representativeness bias, and risk tolerance, affect investors' ability to make emotional and cognitively driven investing decisions. Purposive sampling is the method used to acquire the sample, which consists of 230 Indonesian stock investors. The application called Smart PLS 3.2.8 is used to analyse the data. According to this study, decision-making about investments is heavily influenced by risk tolerance, representativeness bias, and overconfidence. The paper's practical implications urge investors to exercise greater caution when making investment decisions by relying less on their overconfidence, representativeness bias, and risk tolerance. For professionals and decision-makers in financial institutions, it offers knowledge and awareness about managing cognitive and emotional biases in investment management. This paper assists investors in selecting more effective investment instruments and helps them avoid making costly mistakes again. These mistakes arise from a failure to identify bias and valuation errors, which leave us all susceptible to making poor investment decisions. For this reason, controlling "mental mistakes" by investors requires concentrating on particular investment techniques.

Kartini & Nahda (2021) explained that over the past 20 years, the field of finance has undergone a paradigm change from standard to behavioural, which clarifies the relationship between emotions and cognition in financial decision-making. The purpose of this study is to investigate how different psychological aspects affect people's decisions about investments. The two types of psychological components under investigation are cognitive and emotional characteristics. We look at how anchoring, representativeness, loss aversion, overconfidence, and optimism biases affect investor decisions from a cognitive perspective. The impact of herding behaviour on investment decisions is examined from an emotional perspective. Utilising a survey method and snowball sampling, a quantitative methodology yields 165 questionnaires from individual Yogyakarta investors. In addition, they tested each hypothesis using the One-Sample t-test. The study's conclusions demonstrate that all the factors—representativeness, optimism, overconfidence, loss aversion, anchoring bias, and herding behaviour—have a big impact on investing choices. These finding highlights how behavioural aspects affect investors' judgements. By minimising all potential biases, it improves investors' capacity to make more informed decisions and adds to the body of literature already in existence regarding the dynamics of investor behaviour.

#### **IV. RESEARCH METHODOLOGY**

To gather information from possible investors for analysis, a questionnaire derived from earlier research has been modified. The National Stock Exchange investors receive the questionnaires. There are 300 questionnaires distributed in all, and 275 of those are returned by respondents. Ninety-two percent of investors responded. These twenty-five questionnaires are not returned because ten of them are incomplete and fifteen were completed by unrelated individuals. Therefore, data of 275 questionnaires were employed in the analysis.

Convenience sampling is the sample strategy that were applied in this investigation. The gathered data is analysed using multiple regression analysis and descriptive analysis. Cronbach's alpha, which is used to measure reliability, yields an overall reliability score of 0.873 in Table 1, while exploratory factor analysis (EFA) is used to test the validity of the questionnaire. A factor loading of more than 0.4 is regarded as practically important for an item. Except for one item, which has a factor loading of 0.38, all the questionnaire's items have factor loadings above 0.4; nonetheless, this item has not been changed because all of the questionnaire's items were taken from legitimate surveys used in earlier research.

#### **V. HYPOTHESIS OF THE STUDY**

The following hypothesis are examined in this study:

**H1:** Investors' economic expectations positively impact their investment decision making behaviour.

**H2:** Investors' economic expectations have positive impact on information search.

**H3:** Information search influences investment decision-making behaviour in a positive way.

**H4:** The relationship between economic expectations and investment decision-making behaviour is mediated by information search.

**H5:** Overconfidence bias influences investment decision-making behaviour in a positive way.

**H6:** Information search is positively impacted by overconfidence bias.

**H7:** The association between overconfidence bias and investment decision-making behaviour is mediated by information search.

#### **VI. RESULTS & DISCUSSION**

Tables 2, 3, and 4 provide descriptions of the findings from the regression analysis, correlation analysis, and descriptive statistics, respectively. The study's initial hypothesis—that there is a substantial correlation between economic expectations and decision-making behavior—has been confirmed. The explanation for the 30 % shift in decision-making behaviour is the investors' economic

expectations. Other components in this equation account for the remaining 70% of the effect on decision-making behaviour. The next association can be examined once the relationship between the predictor and outcome variables has been confirmed to be significantly connected, as this is a prerequisite for conducting additional tests.

The second hypothesis is likewise accepted in this analysis since the second equation of the first model shows that the effect of information search on economic expectations is 37.4% and that the relationship is positive with  $\beta$  of 0.608 and a p-value of 0.000 and less than 0.05. The third relationship's results indicate that information search has a positive and significant impact on decision-making behaviour ( $R^2=0.832$ ,  $\beta=0.876$ ,  $P= 0.000$ ). Thus, the H3 hypothesis has been accepted in this instance as well, and the impact of information search on decision making is found to be 83.2%. Finding the relationship between the dependent variable, or decision-making behaviour, and the simultaneous mediation variable, or information search, and predictor, or economic expectations, is the objective of the first model's final equation. In this investigation of the relationship between the variables, the R-square values are, once again, 0.301 and 0.832. When a mediator is included, the value of  $\beta$  is -0.21, indicating a negative relationship between the economic expectations and the outcome. It implies that investors' judgements are adversely affected by economic expectations if they adequately gather market information prior to making an investment.

**Table 1: Reliability Test**

Variables	Cronbach's Alpha	Items
All Variables	0.769	24
Overconfidence Bias	0.717	7
Information Search	0.698	7
Economic Expectations	0.743	5
Decision Making Behaviour	0.679	5

**Table 2 Descriptive Statistics**

Variables	N	Mean	Std. Dev	Skewness		Kurtosis	
				Statistic	S.E.	Statistic	S.E.
Economic Expectations	275	3.45	0.645	-0.243	0.150	-0.543	0.300
Information Search	275	3.56	0.564	-0.254	0.150	-0.128	0.300
Decision Making Behaviour	275	3.61	0.743	-0.412	0.150	0.721	0.300
Over Confidence	275	3.73	0.655	-0.433	0.150	-0.165	0.300

Table 3 Correlation Matrix

		Economic Expectations	Information Search	Decision Making Behaviour	Confidence Bias
Economic Expectations	Pearson Correlation	1			
	P-Value				
	N	275			
Information Search	Pearson Correlation	0.605	1		
	P-Value	0.000			
	N	275	275		
Decision Making Behaviour	Pearson Correlation	0.563	0.922	1	
	P-Value	0.000	0.000		
	N	275	275	275	
Confidence Bias	Pearson Correlation	0.453	0.613	0.794	1
	P-Value	0.000	0.000	0.000	
	N	275	275	275	275

Table 4 Results of Regression Analysis

Regression Paths	R <sup>2</sup>	T	B	P
Economic Expectations → Decision Making Behaviour	0.301	10.112	0.545	0.000
Economic Expectations → Information Search	0.374	12.245	0.608	0.000
Information Search → Decision Making Behaviour	0.832	39.534	0.876	0.000
Economic Expectations → Information Search → Decision Making Behaviour	0.813	34.540	-0.21	0.412
Overconfidence Bias → Decision Making Behaviour	0.643	18.142	0.743	0.000
Overconfidence Bias → Information Search	0.456	12.765	0.651	0.000
Overconfidence Bias → Information Search → Decision Making Behaviour	0.932	13.923	0.674	0.000

In the second model, decision-making behaviour is the dependent variable, information search is the mediating variable, and overconfidence bias is the predictive variable. The first equation evaluates the relationship between overconfidence bias and decision-making behaviour; the findings indicate a positive and substantial level of significance ( $R^2=0.643$ ,  $\beta=0.743$ ,  $P=0.000$ ).

