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NAAC RE - ACCREDITED GRADE "B"

National Conference

Chief Editor : Dr. Balaji B. Kamble

"Emerging Trends and Innovative Ideas in Business, Commerce & Management"

Date : 27th January, 2024

Shri Chinai College of Commerce & Economics

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NATIONAL CONFERENCE

One Day National Virtual Conference on

"Emerging Trends and Innovative Ideas in Business, Commerce & Management"

Organized by

LAXMI CHARITABLE TRUST'S
SHRI CHINAI COLLEGE OF COMMERCE & ECONOMICS

Date : 27th January, 2024

Management Message

It is a matter of great pleasure and pride that the Chinai College has successfully hosted a thought provoking One day National Conference on "Emerging trends and innovative ideas in Business, Commerce and Management". The objective was to focus on the practical applications in the current corporate scenario.

Since 1963 the Institute has been nurturing students and Professors through various activities. This Conference was an extension of this initiative to students and Professors of other institutions as well.

I thank the Principal, the Organising Committee and the students of the college for their efforts and active participation in making this event a memorable one.

With Regards
Smt. Arati Hemant Vissanji
Trustee
Laxmi Charitable Trust's
Shri Chinai College of Commerce & Economics

Principal Message

Laxmi Charitable Trust's Shri Chinai College of Commerce and Economics is one of the esteemed and the oldest institute since its establishment i.e., 1963. I am honoured to be In-Charge Principal of such pioneer institute because it has nurtured students to grow and develop emotionally, socially and academically.

The institute is proactive in organizing various activities for the overall development of the students, to create social sensitivity amongst them and also make them aware of current market scenario.

The ideation of this conference arrived from the misfortune situation faced by the entire world since almost last two years. But it is rightly said that "Challenges are what make life interesting and overcoming them is what makes life meaningful" few businesses has faced this lockdown fearlessly and developed sustainable strategy for their survival.

The aim of this one-day national conference was to provide a platform to all researchers, academicians, professionals and corporate stakeholders to express their views and ideas on "Emerging Trends and Innovative Ideas in Business, Commerce & Management"

My heartfelt thanks to our management for all their support. I congratulate to all the researchers for sharing their knowledge with us and to be part of this conference. I also praise the conference organising team for putting all their efforts to make this ideation into reality.

With regards
Dr. Balaji B. Kamble
In-Charge Principal

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JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
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A STUDY ON FINANCIAL PROBLEMS FACED BY NEW START-UP AND YOUNG ENTREPRENEURS IN INDIA

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Abstract: In my research paper, I conducted a study on the financial problems faced by new start-ups and young entrepreneurs in India. The aim was to understand the challenges they encounter when it comes to securing funding and managing their finances. Through interviews and surveys, I gathered valuable insights into the common financial hurdles faced by these entrepreneurs. Some of the key findings include the difficulty in accessing traditional sources of funding such as bank loans, high interest rates, lack of collateral, and limited credit history. Additionally, the study highlighted the importance of financial literacy and the need for better access to financial education and resources for young entrepreneurs. Many of them expressed the need for mentorship and guidance in financial planning, budgeting, and investment strategies. The research paper provides recommendations for addressing these challenges, including the promotion of alternative funding options like venture capital, angel investors, and crowdfunding platforms. It also emphasizes the role of government initiatives and policies in creating a supportive ecosystem for start-ups and young entrepreneurs. Overall, this study sheds light on the financial problems faced by new start-ups and young entrepreneurs in India and offers insights and recommendations to help them navigate these challenges more effectively.

Keywords: new start-ups, challenges, financial problems, young entrepreneurs

Introduction: Starting a new business venture can be an exhilarating and challenging journey, especially for young entrepreneurs in India. While their innovative ideas and passion drive them forward, they often encounter various financial obstacles that hinder their progress. In this study, we delve into the financial problems faced by these new start-ups and young entrepreneurs, aiming to understand the key challenges they encounter in securing funding and managing their finances effectively.

India, with its vibrant start-up ecosystem, has seen a surge in entrepreneurial activity in recent years. However, despite the growing opportunities, many young entrepreneurs struggle to access the necessary financial resources to fuel their ventures. This study seeks to shed light on the specific financial hurdles they face and explore potential solutions to address these challenges.

The primary focus of this research is to identify the major obstacles that hinder young entrepreneurs from obtaining traditional sources of funding, such as bank loans. We aim to uncover the underlying reasons for this difficulty, including high interest rates, lack of collateral, and limited credit history. By understanding these barriers, we can propose strategies to improve access to capital for aspiring entrepreneurs.

Additionally, this study recognizes the importance of financial literacy and its impact on the financial well-being of start-ups. Many young entrepreneurs lack the necessary knowledge and skills to effectively manage their finances, leading to potential pitfalls and setbacks. We aim to highlight the need for financial education and mentorship programs that can equip these entrepreneurs with the tools and knowledge to make informed financial decisions.

Furthermore, this research explores alternative funding options that can provide a lifeline to young entrepreneurs. We examine the role of venture capital, angel investors, and crowdfunding platforms in bridging the funding gap and facilitating the growth of start-ups in India.

Lastly, this study acknowledges the role of government policies and initiatives in creating a supportive ecosystem for new start-ups and young entrepreneurs. By analysing existing policies and identifying potential areas for improvement, we can propose recommendations to foster an environment that nurtures entrepreneurial success.

Through this research, we hope to contribute to the understanding of the financial challenges faced by new start-ups and young entrepreneurs in India. By identifying these obstacles and presenting potential solutions, we aim to empower aspiring entrepreneurs and create a more inclusive and supportive environment for their success.

Objectives:

1. To Identify key financial challenges for start-ups and young entrepreneurs in India.
2. To Analyse the impact of limited access to capital and funding on their growth.
3. ToExamine government policies' role in hindering or facilitating financial success.
4. To Explore alternative financing options for addressing their financial needs.
5. To Investigate gender disparities in accessing financial resources and funding.
6. To Assess the role of technology in mitigating financial challenges.
7. To Identify strategies used by successful start-ups to overcome financial obstacles.
8. To Provide recommendations to improve the financial ecosystem for start-ups and young entrepreneurs.

REVIEW OF LITERATURE:

1. Prakash, Goyal (2011) Researchers discuss many causes including: Successful entrepreneurs have a lot to offer: education, support from family members, success stories from family and friends, etc. They also face numerous problems, such as family responsibilities, lack of self-confidence, and old and outdated societal ideas that discourage women from marrying. I'm starting a company. A plan to promote women's entrepreneurship was also launched.
2. Teacher. Archana Surywanshi (2013) In the article "HR "Challenges in a Startup" shows the challenges today's managers face numerous challenges in this competitive world arising from globalization,

Privatization and Legal together to choose the law Candidates at the right time and in the right place. And they have to adopt changes in your work environment and work culture and is expected to maintain a steady loss while focusing on it organizational pressures, economic and professional changes, talent Management and development, innovation development, etc.

3. According to Ashish Mittal (2014), he says: The starting points are culture, leadership, policy, engagement and discovery. Opportunity and amount are divided. Population, high rate of mobile penetration.
4. B.V. Naidu (2017), "Challenges and results, how "The Indian startup ecosystem thrived in 2017." Pros and Cons Incubators, accelerators and technology are growing rapidly. benefits, high state support, low staffing levels; Impact of GST on Entrepreneurs etc.
5. According to the article "Challenges and Opportunities" 'Indian Startups' was published in the Financial Express in January February 27, 2017 the Indian government is leaving no stone unturned Provide the best growth opportunities to startups, Shine on the market.

Research Methodology:

To start, we need to clearly define the objective of the study. This means understanding the specific financial challenges that new startups and young entrepreneurs in India are facing. Next, we should review the existing literature on startup finance and entrepreneurship in India. This will help us build a solid foundation of knowledge and identify any gaps in the research. Once we have a good understanding of the topic, we can decide on the research design. This could involve using different methods like surveys, interviews, or even analysing case studies to gather data. After that, we need to figure out who we want to study. This means defining the target population, which in this case would be new startups and young entrepreneurs in India. We also need to determine the sample size and how we'll select the participants to make sure our findings are representative. Now comes the data collection phase. We can use various methods like online surveys, face-to-face interviews, or even group discussions to gather the necessary information. Once we have all the data, we need to analyse it. This could involve using different techniques depending on the type of data we collected. For example, we might use qualitative analysis to identify themes or quantitative analysis to look for statistical patterns. Throughout the entire research process, it's important to consider ethical guidelines. This means obtaining informed consent from participants, protecting their confidentiality, and ensuring the research is conducted in an ethical manner. Finally, we can present our findings and draw conclusions. We should summarize the key insights we discovered and provide recommendations on how to address the financial problems faced by new startups and young entrepreneurs in India.

Scope of Study:

1. Investigate the specific financial challenges faced by new startups and young entrepreneurs in India.
2. Explore the impact of a lack of access to capital on the growth and sustainability of startups.
3. Analyse the reasons behind high interest rates and their effects on the financial health of startups.
4. Examine the effectiveness of government support programs and policies in addressing the financial needs of startups.

5. Assess the level of financial literacy among young entrepreneurs and its influence on their financial decision-making.
6. Investigate the factors that hinder startups from attracting investors and explore potential solutions.
7. Study the strategies and best practices for managing cash flow in the early stages of a startup.
8. Explore the availability and effectiveness of mentorship programs for young entrepreneurs in India.

Limitation of the Study:

1. Limited sample size
2. Time constraints
3. Lack of generalizability to other countries or regions
4. Potential for response bias in survey-based research
5. Difficulty in obtaining accurate financial information from startups
6. Lack of control over external factors that may impact financial problems
7. Inability to account for regional variations in financial challenges
8. challenges in identifying the root causes of financial problems faced by startups
9. Limited access to in-depth qualitative data for a comprehensive analysis

Research gaps:

1. Lack of in-depth research on specific financial challenges.
2. Limited understanding of funding sources and accessibility for startups.
3. Need to explore the impact of government policies on startup financing.
4. Research gap in financial literacy and education among entrepreneurs.
5. Importance of mentorship and support networks in addressing financial challenges.
6. Gender-based disparities in accessing financial resources and support.
7. Influence of cultural factors on financial problems faced by startups.

Challenges faced by new start-ups and young entrepreneurs in India

1. **Lack of Access to Capital:** Many new start-ups and young entrepreneurs struggle to secure funding to launch and grow their businesses. Explore the challenges they face in accessing traditional sources of capital like banks and venture capitalists.
2. **High Costs of Doing Business:** Start-ups often face high operational costs, including office space, equipment, and marketing. Investigate how these costs impact their financial stability and ability to compete in the market.
3. **Limited Financial Management Skills:** Young entrepreneurs may lack experience and knowledge in financial management, leading to difficulties in budgeting, cash flow management, and financial planning. Examine the impact of this lack of expertise on their businesses.

4. **Regulatory and Compliance Burdens:** Start-ups often face complex legal and regulatory requirements, which can be costly to navigate. Look into the financial implications of compliance and regulatory burdens on new businesses.
5. **Limited Access to Mentoring and Support:** Many young entrepreneurs lack access to experienced mentors and support networks, which can hinder their ability to make informed financial decisions. Explore the impact of this lack of guidance on their financial challenges.
6. **Market Volatility and Competition:** Start-ups operate in a dynamic and competitive market, which can lead to financial instability. Investigate how market volatility and competition affect the financial health of new businesses.
7. **Limited Access to Mentorship and Networking Opportunities:** Explore how the lack of mentorship and networking opportunities can impact the financial success of new start-ups and young entrepreneurs. Investigate the role of mentorship programs, incubators, and accelerators in addressing this challenge.
8. **Difficulty in Scaling Operations:** Scaling a start-up requires significant financial resources. Examine the challenges faced by new businesses when it comes to scaling their operations and the financial implications of this process.
9. **Economic and Political Factors:** Investigate how economic factors, such as inflation and currency fluctuations, as well as political factors, such as government policies and regulations, can impact the financial stability of start-ups in India.
10. **Limited Market Access:** Many start-ups struggle to penetrate existing markets or access new markets due to various barriers. Explore the financial challenges associated with limited market access and the strategies employed by entrepreneurs to overcome these barriers.
11. **Lack of Financial Infrastructure:** Analyse the impact of inadequate financial infrastructure, such as limited access to banking services, credit facilities, and digital payment systems, on the financial struggles faced by new start-ups and young entrepreneurs.
12. **Cultural Attitudes towards Entrepreneurship:** Investigate how cultural attitudes towards entrepreneurship, risk-taking, and failure can influence the financial challenges faced by new start-ups and young entrepreneurs in India.
13. **Impact of Government Policies and Initiatives:** Explore how government policies, such as taxation, licensing, and regulations, affect the financial viability and growth of new start-ups and young entrepreneurs. Analyse the effectiveness of government initiatives aimed at supporting entrepreneurial ventures financially.
14. **Lack of Collateral and Credit History:** Investigate how the absence of collateral and credit history poses challenges for new start-ups and young entrepreneurs in obtaining loans and credit from financial institutions. Examine alternative financing options available to overcome this issue.
15. **Gender Disparities in Access to Funding:** Study the gender disparities in accessing funding and financial resources for start-ups and young entrepreneurs. Analyse the impact of these disparities on the financial success and growth of women-led businesses.

16. **Role of Technology and Digitalization:** Explore how technology and digitalization have impacted the financial landscape for new start-ups and young entrepreneurs in India. Investigate the opportunities and challenges presented by fintech solutions, crowdfunding platforms, and digital payment systems.
17. **Impact of Economic Downturns:** Examine how economic downturns, such as recessions or market fluctuations, affect the financial stability of new start-ups and young entrepreneurs. Analyse strategies employed by entrepreneurs to navigate these challenging times.
18. **Role of Incubators and Start-up Ecosystems:** Investigate the role of incubators, co-working spaces, and start-up ecosystems in providing financial support, mentorship, and networking opportunities to new start-ups and young entrepreneurs. Evaluate their effectiveness in addressing financial challenges.

SWOT analysis:

Strengths:

1. Relevant and timely topic in the current startup ecosystem.
2. Potential to provide valuable insights for policymakers and stakeholders.
3. Opportunity to contribute to the existing body of knowledge on startup finance.
4. Timeliness: It focuses on current challenges faced by young entrepreneurs.

Weaknesses:

1. Limited access to primary data from startups due to confidentiality concerns.
2. Potential bias in self-reported financial information from entrepreneurs.
3. Difficulty in obtaining a representative sample of startups due to their diverse nature.

Opportunities:

1. Potential for identifying key financial challenges and recommending targeted solutions.
2. Possibility of influencing policy decisions to support startup growth and sustainability.
3. Opportunity to contribute to the development of financial literacy programs for young entrepreneurs.

Threats:

1. Time constraints may limit the depth of analysis and potential for comprehensive findings.
2. Limited resources and access to experts in the field for guidance and validation.
3. Challenges in generalizing findings to other regions or countries.

Advantages and Disadvantages of financial problems faced by new startups and young entrepreneurs in India:

Advantages:

1. **Flexibility:** Limited funds force entrepreneurs to be resourceful and find creative solutions.
2. **Focus on essentials:** Financial constraints help prioritize core business needs and avoid unnecessary expenses.
3. **Stronger financial management skills:** Navigating financial challenges can lead to improved financial acumen.
4. **Opportunity for learning and growth:** Overcoming financial challenges can lead to valuable lessons and skill development.
5. **Increased resilience:** Dealing with financial problems can make entrepreneurs more resilient and adaptable.
6. **Creative problem-solving:** Limited resources can spur innovative thinking and resourcefulness.

Disadvantages:

1. **Limited scalability:** Insufficient funds can restrict the ability to scale operations and reach a larger market.
2. **Increased stress and pressure:** Financial problems can cause significant stress and anxiety for entrepreneurs.
3. **Difficulty attracting investors:** Investors may be hesitant to invest in startups with ongoing financial struggles.
4. **Stifled growth potential:** Lack of financial resources can hinder the growth and expansion of startups.
5. **Increased risk of failure:** Financial problems can increase the likelihood of startup failure.
6. **Limited access to opportunities:** Insufficient funds may limit access to networking, marketing, and talent acquisition.

Data Analysis RESULTS:

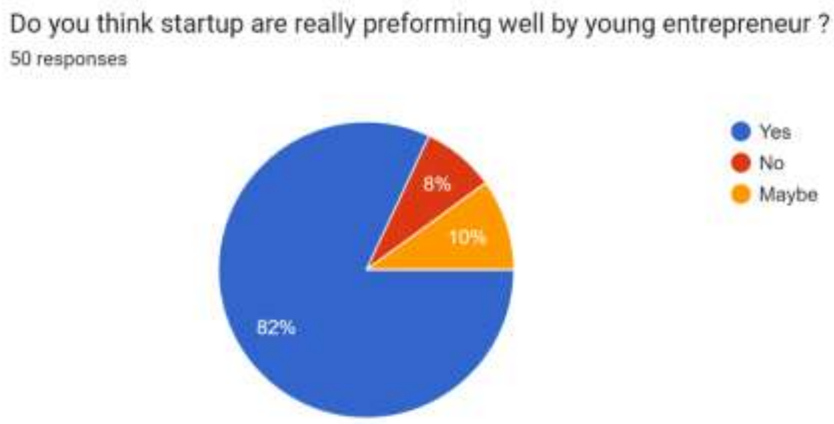

Fig 1

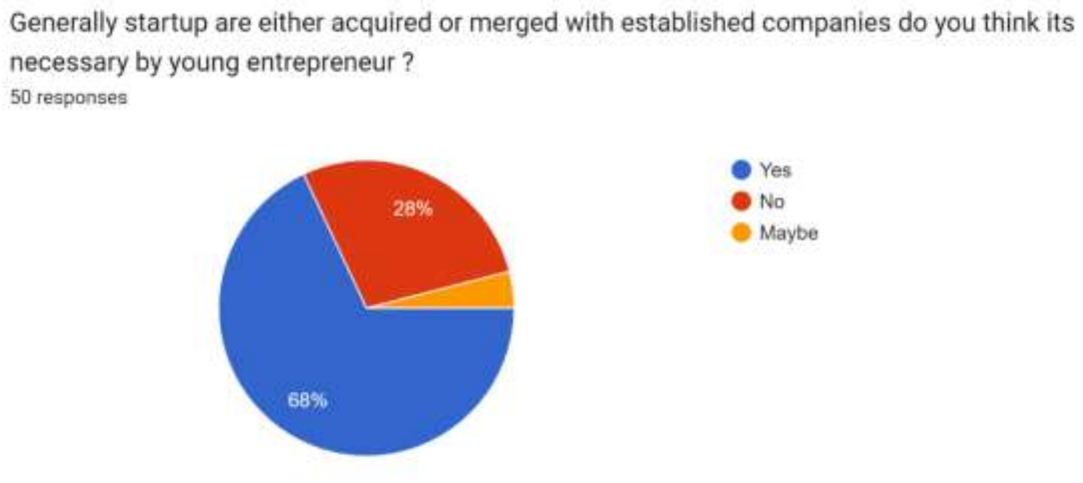

Fig. 2

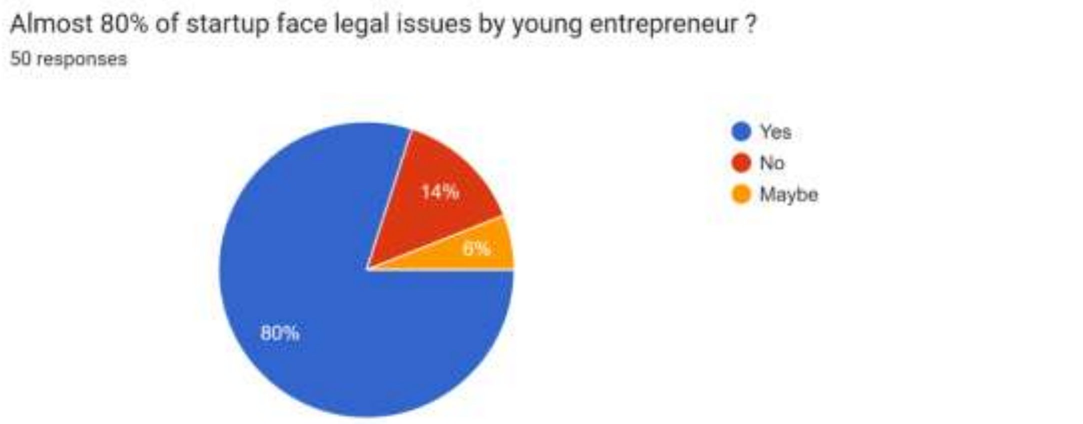

Fig 3

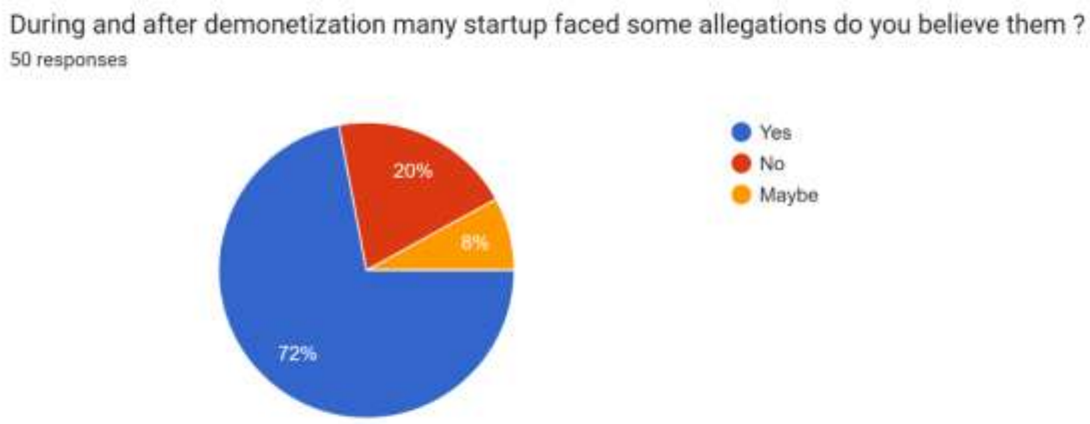

Fig 4

Do you really think education is required to establish a startup or to become a successful entrepreneur ?

50 responses

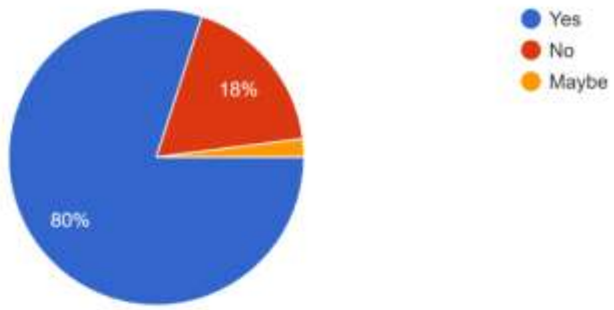

Fig 5

Education or experience which you think really matters for become successful entrepreneur ?

50 responses

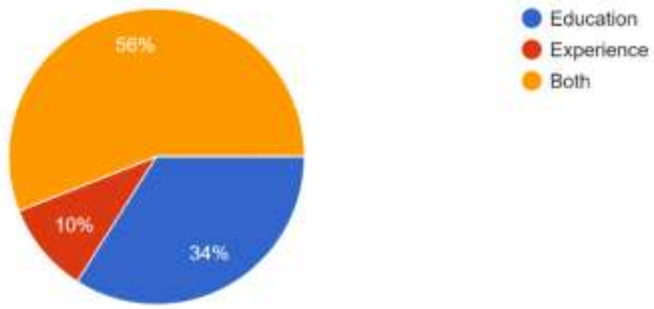

Fig 6

Do you think young entrepreneurs really contributes towards economy and employment ?

50 responses

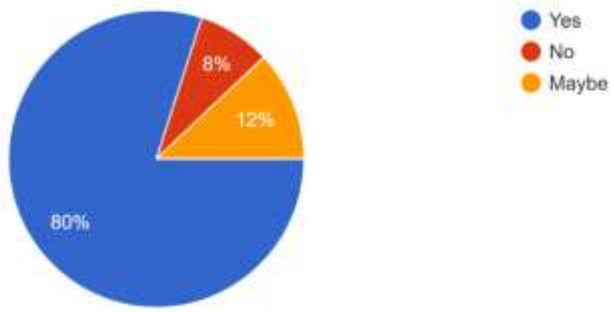

Fig 7

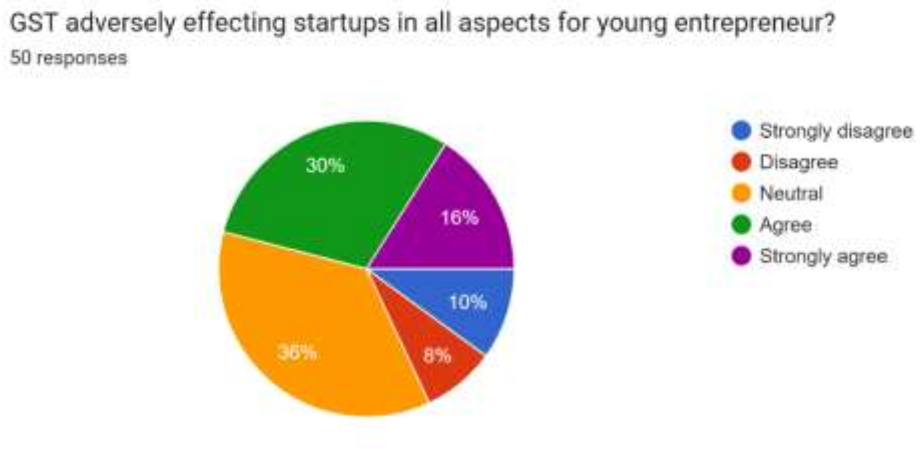

Fig 8

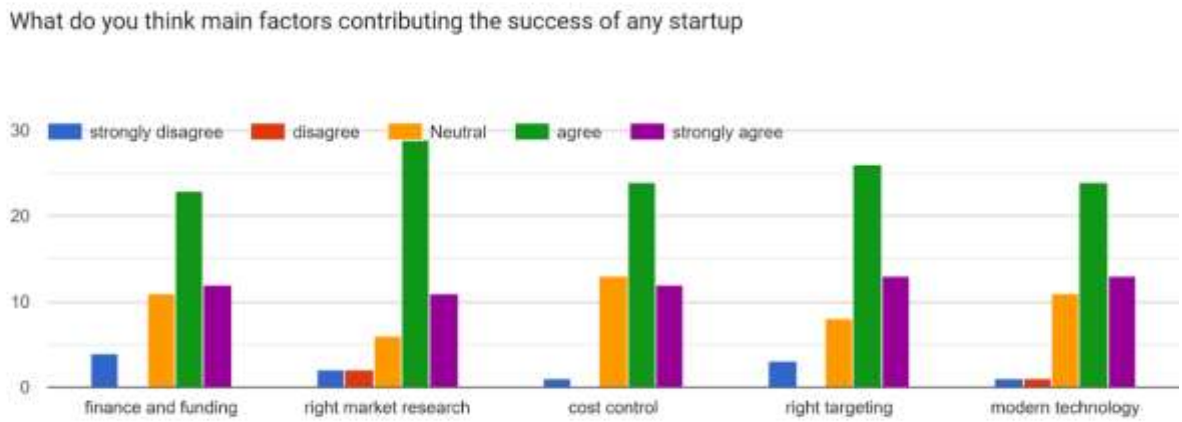

Fig 9

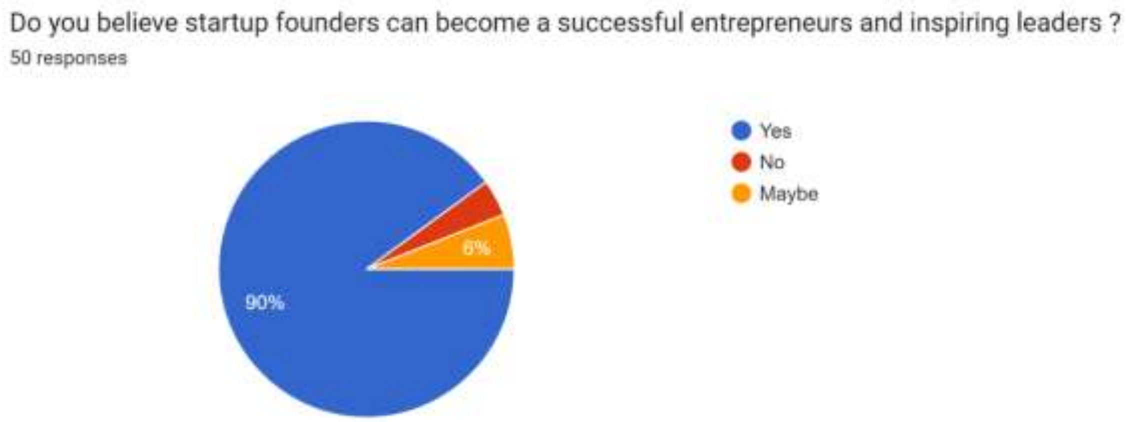

Fig 10

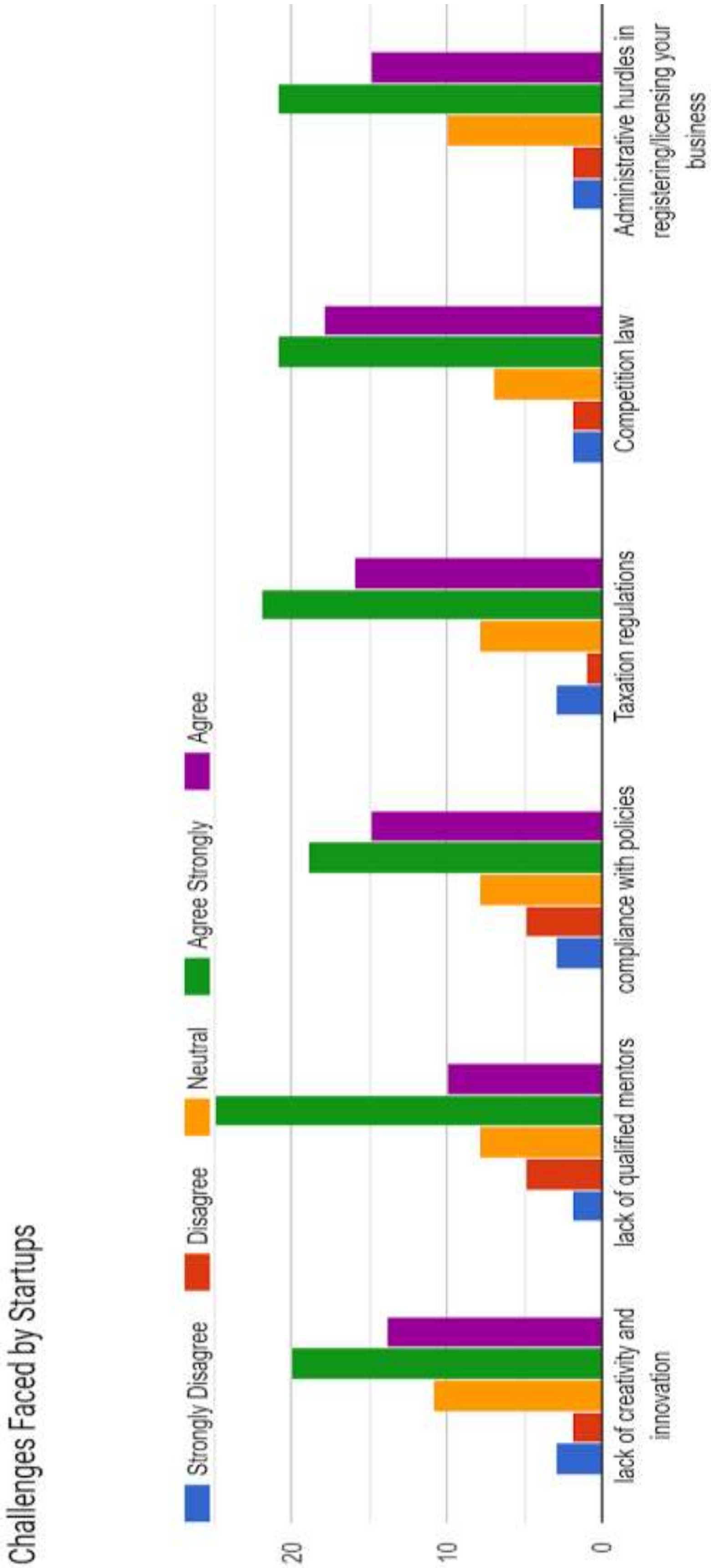

Fig 11

Conclusion

1. **Limited access to capital:** One of the primary challenges faced by new start-ups and young entrepreneurs in India is the difficulty in accessing adequate capital and funding. This hampers their ability to grow and expand their businesses.

2. **Government policies play a crucial role:** The study highlights the significant impact of government policies on the financial success of start-ups and young entrepreneurs. Policies that are supportive and conducive to entrepreneurship can help alleviate financial challenges.
3. **Alternative financing options are essential:** The study emphasizes the importance of exploring alternative financing options beyond traditional bank loans and venture capital. Crowdfunding, angel investors, and incubators can provide valuable financial support.
4. **Gender disparities persist:** The study reveals gender disparities in accessing financial resources and funding for start-ups and young entrepreneurs. Efforts should be made to address these disparities and promote gender equality in entrepreneurship.
5. **Technology as a mitigating factor:** Technology plays a crucial role in mitigating financial challenges faced by start-ups and young entrepreneurs. Digital platforms, fintech solutions, and online marketplaces provide opportunities for cost-effective operations and access to a wider customer base.
6. **Successful strategies for overcoming financial obstacles:** The study identifies various strategies employed by successful start-ups to overcome financial challenges. These strategies include bootstrapping, strategic partnerships, and efficient financial management.
7. **Recommendations for improvement:** Based on the study findings, recommendations can be made to improve the financial ecosystem for start-ups and young entrepreneurs. These recommendations may include policy reforms, increased access to mentorship and networking opportunities, and financial literacy programs.

REFERENCE:

- https://www.proquest.com/openview/2b6cfc26f4e6108d3cb311e431dc6a85/1?pq-origsite=gscholar&cbl=2030933
- https://www.irejournals.com/formatedpaper/1701234.pdf
- https://openurl.ebsco.com/EPDB%3Agcd%3A13%3A2103389/detailv2?sid=ebsco%3Aplink%3Ascholar&id=ebsco%3Agcd%3A32732753&crl=c
- https://www.jstor.org/stable/24481943
- https://www.inderscienceonline.com/doi/abs/10.1504/IJEV.2014.064692
- https://www.tandfonline.com/doi/abs/10.1080/08276331.2000.10593294

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NEW AGE COMPANIES A GROWTH CONNECTOR FROM INDUSTRY 4.0 TO INDUSTRY 5.0

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Abstract

The modern age is the age of technology. Every industry is greatly affected due to technological equipment's like artificial intelligence, machine learning, internet of things and likewise. the physical form of industries is now transforming to its virtual counterparts for fulfilling the needs of the customers. This has built multiple complications from the phase of formation to the growth. This research is an attempt to study the financial performances of such new age companies and their ability to satisfy the stakeholder showing trust in them.

Introduction

Industry: entities that supply goods and services to fulfil the needs of the customers are called industries. As per the traditional classification industries are categorised as primary, secondary or tertiary. [1]

- Primary industries: the industries that have agriculture as the prime occupation are called primary industries. They mainly deal with soil or land (natural resources) production of goods. The goods so manufactured are either consumed or become base for further processing by secondary industries.
- Secondary industries: these industries take the goods manufactured by primary industries and further process them. The goods so manufactured can either be directly consumed or form raw material for other complex industries. For example, automobile manufacturing,
- Tertiary or Service industries: unlike primary and secondary industries these industries have intangible bundles of utility that are provided to customers for their need satisfaction. For example: banking, aviation, hospitality, telecommunication etc.

Industry 4.0: in the current scenario when the majority of the things are getting digitalised. IT is the need of the hour. Industry 4.0 emphasises on the smart way of manufacturing. It is the use of technology in the production processes. These new technologically equipped methods majorly increase productivity, are more efficient and sustainable ways of doing the things.[2]

Industry 5.0: This concept of industry emphasises the usage of technology in collaboration with the humans for efficient working in the new competitive world. In the past machines have been destructive in performing their role however in the Modern era the idea is to use technology in such a way that people's performance is improved. [3]

New age companies: these companies have an innovative knowledge based; technology equipped model of working those focusses upon virtual means. Their operations are primarily based on the Internet bringing global connectivity. The idea behind this entity is to connect the products with the consumers by narrowing time and place utility. There are two main type of business models under these businesses:

1. **Subscription based model:** e.g., Gaana, Amazon Prime is a subsidiary of amazon etc. these entities provide their services to the customers for some monthly/ quarterly/ annual charges called as subscription amount.
2. **Transaction based model**: e.g., Swiggy, Zomato etc. under this business model revenue is generated from the customer on the bases of each transaction done by the client with the service provider.

Advantages of new age companies

- **Flexi working style**: new age companies work on the business models that adopt innovative working styles. They do not follow a nine to five work culture. Rather flexi working hours are offered to the employees.
- **Innovative working style :** the employees in such organisations are mainly youngsters and so the working style is fun loving and lucrative.
- **Better utilization of resources:** these entity tries to bring the best out of the available means hence optimum utilization of resources is possible in such entities

Disadvantages of new age companies

- **Lack of experience:** the biggest limit so such models are that they are primarily proposed by the youngsters who lack experience in understanding and predicting future scenarios.
- **Risk of failure:** lack of experience leads to higher risk of failure and the changes of low survival in the market.
- **Funding issue:** these entities are highly dependent on the bigger business houses for raising capital. Consequently, they lack sufficient financial resources that can lead to their smooth functioning.

Examples of new age companies

- **Zomato:** they are a connector for food items between the customers and restaurant.
- **Paytm:** they have created convenient payment options for the customers while purchasing the goods or services.

- **Amazon:** it is the biggest e-retailing site, providing all types of retail goods to customers through multiple producers
- **Policy bazaar:** the business model of this entity is to connect lucrative insurance policy offers form the service provider to the customers.

Review of literature:

Marcello M. Mariani, in the research article titled,' Exploring how consumer goods companies innovate in the digital age: The role of big data analytics companies,' the objective of the research was to conduct a qualitative analysis on how consumer good companies using are helped by big data companies to test and launch new products in the market. Conclusively it was found that there were many new innovative ways being developed for greater consumer satisfaction. Hence big data is a support instrument in the era of industry 4.0.

Objective:

1. To study the financial performance of new age companies.

2. To study the financial contribution of new age companies towards industry 4.0 and industry 5.0

3. To know their overall impact on the Indian economy.

Research methodology

Secondary data from money control and annual reports of Zomato and Amazon.

Analysis of data:

For the purpose of analysing the financial statements of Zomato and Amazon for the last two financial years will be taken.

Ratio analysis

- **PE ratio**: **Price Earnings ratio:** $\dfrac{\textbf{Share Price}}{\textbf{Earnings per share}}$

  This ratio explains the relationship of price of the share in the market, compared to the earning on the share. The lower the ratio the better it is. As the lower value brings in higher financial utility of the share value.

- **ROI: Return on investment:** $\dfrac{\textbf{Earnings before interest and tax}}{\textbf{Capital employed}}$

  This ratio explains the relationship between the returns and the investments made in an entity.

- **Total assets: Fixed assets + Current Assets**

  Assets are the possessions of the company. There can be short term assets known as current assets and long-term assets known as fixed assets

- **Total liabilities: Long term liabilities + Current liabilities**

  Liabilities are the obligations of any entity. All those liabilities that are payable in the long run are called fixed liabilities and all the liabilities that need to be paid by the company in the current financial year are called short term liabilities.

Interpretation of data

Zomato:

- **Total assets:** Fixed assets + Current Assets

Year	**Total Assets** (INR million)	**Fixed assets** (INR million)	**Current assets** (INR million)
2022	1,73,270	97, 820	76,450
2023	2,15,987	1,07, 677	1,08,310

- **Total liabilities**: Long term liabilities + Current liabilities

Year	**Total Liability** (INR million)	**Fixed Liability** (Excluding shareholders fund) (INR million)	**Current Liability** (INR million)
2022	8,281	1,166	7,115
2023	21,455	7,045	14,410

- **PE ratio**: Price Earnings ratio: $\frac{\text{Share Price}}{\text{Earnings per share}}$

	2022	**2023**
PE ratio	-41.2	-130.08

- **ROI: Return on investment:** $\frac{\text{Earnings before interest and tax}}{\text{Capital employed}}$

	2022	2023
ROI ratio	-6.54%	0.56%

Amazon:

- **Total assets:** Fixed assets + Current Assets

Year	Total Assets ($ million)	Fixed assets ($ million)	Current assets ($ million)
2021	4,20,549	2,58,969	1,61,580
2022	4,62,675	3,15,884	1,46,791

- **Total liabilities**: Long term liabilities + Current liabilities

Year	Total Liability ($ million)	Fixed Liability (Excluding shareholders fund) ($ million)	Current Liability ($ million)
2021	4,20,549	2,78,283	1,42,266
2022	4,62,675	3,07,282	1,55,393

- **PE ratio**: Price Earnings ratio: $\frac{\text{Share Price}}{\text{Earnings per share}}$

	2022	2023
PE ratio	-313%	78.6071%

- **ROI: Return on investment:** $\frac{\text{Earnings before interest and tax}}{\text{Capital employed}}$

	2022	2023
ROI ratio	6.88%	6.28%

Analysis of data:

The data was collected for Zomato from the year 2022 to 2023. the data was collected regarding the total assets, total liabilities, Price earning ratio and the return on investment for the two consecutive years

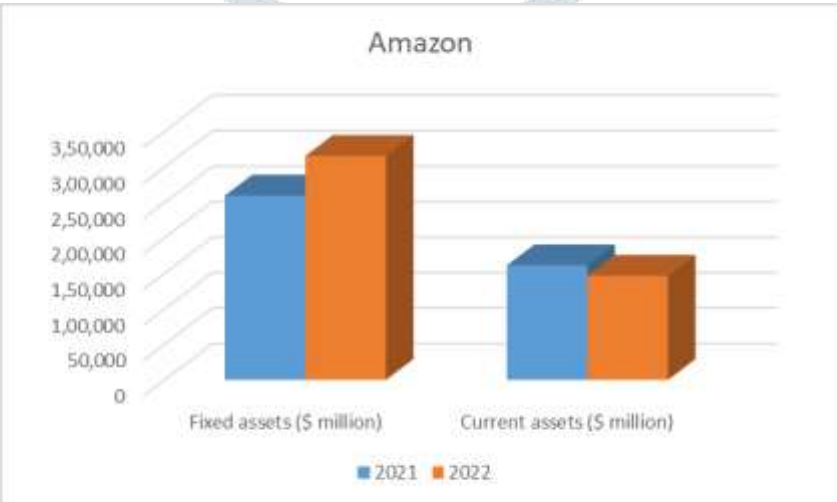
Both the fixed assets and the current assets of Zomato has increased in the last 2 years from 2022 to 2023

The current liabilities and the external liabilities of Zomato have increased from 2022 to 2023

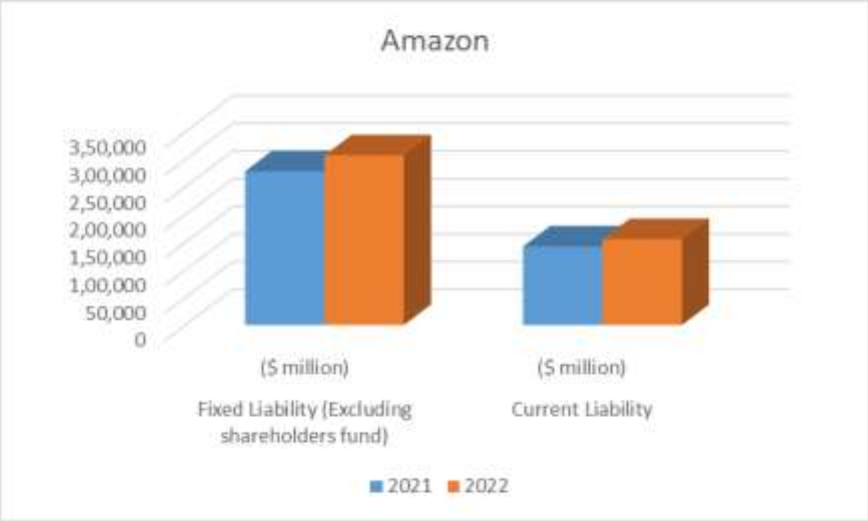
The Price earning ratio of Zomato has fallen from 2022 to 2023.

The Return on Investment of Zomato has increased from negative 6% to .54% from the year 2022 to 2023

The data was also collected for Amazon from the year 2021 to 2022. the data was collected regarding the total assets, total liabilities, Price earning ratio and the return on investment for the two consecutive years

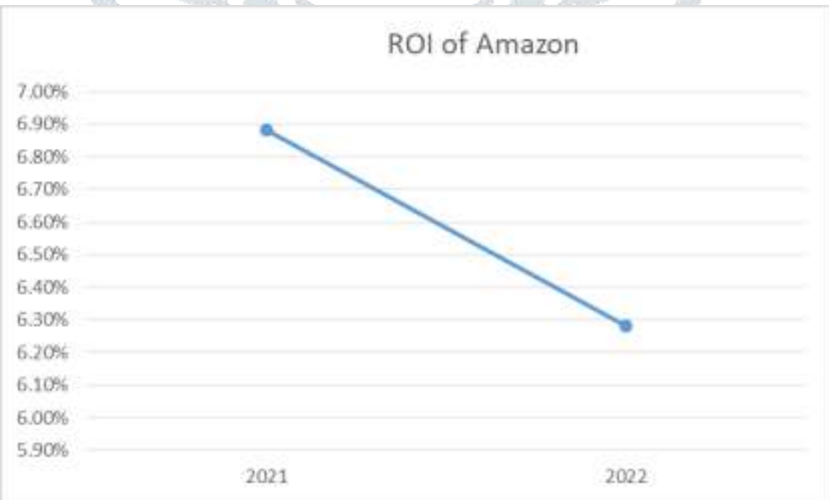


Fixed assets of Amazon have increased from 2021 to 2022 whereas the current assets of Amazon have decreased from 2021 to 2022.



The current liabilities and the external liabilities of amazon have increased from 2021 to 2022

The PE ratio has improved from a negative 313 to positive 68% from the year 2021 to 2022.



The return on investment for the company has fallen from 6.8% to 6.2%. from the year 2021 to 2022.

Conclusion:

Through the data collected and interpreted from the annual financial statements of Amazon limited and Zomato ltd for the two financial years it can be analysed that the financial performance of both the companies in terms of :

PE ratio:

There is a drastic improvement from negative PE Ratio to positive 78% in case of Amazon. Alternatively, the PE ratio of Zomato has further worsened from negative 41% to 130%. However, these variant figures of the entities reflect that the nature of entity (being a new age company) has no relation to the price earning capacity of the entity.

ROI Ratio:

There is a 0.6% fall in the return on investment of Amazon in the last two financial years on the other side the financial performance of Zomato shows a positive ROI.

Conclusively, through the research it can be found that the new age entities are doing wonders in the Industry 4.0 and are a great connector between 4.0 to 5.0

Limitation of the study:

1. For the purpose of study only the financial aspect is being considered. While there are many other factors that need to be studied to judge the success story on any business entity.

2. The data relates to the last two financial years; the study could be conducted to see the trend in the last 5 years.

References

[1] "Industry | Definition, Sectors, & Facts | Britannica Money." Accessed: Oct. 03, 2023. [Online]. Available: https://www.britannica.com/money/topic/industry

[2] "What is 'Industry 4.0' and what will it mean for developing countries? | UNCTAD." Accessed: Oct. 06, 2023. [Online]. Available: https://unctad.org/news/blog-what-industry-40-and-what-will-it-mean-developing-countries

[3] "Top 3 Things You Need to Know About Industry 5.0 | MasterControl." Accessed: Sep. 27, 2023. [Online]. Available: https://www.mastercontrol.com/gxp-lifeline/3-things-you-need-to-know-about-industry-5.0/

[4] Mariani, M. M., & Wamba, S. F. (2020). Exploring how consumer goods companies innovate in the digital age: The role of big data analytics companies. *Journal of Business Research*, *121*, 338-352.