Assuming that information search is the outcome variable and overconfidence bias is the predictor, the results show that overconfidence and the mediator have a positive and significant relationship ( $\beta = 0.651$ ,  $p = 0.000 < 0.05$ ,  $t = 12.765$ ,  $R^2 = 0.456$ ). This means that 45.6% of the variation in information search can be explained by overconfidence bias and  $\beta = 0.651$  in the test result. Information search and decision-making behaviour have been shown to positively and significantly correlated.

The relationship between overconfidence bias and investment decision-making behaviour through information search behaviour mediation is the fourth relationship that were identified. For overconfidence bias and information search, the respective  $R^2$  values are 0.643 and 0.932. Overconfidence bias now has a 64.3% influence on decision-making behaviour and a 93.2% effect on information search. The  $\beta$  values for both variables indicate a positive correlation. Even after accounting for the mediating role of information search, there is still a substantial and positive correlation between overconfidence bias and decision-making behaviour.

## VII. LIMITATIONS OF THE STUDY

The main limitation in this research is that it makes assumptions about market participants, which means it doesn't depict the investment habits of investors in different parts of the Country. The data is limited to the investors of Hazaribagh district that has used to draw conclusions about the outcomes. Furthermore, the study only considers one bias, namely the overconfidence bias. Even though this bias is one of the more prevalent and influential biases among investors, understanding the impact of biases on investor behaviour requires understanding of more biases than just focusing on one bias.

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**A STUDY ON EFFECTIVENESS OF EMPLOYEE ENGAGEMENT IN VM FOOD  
PRODUCTS PRIVATE LIMITED AT PANRUTI**

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**ABSTRACT**

*The purpose of this study is to find the antecedents that influence employee engagement as the organizational Engagement deteriorated due to high turnover and related issues such as high absenteeism, low loyalty and productivity. Employee engagement is the level of commitment and involvement an employee has towards his organization and its values. It is a measureable degree of an employee's positive or negative emotional attachment to their job, colleagues and organization which profoundly influences their willingness to learn & perform at work. Employee engagement has a direct impact on the employee's productivity. This exploratory research was conducted among employee working in food processing sector to test the relationship between the antecedents comprising of employee communication, employee development, reward and recognition and extended employee care.*

**I. INTRODUCTION**

Managers agree that modern business demands higher productivity and more efficiency, than in previous times. Companies are trying to increase their performance in order to place their company ahead of the competitors. At some point, satisfied employees, content with their work experience, was good formula for success, as a satisfied employee, who wanted to stay with a company, contributed to the workforce stability and productivity. But those times have changed. Nowadays, the business environment is global and competitive and simply satisfied and stable employees are not enough to bring necessary business results. Satisfied employees may just meet the work demands, but this will not lead to higher performance. In order to compete effectively, employers need to go beyond satisfaction - employers must do their best to inspire their employees to apply their full potential and capabilities to their work, if they do not, part of the valuable employees' resources remains

unavailable for the company. Employee engagement is the best tool in the company's efforts to gain competitive advantages and stay competitive.

## **II. COMPANY PROFILE**

VM Food Products Private Limited is a Private incorporated on 19 June 2019. It is classified as Non-govt Company and is registered at Registrar of Companies, Chennai. Its authorized share capital is Rs. 40,000,000 and its paid up capital is Rs. 37,069,000. Directors of VM Food Products Private Limited are Velliangiri Shanmugapriya and Veeraviswamithiran Palanisamy. The main objective is to ensure sustainable economic, food and nutrition security by through processing in an efficient manner. We are prominent manufacturer, exporter and supplier of Cashew Nut and All types of Flavored Cashew Nut. Our diverse range of products is processed as per customer's specification within the stipulated time frame. Customers from across the globe can process quality proven range from us at prices that are sure to be competitive.

## **III. STATEMENT OF THE PROBLEM**

Difference in beliefs and thoughts, Leadership problem ,Engagement tends to look at the effect but not the cause, Engagement measures downwards, Employees supporting company policies with lower Enthusiasm, Lack of coordination among Workers, Increased attrition rate Increased attrition rate The above mentioned problems are faced by VM Food Products , are araised due to new emerging trends in the company and also increased disposable income of employees ,results in uncertainty in demand, This project help to find out the reason which affect the employee engagement adversely.

## **IV. OBJECTIVES OF THE STUDY**

- To determine the level of engagement of the respondents regarding their job.
- To study and understand the job satisfaction among the employees.
- To study the various factor which influencing job satisfaction and satisfaction from the company
- To raise the awareness concerning the importance of employee engagement in the workplace.

## **V. SCOPE OF THE STUDY**

- Measure current level of employee engagement
- Identify the problem areas
- Improve overall organizational effectiveness

- Increases employees trust in organization
- Clarity of company value

**VI. RESEARCH METHODOLOGY**

Research methodology is a way to systematically solve the research problem. The aim of the study was to analyze the engagement level of employees of company. Employees were asked to fill questionnaire to get the information from them. However this was a delicate issue as many respondents would not comment about their organization policies and systems as they were scared to reveal the reality. The findings and conclusions are based on the knowledge and experience of the respondents sometimes may subject to bias

**VII. DATA ANALYSIS AND INTERPRETATION**

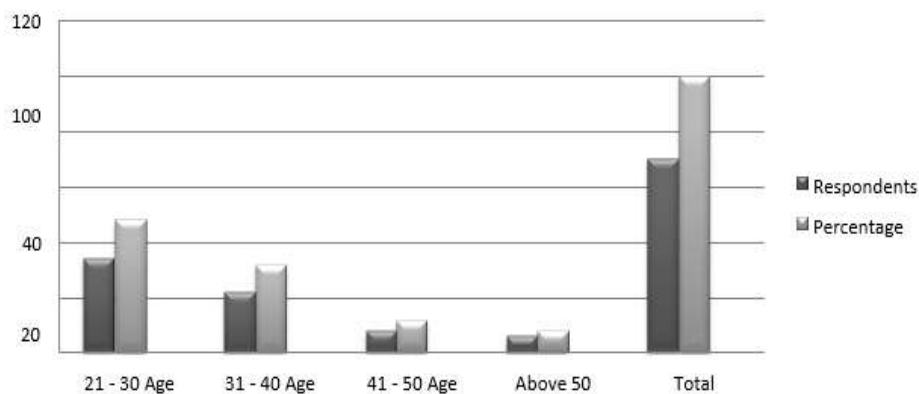
The survey was carried out among the current employees working for VM Food products pvt, Ltd. of the 70 respondents 46were Female and 24 were male,

**PERCENTAGE ANALYSIS**

**TABLE 1: AGE**

S.NO	Frequency	Respondents	Percentage%
1	Above 21-30 years	34	48
2	Above 31-40 years	22	32
3	Above 41-50 year	8	12
4	Above 50	6	8
	<b>Total</b>	<b>70</b>	<b>100</b>

**CHART -1 AGE**



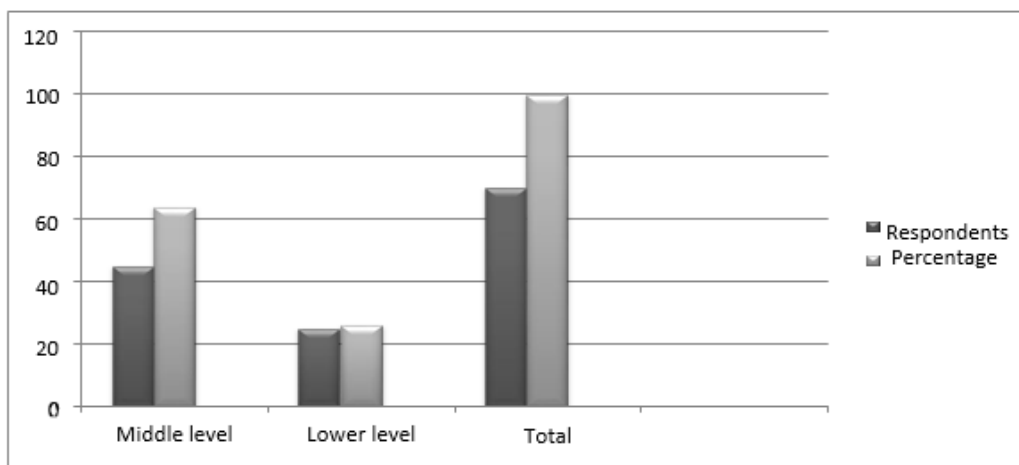
**INTERPRETATION:**

48% of the respondents are in the age group 21-30 years, 32% of the respondents between 31-40 years old, 12% of the respondents in 41-50 years old, and 8% of the respondents above years 50 of age. Majority of the respondents in the age group 21-31 years.

**TABLE 2: EMPLOYEES IN ORGANIZATION HIERARCHY**

S.NO	FREQUENCY	RESPONDENTS	PERCENTAGE%
1	Middle level employees	45	64
2	Low level employees	25	26
	<b>Total</b>	<b>70</b>	<b>100</b>

**CHART 2: ORGANISATIONAL HEIRARCHY**



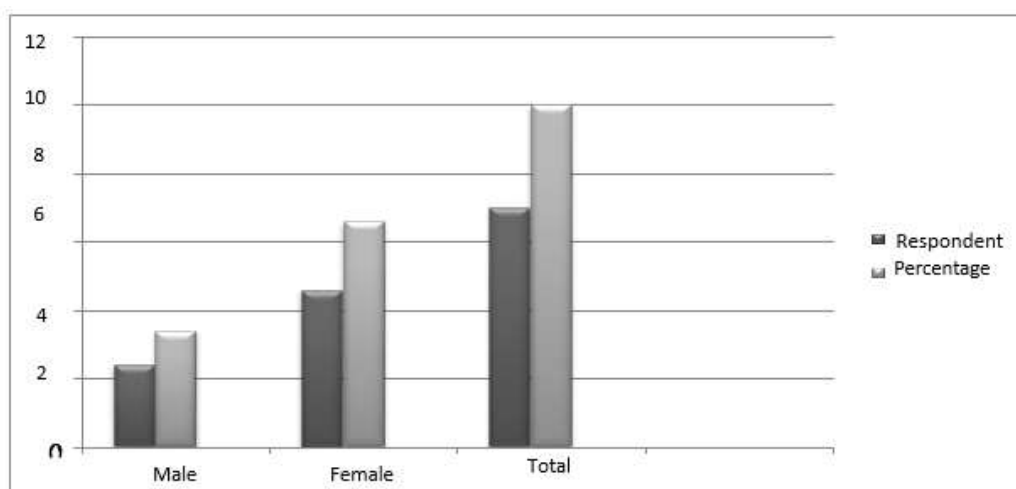
**INTERPRETATION:**

26% of the respondents are lower level employees, 64% of the respondents are to the middle level employees. Majority of the respondents are middle level employees

**TABLE 3: GENDERS**

S.NO	Frequency	Respondents	Percentage%
1	Male	24	34
2	Female	46	66
	<b>Total</b>	<b>70</b>	<b>100</b>

**CHART 3: GENDERS**



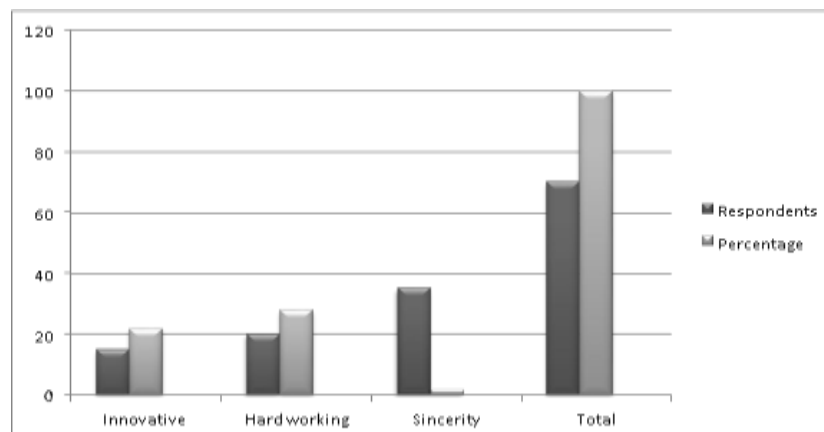
**INTERPRETATION:**

34% of the respondents are male employees and 66% of the respondents are female employees. Majority of the respondents are female employee

**TABLE 4: EXPECTATION FROM THE EMPLOYEES**

S.NO	Frequency	Respondents	Percentage%
1	Innovative ideas	15	22
2	Hard working	20	28
3	Sincerity	35	50
	Total	70	100

**CHART 4: EXPECTATIONS FROM EMPLOYEES**



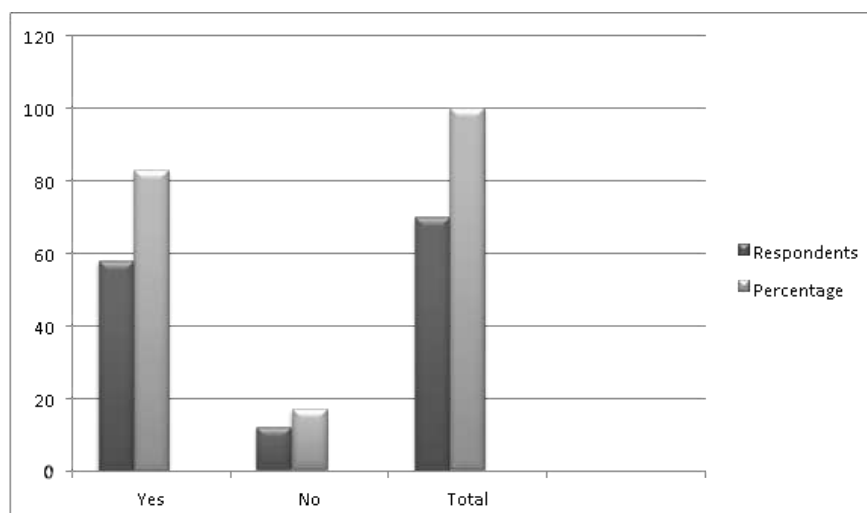
**INTERPRETATION:**

22% of the respondents have contributed towards INNOVATIVE IDEAS,28% of the respondents thought HARD WORK, 50%of the respondents by being SINCERITY. Majority of the respondents have contributed towards Innovative ideas.