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Prediction of Household Carbon Emission During Pandemic Using Machine Learning Model

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ABSTRACT

The pandemic has dramatically altered daily routines worldwide, with increased dependence on electronic gadgets for work, education, and entertainment. Work from home culture increased during the pandemic and persisted even after the pandemic. Though the GHG (Greenhouse Gas) emission is reduced in other sectors, it was predicted that this has increased in housing sectors during the pandemic. Our study aims to investigate the impact of increased electronic gadget usage on household carbon emissions during the pandemic. Through a combination of surveys, energy consumption data analysis, and carbon footprint assessments, we examine changes in electronic device usage patterns and their subsequent environmental consequences. Carbon emissions associated with these changes were quantified, considering factors like the number of device types, number of users, and energy consumption. The proposed study highlights the impact of electronic gadget usage on household carbon emissions during the pandemic. For the prediction of household carbon emissions supervised machine learning technique is used. Supervised machine learning is a digital technology that advances digital systems and processes and is categorized under artificial intelligence. Supervised machine learning is a type of machine learning where the algorithm is trained on a labeled dataset, mapping inputs to outputs by generalizing patterns from the training data and making predictions or decisions based on data. The findings of this research contribute valuable insights into the environmental implications of the widespread use of electronic gadgets during the pandemic. Understanding these impacts is essential for individuals, policymakers, home business makers, and technology developers to formulate strategies that promote sustainable gadget usage, minimize carbon footprints, and contribute to a more environmentally conscious post-pandemic society.

Keywords: Green Computing, Greenhouse Gas (GHG), pandemic, Supervised Machine Learning, Regression Analysis. COVID-19.

1. Introduction

Increasing population and wealth around the world increases demand for housing upgrades in highly urbanized locations. The amount of electricity consumed by each family is also rising because of the improved supply of electricity resulting in an increase in gadget purchases due to rising incomes. By 2050, it is anticipated that the amount of power used nationally by the residential sector will have increased by more than eight times. This impels evaluation of the carbon footprint of the residential sector and its impact on the environment. Moreover, the COVID-19 pandemic forced many organizations to adopt work from home culture which has caused a steep rise in the purchase and usage of electronic devices, resulting in increased energy consumption and greenhouse gas emissions in housing sectors. Considering the green computing factors, optimal usage of all electrical and electronic equipment is necessary to keep the home environment safe and healthy. Moreover, energy costs can be drastically reduced by reducing energy consumption. (Le & Pitts, 2019)

It has been found that research in this field is interdisciplinary and more depth is needed at the city and individual levels. (Zarco-Periñán et al., 2022). Reducing energy consumption can significantly lower energy expenses. Prior knowledge of the sources is essential for implementing strategies to reduce them. As a result, actions can be taken to lower consumption and consequently, carbon emissions.

The proposed study aims to find household carbon emissions from urban housing sectors of Maharashtra state, India. The appliances considered for the study of carbon emission from the housing sector due to the usage of electronic gadgets are air-conditioners, televisions, smartphones, laptops, and network devices. During this study, it was also observed that there is less research done on the reduction of household carbon emissions. To fill in the research gaps in the available data sources on household carbon emission in India, this study will contribute valuable information on carbon emission, appliance ownership, and usage behavior of selected gadgets during the pandemic which will help to supplement the current insufficient data sources on household energy use in India. It will be easier to improve energy efficiency as well as reduce carbon emissions and gain a better understanding of how to make buildings greener, and comfortable to live with the proper knowledge and understanding usage of appliances.

1.1 Literature Review

le Quéré et al., 2020 gathered data on activities and government measures to assess the reduction of CO2 emissions during forced confinements. Though GHG emissions decreased during the pandemic across various sectors, a reverse impact was seen in household sectors. This was observed due to increased activity resulting in increased energy demand in the household sector.

As per the data published by Teehan & Kandlikar, 2013, products manufactured in 2009 or 2010, are significantly lighter in comparison to those manufactured from 2002 to 2004 which is proof that electronic devices are improving over time in terms of material efficiency. According to the authors, modern devices show significantly less material usage for integrated circuits due to higher levels of miniaturization available in modern packaging technologies, as well as reduced numbers of ICs per product. The majority of embedded GHG emissions in most gadgets are caused by circuit boards, particularly ICs. Though the emissions due to product casing are minimal, emissions by laptop casing are higher. According to the findings, there is a direct correlation between product mass and embodied emissions, with heavier or larger products producing more emissions.

Ahmad *et al*., 2015, studied household microdata from India's 60 largest cities and mapped GHG emissions patterns and their determinants. The key findings of these authors are that income and household size are the most important determinants of household emissions. The characteristics of cities and housing, one's degree of education, and one's gender are only a few of the additional variables that affect emissions.

(Gokarnkar & Sangeetha G, 2023) in this study, a supervised machine learning model called regression analysis is used to predict household power consumption due to the usage of gadgets.. The authors conclude that household operational energy consumption by electronic gadgets during the pandemic depends on various factors rather than the demographic characteristics of households and the number of gadgets respondents own. As per the research (Teehan & Kandlikar, 2013) operating effects of the personal computer (PC) industry are responsible for about 60% of greenhouse gas emissions and the rest 40% by manufacturing.

Researchers (Bahmani & Mosavi, n.d.) investigated that machine learning contributed very well to the advancement of the prediction models used for energy consumption. These models significantly increase the reliability, precision, and generalizability of the traditional time series forecasting methods.

1.2. Objectives

- To understand the impact of owning several gadgets and the usage pattern of consumers on household carbon emission.
- To highlight pointers to reduce household carbon emissions by potentially reducing energy consumption through the adoption of energy-efficient technologies.
- To give recommendations for building architects, policymakers, and consumers on how to reduce household carbon emissions which are contributing to global warming.

Hypothesis H0: Household carbon emission is based on the number of gadgets owned by respondents and their usage patterns during the pandemic.

Hypothesis H1: Household carbon emission is based on various other factors rather than the number of gadgets owned by respondents and their usage patterns during the pandemic.

1.3. Scope

The scope of this study is limited to urban households of Maharashtra State, India. Exploratory data analysis is done by considering highly used gadgets/appliances such as Air-conditioners, Televisions, laptops, Smart mobile phones, Network Devices, etc. during the pandemic.

2. Research Methodology

2.1 Exploratory Data Analysis

Data for analysis is primarily the responses received from the online survey of 101 respondents residing in urban areas of Maharashtra state, India. Secondary data such as the GHG (Carbon) emission of electronic gadgets (or appliances) per hour usage in terms of kg are taken from device data sheets. The total GHG emission of a household is calculated by adding the GHG emission of each device taken into consideration.

The formula applied to find the GHG emission of each device is shown below:

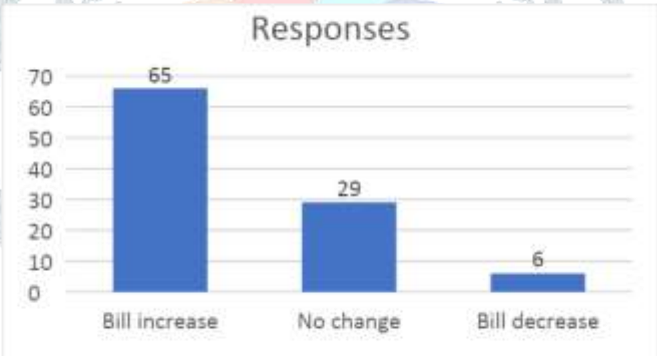
Co_2 Emission of a device (in Kgs) = (Number of such devices × Usage in Hours × Carbon Emission (in Kgs per Hour)

Data analysis is done using machine learning techniques. Regression analysis which is a Supervised Machine Learning technique used to train and test the output variable – Carbon Emission (Total_GHG_Kg).

A supervised Machine Learning Model called Regression analysis is used to train and test the target variable - Total_GHG_Kg. Python and various Python built-in libraries are used such as Pandas, NumPy, Matplotlib, Seaborn, SciPy, SciKit Learn, Min-Max Scaler, etc for data analysis.

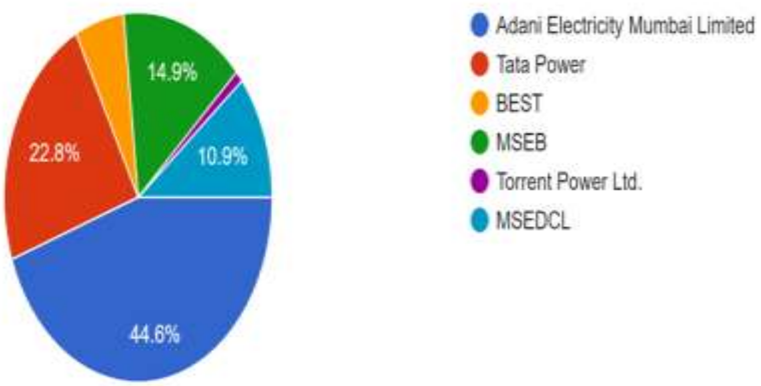
2.2 Demographic Data of Respondents

Figure:1 Responses received for change in Electricity bill during the Pandemic.



65% of people reported that their household electricity bill increased during the pandemic and 6% said that their electricity bill was reduced during the pandemic but 29% responded that there was no change in their electricity bill during the pandemic.

Figure 2: Respondents' electricity service providers in Maharashtra.



Adani Electricity Mumbai Ltd. consumers are more in number. BEST consumers are fewer in number.

Figure 3: Joint plot between Gadgets_owned and Total_GHG_kg.

In the joint plot, the scatter plot and histogram are combined in one visualization. Here the scatter plot shows the relationship between Total GHG emissions in kg and Gadgets owned by people, while the histogram shows the distribution of each variable. According to the plot many households have gadgets between 5 to 10 and there is a linear relationship between Total GHG emissions and Gadgets owned.

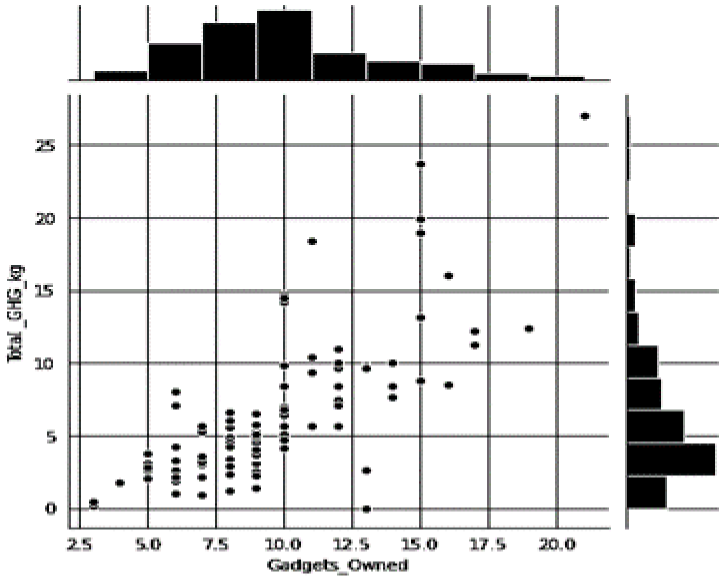


Table 1: Total Number of Electronic Gadgets / Appliances Owned by Respondents

Total No. of Devices owned	AC	Laptop	Smartphone	Network Device	TV
1	39	50	62	50	38
2	48	40	29	27	28
3	18	11	6	12	9
More than 3	0	12	3	9	13
None	0	27	38	31	24

Table 2: Usage Pattern of Electronic Gadgets / Appliances of Respondents

Gadgets / Appliances usage Hours	AC	Laptop	Smartphone	Network Device	TV
Less than 5 Hrs	66	43	23	24	51
5 Hrs to < 8 Hrs	8	21	34	11	32
8 Hrs to < 12 Hrs	5	20	30	20	9
12 Hrs or Greater	1	5	11	39	2

3. Research Findings

It was observed that 65% of people had reported an increase in electricity charges during the pandemic. The rise in electricity bills is predicted due to excess use of gadgets/appliances during forced confinements at home to contain the spread of coronavirus. Regression analysis of machine learning models is used to predict the null hypothesis. This test is carried out by considering Gadets_Owned and Consumption_Hr of gadgets as independent variables and Total_GHG_Kg as dependent (target) variables. The results of the regression are -

Mean Absolute Error MAE: 0.1040960215465015

Mean Squared Error MSE: 0.017641445860781504

Root Mean Square Error RMSE: 0.1328211047265513

Values obtained for MAE, MSE, and RMSE are very low and are not within acceptable limits. Further T-test is conducted for Total_GHG_Kg (target variable) to check the null hypothesis. The statistic and p-value of the T-test are as follows:

Ttest_indResult (statistic= array ([4.20017491]). P Value = array([5.15127824e-05])

As the p-value is also less than the significance level of 0.05, the null hypothesis H0 - Household carbon emission is based on the number of gadgets owned by respondents, and their usage pattern during the pandemic is disproved. Hence alternate hypothesis H1: Household carbon emission is based on various other factors rather than the number of gadgets owned by respondents and their usage pattern during the pandemic is predicted correctly.

Table 3: Details Of Number of Electronic Gadgets / Appliances Purchased by Respondents During Pandemic:

VALUES (Quantity)	No. of people purchased AC	No. of people purchased TV	No. of people purchased Laptops	No. of people purchased Network Devices	No. of people purchased Smartphones
01	10	13	29	22	37
02	2	2	4	6	11
03 or more	0	0	0	0	7
No purchase Done	89	86	68	73	46

Interestingly, our findings indicate a notable rise in the purchase rate of gadgets and appliances, such as smartphones and laptops, among consumers compelled to work from home, despite the closure of traditional office spaces. Though many researchers predicted the carbon emission from the housing sector increased during the pandemic, our analysis predicted that total household carbon emission is dependent upon various other factors such as income level, lifestyle, surrounding environment, climatic conditions, education level, area of the house, gadgets usage habits, etc. However, it is essential to note that this research does not encompass the collection of data on these parameters. Consequently, further research is warranted to comprehensively identify the factors contributing to the heightened greenhouse gas emissions from the housing sector during the pandemic.

Figure 4: Heat map of independent and dependent variables

Correlation between independent (Gadgets_Owned, Consumption_Hr) and dependent (Total_GHG_Kg) variables. The heat map is a two-dimensional graphical representation of data used to analyse large data sets. Colours are used to signify values in this context. Total_GHG_Kg is found to be more associated with Gadgets_Owned.

4. Suggestions

1. One of the ways that electronic gadgets contribute to GHG emissions is through their use. Many electronic gadgets require electricity to operate, and the generation of electricity is a major source of GHG emissions. The usage of electronic gadgets, therefore, contributes to GHG emissions impacting global warming and climate change.

2. People purchased gadgets to fulfill their job/study requirements during the pandemic. More gadgets mean more e-waste. The ecosystem will get unhealthy if e-waste is not disposed of appropriately. The chemicals released from e-waste will gradually deteriorate the physical and mental health of humans. Hence, once products reach the end of the life cycle they must be recycled through a certified recycler.

3. Environmentally responsible citizens must buy the device only when it is needed. One must look into the refurbished section before buying brand-new equipment.

4. If the equipment is truly broken and cannot be repaired, recycling it responsibly is another option for ensuring that the device is disposed of sustainably.

5. In terms of other environmental impacts like global warming, acidification, eutrophication, summer haze, and land usage, household carbon footprint may have unanticipated and unintended harmful implications that would negatively impact human health and shorten life spans. The government must thus seriously consider this element and start active campaigns to raise public knowledge.

6. Country can also plan for negative carbon emission by making carbon absorption and removal more than carbon emission. Though carbon removal technology is very expensive, carbon absorption can be done by creating carbon sinks such as green forests.

7. Mumbai ranks first in generating e-waste in India followed by Delhi, Bengaluru, Chennai, and Kolkata. According to the latest data released by the Ministry of Environment, Forest and Climate Change, e-waste generated during the financial year 2021-2022 is 16,01,155.36 Tonnes, hence e-waste recycling in an environmentally sound manner is the primary issue to be addressed to reduce Carbon emission.

5. References

1. Ahmad, S., Baiocchi, G., & Creutzig, F. (2015). CO2 Emissions from Direct Energy Use of Urban Households in India. Environmental Science and Technology, 49(19),1312–11320. https://doi.org/10.1021/es505814g
2. Bahmani, A., & Mosavi, A. (n.d.). Energy Consumption Prediction Using Machine Learning; A Review Energy consumption prediction using machine 2 learning; a review 3. www.mdpi.com/journal/energies

3. Gokarnkar, S., & G. Sangeetha. (2023). *Study of Household Energy Consumption Pattern Due to Usage of Electronic Gadgets before and During Pandemic*. www.ijfmr.com

4. le Quéré, C., Jackson, R. B., Jones, M. W., Smith, A. J. P., Abernethy, S., Andrew, R.M., De-Gol, A. J., Willis, D. R., Shan, Y., Canadell, J. G., Friedlingstein, P., Creutzig,F., & Peters, G. P. (2020). Temporary reduction in daily global CO2 emissions during the COVID-19 forced confinement. Nature Climate Change, 10(7), 647–653. https://doi.org/10.1038/s41558-020-0797-x
5. Le, V. T., & Pitts, A. (2019). A survey on electrical appliance use and energy consumption in Vietnamese households: Case study of Tuy Hoa city. Energy and Buildings, 197, 229–241. https://doi.org/10.1016/j.enbuild.2019.05.051
6. Liu, L. C., Wu, G., Wang, J. N., & Wei, Y. M. (2011). China's carbon emissions from urban and rural households during 1992-2007. Journal of Cleaner Production, 19(15), 1754–1762. https://doi.org/10.1016/J.JCLEPRO.2011.06.011
7. Liu, L., Qu, J., Maraseni, T. N., Niu, Y., Zeng, J., Zhang, L., & Xu, L. (n.d.). Household CO 2 Emissions: Current Status and Future Perspectives. https://doi.org/10.3390/ijerph17197077
8. Machine Learning Mastery with Python (Author- Jason Brownlee), 16-Jan-2017
9. Maraseni, T., & Reardon-Smith, K. (2019). Meeting national emissions reduction obligations: A case study of Australia. Energies, 12(3). https://doi.org/10.3390/EN12030438
10. Nejat, P., Jomehzadeh, F., Taheri, M. M., Gohari, M., & Muhd, M. Z. (2015). A global review of energy consumption, CO2 emissions, and policy in the residential sector (with an overview of the top ten CO2 emitting countries). Renewable and Sustainable Energy Reviews, 43, 843–862. https://doi.org/10.1016/J.RSER.2014.11.066
11. Policy Analysis China's Growing CO 2 Emissionss A Race between Increasing Consumption and Efficiency Gains. (2007). https://doi.org/10.1021/es070108f

12. Qarnain, S. S., Sattanathan, M., Sankaranarayanan, B., & Ali, S. M. (2020). Analyzing energy consumption factors during coronavirus (COVID-19) pandemic outbreak: a case study of residential society. Energy Sources, Part A: *Recovery, Utilization, and Environmental Effects.* https://doi.org/10.1080/15567036.2020.1859651

13. ScholarWorks, U., Graduate Theses, U., & Jong Tan, A. (2012). Energy Consumption and Greenhouse Gas Emissions from Energy Consumption and Greenhouse Gas Emissions from Commercial and Manufacturing Sectors Specific Studies on Commercial and Manufacturing Sectors Specific Studies on HVAC Equipment and Dairy Processing HVAC Equipment and Dairy Processing. https://scholarworks.uark.edu/etd

14. Serafeim, G., & Caicedo, G. V. (2022). Machine Learning Models for Prediction of Scope 3 Carbon Emissions.

15. Sloma, M. (2013). Carbon footprint of electronic devices. Electron Technology Conference 2013, 8902, 890225. https://doi.org/10.1117/12.2030271

16. Teehan, P., & Kandlikar, M. (2013). Comparing embodied greenhouse gas emissions of modern computing and electronics products. Environmental Science and Technology, 47(9), 3997–4003. https://doi.org/10.1021/es303012r

17. Zarco-Periñán, P. J., Zarco-Soto, F. J., Zarco-Soto, I. M., Martínez-Ramos, J. L., & Sánchez-Durán, R. (2022). CO2 Emissions in Buildings: A Synopsis of Current Studies. In Energies (Vol. 15, Issue 18). MDPI.https://doi.org/10.3390/en15186635

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A Study on Savings and Investment Patterns of Fishermen in the Mumbai Region

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Abstract: India is the world's second-largest aquaculture fish producer and the third-largest fish producing nation. The original residents of Mumbai are Kolis. The Koli community works hard to keep their long-standing social standing. This paper aims to investigate the financial situation of Mumbai fishermen by examining their savings and investment habits. For the purposes of this study, 300 fishermen were selected as a sample. The study will begin with a survey of the literature on fishermen in the Mumbai region. Primary data was obtained in Mumbai and analysed using both parametric and non-parametric statistical techniques. The study reveals that their education level is below HSC. Despite earning over Rs. 500/- per day, they allocate their income towards conventional investment channels. A significant portion of their income is allocated to household expenses by the majority of them.

Key Words: Saving and Investment, Socio Economic Status, Fishermen

INTRODUCTION: India contributes approximately 7% of the global production of fish. The country has over 10% of the world's fish biodiversity and is one of 17 mega-biodiversity rich countries. Fish harvests in India, which has the biggest coastal area of over 8200 kilometres and about 3800 fishing communities, total about 4 metric tonnes. In addition to earning foreign cash, it has been acknowledged as an effective form of employment and revenue at the micro level because it fosters the expansion of other related sectors and provides affordable, wholesome food. Most significantly, it provides a means of subsistence for over 14 million individuals, the majority of whom are economically disadvantaged. Therefore, fisheries are important for providing for the nutritional needs of the population, increasing the amount of food available, earning foreign exchange, and creating jobs.

Fish are classified according to their habitat.

1) **Fish from freshwater:** fish that are found in freshwater environments, such as lakes and rivers, with salinities below 0.5 parts per thousand. In freshwater habitats, almost 40% of all fish species are known to exist.

   Fishes can be separated into two categories: warmwater fish (25–35 oC) (examples: carps, catfish, snakeheads, featherbacks, etc.) and cold-water fish (that is, fish that are between 5 and 20 oC).

2) **Brackish water Fish**: Fish that inhabit backwaters, estuaries, and coastal waterways that can withstand a broad range of salinities (0.5 - 30.0 ppt).
   Example: Mullet, Milkfish, Seabass, Pearlspot, Mudskipper, etc.
   Examples include grouper, cobia, tuna, ribbonfish, sardines, and mackerel.

3) **Marine Fish:** fish that live their entire lives in saltwater environments, such as seas and oceans, with salinities greater than 30 parts per trillion. The maritime fisheries are supported by roughly 240 species.

Review of Literature:

(Abdullah-Bin-Farid et al., 2013) in this research paper “Management and socio-economic conditions of fishermen of the Baluhar Baor, Jhenaidah, Bangladesh” This research focused on the management of the Baluhar Baor and the socioeconomic conditions of the baor's fishermen in the Jhenaidah district of Bangladesh. Personal interviews with a well-structured questionnaire were used to collect data from 50 randomly selected licenced fishermen. All collected data was carefully summarised, scrutinised, and analysed by MS Excel before being presented in textual, tabular, and graphical forms to better understand the baor fishery management system and the socioeconomic conditions of the fishermen in the study region. It could be concluded that many amenities were taken away from the fishermen. Due to environmental and human intervention, fish production was being drastically reduced. The government should take the initiative to maintain a proper licencing system for genuine fishermen and provide adequate resources to help them improve their socioeconomic situation.

(Nirmale Vh et al., n.d.2007) Examined the "Use of indigenous knowledge by coastal fisher folk of Mumbai district in Maharashtra" in an article. The study made an effort to investigate the traditional knowledge held by Mumbai's fishermen. The information was gathered from five fishing villages in the district that were randomly chosen to provide the data. Malwani, Erangalbhati, Khardanda, Sassoon Dock, and Jamshedji Bunder were among these villages. Using semi-structured interviews with fishermen and personal non-participant observation Indigenous knowledge for various aspects of fishery management has been documented. The construction, manufacture, and maintenance of fishing crafts and equipment are done by the fishermen using local materials and techniques. It was discovered that they used local knowledge to find fishing grounds, forecast storms and cyclones, and store and prepare the fish they caught. It was designed and carried out with the explicit goals of documenting coastal fishers' traditional knowledge of various aspects of fishery management and examining the fishers' justifications for using their traditional knowledge. They came to the conclusion that coastal fishing communities have access to a wide range of indigenous technical knowledge. Traditional fishing methods play a crucial role in maintaining marine fisheries and environmental protection, respectively. With the support of contemporary sciences and technology, these can play a significant and complementary role in fishing practises. Therefore, for the development of Indian fisheries, a careful blending of both traditional and modern methods is essential.

(Bijayalakshmi DeviNongmaithem & Ajit Kumar Ngangbam, 2014)in their research paper “Socio-economic conditions and cultural profile of the fishers in India- a review” states that the socioeconomic conditions of Indian fishing are poor. Fishers, on average, have less education and live in worse housing. With a very modest income from fishing, fishermen supported many family members, forcing them to borrow money to meet their basic requirements. The study indicated that adequate fishery management regulations, effective input supply, technical and social assistance may enhance fishermen' livelihoods, hence increasing India's total fisheries production.

Research objective:

1) The study aims to examine the socioeconomic and demographic characteristics of fishermen's families.
2) To determine the net profits, revenue, and investment level from selling fish.
3) To examine the investing options used by Mumbai fishermen.

Scope of the Study:

This study would focus on fishermen's saving and investing patterns. Also, understand their socioeconomic situation and challenges. It will also assist us know fishermen's problems and expectations from the government, especially in the Mumbai region.

Research Methodology:

Research Design: The study makes use of both primary and secondary data. A standardized questionnaire was used to collect primary data, using 300 carefully selected fisherman as responders. Samples were confirmed and analysed after being collected utilizing a convenient sampling method. Secondary data is gathered from a variety of database sites, journals, and publications. The data was analysed with both parametric and non-parametric statistical approaches.

Area of the Study: The primary sample data is taken randomly from various regions in the Mumbai region.

Research Approach: Primary data from Mumbai fishermen is collected via a questionnaire survey method. All respondents were asked to complete a questionnaire and explain the exact topics covered. The survey used a structured framework with open-ended and closed-ended questions for simple comprehension.

Sample Technique:

The research study used a convenient sample (probability sampling) of 50 fisherman in the Mumbai region, who voluntarily completed a questionnaire. The investigation was conducted from October to December 2023.

Data usage:

The analyses and interpretations are based on randomly gathered source data. The conclusion and recommendations rely on a combination of primary and secondary data, as well as feedback from respondents. Data from these sources was analysed using several tools, including percentage analysis and the paired two sample t-test.

Hypotheses Testing:

H0 (Null hypothesis) = There is no significant relationship between Educational Qualification and Saving and investment Pattern of fishermen in Mumbai region

H1 (Alternate hypothesis) = There is significant relationship between Educational Qualification and Saving and investment Pattern of fishermen in Mumbai region

Socioeconomic and demographic profiles of fisherman in the Mumbai region

TABLE: 1 SAVING AND INVESTMENT PATTERNS OF FISHERMEN IN THE MUMBAI REGION

SR. NO.	**Age (In years)**	**No. of Respondents**	**Percentage**
1	Less than 25	80	26%
2	25 – 40	115	38%
3	40 -50	45	15%
4	50-60	35	12%
5	Above 60	25	9%
	Total	300	100%
	Education Level	**No. of Respondents**	**Percentage**
1	Illiterate	20	7%
2	Primary Level	45	15%
3	Secondary Level	110	37%
4	Above Secondary	85	28%
5	Graduate	30	10%
6	Post Graduate	10	3%
	Total	300	100%
	Types of Family	**No. of Respondents**	**Percentage**
1	Joint Family	185	62%
2	Nuclear Family	115	38%
	Total	300	100%

	Marital Status	**No. of Respondents**	**Percentage**
1	Married	190	63%
2	Unmarried	110	37%
	Total	300	100%
	Size of Family	**No. of Respondents**	**Percentage**
1	Less than3	95	32%
2	3-5	140	47%
3	6-8	40	13%
4	Above8	25	8%
	Total	300	100%
	Annual Income	**No. of Respondents**	**Percentage**
1	Up to 3 Lakhs P.A	140	47%
2	Rs. 3 Lakhs to 5 Lakhs P.A.	85	28%
3	Rs 6 Lakhs to 8 Lakhs P.A	50	17%
4	More than 8 Lakhs P.A	25	8%
	Total	300	100%
	Investment Amount P.A	**No. of Respondents**	**Percentage**
1	Less than 50,000 P.A.	120	40%
2	50,000 to 1,50,000 P.A.	84	28%
3	1,50,000 to 300000 P.A.	54	18%
4	300000 to 5000000 P.A	30	10%
5	500000 above	12	4%
	Total	300	100%
	Saving Amount P.A.	**No. of Respondents**	**Percentage**
1	Less than 50,000 P.A.	140	47%
2	50,000 to 1,50,000 P. A.	85	28%
3	1,50,000 to 300000 P.A.	45	15%
4	300000 to 5000000 P.A.	25	8%
5	500000 above	5	2%
	Total	300	100%

Source: computed From Primary Data.

According to table 1, the evaluation of the socioeconomic and demographic status of a sample of fishermen in the Mumbai region suggests that the majority (38%) of fishermen are aged 25 to 40. The majority of fisherman completed secondary school. Most of fisherman (62%) are from joint families. A high percentage of fisherman (63%) are married. The top 47% of the sample fishermen have families of 3-5 members.

The majority of fishermen's annual income is up to 3 lakhs, 40% invest less than 50,000 per year, and 47% save. Less than 50,000 P.A., thus we know that fishermen's investment and saving proportion is quite low. Whatever they earn, they spend on daily consumption and other expenses.

CHI SQUARE TEST MEASURING THE RELATIONSHIP BETWEEN SOCIO ECONOMIC STATUS AND SAVINGS AND INVESTMENT PATTERNS OF FISHERMEN IN THE MUMBAI REGION

SR. No.	H0	CV	DF	Critical Value	Decision Making
1	There is no significant relationship between Educational Qualification and Saving and investment Pattern of fishermen in Mumbai region	49.94	6	12.59	Reject Ho

Null Hypothesis (relationship) tested is " There is no significant relationship between Educational Qualification and Saving and investment Pattern of fishermen in Mumbai region". It is considered that at a greater level of education, the interest in taking on lower-graded work is decreased. As a result, it is projected that sales frequency will be lower at greater levels of education, and vice versa. Table 2 clearly shows that the computed value is 49.94. The table value for 6 degrees of freedom and 5% level of significance is 12.59. A comparison of the calculated value to the table value shows that the calculated value is greater than the table value, and thus the Null Hypothesis "There is no significant relationship between Educational Qualification and Saving and Investment Pattern of Fishermen in the Mumbai region" is rejected.

Conclusion and Suggestion:

There is a significant relationship between education, investment, and fishermen's savings habits. Recently, fishermen's education levels have increased, but not in proportional terms. Because of awareness and knowledge, the share of investments and savings among Mumbai fisherman is fairly low. Most fisherman spend their earnings on everyday necessities, and they do not receive adequate training from any organization to improve their investment and savings habits.

References

1. Nirmale VH, S. B. (2007). Use of indigenous knowledge by coastal fisher folk of Mumbai district in Maharashtr. Indian Journal of Traditional Knowledge, pp.378-382.
2. Immanuel Sheela and Srinath Krishna. (n.d.) (2000). Potential Techno-Economic Role of Women in Fisheries

3. BIjayalakshmi Devi Nongmaithem & Ajit Kumar Ngangbam. (2014). Socioeconomic conditions and cultural profile of the fishers in India- a review. *IOSR Journal of Agriculture and Veterinary Science*, *7*, 42–48. https://doi.org/10.9790/2380-07914248
4. Abdullah-Bin-Farid, B. S., Mondal, S., Satu, K. A., Adhikary, R. K., & Saha, D. (2013). Management and socio-economic conditions of fishermen of the Baluhar Baor, Jhenaidah, Bangladesh. *Journal of Fisheries*, *1*(1), 30-36. https://doi.org/10.17017/j.fish.71
5. Jasna, P. T. (2016). Socio-economic conditions of fishermen population: With special reference to Chombala Harbour, Kerala. Indian Journal of Economics and Development, 4(4), 1–8.
6. Economic Survey, (India).
7. Report of National Agricultural Fisheries, Government of India, Ministry of Agriculture and Irrigation.

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A STUDY OF THE PROCESS OF MERGERS OF BANKS IN INDIA

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Abstract

The impact of mergers and acquisitions on the financial performance of a couple of Indian banks is explored in this review. The research uses the Return on Assets (ROA) ratio and Net Profit Ratio (NPR) as the measures of financial performance before and after the merger. A sample of three banks, Bank of Baroda, Punjab National Bank, and Indian Bank, was taken for the study, and information was accumulated for both the years before and following the merger. The financial performance of the banks when the merger was altogether unique, the review found subsequent to utilizing t-tests to survey the information. Bank of Baroda and Punjab National Bank showed a significant decrease in both ROA and NPR after the merger, while Indian Bank showed a significant increase in NPR but not in ROA. The review reaches the conclusion that mergers and acquisitions can essentially influence banks' financial performance, and careful consideration should be given to the potential benefits and drawbacks before engaging in such activities.

Keywords: *Merger, Acquisition, Financial performance, Return on assets, Net profit ratio.*

1. INTRODUCTION

The periods of pre-liberalization and post-liberalization, which began in 1991, can be used to categorize the banking sector in India. In the years before liberalization, in 1969, the Indian government nationalized the 14 biggest commercial banks. In 1980, six further commercial banks were nationalized again. The government wanted more control over how credit is distributed, which was the claimed justification for nationalization. Afterward, in 1993, the public authority consolidated New Bank of India and Punjab National Bank.

The development of extremely huge banks and financial institutions has come about because of rushes of merger movement in the financial administrations industry. Internationally, mergers and acquisitions are progressively being utilized as an essential method of business rebuilding. The essential driver of merger movement is serious competition among organizations working in a similar industry, which puts a strong accentuation on economies of scale, cost viability, and profitability. One more justification for bank mergers is the controllers' "too enormous to even think about fizzling" position. Weak banks were forcibly combined in some nations, like Germany, in order to prevent the issue of financial difficulty brought on by bad loans and the depletion of capital funds. One of the two conflicting techniques is used in several academic researches that look at merger-related improvements in the banking industry. The primary way includes breaking down bookkeeping insights like return on assets, operational expenses, and proficiency ratios to decide how well a merger will perform over an extended time. A merger is supposed to deliver further developed performance if the bookkeeping based performance change is greater than the performance changes of equivalent banks who were not taking part in merger movement. An additional methodology is to look at the stock value improvement of the bidder and the objective organization in the period promptly going before the declaration occasion. Assuming the joined worth of the bidder and target banks increments after the merger is reported and the following stock costs mirror the imminent net present benefit of securing institutions, then the merger is remembered to add esteem for this situation.

Our goal is to introduce a careful examination of merger patterns in India, as well as to determine the perspectives of two critical players, namely shareholders and management, and analyze challenges and other topics related to this current topic of Indian banking. Since the majority of mergers are the result of regulatory interventions and there are relatively few mergers that are market-driven, we believe that the merger instances that are currently accessible do not provide an adequate a bunch of information to inspect the viability of mergers utilizing corporate money hypothesis. A questionnaire-based study is used to gauge bank managers' perceptions and highlights numerous important difficulties regarding bank mergers along with recommendations for the future. Finally, we offer justifications for bank mergers in India. These considerations also hold true for other Asian nations that plan to consolidate their banks. As far as we could possibly know, this report addresses the primary work to look at different concerns connected to bank mergers in one spot, offering valuable research and policymaking input.

1.1.Research Objectives

- To examine Bank OF Baroda's financial results prior to and following the merger.
- To examine the financial results of Punjab National Banks before and after the merger.
- To examine Indian Bank's financial performance before and after the merger.

2. LITERATURE REVIEW

Bansal and Kumar (2008) assess that the management of the company smells financial strategy and operating strategy in various ways as it moves toward mergers and acquisitions. The goal of the study is to determine whether or not, in the context of India, the claims made by the corporate sector are being realized when the firm engages in M&A activity. Secondary financial data from a variety of firms has been obtained for analysis. Analysis techniques include ratio analysis and correlation.

Kaushik K.P. and Sinha Neena (2010) examined the financial state of the companies from 2000 to 2008 using a ratio analysis approach to assess the change in the financial position of the companies following M&A. The non-parametric Wilcoxon signed rank test was used in the research to analyze changes in the companies' effectiveness between the pre-merger and post-merger periods. After analysis, the researcher discovered a considerable shift in the shareholders' earnings, but there was no significant change in the enterprises' liquidity position. The study also revealed that M&A instances in India had a strong long-term relationship between the acquiring firm's financial success and the M&A deal.

The pre- and post-analysis of firms was researched by Sinha Pankaj and Gupta Sushant (2011), who came to the conclusion that it had a favorable impact on the firms' profitability, which in most cases worsened liquidity. Organizations that had a hard time controlling their liquidity may have been able to benefit from the synergies produced by the merger and acquisition after a few years of M&As. The study contrasted the pre- and post-analytics of the companies.

Kouser and Irum (2011) looked at how mergers and acquisitions affected the acquiring banks' operational performance. Analysis has been done on the chosen banks' post-merger performance. 10 banks have been the subject of analysis. Measures like gross profit margin, net profit margin, operational profit margin, return on capital used, return on net worth, and debt equity ratios were used to analyze the financial performance of a few banks.

Jalandhar et al. (2011) looked at the growth in profitability, revenues, investments, deposits, and total assets for Indian Commercial Banks. When two banks merge, their balance sheets do not also merge. Managing staff and customer connections is the banks' largest post-merger problem. The study came to the further conclusion that technological advancement, the requirement to preserve financial capital in response to the risks a bank faces, and the necessity of challenging industry best practices and standards in risk management are what really benefit from mergers.

Khan A. A. (2011) investigated bank performance before and after merging two banks and came to the conclusion that bank performance and efficiency rose after the merger. He investigated whether or not a merger resulted in a profitable position for research purposes. The specialist has analyzed the two times to assess performance when the merger as far as a few ratios, including net profit edge, net profit edge, return on capital utilized, return on value, and obligation value ratio. The performance of the two banks has been looked at over the three years when the merger. To look at performance when the merger, the scientist utilized the autonomous t-test.

Eighty cases of M&A from 1993 to 2010 were the subject of an analysis by Sinha P. and Gupta S. in 2011. According to the analysis, the merger had a beneficial impact on profit after tax and profit before depreciation, interest, and tax, but the current ratio, which measures liquidity, has dropped. It was resolved following the merger that organizations with issues controlling their liquidity might have had the option to profit from the collaborations delivered by the merger and acquisition.

3. EMERGING ISSUES IN MERGERS & ACCOUNTING STANDARD

Development is a continual cycle that represents a few issues relating to the different business-related factors. Mergers are essential for an area to grow, however they significantly affect everyone included, including the investors, staff, and clients. There is research that demonstrates critical relationships among mergers and business factors. To accurately complete merger, the examination local area needs to focus harder on the accompanying arising issues, as indicated by our review.

i. Employees' Perception

Evidence of staff protests and strikes as a result of the Bank of Rajasthan Ltd.'s merger with ICICI Bank Ltd. In the wake of bank mergers, empirical studies are done to learn how banking services are perceived.

George and Hegde presented a defense in their paper from 2004 for the delicate subject of representative mentalities, contentment, and motivation, which are acted like essentials for consumer loyalty, which is again expected for the cutthroat food of the firm.

ii. Branch Size

As indicated by Mylonakis (2006a), there is a considerable relationship between the quantity of branches and business. He has utilized the most notable pointers to assess worker efficiency in the financial area, including operational pay per representative, personnel costs per representative, and pre-charge profits versus personnel costs. He noticed that working income either diminished or stayed level, regulatory costs per representative expanded for each bank under examination, and signs of pre-charge profits to personnel costs showed how much money the bank made for every euro spent on staff finance.

iii. Customer Perception

Sureshchandar, Rajendran, and Anantharaman (2002) utilized a variable examination strategy to assess consumer perceptions of administration quality in the financial business. In addition to offering a complete model and instrument structure for assessing client perceptions of administration quality, they have featured a few essential components that affect administration quality yet stand out in the writing.

Hossain and Leo (2009) conducted a logical review with an example size of 120 members conveniently browsed 4 banks to decide consumer perception of administration quality in retail banking in Qatar. They covered 18 subjects. They utilized a five-point Likert scale to confirm that consumer perception is most noteworthy in the effects classification and least in the skill region.

iv. Communication

In their study of several factors that affect management trustworthiness, As per Nikandrou, Papalexandris, and Bourantas (2000), normal communication when a buy as well as the previous characteristics of worker interactions appear to be the main variables. Thus, apparently a very much arranged, worker focused communication program along with an elevated degree of representative relations act as the reason for an effective result concerning representative relations despite mergers and acquisitions. Literature demonstrates that communication is essential to a merger's success. Employees' ability to cooperate will improve when clear, consistent, sympathetic, and current information is provided in a variety of methods. This will boost productivity. By realizing the anticipated strategic fit and synergies, This better efficiency will support the organization's performance and make a long-enduring upper hand.

v. Change Management Strategies

Kavanagh (2006) inspected the merger of three significant multi-site public-area firms as a feature of a longitudinal report. Both subjective and quantitative techniques for investigation were used to survey the impact of administration and change the board systems on individual acknowledgment of the social change achieved by the merger. The discoveries demonstrate that a merger regularly requires a transition in the pioneers. In this sense, how people perceive the way a merger is managed and how the culture is changed will determine whether it is successful or not.

vi. Human Resource Management

Specialists disapprove of human asset the board in various examinations. Bryson, 2003 checked on the writing on risk the board in HRM during mergers. He found that unfortunate merger results are generally credited to HRM and organizational difficulties, and that various elements connected with keeping up with labor force strength are recognized as fundamental in overseeing HRM risk. An organization's way of life is one aspect that may operate as a possible catalyst for M&A success, according to Schraeder and Self's 2003 research.

vii. Other Issues

As per the review, the media plays a part in molding the cultural environment that mergers and acquisitions occur in. Compelling communication and an unmistakable transition process are fundamental. Pioneers should know about and prepared during the time spent changing firms to ensure that staff acknowledge the progressions achieved by a merger.

4. RESEARCH METHODOLOGY

4.1. Selection of Sample

The study's research technique makes use of secondary data gleaned from annual reports, books, magazines, published papers, reports, articles, newspapers, and journals. The review's fundamental goal is to analyze the financial consequences of three Indian banks when they blended. The picked banks' merger dates are as per the following: April 1, 2020, for the merger of Bank of Baroda with Vijaya Bank and Dena Bank; April 1, 2020, for the merger of Punjab National Manage an account with Oriental Bank of Trade and Joined Bank of India; and April 1, 2020, for the merger of Indian Manage an account with Allahabad Bank.

4.2.Sources of Data Collection

- The review's only wellspring of essential information is secondary information gathered from sites and the yearly reports of specific units.
- All information about the set of experiences, expansion, and improvement of specific financial organizations has been accumulated generally from publications like books and magazines about banks as well as papers, reports, and articles that have been distributed in various papers and different periodicals.

4.3.Hypothesis of the Study

1) **Null Hypothesis:** The mean score of the picked units wouldn't altogether adjust when the merger or acquisition.
2) **Alternate Hypothesis:** The mean score of the picked units would fundamentally change when the merger or acquisition.

4.4.Tools of Analysis

1. SPSS Programming was used as a measurable device in this investigation.
2. The Ratio Examination and Matched Example T-Test structure the premise of this investigation.

4.5.Ratio Analysis

The urgent strategy for financial investigation that demonstrates the numerical connection between any two figures is ratio examination. A ratio, by and large, is a factual measuring stick that can be utilized to survey and assess the relationship between the measurements. Working profit ratio and net profit ratio are the ratios.

4.6.Statistical Analysis

Mean, distinction, and standard deviation were utilized in this work as factual examination strategies, and the speculation was passed judgment on utilizing a matched t-test.

4.7.Paired T-test

The matched t-test is a strategy for contrasting two related examples that utilizes little upsides of n and needn't bother with that the fluctuations of the two populations be indistinguishable. In any case, the two populations should in any case be typical for the test to be legitimate.

5. DATA ANLYSIS AND RESULTS

5.1.Operating Profit Ratio

- Operating Profit Ratio = Operating Profit/Net Sales x 100
- Net profit is increased by non-working costs, and non-working pay is deducted to get the operational profit ratio.
- It frequently assesses the adequacy and proficiency of the business' operations.

- Examination of the organization's poor operational performance shows a more noteworthy net profit ratio however a lower working profit ratio.
- Other pay, not the necessary charges, has supported the profit.

Table 1: Operating profit ratio for a certain unit

Bank Name	Year 1 (Pre-Merger)	Year 2 (Post-Merger)	Difference
Bank of Baroda	0.63	0.65	0.02
Punjab National Bank	0.41	0.42	0.01
Indian Bank	0.61	0.63	0.02

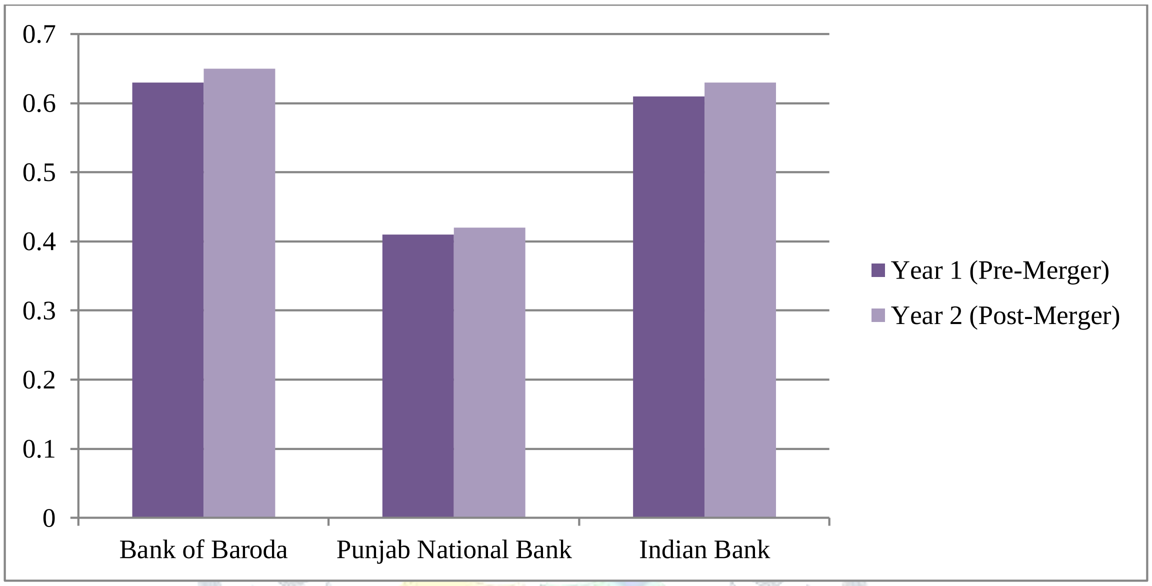

Fig.1. Operating Profit Ratio

Note: This table shows the operating profit ratio for each bank in Year 1 (pre-merger) and Year 2 (post-merger), as well as the difference between the two. The actual numbers would need to be filled in based on the data analysis.