**TABLE5: POSSIBILITIES FOR PERSONAL GROWTH**

S.NO	Frequency	Respondents	Percentage%
1	Yes	58	83
2	No	12	17
	<b>Total</b>	<b>70</b>	<b>100</b>

**CHART 5: POSSIBILITIES OF PERSONAL GROWTH**



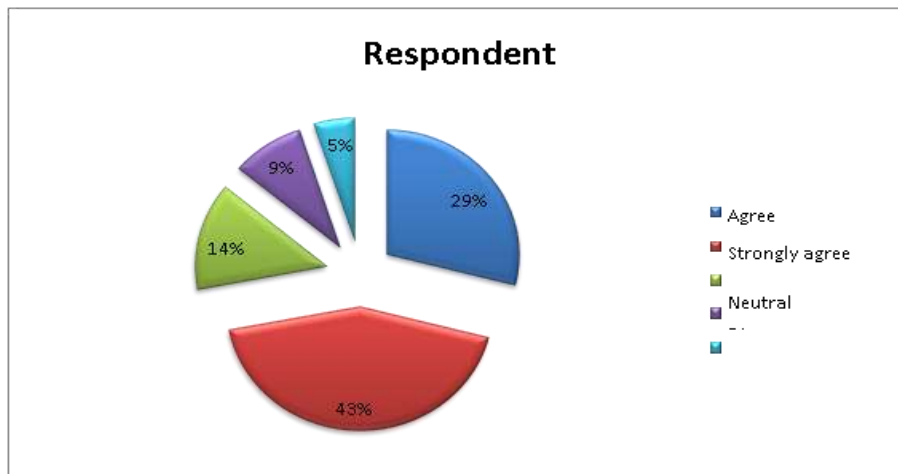
**INTERPRETATION:**

83% of the respondents accepted working in this organization will help them grow personally and 17% of the respondents not accepted working in this organization will help them grow personally view. Majority of the respondents accepted for possibilities of personal growth.

**TABLE 6: WORK LIFE BALANCE**

S.NO	FREQUENCY	RESPONDENT	PERCENTAGE%
1	Agree	20	29
2	Strongly agree	30	43
3	Neutral	10	14
4	Disagree	06	9
5	Strongly disagree	04	5
	Total	<b>70</b>	<b>100</b>

**CHART 6: WORK LIFE BALANCE**



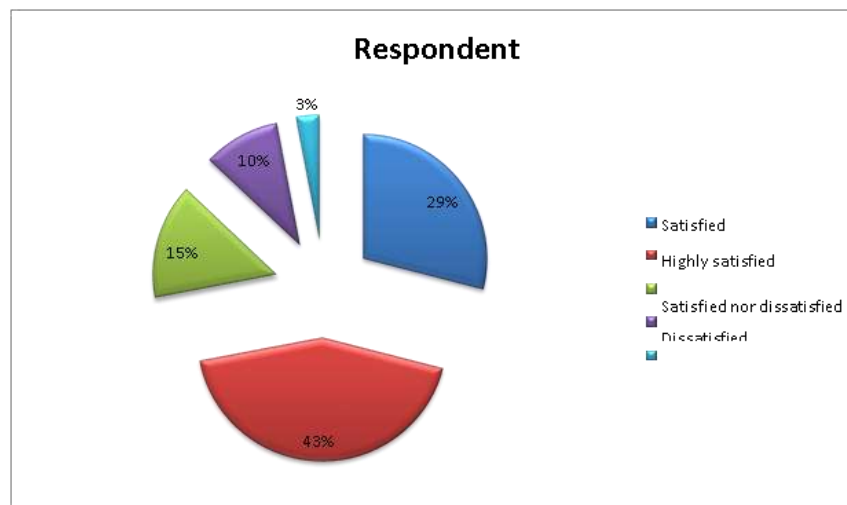
**INTERPRETATION**

43% of the respondents have strongly agree with work life balance, 29% of respondents Agrees the work life balance, 14% are respondents are neutral over work life balance, 9% respondents disagrees the work life balance, 5% of respondents Strongly disagree on work life balance

**TABLE 7: JOB SATISFACTION**

S.NO	FREQUENCY	RESPONDENT	PERCENTAGE%
1	Satisfied	20	29
2	Very satisfied	30	43
3	Satisfied nor dissatisfied	11	16
4	Dissatisfied	7	10
5	Very dissatisfied	2	7
	Total	<b>70</b>	<b>100</b>

**CHART 7: JOB SATISFACTION**



**INTERPRETATION**

29% of the respondents are satisfied in their work, 43% of the respondents are highly satisfied in work, 15% of respondents are neither satisfied nor dissatisfied, 10% of respondents are dissatisfied, 3% of respondents are highly dissatisfied.

**CHI-SQUARE ANALYSIS**

**ASSOCIATION BETWEEN EMPLOYEE ENGAGEMENT APPLICABILITY OF PERFORMANCE IMPACT IN COMPANY.**

H0: There is no significant relationship between the Job performance and employee engagement in organization.

H1: There is significant relationship between the job performance and Employee Engagement in organization.

**TABLE 1:**

OI	EI	OI-EI	(OI-EI) <sup>2</sup>	(OI-EI) <sup>2</sup> /EI
22	21	1	1	0.047
31	34	-3.0	9	0.264
18	23	-5.0	25	1.087
12	4	8	64	16.00
2	3	-1	1	0.333
<b>TOTAL</b>				<b>17.73</b>



Calculated Value =  $\sum (OI-EI) ^2/EI = 17.73$

Degree Of Freedom = (R-1) (C-1) = (5-1) (2-1) = (4) (1) = 4

Tabulated value for 4 degree of freedom at 5% level of significance is = 9.488

**RESULT:**

The calculated value is higher than the tabulated value, therefore H1 is accepted. So there is significant relationship between the job performance and employee engagement.