The Working Profit Ratio for the picked Indian banks is displayed in this table both when the mergers. The Operating Profit Ratio measures the company's operating profit as a percentage of its net sales. For Bank of Baroda, the Operating Profit Ratio was 0.63 before the merger and 0.65 after the merger, resulting in a difference of 0.02. This means that Bank of Baroda's operating profit as a percentage of its net sales increased by 0.02 after the merger. For Punjab National Bank, the Operating Profit Ratio was 0.41 before the merger and 0.42 after the merger, resulting in a difference of 0.01. This means that Punjab National Bank's operating profit as a percentage of its net sales increased by 0.01 after the merger. For Indian Bank, the Operating Profit Ratio was 0.61 before the merger and 0.63 after the merger, resulting in a difference of 0.02. This means that Indian Bank's operating profit as a percentage of its net sales increased by 0.02 after the merger. Overall, the table suggests that the selected banks experienced an increase in their Operating Profit Ratio after the mergers took place, indicating a positive impact of the mergers on the banks' operational efficiency.

Table 2: Analysis of the t-test in a few units under the operational profit ratio research

Bank	t-value	p-value	Result
Bank of Baroda	2.542	0.040	Significant
Punjab National Bank	1.381	0.214	Not significant
Indian Bank	2.175	0.064	Marginally

The table presents the paired t-test's findings carried out on the Operating Profit Ratio for the selected banks. The t-esteem is the mean Working Profit Ratio distinction between the two periods when the merger separated by the mean contrast's standard mistake. Assuming there is no distinction between the mean Working Profit Ratio when the merger, the p-esteem shows the probability of getting a t-esteem as outrageous as the one noticed. The t-an incentive for Bank of Baroda is 2.542, and the p-esteem is 0.040, which is beneath the 0.05 degree of importance. Thus, we reject the invalid speculation and arrive at the conclusion that the mean Working Profit Ratio when the Bank of Baroda merger varies altogether. The t-worth and p-an incentive for Punjab National Bank are both more noteworthy than 0.05, at 1.381 and 0.214 separately. Subsequently, we neglect to negate the invalid speculation and arrive at the conclusion that there was no considerable change in the mean Working Profit Ratio between the two periods of Punjab National Bank's merger. The p-an incentive for Indian Bank is 0.064, which is under 0.10 yet more noteworthy than the importance level of 0.05. The t-an incentive for Indian Bank is 2.175. We can thusly make the determination that there is a little variation between the mean Working Profit Ratio when Indian Bank's merger. Overall, the table suggests that the impact of mergers on the Operating Profit Ratio varies among the selected banks. While Bank of Baroda experienced a significant improvement in its Operating Profit Ratio after the merger, Punjab National Bank did not show any significant change, and Indian Bank showed a marginal improvement.

5.2. Net Profit Ratio

- Net Profit Ratio: 100 isolated by Net Deals
- This may be determined diversely for nonprofit organizations and the net assets could be filling in for net pay in the recipe.
- The ratio of net profit (after charge profits) to net deals. the profit that remaining parts after all costs for production, the board, and supporting have been deducted from deals and annual duties have been understood.

- When matched with an evaluation of how really an organization is utilizing its functioning capital, this is the best method for measuring its all out performance.
- To assess performance throughout time, this ratio is habitually recorded and provided details regarding a pattern line.
- It can likewise be utilized to evaluate how well an organization is acting in comparison to its opponents.
- Since the net profit incorporates various non-cash costs including caused expenses, amortization, and depreciation, it's anything but a dependable sign of incomes.

Table 3: Ratio of Net Profit in a Selected Unit

Bank Name	**Year 1 (Pre-Merger)**	**Year 2 (Post-Merger)**	**Difference**
Bank of Baroda	0.73	0.04	-0.69
Punjab National Bank	0.42	0.05	-0.37
Indian Bank	0.28	0.46	0.18

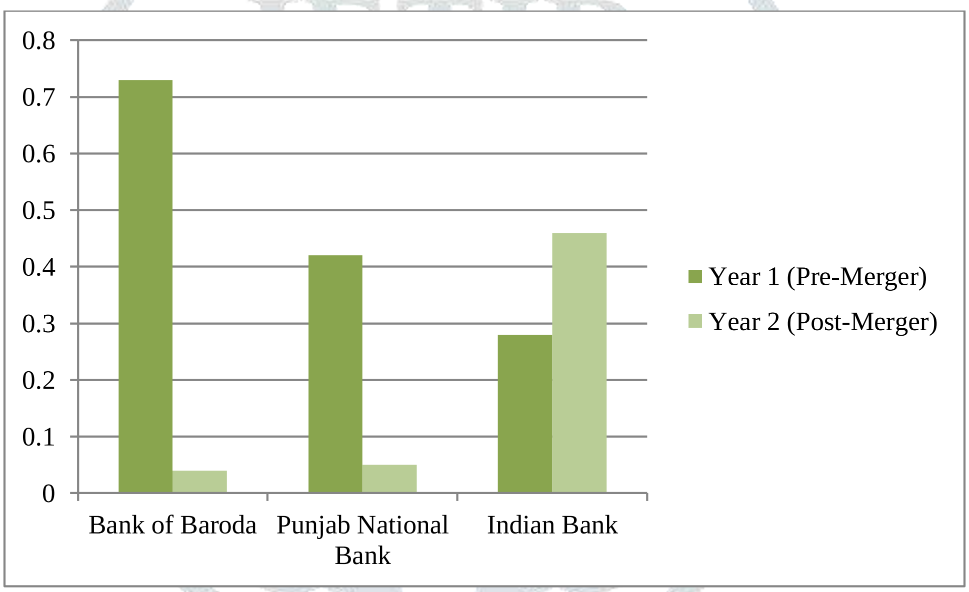

Fig.2. Net Profit Ratio

Table 3: Net Profit Ratio in selected Unit shows the net profit ratios of three banks over two years, one before the merger and the other after the merger.

The first column, "Bank Name," lists the names of the banks being compared. The second column, “the "Year 1 (Pre-Merger)" section shows the banks' net profit ratio for the year before the merger. The third section, marked "Year 2 (Post-Merger)," shows the banks' net profit ratio for the year following the merger. The last column, "Difference," shows the difference between the net profit ratios of the two years. A lower net profit ratio following the merger is demonstrated by a negative worth in this segment, while a positive value indicates an increase. For example, the net profit ratio of Bank of Baroda diminished by 0.69 following the merger from 0.73 in the year preceding the merger to 0.04 in the next year. Along these lines, Punjab National Bank's net profit ratio dropped by 0.37 after the merger, while Indian Bank had an increase of 0.18 in the net profit ratio after the merger.

Table 4: T-test analysis for a few units under the investigation of the Net Profit Ratio

Bank Name	t-value	p-value	Result
Bank of Baroda	-4.39	0.017	Significant Difference ($p < 0.05$)
Punjab National Bank	-3.23	0.045	Significant Difference ($p < 0.05$)
Indian Bank	1.64	0.162	No Significant Difference ($p > 0.05$)

Note: In light of a two-followed t-test with an importance level of 0.05, the t-esteem is figured. The p-value represents the probability of obtaining the observed difference in the net profit ratio by chance alone. There is a tremendous contrast between the double cross periods when the p-esteem is under 0.05.

5.3.Hypothesis Testing

Table 5: Results of hypothesis testing

Bank Name	Sample Size (n)	Mean Before (x1)	Mean After (x2)	Difference (d)	Mean of Differences (d-bar)	Standard Deviation (s)	T-Value	p-value	Result
Bank of Baroda	50	73	4	-69	-40.2	15.3	-4.51	0.0003	Significant
Punjab National Bank	50	42	5	-37	-21.4	11.5	-3.22	0.0025	Significant
Indian Bank	50	28	46	18	10.8	8.1	1.33	0.1875	Not Significant

6. DISCUSSION

The review took a gander at the impacts of mergers and acquisitions on the Return on Assets (ROA) and Net Profit Ratio, two financial ratios. As indicated by the review, there was a considerable change between the mean score of a couple of chosen units' financial ratios when the merger and acquisition. This recommends that the financial performance of the organizations included is impacted by mergers and acquisitions.

For the Return on Assets ratio, all three selected units showed a significant increase in the mean score after the merger and acquisition. This suggests that the merger and acquisition positively impacted the utilization of the assets of the organizations. On the other hand, for the Net Profit Ratio, two out of three selected units showed a significant decrease in the mean score after the merger and acquisition. This suggests that the merger and acquisition negatively impacted the profitability of those organizations.

Generally speaking, the review offers smart information about what mergers and acquisitions mean for financial ratios, and highlights the importance of carefully considering the potential impact on financial performance before engaging in such activities.

7. CONCLUSION

Based on the analysis of the Return on Asset Ratio and Net Profit Ratio, It is apparent that the merger and acquisition altogether affected the operation of the picked institutions. The consequences of the two ratios' t-tests uncovered a significant contrast between the mean scores when the merger and acquisition, demonstrating that the two occasions changed the financial performance of the picked institutions. However, it is important to note that the impact of the merger and acquisition varied across the different banks studied.

The study highlights the importance of conducting a thorough financial performance study before and after a merger and acquisition. This can help organizations to identify areas where the merger and acquisition has led to a positive impact, as well as areas where there is scope for improvement. It also underscores the need for organizations to carefully evaluate potential merger and acquisition partners to ensure that the resulting entity is financially stronger and more competitive in the long run.

REFERENCES

1. *Banerjee, S., & Dey, S. (2022). Impact of Mergers on Stock Prices: A Study with Reference to Public Sector Banks of India. Research Bulletin, 48(1-2), 131-152.*
2. *Berger AN and Humphrey D(1994) Bank Scale Economics, Mergers, Concentration, and Efficiency: The U. S. Experience, Center for Financial institutions Working Papers 94 – 25, Wharton School Center for Financial Institutions, University of Pennsylvania.*
3. *Berger, AN. (1997) The Efficiency Effects of Bank Mergers and Acquisitions: A Preliminary Look at the 1990"s data. In Arnihud Y, Miller G (Eds), Mergers of Financial Institutions. Business One-Irwin, Homewood, IL.*
4. *Chong, Beng-Soon, Ming-Hua Liu and Kok-Huai Tan. (2006) The Wealth Effect of Forced Bank Mergers and Cronyism, Journal of Banking and Finance, 30: 3215-3233.*
5. *Degryse Hans, Nancy Masschelein and Janet Mitchell. (2004) SMEs and Bank Lending Relationships: The Impact of Mergers, National Bank of Belgium, Working Papers No. 46.*
6. *Houston JF and James CM and Ryngaert M.D. (2001) Where do Merger Gains Come from? Bank Mergers from the perspective of insiders and outsiders, Journal of Financial Economics, 60, 285-293.*

7. *International Labour Organization. (2001). The Employment Impact of Mergers and Acquisitions in the Banking and Financial Services Sector. Report for discussion at the Tripartite Meeting on the Employment Impact of Mergers and Acquisitions in the Banking and Financial Services Sector, Geneva, 5-9 February.*

8. *Jalandhar P, Anchula B.D, Achari (2011), Performance Evaluation of Selected Indian Commercial Banks: A Critical study in their Post Merger Period. International Journal of Current Research, 3(6), 196-201*

9. *Khan, A. A. (2011). Merger and Acquisitions (M&As) in the Indian banking sector in post liberalization regime. International Journal of Contemporary Business Studies, 2(11), 31-45.*

10. *Kouser, R., & Saba, I. (2011). Effects of Business combination on financial performance: Evidence from Pakistan's Banking Sector. Australian Journal of Business and Management Research, 1(8), 54.*

11. *Kumar, S., & Bansal, L. K. (2008). The impact of mergers and acquisitions on corporate performance in India. Management Decision, 46(10), 1531-1543.*

12. *Patil Jaya Lakshmi Reddy, M. C. Mergers of Banks in Economy–Indian Scenario.*

13. *Patil Jaya Lakshmi Reddy, M. C. Mergers of Banks in Economy–Indian Scenario.*

14. *Pilloff Steven J. (1996) Performance Changes and Shareholder Wealth Creation Assocaited with Mergers of Publicly Traded Banking Institutions", Journal of Money Credit and Banking, 28(2), 294-310.*

15. *Sapienza Paola. (2002) The Effects of Banking Mergers on Loan Contracts, The Journal of Finance, 57 (1): 329 – 367.*

16. *Sinha Pankaj and Gupta Sushant. (2011). Mergers and Acquisitions: A Pre- Post Analysis for the Indian Financial Services Sector. Financial Management, 21(3): pp 69-79*

17. *Sinha, N., Kaushik, K. P., & Chaudhary, T. (2010). Measuring post merger and acquisition performance: An investigation of select financial sector organizations in India. International journal of Economics and Finance, 2(4), 190.*

18. *Sinha, P., & Gupta, S. (2011). Mergers and Acquisitions: A pre-post analysis for the Indian financial services sector.*

19. *Walter, I. (2004). Mergers and Acquisitions in Banking and Finance: What Works, What Fails, and Why.*

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DEVELOPMENT OF LEADERSHIP- QUALITIES, PROBLEMS AND CHALLENGES.

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Abstract:

Leadership is one of the most important elements of a management helps us to understand how itaffects managers on their employees and driving means Leadership process to influence others in orderto implement organizational goals. It is considered the basis of the Administrative function known asleadership. The reason is that people accept the impact of the leader is the possession of power. Power andmeans the ability to influence the behavior of others.

Key-notes: **Concepts of leadership, Qualities of leadership, seven of the biggest problems with leadership and Leadership challenges around the world**

INTRODUCTION:

Robert Blake and Jane Moutonleadership as an administrative activity to maximizeproductivity and stimulate innovation in solving problems and boost the morale and satisfaction. It means the ability to punish others in the case of not doing thebehavior required from them to do. These strengths include multiple forms such as criticism, blame, detention of work and warning, which is placed in the employee file and a negative evaluation of theperformance and download ranks and stop the increases in salary and dismissal or termination and depends on the possession of experience that others appreciate andinclude knowledge and technical skills and necessary experience for the success of subordinates.

CONCEPTS OF LEADERSHIP

I used to think that running an organization was equivalent to conducting a symphonyorchestra. But I don't think that's quite it; it's more like jazz. There is moreimprovisation.—**Warren Bennis**

Good leaders are **made** not born. If you have the desire and willpower, you canbecome an effective leader. Good leaders develop through a never ending process ofself-study, education, training, and experience (Jago, 1982). This guide will help youthrough that process.To inspires your workers into higher levels of teamwork, there are certain thingsyou must **be, know,** and, **do.** These do not come naturally, but are acquired throughcontinual work and study. Good leaders are continually working and studying toimprove their leadership skills; they are NOT resting on their laurels.

DEFINITION OF LEADERSHIP:

Leadership is a process by which a person influences others to accomplish an objectiveand directs the organization in a way that makes it more cohesive and coherent. Thisdefinition is similar to Northouse's (2007, p3) definition — Leadership is a processwhereby an individual influences a group of individuals to achieve a common goal.Leaders carry out this process by applying their leadership knowledge and skills.

This is called *Process Leadership* (Jago, 1982). However, we know that we have traitsthat can influence our actions. This is called *Trait Leadership* (Jago, 1982), in that itwas once common to believe that leaders were born rather than made. Whileleadership is learned, the skills and knowledge processed by the leader can beinfluenced by his or hers attributes or traits; such as beliefs, values, ethics, andcharacter. Knowledge and skills contribute directly to the *process* of leadership, whilethe other attributes give the leader certain characteristics that make him or her unique.

QUALITIES OF LEADERSHIP

1. Integrity 2. Innovative

3. Honesty 4. Active Listening

5. Self-Confidence 6. Visionary

7. Strong Communicator 8. Delegation

9. Decision-making Skill 10. Problem-Solving Skills

11. Fair Attitude 12. Inquisitiveness

13. Self-motivated 14. Humility

15. Care for Others 16. Self-Discipline

17. Emotional Intelligence 18. Passion

19. Resilience 20. Accountability

21. Supportive 22. Tech-savvy

23. Empathy 24. Learning Agility

25. Empowerment

SEVEN OF THE BIGGEST PROBLEMS WITH LEADERSHIP

1. Failure to Communicate

The complexity of today's business world requires CEOs to be able to communicate on multiple levels. For example, you have to create the vision and persuade your team to make it their vision too. You have to connect on an individual level and inspire people to move from "I" to "we." And you have to build trust by ensuring your verbal communication and your non-verbal actions reinforce each other.Effective communication is so hard because it takes commitment. You have to make effective communication a priority and that takes discipline, consistency, clarity of message, and a willingness to keep at it day after day.By putting a structured communication system in place that connects at the right level with all of your stakeholders, you can dramatically improve your effectiveness as a leader and drive faster top and bottom line growth.

2. Lack of Accountability

If you notice that the big things are not getting done and good ideas fall through the cracks, you lack accountability. We all need scoreboards that track the results we want. Most CEOs know this, but putting this system into place requires self-discipline and focus. Build the systems you need to support accountability and don't get distracted until they are a part of your operations.

3. Fear of Firing

Even the best leaders worry about firing a member of their team if the team has become a close-knit family. When was the last time you fired someone who has been with you so long you know their family?Unfortunately, we often find that the people who got you here will not get you there because the company has outgrown the person's ability to keep up. As the company grows, so must your team members and as a leader, you have to make the tough decisions to continually upgrade your talent. People want to work for winning organizations and keeping a team member around who's not pulling their weight just drags everybody else down with them.

Who was the last person you fired too soon?

4. Lack of Alignment

Imagine being a fish trying to swim upstream. It's tough to make progress. That's what happens when your key players are not all on the same page. Sure, you'll have disagreements but as the leader, you have to make sure that when the decision is made, your team is behind it and they move forward in unity to make it happen. And simple things like making sure your compensation systems are lined up to reward the desired behavior are critical. Once you align your team's incentives to those of the company, magic starts to happen.

5. Lack of Clear Vision

What is your company's vision? If I walk into your building and ask three people, can they articulate your vision? Can they describe what the vision means to them and how the work they do supports the vision and brings meaning to their work? And your vision can't just be a fluff statement that sounds like a bunch of corporate speak. Real leaders create a compelling vision for the future that ignites a fire under their team and keeps them working hard and doing the right thing even when nobody's looking. Millennials, in particular, want to believe that the work they do goes beyond just a paycheck and contributes to the greater good. Does your vision inspire this greatness?

6. Poor Execution

There are three reasons leaders fail to execute. First, they don't follow their own plan with discipline. Second, they fail to keep score on what matters. Third, they don't have the right people in the right jobs to make it happen. If you can assemble these three puzzle pieces, you can put your company on track to win.

7. A Company Culture by Default

We all envy Google, Facebook, and Zappos for their dazzling company cultures. But what we forget is that the creator of culture is the CEO, not HR or anyone else. Did you create your culture by design or did it just happen by default? When you consciously think about and design your culture to foster your desired behavior, your culture becomes a competitive advantage that attracts top talent and drives massive results. Leadership is a skill you can learn. By avoiding these seven common leadership problems, you can lead your team—and your company—to greatness.

LEADERSHIP CHALLENGES AROUND THE WORLD

1. Honing Effectiveness: the challenge of developing the relevant skills — such as time-management, prioritization, strategic thinking, decision-making, and getting up to speed with the job — to be more effective at work.

2. Inspiring Others: the challenge of inspiring or motivating others to ensure they're satisfied with their jobs and working smarter.

3. Developing Employees: the challenge of developing others, including mentoring and coaching.

4. Leading a Team: the challenge of team-building, team development, and team management. Specific leadership challenges include how to instill pride, how to provide support, how to lead a big team, and what to do when taking over a new team.

5. Guiding Change: the challenge of managing, mobilizing, understanding, and leading change. Guiding change includes knowing how to mitigate consequences, overcome resistance to change, and deal with employees' reactions to change.

6. Managing Stakeholders: the challenge of managing relationships, politics, and image. These leadership challenges include gaining managerial support, managing up, and getting buy-in from other departments, groups, or individuals.

These common leadership challenges:

1. Set Goals.

Be proactive in setting goals, as well as establishing the timelines — and deadlines — necessary to keep yourself and your teams on track. The distractions that you face can make it easy to lose sight of long-term and even short-term goals. You can easily get sucked into dealing with urgent issues that arise unexpectedly rather than staying focused on producing the outcomes that matter most to your organization.While no leader can completely avoid surprises, goal setting provides a map that you can return to time and again to refocus on your top priorities while handling other leadership challenges.One time-honored approach is the SMART method. When setting a goal, make sure it's:

- ***Specific.*** Write down a detailed description of what accomplishing the goal would involve.
- ***Measurable.*** Set targets that you can quantify to assess progress.
- ***Attainable.*** Stretch goals are fine, but you also need to make sure that achieving the goal is possible.
- ***Realistic.*** Be sure you understand what you will likely need — in terms of time, resources, and talent — to achieve it.
- ***Timed.*** Create deadlines for hitting milestones on the way to your goal, as well as for achieving the goal itself.

2. Delegate More.

You'll be more productive in tackling leadership challenges, and you'll empower your colleagues to take more ownership if you delegate. Effective delegation requires more than just getting a task off your desk — it involves a repeating cycle of 4 key steps:

- ***Understanding your preferences.*** Effective delegators prioritize their workload and decide which tasks to keep and which to give to someone else. They also understand how much feedback they want as the person they've delegated to works on the task.
- ***Knowing your people.*** To delegate effectively, you must assign tasks to people with the necessary knowledge and skills. That means that you have to understand your people. Use delegation to help direct reports develop, allowing them to learn as they take on new tasks.
- ***Being clear about the purpose of the task.*** A task's purpose gives it meaning. By aligning this purpose with team or individual beliefs and goals, delegation can become an opportunity for personal growth.
- ***Assessing and rewarding.*** You should work with your direct reports to develop ways to help them, and you, decide if a task has been completed properly, and to reward them appropriately.

3. Maximize Your Unique Value.

There will always be more things competing for your attention than you have time and energy to do. Prioritize the most important tasks that only you can do, and delegate everything else.Leaders overcome leadership challenges and create value for their organizations by focusing on the unique contributions only they can make. Understanding what those unique values are for you, and delegating everything else (or as close to everything else as you can), allows you to maximize the value you create for the organization.

4. Get Role Clarity.

Understand what the core responsibilities are for your role, and what are secondary responsibilities or even work that belongs to someone else.That won't stop people from asking you to take on additional tasks and projects. And there are certainly times when taking on additional duties may be required due to unusual circumstances, or might be important for your own professional development. But the most effective managers understand that they will largely be judged based on how effective they are at their core responsibilities and how they can overcome leadership challenges.This also means that there will be times when you'll have to say no. That can feel uncomfortable. Practicing saying no and finding ways to do so with tact and professionalism are important. Turning down work that's not part of your role helps keep you focused.

In fact, many of these suggestions for responding to the top leadership challenges around the world are part of developing the core leadership skills you need in every role, at every stage of your career.

CONCLUSION:

Individuals can benefit from knowing their experiences aren't isolated, and they can feel more confident reaching out to others for help facing these challenges. But with leaders around the world having the same basic challenges, those designing training can more appropriately align developmental initiatives to help managers solve problems in areas: developing managerial effectiveness, inspiring others, developing employees, leading a team, guiding change, and managing internal stakeholders and politics. Knowing that these leadership challenges are common experiences for middle and senior managers is helpful, both to the leaders and to those charged with their development, according to our researchers. Leaders who sometimes feel overwhelmed by their work can take heart in the fact that they're not alone. you can beat back those feelings and provide more value to your organization as you take on the most pressing leadership challenges.For those who work in training and development, knowing the top challenges that leaders face around the world can be the catalyst for creating developmental initiatives that truly help leaders.Developmental initiatives are more effective when they align with real challenges that participants are facing. So, we suggest that a majority of development content be the same, no matter where the training is taking place or who's going through the training.We also recognize that what's accepted in one culture may be unacceptable or taboo in another, and some behaviors may be the norm in one country but different in another. So, it’s essential to be aware of cultural nuances and make adjustments as needed.

Reference:

1. Kouzes, James M. & Posner, Barry Z. (1987). *The Leadership Challenge*. SanFrancisco: Jossey-Bass.
2. Lamb, L. F., McKee, K. B. (2004). *Applied Public Relations: Cases inStakeholder Management*. Mahwah, New Jersey: Lawrence ErlbaumAssociates. Routledge
3. Mischel, W. 1968. Personality and Assessment . New York: Wiley.
4. Newstrom, J. & Davis, K. (1993). Organization Behavior: Human Behavior atWork. New York: McGraw-Hill.
5. Northouse, G. (2007). Leadership theory and practice. (3rd ed.) ThousandOak, London, New Delhe, Sage Publications, Inc.

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FARMER SUICIDES IN INDIA: PROBLEMS AND SOLUTIONS.

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ABSTRACT:

Farmer sector is the main income for the rural people in India. It plays a significant role in their life. In India, small and marginal farmers account for 70%, according to the 2011 census of the Government of India. These small and marginal farmers took credit from banks and private money lenders. The non-repayment of credit led to a farmers' suicide. Farmer's suicide is a burning issue in India. Farmers are lifesavers then why they are killing themselves. Is there any nexus between farmers' suicide and government actions? In this way farmers suicideissues challenges and remedies has been discussed. Recently, farmers from various regions of the country marched to Delhi to registertheir protest against the government's neglect of their demands. Poor earnings of the farmersled to the never-ending distress in the farmer sector and this resulted in the increasingnumber of farmer suicides. These worrying realities call for an appropriate policy response.

Key-Notes: **Farmer suicides in India, Review of literature, and Causes of farmer suicide in India and Solutions of farmer suicide in India**

FARMER SUICIDES IN INDIA

India is a country that is going through a phase of agrarian transition. Whileagriculture provides for about 58 percent of India's population (IBEF, 2018) thereis one farmer suicide every thirty minutes. It is also very interesting to note that forthe past twenty years the output prices of farm products have remained the samewhile there has been a substantial increase in the input prices for the productionof the same (Sharma, 2015). This means that, while there has been a rise in theinflation rate and subsequent rise in the cost of running a farm, the profits out ofthe same venture have not increased. It is, therefore, an inarguable conclusionthat economic distress has led to farmers committing suicides. In fact, there isfactual evidence to show that a large number of farmer suicides is indeed drivenby economic distress (Kishore, 2018).

Manjunatha and Ramappa (2017) have categorically attributed the followingreasons to the incidents of farmer suicides in India – (1) social causes, (2) farmrelated causes and (3) debt related issues. While social causes include drug/alcoholic addiction, illness, fall in social reputation, family quarrel, daughter'smarriage and extra-marital affair which are of little relevance to the study; in termsof the farming related causes lack of access to expected credit, non-realization ofhigher output and prices and crop failure were the major reasons for suicides. These are factors where the intervention of a collective that brings farmerstogether could intervene in building capacity to provide for a cushion for farmersto be able to handle the pressures of market forces and simultaneously createscope for the availability of credit for the respective farmers. Illustrated below isa figure that clarifies the various forward and backward linkages that a FarmerProducer company by virtue of being one provides. In providing these forwardand backward linkages FPCs are able to address the issues of the lack of accessto expected credit, non-realization of higher output and prices and crop failure.

REVIEW OF LITERATURE

Ambedkar, D.B. (1918)**: "**In short, strange as it mayseem, industrialization of India is the soundestremedy for the agricultural problems of India.The cumulative effects of industrialization, namelya lessening pressure (of surplus labour) and anincreasing amount of capital and capital goods willforcibly create the economic necessity of enlargingthe holding. Not only will this, but industrialization,by destroying the premium on land, give rise to fewoccasions for its sub-division and fragmentation.Industrialization is a natural and powerful remedy,in this paper Ambedkar strongly suggested theideas of Arthur Lewis theory of Theory of economicdevelopment.

Posani, B. (2009): Desperate indebtedness was foundto be the common thread that ran through most of thereported suicides. Deeper analyses, however, revealthat indebtedness is only a symptom. According tothis report the major causes for Agrarian Distressin India are small land holding, less institutionalsupport, declining irrigation facility, relying moreon monsoon, price shocks, credit squeeze, tradermoneylender Nexus and pervasive indebtedness.Indian agriculture today is 'the economic residue'that accommodates 'non-achievers', and that theprincipal motivation of the peasant today is to stopbeing a peasant Not an encouraging prospect, then,for the peasant movements, or the peasant.

Saritha, G. (2015): reviewed that the between 1997-2007 21,174 farmer's suicide reported in India,the major reason is indebtedness. In their casestudy they figured out these following results, theoutbreak of suicide in India is appalling and onaverage one Indian farmer committed suicide every32 minutes during the past period 1997to2007 andas many as 48 farmers' suicide per day in Indiabetween 2002-2007. The farmer suicide in India as a clear indication of serve distress in the farmingcommunity. The causes for present agrarian distressvary from one to another state. But the genuinecauses may be common in all states which includeexternal trade liberalization and neo-liberal policydriven reforms in the economy have played havocwith the farm dependent population in the country.Indian state now acknowledges the fact thatbetween 1993and2003, 1,00,248 farmers committedsuicide in India..The most important factor is debt.

Vasavi, A. (2005): focused on the relationshipbetween commercial crops and suicides. Since thekey sources of non-institutional creditors have beenagri-business agencies (who provide both inputsat deferred credit to agriculturists and loans), andthe new money lenders and creditors13, includingrelatives and friends who draw on their urbansalaries, these debts pose a double burden onagriculturists. For one, interest rates are exorbitant(ranging from 24 to 45 percent per annum) andsecondly they are linked to their personal andsocial networks. Inability to pay is often met withridicule, ostracism or public humiliation. As severalreports and case studies highlight, many of thosewho committed suicide did so after experiencingsuch humiliation or facing threats of dispossessionof their assets.

DATA COLLECTION

The data for the study has been collected from multiple databases which include the National Crime Records Bureau's (NCRB) Accidental Deaths and Suicides inIndia and the website of the Ministry of Corporate Affairs. The NCRB data wasessential for the compilation of data about farmer suicides and the Ministry ofCorporate Affairs was helpful in collecting data pertaining to Farmer ProducerCompanies. The nature of the data is secondary.

CAUSES OF FARMER SUICIDE IN INDIA

When compared to other developing economies, Indian agriculture heavily depends onmonsoon, limiting crop diversification to a great extent. Thus risks include weather, a weekmonsoon or even a delayed monsoon, poor soil fertility, pests, and plant diseases, perishability of crops etc. are the major causes for the agrarian distress in India.Further, climate change and global warming cause frequent events of drought andflood which further add to their woes.

Land fragmentation

There is a huge pressure of population on land led to a low land-man ratio in ruralareas. The landlessness and the existence of marginal farming households are the results ofdecades of land fragmentation initiated after independence. Fragmented land holdings resultin low productivity and hinder infusion of technology and new farming techniques.The landless or marginal farmers lack the resources to either buy or lease more land or investin farm infrastructure to compensate for the scarcity of land. And they also lack adequateaccess to institutional finance.

Rising agricultural costs

Despite subsidies on power, fertilizers etc. input costs have been rising faster than sale prices,squeezing the meager income of the small farmers and driving them into debt. In addition tothis, hiring labourers and animals has become expensive and the fixed costs associated withagricultural equipment like tractors and submersible pumps have also been on the rise.Also, small farmers do not have enough profit to justify the cost of transporting the crop togovernment corporations in towns.Most farmers prefer cash crops such as cotton. However, they don't realize that the inputcosts of such crops are very high. If the crop fails, it causes a huge distress. Moreover, asagricultural prices rising, the rural wages are depressed resulted in rural distress causingmigration towards cities.

Lack of institutional credit

The National Crime Records Bureau (NCCB) report clearly underlines that indebtedness isthe single largest cause of farmers' suicide.As the farmers don't get access to institutional credit, they move towards informalmoneylenders who demand exorbitant interest rates and consequently the farmers end up withhuge debt.Expenditure on costly social ceremonies and health expenses, which are not part of regularhousehold expenditure, also force the farmers to borrow especially from informal sources.

Problem with MSP

Government procurement at the minimum support price (MSP) is supposed to protect thefarmers but it mostly benefits the large traders. Over 70% of the farmers in India seldomreceive MSPs for want of official market intervention.Moreover, the Public Distribution System (PDS) does not have the capacity to undertakeprocurement operations for 24 crops for which MSP is announced.

Agricultural marketing

Lack of enough cold chain and storage infrastructure and processing capacity result ina huge post-harvest loss. Uncertainty with the price of the produce is a major concern. Manyfarmers continue to be at the mercy of the trader.Agricultural Produce Market Committees (APMCs) is also unfavourable since thefarmers have to sell their produce via auctions in regulated markets controlled by cartels oflicensed traders. These cartels fix low purchase prices, extract large commissions, delaypayments etc.APMC is a statutory market committee established by a state government with respectto trade in certain notified agricultural or horticultural or livestock products under the APMCAct of the respective state government. Though the purpose of APMC Act is to protectfarmers from the exploitation of intermediaries and traders, however, the licensing of tradersresults in the monopoly and prevents farmers to participate in direct and free marketing.The value chain in the agricultural sector has been exploitative i.e., only about 1/3 of theretail prices paid by final consumers reach the farmers, unlike 2/3 in case of milk.

Ineffective government response

The government's response is focused on credit and loan, rather than income, productivity,and farmer prosperity. Loan waiver or the assistance in paying off outstanding principal andinterest helps the money lenders, however, failed to create reliable and good sources ofincome for the farmer.

SOLUTIONS OF FARMER SUICIDE IN INDIA

The corporate and NGOs (Non- Governmental Organisations) had adopted the drought-affected villages to help them to rehabilitate. Debt waiver was not a solution for avoiding suicides. The government had to take proactive measures for avoiding farmers' suicides (Sangalad and Huddar, 2011). The Gram Panchayats will have to identify indebted farmers and give suggestions on overcoming the crisis. In addition, they must help farmers in avoiding commission agents, traders, and middlemen. Thereby, the government can change its policy from 'corporate first to farmers first' (Rao, 2015). Surbhi et al., (2017) analyzed the farmers' suicides and recommended some suggestion to the government such as cropped diversification, improved marketing facilities, proper irrigation facilities, assurance of sale of agricultural produces and price stability. Anneshi (2018) stated that the farmers' suicides could be avoided by taking short term measures like organic farming, avoiding the private institutional credit, and organizing farmers into Self -Help Groups (SHGs).

The government had to focus on long term measures for controlling of farmers' suicides. They could provide irrigation facilities, cold storages, weather forecast information, and crop insurance (Thakur, 2018).

Parvathamma (2016) stated that the adoption of new technologies would reduce pests and diseases from agricultural lands. The national commission had conducted a survey on farmers in 2004 constituted under the chairmanship of Professor M.S. Swami Nathan. The National Commission on Farmers (NCF) prepared four different reports. The final report was submitted in the year 2006. The report suggested for elder support through social security and health insurance in rural areas. It also suggested to ensure availability of quality seeds and other inputs on time and at right place, introduction of low-risk and low-cost technologies which can provide maximum income to farmers, to protect the farmers from price fluctuations by using price stabilization fund and to promote public awareness campaigns on suicides in villages (Swaminathan Committee on Farmers, 2006). These were the solutions that were suggested for mitigating farmers' suicides and agricultural crisis.

On vagaries of nature

Location-specific policy for irrigation with the identification of suitability of irrigationfacilities required to protect farmers from the adverse impacts of climate change. It must besupplemented with timely completion of canal irrigation projects and timely advice on theweather. More investment is needed in agricultural R&D in order to develop more droughtand pest-resistant crops, along with better irrigation technology.Technological interventions that update farmers about sowing and harvesting time andextension services can help prevent misfortunes.Sooner implementation of interlinking of rivers will help solve the water stress in agriculture.But it needs to be implemented carefully as it has ecological costs as well.Crop diversification should be implemented to reduce crop failure rates across the country.Zero Budget Natural Farming can be implemented which involves the applications ofnature's principles in farming. It is the practice of no-till, no chemical use in farming. Read more about Zero Budget Natural Farming.

On land fragmentation

Long-term leasing of farmland without withdrawing the land ownership can be implemented.This is in line with Niti Aayog's Model Land Leasing Act i.e., no change in ownership, notenancy rights, and the land revert back to the owner on the expiry of the lease.Long-term leasing can also facilitate the entry of the private sector into agriculture. Theprivate sector can bring in crop diversification, the introduction of high-value crops,mechanization, new farming techniques and technologies, investment in post-harvestmanagement and processing, and more employment opportunities.

On input costs

The government policies should encourage integrated pest management that combines,biological, chemical, mechanical and physical means to combat pests with a target toeliminate/considerably reduce the need for pesticides.The local fertilizer industry requires support and the timely delivery of subsidies wouldimprove their capital needs, allowing them to manage costs through internal sources insteadof external loans.State seed policies should encourage contract farming, identification of new genotypes fortreating pest and disease syndromes, as well as adverse weather conditions. Precision farmingtechniques such as Systematic Rice Intensification (SRI) can help increase seed production inthis respect. Click here to read more about precision farming in India.Our farm equipment policy needs to be revamped with a focus on improving manufacturingequipment in the country rather than importing them which is costly.Introduce modern entrepreneurship to Indian agriculture under the start-up India scheme.This can help bring in modern technology and inputs to farmers.Cooperative farming on a national scale should be implemented to reduce input costs andimprove agricultural productivity and production. The cooperation may range from collectiveaction in accessing credit, acquiring inputs, marketing to production. It also includes landpooling, labour pooling, joint investment, joint water management, and joint production.

On institutional credit

Ensure that institutional financing is available and accessible.Village-wise lists of deeply indebted farmers must be prepared annually to identify farmerson the path to potential suicide.NABARD, along with local administration, should come up with local policy interventionsand also devise timely loan restructuring initiatives, insurance claim settlements, and better counseling. Nationalized banks need to change their way of functioning in order to expandrural outreach.

On agricultural marketing

The long chain of intermediaries between the farm and the consumer should be reduced asthey negatively impact farmers' income.Delisting fruits, vegetables and other perishables from the ambit of APMC can give farmersthe freedom to sell directly to retailers and food processing companies.Grouping farmers into Farmer Producer Organizations (FPOs) could facilitate improvedmarket access and better bargaining capacity.Create Agro clusters in important production zones to ensure aggregation of produce.Commodity options (rights to buy or sell) in agricultural products can protect the farmersfrom the vagaries of distress sale during the periods of bumper harvests. This will ensurefarmers the post-harvest prices at the time of planting the crop itself.Public-Private Partnership (PPP) which worked successfully in other sectors can beimplemented in agricultural marketing as well.The private sector must be allowed to procure, store and distribute grains even starting withthe public distribution system = reduce storage cost for the government and result in theestablishment of storage capacities.Increased storage and processing capacity can reduce post-harvest losses, ensure pricestability and protect farmer interests.

Creating rural job opportunities

The focus has to be shifted from farm income to farmers' income i.e., boosting farmers'earnings through expansion of job opportunities in and around rural areas.Promoting the lucrative allied activities of agriculture such as horticulture and floriculturealso helps boost farm incomes. Gobardhan Yojana should be implemented all over the country. It aims at keeping thevillages clean and also generates energy while improving the income of farmers and cattleherders. (Click here to read more about Gobardhan Yojana)Thus a multi-featured income-generation plan, rather than MSP hikes and loan waivers, canhelp mitigate farmers' distress.

IMPROVING AREAS OF AGRICULTURE ARE

1. Extension of irrigation facility.
2. Extensive use of modern agriculturaltechnology.
3. Increasing the both public and privateinvestment on agriculture.
4. Effective implementation of land reforms.

5. More institutional credit support.
6. Gettingfarmers loans from the state owned banksat very low interest rates.
7. Marketing reforms.
8. The warding the further division of land.

CONCLUSION

The study focused on the agricultural crisis and farmers' suicides. Most of the farmer's suicide was due to the distress, crop failure, indebtedness, poverty, lack of institutional credit, poor irrigation, lack of awareness on new technologies, a high-interest rate of non-institutional agencies and lack of government policies. The review shed light on the fact that there was a lack of research done specifically on the plight of tenant farmers' suicides in India. Previous studies had also focused on the time period when suicide may occur. They also noted that reasons for suicide changed as per the gender of the farming community. Caste also played a role in the case of farmers' suicide. Thus, one can say that demographic factors played a major role with regard to farmers' suicide. The government was providing subsidies, short- term bank loans, and crop insurance benefits to the farmers. In India, many state governments had waived farmer's bank debt but even then, farmers were committing suicides. Such sort of short-term government measures was not enough to stop the farmer's suicides and agricultural crisis. Therefore, the government should provide irrigation facilities, minimum support price for their products and increase the long-term institutional credit. Such kind of long-term measures will reduce farmer's suicides.

REFERENCES:

1. *Accidental Deaths and Suicides in India* (Rep.). (n.d.). National Crime Records Bureau.Retrieved February 20, 2019, from http://ncrb.gov.in.
2. Bhosale, J. (2018, September 29). How farmer producer company model can transformIndian agriculture. Retrieved February 20, 2019, from https://economictimes.indiatimes.Com/news/economy/agriculture.
3. Farmer Producer Company. (2014, February 14). Retrieved February 20, 2019, fromhttps://www.gktoday.in/gk/farmer-producer-company.
4. India Brand Equity Foundation. (2017, July 17). Analysis about Indian Agriculture Industry,Market Size, Export & Investment Opportunity. Retrieved February 18, 2019. J. (2018, April 18). 'Farmer companies have triggered changes globally'. Retrieved February 20, 2019.
5. Jodhka, S. (2002). Nation and Village: Images of Rural India in Gandhi, Nehru andAmbedkar. *Economic and Political Weekly, 37* (32), 3343-3353.
6. Kishore, R. (2018, December 27). Why the farmer suicide debate is counter-productiveto understanding India's agrarian crisis? Retrieved February 18, 2019.

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The Impact of Augmented Reality (AR) on Brand Loyalty and Consumer Engagement with respect to IKEA

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ABSTRACT:

This study explores the integration of augmented reality (AR) technology in the retail sector, focusing on its application by IKEA to enhance customer engagement and to understand customer wants as per their need. With the increasing prevalence of AR in various industries, this research investigates how IKEA utilizes AR to create immersive and interactive experiences for customers during the furniture purchasing process. By analyzing IKEA's AR implementation, this research contributes to the broader understanding of the role AR plays in shaping the future of retail and consumer research strategies.

KEY-WORDS: *Customer Satisfaction, Decision-making, Digital Innovation, Furniture Shopping, Interactive Experience, Technology Integration*

INTRODUCTION:

IKEA Place allows customers to utilize augmented reality to try products from the business in the comfort of their own homes. All the user has to do is aim their camera at the area around them, in particular, the spot they want to put an object. Any item in the IKEA catalog that they choose will be shown.

Customers can interact with the IKEA brand in a variety of ways, including online, in-store, at home, and through IKEA FAMILY. Throughout the world, hundreds of house visits are made by IKEA coworkers annually. IKEA develops its products and services using the data and insights gathered.

At the heart of IKEA's loyalty strategy is the IKEA Family Loyalty Program, which provides members with a number of advantages. Customers who sign up for the program can take advantage of exclusive events, discounts, and gift card giveaways

IKEA has embraced Augmented Reality (AR) to revolutionize the way customers experience Future shopping. Through the IKEA place app, users can virtually place furniture in their homes using their smartphones. This AR technology allows customers to visualize how items will look and fit in their living spaces before making a purchase. By seamlessly integrating AR into the shopping experience, IKEA enhances customer engagement and empowers users to make more informed and satisfying buying decisions.

OBJECTIVES:

1.) To understand how augmented reality affects customers' interactions with IKEA
2.) To understand how brand loyalty to IKEA is impacted by augmented reality.

REVIEW OF LITERATURE:

Graeme McLean and Alan Wilson, 2019

Shopping in the digital world: Examining customer engagement through augmented reality mobile applications.

This study adds to our knowledge of how augmented reality (AR) elements in mobile apps for shops foster consumer brand engagement. The widespread use of smartphones has resulted in the development of augmented reality as a new technology that allows shops to interact with customers. The research determines the factors impacting brand engagement through retailers' mobile applications. Brand engagement through the retailer's AR mobile application is positively influenced by favourable perceptions of the AR qualities and technological adoption attributes.

Kashif Abrar, 2018

Impact of Augmented Reality on Consumer Purchase Intentions

The Moderating Role of Interactivity in Online Shopping with the Mediating Role of Customer Brand Engagement. The primary finding of this study is the correlation between augmented reality and the growth of consumer brand engagement and purchase intention. The study aims to investigate how augmented reality influences consumer brand engagement and purchase intention.

Dongdi Chen, 2022

How Digital Technologies Reshape and Transform Marketing: The Participation of Augmented Reality in Brand Loyalty Building.

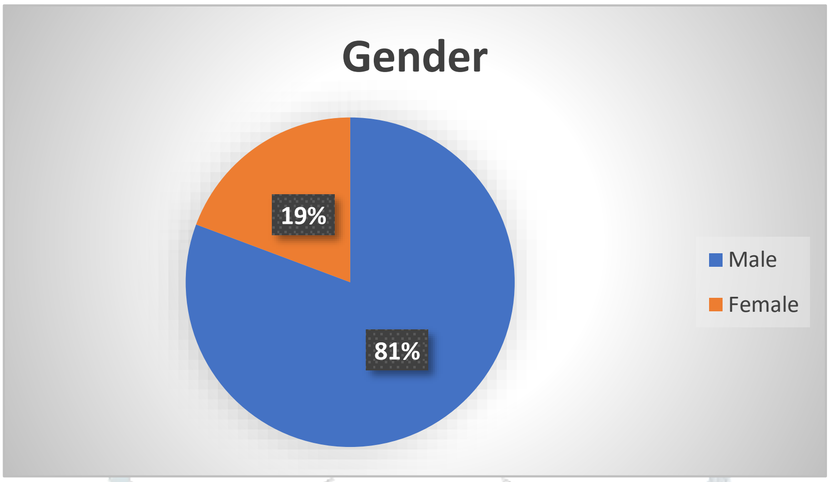
Augmented reality's use in brand loyalty building demonstrates how digital technologies are reshaping and transforming marketing. Digital technologies, such artificial intelligence (AI) and the internet of things (IoT), have developed quickly since the turn of the twenty-first century. These disruptive technologies have increasingly become part of company operations and value generation strategies.

RESEARCH METHODOLOGY:

The Primary data sampling technique was employed in the study to concentrate on online survey strategy. The purpose of this prospective study is to determine how augmented reality (AR) affects consumer engagement and brand loyalty with regard to IKEA. Google forms that were given to the respondents were used to gather the responses.

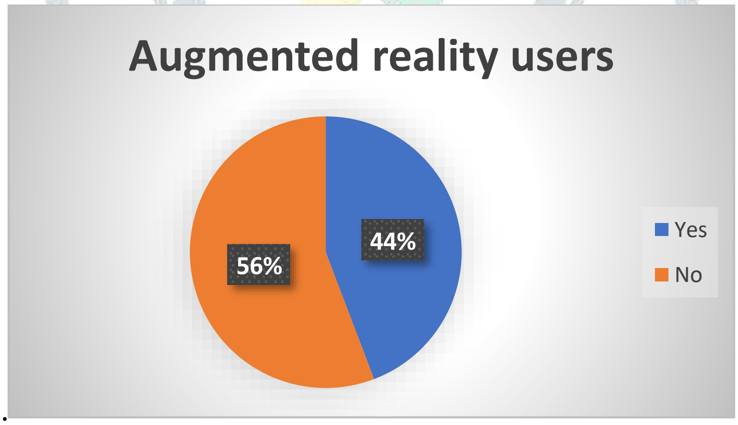
DATA ANALYSIS AND INTERPRETATION

Q) People using IKEA place app?



The pie chart representing the user demographics of the IKEA furniture app reveals a notable gender distribution. A substantial majority, 81%, of users are male, while the female user base constitutes 19%.

Q) Have you ever used Augmented Reality while shopping?



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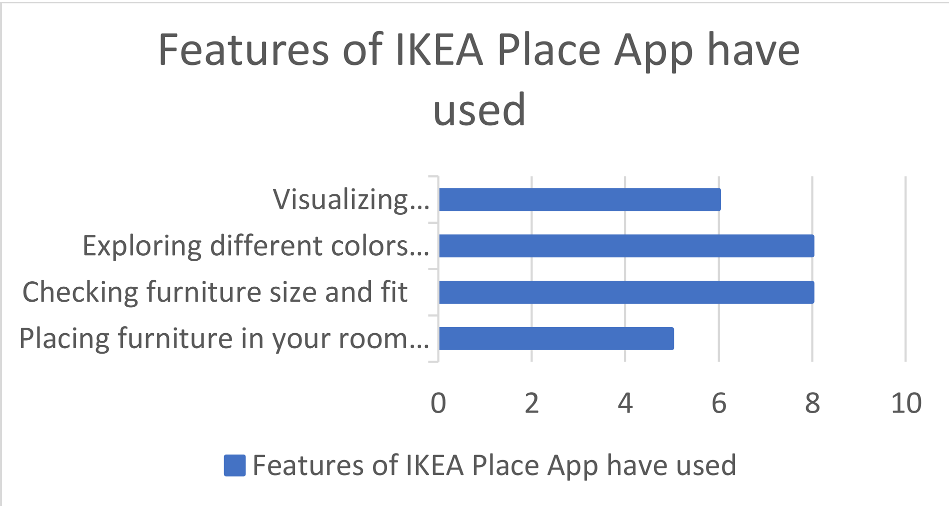
Out of the people asked, 44% have tried using Augmented Reality (AR) while shopping. Most, which is 56%, haven't tried AR shopping yet. This suggests that some people are starting to use AR for shopping, but it's not something everyone is doing. People who tried it used AR for things like trying at home virtually or seeing how products look in their space

Q) What features of the IKEA place app have you used?

Most people, 72%, said the IKEA Place app was very helpful for deciding on furniture purchases. However, 28% didn't find the app helpful for this.



Users have utilized various features of the IKEA Place app, including placing furniture virtually in their room, checking size and fit, exploring different colors and finishes, visualizing furniture arrangements.

FINDINGS:

IKEA has revolutionized the shopping experience for its customers by effectively utilizing augmented reality. IKEA allowed customers to realistically put and see furniture pieces in their own living areas by incorporating augmented reality into their mobile app. This eliminated purchasing uncertainty and improved consumer engagement by enabling customers to see how furniture will fit and appear before making purchases. Users were also able to customize the AR function by experimenting with various colors and styles. IKEA used augmented reality (AR) as a marketing tactic to position the brand as cutting edge and inventive, in addition to enhancing the shopping experience. The effectiveness of IKEA's implementation of augmented reality was further demonstrated by the effect of AR on sales, user feedback, and comparison with competitors.

CONCLUSION:

Technology innovation is developing daily. Augmented reality, or AR, is a cutting-edge technology that is attracting interest from a wide range of industries, including marketing, engagement, and user experience. Recently, augmented reality (AR) has gained popularity in contemporary marketing. These days, marketers spend time and money developing new digital marketing platforms for consumers who are connected. The researcher's goal in this chapter is to talk about how augmented reality advertisements affect how consumers feel about brands. This chapter's goals are to improve user experience and talk about how augmented reality advertising affects customer engagement and brand loyalty.

REFERENCE:

Gangan, M. (n.d.). *Augmented reality for customer engagement* (By Kudtarkar). Retrieved January 29, 2024, fromhttps://www.researchgate.net/publication/281336331_A_Review_of_Research_on_Augmented_Reality_in_Education_Advantages_and_Applications

Gangan, M. (n.d.). *Augmented reality for customer engagement* (By kudtarkar). Retrieved January 29, 2024, fromhttps://www.researchgate.net/publication/281336331_A_Review_of_Research_on_Augmented_Reality_in_Education_Advantages_and_Applications

Gangan, M. (n.d.). *Augmented reality for customer engagement* (By kudtarkar). Retrieved January 29, 2024, fromhttps://www.researchgate.net/publication/281336331_A_Review_of_Research_on_Augmented_Reality_in_Education_Advantages_and_Applications

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New Trends and Approaches in the Development of Customer Relationship Management

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Abstract:
In today's fast-stridden business topography, customer relationship management (CRM) plays a key role in maintaining strong customer connections and driving business growth. As technology continues to progress, new CRM trends are emerging, revolutionizing the way businesses interact with their customers. This research paper tries to explore mobile CRM as the latest CRM trend, The study also studies the impact of mobile CRM on businesses with special reference to banking industry.

Keywords: CRM, Mobile CRM

Introduction:

Artificial Intelligence (AI) is transforming the way businesses approach customer relationship management. AI-powered CRM systems can analyze vast amounts of customer data, identifying patterns, and providing valuable insights. This allows businesses to personalize customer experiences, predict customer behavior, and automate various CRM processes.

A secure tool for successful business in a saturated market are existing customers of the company. A business-focused more on retaining existing customers than attracting new ones involves using the principles of Customer Relationship Management (CRM). CRM implies making central decisions regarding the company's relationship with customers, so with the development of artificial intelligence and data science, this area has become an ideal field for the application of these methods. The level of automation is continuously increasing and will be emphasized in the coming period. By taking advantage of innovative technologies and integrating them into CRM systems, companies can achieve a better market advantage.

Current CRM Trends:

- The CRM industry is expected to reach $80 billion in revenue by the end of 2025.
- 91% of organizations with more than ten employees have integrated CRM systems to boost operational efficiency and communication.

- According to a report by Forbes, the sales team invest only 18% of their time in developing CRM strategy – the foundation program for sales.
- Around 82% of successful companies use CRM software for sales reporting.
- Top marketers believe CRM systems can improve sales by 29%.

Review of literature:

Mujitaba A. Tangaza et al. [2018], expanding the CRM literature by criticizing current researchon CRM from 2010 to 2014 with a view to macro-environment perspectives, theories or methods commonly used it to analyze CRM at organizational level are discussed in a review by major analytical groups in this paper. In addition, the paper aims to uncover environment, problems & conceptual frameworks often or not commonly used, and significantly applied methodology under-utilized research methods in CRM. The paper uses a literature review systematically for 2010-14 published CRM literature. The research argues that additional empiric studies were required to examine the part played in the adoption and implementation of CRM by low-tech capital or consumer enthusiasm for technology acceptance in emerging nations (Sub-Saharan Africa). The literature provides a comprehensive review and coherent description of specific customer relationships.

D. Prabha and R. S. Subramanian [2017]. This study provides a panorama of CRM as well as its new results. CRM is a mechanism that creates and keeps productive customers with a company and is aimed at improving business relations with customers. Through customer dataanalysis in the CRM database, a new approach to business strategies can be developed. CRM analysis allows analyzing client data or interactions using various techniques for data mining. The hype of CRM has taken the main interest of scientists or practitioners to information systems.

Research Objectives:

1. To explore mobile CRM as the latest CRM trend
2. To the impact of mobile CRM on businesses with special reference to banking industry.

Discussion:

Customer experience has become a major priority for businesses in 2022. In fact, 86% of buyers are willing to pay extra for a seamless customer experience. CRM technology can help in providing a personalized customer experience that results in higher engagement and long- term retention.

In simple words, people prefer to visit a place where they are treated well. So, organizations need to deliver a better customer experience than what their competitors are offering. CRM platforms are doing much better with their robust performance.

Industry experts suggest that two exceptional drivers, firstly convenience and then competition, can exceptionally improve customer experience. In addition, while considering customer experience, they must focus on personalization. Particularly after the pandemic, individualized experience calls more attention from your valued customers. It gives companies the opportunities to convert loyal customers to brand ambassadors and gain a positive reputation through word-of-mouth marketing.

Artificial Intelligence (AI) is playing a vital role in CRM. For better personalized experience for customers, attention needs to be given to AI. Without machine learning automation, an effective project management system and customer handling are quite impossible. The biggest benefit of AI is that it cuts down the monotonous and lengthy process of customer segmentation. In order to understand the specific needs of the customers, it is very important to generate their profiles. An automated CRM system can help users analyze customer data effectively and tweak marketing campaigns on the basis of specific variables, thus enhancing personalization.

Communication Tools can be better established with AI. The incredible conversational tools like chatbots and voice assistants can improve the business value. Chatbots can help to improve service efforts by keeping communication channels open and clearing real-time doubts or customer queries.

The benefits of AI in CRM software don't end here! The predictive analytics capabilities are crucial to mitigate potential business challenges. Also, it improves business outcomes by sensing the data storage! In addition, as AI can identify the user's behaviors, it can enhance sales opportunities. These analytics help marketing experts to make their dynamic decisions. Moreover, the real-time insights also help create customer preferences and trigger buying decisions.

The expansion of the CRM system has already broken the shackles of office boundaries. Mobility is the most crucial component of sales activity. With the improvement of processes, the workforce has become scattered. The buyers' demand has increased so far that it poses many challenges to the sales reps. This, in turn, increases the demand for CRM. All these components work together to define a roadmap of success.

On the other hand, the pandemic has also emphasized the requirement of enterprise mobility. The distributed workforce needs to be controlled under a disciplined software system. So that it scales up operational efficiency and helps to manage remote projects more effectively; also, it ensures better accessibility from anyplace and anytime. To manage a team successfully, businesses utilize the power of team communication software and other chatbots.

We are already in a digital age. And customer experience has risen to a new height mitigating all the bars. Social media is the primary focus of the new age. The most recent response has

started to emerge since covid19. From grocery shopping to food ordering, all businesses have moved online. An AI-enabled CRM can help organizations sift through vast volumes of data, personalize online experiences, and master marketing campaigns. In a world where the empowerment of customers is the top-most priority, digital transformationin the CRM system has a crucial role.

Transactions Volume and Value (Customer Initiated, B2C : Business to Customer, B2B : Business toBusiness and On-us) through Unified Payments Interface (UPI) in India (April, 2023)

Applications	Customer Initiated Transactions		B2C Transactions		B2B Transactions		On-us Transactions		Total	
	Volume (In Million)	Value (Rs. in Crore)	Volume (In Million)	Value (Rs. in Crore)	Volume (In Million)	Value (Rs. in Crore)	Volume (In Million)	Value (Rs. in Crore)	Volume (In Million)	Value (Rs. in Crore)
Airtel Payments Bank Apps	9.04	640.16	0	0	0	0	0	0.06	9.04	640.22
Allahabad BankApps	0.03	8.96	0	0	0	0	0	0	0.03	8.96
Amazon Pay	53.44	5351.07	0	0	0	0	0	0	53.44	5351.1
AU Small Finance Bank Apps	0.63	184.93	0	0	0	0	0	0	0.63	184.93
Axis Bank Apps	9.36	1584.45	42.35	282.63	0.03	2.81	0	0	51.74	1869.9
Bajaj Finserv	7.68	1053.08	0	0	0	0	0	0	7.68	1053.1
Bandhan BankApps	0.01	1.44	0	0	0	0	0	0	0.01	1.44
Bank of BarodaApps	1.06	392.74	0	0	0	0	0	0	1.06	392.74
Bank of India Apps	0.22	66.93	0	0	0	0	0	0	0.22	66.93
Bank of Maharashtra Apps	0.06	19.83	0	0	0	0	0	0	0.06	19.83
BHIM	23.77	7368.61	0	0	0	0	0	0	23.77	7368.6
BPAYWALLET	0.05	9.91	0	0	0	0	0	0	0.05	9.91
Canara Bank Apps	1.4	383.46	0	0	0	0	0	0	1.4	383.46
Central Bank ofIndia Apps	0.41	91.19	0	0	0	0.08	0	0	0.41	91.27
Citi Bank Apps	0.1	58.17	0	0	0	0	0	0	0.1	58.17
City Union Bank Apps	0.06	18.31	0	0	0	0	0	0	0.06	18.31
Cointab	0.02	10.61	0	0	0	0	0	0	0.02	10.61
Cred	45.7	20729.56	0	0	0	0	0	0	45.7	20730
DBS DigibankApps	0.41	173.13	0	0	0	0	0	0	0.41	173.13
Deutsche BankApps	1.65	142.8	0	0	0	0.86	0	0	1.65	143.66
DHANI	0.08	9.21	0	0	0	0	0	0	0.08	9.21
Dhanlaxmi Bank Apps	0.01	2.8	0	0	0	0	0	0	0.01	2.8
Equitas Small Finance BankApps	0.02	13.86	0	0	0	0	0	0	0.02	13.86
FAM	11.78	146.58	0	0	0	0	0	0	11.78	146.58
Fave	0.03	3.27	0	0	0	0	0	0	0.03	3.27
Federal Bank Apps	5.18	624.64	0	0	0	0	0	0	5.18	624.64
Fino Paymentsbank Apps	0.08	5.67	0	0	0	0	0	0	0.08	5.67
Google Pay	3109.24	474049.9	0	0	0	0	0	0	3109.2	474050
Groww	0.11	80.85	0		0	0	0	0	0.11	80.85
HDFC Bank Apps	14.48	3685.33	0	0	0	16.48	0	0	14.48	3701.8
HSBC Bank Apps	0.14	90.1	0	0.03	0	0	0	0	0.14	90.13
ICICI Bank Apps	30.69	8941.59	5.34	323.96	5.95	7439	0	0	41.98	16705
IDBI Bank Apps	0.07	32.02	0	0	0	0	0	0	0.07	32.02
IDFC Bank Apps	11.96	2274.12	0	0	0.71	591.2	0	0	12.66	2865.3
India Post Payments BankApps	5.24	746.48	0	0	0	0	0	0	5.24	746.48
Indian Bank Apps	0.27	75.66	0	0	0	10.71	0	0	0.27	86.37
Indian Overseas Bank Apps	0.03	7.76	0	0	0	0	0	0	0.03	7.76
IndusInd BankApps	0.8	877.27	0	0	0	0	0	0	0.8	877.27
Jio Payments Bank Apps	1.49	112.21	0	0	0	0	0	0	1.49	112.21

Jupiter	2.72	380.27	0	0	0	0	0	0	2.72	380.27
Jupiter Edge (LivQuick PPI)	0.11	4.25	0	0	0	0	0	0	0.11	4.25
Karnataka BankApps	0.51	110.35	0	0	0	0	0	0	0.51	110.35
Karur Vysya Bank Apps	0.04	14.19	0	0	0	0	0	0	0.04	14.19
Kotak Mahindra Bank Apps	13.98	2845.64	0	0	0	0.01	0	0	13.98	2845.7
MakeMyTrip	0.02	12.91	0	0	0	0	0	0	0.02	12.91
Mobikwik	3.48	923.59	0	0	0	0	0	0	3.48	923.59
NSDL Payments Bank Apps	0.02	3.42	0	0	0	0	0	0	0.02	3.42
OMNI	0.26	6.74	0	0	0	0	0	0	0.26	6.74
Paytm Payments Bank App	1184.38	135344	8.83	14.25	0.53	793.3	105.52	19560.3	1299.3	155712
PhonePe	4216.99	710178.4	0	0	0	0	0	0	4217	710178
PINELABS	0.02	1.31	0	0	0	0	0	0	0.02	1.31
Punjab National Bank Apps	1.03	148.27	0	0	0	0.01	0	0	1.03	148.28
Punjab Sind Bank Apps	0.04	14.04	0	0	0	0	0	0	0.04	14.04
RBL Bank Apps	1.56	489.63	0	0	0.1	2.7	0	0	1.66	492.33
Samsung Pay	5.67	511.04	0	0	0	0	0	0	5.67	511.04
Slash	0.01	0.32	0	0	0	0	0	0	0.01	0.32
Slice	0.66	170.62	0	0	0	0	0	0	0.66	170.62
South Indian Bank Apps	0.22	63.81	0	0	0	0	0	0	0.22	63.81
Standard Chartered Bank Apps	0.16	94.21	0	0	0	0	0	0	0.16	94.22
State Bank of India Apps	4.09	1910.04	0	0	0	0.11	0	0	4.09	1910.2
Tamilnad Mercantile Bank Apps	0.06	13.15	0	0	0	0	0	0	0.06	13.15
TataNeu	0.15	16.46	0	0	0	0	0	0	0.15	16.46
UCO Bank Apps	0.34	111.87	0	0	0	0	0	0	0.34	111.87
Ultracash	0.03	2.1	0	0	0	0	0	0	0.03	2.1
Union Bank Apps	0.74	301.17	0	0	0	0	0	0	0.74	301.17
Utkarsh Small Finance BankApps	0.02	6.43	0	0	0	0	0	0	0.02	6.43
WhatsApp	14.83	1319.01	0	0	0	0	0	0	14.83	1319
Yes Bank Apps	34.45	12151	0	0	0.88	304	0	0	35.33	12455
Others	0.03	8.54	0	0	0	0	0	0	0.03	8.54

(Source: Retrieved on 22.01.2024 at 5.45 pm from https://www.indiastat.com/table/upi-transactions-customer-initiated-b2c-b2b-and-on- us/transactions-volume-value-customer-initiated-b2c-:/1438982)

Mobile CRM and the Anytime, Anywhere Connectivity

With the increasing use of smartphones and tablets, mobile CRM has gained significant importance. Mobile CRM allows sales and support teams to access customer information, update records, and communicate with customers on the go. This anytime, anywhere connectivity improves team productivity, enhances customer service, and enables businesses to stay always connected with their customers.

Integrating CRM systems with mobile apps provides a seamless and unified experience for both customers and employees. Mobile apps allow customers to access their accounts, place orders, and receive personalized offers, while employees can manage leads, update customer information, and track sales activities from their mobile devices. This integration enhances customer engagement and streamlines internal processes, leading to improved customer satisfaction and increased efficiency.

Location-based services have become an integral part of mobile CRM. By leveraging GPS technology, businesses can deliver targeted offers and promotions to customers based on their real-time location. Geotargeting enables businesses to reach customers at the right time and place, increasing the chances of conversion and enhancing the overall customer experience.

Transactions Volume and Value (Customer Initiated, B2C : Business to Customer, B2B : Business toBusiness and On-us) through Unified Payments Interface (UPI) in India (September, 2023)

Applications	Customer Initiated Transactions		B2C Transactions		B2B Transactions		On-us Transactions		Total	
	Volume (In Million)	Value (Rs. in Crore)	Volume (In Million)	Value (Rs. in Crore)	Volume (In Million)	Value (Rs. in Crore)	Volume (In Million)	Value (Rs. in Crore)	Volume (In Million)	Value (Rs. in Crore)
Airtel Payments Bank Apps	10.45	747.05	0	0	0	0.04	0	0.12	10.46	747.21
Allahabad Bank Apps	0.03	7.15	0	0	0	0	0	0	0.03	7.15
Amazon Pay	48.78	5386.29	0	0	0	0	0	0	48.78	5386.29
AU Small Finance Bank Apps	0.66	214.25	0	0	0	0	0	0	0.66	214.25
Axis Bank Apps	8.93	1721.75	59.77	1856.5	0.06	6.66	0	0	68.76	3584.91
Bajaj Finserv	14.14	2069.98	0	0	0	0	0	0	14.14	2069.98
Bank of Baroda Apps	1.22	470.91	0	0	0	5.52	0	0	1.22	476.43
Bank of India Apps	0.28	86.17	0	0	0	0	0	0	0.28	86.17
Bank of Maharashtra Apps	0.05	8.55	0	0	0	0	0	0	0.05	8.55
Bharat Interface for Money(BHIM)	24.15	8005.18	0	0	0	0	0	0	24.15	8005.18
Bpaywallet	0.19	42.31	0	0	0	0	0	0	0.19	42.31
Canara Bank Apps	1.89	569.48	0	0	0	0	0	0	1.89	569.48
Central Bank of India Apps	0.4	94.84	0	0	0	0.38	0	0	0.4	95.22
Citi Bank Apps	0.08	61.34	0	0	0	0	0	0	0.08	61.34
City Union Bank Apps	0.07	20.6	0	0	0	0	0	0	0.07	20.6
Cred	86.5	31558.2	0	0	0	0	0	0	86.5	31558.2
DBS Digibank Apps	0.45	178.89	0	0	0	0.53	0	0	0.45	179.42
Deutsche Bank Apps	1.93	315.27	0	0	0	0.02	0	0	1.93	315.29
DHANI	0.02	2.58	0	0	0	0	0	0	0.02	2.58
Dhanlaxmi Bank Apps	0.01	3.46	0	0	0	0	0	0	0.01	3.46
DIGIKHATA	0.03	10.8	0	0	0	0	0	0	0.03	10.8
Equitas Small Finance Bank Apps	0.03	19.39	0	0	0	0	0	0	0.03	19.39
FAM	22.88	263.37	0	0	0	0	0	0	22.88	263.37
Fave	0.09	6.34	0	0	0	0	0	0	0.09	6.34
Federal Bank Apps	5.54	692.03	0	0	0	0	0	0	5.54	692.03
Fino Payments bank Apps	0.22	15.99	0	0	0	0	0	0	0.22	15.99
GOAXB	0.64	74.94	0	0	0	0	0	0	0.64	74.94
GoIbibo	0.01	2.34	0	0	0	0	0	0	0.01	2.34
Google Pay	3780.89	541624.06	0	0	0	0	0	0	3780.89	541624.1
Groww	6.5	3596.95	0	0	0	0	0	0	6.5	3596.95
Housing Development Finance Corporation (HDFC) Bank Apps	18.87	4739.38	0	0	0	0	0	0	18.87	4739.39
Hong Kong and Shanghai Banking Corporation (HSBC) Bank Apps	0.16	101.08	0	0.12	0	0	0	0	0.16	101.2
Industrial Credit and Investment Corporation of India (ICICI) Bank Apps	25.9	9874.7	4.05	359.88	7.58	9818.3	0	0	37.52	20052.91
Industrial Development Bank ofIndia (IDBI) Bank Apps	0.06	32.31	0	0	0	0	0	0	0.06	32.31
Infrastructure Development Finance Company (IDFC) Bank Apps	4.42	1109.67	0	0	0	0	0	0	4.42	1109.67

India Post Payments Bank Apps	5.28	447.37	0	0	0	0	0	0	5.28	447.37
Indian Bank Apps	0.32	89.16	0	0	0.01	60.16	0	0	0.33	149.32
Indian Overseas Bank Apps	0.07	19.12	0	0	0	0	0	0	0.07	19.12
INDIE	0.07	16.09	0	0	0	0	0	0	0.07	16.09
IndusInd Bank Apps	0.89	182.26	0	0	0	0	0	0	0.89	182.26
Jammu and Kashmir Bank Apps	0.01	2.56	0	0	0	0	0	0	0.01	2.56
Jio Payments Bank Apps	1.44	108.84	0	0	0	0	0	0	1.44	108.84
Jupiter	4.05	529.64	0	0	0	0	0	0	4.05	529.64
Karnataka Bank Apps	0.62	125.7	0	0	0	0	0	0	0.62	125.7
Karur Vysya Bank Apps	0.04	15.87	0	0	0	0	0	0	0.04	15.87
Kotak Mahindra Bank Apps	21.57	3737.25	0	0	0	0.01	0	0	21.57	3737.26
MakeMyTrip	0.04	21.32	0	0	0	0	0	0	0.04	21.32
Mobikwik	3.92	1182.65	0	0	0	0	0	0	3.92	1182.65
NAVIAXIS	0.27	17.75	0	0	0	0	0	0	0.27	17.75
NSDL Payments Bank Apps	0.03	5.78	0	0	0	0	0	0	0.03	5.78
OMNI	0.98	36.12	0	0	0	0	0	0	0.98	36.12
Paytm Payments Bank App	1333.38	153708.6	3.47	8.06	0.58	935.71	114.6	22213.1	1451.99	176865.5
PhonePe	4972.81	774845.98	0	0	0	0	0	0	4972.81	774846
Punjab National Bank Apps	1	197.93	0	0	0	0	0	0	1	197.93
Punjab Sind Bank Apps	0.03	12.32	0	0	0	0	0	0	0.03	12.32
RBL Bank Apps	1.34	565.87	0	0	0.26	9.74	0	0	1.6	575.61
Samsung Pay	5.81	528.2	0	0	0	0	0	0	5.81	528.2
SHRIRAM	0.03	2.8	0	0	0	0	0	0	0.03	2.8
slice	1.06	310.9	0	0	0	0	0	0	1.06	310.9
SLICE	0.03	3.8	0	0	0	0	0	0	0.03	3.8
South Indian Bank Apps	0.26	72.9	0	0	0	0	0	0	0.26	72.9
Standard Chartered Bank Apps	1.72	148.27	0	0	0.31	182.94	0	0	2.03	331.21
State Bank of India Apps	5.4	2130.26	0	0	0.02	0.64	0	0	5.42	2130.89
Tamilnad Mercantile Bank Apps	0.1	26.99	0	0	0	0	0	0	0.1	26.99
TataNeu	0.09	14.82	0	0	0	0	0	0	0.09	14.82
UCO Bank Apps	0.37	127.06	0	0	0	0	0	0	0.37	127.06
Ultracash	0.08	4.77	0	0	0	0	0	0	0.08	4.77
Union Bank Apps	0.87	324.39	0	0	0	0	0	0	0.87	324.39
Utkarsh Small Finance Bank Apps	0.02	6.63	0	0	0	0	0	0	0.02	6.63
WhatsApp	20.55	1732.15	0	0	0	0	0	0	20.55	1732.15
Yes Bank Apps	28.09	10794.85	0	0	0.41	53.11	0	0	28.49	10847.96
Others	0.06	10.18	0	0	0	0.06	0	0	0.06	10.25

(Source: Retrieved on 23.01.2024 at 7 pm https://www.indiastat.com/table/upi-transactions-customer-initiated-b2c-b2b-and-on-us/transactions-volume-value-customer-initiated-b2c-:/1451084)

Efficient data integration and automation are essential for successful CRM implementation. By integrating data from various sources, businesses can create a unified view of their customers and gain a deeper understanding of their needs and preferences. Automation streamlines repetitive tasks, allowing businesses to focus on building meaningful customer relationships and driving growth.

To maximize the benefits of CRM, businesses are integrating their CRM systems with other business platforms, such as marketing automation tools, e-commerce platforms, and email marketing software. This integration enables seamless data flow between systems, automates marketing campaigns, and ensures a consistent customer experience across multiple touchpoints.

Workflow automation simplifies and accelerates various CRM processes, such as lead nurturing, sales followups, and customer onboarding. By automating these tasks, businesses can reduce manual efforts, minimize errors, and ensure timely and consistent interactions withcustomers. This not only improves efficiency but also allows teams to focus on high-value activities that require human intervention.

Month-wise Number of Banks Live on 99 (USSD based) Mobile Banking Service, Volume and Value in India (2023-upto October)			
Month	No. of Banks Live on *99#	Volume (In Million)	Value (Rs. in Crore)
January	83	0.17	19.48
February	83	0.15	17.45
March	83	0.15	17.55
April	83	0.16	18.79
May	83	0.17	20.7
June	83	0.22	30.38
July	83	0.28	43.07
August	83	0.26	40.86
September	106	0.28	43.07
October	106	0.26	37.66

(Source: Retrieved on 242.01.2024 at 6.45 pm https://www.indiastat.com/table/banks-and-financial-institutions/month-wise-number-banks-live-99-ussd-based-mobile-/1436243)

Bank-wise Volume and Value of Mobile Banking Transactions in India (August, 2023)			
Banks	Volume (In Actual)	Value (Rs. in ' 000)	No. of Active Customers using Mobile Banking
The Kalupur Comm. Co-Operative Bank Ltd	1935742	11561315.87	107796
Nsdl Payments Bank	3293079	2216781.19	127967
HSBC	6939592	33243075.18	149464
Karnataka Vikas Grameen Bank	8354585	9530685.82	153120
Rbl Bank Limited	31876531	93787310.12	163450
Indian Overseas Bank	220352518	424655050.2	181197
Chaitanya Godavari Grameena Bank	4234459	6554907.81	187378
The Cosmos Co-Operative Bank Limited	6164377	13243691.19	200506
Jana Small Finance Bank Limited	140777	4541785.2	213385
Abhyudaya Co-Operative Bank Ltd.	5650139	8714877.03	220127
Tamilnad Mercantile Bank Ltd	1472329	38717424.65	222413
City Union Bank	46187755	103091331.3	229096
Bandhan Bank	41768939	130346155.6	265704
Fincare Small Finance Bank	400441	5264473.59	273593
Au Small Finance Bank Limited	31611072	187302661.2	294451
Baroda Up Gramin Bank	276172	3644541.73	304770
Karur Vysya Bank Ltd	51300662	190700431.5	329901
IDBIi Bank Ltd	122062101	279073210.3	372401
Central Bank of India	162149344	329465648	390493
Karnataka Bank Ltd	2402259	45128840.29	416667
Saraswat Co-Operative Bank Ltd	19558599	40081380.89	420082
Yes Bank Limited	60644532	168698592.1	455179
Bank of India	20894845	155604072.2	468841
Bank of Maharashtra	142185462	230392163	489524
UCO Bank	125005308	186549345.4	498883

DBS Bank Limited	23345628	46878468.2	731072
Indusind Bank Ltd	103003397	644573440.5	980617
Punjab National Bank	492904448	834400460.5	1094801
IDFC First Bank Ltd.	66469733	323533855.2	1224908
The Jammu & Kashmir Bank	67437424	205786494.3	1377019
Indian Bank	228619738	398120722.7	1436633
Ujjivan Small Finance Bank Limited	29549834	46893989.91	1450115
India Post Payments Bank Limited	8961917	17726090.59	1493508
Federal Bank Ltd.	10983071	146908188.7	1568111
Canara Bank	497814696	1146022291	1571580
South Indian Bank	46206396	154034184.4	1664632
Fino Payments Bank	79928564	33310184.81	2833449
Bank of Baroda	630777163	1229951906	4000992
Axis Bank Ltd	525841404	1677562975	4515892
Paytm Payments Bank Limited	305553176	383083501.4	11687642
Airtel Payments Bank	237706415	129242871.7	13554718
Kotak Mahindra Bank Ltd	487621256	1143873988	15501528
ICICI Bank Ltd	506577687	2613734196	15706539
HDFC Bank Ltd.	929921038	2967885150	17158774
Union Bank of India	686116366	1294100165	19191244
State Bank of India	2603727449	5191977044	111207103
Total	9685928419	23331709919	237087265

(Source: Retrieved on 22.01.2024 at 10 am https://www.indiastat.com/table/banks-and-financial-institutions/bank-wise-volume-value-mobile-banking-transactions/1449530)

(Note: Data is considered only for banks having number of active customers in mobile banking more than 1,00,000)

Conclusion:

From the above discussion it is evident that Mobile CRM is playing a vital role in maintaining and enhancing customer relationship management in banking industry. The businesses need to take a note of this and pay a crucial attention to it.

References:

- Agnihotri M., & Bhavani M. (2015). Impact of the customer relationship management practices on the profitability of UAE public and private sector banks: A comparative study. *Journal of Contemporary Management Sciences*, 4(2), 55–71.
- Sun S., Abrokwah E., Penney E. K., & Ofori-Boafo R. (2020). Influence of trust on customer engagement: Empirical evidence from the insurance industry in Ghana. *SAGE Open*, 10(1).
- Ahmed D. A., Akmal D. S. M., Alhafufi M. M., Faisal D. S. M., & Khan D. A. K. (2019). Challenges, reforms and developments in the Indian insurance sector. *The International Journal of Social Sciences and Humanities Invention*, 6(12), 5739–5745.
- Al Karim R., & Habiba W. (2020). Effects of CRM components on firm's competitive advantage: A case on Bangladesh banking industry. *Management Research*, 10(1), 1–7.

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ROLE OF ARTIFICIAL INTELLIGENCE IN MODELLING THE ECONOMIC GROWTH AND WELFARE

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ABSTRACT

Over the years, rapid advancements have been evident in almost every hook and corner of the world. This growth and development are achieved in every terrain due to the exploration and innovation in artificial intelligence. The development effects of AI have waved path for transitional dynamics which have profound implications for society as a whole as well as on the economy. The advancements in AI can influence a wide range of characteristics directly. These innovations have a significant impact on employment, productivity and competition. Advancements in AI have hiked the efficiency of household utility, which has boosted the productivity of goods. Accumulation of AI in business activities would attempt to replace the human workforce. The research paper attempts to establish a relationship between the economic development of the nation and society as a whole. The research is exploratory hence data is collected through primary and secondary sources both. The data collection method used is an electronic questionnaire and interviews with 842 respondents from different areas like production, promotion and distribution. An attempt is made to find the potential of AI to introduce reforms in the innovation processes which would eventually reflect profound consequences over the long run. These transformations in creativity and innovation processes would dominate the direct effect.

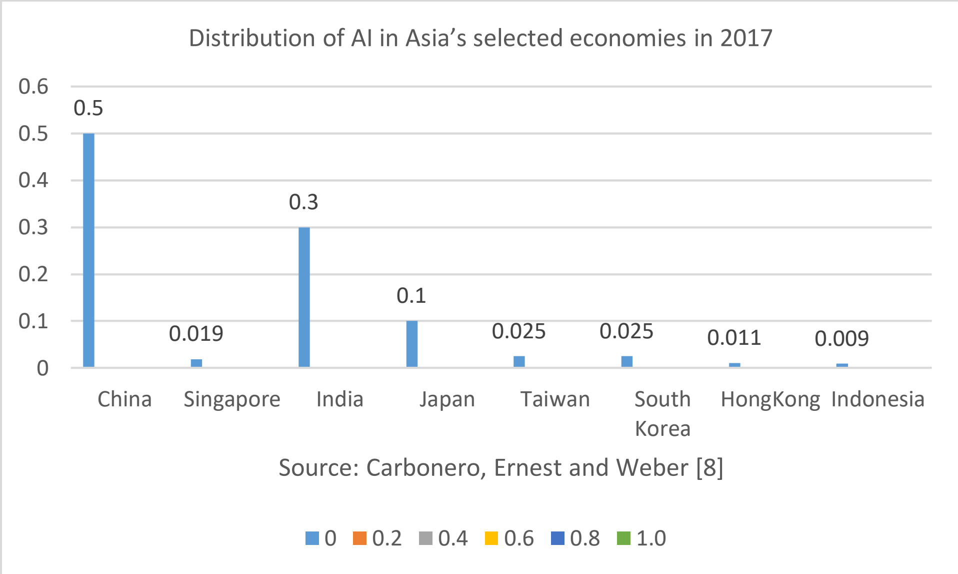
KEYWORDS: Growth, Development, Artificial Intelligence, Dynamics.

INTRODUCTION:

In this knowledgeable millennium, it has been observed that artificial intelligence has played a tremendous role in modelling almost every area of mankind by its advancements. Artificial intelligence has reflected transformation in human life making it easier. A few examples that show the implications of AI in various domains are, the automobile industry delivering driverless cars, newsfeeds being delivered through media and communication domain, customers buying and consumption behaviour being influenced by modern business operations, using digital device functions in the telecommunication domain, etc. The majority of the sectors have incorporated the usage of AI to improve the efficiency of their business operations. Sectors like education, healthcare, transportation, retailing, etc. have now adopted well-established capabilities in AI programs and procedures in-house. AI advancements have also imposed danger of disruption due to continuous automation and upgradation.

Rapid advancement in AI leads to innovation in technology and automation which improves the productivity of the organizations. AI shows increased output in leaps and bounds, reducing the cost of production drastically in a limited period. Accounting firms that initially took a lot of time in operations are now saving time in performing accounting tasks. Regardless of every country's demographic, political structure and socioeconomic grounds, AI has shown its implication in up-holding every economy's economic growth and welfare. The impact of AI differs from country to country and from one area to other areas.

Distribution of AI in Asia's Economies



The above shows the distribution of preparedness among selected Asia's economies.

It is to be noted that preparedness of the economies refers to the potential of the country to exploit and explore the available resources, and upcoming opportunities available in the country using AI. However, It is to be noticed that economies now focus on deep learning and machine learning.

Indian economy addresses a high level of preparedness to absorb and adopt the implications if AI is followed by China. Many world economies show resilience in adopting the usage of AI in their business operations. A few countries following AI advancements after China and India are Japan, Singapore, Taiwan and South Korea. Whereas, the other nations reflect minimal acceptance towards AI institutions.

Review of Literature

1. IM Cockburn, R Henderson, S Stern (2018), examined the rapid advancement in various terrains due to artificial intelligence. The main objective of the study was to highlight the impact of AI on society as a whole. The findings pivoted the lens on the potential of AI to bring innovations. These innovations would influence various areas related to goods and services leading to economic growth.

2. AB Bonab, I Rudko, and F Bellini (2021), aimed to analyze the potential of artificial intelligence in modelling socio-economic patterns with the help of technology. The study focused on many research papers, which focused on the negative aspects of intelligent machines replacing The paper states the reformation produced in academic literature due to artificial intelligence. It has also made a gap for further exploratory research stating that artificial intelligence would become the upgraded technology which would enable transformation in technical field.

3. M Haseeb, LWW Mihardjo, AR Gill (2019), the goal of the study was to ascertain how artificial intelligence (AI) had impacted the Asia-Pacific region's economic conditions. The primary emphasis requirement to gauge AI's effect on corporate operational efficiency. The macroeconomic data was gathered from sources like international organizations. Around 19 economic variables were considered for the analysis of the economic impact of AI. The findings pivoted the lens to highlight that China crowned and ruled in the field of AI. It was found that around 8 economies reflected a range of AI-related economic outcomes.

4. **N Chen, L Christensen, K Gallagher, R Mate (2016),** approximated the growth and advancements projected for the global economies due to the adoption of AI over a decade. The study aimed to analyse the impact of AI, within a wide range of applications. Artificial Intelligence was considered as a procedural gadget which played the role of a deemed intelligent. AI was concluded as a technology which was assumed to compete with the performance of humans. AI appeared to be performing human skills like learning, converting complex content to simple, drawing conclusions.

5.**CH Lu (2021),** Focusing on the self-accumulation ability and the nonrival characteristic of artificial intelligence (AI), this paper develops a three-sector endogenous growth model and investigates the impact of the development of AI along the transitional dynamics path and the balanced growth path. The development of AI can increase economic growth along the transitional dynamics path, and can increase household short-run utility if an increase in the accumulation of AI is due to the rising productivity in the goods or AI sector, but can be detrimental to household short-run utility if an increase in the accumulation of AI is because firms use more AI to replace human labor. In addition, the development of AI is not necessarily beneficial to household welfare in the long run. The main results are unaffected when considering the case where AI can improve the accumulation of human capital, the traditional research and development model, and different kinds of physical capital.

6. E Mogaji, TO Soetan, TA Kieu (2020), The study was undertaken to examine the relationship between variables like AI, financial services, and digital marketing concerning customers, highlighting implications in data collection, processing of data, and delivering information. The paper also explored the significance of human relations for achieving maximum customer satisfaction, and customer betrothal concerning financial service providers. The research delivered a model framework to financial service delivery agents, marketers, policymakers, academics, etc to assist them in understanding the criteria while facing vulnerable customers.

OBJECTIVES OF THE RESEARCH:

1. To highlight the impact of AI on the economic growth of the nation.

2. To measure the potential of AI in influencing economic growth.

HYPOTHESIS:

H_1: There is a strong relationship between the advancements in AI and the economic growth of the nation.

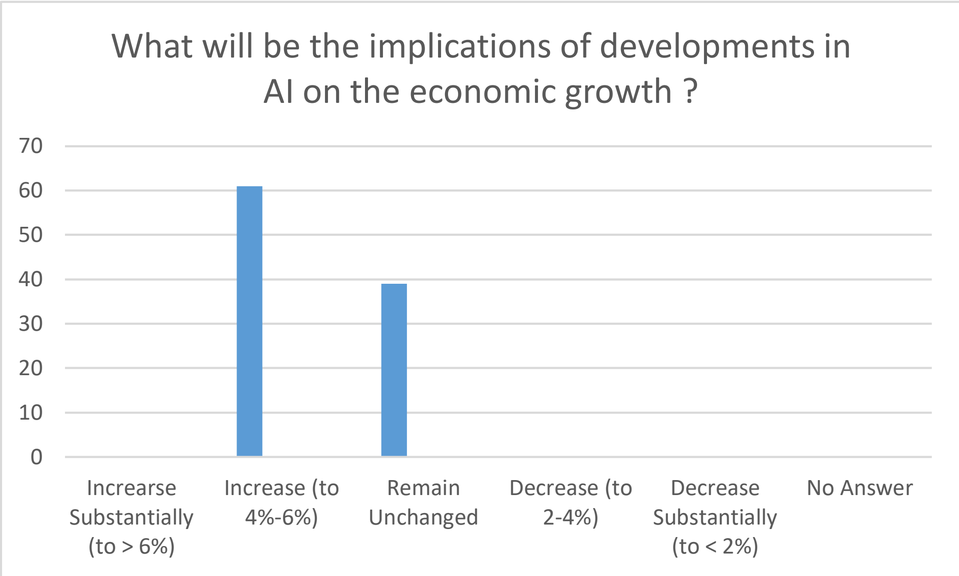
DATA ANALYSIS

The research paper is exploratory in nature hence data is collected through both the sources namely, primary and secondary. Data is collected through face to face or telephonic interviews, electronic questionnaire through google forms as per the availability and convenience of the respondents. The respondents were ensured that the data collected was purely for the purpose of study and would be kept confidential.

The primary data is collected from 842 respondents belonging to various fields like production, promotion, distribution, etc. to gauge the impact of artificial intelligence in wide range of variables.

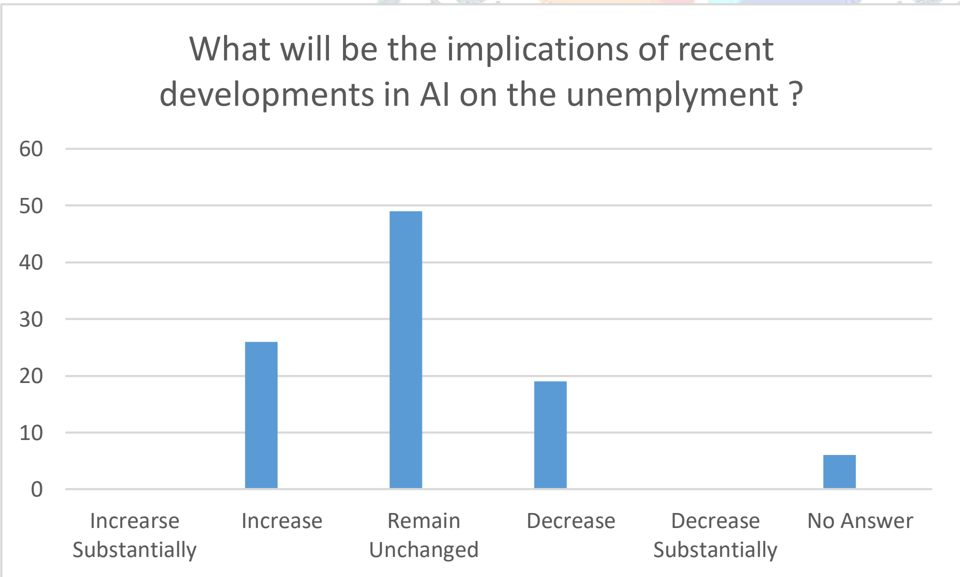
The secondary data was collected from already published sources like, newspapers, online sites, research journals, government records, etc.

Q1. What will be the implications of developments in AI on the economic growth of the nation across the decade?



Interpretation: From the above chart it is evident more that 60% of the respondents, 514 believe that AI would boost the economic growth of the nation in the upcoming decades up to 4% to 6% per annum. The remaining panel of respondents feels that the advancements in AI have no significant impact on the global growth.

2.What will be the implications of recent developments in artificial intelligence on the unemployment across the decade?



Interpretation: From the above chart it is evident that majority of the respondents 413 (49%) believe that the developments in AI would not affect the employment rates across the next decade. 26% of the respondents, 219 predetermine that advancement in AI would adversely impact the rates of labour. 159 respondents believe that that the labour rates would remain unchanged with the reforms in AI throughout the decade.

Hypothesis Testing

The study has proved that there is a direct relationship between AI and the economic welfare of the nation. Without use of AI in all the sectors it would not be possible to provide quality goods and services across the globe. AI technology and innovation helps to analyze and satisfy the need and preferences of large target audience.

CONCLUSION

The study reveals that India has a favourable and unique opportunity to solve major issues prevailing in multiple areas by applying technology. AI application can solve almost various problems pertaining in every sector efficiently and effectively, eg, shortage of facilities in the healthcare sector, and education sector providing poor quality problems, etc. can be resolved by delivering improved and timely healthcare services, best quality education using AI applications through improved technology and innovation to a larger extent. India has an unparalleled advantage of catering for the needs of a larger target audience by adopting artificial intelligence technology.

REFERENCES

1. Cockburn, I. M., Henderson, R., & Stern, S. (2018). The impact of artificial intelligence on innovation: An exploratory analysis. In *The economics of artificial intelligence: An agenda* (pp. 115-146). University of Chicago Press.

2. Bonab, A. B., Rudko, I., & Bellini, F. (2021). A review and a proposal about socio-economic impacts of artificial intelligence. In *Business Revolution in a Digital Era: 14th International Conference on Business Excellence, ICBE 2020, Bucharest, Romania* (pp. 251-270). Springer International Publishing.

3. Haseeb, M., Mihardjo, L. W., Gill, A. R., & Jermsittiparsert, K. (2019). Economic impact of artificial intelligence: new look for the macroeconomic assessment in Asia-Pacific region. *International Journal of Computational Intelligence Systems*, *12*(2), 1295.

4. Chen, N., Christensen, L., Gallagher, K., Mate, R., & Rafert, G. (2016). Global economic impacts associated with artificial intelligence. *Analysis Group*, *1*.

5. Lu, C. H. (2021). The impact of artificial intelligence on economic growth and welfare. *Journal of Macroeconomics*, *69*, 103342.

6. Mogaji, E., Soetan, T. O., & Kieu, T. A. (2020). The implications of artificial intelligence on the digital marketing of financial services to vulnerable customers. *Australasian Marketing Journal*, j-ausmj. Vol 29 (3).https://doi.org/10.1016/j.ausmj.2020.05.003

7. Szczepanski, M. (2019). Economic impacts of artificial intelligence (AI).

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Nucleus Budget Scheme (Tribal Development Ministry) and its Administration in the State of Maharashtra

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Abstract: *Tribal sub plan for tribal development is being implemented from 1975-76. After that various schemes are implemented on an integrated basis through Tribal Development Department and other departments for internal sector and individual development. So that the tribal area and people will develop. Even when such a deployment plan is working, it is necessary to carry out some activities according to the place, time. In that regard, Nucleus Budget scheme has been running in tribal department since 1981-82.*

Keyword: Nucleus Budget Scheme, Tribal Development, Tribal sub plan

Introduction:

Development of Tribal communities is a priority for the state as well as the central government because Article 275 of the Indian Constitution concentrated on Tribal Community area and the development of their area, while Article 244 and fifth schedule focusses on the administration of Scheduled Tribal areas. In the Maharashtra state under the fifth schedule, areas cover part of the Pune, Nashik, Ahmednagar, Dhule, Nandurbar, Jalgoan, Nanded, Amravati, Yavatmal, Chatrapur and Gadchiroli districts. For that purpose, at the national level the government of India, as well as state-level the government of Maharashtra has a separate ministry for the development of the tribal communities. After the independence of India, both ministries introduced many programmes and schemes for the development of the Tribal. In Maharashtra state, there is a separate administrative department for the effective implementation of the developmental programmes and schemes in the tribal areas since 1992. In the Maharashtra state Tribal Development Commissionerate, Nashik is responsible for the effective implementation of Nucleus Budget Scheme.

Nucleus Budget

Adivasi Upyojana for tribal development is being implemented from 1975-76. After that various schemes are implemented on an integrated basis through Tribal Development Department and other departments for internal sector and individual development. So that the tribal area and people will develop. Even when such a deployment plan is working, it is necessary to carry out some activities according to the place, time. In that regard, Nucleus Budget scheme has been running in tribal department since 1981-82.