**VIII. FINDINGS OF STUDY**

- Around 69% of the employees have engaged in organization policies, Majority of the respondents agree that there are possibilities of personal growth in the organization.
- Majority of employees preferred training scheme in entire organization, Rewards are given to the employees for their performances compared to other motivational factors.
- Most of the respondents rated good communication as the strength of engagement in the organization.
- The enthusiasm of the employees is effective in the organization. 80% of the respondents understood the concept of employee engagement. There is significant relationship between job performance and employee engagement has impact in organization through chi-square analysis.

**IX. SUGGESTIONS AND RECOMMENDATIONS**

- The ‘suggestion box’ can be sophisticatedly can be changed to ‘employee involvement association’ (EIA) because it is the keystone of organizational development nurturing the engagement and empowerment of people.
- Employees have diverse needs so this diversity requires flexible and individually directed support. Benefit plans like cash balance plan which is defined contribution plan specify the amount of contribution made by the employer towards an employees retirement account can be implemented.
- Incentive awards to be designed to reward employees, ideas ,suggestion and solutions that result in cost saving and generate revenue. Cash award or gift certificates can be as per the policies and procedures governing recognition/incentive programs.
- Awards may be in form of gift cards with a monetary value.
- Rewards and recognition should be fair, transparent, inclusive, timely and varied.

## **X. CONCLUSION**

As Per the above observation, organization expects few employees who are not engaged and few who are nearly engaged and can be changed to an engaged employee by their supervisors by proper planning. Employee engagement is an buzz word term for employee communication. It is the positive attitude held by the employee towards the organization and its values. It is rapidly gaining popularity, use and importance in workplace& impacts organization in many ways. Employee engagement emphasis the importance of employee communication on the success of business. An organization should thus recognize employees, more than any other variable, as powerful contributors to a company's competitive position. Therefore employee engagement should be continues process of learning, improvement, measurement and action. We would hence conclude that raising and maintaining employee engagement lies in the hands of the organization and requires a perfect blend of time, effort, commitment and involvement to craft a successful endeavor.

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## **THE CRUCIAL ROLE OF PUBLIC RELATIONS IN A MANUFACTURING ORGANIZATION**

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### **ABSTRACT**

*This study delves into the value of PR and its function inside a manufacturing business. The field of public relations aims to bridge the gap between an organization's internal operations and its external stakeholders. The goals and methods of public relations are what give programs their appeal. When we talk about the quality of public relations in organizations, we're talking about things like: helping management achieve organizational goals; believing in transparency and accountability; respecting citizens' rights; identifying government responsibilities and obligations; having the right people in charge of the work; and having the right people criticize and evaluate the organization's programs, practices, and strategies. As more and more tasks are automated by computers, public relations specialists have emerged to fill the void left by shrinking administrative departments. Several Bangalore-based factories were selected. Industrialization is the genesis of modern economic expansion.*

### **1. INTRODUCTION**

India is rapidly becoming one of the most promising regions for the development of the manufacturing sector. The purpose of this study was to investigate how India's manufacturing industry may benefit from a more fluid approach to strategy. The factors that affect the manufacturing industry in different U.S. states were studied. Some of the reasons why states like Bangalore and Andhra Pradesh do better than others include their superior infrastructure, their consistent application of tax and labor regulations, and their fulfillment of the desired natural measures. The International Monetary Fund (IMF) has expressed concern at the rapidity of the legislation's passage.

The manufacturing sector is often regarded as an important contributor to developing economies' overall development in wealth. This study inquires about whether or not drastic shifts in the development features of manufacturing explain the dismal state of industrialization in developing nations, and what the future holds for the manufacturing sector as a whole. The findings show that the

decline in manufacturing regard included and manufacturing business shares in a number of developing countries is not attributable to a shift in the manufacturing sector's development potential, but rather to the failure of manufacturing development in an infinite number of countries against the backdrop of rapid manufacturing development in a small number of countries, leading to a convergence of manufacturing practice.

This indicates that regional or state-level testing for the joining hypothesis and, in the case of manufacturing, the role of manufacturing as an engine of development is less controversial than its global counterpart.

### **1.1 Level:**

In this environment, we conduct testing of: Do the states of India have evidence that manufacturing has served as a "engine of growth"? Is dualism (the proximity of the unorganized sector) a factor in the development of industry? Finally, is the current method of industrialisation effective in creating enough jobs to absorb the expanding human population? Recent decades have witnessed a sea shift in how economic development is conceived of. Traditional neoclassical growth models have provided a framework for endogenous growth models, which present a more realistic picture of firms exercising market dominance, benefiting from scale economies, and investing in research and development to determine innovation endogenously rather than relying on the assumptions of perfect competition, diminishing returns, and exogenous forces.

As the epicenter of creative disruption, manufacturing is given a central role in this revised definition. There are a number of norms that suggest manufacturing might be an engine of development; nevertheless, these norms need precise validation in the current scenario of rising ICT use. The 'merging' of countries is a subject that has been hotly contested in recent literature on economic development. Under the standard neoclassical model, convergence in GDP per capita is assumed to occur automatically due to diminishing returns to the capital group, provided there is access to comparative innovation, virtually identical sparing rates, and an indistinguishable rate of labor compel growth.

### **1.2 Manufacturing and other types of capacity are being used in every sector.**

Science, information management, logistics, transport, sales, HR, and PR. One of the most crucial skills is marketing, since it is the means through which goods and services are distributed to consumers. It's a crucial step for any company that relies on the fruits of its labors to succeed. As defined by the American Marketing Association, "marketing is the process by which society, to supply

its utilization needs, advances distributive frameworks made out of members, who, working together under limitations - technical (economic) and ethical (social) - make the exchanges or streams which settle market partitions and result in return and utilization."

We've chosen a wide range of Bangalore's manufacturing firms. Industrialization is the genesis of modern economic expansion. The phrase "manufacturing as the motor of growth" describes the observed association between industrialization and high rates of rise in per capita genuine pay. Growth in the industrial sector is correlated with the rate of other socioeconomic changes such as modernization, urbanization, technological progress, lifestyle shifts, etc. By breaking down growth rates in important criteria like value-added, yield, and work by output since the 1980s, we aim to do a comparable audit of the manufacturing sector in Bangalore.

### **1.3 Definition of public Relation**

These are a portion of the main definitions that few experts have endeavored to write to streamline the calling. Embraced the assignment of group such definitions distributed since the turn of the century, breaking them into real components, and ordering the essential, focal thoughts that these definitions included. From his investigation of 472 definitions, he created a working definition that is both applied and operational:

Public relations is a distinctive management function which helps establish and maintain mutual lines of communication, understanding, acceptance and cooperation between organization and its publics; involves the management of problems or issues; helps management to keep informed on and responsive to public opinion; defines and emphasizes the responsibility of management to serve the public interest; helps management keep abreast of and effectively utilize change; serving as an early warning system to help anticipate trends; and uses research and sound and ethical communication as its principal tools.

## **II. IMPRTANCE OF PUBLIC RELATIONS FOR MANUFACTURING**

All things considered, manufacturing is an industry that has a tendency to be commanded exceptionally logical people who, in spite of their huge learning base and aptitude, may not be excessively worried about offering their rewards for so much hard work to whatever remains of the world. A recent report by the Hillsborough-Pinellas Manufacturing Gap Analysis uncovered that in light of this pattern, there is a noteworthy separate between the manufacturing industry and the training/mindfulness expected to increase new specialists and construct new income.