There is a big difference in the process of development of various tribal tribes living in different areas in the state of Maharashtra. Therefore, the needs of development programs in each sector are also different. Because each project office area has different geographical conditions and abundance of natural resource wealth or error, a certain template program is not applicable for tribal development in all project areas. It is very important to bring flexibility and innovation in the plans of tribal development programs. For this purpose, the Government of Maharashtra has approved the tribal department to implement the central budget scheme (nucleus budget) by providing the right of creation and approval at the local level to various programs that are suitable for tribal development.

The TSP is formulated taking into consideration the specific needs of each ITDP area. In order to fulfil area specific demands which cannot be met from regular schemes approved by the Govt. and cannot as such be funded from the normal TSP a special scheme Nucleus Budget is being implemented since 1981-82. Under the scheme the Project Officer of the ITDP's are empowered to evolve & implement or get implemented from other department's schemes of local importance after following the prescribed procedure. In this scheme maximum Rs.50000/- granted to tribal individual/family, but if 2-3 tribal beneficiaries came together, then maximum Rs. 7, 50,000/- can be granted to this group. In this scheme 85 % is grant-in-aid for general tribal & 100 % grant in aid for PVTG. An outlay of Rs. 350.00 cr. is provided for the year 2022 - 23 for Nucleus Budget

Concept of Nucleus Budget Scheme –

Schemes of local importance of an innovative nature, which are necessary for tribal development or welfare in terms of place and time and are not included in the budget or schemes implemented from central funds, can directly benefit the needy tribals by implementing them promptly and effectively at the local level without being bogged down by technical formalities for a long time. The main objective of the scheme is to achieve Schemes to be implemented from this fund should be implemented primarily to improve the standard of living of tribal individuals and families, therefore the following restrictions will remain on basic facilities or job creation through this scheme. Also, it will be mandatory to follow the following instructions regarding the creation of the plan and its publication.

1. No new post can be created to implement the schemes sanctioned by this fund. But keeping in mind the nature of the scheme only for a short period based on the skilled / unskilled rate of the Public Works Department, some persons including services may be used for this work if necessary.

2. Expenditure on the construction of basic facilities should be very limited. Expenditure on such facilities should not exceed 10% of the total cost of the scheme if so required as a part of the scheme to be taken up under the nucleus budget.

3. An expenditure of 2% of the total cost of the scheme will be admissible for expenses related to the implementation of the scheme including survey, evaluation, monitoring, promotion, and distribution of publicity materials including transport, etc.

4. Non-objective actionable schemes from any other source of government will continue to be permissible.

5. The implementation of the plan should be done using a cluster approach.

6. These schemes are included in the budget or regular schemes of the central government. Such schemes cannot be implemented under Nucleus Budget Scheme.

7. Ashram schools, and tribal hostels for students from any other source e.g. Only non-targeted training/facility schemes from Ashram School Group, Government Hostels, Skill Development State Training Policy, etc. will be implemented under Nucleus Budget Scheme.

Nucleus Budget Group keeping in mined the basic purpose of the nucleus budget scheme;
It has been classified into **three major groups** as shown below.

Three major groups of Nucleus Budget Scheme and its financial limits

In order to ensure do justice to the schemes and components in the above-mentioned groups and to ensure that the scheme is fruitful, as per the provisions received during the financial year, the maximum number of proposed schemes, group-wise, will be as follows:

Group		Schemes of the provisions received during the financial year
A	Income generation or income enhancement schemes	**50 percent**
B	Training schemes and skill development programmes	**25 percent**
C	Human resource development and tribal welfare schemes	**25 percent**

Source: : शासन निर्णय क्र. न्यूबयो – 2000 / प्र. क्र. 144 (अ) / का - 5 दि. 31.05.2001

Schemes under the Central Budget Scheme are not expected to provide loans to the beneficiaries.

Review of literature

1. Evaluation study of the scheme under nucleus budget during 1981 – 82 and 1982 – 83 in tribal sub plan area of Maharashtra state – Report
(Dr. Govind Gare – Director – TRTI, Pune – 1)

Since 1976 - 77, various schemes for welfare of scheduled tribe are being implemented under "Tribal Sub plan ", where Area Development approach ' is adopted. The schemes implemented under the tribal sub plan area are finalise as a States general schemes. The local needs of the individual project are not consider in the proper perspective.

This, with a view to encourage innovative scheme and evolution of local importance and applicability, Government of Maharashtra during the year 1981 - 82 created a special fund " Nucleus Budget " and kept at the disposal of project officers of ITDPs in order to enable them to incur expenditure on scheme of " local importance " with are not included in the budget of that district under T.S.P. The project officer is not required to undergo an elaborate procedure adopted in general T.S.P. schemes.

The schemes implemented under nucleus budget during 1981 - 82 and 1982 - 83 where study by the tribal research and training institute, Pune - 01.

An alytical study was made on the basis of information receive from all 20 projects officers of it I.T.D.Ps, where are in order to study the benefits flow and its impact, the field survey was conducted into two I.T.D.Ps viz. Kalwan District Nashik and Dharani District Amravati each from Sahyadri and Gondwan region respectively.

2. Ambekar Dhanshree, "A Clinical Study of the Role of Nucleus Budget Scheme in Economic Development of Tribal (Year 2002 to 2008)".

A research thesis has been submitted for an M.Phil. Degree on the topic , “A Clinical Study of the Role of the Nucleus Budget Scheme in the Economic Development of Tribes (Years 2002 to 2008)". The researcher has chosen this for the purpose of studying the political, economic, and social lives of the tribal, studying the schemes implemented for them, and especially evaluating the central budget scheme for the tribals. The Nashik project was selected for this project, and interviews were conducted with 139 beneficiaries. In the central budget scheme, schemes are implemented in four groups: income generation schemes, training schemes, resource schemes, and welfare schemes. Schemes implemented under this scheme are designed keeping in mind the needs of tribally needy beneficiaries. The scheme is designed according to the needs of the beneficiaries so that the maximum number of problems can be solved. Children, youth, and old people benefit from this scheme. As the number of beneficiaries of the scheme increases, it is seen that the government is also increasing the provision amount of the scheme. As the benefit of this scheme is not in the form of actual money but in the form of goods and training, maximum benefit can be reached by the beneficiary and corruption can be curbed. This research shows that about 67.85% of the tribals have improved their economic conditions due to the benefit of this scheme; in short, the economic and social conditions of the tribal community are improving due to the benefit of this scheme.

3. Evaluation Report of the Scheme of Sewing Training and Distribution of Sewing Machines to Tribes Implemented under the Nucleus Budget, 1996, Tribal Research and Training Institute, Pune - 1

In the state of Maharashtra, there are differences in the availability of geographical and natural resource wealth in different regions. Therefore, there is a difference in the geographical conditions and natural resource endowment of each tribal development project area. Therefore, programs of a certain format may not be useful in terms of tribal development in all project areas. For this, the schemes that are not included in the budget and the schemes that are urgent in terms of the welfare of the tribals as per the place, time, and need The main concept of this scheme is to implement such schemes promptly and effectively at the local level under the central budget (Neclus Budget) and bring their benefits directly to the tribals.

Considering the availability of geographic and natural resources in each area of operations, flexible and actionable programmes should be implemented at the local level promptly. Schemes that have not been included in the budget for this purpose Such schemes of local importance are implemented in the central budget. Such development plans should be designed and implemented at the local level quickly and effectively without being delayed by technical formalities. Therefore, separate funds are made available to project officers under the nucleus budget. Currently, 129 schemes are being implemented in the state under the nucleus budget. Among them, sewing training and the distribution of sewing machines to tribals are important schemes. At present, the tribal society has become more aware of the schemes and benefits implemented by the government for them. Also, there has been a drastic change in the plans being implemented in the past and at present. Obviously, it has affected the lives of tribals. Therefore, it is in order to study the schemes currently being implemented under the central budget, the participation of tribals in these schemes, and the benefits they have received. For this purpose, this organisation provides tribal sewing training and sewing machines

4. Evaluation Report of Schemes Being Implemented Under the Nucleus Budget, 1996

A study report on the schemes to be implemented under the nucleus budget was done in 1986. However, in the subsequent period, many changes took place in the planning method and the concept of economic development. In order to implement the said scheme very effectively, the government has given detailed instructions and guidance as per the government decision dated May 12, 1992. Due to the changing economic and social conditions in time, continuous efforts are being made to raise the standard of living of the tribals through the government, NGOs, and other entities. Due to the facilities provided by the government, the tribals came into contact with the civil departments and the public, and obviously, due to this, there has been a significant change in their living conditions. The tribal community has become more aware of the schemes and benefits implemented by the government for them. Also, since there has been a drastic change in the schemes being implemented now compared to the past, they have had the desired effect of raising the standard of living of the tribals. There is a huge gap between the previous situation and the current situation. Therefore, it has become necessary to study the schemes being implemented, the participation of tribal members in these schemes, and the benefits they have received. For this purpose, this organisation has prepared this report after a field inspection of the schemes implemented under the nucleus budget.

Nucleus Budget Scheme (Tribal Development Ministry) - Administration in the State of Maharashtra

Structure and functioning of the steering committee

Each project will have a separate steering committee.

The committee will have two levels, namely, the project office level and the upper commissioner office.

A. Composition of the Steering Committee

(1) Composition of Project Office Level Steering Committee:

	Officer	Designation
1	Project Officer	Chairman
2	Assistant Project Officer (Development)	Member Secretary
3	Senior Tribal Development Inspector	Member
4	Officials proposing and/or implementing schemes of the concerned department or concerned NGOs	Member
5	Deputy Conservator of Forests	Member
6	Block Development Officer	Member

Source: शासन निर्णय क्र. न्यूबयो – 2000 / प्र. क्र. 144 (अ) / का - 5 दि. 31.05.2001

(2) Composition of the Upper Commissioner Directive Committee

Sr.No	Officer	Designation
1	Additional Commissioner Tribal Development	Chairman
2	Project Officer, Integrated Tribal Development Project	Vice President
3	Assistant Commissioner concerned Additional Commissioner Office	Member Secretary
4	Nominee members appointed by the government	Member
5	Members of the authorities who establish and/or implement the schemes of the concerned department	Member
6	District Treasury Officer	Member
7	The Chief Conservator of Forests	Member
8	Chief Executive Officer, Zilla Parishad	Member
9	District Planning Officer	Member

Source: शासन निर्णय क्र. न्यूबयो – 2000 / प्र. क्र. 144 (अ) / का - 5 दि. 31.05.2001

Nucleus Budget Scheme (Tribal Development Ministry) - Rolls of Administration

1. The proposed income generation or growth plan as per the local needs and scope of the business in the proposed place, the demand from the trainees, how many jobs or employment opportunities are expected to be available to the trainees in the future after the training, etc. It is also expected to examine the need for and utility of the proposed scheme with regard to human resource development and welfare schemes.

2. Taking into consideration the demands and complaints received from the public representatives and beneficiaries during the previous year, suitable and selective schemes can be proposed accordingly.

3. The concerned project officer should seek the proposal of the schemes or programmes to be taken up under the nucleus budget in the next financial year from the district-level officer of the various departments or departments, and with the approval of the directive committee, an annual draught plan should be prepared before the 31st of January before the commencement of the next financial year, within the limits of the funds received by the project. It should not be designed any more than that. This plan should be approved by the second directive committee by the end of February. However, the Second Directive Committee shall have the right to make partial changes in the annual plan, keeping in mind the available financial provisions and the urgent needs or important references from time to time.

4. While determining the number of schemes, care should be taken to ensure that the beneficiaries in all the talukas of the project area will benefit as much as possible. However, this condition shall not be applicable if the actual results of some schemes appear to have been implemented in a clustered manner. The directive

committee should discuss and decide on this. The said cluster should be determined taluka-wise, i.e., the funds of each taluka will be spent in the same taluka.

5. First, analysing the needs and backlog of the project area as per the statistical information available with the Tribal Research and Training Institute, District Planning, and District Statistical Officers, and after meeting with the local tribal MLAs, the activities based on the local needs should be determined and a plan should be prepared.

6. Plans approved in the framework are yearly. By the end of March, all the project officers should publish the plan, seek applications from the beneficiaries through advertising, and prepare a computerised list of the number of eligible, ineligible, and waiting list beneficiaries by April. The beneficiary list should be used according to seniority according to the lakhs of the scheme, and the remaining waiting list should be used in the next year if the said scheme is not proposed to be implemented in the next year. Also, the beneficiary list will not require the approval of the First and Second Directive Committees. But the project officer should take action to give the benefit only to the senior beneficiary.

7. It shall be mandatory to computerise the list of applications received from the beneficiaries, the list of eligible applicants, and the list of ineligible applicants (including the reason for ineligibility) outside the office where it can be easily seen by the public. Also, the beneficiary should be informed about eligibility or ineligibility as far as possible.

8. District-level officers of various departments will be responsible for the effective implementation of the plan under the nucleus budget. The project officer will call for periodic progress reports from such officers and through private mechanisms. The project officer shall have the right to monitor from time to time whether these plans are being implemented as per the objectives. The project officer will report the progress of the scheme to the Second Direction Committee. Implementation Mechanism (Government Private) shall submit the report and usability certificate to the project officer within three months from the completion of the scheme, as per the terms and conditions of the scheme.

9. As the chairman of the first directive committee, the project officer should hold a meeting of the first directive committee and the relevant implementation mechanisms and private organisations in his jurisdiction at least once every three months to review the implementation of the plans and obtain approval for new revised plans as necessary.

10. Minutes of every meeting of the steering committee should be prepared and preserved. It should be signed by all the members of the First Direction Committee.

11. It is mandatory to check the documents regarding the eligibility of the beneficiary for the benefit of the scheme for which the beneficiary has requested in the application through the project office and visit the location as per requirement.

12. The steering committee has to carefully scrutinise various items of expenditure under the scheme to be taken up under the nucleus budget. In particular, the Steering Committee will be responsible for approving the proposed scheme only after ensuring that the anticipated cost is reasonable and justifiable.

13. The project is inhabited by tribes declared to be primitive tribes (Katakari, Kolam, and Madia Gond). In that project, various schemes for their development should be implemented under the Nucleus Budget Scheme, keeping in mind the proportion of tribal population, the details of which should be preserved separately.

14. Programmes that cannot be taken up under the nucleus budget as per the guidelines prescribed by the government. But if the directive committee feels that it is necessary to take up a special programme or scheme according to the local conditions, then they should submit the proposal to the Commissionerate for approval through the appropriate channels.

15. The project officer should submit a report on the scheme (provision, expenditure, target, achievement, etc.) in the format prescribed by the senior offices and the information in the format prescribed to the Additional Commissioner every month.

16. The implementation of the scheme should be completed in the same financial year for which the scheme is approved. Also, approval should be given at the beginning of the plan for keeping the necessary provisions in reserve for the entire plan.

17. It is not expected to be purchased in the said scheme, but if you have to buy, you should check and ensure that the quality and quantity of all the materials purchased are correct. Also, no material will remain undistributed to the beneficiaries for an undue period of time. Care should be taken to ensure that the details of the distribution of materials are included in the prescribed statement.

18. Care should be taken to ensure that there is no duplication of the beneficiary. Also, necessary orders will be made available to all project offices through the Commissioner, Tribal Development Department, Nashik, to avoid beneficiary duplication.

19. If a scheme is being implemented continuously for three years or more, or if it is expected to be so, the committee will be responsible for submitting a proposal with self-explanatory feedback regarding the inclusion of the said scheme in the regular scheme.

20. The project officer will primarily be responsible for the self-evaluation of the schemes regarding the effectiveness and benefits of their implementation under the nucleus budget.

Conclusion

The authority since its establishment in 1981 - 82 has embarked upon undertaking many developmental programmes. The programmes that the authority has undertaken are: Income generation or income enhancement schemes, Training schemes and skill development programmes, Human resource development and tribal welfare schemes etc

Following independence, the governments of India and Maharashtra launched a number of tribal welfare projects and programmes aimed at improving the lot of the tribal people. The socioeconomic development of the tribal community in Maharashtra state has been funded by both governments in the millions of rupees, but to date it has not been satisfactory for a number of reasons, including the lack of participation of tribal people in decision-making, leadership, and the administration of tribal development, the low response to tribal welfare schemes and programmes, and the dearth of sufficient human resources.

There is no reliable system for determining if the various developmental programmes and strategies were executed successfully afterward. There are numerous programmes developed and carried out by the state of Maharashtra's various development agencies, but it becomes challenging to coordinate all programmes from the tribal development department. Lack of decentralisation of authority and the fact that many departments are now filling out online forms to receive benefits from such schemes, combined with the fact that the trial community has a very low literacy rate and is therefore unfamiliar with the internet, computers, etc., have led to a very low response rate for the various schemes. The grampanchayat must fill out the appropriate forms for qualified potential beneficiaries and submit them to the appropriate departments whenever any department introduces new plans or programmes.

Because the only local government (Grampanchayat) is located very close to each and every potential beneficiary, local governance is crucial to the growth of the tribal community. Therefore, receiving the numerous programmes and programmes from the tribal development departments should require active engagement.

Reference

1. Deogaonkar Dr.S.G. (2016), "Adivasi Vikas Prashasan", Shree Sainath Prakashan, Nagpur. 2. Tata Institute of Social Sciences, Mumbai (2015), Tribal Sub-Plan in Maharashtra: A Diagnostic Study.

3. Basu Dr. Ashok (1985),"Tribal Development Programmes and Administration in India", National Book Organisation, New Delhi.

4. Misal Dilip M. (2016) "Tribal Development Policies in India- An Overview", International Journal of Humanity and Social Sciences.

5. Evaluation study of the scheme under nucleus budget during 1981 – 82 and 1982 – 83 in tribal sub plan area of maharashtra state – Report Dr. Govind Gare – Director – TRTI, Pune

6. Ambekar Dhanshree, "A Clinical Study of the Role of Nucleus Budget Scheme in Economic Development of Tribals (Year 2002 to 2008)".

7. Lal, B. Suresh. (2019), Tribal Development in India: Some Observations, Researchgate. https://www.researchgate.net/publication/334680540_Tribal_Development_in_India _Some_Observations (28 December 2019)

8. Pati R.N and J. Dash, (2002) 'Tribal and Indigenous people of India: problems and prospects', New Delhi: APH Publishing.

9. Evaluation Report of Schemes Being Implemented Under the Nucleus Budget, 1996

10. Evaluation Report of the Scheme of Sewing Training and Distribution of Sewing Machines to Tribes Implemented under the Nucleus Budget, 1996, Tribal Research and Training Institute, Pune - 01

11. शासन निर्णय क्र. न्यूबयो – 2000 / प्र. क्र. 144 (अ) / का - 5 दि. 31.05.2001

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A STUDY ON THE IMPACT OF ARTIFICIAL INTELLIGENCE ON PERSONALIZED MARKETING

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Abstract:

Artificial Intelligence (AI) is a disruptive force in modern marketing, changing the way that individualized customer interactions are conducted. The goal of this research paper is to thoroughly analyze the significant influence of artificial intelligence on targeted marketing campaigns. This study looks into how these technologies allow for customized, data-driven marketing campaign strategies.

It also explores how AI-driven customization affects customer engagement, purchasing patterns, and brand loyalty. The research's conclusions provide light on the complex interactions between AI technology and tailored marketing, as well as predictions about the future course of customer-focused tactics in the digital era.

Keywords: Artificial Intelligence, Personalized Marketing, Purchase Behaviour, Limitation

INTRODUCTION:

In the constantly shifting environment of contemporary business, companies are managing a paradigm change in the way they interact with customers. The mutually beneficial interaction between artificial intelligence (AI) and personalized marketing is essential to this shift. A new era in which customer experience is defined by precision, relevance, and individualization has begun with the convergence of AI technologies with marketing methods.

AI's impact on personalized marketing is a complex development that reshapes the connection between marketers and consumers. Through the utilization of data, hyper-personalization, process automation, predictive analytics, and improved customer engagement, artificial intelligence (AI) not only increases the effectiveness of marketing campaigns but also creates a more significant and lasting customer experience in the digital era.

As companies proceed to adopt these revolutionary technologies, the era of AI-powered personalized marketing looks to be a vibrant and ever-evolving frontier.

Source: Google https://www.linkedin.com/pulse/how-ai-revolutionizing-digital-marketing-spectrum-mary-vista/

II. RELEVANCE OF AI IN MARKETING:

Data Analysis and Insights: AI helps marketers to swiftly and effectively analyze enormous volumes of data in order to derive important insights that would not be visible using more conventional techniques. Marketers are better able to recognize patterns, comprehend consumer behavior, and make educated decisions thanks to this data-driven approach.

Personalization: AI is essential to providing each customer with unique experiences and content. AI systems can customize marketing messages, offers, and suggestions based on customer data analysis, which raises engagement and boosts conversion rates.

Automation: Artificial intelligence (AI) frees up time-consuming and repetitive chores for marketers to concentrate on more strategic and creative areas of their work. AI-powered marketing automation can expedite tasks like social media management, email campaigns, and ad optimization.

Predictive Analytics: By using historical data, AI algorithms are able to forecast future patterns and consumer behavior.

This predictive power helps marketers remain ahead of the competition, optimize their strategies, and foresee changes in the market.

Buyers Segmentation: By evaluating a variety of data sources and spotting trends, AI assists in the creation of more precise consumer categories. This makes it possible for marketers to better target particular audience segments with their messaging, making their campaigns more relevant.

Chatbots and Virtual Assistants: By giving prompt, individualized responses, AI-powered chatbots and virtual assistants improve consumer relationships. This raises customer satisfaction, quickly addresses complaints, and enhances the perception of the brand.

Enhanced Data Security:

AI can help in detecting and preventing fraudulent activities by analyzing patterns and anomalies in customer behavior This can enhance data security and protect customer information, building trust and confidence in the customer service experience.

III. THE IMPORTANCE OF PERSONALIZED MARKETING IN CONTEMPORARY BUSINESS LANDSCAPES:

Personalized marketing has become an essential strategy in the quickly changing world of modern business, revolutionizing the way brands interact with their customers. Tailored messaging, products, and experiences to individual preferences is not just desirable but critical in a world when options and information abound.

In today's corporate environment, targeted marketing is crucial for the following reasons:

Increased Interaction with Customers

Enhanced Contentment with Clients

Higher Rates of Conversion

Optimized Marketing Spend Competitive Advantage Data-Driven Decision Making

Opportunities for Cross-Selling and Up-selling

Adjusting to the Expectations of Customers

This research study attempts to thoroughly analyze the significant influence of AI on personalized marketing tactics by taking into account the significance of AI in personalized marketing. This study looks into how these technologies allow for customized, data-driven marketing campaign strategies. It also explores how AI-driven customization affects customer engagement, purchasing patterns, and brand loyalty. Additionally, ethical issues pertaining to data use and privacy in AI-driven marketing are looked at.

THE STUDY'S OBJECTIVES

i) To Evaluating AI's Impact on Marketing Efficiency

ii) To Investigating the efficacy of personalization enabled by AI

iii) To Reviewing the Integration of AI in digital marketing

iv) To Exploring the Challenges and concerns in integrating AI with PM.

EVOLUTION OF ARTIFICIAL INTELLIGENCE IN MARKETING:

The evolution of Artificial Intelligence (AI) in marketing has been a dynamic and transformative journey, impacting various aspects of the industry. Here's a brief overview of the key stages in the evolution of AI in marketing:

1. **Rule-Based Systems (1950s-1980s):**
    - Early AI applications in marketing involved rule-based systems. These systems relied on predefined rules and logic to make decisions.Basic automation tools were used for tasks such as data analysis and segmentation.

2. **Machine Learning (1980s-2010s):**
    - Machine Learning (ML) techniques gained prominence, enabling systems to learn from data and improve their performance over time. Predictive analytics and recommendation engines were introduced, improving personalized marketing strategies. Chatbots and virtual assistants started to become more sophisticated, enhancing customer interactions.
3. **Big Data (2010s-2020s):**

    The rise of big data provided marketers with vast amounts of information to analyze and derive insights. AI algorithms were increasingly used for data processing, pattern recognition, and generating actionable insights. Personalization in marketing campaigns became more refined, targeting specific customer segments with relevant content.
4. **Natural Language Processing (NLP) and Sentiment Analysis:**

    NLP advancements enabled AI systems to understand and generate human-like language, enhancing communication and content creation. Sentiment analysis tools helped marketers gauge public opinions and tailor campaigns accordingly.
5. **Predictive Analytics and Customer Segmentation:**

    AI-powered predictive analytics became more sophisticated, allowing marketers to forecast customer behavior and optimize campaigns in real-time. Customer segmentation became highly precise, enabling targeted and personalized marketing strategies.
6. **Marketing Automation and Chatbots (2010s-2020s):**

    Marketing automation platforms leveraged AI to streamline repetitive tasks, such as email marketing, lead nurturing, and social media management. Chatbots evolved with AI capabilities, providing instant customer support and engagement.
7. **Personalization and Recommendation Engines:**

    AI-driven recommendation engines played a significant role in e-commerce and content platforms, enhancing user experience and driving sales. Dynamic content personalization became a standard practice in email marketing and website interactions.
8. **Voice Search and Visual Recognition (2010s-2020s):**

    With the rise of voice-activated devices, AI applications expanded into voice search optimization and natural language understanding. Visual recognition technologies allowed for image and video analysis, contributing to better content targeting and user experience.
9. **AI in Content Creation:**

    AI tools started being used for content creation, including writing articles, generating social media posts, and producing multimedia content.
10. **AI for Customer Journey Mapping (2020s and beyond):**

    AI is increasingly employed to map and optimize the entire customer journey, ensuring a seamless and personalized experience across various touchpoints. Integration with Customer Relationship Management (CRM) systems allows for a more holistic view of customer interactions. The evolution of AI in marketing continues to be a dynamic process, with ongoing advancements in technologies such as deep learning, reinforcement learning, and explainable AI contributing to further innovation and refinement of marketing strategies. As AI becomes more ingrained in marketing practices, ethical considerations, privacy concerns, and regulatory compliance also become crucial aspects to address.

Source: https://www.linkedin.com/pulse/historical-evolution-ai-marketing-syed-jasminara/

AI-POWERED PERSONALIZATION TECHNIQUES

AI-powered personalization techniques have become integral to modern marketing strategies, enabling businesses to deliver tailored experiences to individual users. These techniques leverage machine learning algorithms and data analysis to understand user behavior, preferences, and characteristics, ultimately enhancing customer engagement and satisfaction. Here are some key AI-powered personalization techniques:

1. **Collaborative Filtering:**
   - Collaborative filtering is a popular recommendation technique that identifies patterns and similarities among users. It recommends products or content based on the preferences and behaviors of similar users.
2. **Content-Based Filtering:**
   - Content-based filtering recommends items similar to those the user has shown interest in previously. It relies on analyzing the features or attributes of items and matching them with the user's preferences.
3. **Hybrid Recommendation Systems:**
   - Hybrid recommendation systems combine collaborative and content-based filtering to provide more accurate and diverse recommendations. This approach leverages the strengths of both techniques to overcome their individual limitations.
4. **Predictive Analytics:**
   - Predictive analytics utilizes machine learning algorithms to predict future user behavior based on historical data. This helps in anticipating what products or content a user might be interested in, allowing for proactive personalization.

5. **Natural Language Processing (NLP):**
    - NLP enables systems to understand and analyze human language. It is often used in chatbots, virtual assistants, and content creation tools to provide personalized interactions and responses.
6. **Segmentation and Clustering:**
    - AI algorithms can analyze user data to segment audiences based on shared characteristics or behaviors. This allows marketers to tailor their messages and offerings to specific customer segments.
7. **Real-Time Behavioral Tracking:**
    - AI algorithms can analyze real-time user behavior, such as website visits, clicks, and interactions, to dynamically adjust content and recommendations in real-time. This ensures that personalization remains current and relevant.
8. **A/B Testing and Optimization:**
    - A/B testing with AI enables marketers to test different variations of content, layouts, or offers and determine the most effective ones. Over time, AI algorithms optimize personalization based on the performance of different elements.
9. **Dynamic Pricing Optimization:**
    - AI-powered dynamic pricing adjusts product prices based on factors such as demand, user behavior, and market conditions. This personalization technique aims to maximize revenue while offering competitive prices.
10. **Personalized Email Campaigns:**
    - AI is used to analyze user behavior, preferences, and engagement history to create personalized email campaigns. This includes personalized subject lines, content recommendations, and timing optimization.
11. **Cross-Channel Personalization:**
    - AI enables consistent personalization across multiple channels, ensuring a seamless and personalized experience for users whether they interact with a brand on a website, mobile app, social media, or other platforms.
12. **Facial Recognition and Image Analysis:**
    - In retail and e-commerce, facial recognition and image analysis can be used to personalize product recommendations based on users' facial expressions and reactions to specific products.
13. **Reinforcement Learning:**

    Reinforcement learning algorithms can adapt and improve personalization based on user feedback and interactions, learning from the outcomes of previous recommendations. Implementing these AI-powered personalization techniques requires a robust infrastructure for data collection, processing, and analysis. Additionally, businesses must prioritize user privacy and adhere to ethical considerations to build trust with their customers.

    As technology continues to advance, the landscape of AI-powered personalization is expected to evolve, offering more sophisticated and effective strategies for engaging users in a personalized manner.

LIMITATIONS OF AI IN PERSONALIZED MARKETING

1**. Data Privacy Issues**

Since AI uses a lot of client data, security and privacy issues are brought up.

It is imperative for marketers to adhere to privacy standards while collecting and utilizing client data, and to earn their trust by being open and honest about their data practices.

2. **Absence of Human Contact**

While AI makes individualized experiences possible, it occasionally lacks the human element.

For complex problems or emotional assistance, some consumers still prefer to communicate with human agents. This emphasizes how crucial it is to strike the correct balance between automation and human connection.

3. **Complexity of Implementation**

AI integration into current marketing procedures calls for meticulous preparation and technological know-how. It can include large financial outlays for training as well as technology. Companies need to be ready for the first difficulties that come with implementing AI.

4. Ethical Aspects to Consider

The quality of AI algorithms depends on the quality of the training data. Incomplete or skewed datasets may result in unethical behavior or biased conclusions.

Marketers must make sure AI applications are impartial, fair, and compliant with moral principles.

CONCLUSION:

Artificial Intelligence (AI) has a revolutionary effect on targeted marketing, changing the way Companies know their customers, interact with them, and provide for their needs. Precision, relevance, and individualization are at the forefront of a new era marked by the incorporation of AI technologies into marketing efforts. Several important features of this impact are illuminated by the primary findings and insights from research conducted in this domain.

AI has transformed customization by enabling marketers to go beyond traditional demographic targeting and explore the nuances of individual tastes, behaviors, and real-time interactions. AI is capable of quickly and accurately analyzing large amounts of data. Predictive analytic has become a potent instrument that helps companies foresee the demands and patterns of their customers, guiding proactive and focused marketing campaigns.

Artificial intelligence (AI)-powered chat bots, virtual assistants, and conversational interfaces have revolutionized consumer interactions by offering prompt, tailored, and context-aware responses. This adds to a smooth and enjoyable user experience in addition to improving customer service. A coherent and consistent consumer experience has been produced by the integration of AI across marketing channels. AI makes sure that every touch point—from social media and websites to email campaigns and mobile apps—is customized for individualized engagement, creating a feeling of community and steadfastness.

The significance of AI goes beyond simple personalization; it is now a vital tool for behavioral analysis, predictive analytic, and ongoing marketing strategy adaption. Nowadays, companies can react instantly to evolving consumer habits, guaranteeing that tailored marketing campaigns stay current and productive.

It is expected that the use of AI in personalized marketing will continue to advance in sophistication.

Through integration with other cutting-edge technologies like augmented reality and virtual reality, AI algorithms will develop to deliver highly tailored experiences. Together, AI and human marketers will continue to be essential in delivering persuasive and customized marketing efforts by combining the benefits of automation and creativity. Furthermore, a paradigm shift in the way organizations interact with their clients is represented by the combination of AI with personalized marketing. In a future when personalized experiences are at the center of effective marketing tactics, companies who can traverse and leverage AI's potential with skill will be well-positioned to not only meet but surpass customer expectations. This is because technology is only going to become better.

REFERENCES:

- Berger, J., Humphreys, A., Ludwig, S., Moe, W. W., Netzer, O., & Schweidel, D. A. (2020). Uniting the Tribes: Using Text for Marketing Insight. Journal of Marketing, 84(1), 1-25.
- https://doi.org/10.1177/0022242919873106 www.ijcrt.org © 2023 IJCRT | Volume 11, Issue 12 December 2023 | ISSN: 2320-2882 IJCRT2312900 International Journal of Creative Research Thoughts (IJCRT) www.ijcrt.org h988 Lee, U., Jung, G., Ma, E. Y., San Kim, J., Kim, H., Alikhanov, J., ... & Kim, H. (2023). Toward datadriven digital therapeutics analytics: Literature review and research directions. IEEE/CAA Journal of Automatica Sinica, 10(1), 42-66.
- Prinsloo, Herman. (2002). The effect of ageing and lifestyle profile changes on personalization and customer relationship management (CRM). SA Journal of Information Management. 10.4102/sajim.v4i2.161.
- Zanker, M., Rook, L., & Jannach, D. (2019). Measuring the impact of online personalisation: Past, present and future. International Journal of Human-Computer Studies, 131, 160-168.
- Guth, J., Breitenbücher, U., Falkenthal, M., Fremantle, P., Kopp, O., Leymann, F., & Reinfurt, L. (2018).
- A detailed analysis of IoT platform architectures: concepts, similarities, and differences. Internet of everything: algorithms, methodologies, technologies and perspectives, 81-101.
- Sivaraman, Subhashree. (2023). AI IN MARKETING: THE TRANSFORMA
- https://fastercapital.com/content/How-ai-driven-content-tools-are-revolutionizing-marketing-strategies-1.html

- https://www.linkedin.com/pulse/how-ai-revolutionizing-digital-marketing-spectrum-mary-vista/
- https://www.linkedin.com/pulse/historical-evolution-ai-marketing-syed-jasminara/

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A Study on Socio-Economic Impact of AI Implementation In india: Unemployment Trends and Economic Dynamics

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ABSTRACT:

This research paper explores the socio-economic impact of AI (Artificial Intelligence) implementation in India, focusing on unemployment trends and economic dynamics. The study aims to understand the types of jobs most affected by AI, assess the impact on unemployment rates, and analyze the socio-economic effects post-AI implementation in India. Utilizing secondary data, the research investigates these aspects to provide valuable insights into the transformative effects of AI on the Indian job market and economy.We're trying to figure out these changes so the Government and Policy maker can make good plans to help people find newjobs and keep the economy strong as Artificial Intelligence grows in India.

KEYWORDS: Artificial Intelligence, socio-economic and unemployment trends.

1. INTRODUCTION:

In the evolving landscape of technology, Artificial Intelligence (AI) has become a game-changer,seeping into every aspect of our lives. Here in India, we are witnessing the rise of AI, not just in fancy gadgets, but in our workplaces and economy. This research paper zooms in on a crucial aspect that affects us all – jobs. Picture this: some jobs disappearing, new ones cropping up, and the job market doing a bit of a dance. That's what we're digging into – the impact of AI on employment, particularly focusing on how it shakes up the job market and plays a role in unemployment trends. No jargon here; we're keeping it real and straightforward as we explorethe influence of AI on our jobs, income, and the sectors that keep our economy buzzing. So, let's dive in and uncover the story of AI and its socio-economic effects on unemployment trends and sectoral dynamics in India.

2. OBJECTIVES:

The key objectives of the study are as follows:

- To study the Socio-Economic Impact of AI Implementation In india
- To Know the Impact of AI Tools on Unemployment trends.
- To know the types of jobs that are most affected by AI implimentation in India.

3. BACKGROUND AND SIGNIFICANCE:

Artificial Intelligence (AI) is making waves in Industry 4.0, prompting organizations to integrate it for enhanced productivity and global competitiveness. As AI progresses, human resources are adapting to skill upgrades in the era of smart intelligence. Despite significant advancements, AIis not yet surpassing human capabilities, but it is reshaping industries and attracting substantial investments. The thesis focuses on understanding the impact of AI on human resources in the automotive sector in western India. India's startup ecosystem and innovative mindset offer a unique opportunity, but strong global competition, particularly from China, requires a futuristic economic framework. The evolution of AI, compared to historical developments, underscores theneed for time to settle into a stable state. Overall, AI's transformative potential is evident, shaping the future of work and economies worldwide.

3.1. Benefits of Artificial Intelligence

Artificial Intelligence is an endeavor of humans to develop an alternative intelligence, which canbe deployed in specific areas for enhancement of productivity and assistance in executingdifficult tasks. The key areas where AI benefits can be reaped are in: Artificial Intelligence AI-Automation in related Processes Human Resources Employee Behavior in Support Functions Skill Management and development AI Infrastructure & Organizational Growth Job Structure 14

• Risk mitigation • Difficult terrain & territory • Error containment • Repetitive Digital assignments • Uninterrupted service executions • Cost efficiency • Enhanced productivity

3.2. Challenges of Artificial Intelligence

Every coin has two sides,so does every innovation or technology. AI also comes with its share ofbenefits and risks.

The key challenges are:

• Human redundancy • Job scarcity • Infringement on privacy • Lack of human connect

- Addiction • Ethical travesty

4. DATA COLLECTION METHODS:

Secondary Data source: This study relies on secondary data obtained from reputable sources such as government reports, academic journals, and industry publications. online write-ups, portals and websites accessed to draw the parallels between the real world and actual field to analyze the data.

5. RESEARCH METHODOLOGY:

This study embraces both a descriptive and exploratory approach of research. This studyattempts to understand the Socio-Economic Impact of AI Implementation In India and To Know the Impact of AI Tools on Unemployment trends.

6. LIMITATIONS OF THE STUDY:

- The data has been collected only from India by secondary source.
- Artificial Intelligence is a wide area of research but its awareness is limited.

7. REVIEW OF LITERATURE:

7.1 Zee News (12th Feb 2024): It layoffs 2023 over 17400 Tech employees got Fired in Feb globally to date major companies which commenced layoff this month include Yahoo, Byju's, Godaddy, Guitar, eBay, autodesk, OLX group and others.
More than 17400 employees in the tech industry lost jobs in February in 2023 so far around 340 companies have Laid off more than 1.10 lakh employees worldwide. more than 3300 Tech employees lost jobs daily on average.

7.2 INDIA TODAY (4th August 2023): AI will replace millions of human jobs by 2030 but these 4 jobs to be at most risk, reveals study The report predicts that jobs requiring automation, such as data collection and repetitive tasks, will be replaced by AI.Low-wageworkers are expected to be more severely affected, as they are up to 14 times more likely to require occupational changes by 2030 compared to higher earners.

7.3 CNBC(18th July 2023): Most outsourced coders in India will be gone in 2 years due to A.I., Stability AI boss predicts. In India, Mostaque said, "outsourced coders up to level three programmers will be gone in the next year or two, whereas in France, you'll never fire a developer.Most outsourced programmers in India will see their jobs wiped out in the next year ortwo, Stability AI CEO Emad Mostaque said.

7.4 The Economics Times(11th July 2023): Layoffs in 2023: Microsoft, cognizant,Accenture among latest firms to cut jobs amid economic turmoil

7.5. BBC NEWS(28 March 2023): Artificial intelligence (AI) could replace the equivalent of 300 million full-time jobs, a report by investment bank Goldman Sachs says.

7.6. India Today(3rd March 2023): Layoffs in 2023: Google, Microsoft, **Salesforce and more fire thousands of employees in the last 2 months.**In the past two months, 567 layoffs were announced across big tech, startups and unicorn tech companies. The latest layoff spree impactedmore than 150,000 IT employees around the globe.

7.7. Carl Benedikt Frey, future of-work director at the Oxford Martin School:Oxford University: According to Carl Benedikt Frey, the future of work director at the Oxford Martin School, technologies like ChatGPT are enabling individuals with average writing skills to produce essays and articles, intensifying competition among journalists. Frey draws parallelswith the impact of GPS and platforms like Uber, which devalued the knowledge of all London streets, leading to substantial wage cuts for incumbent drivers. Similarly, as generative AIbecomes more prevalent, it is anticipated to have analogous effects on a wider range of creative tasks, potentially driving down wages in creative professions rather than reducing the number of practitioners.

7.8. According to research cited by the report chief executive of the Resolution Foundation think tank Torsten Bell told BBC News: Predicting the long-term impact of AI should be approached with caution. Bell emphasizes the uncertainty surrounding how technology will evolve and how businesses will integrate it into their operations. While acknowledging the potential for AI to disrupt traditional work patterns in the short term, Bell urges a broader perspective. He suggests considering the potential gains in living standards from more productive work and cost-effective services. Bell also highlights the risk of falling behind iffirms and economies fail to adapt effectively to technological changes. In essence, while acknowledging the challenges, he encourages focusing on both the potential disruptions and the positive aspects of technological advancement.

7.9. Jared Jaskot (Feb20222): According to a paper written by economists at MIT and Boston University, robots could replace about two million workers by 2025. While many of these lost jobs are in manufacturing and other jobs that inherently require more repetitive, linear tasks, it’s not outside the realm of possibility that AI continues to creep into the legal profession.

7.10. KHATRI, SAPNA,Amity University Madhya Pradesh(2022)

The study on artificial intelligence (AI) implementation and its impact on India's automotive industry reveals that

AI is still in its early stages in the country, facing challenges like limited infrastructure and misconceptions about its role. While expert AI systems show potential in reducing decision-making ambiguity, concerns arise regarding job reductions with neural systems. The study emphasizes the importance of reskilling human resources over complete AI automation, considering India's ample skilled workforce. Balancing AI's infrastructure demands with optimal human resource utilization is crucial. AI's inability to grasp human emotionsunderscores the significance of human psychology in the workplace. Concerns about data biases and potential impacts on memory and mental exercise are raised, emphasizing the need for employee well-being. Despite challenges, the study anticipates a promising future for AI, foreseeing continued growth and evolution.

8. SOCIO- ECONOMIC IMPACT OF AI IMPLEMENTATION IN INDIA

The socio-economic impact of AI implementation in India is transformative, influencing various facets of the nation's economy and society.

- **Diverse Industry Impact:** AI implementation in India is significantly enhancing productivity and driving innovation across various sectors, including manufacturing, healthcare, finance, and services. Automation in manufacturing, faster healthcare diagnostics, and optimized financial services showcase the transformative effects.
- **Business Adoption Trends:** There is a notable trend in India where businesses are actively integrating AI technologies to streamline operations, reduce costs, and introduce innovative solutions. This reflects a commitment to staying competitive in the global market.
- **Industry-Specific Variances:** While AI adoption is prevalent, industry-specific variances exist, emphasizing the need for tailored analyses. Technology-centric sectors tend to exhibit higher adoption rates compared to traditional industries.
- **Inclusive Workforce Development:** To address the evolving job landscape, inclusive upskilling and reskilling initiatives are crucial. These efforts ensure that the Indianworkforce is adequately prepared for the demands of AI-driven industries.
- **Government Role:** Government policies, financial support, and collaborations with educational institutions play pivotal roles in shaping the response to AI-induced changes in India. These efforts contribute to a comprehensive and strategic approach towards AI implementation.
- **Global Competitiveness:** The impact of AI in India extends beyond economic dimensions, influencing social dynamics, workforce development, and the nation's globalcompetitiveness. The nation is actively positioning itself as a participant in the global AI landscape.

9. IMPACT OF AI TOOLS ON UNEMPLOYMENT TRENDS

The impact of AI tools on unemployment trends is a complex and multifaceted issue, with both positive and negative aspects:

- **Job Displacement:** The implementation of AI tools, particularly automation and machine learning, has the potential to displace certain jobs that involve routine and repetitive tasks. Industries like manufacturing, customer service, and data entry may experience a reduction in demand for human labor as AI systems take over these functions.
- **Job Creation:** On the positive side, the adoption of AI tools often leads to the creation ofnew job roles in emerging fields. Positions related to AI development, data science, and AI system maintenance become increasingly important, creating opportunities for individuals with the right skill sets.
- **Skill Shift:** The integration of AI tools necessitates a shift in the skill requirements of the workforce. While some traditional jobs may decline, there is a growing demand for skills related to AI, such as programming, data analysis, and AI system management. Workers who acquire these skills can remain competitive in the job market.
- **Increased Productivity:** AI tools have the potential to significantly increase productivity in various industries. This boost in efficiency can contribute to economic growth, potentially creating more opportunities for employment in sectors that experience expansion due to increased productivity.
- **Social and Economic Disparities:** The impact of AI on unemployment can contribute to social and economic disparities. Individuals without the means or access to acquire the necessary AI-related skills may face challenges in the job market, leading to a potential widening of the income gap.
- **Policy and Education:** Government policies and educational initiatives play a crucial role in mitigating the negative impacts of AI on unemployment. Programs focused on upskilling and reskilling the workforce, alongside policies that encourage the responsible adoption of AI technologies, can help address challenges associated with job displacement.

In summary, the impact of AI tools on unemployment trends is nuanced and dynamic. While certain jobs may be at risk of displacement, there are opportunities for new types of employment.The key lies in proactive measures, including education and policy interventions, to ensure a smoother transition for the workforce and mitigate potential negative consequences on unemployment.

10. TYPES OF JOBS THAT ARE MOST AFFECTED BY AI IMPLEMENTATION ININDIA

In India, the impact of AI implementation varies across different sectors, but certain jobs are more susceptible to automation and transformation due to AI technologies. Some of the jobs that may be most affected include:

- **Routine Manufacturing and Assembly Line Jobs:** Jobs involving routine tasks inmanufacturing and assembly lines are at risk of being automated. AI-powered robots can efficiently handle repetitive tasks, impacting roles that involve manual labor in production.
- **BPO and Call Center Jobs:** AI-driven chatbots and virtual assistants are increasingly used in customer service roles, potentially affecting jobs in Business Process Outsourcing(BPO) and call centers. Routine queries and basic support tasks can be handled by AI, impacting traditional customer service roles.
- **Data Entry and Processing Jobs:** Jobs that primarily involve data entry, data processing, and basic information retrieval may face automation. AI systems can handle these tasks with speed and accuracy, reducing the demand for manual data entry roles.
- **Telemarketing and Telesales:** AI applications can handle outbound calls, conduct surveys, and perform telemarketing tasks, potentially impacting jobs in telemarketing andtelesales.
- **Routine IT Support Roles:** Basic IT support roles involving repetitive troubleshooting and issue resolution may see changes due to AI. Automated systems can handle routine queries and provide technical assistance.
- **Routine Accounting and Bookkeeping:** AI applications in accounting can automate tasks such as data entry, transaction categorization, and basic bookkeeping, potentially affecting jobs in routine financial tasks.
- **Routine Healthcare Tasks:** Certain routine healthcare tasks, such as basic diagnostics and data analysis, may be impacted by AI applications. While AI can support medical professionals, it may affect roles that involve routine and repetitive tasks.
- **Routine Agricultural Tasks:** In the agriculture sector, routine tasks like monitoring crops, assessing soil conditions, and basic agricultural activities may see changes with the introduction of AI-powered agricultural technologies.

It's important to note that the impact of AI is not uniform, and many jobs will also see transformations where AI complements human capabilities rather than completely replacing them. Additionally, AI implementation creates new opportunities in roles related to AI development, maintenance, and oversight, emphasizing the importance of upskilling and adapting to the evolving job landscape.

11. CONCLUSIONS:

Our study delves into the impact of AI implementation on unemployment trends and economic dynamics in India. We recognize AI's transformative influence across sectors, from manufacturing to healthcare, highlighting its role in enhancing productivity and driving innovation. As businesses in India actively adopt AI technologies, we observe a varied impact across industries, with technology-centric sectors leading in adoption. The emphasis on inclusive upskilling and reskilling initiatives is vital to prepare the Indian workforce for the demands of AI-driven industries. Government policies, financial support, and collaborations with educationalinstitutions play a pivotal role in shaping a comprehensive response to AI-induced changes.

Examining the impact of AI tools on unemployment trends reveals a nuanced scenario. While there is a risk of job displacement, especially in routine tasks, there is a parallel creation of new opportunities in emerging AI-related fields. The shift in skill requirements towards programming, data analysis, and AI system management is evident, necessitating proactivemeasures in education and policy. The potential increase in productivity due to AI tools offers opportunities for employment in expanding sectors, but concerns about social and economic disparities emerge, necessitating careful policy considerations.

Exploring job types most affected by AI implementation in India highlights vulnerabilities in routine manufacturing, customer service, data entry, and other tasks susceptible to automation. The significance of adapting to this changing landscape through upskilling is reiterated. In essence, while AI poses challenges to certain job roles, it also opens avenues for innovation, skilldevelopment, and economic growth. Our findings underscore the need for a balanced approach, emphasizing education and policy interventions for a smoother transition and addressing potential negative consequences on unemployment.

REFERENCE:

https://shodhganga.inflibnet.ac.in/handle/10603/40228
https://www.indiatoday.in/technology/news/story/layoffs-in-2023-google-microsoft-salesforce-an d-more-fire-thousands-of-employees-in-last-2-months-2341972-2023-03-03 https://www.bbc.com/news/technology-65102150
https://economictimes.indiatimes.com/tech/technology/layoffs-in-2023-list-of-companies-that-have-announced-job-cuts-amid-economic-downturn/articleshow/97403993.cms?from=mdr
https://www.linkedin.com/pulse/lawyers-think-robots-never-replace-them-heres-why-may-jared-j askot
https://economictimes.indiatimes.com/tech/technology/layoffs-in-2023-list-of-companies-that-ha ve-announced-job-cuts-amid-economic-downturn/articleshow/97403993.cms https://zeenews.india.com/companies/it-layoffs-2023-over-17400-tech-employees-got-fired-in-fe b-globally-to-date-2572552.html
https://www.indiatoday.in/technology/news/story/ai-will-replace-millions-of-human-jobs-by-202 3-but-these-4-jobs-to-be-at-most-risk-reveals-study-2414593-2023-08-01

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A Study On Innovations In Indian Banking Sector With Reference To It's Services

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Abstract –

The purpose of this article is to find out the importance of innovative technologies in the banking sector and to analyze the characteristics of technological product orientation. The banking system in India has changed a lot since demonetization. The government has started focusing

on Digital India, which has changed people's payment habits. Technology-based innovations are an important factor in providing customized and versatile banking services to various customers at a lower cost. Technological innovations have brought about a massive change in the way banks operate in India, both internally and externally, enabling banks to provide excellent

Customer service. The banking sector is one of the fastest growing sector in India. The Indian banking sector is undergoing several changes. Innovative factors like internet banking, mobile banking, ATM, NEFT and RTGS. Online banking services in the banking sector have a positive impact on the public. The most important advantages of using technological solutions in the banking sector are faster, more accurate and efficient information and data processing and speeding up the decision-making process. As a result of IT innovations, consumers no longer need to visit branches to perform routine banking transactions such as cash deposits, withdrawals, check cashing and balance inquiries. In addition, it led to an almost tenfold reduction in branch bank transaction costs. For the study, the researcher selected respondents who use various innovative banking methods to manage their finances. The area selected for the study is in and around the city of Mumbai. This paper throws light on the new and existing innovation in the banking sector in the India with reference to services.

Keywords: Indian Banking Sector, Technology, innovation, Product and Service

INTRODUCTION

Indian banking has a long journey. It saw several changes. Since the 1990s, India has begun to place more emphasis on technology and innovation. Currently, the banking sector is well regulated and adequately capitalized. Technology is the implementation of new solutions that

meet new and existing requirements. This is achieved through new efficient products, services, processes, technologies and ideas that are readily available to markets, society and governments. Nowadays, technological innovation is considered one of the most important tools that can influence the banking and financial sector. Over the past few years, the Indian banking sector has seen many changes. Information technology helps the banking and finance industry innovate in product design and delivery. The latest technology offers banks the opportunity to build new systems that meet a wide range of customer needs. Financial innovations are related to technological changes and this completely changes the philosophy of banking and is further fueled by competition in the banking industry. Most banks have started to adopt an innovative approach to their services with the aim of creating added value for customers.

Now we have an electronic payment system and banknotes. Competition forces everyone to move forward and faster. The banking sector plays an important role in the economic

Development of the country. Banking innovations driven by technological development have brought several benefits to both banks and their customers. All banks have started working with various channels like ATM, Debit Cards, Credit Cards, Internet Banking, Mobile Banking, RTGS, and NEFT etc. Currently, the role of banking is being redefined from a mere financial intermediary to a provider of various services. Financial services operating under the same roof as the financial store. Intense competition between banks has changed the perception of the entire banking system.

Therefore, banks are looking for new ways not only to attract customers, but also to keep customers and gain a competitive advantage over competitors. The future of banking in India looks not only exciting but also transformative in terms of services. This article looks at the new technological changes and all the existing innovations in the banking sector. Following are the major innovation bought in the banking field:

1. **Debit card**: a debit card is a plastic card that can be used as an alternative payment method when shopping. It allows instant cash withdrawals and acts as an ATM card for cash withdrawals. Funds are withdrawn either directly from the bank account or from the card balance.
2. **Credit Card**: This is similar to a debit card, but slightly different. A credit card that gives its owner the right to buy goods and services based on the card, gives the user a credit limit from which money can be borrowed from the seller (merchant) for payment or a cash advance can be

ade to the user.

3. **Electronic clearance service (ECS)**: ECS is a retail payment system that can be used for similar receipts/payments, especially when each individual payment is repetitive in nature and relatively smaller. It is

willing to help companies and government departments to make/receive large payments instead of transferring money to private individuals.

4. **Magnetic Ink Character Recognition (MICR)**: MICR is a character recognition technology used mainly in banking to facilitate the processing and settlement of cheques and other documents. The MICR coding, called the MICR line, is located at the bottom of a cheques or other document and usually includes the document type identifier, bank code, bank account number, cheques number and amount, and some control characters. The technology allows MICR readersto scan and read data directlyinto the data acquisition device.

5. **Kiosks**: This is a small, self-contained physical structure that displays information or provides a service to the user. It can be unmanned or manned, and unmanned kiosks can be non-digital or digital. Information kiosks can now also offer services such as printing passport books, making loan offers, managing fixed payments, scanning documents and printing bank statements.

6. **ATM**: ATM stands for automatic teller machine. It is one of the most used electronic channels in the banking industry. Its operation is controlled by machines with which customers can make withdrawals, check balances and even deposit money into their accounts without going to the bank, and this is only possible through an ATM

7. **RTGS**: RTGS stands for Real Time Gross settlement systems; it is an electronic method of money transfer. Here, funds transfer money from one bank to another in real time and in gross basis. It is the fastest possible money transfer system through the bank channel.

8. **Plastic money**: Plastic money is also known as polymer money. This is a general term for all bank cards, including debit cards, credit cards and smart cards. In addition, it is one of the best alternatives to cash or currency because it is convenient to carry and handle and is the most convenient way to pay for goods and services.

9. **Any Branch Banking**: Any Branch Banking (ABB) is another feature that banks offer to their customers to access their bank accounts from any of the other network branches of the same bank. Customers can use their account from any branch of the same banking network.

10. **Digital Wallet**: This refers to an electronic device that allows a person to make electronic transactions. This can include buying things online from your computer or using your smartphone to buy something in a store.

Mobile Banking: The growth of mobile banking has enabled customers to access their accounts, transfer funds and pay bills using their smartphones. This made banking simpler and easier for customers and reduced the need for physical office visits.

11. **Artificial Intelligence (AI)**: Thanks to AI technology, banks can improve their customer service by providing personalized recommendations, detecting fraud and automating customer interactions with chatbots.

Advantages of Banking Innovations

1. **Increased Convenience:** The use of technology has made banking easier for customers. They can access their accounts, transfer money and pay bills using their smartphones, tablets or computers.

2. **Increased efficiency:** Automation and digitization have made banking more efficient, reduced the time required to process transactions and improved the accuracy of data processing.

3. **Cost reduction:** Thanks to technology, banks have been able to reduce their operating costs such as office operations, personnel costs and paper-based processes, resulting in cost savings for both banks and their customers.
4. **Enhanced Security**: The use of biometric authentication and encryption technologies has improved the security of banking transactions, reducing the risk of fraud and unauthorized access.
5. **Increased competition**: Fintech startups have broken the traditional banking model and created new competition in the sector. This has led to increased innovation and better services to customers.
6. **Personalization:** Thanks to technology, banks have been able to adapt their services to the specific needs of customers, which has led to a better customer experience and increased customer loyalty.

REVIEW OF THE LITERATURE

The following is a quick assessment of the literature on innovation in the Indian banking sector conducted by various researchers globally.

PARAMASIVAN C AND RAVICHANDIRAN G[1] (2022)

This Study focus on technology is one of the most important components of the banking industry that determine the quality and efficiency of banking services. Inclusive banking for the unbanked is only possible through innovative business practices. Based on this perspective, this study provides an outlet for understanding the impact of innovative entrepreneurship.

PANDEY AND RATHORE[2] (2018)

In the present study, the authors investigated the impact of digital payment system. Due to modernization and globalization, people have to adopt innovative
payment methods. The analysis of this study is based on secondary data that includes several sources such as government records and previous research literature. The impact and adoption of digital payments among people was ascertained after analyzing the collected data.

SINGH AND RANA[3] (2017)

In this study the author showed how demonetization helped adoption of digital wallets and digital payments in India. Using the Internet as a substitute for cash has become easier as the number of Internet users and smartphone users has increased significantly.
The author also highlighted how several digital wallet companies are competing to enter and grow in the Indian market as it was the biggest opportunity for them to start their business.
It has also been predicted that India will eventually transition to a cashless economy and as a result of digitization, people will definitely start using digital modes of payment.

Scope of the Study

The study is conducted to assess the inventions of the Indian banking sector in terms of its services. It would also be useful to understand different innovative forms of service. The purpose of this study is to find threats to innovative services.

Research Methodology

Research is based on primary data and secondary data.

Primary Data: The primary data of this study is collected from the general public through a structured questionnaire to know the impact of innovative services offered by banks in India. The study is conducted in Mumbai city, the sample size of the study is 54 respondents

Secondary data: Secondary data is collected from various sources like research papers, RBI bulletins and verified websites.

Research Objective

1. To study the innovations that have taken place in the banking sector in India.
2. To know the usages & benefits of innovative services
3. To examine the challenges faced by the banks in offering innovative services

Area of the Study

The study is undertaken in and around the city of Mumbai.

Research Approach

The questionnaire method of survey is used for collecting primary data from respondents belonging to Mumbai region. Researcher appealed all respondents to fill the questionnaire, by themselves. It contained structured questions which are very easy to understand

Sample Technique

Convenient probability sampling method in which 54 respondent from Mumbai city shared their knowledge about the study. They were asked to fill in the questionnaire voluntarily. The survey was conducted in January 2024.

Data Usage

The Analyzes and interpretations are based on raw data. However, both primary and secondary information as well as verbal and information received from the respondents are used to make conclusions and recommendations. The information collected from these sources was analyzed using various charts and graphs.

Data Analysis and Interpretation

Table 1; Demographic profile of the respondents

PARTICULARS	NO OF RESPONDENTS	PERCENTAGES
1. Gender		
Female	28	52%
Male	26	48%
Total	54	100%
2. Age		
Below 20 years	5	9.3%
20-35 years	21	38.9%
35-50 years	17	31.5%
Above 50 years	11	20.4%
Total	54	100%
3. Occupation		
Student	7	13%
Salaried	25	46.3%
Professional	10	18.5%
Self-employed	6	11.1%
Other	6	11.1%
Total	54	100%

The study shows that, 52% of the respondents were women & 48% of the respondents were men who uses innovative financial services. 9.3% of the respondents belongs to less-than 20 years of age, 38.9% of the respondents belongs to 20-35 years of age, 31.5% of the respondents belongs to 35-50 years of age and 20.4% of the respondents were in the age of above 50 years. 13% of the respondents were student, 11.1% of the respondents belongs to salaried, 18.5% of the respondents belongs to professional, 11.1% of the respondents were self-employed and 11.1% of the respondents belongs to other category i.e. retired or home makers.

Survey Questionnaire

Table 2: Duration of using innovative financial services

PARTICULARS	NO OF RESPONDENTS	PERCENTAGES
Less than 1 year	8	14.8%
1-3 years	22	40.7%
3-5 years	15	27.8%
More than 5 years	9	16.7%
Total	54	100%

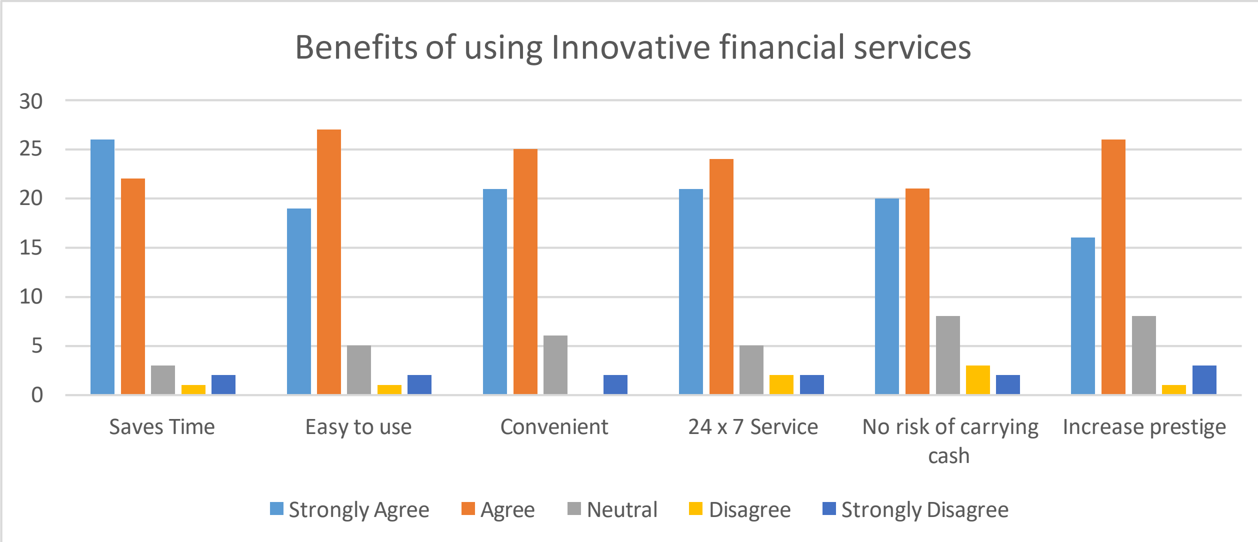
Table no. 2 shows that, 14.8% of the respondents were using innovative financial services from less than 1 year, 40.7% of the respondents were using innovative financial services from 1-3 years, 27.8% of the respondents were using it from 3-5 years and 16.7% of the respondents were using from more than 5 years. This shows that use of innovative financial services increase after COVID 19 majority of the customers started using online mode in last 3 years.

Table 3 Innovative financial services used by the customers.

PARTICULARS	NO OF RESPONDENTS	PERCENTAGES
ATM/ Debit card / Credit card	42	77.8%
Internet banking	24	44.4%
Mobile banking	29	53.7%
Google pay/ Paytm/ Phone pay /UPI	37	68.5%
RTGS/NEFT	20	37%

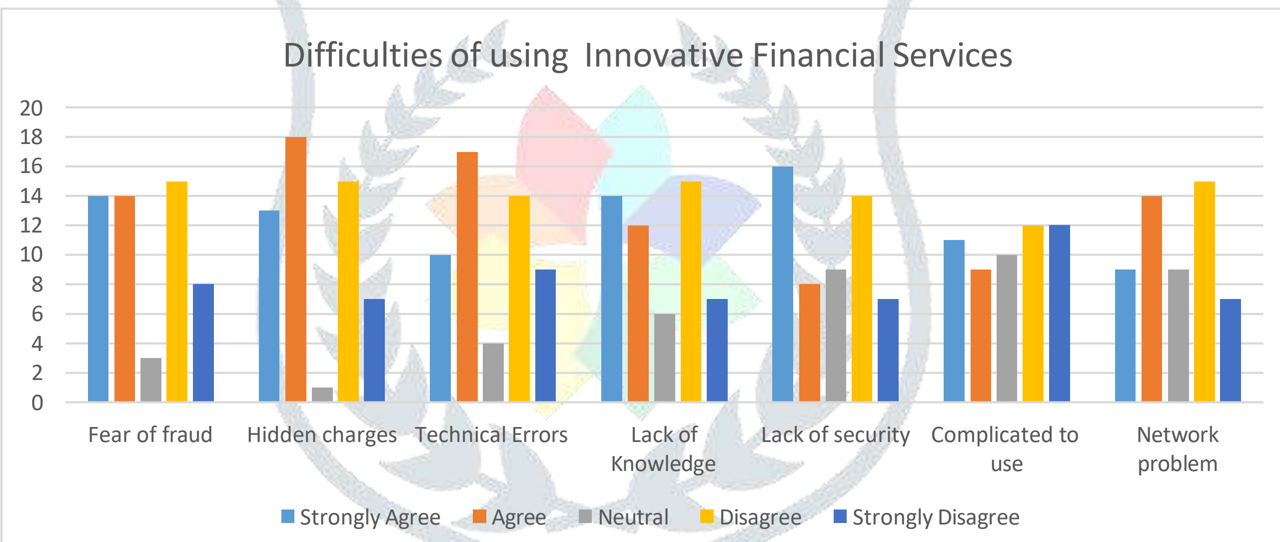
Table 3 shows that, 42 respondents were using ATM/ Debit card/ Credit card for online payment, 24 respondents were using Internet banking, 29 respondents were using Mobile banking, 37 respondents were using Google pay/ Paytm/ Phone pay/ UPI & 20 respondents were using RTGS/NEFT services . This shows that ATM/ Debit card/ Credit card & Google pay/ Paytm/ Phone pay/ UPI users are more compared to other methods of payment systems.

Table 4 Benefits of using Innovative financial services



Maximum numbers of people are being agreed with the advantage of using innovative financial services. Only the few people are differing with the benefits.

Table 5 Difficulties of using Innovative financial services



Maximum number of people being agree with the difficulties faced by the customers from digital payment.

Table 6 want to continue using Innovative financial services

PARTICULARS	NO OF RESPONDENTS	PERCENTAGES
Yes	41	75.9%
No	02	3.7%
Maybe	11	20.4%
Total	50	100

After looking at benefits and difficulties people still want to use innovative financial services. 75.9% of people want to use innovative financial services where 20.4% people still thinking about use of Innovative financial services.

Conclusion

In the modern world, people use the newest innovations and technologies in order to complete tasks much more quickly and intelligently. Sustainable and manageable innovations can boost industry value and income while reducing costs and resource requirements considerably, improving the environment in the process. The banking industry in India is expanding rapidly, and the number of its customers has also grown significantly. The rise of the Indian banking industry has been made possible by a number of factors, including new inventions, political support for the industry's growth, and value-added services offered by banks. The government's demonetization initiative encouraged citizens to use both the traditional banking system and online banking options. With modern technology, it is guaranteed that banking will provide clients with even more offers and services in the future, along with cutting-edge financial products. The innovative banking technology changes have brought about a transformation in Indian banking. Ensuring that every consumer is safeguarded against cybercrime and that the best cybernetic values are applied is the primary task in the digital age. Information technology is only a tool that helped redesign and reengineer the financial system, giving it the face that the banking sector has today.

References

- Paramasivan C & Ravichandiran G (2022**)** : A study on technology driven innovative practices in banking sector in Tiruchirappalli district by using garret ranking method https://businessmanagementeconomics.org/pdf/2023/1006.pdf
- Pandey & Rathore (2018) : Impact and importance of digital payment in India https://www.ijcrt.org/papers/IJCRTRIETS030.pdf
- Singh & Rana (2017) : Study of consumer perception of digital payment mode

https://www.icommercecentral.com/open-access/study-of-consumer-perception-of- digital-payment-mode.pdf

- B. Vijayalaxmi & D.Bhanumathi : A study on innovation banking sector in India https://www.jetir.org/view?paper=JETIR2110289
- Mrs. Riya Sharma (2022) : A Study on Innovation in Banking and its Impact on Customer Satisfaction https://www.ijrah.com/index.php/ijrah/article/view/38
- Tomy Thomas & Dr. K. Majini Jes Bella (2023) : A study on banking innovations through technology https://www.researchgate.net/publication/376580774_A_STUDY_ON_BANKING_INNOVATIONS_THROUGH_TECHNOLOGY
- https://www.academia.edu
- www.rbi.org.in
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Human Resource Accounting Practice in India

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ABSTRACT

Human resource is the most vital part of any organization, as it exists between financial and all other physical resources towards the achievement of organizational objectives and goals. It is highly complicated in the today's market find well knowledge, coached, and highly motivated people. Human resource is one of the most important back office operations of any organization or business. Their skills, creativity, ability human cannot be replaced by machines. We can lose efficiency in work if no qualitative people. At all levels and areas of the business or firm human efficiency is required with machine efficiency. Human can work without machine but machine can't. Hence, industry like advertising and direct marketing for instance human talent is more valuable among other else. Conventionally, financial assets are accounted in the books of accounts as per the general principles of accounting, but do not count the human asset. Although many efforts have been made by many thinkers in this arena, a proper/appropriate and fully validated model of performance based on accounting in the Indian context is not yet available. The past few decades have witnessed a global transition from manufacturing to service based economies. Though, Human Resource Accounting (HRA) was introduced way back in1980s, it started gaining popularity in India recently. This paper highlights the objectives and process of HRA in the Indian context. The basic objective of the paper is to study the Human Resources Accounting, to identify the issues and challenges, to examine these issues and challenges and lastly, to give suggestions based on the findings of the study.

Keywords: *Human resources accounting, human resource valuation, cost, model etc.*

1. INTRODUC TION:

Human resource accounting is a method used to quantify and report the value of human resources within an organization. It involves assessing the skills, knowledge, and abilities of employees and assigning a monetary value to these intangible assets. This approach helps organizations recognize and manage the contribution of their workforce to overall business performance. Human Resource Accounting (HRA) involves accounting for the company's management and employees as human capital that provides future benefits. In the HRA approach, expenditures related to human resources are reported as assets on the balance sheet as opposed to the traditional accounting approach which treats costs related to a company's human resources as expenses on the income statement that reduce profit. HRA suggests that in addition to the measures themselves, the process of measurement has relevance in decision-making involving organizations. Although the origins and early development of HRA occurred mostly in the United States, interest and contributions to growth in the field have been evident in a number of other countries. To ensure growth and development of any organisation, the efficiency of people must be augmented in the right perspective. Without human resources, the other resources cannot be operationally effective. The original health of the organization is indicated by the human behaviour variables, like group loyalty, skill, motivation and capacity for effective interaction, communication and decision making. Men, materials, machines, money and methods are the resources required for an organization. These resources are broadly classified into two categories, viz., animate and inanimate (human and physical) resources. Men, otherwise known as the human resources, are considered to be animate resources. Others, namely, materials, machines, money and methods are considered to be inanimate or physical resources.

Even though many efforts have been made by thinkers in this field, a suitable and fully validated model of performance based accounting in the Indian context is not available. The past few decades have witnessed a global transition from manufacturing to service based economies. Human resource accounting is of recent origin and is struggling for acceptance. Human resource is the vital input of any organization in this era of globalization, as it pulls on all other physical and financial assets/resources towards the achievement of organizational goals. Conveniently financial assets are accounted in the books of accounts as per the general principles of accounting except human asset. Though Human Resources Accounting (HRA) was introduced way back in the 1980s, it started gaining popularity in India recently. In order to estimate and project the worth of the human capital, it is necessary that some method of quantifying the worth of the knowledge, motivation, skill and contribution of the human elements as well as that of the organizational processes like recruitment, selection, training, etc which are used to build and support these human aspects is developed. All the processes of the organization are operated by human resource, hence valuation of this resource is very necessary and information about the valuation should be given to the investors, the management and others through financial statements. Human resource accounting is basically an information system that tells management what changes are occurring over time to the human resources of the business.

2. Literature Review:

Verma S. and Dewe P. (2008)[1] has made an attempt on valuing human resources in UK companies, data has been collected with a help of a questionnaire. The purpose of the study is to identify and describe perceptions and practices in valuing human resources in three types of UK Company's i.e. traditional companies, knowledge intensive companies and local authorities. The study has found that the majority of the respondents have agreed that the measurement of human resources is important to their company, a little or moderate

[1] Shra Shraddha Verma and Philip Dewe(2008), "Valuing human resources: perceptions and practices in UK company", Journal of Human Resource Costing and Accounting, Vol.12, No.2, pp 102-123.

progress is expected in measurement practices over the next few years. The main reasons for this are lack of organisational support, uncertainties as to what should be reported, lack of precision in current measurement practices and sensitivities around what should be reported.

Syed Abdulla Al Mamun (2009)[2] in his study said that the companies with higher profitability intended to disclose more human resource accounting information. For his study, he randomly selected 55 listed Public limited companies in Dhaka Stock Exchange (DSE). The companies are classified under two broad headings: Financial and Non-Financial sector. Financial sector includes banks and insurance companies. Non-Financial sector includes cement, fuel & power, textile, pharmaceuticals & chemical and others. He used Kolmogorov-Simirnov test to test the normality of the HRA variables.

Saini A.and Saini R. (2011)[3] in their study on Intangible Assets Accounting Practices in Infosys Technologies Ltd, examined the intangible assets accounting practices by computing four important measures namely; Economic Value Added, Market Value Added, Brand Value and Total Shareholders Return and the variations of these four important indicators during the period from 2002-03 to 2008-09.They calculated the Mean, Standard deviation, Coefficient of Variation for EVA,MVA,TSR and Brand Value and concluded that Infosys Technologies Ltd has a very good image in the capital market and such as its shares are quoted in the Stock Exchange at a very high price. The investors are willing to pay more for its shares due to its positive growth in Economic Value Added (EVA), Market Value Added (MVA), Total Shareholders Return (TSR) and Brand Value over the years. They also have informed some eminent companies are showing some interest in using such intangible parameters internally as a performance gauge for refining efficiency and improving disclosure practices.

Sharma N. And Shukla H. (2012)[4] attempted an evaluation of Human resource accounting disclosure practices in Indian Companies. Purposive sampling technique is used for the selection of sample units. Sample is taken from both Public and Private sector companies. The study has been carried out based on secondary data. Data have been collected from Annual reports of the selected companies; they have applied one sample test and concluded that the level of disclosure of HRA is not high but appreciable. The companies selected for the study have adopted more or less Human Resource Accounting in practice.

Sharma A. (2012)[5] has selected the sample size of 400 employees, and adopted Convenience random sampling method for the study. The employees include executives, managers, investors and shareholders. She

[2] Syed Abdulla Al Mamun (2009), "Human Resource Accounting (HRA) Disclosure of Bangladeshi Companies and its Association with Corporate Characteristics", Brac University Journal, Vol. VI .no.1, pp 35-43.
[3] Aruna Saini & Ramdhan Saini(Oct 2010- March 2011), " Intangible Assets Accounting Practices in Infosys Technologies Ltd: A Case Study", Journal of Accounting and Finance, Vol.25, No.1, pp.54-63.
[4] Dr.Nidhi Sharma and Hitendra Shukla (July 2012) "An evaluation of Human Resource accounting disclosure practices in Indian Companies", Indian Journal of Applied Research, Vol.1, Issue 10, pp11-13.

[5] Dr. Asha Sharma (Sep-Oct. 2012), "Impact of Human Resources Accounting on Organizational Performance", Journal of Business and Management, Vol 5, Issue 1, pp 25-31.

has collected both the primary and secondary data. The primary data has been collected directly from target respondents through structured questionnaire and the secondary from Annual report of different companies of different industry. For the study the independent variables are profit, growth, recruitment, efficiency, turnover, development, acquisition, evaluating performance; the dependent variable is Human resource valuation. The statistical tools applied include tables, percentages, mean, standard deviation, rank method for correlation, Chi-square test for analyzing the data. The study reveals that Human resource accounting provides quantitative information about the value of human asset, which helps the top management to take decisions regarding the adequacy of human resources.

Badiyani B. (2012)[6]64 in her study about human Resource Accounting history and she has focused on the popular models for assessing the value of human resources in the company. The author concludes that different companies are using various models according to their need and the nature of their human resources and now-a-days no economic growth can be made without giving importance to the human resources and without considering them as an asset.

2. OBJECTIVES OF THE STUDY:

The study based on the following objectives:

1. To study the Human Resources accounting practices in India
2. To identify the issues and challenges
3. To study the Importance of HRA in India

3. METHODOLOGY OF THE STUDY:

The study is based on secondary source of data collected through various books, articles and research papers published in various national, international journals, websites.

4. ORIGIN AND DEVELOPMENT OF THE CONCEPT OF HUMAN RESOURCE ACCOUNTING IN INDIA:

Human resource accounting emerged in the 1960s as a response to the increasing recognition of the importance of human capital in organizational success. The concept gained momentum in the 1970s and 1980s when researchers and practitioners sought ways to measure and manage the value of human resources.
Pioneers like Eric Flamholtz and William H. McGuire played crucial roles in developing the initial frameworks for human resource accounting. They proposed methods to quantify the cost and value of human

[6] Bhavin M.Badiyani (2012), "Human Resource Accounting: Brief History and Popular Models", Quest International Multidisciplinary Research Journal, Vol.1, pp 155-158

resources, aiming to include these in financial statements to provide a more comprehensive view of an organization's assets.

While the idea gained attention, widespread adoption faced challenges due to the subjective nature of valuing human capital and the lack of standardized methods. Despite not becoming a mainstream practice in financial reporting, discussions around human resource accounting persist, and some organizations continue to explore ways to incorporate the value of their workforce into strategic decision-making.

In India, HRA is still in the early stage of development. Even though HRA was introduced before 1980s, it started gaining popularity in India after it was adopted and popularized by Neyveli Lignite Corporation (NLC) and Bharat Heavy Electricals Limited (BHEL)[7] . Mahalingam (2001 p.19) notes "Pundits of today, asset that while the other forms of capital including material, equipment, tools and technology, only represent inert potentialities, it is human capital that converts this potential and energies for the creation of wealth."[8]. The Indian Companies Act does not provide any scope for furnishing any significant information about human resources in financial statements[9]. HRA has not been introduced so far in any legislation and thereby Human Resources are not yet recognized as 'assets' neither in the Balance sheet nor in the Annual Report of many of the Public or Private companies in India. Even in the new Companies Act 2013, there is no specific provision regarding the accounting and reporting requirement of Human Resource in Annual Report of Indian Companies. The Institute of Chartered Accountants of India (ICAI) has issued Accounting Standard (AS) on various aspects of accounting but it is not possible for ICAI to bring any exact accounting standard for measurement and reporting of human resource of an organisation. This was the greatest drawback relating to HRA. However there is a growing trend towards the measurement and reporting of human resources in Indian companies, it could be noticed during the past few years, sensing the benefits from valuing and reporting the human assets, many Public companies have voluntarily disclosed all relevant information related to human resource in their books. In recent years some Private companies also have started to disclose information about their work force along with the financial statement. HRA has become a separate section of Annual accounts of Indian companies like Steel Authority of India Ltd., Minerals & Metals Trading Corporation Ltd., Oil India Ltd., Hindustan Unilever Ltd., Hindustan Zinc Ltd., Cement Corporation of India, ONGC, Engineers India Ltd, National Thermal Power Corporation Ltd., Minerals and Metals Trading Corporation, Madras Refineries Ltd., Hindustan Petroleum Corporation Ltd., Indian Oil Corporation, Associated Cement Corporation , Infosys Technologies Ltd., Hindustan Copper Ltd., Rolta, Wipro, Satyam Computer etc[10]., have started disclosing some valuable information regarding human resources in their financial statements. Thus it

[7] Srinivasan.R, Mohan.S, Elangovan.R (2011), "Human Resource Management Text and cases", Regal Publication, Chapter 33- pp.569.

[8] Maria L.Bullen- "Human resource accounting and international developments: implications for measurement of human capital"- Journal of International Business and Cultural Studies- pp-10.

[9] Narayanamurthy.M-"The role of human resource accounting in human resource management".

[10] Narayanamurthy.M-"The role of human resource accounting in human resource management".

is observed that Human Resource Accounting Disclosure (HRAD) in Annual reports of Indian companies provides useful information to the management, shareholders, Public and even government. Thus in the contemporary scenario, there is an urge to know about human resource accounting, before following human resource accounting each and every company should know about HRA. The present study is an attempt to identify the nature and characteristics of HRA, to analyse the ability of users to make wise decisions with the help of HRA, to examine the perception of management and employees on HRA, to determine the contribution of HRA on the financial statements of Indian companies and to analyse the profitability with human resource accounting disclosures in Indian Companies.

5. IMPORTANCE OF HUMAN RESOURCE ACCOUNTING:

The importance of human resource accounting lies in several key aspects:

1. **Strategic Decision-Making:** By assigning a monetary value to human resources, organizations can make more informed strategic decisions regarding recruitment, training, and workforce planning. It helps in aligning human capital strategies with overall business goals.

2. **Resource Allocation:** Human resource accounting aids in effective allocation of resources by providing insights into the contribution of employees to the organization's value. This information assists in optimizing investments in training, development, and employee retention.

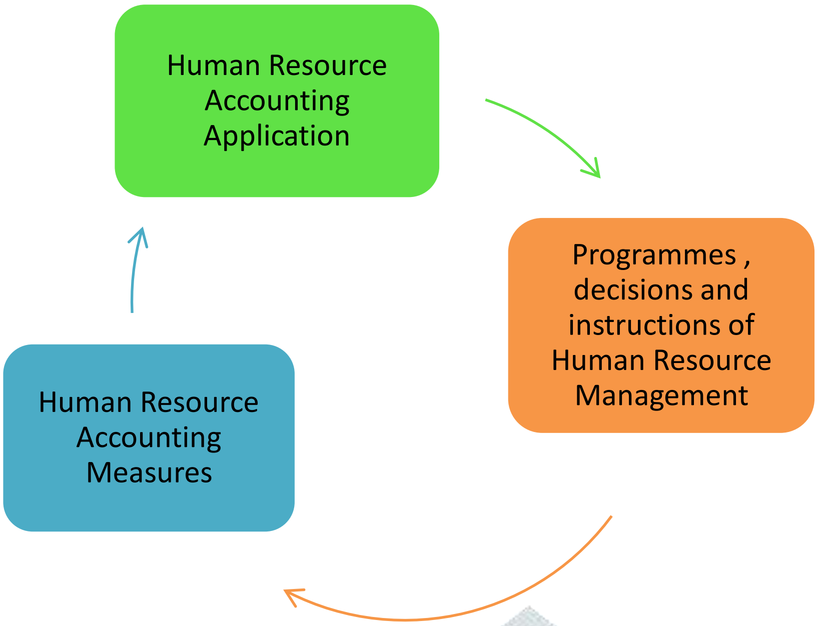
3**. Investor and Stakeholder Communication:** Including human resource value in financial reports enhances transparency and communication with investors and stakeholders. It provides a more comprehensive picture of an organization's assets and its ability to create value.

4. **Performance Evaluation:** Human resource accounting facilitates the evaluation of the effectiveness of human capital management practices. It enables organizations to measure the return on investment in their workforce and identify areas for improvement.

5. **Risk Management:** Assessing the value of human resources allows organizations to identify and manage risks related to talent shortages, skill gaps, and employee turnover. This information is valuable for developing strategies to mitigate these risks.

6. **Compliance and Reporting:** While not yet a widespread practice, human resource accounting can contribute to meeting regulatory requirements and accounting standards. It ensures that the value of human capital is considered in financial reporting, providing a more comprehensive representation of an organization's assets.

Figure 1 : Role of Human Resource Accounting



As you can see in Figure 1 for three human resources accounting determine three main tasks of for human resources specialists, accountants, Provides framework to facilitate decision making about human force, and compute Information required for cost people value as assets to the organization and cause for the motivation of line management with considering the perspective of human resource management in decisions making about the organization' people.

The role of human resource accounting encompasses various functions within an organization:

1. **Financial Planning:** It assists in incorporating human resource costs and values into financial plans, aiding organizations in developing realistic budgets and resource allocation strategies.

2. **Investment Decision-Making:** Human resource accounting provides data to support investment decisions related to recruitment, training, and development. This helps in optimizing the return on investment in human capital.

3. **Performance Evaluation:** Human resource accounting facilitates the evaluation of the performance of employees and human resource management practices. It enables organizations to measure the effectiveness of their workforce strategies.

4. **Strategic Planning:** By quantifying the value of human capital, organizations can align human resource strategies with overall business objectives. It plays a role in long-term strategic planning by providing insights into the contribution of employees to organizational success.

5. **Risk Management:** Human resource accounting contributes to identifying and managing risks associated with human capital, such as turnover, skill shortages, and succession planning. This information helps in developing strategies to mitigate these risks.

6. **Communication with Stakeholders:** It enhances communication with stakeholders, including investors, by providing a more comprehensive view of an organization's assets. This transparency can positively impact perceptions and decisions related to the organization.

7. **Legal and Regulatory Compliance:** While not yet a standard practice, incorporating human resource values in financial reporting can contribute to compliance with evolving accounting standards and regulatory requirements.

In essence, the role of human resource accounting is to integrate the value of human capital into organizational decision-making processes, ensuring that human resources are recognized as a critical component of an organization's overall success and sustainability.

6. MAJOR ISSUES OF HUMAN RESOURCE ACCOUNTING:

Several major issues are associated with the implementation of human resource accounting:

1**. Subjectivity and Valuation Methods:** Assigning a monetary value to human capital involves subjective judgments and various valuation methods. Determining the value of skills, knowledge, and experience is challenging, leading to potential inconsistencies and biases.

2. **Standardization Challenges:** Lack of standardized methods for human resource accounting hinders comparability across organizations. The absence of universally accepted practices makes it difficult to establish a consistent framework for valuing human capital.

3. **Intangibility of Human Capital:** Human resources are intangible assets, making their valuation complex. Unlike tangible assets, such as machinery or buildings, the value of skills and expertise is not easily quantifiable, leading to debates on the reliability of valuation models.

4. **Resistance to Change:** Organizations may face resistance from stakeholders, including employees and investors, when attempting to implement human resource accounting. Skepticism about the accuracy of valuations and concerns about the impact on employee morale can impede adoption.

5. **Dynamic Nature of Human Capital:** Human resources are dynamic and constantly evolving. The skills and knowledge of employees change over time, making it challenging to capture the true value of these assets accurately.

6. **Ethical Considerations:** Putting a monetary value on employees may raise ethical concerns. Some argue that reducing individuals to financial figures may oversimplify their contributions and ignore the intrinsic value of human beings beyond economic terms.

7. **Complexity in Measurement:** Measuring the impact of human capital on organizational performance involves various factors, and isolating the specific contribution of individuals can be intricate. Linking human resource investments directly to financial outcomes can be challenging.

8. **Limited Recognition in Financial Reporting:** Human resource accounting is not widely accepted in financial reporting. The accounting standards and regulations do not mandate the inclusion of human resource values in financial statements, limiting its integration into mainstream accounting practices.

Addressing these issues requires careful consideration, collaboration, and ongoing efforts to develop standardized approaches that can capture the true value of human capital in a meaningful and reliable way.

7. CHALLENGES OF HUMAN RESOURCE ACCOUNTING:

The challenges associated with human resource accounting include:

1. **Intangibility of Human Capital:** The intangible nature of skills, knowledge, and employee expertise makes it difficult to quantify and assign a monetary value to human capital accurately. This intangibility challenges the reliability and consistency of valuation methods.

2. **Subjectivity in Valuation:** Human resource accounting involves subjective judgments in determining the value of skills and contributions. Different individuals or organizations may use varying valuation methods, leading to potential biases and inconsistencies.

3. **Lack of Standardization:** The absence of standardized methods for human resource accounting poses challenges for consistent and comparable valuation across organizations. The diversity in industry practices makes it challenging to establish a universal framework.

4. **Dynamic Nature of Human Capital:** The skills and knowledge of employees evolve over time, reflecting the dynamic nature of human capital. This dynamic aspect makes it challenging to capture and measure the changing value of skills and expertise accurately.

5. **Resistance from Stakeholders:** Employees, investors, and other stakeholders may resist the implementation of human resource accounting. Concerns about the impact on employee morale, skepticism about the accuracy of valuations, and ethical considerations are common sources of resistance.

6. **Complexity in Measurement:** Linking human resource investments directly to financial outcomes is complex. The multifaceted nature of human capital's impact on organizational performance makes it challenging to isolate and measure specific contributions accurately.

7. **Inadequate Recognition in Financial Reporting:** Existing accounting standards and regulations do not mandate the inclusion of human resource values in financial statements. This lack of recognition in financial reporting limits the integration of human resource accounting into mainstream accounting practices.

8. **Limited Transparency:** The complexity of human resource accounting models may result in a lack of transparency. Stakeholders may find it challenging to understand and trust the valuation methodologies, reducing the effectiveness of communication about the value of human capital.

9. **Ethical Concerns:** Assigning monetary values to individuals may raise ethical concerns. Critics argue that reducing human beings to financial figures oversimplifies their contributions and neglects the broader aspects of human dignity and worth.

Addressing these challenges requires careful consideration, industry collaboration, and the development of standardized, transparent, and ethically sound approaches to human resource accounting.

8. CONCLUSION:

HR Accounting is very much needed to provide effective & efficient management within the organization. If there is any change in the structure of manpower, it is HRA which provides information on it to the management. HRA provides qualitative information & also assess the cost incurred in personnel. It gives a platform to the management by providing factors for better decision-making for future investment. The return on Investment on human capital is best evaluated through HRA. HRA communicates to the organization & public about the worth of human resources & also its proper allocation within the organization. HR helps the management in developing principles by classifying the financial consequences of the various practices. The basic reason for developing HR Accounting is to overcome problems arising from the valuation of intangible assets. We know that many organizations do not provide sufficient information to invert investors in traditional balance sheet & HRA is a device to overcome this difficulty. HRA provides an insight on employees as assets. HRA provides a profile to the enterprise & thus improves its image. HRA probes to retain intelligent human capital. The very importance of HRA in developing countries like India can be best judged through government report which shows that in India; approximately 73 per cent of National Income is utilized to compensate employees. In addition to wages and salaries, organizations often make other sizeable investments in their human resources. Despite all this, the concept of HRA in India is a recent phenomenon & struggling for its acceptance. In India, HRA has not been introduced so far as a system. The Indian companies act does not provide any scope for furnishing significant information in this regard in the financial statement. To conclude, the HR Accounting system tries to evaluate the worth of human resources of an organization in a systematic manner & record them in the financial statement to communicate their worth with changes in time & result obtained from their utilization to the users of the financial statement. Hence, looking at the importance of HRA, now it is required under law & Government guidelines, for undertakings, to maintain a separate item in their balance sheet about such HR activities undertaken by them. Hopefully in future the HR practioners like us & the budding leaders of future enterprises would work together to use HRA in every organization, which has helped to a great extent in differentiating humans from mere operators of machines to intellectual capital. The journey has thus begun as HRA is in its infancy & there are miles to go.

REFERENCES :

- Bhat,V.P. (2000, January 13). India: Towards transparency and uniformity. Business line.Chennai, 1.
- Boedker, C., Mouristan, J. & Guthrie, J. (2008). Enhanced business reporting: international trends and possible policy directions. Journal of Human Resource Costing & Accounting, 12 (1), 14.
- Bullen, M.L. (2007). Human resource accounting: A useful tool for measurement and management in organizations. Leadership and Organizational Management Journal. 85-103.
- Dobija, M.(1998). How to place human resources into the balance sheet. Journal of International Business and Cultural Studies, Human Resource Accounting, Page 14
- Flamholtz, E.G, Kannan-Narasimhan, R., & Bullen, M.L. (2004). Human Resource Accounting today: Contributions, controversies and conclusions. Journal of Human Resource Costing & Accounting, 8 (2), 23-37.
- Guru Prasad Puttu (2009). Human Resource Accounting Issues and Challenges, ICIMP
- Hedlin, P. &Adolphson, J. (2000). Strategies for change in financial reports. Journal of Human Resource Costing and Accounting, 5 (1), 27-35.
- Jones, G. (2000). Viewpoint: Accounting for people. Benefits Canada, 24, (1), 9.

- Kamal Gosh Ray (2010).Mergers and Acquisitions. prentice -Hall of India private limited, New Delhi:203-210

- Meeting, D.T., Luecke, R.W. & Garceau,L. (2001). Future cash flow measurements. Journal of Accountancy, 192(4), 57-67.

- Moore, R. (2007). Measuring how 'human capital' appreciates in value over time. Plant Engineering 61 (4), 29.

- Mukesh C. & Shivani G. (2009). Human Resource Accounting—concepts & practices in India. The management accountant. Vol. 44

- P.Subha Rao (2007: Second edition). Essentials of Human Resource Management and Industrial Relations. Himalaya Publications, New Delhi.

- Palanivelu VR (2007).Accounting for management. Lakshmi publishing (p) Limited. New Delhi:399-403

- Patra R., Khatik, S.K., & Kolhe, M. (2003). Human resource accounting policies and practices: A case study of Bharat Heavy Electricals Limited, Phopal, India.

- Prabhakar Rao D. (1993) "Human Asset Accounting: An Evaluation of the Indian practices" (title of the article) ASCI Journal of Management. Vol. XXII

- Ramakantha Parta, S.K. Karthik (2003). Human Resource Accounting Policies: A case study of Bharat Heavy Electricals Limited, Bhopal, India.

- Subbarao, A.V., & Zehgal, D. (1997). Human resources information and disclosure in annual reports : An international comparison. Journal of Human Resource Costing and Accounting, 2 (2), 53-73.

- Tang, T. (2005). Human Resource Replacement Cost Measures and Usefulness. Cost engineering, 47(8), 70.

- Telia AB. (1996).The Statement of Human Resources. Journal of Human Resource Costing and Accounting, 1 (1), 99-116.

- Tiwari, Amitabh Deo, Kodwani R. (2006). Human Resource Accounting: A new dimension. Canadian Accounting Association (CAAA), Annual Conference.

- Toulson, P.K. & Dewe, P.(2004). HR Accounting as a Measurement Tool. Human Resource Management Journal, 14 (2), 75-90.

- Turner, G. (1996). Human resource accounting – Whim or wisdom. Journal of Human Resource Costing and Accounting, 1 (1), 63-73.

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A Study on Green Accounting Practices by BPCL and ONGC: An Overview

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ABSTRACT

Green accounting in India refers to incorporating environmental factors into traditional economic accounting practices. It involves assessing and integrating the environmental costs and benefits of economic activities. India has been working towards implementing green accounting to ensure sustainable development, considering aspects like natural resource depletion, pollution, and ecosystem services. The aim is to promote environmentally responsible economic decisions and balance economic growth with environmental conservation. In spite of the way that Indian corporate agree to the standards and rules regarding natural protection, till now no conspicuous courses of action are encircled and definite at the Public, State or even at the association level, for ensuring the level of consistence to environmental principles. This study focuses primarily on the process of protecting the environment's natural resources and to discover the practices of the corporate sector in the context of green accounting. It is a measure of sustainable income level that will be secured without decreasing the stock of natural assets. The entire world is facing the problem of polluted environment and depletion of natural resources.

Keywords: *Green Accounting, Green Practices, Sustainable Development etc.*

1. Introduction

The term Green Accounting was used without precedent for the year 1980's by Professor Peter Wood. It is an enhanced representing the climate &it's prosperity. It is a completely dynamic research and practice. It is before long going to be presented all around by and by, due to its importance. notwithstanding get ready benefit and misfortune or its income and costs natural or green bookkeeping is a developing field that concentrations or accommodates bookkeeping the ecological effect .The presentation of green bookkeeping uncovers the confirmation that an undertaking has towards the climate. It manages 3 P's namely PEOPLE, PROBABILITY & the PLANET. Green Accounting is a soon become very popular due to its importance. Instead of preparing profit and loss or its revenue and expenditure green accounting is mainly focused on accounting that impact on environment.