The most intense sequential construction system hand device, notwithstanding when completely operational, is still "only a thought" without mindfulness. Luckily, there are strategies to better your manufacturing public relations. Like manufacturing, and public relations is a particular specialty with specific techniques, and actualizing a campaign is an awesome method to support your business-to-business deals. Here are some ways B2B PR can profit your manufacturing company.

## **2.1 Branding**

You, as a manufacturer, have the option of creating items that are either simple or complex. Experts in manufacturing public relations can take your technical specifications and transform them into interesting narratives that will pique the interest of prospective buyers without sacrificing any of the critical information you need to flaunt to the market.

## **2.2 Face to face awareness**

Your items, as a producer, might either be simple or complex. While maintaining the crucial information you need to wow prospective buyers, professional manufacturing PR gurus may assist with translating your specific requirements into more palatable causes of fascination.

## **2.3 Creditability**

Weakening is the exact opposite of what you want from the information for your manufacturing business. A goofy campaign will do more harm than good given the very specialized nature of the sector; but, focused efforts using technical white papers, public comments, and expert commentary may boost your company's credibility in the sector.

## **2.4 Public relations objectives of a company**

Stronger involvement in improving employee relations with the aim of boost each employee's productivity, lower absenteeism, and foster a deeper sense of "family" among all workers.

More research-based efforts will be made to promote the company's reputation as a forward-thinking, giving corporate citizen of the national and local communities where its plants are located.

Particular public relations specialists worked in tandem with sales and marketing to enhance the brand reputation of the whole company's product line.

Improved coordination between sales and marketing to support certain marketing initiatives, roll out new goods, maintain dealer relationships, and provide sales training.

Greater forethought is needed, in collaboration with management, to maximize the contributions of public relations to the accomplishment of company goals and the resolution of significant business issues.

More yearly, quarterly, and monthly planning and assessment is required to guarantee that the public relations campaign is particularly geared toward advancing the most crucial business objectives.

More 'Imagineering' should go into the development and management of strategic PR initiatives as well as the promotion of businesses and goods.

Anticipated contribution to better communications throughout the company among all its elements.

### **III. THE ROLE OF PUBLIC RELATIONS IN MANAGEMENT**

Public relations is a confusing field that many people do nowadays, folks from all around. One company will employ some public relations specialists. Others work for public relations agencies that serve a variety of businesses. Public relations professionals work for companies, governments, trade groups, charity organizations, educational institutions, hospitals, hotels, and a variety of other organizations. Both big and small businesses employ them. Many public relations professionals focus only on their own country, while others develop their skills on a global scale.

They believe that excellence in quality is priceless. Commonplace quality is an impetus for them and ensures the delivery of exceptional goods that exceed expectations. They now use an effective quality control and management system.

**3.1 Growth:** They enrich people's lives, elevate society, and raise demands for basic luxuries for the

**3.2 Society.** They grow at the same time as the rest of the population that is linked to us. They put forth a lot of effort to provide the highest quality and do their part to create a better nation.

**3.3 Outperforming Client Expectations:** We focus on customer demands and work to make every client's experience better. Value creation and delivery are our top priorities at all times. By producing only the finest, they aim to exceed their expectations and provide great customer service.

#### **3.4 Public Relations and the Media**

Lack of trust between the media (especially newspapers) and PR is a known problem that often has an influence on social and political structure. Since newspapers have more fundamental access to the performance organization, governmental forces, and technology, these interactions have greater

challenges, especially those involving public relations and press columnists. Public relations and the media have long been aware of their expertise and independent nature. The interaction of media with public relations and the dialogue between the two has its own unique challenges.

Growth Pattern and Pace of Industry Modern economic expansion is a result of industrialization. Manufacturing is said to be the "engine of growth" in Madhya Pradesh, a state where industrialization provides to rise to high rates of increase in real per capita income. Modernization, urbanization, technological advancement, lifestyle changes, and other factors all need industrialization, and the timing of their occurrences is correlated with a faster rate of expansion of commercial sector. By dissecting growth rates in certain important indicators like value-added, yield, and work by output during the 1980s, we attempt a close examination of the growth performance of Bangalore's manufacturing sector. Bangalore is often believed to be industrially in reverse and to have low manufacturing sector development.

Manufacturing a growth engine the eight main channels outline how manufacturing might function as a growth engine. The growth path that many modern wealthy countries have adopted is one that moves from agriculture to industry to services. The manufacturing sector has better productivity and is more specialized, thus moving personnel and assets from farming to manufacturing would instantly increase profitability (known as an auxiliary change reward), contributing to growth. Basic transition is complicated by the transfer of assets from production to services. This is so because services are less efficient than production. As a result, overall per capita growth will probably start to slow down as the service sector's offer expands.

#### **IV. THE PRINCIPLE COMPONENTS OF MARKETING**

- The goal of marketing is to fulfill the needs, desires, and requirements of the consumer.
- Everyone inside the company has to embrace the marketing mindset.
- Future requirements must be recognized and foreseen.
- Typically, there is an emphasis on profitability, particularly in the business sector. This need not always be the case, however, as public sector organizations and not-for-profit organizations accept the notion of marketing.
- More current definitions take into account how marketing affects society.
- More recent definitions recognize the influence of marketing upon society.

This is the main reason people keep coming back to our company. In order to achieve the goals in the market, a great deal of practice is being put in. These drills are broken down into four categories—item, value, progression, and placement—for ease of comprehension. Blend marketing describes such



an approach. The 4Ps, or product, price, location, and promotion, are the manageable aspects of a product's marketing mix. These factors are weighed and measured until the optimal combination is found that satisfies both the product's target market and its financial backers.

## **V. ROLES OF NEW TECHNOLOGY**

Organizational communication has been profoundly influenced by technological advancements, particularly by the introduction of novel forms of communication. Innovation's true breakthroughs have shown communication's mediation in some forward-thinking new methods, so revolutionizing communication. Email, texting, phone messages, copies, sound and video conferencing, computer conferences, management information frameworks, group decision emotionally supporting networks, and so on have all recently been introduced to the workplace. The internet, World Wide Web, and other distant networks have had a profound impact on the structure, content, and methods of communication inside organizations.

## **VI. CONCLUSION**

Public relations, advertising, and marketing all rely on clear, persuasive communication to reach their audiences, use cognitive norms to better understand and influence customers, and employ basic data analysis to ensure they are reaching their target demographics. In addition to using your imagination to come up with ideas and messaging, you'll need to use your fundamental thinking skills to make sense of market research in these domains. An integrated marketing firm will do everything from devising the advertising strategy to creating the ads and buying the media time (whether it be print, television, or online) to promote the business. Here is a brief summary of the key divisions of a typical advertising agency that see to it that all of this gets done on time.