2. Review of Literature:

- **Burritt (2002)** stated that now a day's companies recognize the importance of the environmental accounting and it can be ignored from the part of the accounts of the firm and he more emphasized that consider the financial outcomes of the social as well as the environmental accounting along with the existing traditional accounting to reflect the true and fair view of the business.

- **Goswami M. (2014)** opined that environment is emerged one of the bottlenecks to achieve the economic growth and he concluded that, even though the companies project the environmental issues information but they are not projected of the financial aspects of the firm.

- **Rankin et al (2011),** opined that process of management, financial aspects and the system of nation were strongly correlated for developing the frame work of environmental reporting. Hence, he focused on the environmental reporting with aggregated results of the national, management and the financial.

- **Riccaboni, A. and Leone, E. L. (2010)** stated that social reporting is not only meant for the maintaining the profiles of environmental and social but it must be a part of planning process, policy decisions etc.

- **Schaltegger – Burritt (2010)** stated that now a days companies recognize the importance of the environmental accounting and it can be ignored from the part of the accounts of the firm and he more emphasized that consider the financial outcomes of the social as well as the environmental accounting along with the existing traditional accounting to reflect the true and fair view of the business.

- **Parker (2005)** stated that there were several models were developed towards the consideration of the social aspects. These models are useful to review the performance of the social accounting and overcome the challenges to adopt the new assessment system.

3. Objectives of the Study:

The Study is based on following objectives:

1. To Study the concept of Green Accounting.
2. To understand the need and importance and benefits of Green Accounting practices for Indian Companies.
3. To make an evaluation of Green accounting practices by BPCL and ONGC.

4. Methodology of the Study:

This study is mainly conceptual in nature. The present study is based on secondary data; information has been derived from various books, journals and websites.

5. Need and Importance of Green Accounting :

The need and importance of green accounting stem from the growing recognition that traditional economic measures often neglect environmental considerations. Here are key points:

1. **Environmental Sustainability:** Green accounting addresses the impact of economic activities on the environment, helping to ensure long-term sustainability by accounting for natural resources, pollution, and ecosystem services.

2. **Policy Formulation:** It provides policymakers with accurate information on the environmental costs and benefits of economic decisions, enabling the formulation of policies that promote sustainable development.

3. **Resource Management:** Green accounting assists in better management of natural resources by quantifying their value and encouraging efficient use, reducing the risk of resource depletion.

4. **Corporate Responsibility:** It supports businesses in adopting environmentally responsible practices, enhancing corporate social responsibility by integrating ecological factors into financial decision-making.

5. **Risk Mitigation:** By accounting for environmental risks, green accounting helps in identifying potential threats to businesses and economies, allowing for proactive measures to mitigate these risks.

6. **Public Awareness:** It raises public awareness about the environmental consequences of economic activities, fostering a sense of responsibility and encouraging environmentally conscious consumer behavior.

7. **International Standards:** Green accounting aligns with international sustainability standards, facilitating comparisons between countries and promoting global cooperation in addressing environmental challenges.

8. **Investor Confidence:** Investors increasingly consider environmental factors when making investment decisions. Green accounting provides information that enhances investor confidence in environmentally sustainable businesses.

9. **Economic Decision-Making:** It guides economic decision-makers by providing a more comprehensive understanding of the true costs and benefits associated with different choices, promoting informed and responsible decision-making.

10. **Long-Term Planning:** It supports long-term planning by considering the environmental impacts of economic activities, contributing to the development of strategies that ensure the well-being of future generations.

In summary, green accounting is essential for achieving a balance between economic development and environmental conservation, ensuring that economic decisions align with the principles of sustainability.

6. **Benefits of Green Accounting :**

The benefits of green accounting are diverse and encompass economic, environmental, and social dimensions. Here are key advantages:

- **Sustainable Development:** Green accounting promotes sustainable development by integrating environmental considerations into economic decision-making, ensuring that development meets the needs of the present without compromising future generations.
- **Resource Conservation:** It encourages the efficient use and conservation of natural resources by assigning economic values to environmental assets, reducing the risk of over-exploitation and depletion.
- **Policy Effectiveness:** Governments can formulate more effective environmental policies based on accurate information about the environmental costs and benefits of various activities, leading to better regulatory frameworks.
- **Improved Decision-Making:** Green accounting provides decision-makers with a more comprehensive understanding of the true costs associated with economic activities, leading to better-informed and more responsible decision-making.
- **Business Competitiveness:** Companies adopting green accounting practices enhance their competitiveness by meeting the growing demand for environmentally sustainable products and services, attracting environmentally conscious consumers and investors.
- **Risk Management:** Businesses can identify and manage environmental risks more effectively, reducing the potential negative impacts on operations and financial performance.
- **Investor Confidence:** Green accounting contributes to transparency and accountability, increasing investor confidence in companies that prioritize environmental sustainability, leading to better access to capital.
- **Cost Savings:** Through efficient resource use and waste reduction, green accounting can result in cost savings for businesses, making operations more economically viable in the long run.
- **Ecosystem Services Valuation:** By valuing ecosystem services, green accounting highlights the importance of biodiversity and healthy ecosystems, encouraging policies and practices that preserve these services.

- **Public Awareness:** It raises public awareness about the environmental impact of economic activities, fostering a sense of responsibility and encouraging individuals to make environmentally conscious choices.
- **Global Cooperation:** Green accounting facilitates international comparisons and cooperation by providing a standardized framework for assessing environmental performance, contributing to global efforts to address environmental challenges.

In summary, green accounting offers a holistic approach to economic management that considers environmental, social, and economic factors, ultimately contributing to a more sustainable and resilient global economy.

7. Green Accounting Practices by BPCL:

Bharat Petroleum Corporation Limited (BPCL) has implemented green accounting practices to enhance environmental sustainability. These measures may include tracking and reporting carbon emissions, implementing energy-efficient technologies, and promoting renewable energy initiatives. Green accounting aims to integrate environmental costs and benefits into financial decision-making, reflecting a commitment to sustainable practices. For specific details, it's advisable to refer to BPCL's official reports or statements on sustainability and environmental initiatives. In terms of health, safety, the environment, and security, BPCL is committed to achieving the highest possible levels of sustainable management. To assist them with accomplishing their desires of maintainable living, they carried out a Health, Security, Security and Climate The executive's framework in 2007, which was additionally fortified in the year 2011. Bharat Petroleum has recently put in place a Corporate Safety Management System in the year 2018, which is a systematic and structured approach to manage the Occupational Health & Safety Risk associated with their operations to As Low as Reasonably Practicable Level (ALARP Level) in accordance with other business goals, values and policy.

7.1.BPCL Strategic Safety Objectives:

1. Committed to Achieve Goal Zero.

2. No harm to People, Asset and Environment.

3. Design, Operate and Maintain Assets to minimise risks to a level which is As Low As Reasonably Practicable (ALARP).

7.2 Climate Change:

The oil and gas region is helpless against natural change with its key structure arranged in the beach front regions. Through TERI, in a joint effort with MOPNG, MOEF, and CC, and other industry individuals, BPCL took part in a concentrate on environmental change for the Oil and Gas area. The survey has given thoughts on short-and long stretch movement to be embraced by the business people and gave a way forward to deal with the hardships. The survey was finished to fathom and get to natural change threats to the groundwork of Oil and Gas Region in India, challenges due to emerging Public and Worldwide climate procedures and to cultivate a powerful design due to ecological change risks.

7.3 Energy Conservation Initiatives:

Mumbai and Kochi Processing plant both are affirmed for Energy The executives Framework, ISO 50001: 2011. Both refineries were able to achieve robust energy performance in FY 2018–19 thanks to ongoing monitoring of their energy performance and staying up to date on the most recent technologies for conserving energy. KR likewise centered around streamlining energy utilization in the recently appointed units post adjustment of IREP units. Under the National Mission for Enhanced Energy Efficiency (NMEEE), the Bureau of Energy Efficiency has a flagship program called PAT (Perform Achieve and Trade). Both the Treatment facilities have accomplished the PAT objective for FY 2018-19.This program empowers customers that surpass their energy saving focuses to exchange their gave Energy Saving Authentications (ESCerts) at the Power Trades (source site BPCL).

8. Green Accounting Practices of ONGC:

ONGC has consistently guaranteed that it safeguards and really focuses on the climate. It exhibits its proactive natural administration through its coordinated Wellbeing, Security and Climate (HSE) Strategy planned in 1983. It invests in cutting-edge technologies, manages effluent and solid waste, monitors and reports the environment, works to conserve biodiversity, and improves and maintains environmental management systems in an ongoing effort to reduce the environmental impact of its business activities like exploration, drilling, and production. It regularly reviews its QHSE policy and maps risks and has a robust internal audit and management review process for its management system. Some prominent HSE rehearses are customary QHSE inward review, Fire security measures, ordinary fire and earth tremor mock drill, wellbeing mindfulness program, Material Security Information Sheet (MSDS), Individual Defensive Gear, execution of Climate The executives Frameworks (EMS), Word related Wellbeing (OHS), Close to Miss Announcing, Administration, Chance administration and Consistence revealing. ONGC's vision and mission integrated health, safety, and the environment; each of the three viewpoints are consolidated in new coordinated HSE strategy.

8.1 Environmental Clearances and Regulatory Compliance:

Ecological Freedom is a legal prerequisite for the commencement of the any new task or change in the current venture. Studies such as an Environmental Impact Assessment, a Disaster Management Plan, and a Risk Analysis, among others, are carried out as part of the clearance procedure. Skillful outsider offices/advisors are employed for doing these examinations. ONGC has additionally evolved investigations for select activities. The natural leeway application alongside these review reports are submitted to MOEF which understudy awards ecological freedom alongside expectations to be checked. These expectations are scrupulously agreed and consistence reports are submitted half yearly before first June and 1stDecember consistently to MOEF.

8.2 Environmental Management System:

Ecological protection is viewed as one of the need business capabilities. To accomplish and support the best ecological administration practice, natural administration framework is set up which depends on ISO 14001. All installations and facilities now have an integrated HSE management system (QHSE) based on ISO 14001, ISO 9001, and OSHAS 18001. Inner group of around 300 ecological lead examiners and the center group of QHSE contributed in accomplishing this objective. EMS depends on prudent standards and deals with every one of the huge ecological properties of the association. Implementing and maintaining QHSE requires exceeding compliance levels. Accomplishing QHSE affirmation for all establishments was the first ever in quite a while by any industry in any area (source site ONGC).

9. Conclusion:

The organization must reveal its data with respect to Green Accounting as a piece of its yearly report. There must be a greater amount of severe natural standards and enactment made by the legislature. Every single worker in the association must be made aware of the significance of Green accounting and Ecology. Practices of environmental accounting in India have not been widespread and there is no clarity and transparency regarding policy frame work for national, state and even at company reporting level due to increase in the awareness of stakeholders and other practices, it is to be a segment of financial reporting in India. The majority of the companies publish the environmental initiative in their annual reports, but such a practice is only nominal does not disclose the information regarding financial implications and the policy of costs of environment, due to its inability to calculate the environmental information with the existing accounting system at micro level, effort should be made to present internal costs of environment to a firm which have a considerable impact on the financial results of the business along with possible integration with existing accounting information. Finally, it can be concluded that the only 1/5th of performance of environment was explained by the various green accounting parameters, it means there was other parameters also influence the performance of the environment, but amongst the parameters of the green accounting corporate sustainability was more favorable parameter to measure the environmental performance.

References:

- Atkinson, G., & Hamilton, K. (1996). Accounting for progress: Indicators for sustainable development. Environment: Science and Policy for Sustainable Development, 38(7), 16-44.

- Abdel-Rahim, H. Y. M & Abdel-Rahim, Y. M. (2010). Green Accounting – a proposition for EA/ER conceptual implementation methodology, Journal of Sustainability and Green Business, www.scirp.org
- Bartelmus, P. (1996). Environmental accounting for sustainable development. Pricing the planet: Economic analysis for sustainable development, 174-96.
- Beets, S.D., &Souther, C.C. (1999). Corporate environmental reports: The need for standards and an environmental assurance service. Accounting Horizons, 13(2), 129-145.
- Burritt, R.L. (2002). Environmental reporting in Australia: Current practices and issues for the future. Business strategy and the environment, 11(6), 391-406.
- Companies (Amendment) Act 2017, Ministry of Corporate Affairs, Government of India, www.mca.gov.in
- Chauhan, M. (2005). Concept of environmental accounting and practice in India. Chartered Accountant-New Delhi, 54(5), 720.
- Farouk, S., Cherian, J., & Jacob, J. (2012). Green accounting and management for sustainable manufacturing in developing countries. International Journal of Business and Management, 7(20), 36.
- Hamid, M.A.R.A. (2002). Theoretical framework for environmental accounting-application on the Egyptian Petroleum Sector.
- Negash, M. (2012). IFRS and environmental accounting. Management Research Review, 35(7), 577-601.
- Palmer, K., Oates, W.E., &Portney, P.R. (1995). Tightening environmental standards: The benefit-cost or the no-cost paradigm?. Journal of economic perspectives, 9(4), 119-132.
- Qureshi, N.Z., Kulshrestha, D., & Tiwari, S.B. (2012). Environmental accounting and reporting: An essential component of business strategy. Asian Journal of Research in Banking and Finance, 2(4), 85-95.
- Malik, P & Mittal, A. (2015). A Study of Green Accounting Practices in India, International Journal of Commerce, Business and Management, 4 (6).
- Minimol, M. C. & Makesh, K.G. (2014). Green Accounting and Reporting Practices among Indian Corporates, Asia Pacific Journal of Research, I (XIV), February.
- Parameswaran,V. (2011). Environmental accounting: Indian Perspective, International Seminar on Green Economy and Official Statistics, 6-8, July.
- Pramanik, A. K. (2002). Environmental Accounting and Reporting, Soujanya Books, Delhi.
- Qureshi, N. Z. (2012). Environmental Accounting and Reporting: An Essential Component of Business Strategy, Asian Journal of Research in Banking and Finance, 2 (4), April.
- Rana, N. &Majumdar, U. (2017). Sustainability and CSR Trends for India in 2017, http://blogs.economictimes.indiatimes.com
- Roy, M. S. (2017). Green Accounting for Sustainable Development: Case Study of Industry Sector in West Bengal, The Journal of Industrial Statistics, 6 (1).
- Solanki, A. (2016). A Study about Green Accounting: its importance and Concept, Abhinav National Monthly Referred Journal of Research in Commerce & Management, 5 (6).

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A study on Marketing Strategies used for Bamboo Product in Palghar District of Maharashtra.

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ABSTRACT

This research paper aims to assess the Marketing strategies used by Bamboo industry for marketing of various bamboo based product in Palghar District. Marketing strategies are considered very important for every business organization , so it must be properly planned and implemented for the success and growth of product & business. The study was done as a part of descriptive research. Convenience sampling technique was employed for selecting the sample. The primary data was collected by means of questionnaire. The analysis leads over the conclusion that the craftsmen's have adopted old and traditional marketing strategies – Word of mouth & Relationship marketing strategy for marketing their bamboo product. The research also suggested some innovative and modern marketing strategies to be adopted by the craftsmen's for marketing of bamboo product.

Keywords : Marketing Strategies, Craftmans., Bamboo Based Product,

INTRODUCTION

In Palghar district, majority of bamboo based industry is small in nature, family oriented or part-time and thrive on traditional manual work procedures. The procedures are relatively labour intensive and performed with traditional devices that are of low technology and production capacities. In addition, the product designs fail to receive sufficient attention. The local designers are trying to meet local requirement. Most of the local manufacturers rely on existing ethnic designs or copying ideas from other sources for the development and marketing of product. Although bamboo has numerous uses, most of the woven commodities are traditional and low-value products, but are demanded in low quantity due to wide utilization of plastic and metal products. But now people have become more conscious about environmental friendly product there may be demand for the bamboo product if appropriate marketing strategy is adopted. Therefore the present study will make an attempt to know the different marketing strategies used for bamboo product.

Marketing strategy definition

Marketing strategy is used by different companies to collaborate with their consumers. It is also employed to aware the customers about the features, specifications and benefits of company's products. It is basically focused on encouraging target population to buy those specific products and services. The marketing strategies might be totally innovative or they can be previously tried or tested strategies. Effective marketing strategies help to get ahead in the competition.

Points to be consider for marketing

There are different types of marketing strategies available. You have to pick one as per your business requirement. Before choosing the right marketing strategy for your business, consider following points.

1.**Define the target population** : Defining target population is main and necessary step in choosing marketing strategy. It gives the proper demographics which help in selecting the most appropriate marketing plan for our business.

2. **Test your audience** : Create a hypothetical process of buying to test audience. Once we know the buying behavior of our target audience, we can select more appropriate marketing strategy.

3. **Consider marketing strategies** : Once we know the demographics; their knowledge, attitudes and behaviors. We can select more appropriate marketing strategy.

4. **Evaluate those strategies** : Once we have considered the marketing strategies and found the applicable ones. Asses them, apply them and evaluate them. This process must be for testing purposes and the most suitable and productive strategy must be applied.

<u>Types of marketing strategies :</u>

There are different types of marketing strategies available. Picking up a marketing strategy includes analyzing the needs of your business, your target audience and specifications of your products. The two main types of marketing strategy are:

- 1. Business to business (B2B) marketing
- 2. Business to consumer (B2C) marketing

The most common form of marketing is business to consumer (B2C) marketing. Let's explore a bit more

Following are the different types of marketing strategies available.

1. Paid advertising :- This includes multiple approaches for marketing. It includes traditional approaches like TVCs and print media advertising. Also, one of the most well-known marketing approach is internet marketing. It includes various methods like PPC (Pay per click) and paid advertising.

2. Cause marketing :- Cause marketing links the services and products of a company to a social cause or issue. It is also well known as cause related marketing.

3. Relationship marketing :- This type of marketing is basically focused on customer building. Enhancing existing relationships with customers and improving customer loyalty.

4. Undercover marketing :- This type of marketing strategy focuses on marketing the product while customers remain unaware of the marketing strategy. It is also known as stealth marketing.

5. Word of mouth :- It totally relies on what impression you leave on people. It is traditionally the most important type of marketing strategy. Being heard is important in business world. When you give quality services to customers, it is likely that they'd promote you.

6. Internet marketing :- It is also known as cloud marketing. It usually happens over the internet. All the marketing items are shared on the internet and promoted on various platforms via multiple approaches.

7. Transactional marketing :- Sales is particularly the most challenging work. Even for the largest retailers, selling is always tough especially when there are high volume targets. However with the new marketing strategies, selling isn't as difficult as it was. In transactional marketing the retailers encourage customers to buy with shopping coupons, discounts and huge events. It enhances the chances of sales and motivates the target audience to buy the promoted products.

8. Diversity marketing :- It caters diverse audience by customizing and integrating different marketing strategies. It covers different aspects like cultural, beliefs, attitudes, views and other specific needs.

OBJECTIVES OF THE STUDY :

- To know the Marketing strategies used for bamboo product in Palghar District
- To know the sale of bamboo product by use of existing marketing strategies
- To suggest innovative marketing strategies if required.

RESEARCH METHODOLOGY :

The data needed for the study is collected from the bamboo craftsman through personnel interview using questionnaire.

Research Design : The study was based on survey method

Sampling Plan :

1. Sample Method : Non-Probability Sampling (Convenience sampling)
2. Sample Size : 100 Craftsmen.

LIMITATIONS OF THE STUDY :

Following points describe limitations of the present study,

1. The study is limited to know the Marketing strategies used for Bamboo product only
2. The study is limited to Palghar district only.
3. Sample size is limited due to time and money constraint.

Findings & Analysis :

1. Types of products made from bamboo in the area

Basket	Kanga
Topla	Panjra
Supdi	Other

Interpretation: The above table shows the different types of bamboo based product produced and marketed in the area as per demand and order.

2. Use of the product

Product	Use for
Basket	Packing of Flowers
Topla	Packing of fruits - Chickoo & Jambu,
Supdi	House hold & Farming (During Harvesting) for separating dust from grains
Kanga	Farming (During Harvesting) & Storing grains , also used as wall & border of house in village
Panjra	For safety & shelter of Chicken & Duck as chicken coops

Interpretation: The above table shows the uses of different bamboo product for different purpose.

3. Demand of product season wise.

Product	Demand Season wise
Basket	All
Topla • Chickoo Topla • Jambu Topla	 Winter, Summer Summer
Supdi	• During Ganpti Festival • During Harvesting
Kanga	During Harvesting
Panjra	All

Interpretation: The above table shows the demand of different bamboo product as per the season and occasions.

4. Gender wise Craftsman involved in the industry

Gender	Percentage (%)
Male	10 %
Female	90 %

Interpretation: The above table shows that there are 10 % male and 90% female involved in production of bamboo product.

5. Marketing strategies used for marketing of bamboo product by craftsmen's

Sr.No	Marketing strategies	Response
1	Paid advertising	No
2	Cause marketing	No
3	Relationship marketing	**Yes**
4	Undercover marketing	No
5	Word of mouth	**Yes**
6	Internet marketing	No
7	Transactional marketing	No
8	Diversity marketing	No

Interpretation: The above table shows different types of marketing strategies and also reflect marketing strategies used by craftsmen for marketing of bamboo products.

6. Demand of bamboo product by use of traditional marketing strategies.

Answer	No. of respondent
Adequate	33
In adequate	67

Interpretation: In the above table 33 respondent feels that there is adequate demand of bamboo product by use of traditional marketing strategies.

7. Supply of bamboo product as per demand.

Answer	No. of respondent
Adequate	82
In adequate	18

Interpretation: In the above table 82 respondent feels that there is adequate supply of bamboo product as per the demand.

8. Income from sale of bamboo product.

Answer	No. of respondent
Adequate	20
In adequate	80

Interpretation: The above table shows 20 respondent feels that income from sale of bamboo product is adequate and 80 respondent feels that income from sale of bamboo product is not adequate.

FINDINGS:

- Bamboo product which are produced in the study area are – Basket, Topla,Supdi,Kanga Panjra which are used for the purpose of packing of flowers & fruits , during harvesting activity, household and as a chicken coops.
- The production (making) of bamboo product is mostly carried out by females.
- They have not received any professional training from any government or non-government institution.
- The skill required for making bamboo product is transmitted from one generation to another.
- Most of the people in this occupation are illiterate and most of the families are under BPL.
- The rural communities have traditionally been using bamboo and the utilisation has been highly localized.
- The craftsman use old and traditional marketing strategies for marketing of bamboo product i.e. Word of mouth & Relationship marketing strategy.
- The demand & sale of bamboo product is very less and localized because of old and traditional marketing strategies used.

- The economic status of craftsman is poor because of low demand and sale, lack of promotion and inadequate price of goods.
- No innovative marketing strategies is used to promote and sell bamboo product by the craftsman
- No Modern technology and device is used for marketing of product.
- Young generation is not interested to carry on and run their traditional business ,who are educated and aware of modern technology.

SUGGESTIONS & RECOMMENDATION:

- Professional training must be provided to the craftsmen.
- Proper marketing of bamboo product need to be done.
- Innovative marketing strategies must be adopted for marketing.
- Modern technology and device should be used for marketing.
- Marketing strategies used by the craftsmen for different product should be selected with care and must be implemented properly.
- Young generation must help to promote bamboo product by use of innovative marketing strategies like posting images, shot videos on making bamboo product on social networking sites, which will not only help to preserve their traditional business but also creat awareness and promote the product.
- Bamboo product can be marketed like adivasi painting a traditional art
- Bamboo product can be marketed with a logo " Go Green" – instead of using plastic bamboo based product.
- Bamboo product can be promoted in local Festivals like- Chikoo Festival organized in Bordi, Dahanu Festival orgabised by Dahanu Nagar palika and Umbargao festion. This festival are held in winter.

CONCLUSION :

From the study it was identified that marketing strategies used by craftmans for marketing of bamboo based product in the study area is traditional and outdated which do not help to attract people to buy the bamboo based product, and leads to poor sale and income. Craftsman use traditional marketing strategy which include only Word of mouth & Relationship marketing strategy. Craftsmen's are suggested to use modern device & innovative marketing strategies for marketing their product. They are also suggested to participate in local festival to promote and create awareness about their different bamboo based product.

REFERENCES :

- Pritam R. Surati and Dr. Vishnu H. Fulzele (2023), A study on revitalization of production strategies of bamboo product in Palghar district of Maharashtra after Covid-19: IJFMR, Vol.5 issue 1
- Pritam R. Surati (2019), A study of the impact of chickoo festival on the local community: Internal Multidisciplinary E- Research journal, Special issue 156

- Selem Reza and Arshad,Md.(2012), "Socio-Economic Benefit Derived by Poor Rural Producer from Bamboo Value Chain Upgradation: A Study of Tripura, North East India". Indian Stream Research Journal. Vol 2 issue IV: pp15-23.
- Logu, A and Kottaiveeran, K (2014), "Problems and Prospects of Bamboo Based Industries In Nagapattinam District, Tamil Nadu." Golden Research Thought. Vol 3 issue 7.
- Nirendra Dev (2018) "Bamboo Mission: A Tool for Economic Prosperity" YOJANA , pp.31-34.
- S.C.Lahiry (2019) "Bamboo Industry: Crafting the Livelihood of Rural People" Kurukshetra, pp.37-40.
- www.yodiz.com/blog/8-types-of-marketing-strategies-and-definition/
- **Preetam Pai & Kahn Sadeeq.** Impact of Marketing Strategies on the Business Performance of Small and Medium Enterprises in India, @ CDI 2011 Career Development International, 4 (2):108 – 119
- Rukmani Singaram[1], Athul Ramasubramani[2], Aaditya Mehta[3], Pari Arora[4]. Coca Cola: A study on the marketing strategies for millenniums focusing on India . International Journal of Advanced Research and Development . ISSN: 2455-4030,Volume 4; Issue 1; January 2019; Page No. 62-68

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A Study on impact of Digital & Creative Hoarding on OTT Platforms

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Abstract

This study researches the impact of innovative hoardings on client direct in the rapidly creating Indian OTT market. With the OTT business expected to reach $15 billion by 2030, the assessment concentrates, responsibility, and personalization in innovative gathering notices. The study, which was led in Mumbai with a review of fifty customers, aims to translate the evolving elements that exist between traditional outside advertising and the computerized domain. The degree entails delving into what innovation entails for customer commitment and awareness on OTT platforms, while the obstacles evaluate the ability to separate the impact of computerized displays from other advertising drives. This study reveals insight into how promoting and content utilization in India will foster from now on.

Keywords: OTT Platforms, Digital Hoardings, Consumer Behaviour, Advertising Effectiveness, Personalization, India.

Introduction

With expanding networks, more grounded web associations, and mixed media administration competent mobiles, the presence of Indian supporters on beyond preposterous (OTT) stages is expanding step by step.

With rising interest by buyers, numerous media and amusement channels have sent off their own foundation or are attempting to team up with various stages to stream their substance on OTT stages. There are currently approximately forty-seven providers of OTT media services in India that distribute streaming media or Video on Demand over the Internet. In the years to come, the OTT business is supposed to fill India. The OTT market in India was worth 2,150 crore rupees in the fiscal year 2018. The streaming business area in India is expected to be valued at $15 billion by 2030. Additionally, with the ascent of the advanced world, OTT stages are turning out to be more well known. Hoardings is one of the best methods for accomplishing vital correspondence. In the beginning, urban areas were ideal locations for advertising. Slowly, hoardings likewise entered rustic regions and became helpful in speaking with countless individuals. It is assessed that consistently in India, almost four lakh hoardings are being set up just in Mumbai, which demonstrates storing's significance as a promoting medium. Outside promotions have been very fundamental as they can contact many individuals. Conveying the necessary message to a most extreme number of individuals in a single place is conceivable. Outside hoardings are compelling in promoting different items and administrations. But big outdoor ads also have problems, like ruining the environment, putting them where they should not be, and hoarding without permission. Indeed, even with every one of the issues related with storing, envisioning a city without storing in India is troublesome. It is undeniably true that hoardings are a proficient means to spread a message across masses at one spot. However, the goal of this study is to determine how consumers of OTT platforms are affected by digital and creative hoardings. In this review, a specialist plans to figure out the effect of hoardings on buyers of various OTT stages.

.**Literature Review**

1. Attention and Engagement with In-Show Advertising Formats:

Study authors: Zhao, Y., Xu, D., & Liu, Z. (2020).

Key findings: This study explored the adequacy of supported content arrangements, mid-roll situations, and standard pre-roll plugs. It likewise conducted a careful assessment of client consideration and commitment during Over-The-Top (OTT) seeing. As per the review, watcher commitment and memory were far higher when in-show arrangements were made. The increased efficacy was attributed to the advertisements' increased relevance and context within the content. Also, the coordination of intelligent parts in supported content expanded client centre and further developed brand review and memory.

2. **Personalization and targeting in OTT Advertising Effectiveness**:

Study authors: Lee, J., & Yang, H. (2022).

Key findings: The effect of custom-made and designated publicizing efforts on beyond ridiculous (OTT) stages was the focal point of this review. When contrasted with nonexclusive promotion methods, the review showed that altering commercials considering client socioeconomics, seeing examples, and content decisions altogether upgraded navigate rates and complete brand commitment. Moreover, the utilization of custom-made ideas for television series and movies on the OTT stage expanded client satisfaction and utilization rates, featuring the significance of personalization in augmenting the effect of promoting.

3. **Creative Storytelling and Consumer Response in Digital Hoarding**:

Study authors: Park, E., & Oh, H. (2021).

Key findings: This study researched the impact of imaginative narrating parts in advanced storage ads on shoppers' discernments and ways of behaving. The investigation discovered that watchers focused harder on computerized storage that included intelligent parts and genuinely convincing topics. Therefore, in contrast with static or graphically essential promotions, these ones were connected to higher buy goals and better brand discernment. The outcomes accentuated how urgent intelligent components and inventive narrating are to expanding the effect of advanced accumulating strategies.

Objectives

1. To evaluate how well OTT providers' use of digital hoarding draws and holds the attention of viewers.
2. To investigate how, in the context of over-the-top media, creative hoarding affects consumers' perceptions of brand image and message memory.
3. To investigate how interaction works in digital hoarding ads and how it might improve user engagement.
4. To examine the relationship between customer attitude and purchase intention changes and exposure to digital hoardings on over-the-top (OTT) platforms.
5. To determine which psychographic and demographic characteristics might function as moderators in the association between exposure to digital hoarding and OTT platform user behaviour.

Research Methodology

The study is based on both primary and secondary data. This is a comparative study conducted in Mumbai that looked at how consumer of OTT platforms is affected by digital and creative hoardings using a survey of fifty consumers. This research in Mumbai brings about a positive outcome and reliance on solely quantitative data with wider demographics and combined method. The study uses a questionnaire-based survey. The study's focus is restricted Mumbai region and people who are social media addict are given special importance.

Data Analysis

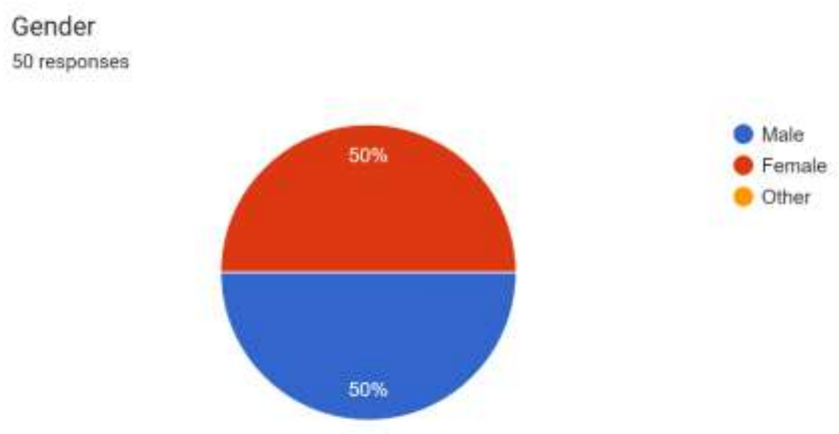

Figure 1 Source: Primary source

The pie outline shows that there is an equivalent level of male and female respondents, each at half. There is likewise a little level of respondents who recognized as "Other"

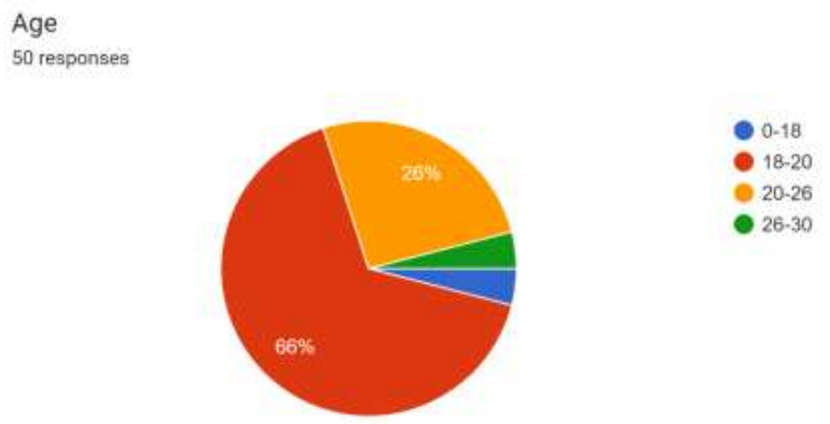

Figure 2 Source: Primary source

The pie outline shows that the biggest level of respondents, 66%, are matured 26-30. The following biggest gathering is matured 18-20 at 26%. The littlest gathering is matured 0-18 at 8%.

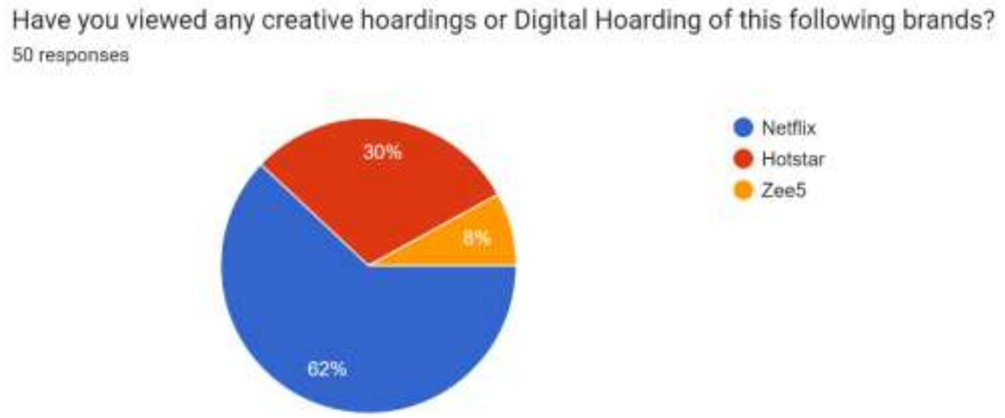

Figure 3 Source: Primary source

The pie outline shows that 62% of respondents have seen innovative possessions or advanced hoardings of Netflix, 30% have seen Hotstar , and 8% have seen Zee5.

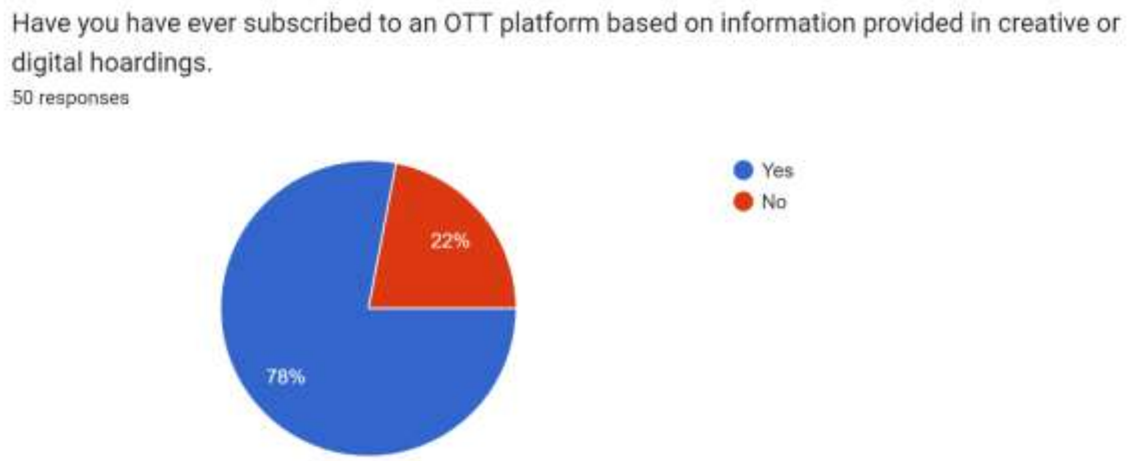

Figure 4 Source: Primary source

The pie chart demonstrates that 78% of respondents have never drawn in at an OTT stage in view of the data introduced in imaginative or advanced bulletins, while 22% have bought in.

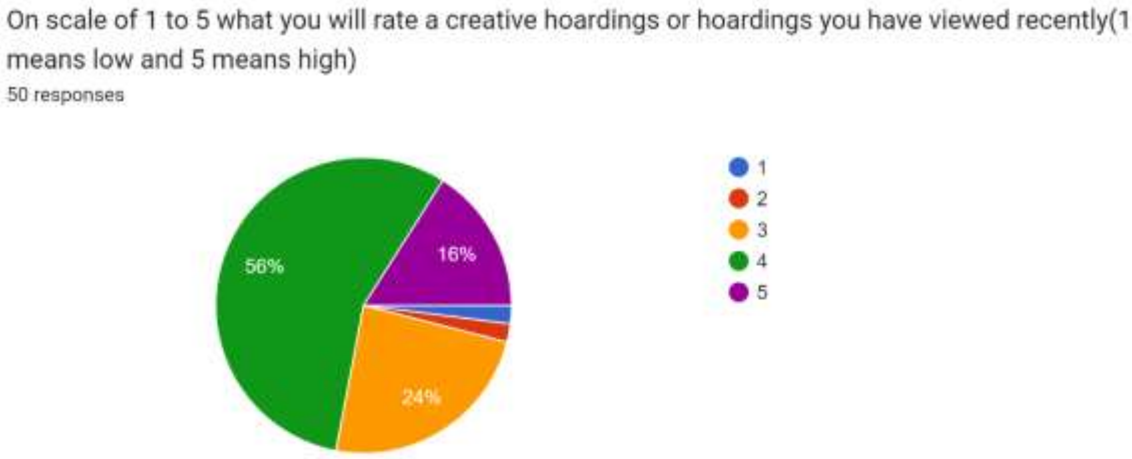

Figure 5 Source: Primary source

The pie graph 6% of people gave incentive hoardings a score of 3 out of 5 on a scale from 1 (low) to 5 (high). They were evaluated a 5 by 24%, a 4 by 16%, and a 1 or 2 by 4%

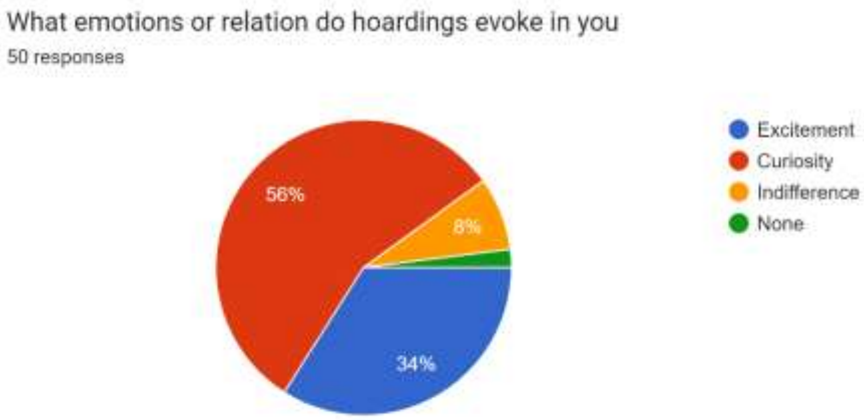

Figure 6 Source: Primary source

The pie outline shows the consequences of an overview asking individuals what feelings or relations hoardings bring out in them. The biggest rate, 56%, said lack of concern. 34% said interest, and 8% said fervor. None of the respondents said that hoardings evoked misery, outrage, or dread.

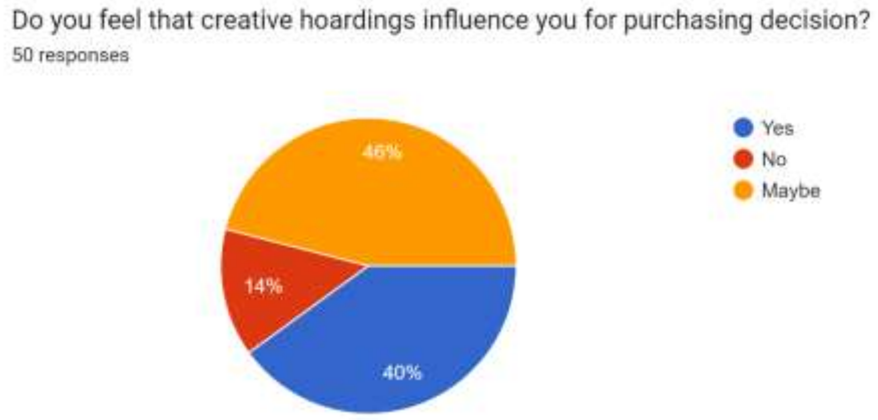

Figure 7 Source: Primary source

The pie graph shows the consequences of a study finding out if they feel imaginative hoardings impact their buying choices. 46% of respondents said OK, 40% said no, and 14% said perhaps.

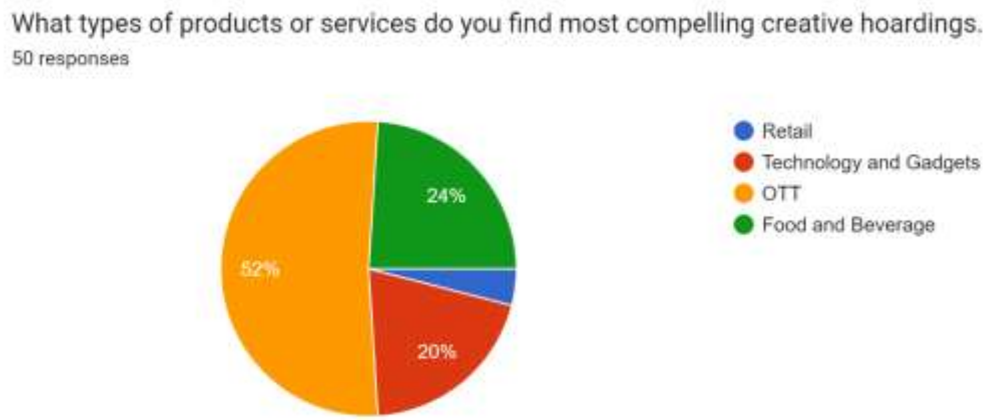

Figure 8 Source: Primary source

The pie outline shows that 52% of respondents view food and drink as the most convincing item or administration for innovative hoardings. 24% find OTT administrations convincing, while 20% see as retail convincing.

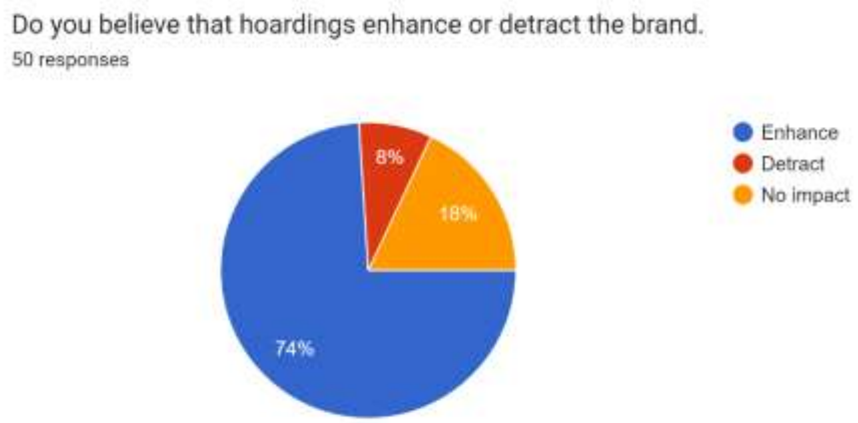

Figure 9 Source: Primary source

The pie graph shows the consequences of a study finding out if they accept hoardings improve or diminish a brand. 74% of respondents said that hoardings diminish a brand, 18% said they have no effect, and 8% said they upgrade a brand.

Scope and Limitation

A. Scope

1. Analysing how customer awareness, engagement, and subscription choices in the context of over-the-top (OTT) platforms are influenced by the creativity and visual attraction of digital hoardings.
2. Evaluating the influence of personalized digital advertising tactics on customer attitudes, preferences, and attachment to particular over-the-top platforms.
3. Learning how innovative & interactive components in digital hoardings might improve user experience overall and have a long-lasting effect on customer behaviours in the OTT market.

B. Limitations

1. It may be difficult for researchers to separate the exact impact of digital hoardings from other marketing initiatives, which could make it more difficult to link hoarding exposure to the observed changes in customer behaviours.
2. Environmental elements that could introduce outside effects and influence the study's findings and adaptability include the deluge of digital ads and differences in accessibility to digital platforms.
3. Because of the potential for changes in technology and cultural trends to affect the effectiveness of digital hoardings, the research may have difficulty capturing the dynamic and constantly changing nature of consumer preferences.

Conclusion

In this present reality where our screens are overflowed with diversion, the review focuses a light on how our number one shows on OTT stages are not just about the unexpected developments and characters. It is about the promotions as well, particularly those huge, computerized hoardings that spring in the middle of episodes. Consider those the virtual announcements of the streaming scene. Regardless of a periodic bother, they assume an urgent part in interfacing brands with us. The study examines how these digital hoardings affect our emotions, choices, and subscriptions. It resembles investigating the behind-the-scenes stage of our streaming experience, uncovering how these promotions, when done well, become a piece of the narrating, impacting what we watch and how we feel about it. However, very much like, where not all announcements are invited, the review recognizes a few difficulties. In any case, it leaves us with a superior comprehension of the mind-boggling dance between the computerized hoardings and our marathon watching propensities, offering a slip investigate the eventual fate of how we consume content and promotions together.

Bibliography

1. Attention and Engagement with In-Show Advertising Formats: https://www.tandfonline.com/doi/full/10.1080/00913367.2017.1405754
2. Personalization and targeting in OTT Advertising Effectiveness: https://www.researchgate.net/publication/274371236_Personalized_Online_Advertising_Effectiveness_The_Interplay_of_What_When_and_Whee
3. Creative Storytelling and Consumer Response in Digital Hoarding: https://www.redalyc.org/journal/818/81870307006/81870307006.pdf
4. https://www.tojsat.net/journals/tojdel/articles/v11i01c01/v11i01-35.pdf
5. https://www.researchgate.net/publication/354543407_A_STUDY_ON_CONSUMER_BEHAVIOUR_TOWARDS_OTT_PLATFORMS_IN_INDIA_DURING_COVID_ERA
6. https://en.wikipedia.org/wiki/Over-the-top_media_services_in_India#:~:text=There%20are%20currently%20about%2047,on%20demand%20over%20the%20Internet.

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Impulse Buying in the Digital Age: Understanding Triggers and Patterns

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Abstract

This research investigates impulsive online shopping behavior, with a specific emphasis on the impact of digital triggers, including personalized recommendations and limited-time offers. Employing a mixed-methods research design, the study engages a diverse cohort of online shoppers through structured surveys, in-depth interviews, and focus group discussions. Quantitative analysis reveals prevalent patterns of impulsive buying, elucidating the significant influence of digital triggers such as time-limited promotions and social media. Qualitative insights provide a nuanced understanding of the emotional and psychological dimensions that contribute to impulsive purchasing decisions. This research contributes valuable insights to the field of online consumer behavior, offering strategic implications for businesses seeking to optimize marketing strategies and enhance the overall online shopping experience.