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**CULTIVATING INCLUSIVE EXCELLENCE: STRATEGIES AND BEST PRACTICES FOR DIVERSITY, EQUITY, AND INCLUSION (DEI) IN THE WORKPLACE**

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**ABSTRACT**

*It is crucial to create a friendly environment in the diverse and demanding workplace of today. The aim of this chapter is to present a comprehensive view of the strategies used by businesses to assure DEI (diversity, equity, and inclusion) in the workplace. After providing a perceptive historical perspective, this chapter delves into a number of intricate workplace issues, such as sexual orientation, gender, colour, and ethnicity. By highlighting the significance of fairness in organisational policies and practises, it addresses unconscious bias. The chapter also explores measurement methods, creating and executing successful training programs, and crucial elements of conquering obstacles and resistance.*

**I. INTRODUCTION**

Diversity, equality, and inclusion (DEI) have become essentials for organizations aiming for excellence in the quickly changing global scene of today. Workplace relations are changing as a result of the realization that different viewpoints, experiences, and skill sets promote creativity and improve organizational success. The evolution of practices and policies meant to promote diversity and inclusion can be better understood by looking at the historical background of DEI initiatives. Gaining an understanding of the change from affirmative action to more complex and comprehensive strategies is crucial. (Thomas, 1990). As companies throughout the world recognise the social and financial benefits of diverse and inclusive workplaces, the debate about DEI has also undergo a major shift.

Research has often demonstrated that DEI initiatives improve an organization's performance (Ferdman and Deane, 2014). Rather from being merely a moral obligation, adopting DEI is a strategic requirement that drives company success. A research by Blake (1991) and Cox (1994) emphasises the link between greater organisational competitiveness and cultural diversity. Additionally, research has demonstrated that diverse teams foster innovation and creativity (Jackson & Ruderman, 1999).

This chapter gives a thorough examination of DEI methodologies and best practises. It emphasises the need of equality in organisational policy development, addresses unconscious prejudices, and analyses the numerous elements of diversity. Furthermore, the chapter delves into the complexity of developing inclusive workplace cultures, including intersectionality, utilising Employee Resource Groups (ERGs), and implementing effective training efforts (Cox, 1993; Catalyst, 2018).

Recognising and appreciating diversity, equity, and inclusion (DEI) are cornerstones for companies as they deal with the challenges of a diverse workforce. This chapter provides practical ways for creating work settings in which each individual feels valued, respected, and empowered, making it an excellent resource for academics, human resource specialists, and leaders. By supporting inclusiveness, organisations may unleash the full potential of their workforce, encourage creativity, boost employee engagement, and ensure long-term success.

## II. DIVERSITY AT WORKPLACE

Recognising and appreciating diversity, equality, and inclusion (DEI) are critical pillars for organisations as they navigate the challenges of a diverse workforce.

### 2.1 Dimensions of Diversity

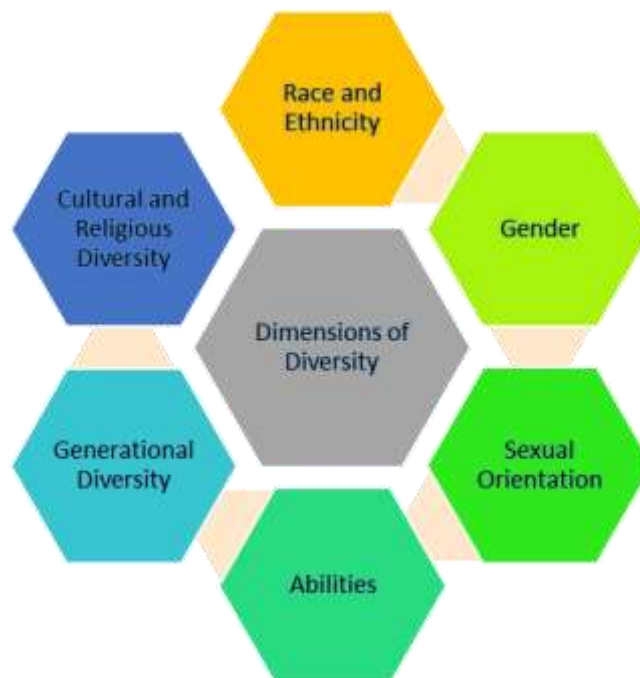


Figure 1: Dimensions of Diversity, Source: Author Composed

It is critical to address multiple facets of diversity in order to develop a truly inclusive workplace. According to Cox (1994), this includes recognising and supporting people of various racial and cultural backgrounds. Gender differences and the promotion of workplace equality for men and women, as proposed by Ely and Meyerson (2000), are critical. Furthermore, as Ragins and Cornwell (2001) emphasise, it is critical to embrace LGBTQ+ individuals and create safe spaces for people of different sexual orientations. Recognizing the abilities of individuals with disabilities, ensuring accessibility, and promoting inclusivity is vital, as emphasized by Shier et al. (2009). Bridging generational gaps and understanding diverse perspectives and work styles among different age groups, as described by Lancaster and Stillman (2002), is essential for collaboration. Lastly, valuing cultural and religious diversity, promoting cultural competence, and accommodating diverse practices, as suggested by Cox (1994), contribute significantly to an inclusive workplace environment. These principles collectively enhance workplace diversity and create a harmonious atmosphere for all employees (Cox, 1994; Ely & Meyerson, 2000; Ragins & Cornwell, 2001; Shier et al., 2009; Lancaster & Stillman, 2002).

## **2.2. Impact of Unconscious Bias**

In contemporary workplaces, the influence of unconscious bias has become a focal point of research and concern, shaping critical aspects such as decision-making, hiring processes, and promotions. Greenwald and Krieger (2006) have conducted extensive research in the realm of implicit bias, uncovering the hidden prejudices that affect these crucial areas. Stereotyping, a pervasive cognitive process, significantly shapes perceptions, behaviors, and interactions in professional settings. Biernat and Dovidio (2000) have delved into this phenomenon, shedding light on the profound impact of stereotypes. Their research underscores the urgency of implementing interventions that challenge these stereotypes, promoting a workplace culture that is free from biased assumptions and unfair judgments. Micro-aggressions, or subtle verbal and nonverbal behaviours with discriminatory undertones, present unique challenges in a variety of workplace settings. Extensive research has been conducted to combat this issue, emphasising the importance of awareness and intervention. Several researchers, including Sue et al. (2007) and Nadal et al. (2014), have investigated the complexities of micro-aggressions. Organisations can create a more inclusive environment where every individual is respected and valued by recognising and confronting micro-aggressions.

Real-world examples provide invaluable insights into successful strategies for fostering diverse, equitable, and inclusive workplaces. IBM's approach, which includes targeted recruitment, mentoring programs, and diversity training, has significantly impacted the company's culture and performance.

Similarly, Google's initiatives, encompassing unconscious bias training and external partnerships, have addressed diversity challenges, although not without hurdles. Procter & Gamble's Supplier Diversity Program stands out for supporting minority-owned and women-owned businesses, bringing substantial economic and social benefits for both the company and its suppliers. Thus, real world examples also illuminate the positive outcomes achieved through deliberate diversity and inclusion efforts. Therefore, understanding the intricacies of diversity and acknowledging unconscious biases are crucial steps toward fostering an inclusive workplace.

### **III. EQUITY AND FAIRNESS IN ORGANIZATIONAL POLICIES**

Creating a truly fair and just workplace requires a fundamental commitment to equity in all aspects of organizational operations. This commitment involves distinguishing between equality and equity, focusing on individual needs and circumstances (Rawls, 1971). Organizations play a crucial role in addressing societal inequalities by critically evaluating policies and conducting impact assessments to prevent biases related to gender, race, and other protected characteristics (Dobbin & Kalev, 2016; Pager & Shepherd, 2008). Equitable processes, including blind recruitment, transparent promotion criteria, and pay equity policies, ensure fairness and equal opportunities (Riach & Rich, 2002; Kalev, Dobbin, & Kelly, 2006; Blau & Kahn, 2017). Compliance with anti-discrimination laws, ethical considerations, inclusive leadership, and active employee participation further contribute to an equitable workplace (Beauchamp & Bowie, 2004; Cox & Blake, 1991; Freeman, 1984). By embracing these principles, organizations can create a culture that celebrates diversity and ensures fairness for all employees, aligning with legal obligations and moral imperatives.

### **IV. BUILDING AN INCLUSIVE ORGANIZATIONAL CULTURE**

Creating an inclusive organizational culture goes far beyond a mere checklist; it demands a steadfast dedication to embracing diversity, nurturing understanding, and championing equity. This section delves into pivotal strategies for cultivating inclusivity within workplaces, underscoring the significance of cultural competence, diverse viewpoints, and supportive leadership.

To Promote Inclusivity and Embrace Diverse Perspectives, organizations can implement Diversity Workshops and Training sessions. These workshops foster open dialogue, challenge biases, and encourage empathy among employees, as suggested by Cox (1993). Additionally, forming Employee Resource Groups (ERGs) centered on various diversity dimensions, such as race, gender, and LGBTQ+, provides safe havens for employees to connect, share experiences, and gain insights

(Catalyst, 2018). Inclusive Communication practices, emphasizing active listening and diverse voices in meetings, ensure every perspective is valued (Moss-Racusin et al., 2016).

Fostering Cultural Competence and Understanding is equally vital. Organizations can provide Cultural Competence Training programs, enhancing employees' awareness and sensitivity, enabling them to work effectively across diverse cultures (Gudykunst, 2003). Encouraging participation in Cross-Cultural Experiences, such as exchanges or international projects, offers firsthand insights and develops cultural intelligence (Earley & Ang, 2003).

Creating Inclusive Leadership and Mentoring Programs involves training leaders to champion inclusivity and respect, setting an example for the entire organization (Cox & Blake, 1991). Formal Mentoring and Sponsorship Programs, pairing experienced employees with diverse mentees, offer guidance, support, and skill development opportunities (Ragins & Cotton, 1999).

Encouraging inclusivity requires both accountability and recognition. Setting quantifiable objectives for diversity and inclusion, monitoring advancements, and holding leaders responsible for fostering inclusive cultures are crucial. (Kulik & Roberson, 2008). Moreover, implementing Recognition Programs celebrating inclusive behaviors and diverse achievements reinforces the commitment to fostering an inclusive culture (Cox & Blake, 1991).

Incorporating Organizational Policies and Support Systems is pivotal. Flexible Policies, such as work arrangements and parental leave, along with accommodations for diverse needs, ensure equal opportunities for all employees (Kossek et al., 2014). Supportive HR Practices, addressing diverse needs and offering resources for issues like mental health and work-life balance, further contribute to an inclusive environment (Golden & Veiga, 2005).

Building an inclusive organizational culture demands a comprehensive approach, embedding inclusivity in every facet of the organization's operations. By promoting cultural competence, embracing diverse perspectives, and fostering inclusive leadership, organizations can create environments where every individual feels valued, respected, and empowered.

## **V. INTERSECTIONALITY IN DEI EFFORTS**

Understanding diversity and inclusion goes beyond acknowledging singular aspects of identity; it involves recognizing the complex intersections of various social categories such as race, gender, ethnicity, sexual orientation, socioeconomic status, and more. This section delves into the concept of intersectionality and its profound significance in Diversity, Equity, and Inclusion (DEI) initiatives. It

addresses the unique challenges faced by individuals with intersecting identities and emphasizes the development of inclusive policies and practices that consider these multiple dimensions of diversity.

### **5.1. Understanding Intersectionality**

The knowledge that people have complex social identities, each of which intersects and shapes their experiences and opportunities (Crenshaw, 1989), calls for an awareness of the complex interactions between racial, gendered, class, sexual orientation, and other factors. Individual experiences of privilege and discrimination in society are shaped by these intricate intersections (Collins, 2000). Fostering true inclusivity and equity in diverse environments requires an awareness of these multifaceted identities and an understanding of their intricate intersections.

### **5.2. Addressing Unique Challenges**

People who are impacted by more than one marginalised identity frequently experience double discrimination, also known as compounded discrimination (Bowleg, 2012). The widespread prevalence of stereotypes and microaggressions, which worsen for people whose marginalised identities overlap, aggravates this experience even more (Sue et al., 2007). It is imperative to tackle these intersectional issues in order to advance inclusivity and eliminate systemic biases in the workplace and society at large. In order to genuinely create environments that are respectful and equitable for everyone, it is imperative that these issues are acknowledged and addressed.

### **5.3. Developing Inclusive Policies and Practices**

Creating inclusive policies that recognize and accommodate diverse needs, particularly addressing challenges faced by employees with intersecting identities, is fundamental in fostering a sense of belonging within the workplace (Shin, 2015). In tandem with these policies, implementing intersectional training programs is essential. These programs raise awareness about intersectionality, encouraging empathy and understanding among employees, thereby cultivating an environment where everyone feels valued and understood (Cho et al., 2013). This combination of inclusive policies and intersectional training promotes a supportive workplace culture that appreciates the complexity of individuals' identities and experiences, leading to a more inclusive and harmonious work environment.

Recognizing and addressing intersectionality in DEI efforts is essential for creating truly inclusive environments. By acknowledging the complexity of individuals' identities and experiences, organizations can develop policies, practices, and cultures that embrace diversity in all its dimensions, fostering genuine equity and inclusion for everyone.

## VI. CONCLUSION

Diversity, equity, and inclusion are fundamental concepts that organisations must acknowledge and value in order to effectively navigate the difficulties posed by a diverse workforce. This chapter provides organisations with the practical strategies to foster environments where each person feels respected, valued, and empowered. Organisations can ensure long-term success, unleash the creative potential of their workforce, boost employee engagement, and fuel inclusivity. Adopting diversity, equity, and inclusion is a strategic imperative for organisations aiming for global excellence, not just a corporate responsibility.

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# EMERGING TRENDS IN GLOBAL BUSINESS AND ECONOMICS

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ISBN: 978-81-964689-7-2



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