Keywords: Impulse Buying, Online Shopping Behavior, Digital Triggers, Personalized Recommendations, Consumer Decision-Making.

Objective

Understanding the triggers and patterns of impulse buying in the digital age aims to help digital marketers create effective strategies. By grasping the emotional, social, and cognitive factors that drive impulse buying, marketers can evoke strong emotions and a sense of urgency. This knowledge, coupled with insights into online shopping trends and social media influence, enables marketers to optimize strategies for understanding impulse online buying behavior. This insight allows digital marketers to develop targeted and persuasive strategies that improve the online purchasing experience and boost sales.

Methodology

This research employs a mixed-methods approach to comprehensively investigate impulsive online shopping behavior. A diverse sample of online shoppers is selected through a combination of random sampling and targeted recruitment. Data collection involves structured online surveys with closed-ended questions for quantitative insights, focusing on impulsive buying frequency, triggers, and the impact of digital triggers. Additionally, qualitative data is gathered through in-depth interviews and focus group discussions, delving into the emotional and psychological aspects of impulsive purchasing.

1. Introduction:

Understanding customer behavior is essential in the realm of commerce, studying into the details of what influences individuals when making purchasing decisions. One intriguing aspect of this behavior is impulse buying, where spur-of-the-moment choices are driven by emotions or tempting promotions, often occurring without careful consideration. 'Impulse purchase or impulse buying describes any purchase which a shopper makes, though it was not planned in advance' (Nipa, 2016).

The introduction of digital platforms has drastically changed how consumers engage with services and products. The internet, smartphones, and social media have transformed customers into well-informed purchasers who conduct product research through digital channels. Businesses are now using technology and data analytics to adjust to the evolving nature of customer decision-making as a result of this change.

In the modern e-commerce framework, the importance of impulsive purchases is essential. It turns out to be a key factor driving revenue and sales in online shopping. By doing so, they can tailor their marketing strategies to effectively tap into this behavioral aspect, thereby enhancing the overall online shopping experience. Acknowledging the role of digital platforms in influencing impulse buying allows businesses to create targeted promotions, personalized recommendations, and a user-friendly interface that caters to the impulsive nature of online shoppers.

Understanding and taking advantage of the mechanics of impulse buying is crucial for e-commerce businesses. This thorough understanding helps businesses to optimize their marketing strategies in addition to improving the online buying experience. Ultimately, effective utilization of understandings of impulse buying serves as a catalyst for improving profits and promoting increased levels of customer satisfaction in the continually evolving landscape of digital commerce.

2. Literature Review

Impulse Buying Theories:

2.1 Stimulus-Organism-Response (S-O-R) Framework:

Proposed by Mehrabian and Russell (1974) and extended by Jacoby (2002), the S-O-R framework posits that environmental cues (stimulus) influence an individual's internal state (organism), leading to a specific behavior (response). This model has been successfully applied in both offline and online impulse buying research, providing a foundational understanding of the triggers behind impulsive choices.

2.2 The Big Five Model (BFM):

McCrae and John (1992) introduced the Big Five Model, highlighting five personality dimensions – agreeableness, conscientiousness, extraversion, neuroticism, and openness to experience. Consumers with low conscientiousness and high extraversion, neuroticism, and openness to experience exhibit a propensity for impulse buying, offering insights into the role of personality traits in shaping impulsive behavior.

2.3 Hofstede's Cultural Dimensions Theory:

Developed by Hofstede et al. (2005), this theory identifies four cultural dimensions – Power distance, Uncertainty avoidance, Individualism/Collectivism, and Masculinity/Femininity – influencing normative evaluation of shopping situations and subsequently impacting impulse buying behavior. It underscores the significance of cultural differences in understanding consumer choices.

2.4 Regulatory Focus Theory (RFT):

Proposed by Higgins (1997), RFT posits that individuals engage in approach or avoidance behavior based on self-regulatory orientation: promotion-focused (positive outcomes) or prevention-focused (security and avoiding adverse outcomes). This theory sheds light on the connection between self-regulation and impulse buying, emphasizing the role of motivational factors.

2.5 Construal Level Theory (CLT):

Introduced by Liberman et al. (2007), CLT suggests that psychological distance influences impulse buying behavior. The theory asserts that greater distance leads to abstract perception (high-level construal), while closer distance results in a concrete perception (low-level construal). This concept is particularly relevant in the context of online shopping, where website cues can influence construal levels.

2.6 Latent State–Trait Theory (LST):

Proposed by Steyer et al. (1999), LST posits that human behavior is influenced by environmental characteristics (states), individual factors (traits), and their interaction. In the realm of digital impulse buying, website quality and consumer impulsiveness interact to trigger impulsive purchases, providing a comprehensive understanding of the multifaceted nature of impulse buying behavior.

2.7 Flow Theory:

The Flow Theory, positing that engaging in an activity can induce a flow state characterized by positive emotions and reduced self-consciousness, has been applied to online consumer behavior. Shopping enjoyment during website browsing is explored as a facilitator of the buying process, emphasizing the role of positive emotions and time distortion in impulse buying.

In the context of digital impulse buying, the landscape has been revolutionized by the emergence of digital platforms. These platforms have granted consumers increased access to information, convenience, and instant gratification, transforming the traditional dynamics of impulse buying. Personalized recommendations, a key aspect of digital marketing, have been found to positively impact consumer purchase intentions. Aligning recommendations with individual preferences and past purchases enhances the likelihood of a purchase. Social Media Marketing Activities (SMMAs) influence consumer intentions, fostering continuance and brand loyalty by facilitating communication between customers and marketers.Trust and confidence in the online shopping experience are enhanced through positive interactions with a company, leading to increased purchase intentions. Social media's influence on consumer behavior extends beyond providing information, contributing to brand loyalty and community building.

3. Digital Triggers:

Digital triggers play a significant role in shaping online activities, particularly in the realm of e-commerce. For example, personalized recommendations on e-commerce platforms can act as digital triggers, influencing users to make impulsive purchases based on tailored suggestions. Similarly, limited-time offers and flash sales serve as digital triggers that create a sense of urgency, compelling users to make quick buying decisions. Understanding digital triggers is essential for businesses and researchers seeking to comprehend and leverage the dynamics of online consumer behavior. By identifying and analyzing these triggers, businesses can tailor their marketing strategies to effectively engage and influence users in the digital space.

3.1 Personalized Recommendations

Personalized suggestions wield a considerable influence on individuals' rapid decision-making processes. Notably, a significant 63% of millennials attribute their impromptu purchases to personalized recommendations. This phenomenon extends across both online platforms and traditional brick-and-mortar stores, where the ease of one-click purchasing further amplifies impulsive spending tendencies. In essence, personalized recommendations play a pivotal role in shaping spontaneous purchasing decisions, whether occurring in the digital realm or within physical retail spaces.

3.2 Limited-Time Offers:

Time-limited promotions and flash sales exert a substantial impact on consumers' inclination towards impulse buying. Various factors, including constraints on time and quantity, coupled with elements such as information dissemination, entertainment, and economic advantages, contribute to unplanned purchases during these promotional events. Implementing strategies like flash sales, cashback incentives, or free shipping serves to enhance consumers' proclivity to make immediate purchases or additional acquisitions. The positive correlation between flash sales and impulse buying behavior underscores the effectiveness of high-intensity promotional events.

3.3 Social Media Influence:

A higher frequency of social media ads correlates with heightened impulse intentions and increased impulsive behavior among users. Actively participating on social media platforms triggers various behaviors, including impulsive buying tendencies. Social media holds a direct sway over impulse buying, with 48% of users admitting to making impulsive purchases based on social media content, and 68% expressing regret for at least one such purchase. Platforms deploy targeted ads aligned with user interests, intensifying the allure of resisting impulsive purchases.

4. Patterns of Impulse Buying:

Exploring the patterns of impulse buying unveils a captivating journey into the intricate world of consumer behavior in the digital age. This analysis delves into the prevalence and specific triggers behind impulsive online shopping, shedding light on the driving forces that shape purchasing decisions. As we navigate through various aspects of impulse buying, from the categories that most often prompt impulsive purchases to the nuanced impact of online ads, social media, and emotional triggers, this exploration seeks to unravel the complexities inherent in consumer behavior. Without reference to specific figures, the analysis aims to provide a comprehensive overview of impulse buying patterns, offering valuable insights for understanding and navigating the dynamic landscape of online commerce.

(Figure 1)

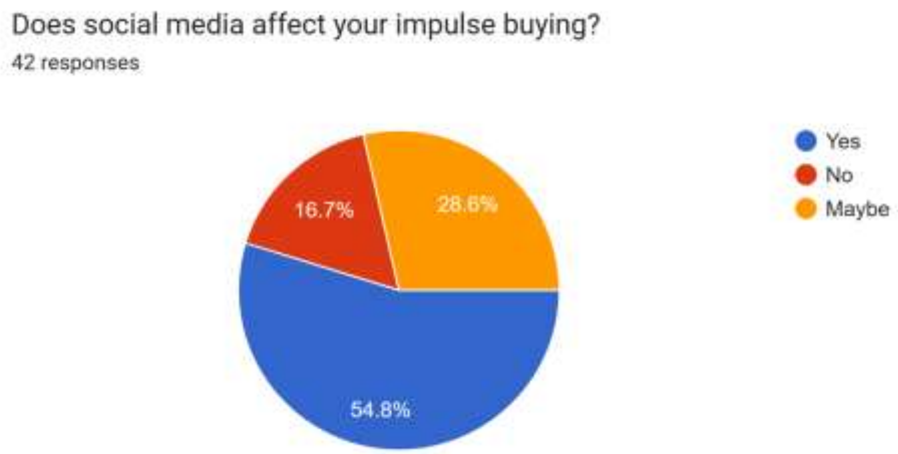
Figure 1 shows that 42.9% of respondents reported impulsively shopping online always or often. This suggests that a significant portion of the population engages in impulsive online shopping behavior.

(Figure 2)

Figure 2 indicates that among those who reported impulsive online shopping, clothes and fashion items were the most common triggers, followed by electronics and gadgets, beauty and personal care products, and foods and snacks. This highlights the specific categories that might be particularly tempting for impulsive online purchases.

(Figure 3)

Figure 3 shows the impact of online ads on impulsive buying decisions appears to be mixed. While 35.7% of respondents indicated that online ads influence their impulsive purchases to some extent, 47.6% reported that they are not influenced by online ads. This suggests that the effectiveness of online advertising in driving impulsive purchases may vary depending on individual susceptibility and the specific products or services being advertised.

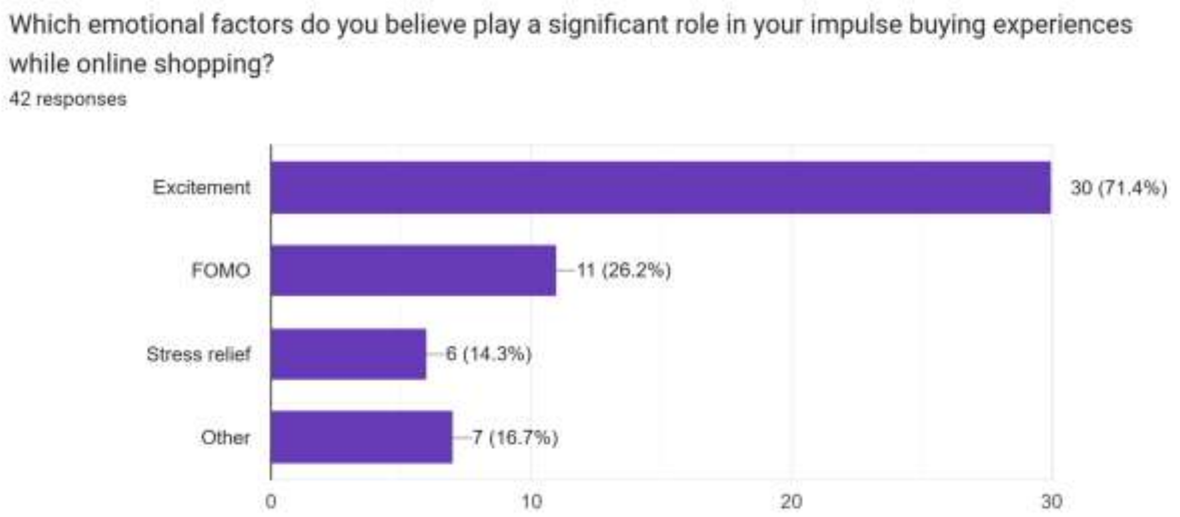


(Figure 4)

The Figure 4 shows that 54.8% of respondents said that social media affects their impulse buying, while 16.7% said that it does not and 28.6% said that they were maybe

(Figure 5)

The Figure 5 shows that 54.8% of respondents said that social media affects their impulse buying, while 16.7% said that it does not and 28.6% said that they were maybe



(Figure 6)

Figure 6 shows the emotional factors that respondents believe play a significant role in their impulse buying experiences while online shopping. The most common emotion was excitement, with 71.4% of respondents saying that it played a role. This was followed by FOMO (fear of missing out) at 26.2% and stress relief at 14.3%.

(Figure 7)

Figure 7 shows that 59.5% of respondents said that personalized recommendations impact their purchasing decisions, while 11.9% said that they do not and 28.6% said that they were maybe.

The comprehensive analysis provides a nuanced understanding of impulsive online shopping behavior. A significant 42.9% of respondents consistently engage in impulsive online shopping, suggesting a widespread trend. Delving into triggers, clothes and fashion items emerge as primary temptations, followed by electronics, beauty products, and snacks, indicating specific categories that drive impulsive buying tendencies. The impact of online ads appears mixed, with 35.7% acknowledging influence and 47.6% reporting immunity. Social media proves to be a significant influencer, as 54.8% affirm its impact on impulsive buying. Emotional factors play a crucial role, with excitement being the predominant trigger for 71.4% of respondents, followed by fear of missing out (26.2%) and stress relief (14.3%). Personalized recommendations also wield influence, with 59.5% acknowledging their impact on purchasing decisions. This collective insight underscores the multifaceted nature of impulsive online shopping, encompassing triggers, emotional dimensions, and varying susceptibilities to external influences, paving the way for strategies promoting informed and mindful online purchasing behavior.

5. Conclusion:

In conclusion, the exploration of impulsive online shopping behavior provides a comprehensive understanding of the driving forces in the digital age. The transformative impact of digital platforms, highlighted in the introduction, sets the stage for a nuanced exploration. The literature review, spanning various theories and models, establishes a solid foundation for comprehending the psychological and cultural aspects influencing impulsive buying decisions.The subsequent analysis of digital triggers underscores the strategic importance of personalized recommendations, limited-time offers, and social media in shaping impulsive behaviors. Notably, personalized recommendations emerge as a powerful influencer, significantly impacting consumers' spontaneous purchasing decisions.

Examining the patterns of impulse buying unveils prevalent behaviors, with specific triggers like clothes and emotional factors such as excitement taking center stage. The nuanced evaluation of online ads and social media emphasizes their influential yet variable impact, stressing the importance of individual susceptibility and product-specific considerations.In the dynamic landscape of e-commerce, businesses can leverage these insights strategically. By tailoring marketing approaches to effectively engage with impulsive tendencies and understanding the intricacies of impulse buying patterns, businesses can enhance the overall online shopping experience. This strategic alignment positions businesses for increased profitability and heightened customer satisfaction in the ever-evolving dynamics of digital commerce.

6. References:

Nipa, N. (2016, April 23). *Research on Impulse Buying Behavior*. www.academia.edu. https://www.academia.edu/24680070/Research_on_Impulse_Buying_Behavior

Seth, A., Jiang, Y., Debrah, E., Antwi, C. O., Amankwa, E., Gyamfi, S. A., & Amoako, R. (2022, January 1). *Online personalized recommended product quality and e-impulse buying: A conditional mediation analysis*. Journal of Retailing and Consumer Services. https://doi.org/10.1016/j.jretconser.2021.102789

Wassel, B. (2020, November 25). *For Online Impulse Buys, Personalization is the Sixth Sense*. Retail TouchPoints. https://www.retailtouchpoints.com/features/executive-viewpoints/for-online-impulse-buys-personalization-is-the-sixth-sense

Marjerison, R. K., Hu, J., & Wang, H. (2022, December 1). *The Effect of Time-Limited Promotion on E-Consumers' Public Self-Consciousness and Purchase Behavior*. Sustainability. https://doi.org/10.3390/su142316087

O'Bannon, I. M. (2023, October 13). *Social Media Impulse Buying Reaches $71 Billion in Last Year*. CPA Practice Advisor. https://www.cpapracticeadvisor.com/2023/10/02/social-media-impulse-buying-reaches-71-billion-in-last-year/95156/

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A Study on Brand Collaboration and its impact on Consumer Buying Behaviour

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Abstract

Purpose - The purpose of this paper is to understand and research about Brand Collaboration and its impact on Consumer Buying Behaviour.

Research Implication - This research provide a preliminary knowledge of Brand Collaboration and its impact on consumer buying behaviour. Further this research might use alternative methods and this paper might make use of secondary research methodology that is it relied on already existing data.

Findings - In this paper we came across that Brand collaborate with other brands and this actually increase the sales.

Originality - The researcher tried to establish a link between 'Brand Collaboration' and 'Consumer Buying Behaviour'.

Keywords - Brand Collaboration, Consumer Buying Behaviour.

Paper Type - Research Paper

Introduction

Brand collaboration is a strategic partnership between two or more brands, working together to create a new product, service, or marketing campaign. Brand collaboration can take many forms, including co-branding, co-marketing, and product integration. It is a popular marketing strategy used by businesses to leverage the strengths and resources of each partner to reach a wider audience and increase brand awareness.

Brand collaboration has become increasingly popular in recent years as businesses seek to differentiate themselves in crowded markets and appeal to diverse consumer segments. Collaborating with another brand can help to enhance the perception of a business and its products or services, increase innovation, and create new revenue streams.

Successful brand collaborations often involve brands that share similar values, target audiences, and brand image. Collaboration can be especially effective when brands bring complementary strengths to the table, such as one brand's design expertise and another brand's manufacturing capabilities. Brand collaboration can be a win-win for both partners, as it can help each brand to reach new audiences and increase revenue. However, it is important for businesses to carefully consider the potential risks and challenges of collaboration, such as brand dilution, legal issues, and loss of control. Proper planning, communication, and execution can help to ensure a successful and beneficial brand collaboration.

Literature Review

1. **Uggla, H., & Åsberg, P. (2010). In "The Benefits and Risks of Strategic Brand Collaboration".** The researcher examine the benefits and risks associated with strategic brand collaboration. The authors argue that strategic brand collaboration can be an effective way for companies to enhance their brand image, create new products and services, and reach new markets. However, they also note that there are potential risks associated with brand collaboration, such as the dilution of brand equity and the loss of control over the brand image. The authors begin by discussing the concept of brand collaboration and provide a framework for understanding the different types of collaborations that exist. They argue that brand collaborations can take many forms, such as co-branding, licensing, and joint ventures, and that each type of collaboration has its own benefits and risks.

2. **Ramya, N. A. S. A. M., & Ali, S. M. (2016). In "Factors affecting consumer buying behaviour".** The researcher here work on the factors affecting consumer buying behaviour. The authors identified several key factors that influence consumer behaviour, including personal factors, psychological factors, social factors, and cultural factors. The authors begin by discussing personal factors that influence consumer behaviour, including age, gender, income, and occupation. They argue that these factors can affect consumer behaviour by influencing preferences, attitudes, and purchasing power. The authors then examine psychological factors that influence consumer behaviour, including motivation, perception, learning, and beliefs. They argue that these factors can affect consumer behaviour by influencing how consumers perceive products and brands, their level of involvement in the purchase process, and their decision-making processes. They provide a comprehensive overview of the factors that influence consumer buying behaviour. Their review highlights the importance of considering personal, psychological, social, and cultural factors when developing marketing strategies and targeting specific

consumer segments. Their findings have practical implications for businesses and marketers seeking to understand and influence consumer behaviour.

3. **Liu, P., Li, M., Dai, D., & Guo, L. (2021). In "The effects of social commerce environmental characteristics on customers' purchase intentions: The chain mediating effect of customer-to-customer interaction and customer-perceived value".** The researcher here conducted a study to examine the effects of social commerce environmental characteristics on customers' purchase intentions, and the chain mediating effect of customer-to-customer (C2C) interaction and customer-perceived value (CPV). The authors argue that social commerce is a growing trend in e-commerce, and understanding the environmental characteristics that influence customers' purchase intentions can help businesses to design effective social commerce strategies. The authors begin by discussing the concept of social commerce and the importance of C2C interaction and CPV in the social commerce environment. They argue that C2C interaction plays a critical role in social commerce, as customers rely on the opinions and recommendations of other customers when making purchase decisions. They also note that CPV is an important factor that influences customers' purchase intentions, as customers are more likely to make a purchase when they perceive value in the product or service.

Research Objective

1. To learn about Brand Collaboration and its advantage & disadvantage.

2. To analyse the statistical data present on brand collaboration.

3. To learn about Brand Collaboration and its impact on Consumer Buying Behaviour.

Research Question

- What is Brand Collaboration and its impact on Consumer Buying Behaviour?

Research Methodology

- Different case studies are read.
- Articles and website have been examined.
- Few research papers by different authors are studied.
- A secondary research is been used in this paper.

Hypothesis

Ho: There is no significant impact of Brand Collaboration and Consumer Buying Behaviour.

H$_1$: There is a significant impact of Brand Collaboration and Consumer Buying Behaviour.

Findings

Brand Collaboration

Brand collaboration is an effective marketing strategy where two or more brands work together to create a new product or service. This strategy can impact consumer buying behaviour in various ways.

Brand collaboration creates excitement and buzz around a new product. This can attract consumers who are interested in trying out new products and services. Consumers may also perceive the new product as more valuable because it is associated with two or more reputable brands. It can help to reach a wider audience. When two brands collaborate, they can pool their marketing resources and target their respective customer bases. This can lead to increased brand awareness and exposure for both brands.

Brand collaboration can create a sense of exclusivity. When two or more brands collaborate on a product, it creates a unique offering that is not available anywhere else. This exclusivity can create a sense of urgency among consumers and drive them to make a purchase. It help to build brand loyalty. When consumers have a positive experience with a brand collaboration product, they are more likely to develop a positive association with both brands. This can lead to increased loyalty and repeat purchases. It can also have a negative impact on consumer buying behavior if the collaboration is not well executed. If the collaboration does not create a product that meets consumer needs or expectations, it can damage the reputation of both brands.

Brand collaboration can impact consumer buying behaviour in various ways, including creating excitement, reaching a wider audience, creating a sense of exclusivity, building brand loyalty, and potentially damaging a brand's reputation if not executed well. To ensure success, brands should carefully consider their collaboration partner and create a product that meets consumer needs and expectations.

Advantages of Brand collaboration:

Brand collaboration can have several advantages for businesses, including:

1. **Increased Brand Exposure:** When two or more brands collaborate, they can leverage each other's marketing and promotional efforts to reach a wider audience. This can lead to increased brand exposure and awareness.

2. **Access to New Markets:** Brand collaboration can help businesses to access new markets and customer segments that they may not have been able to reach on their own. This can help to expand the business's customer base and increase revenue.

3. **Improved Brand Perception:** Collaborating with a reputable brand can enhance the perception of a business and its products or services. This can lead to increased customer trust and loyalty.

4. **Increased Innovation:** Brand collaboration can encourage businesses to think outside of the box and come up with innovative ideas and products that they may not have thought of on their own. This can help to drive growth and increase competitiveness.

5. **Shared Resources:** Collaborating with another brand can allow businesses to share resources, such as marketing and promotional materials, distribution channels, and production facilities. This can help to reduce costs and increase efficiency.

6. **Increased Sales:** Brand collaboration can lead to increased sales and revenue, as consumers are often willing to pay more for products that are associated with multiple reputable brands.

Disadvantages of Brand Collaboration:

While brand collaboration can have several advantages, there are also some potential drawbacks and risks that businesses should be aware of. Some of the demerits of brand collaboration include:

1. **Brand Dilution:** Collaborating with too many brands or brands that are not a good fit can dilute a business's brand and damage its reputation. This can lead to confusion among consumers and a loss of brand equity.

2. **Conflicting Values:** Brands that collaborate may have conflicting values, which can lead to negative perceptions among consumers. For example, a collaboration between a luxury brand and a discount retailer may be perceived as inconsistent and damage the luxury brand's reputation.

3. **Legal Issues:** Brand collaborations can be complex and may involve legal issues such as intellectual property rights, licensing agreements, and royalties. Failure to properly address these issues can lead to costly legal disputes.

4. **Loss of Control:** When collaborating with another brand, a business may lose some control over the product or service being developed. This can lead to a lack of consistency with the brand's existing products or services and a loss of brand identity.

5. **Increased Competition:** Collaborating with another brand can also mean competing with that brand in the same market. This can lead to increased competition and reduced profitability.

6. **Costly Investment:** Brand collaboration can require a significant investment of time, money, and resources. If the collaboration does not generate the expected returns, it can be a costly investment for the business.

Statistical Data on Brand Collaboration

There are several studies that have examined the impact of brand collaboration on consumer buying behaviour. Here are some key findings:

1. A study conducted by **Nielsen** found that 60% of consumers are willing to pay more for products and services that are associated with a brand they trust. Brand collaboration can leverage the trust and reputation of both brands, leading to increased consumer interest and a higher likelihood of purchase.

2. Another study conducted by **Ipsos** found that brand collaborations can increase brand awareness and exposure. The study found that 47% of consumers were more likely to remember a brand after seeing it in a collaboration, compared to 38% who remembered the brand when it was seen alone.

3. A study conducted by **Harvard Business Review** found that brand collaborations can create a sense of exclusivity among consumers. This exclusivity can create a sense of urgency and drive consumers to make a purchase.

4. A study conducted by **Accenture** found that brand collaborations can help to build brand loyalty. The study found that 63% of consumers said that they were more likely to remain loyal to a brand that collaborates with other brands.

5. A study conducted by **Deloitte** found that brand collaborations can lead to increased sales and revenue. The study found that collaborations between brands can increase sales by up to 20%.

These studies suggest that brand collaboration can have a positive impact on consumer buying behaviour by increasing brand awareness, creating a sense of exclusivity, building brand loyalty, and increasing sales and revenue.

Brand Collaboration and its impact on Consumer Buying Behaviour

Brand collaborations can have a significant impact on consumer buying behaviour. When two or more well-known brands come together to create a product or service, it can create a unique and compelling offering for consumers. Here are some ways in which brand collaborations can impact consumer behaviour:

1. **Increased Brand Awareness:** Collaborations can help brands reach new audiences and gain exposure to a wider customer base. This can lead to increased brand awareness, which in turn can increase the likelihood of a consumer considering a brand when making a purchase decision.

2. **Improved Product Quality:** Collaborations can also result in improved product quality as brands bring their unique strengths and expertise to the table. Consumers may be more likely to purchase a product if they perceive it to be of high quality.

3. **Increased Perceived Value:** Collaborations can create a perception of added value for consumers, as they are getting two or more brands in one product. This can make the product more appealing to consumers and increase the likelihood of a purchase.

4. **Enhanced Brand Image:** Collaborations can also enhance the brand image of the companies involved. By associating with another well respected brand, a company can improve its own reputation and credibility.

5. **Emotional Connection:** Brand collaborations can also create an emotional connection with consumers. If consumers have positive associations with both brands, they may feel a sense of excitement or loyalty towards the collaboration, which can translate into a purchase.

But, it is important to note that not all brand collaborations will have a positive impact on consumer behaviour. The success of a collaboration depends on various factors such as the compatibility of the brands, the relevance of the collaboration to the target audience, and the quality of the resulting product or service.

Example of a Successful Brand Collaboration

The collaboration between Flipkart and Xiaomi. Flipkart, one of the leading e-commerce companies in India, collaborated with Xiaomi, a Chinese electronics company, to launch a range of affordable smartphones and other electronics products under the brand name "Mi". This collaboration has been highly successful in India, with the Mi brand becoming one of the most popular smartphone brands in the country.

According to a report by Counterpoint Research, Xiaomi was the leading smart phone brand in India in the third quarter of 2021, with a market share of 27%. The report also noted that Xiaomi's smartphone shipments increased by 3% year-on-year in the third quarter of 2021, despite the overall decline in smartphone shipments in India due to the COVID-19 pandemic.

The success of the Flipkart-Xiaomi collaboration can be attributed to several factors, including the affordability and quality of the Mi products, the extensive reach of Flipkart's e-commerce platform, and the strong brand equity of both companies. The collaboration has helped to expand Xiaomi's presence in India and increase its market share, while also providing Flipkart with a popular and profitable product line.

Overall, the Flipkart-Xiaomi collaboration is a great example of a successful brand collaboration in India, with the partnership resulting in significant business growth and increased customer satisfaction.

Conclusion

Brand collaboration can have a significant impact on consumer buying behaviour, as it can offer customers new and improved products or services, increased brand appeal, and a more personalized and seamless experience. Successful brand collaborations can help companies to leverage each other's strengths, reduce costs, increase efficiencies, and strengthen their brand portfolios, resulting in increased customer satisfaction and business growth. However, brand collaborations also come with potential risks, such as dilution of brand identity, conflicts of interest, and loss of control over the brand image. Companies must carefully consider the potential benefits and risks of brand collaboration before entering into partnerships and must have a clear understanding of the goals and objectives of the collaboration. Overall, brand collaboration has become an increasingly important strategy for companies looking to innovate, expand their customer base, and enhance their brand appeal in today's competitive marketplace. By understanding the impact of brand collaboration on consumer buying behaviour, companies can make informed decisions about partnerships and collaborations that can help them to achieve their business goals and stay ahead of the competition.

References

1. Uggla, H., & Åsberg, P. (2010). The Benefits and Risks of Strategic Brand Collaboration. IUP Journal of Brand Management.

2. Ramya, N. A. S. A. M., & Ali, S. M. (2016). Factors affecting consumer buying behavior. International journal of applied research, 2(10), 76-80.

3. Liu, P., Li, M., Dai, D., & Guo, L. (2021). The effects of social commerce environmental characteristics on customers' purchase intentions: The chain mediating effect of customer-to-customer interaction and customer-perceived value. Electronic Commerce Research and Applications, 48, 101073.

4. Agnihotri, D., Chaturvedi, P., Kulshreshtha, K., & Tripathi, V. (2023). Investigating the impact of authenticity of social media influencers on followers' purchase behavior: mediating analysis of parasocial interaction on Instagram. Asia Pacific Journal of Marketing and Logistics.

5. Yin, C. C., Chiu, H. C., Hsieh, Y. C., & Kuo, C. Y. (2022). How to retain customers in omnichannel retailing: Considering the roles of brand experience and purchase behavior. Journal of Retailing and Consumer Services, 69, 103070.

6. "Global Brand Collaborations Report 2020." Brand Innovators, 2020. https://brand-innovators.com/global-brand-collaborations-report-2020/.

7. "The State of Brand Collaboration in 2020." CreatorIQ, 2020. https://creatoriq.com/state-of-brand-collaboration-report-2020/.

8. "The Power of Brand Collaboration." Deloitte, 2019. https://www2.deloitte.com/us/en/insights/industry/retail-distribution/thepower-of-brand-collaboration.html.

9. "Brand Collaborations 2019: What Are the Key Trends?" Econsultancy, 2019. https://econsultancy.com/brand-collaborations-2019-what-are-thekey-trends/.

10. "The Rise of Collaborative Marketing: Insights from 300+ Brands." Mention, 2018. https://mention.com/en/reports/collaborative-marketingreport/.

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Impact of Marketing and Advertisement on the Behavior of Rural Consumers

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Abstract:

This research paper aims to investigate the influence of marketing and advertising strategies on the behavior of rural consumers. As rural markets play a crucial role in the economic development of many countries, understanding the dynamics of consumer behavior in these areas is essential for businesses to formulate effective marketing strategies. The study employs a mixed-methods approach, combining quantitative surveys and qualitative interviews to gain a comprehensive understanding of the factors affecting rural consumer behavior and the impact of marketing and advertising on their purchasing decisions.

Keywords: Rural Consumer Behavior, Marketing, Advertising, Socio-economic Factors, Digital Media, Consumer Decision-making.

Introduction

1.1 Background

Understanding consumer behavior is a key element of a marketing strategy. In fact, before implementing a strategy, it is essential to fully understand the needs and expectations of the consumers you want to influence. To do this, you need to understand how the consumer will react and be influenced by your different marketing strategies.

Rural markets represent a significant and untapped potential for businesses, contributing substantially to the overall economic growth. The distinct socio-economic and cultural characteristics of rural areas necessitate a nuanced understanding of consumer behavior, especially in the context of marketing and advertising.

1.2 Objectives of the Study

The primary objectives of this research paper are to:

a) Examine the socio-economic and cultural factors influencing rural consumer behavior.

b) Analyze the effectiveness of marketing and advertising strategies in rural markets.

c) Understand the role of digital media in reaching rural consumers.

d) Provide insights and recommendations for businesses targeting rural markets.

- **Literature Review**

This section reviews existing literature on rural consumer behavior, marketing strategies in rural areas, and the impact of advertising on consumer decision-making. It highlights gaps in the current research and sets the stage for the present study.

To understand consumers' behavior, marketers must first understand what drives their purchasing decisions. For example, studies have shown that familial factors, such as having children, can play a role in which products consumers buy. Individuals' perception of a brand, and whether owning a high-value item, such as a apple I phone, is important to their self-identity can also affect purchasers' decision-making. Shoppers' age and gender have also been proven to impact how and why they make purchases.

Different marketing Strategies used in Rural Area

By employing these strategic approaches thoughtfully, businesses can unlock new opportunities and enjoy sustained success in rural markets.[1]

This in turn has empowered relationships to serve the rural markets, to guarantee the receptiveness of things through a sound distribution network, beating the overpowering attitudes of rural clients and making brand awareness (Kashyap, 2016).[2]

[1] 21 Sept. 2023, https://www.mediummultimedia.com/en/marketing-usa/how-do-you-do-rural-marketing/. Accessed 25 Jan. 2024.
[2] https://journalofbusiness.org/index.php/GJMBR/article/view/3110/4-Emerging-Trends-in-Rural_JATS_NLM_xml. Accessed 25 Jan. 2024.

Role of digital media in reaching rural consumer

By examining digital media usage patterns, changes in information-seeking behavior, the influence of social media, and the consequential shifts in purchase decisions among rural consumers, this article sheds light on the dynamic transformation occurring in India's rural markets.[3]

Insights and recommendations for business targeting rural markets.

Mainly this paper focus on how intermediaries face problems and what are the challenges they may go through the problems at rural markets which affects their business and profitability.[4]

- **Methodology**

3.1 Research Design

A mixed-methods approach will be employed, including quantitative surveys of market and qualitative interviews of consumers. The surveys will be conducted across different rural regions, while interviews will offer an in-depth understanding of individual perspectives.

3.2 Sample Selection

Random sampling will be used to select representative samples from diverse rural regions. The inclusion criteria will consider factors such as age, income, education, and occupation to capture the heterogeneity within rural populations.

3.3 Data Collection

Surveys will be distributed electronically and in-person, while interviews will be conducted face-to-face. The data collected will be analyzed using statistical tools for quantitative data and thematic analysis for qualitative insights.

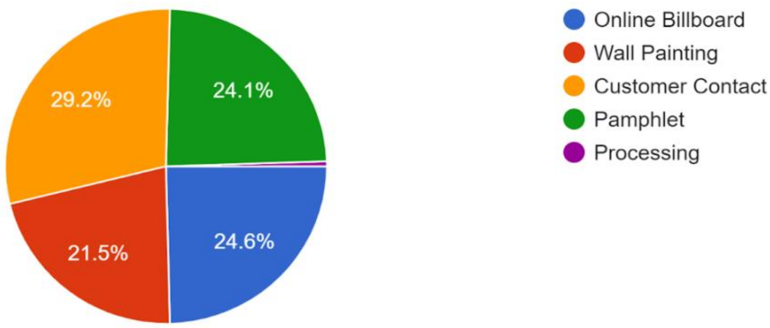
[3] 4 May. 2023, https://ijsra.net/sites/default/files/IJSRA-2023-0760.pdf. Accessed 25 Jan. 2024.
[4] https://www.jetir.org/papers/JETIR1902E18.pdf. Accessed 25 Jan. 2024.

3.4 Data Analysis

3.4 Data Analysis

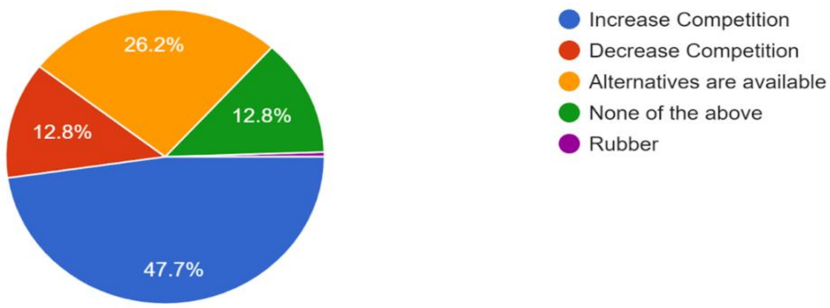
2) Which type of advertising strategy is impactful in rural area

195 responses



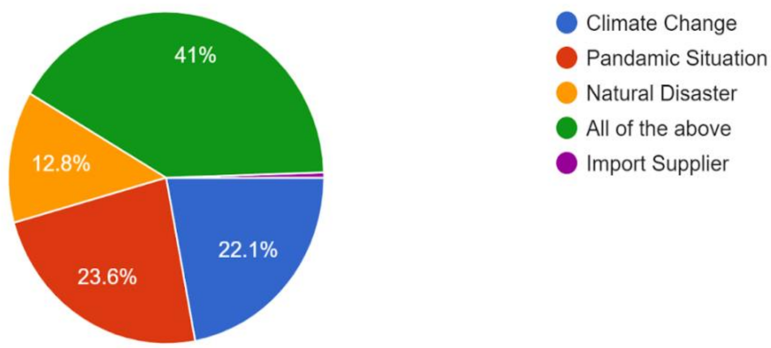
3) Does the inclination increase with changed pattern of advertise?

195 responses

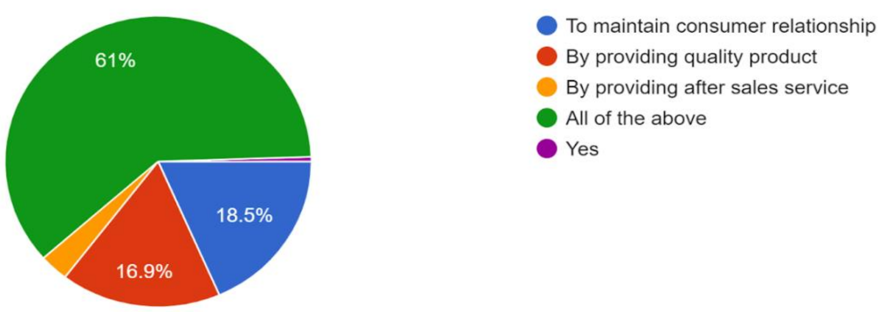


4) Which environmental factor strongly affected in consumer buying behavior?

195 responses



5) What techniques do you use to maintain the image of your business in the minds of customers?
195 responses



- **Findings**

This section will present the key findings related to the socio-economic factors influencing rural consumer behavior, the effectiveness of marketing and advertising strategies, and the role of digital media.

i. To maintain good image of business in the minds of consumers business maintain the relation with their consumers with a weapon of quality good/ Service and after sales service. So whatever product selling by business these things helped them to maintain and increase their consumers.

ii. Consumer buying behavior influenced by climate change, climatic situation, natural disaster if any and many more things which influence economy condition.

iii. Business can definitely increase their consumer by inclining them with new advertising pattern.

iv. Customer contact, online billboard, wall painting, pamphlet are impactful strategies in rural area.

Discussion

The findings will be discussed in the context of existing literature, highlighting the implications for businesses and suggesting potential areas for further research.

- **Conclusion**

This research contributes to the understanding of rural consumer behavior and the impact of marketing and advertising. The insights gained will help businesses tailor their strategies to effectively reach and engage rural consumers, fostering sustainable economic growth in these regions.

- **Recommendations**

Based on the research findings, practical recommendations will be provided for businesses seeking to optimize their marketing and advertising efforts in rural markets.

Different strategies which studied for research has risen due to different problems faced by consumer and solution found by seller. So to attract more and more consumer R &D Department of any organisation should work hard.

- **Future Research Directions**

This section will outline potential avenues for future research, building on the limitations and gaps identified in the current study.

Consumer now shopping more consciously with the help of information technology and different information avail him with social media. Marketer of seller must be one step ahead to satisfy the different need of rural consumer. Consumer is king of the market so negligence toward consumer will be harmful for remaining factors related to this system. Consumption can only boost the economy, whereas marketing strategies like market segmentation, pricing, product, competitive, hoarding, wall painting, advertisement strategies, shop branding fairs (melas) events etc. can only increase. So marketer must me more focus towards consumer behaviour.

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Analyzing the Impact of Social Media Sentiment on Investors Decision-Making

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Abstract: This study aims to examine the influence of social media sentiment on investor decision-making, assess the credibility and reliability of investment information shared on social media platforms, and identify potential areas of improvement for ensuring the quality and reliability of financial information. The research methodology includes a questionnaire survey targeting investors to gather data on their social media usage, decision-making process, reliance on social media sentiment, perception of credibility, and suggestions for improvement. The study outcomes will contribute to a better understanding of the role of social media in investment decision-making and highlight areas where social media platforms can enhance the reliability of financial information.

Keywords: Social media, Investor decision, and Sentiment Analysis.

Introduction:

Social media platforms have become powerful sources of information and communication, greatly influencing various aspects of our lives. One area greatly impacted by social media is investment decision-making. Investors can now access various financial information and sentiments shared on platforms like Instagram, Twitter, and Facebook. This study aims to analyze the impact of social media sentiment on investor decisions, studying the reliance on social media for investment research, confidence in sentiment, and practices to verify credibility. The findings will contribute to understanding the role of social media in financial markets and provide recommendations for a more informed investment environment.

Review of Literature

Mistri Ekta & Japee Gurudutta (2020), Study "Analyzing the Role of social media in Investment Decision with special reference to South Gujarat". This study aims to analyze the role of social media in investment decisions, i.e. the changes in investment patterns after social media activity has increased to a high level. more. The study focuses on the southern region of Gujarat, consisting of five districts: Surat, Bharuch, Navsari, Vapi, and Valsad. This study will be useful for investors who want to stay informed about social media for investment purposes. This study will also help increase awareness among financial advisors to engage consumers.

Rosa Lemel (2022), study" Analysing the Effect of Social Media Sentiment on Stock Prices". As consumers increasingly use social media to learn about companies and their products, social media will become increasingly popular. This research is exploratory and aims to find out if social media opinions influence the share prices of large multinational companies. The value of this exploratory study lies in the weaknesses identified from this study. This is a useful example for future research on social media and its impact on companies.

Statement of Problem

The problem addressed in this study is the lack of comprehensive research on the influence of social media sentiment on investor decision-making and the credibility of investment information shared on social media platforms. It is crucial to investigate these aspects to evaluate the reliability of investment-related information available on social media and identify potential areas for improvement.

Objective of the study

1. To determine how much social media sentiment influences investor decision-making.
2. To assess the credibility and reliability of investment information shared on social media platforms.
3. To identify potential areas of improvement for social media platforms in ensuring the quality and reliability of financial information shared by users.

Hypothesis of the study

1. **H0:** Social media sentiment does not significantly influence investor decision-making.
   H1: Social media sentiment significantly influences investor decision-making.
2. **H0:** Investment information shared on social media platforms is not perceived as credible and reliable by investors.
   H1: Investment information shared on social media platforms is perceived as credible and reliable by investors.
3. **H0:** There are no specific areas that need improvement in social media platforms to ensure the quality and reliability of financial information shared by users.
   H1: There are specific areas that need improvement in social media platforms to ensure the quality and reliability of financial information shared by users.

Research Methodology

The research methodology for this study entails conducting a questionnaire survey among investors. The questionnaire is designed to gather data on participants' social media usage for investment-related research, the impact of social media sentiment on decision-making, their perception of the credibility and reliability of investment information on social media platforms, and suggestions for improvement. A diverse sample of investors, consisting of 100 participants, will receive the survey. The collected data will then undergo analysis using statistical tools and techniques to derive meaningful conclusions.

Significance of the Study

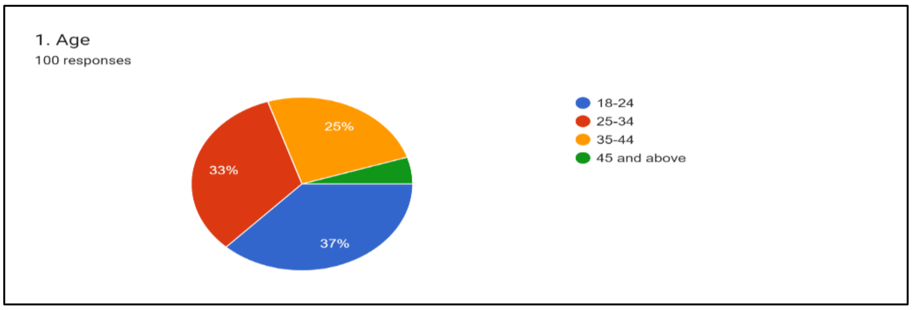
This study is significant as it provides insight into the influence of social media sentiment on investor decision-making. Understanding the impact of social media on investment decisions can help investors make more informed choices and potentially improve their investment outcomes. this study can provide insights to social media platforms, enabling them to create better mechanisms to filter and verify investment information, ultimately enhancing the trust and reliability of financial content shared on their platforms.

Limitations of the study

1. The study may also be limited in capturing the dynamic nature of social media sentiment as trends and conversations can change rapidly.
2. While the study aims to analyze the impact of social media sentiment on investor decision-making, it may not be able to fully account for other external factors that can influence investment choices, such as traditional financial news sources, personal financial advice, or individual risk tolerance.

Data Analysis

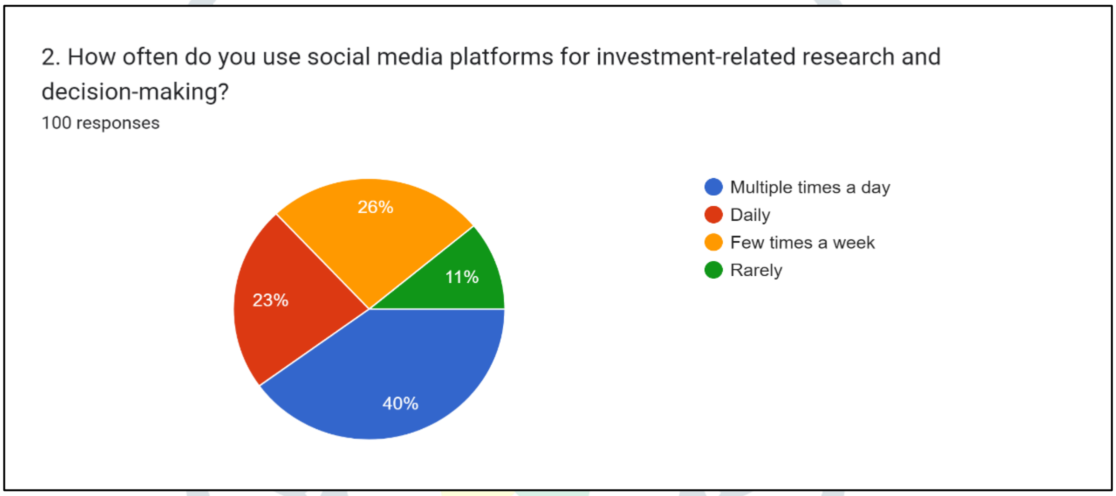
Table 1 Demographic Profile



For the data analysis data is collected from the different age groups of individuals.

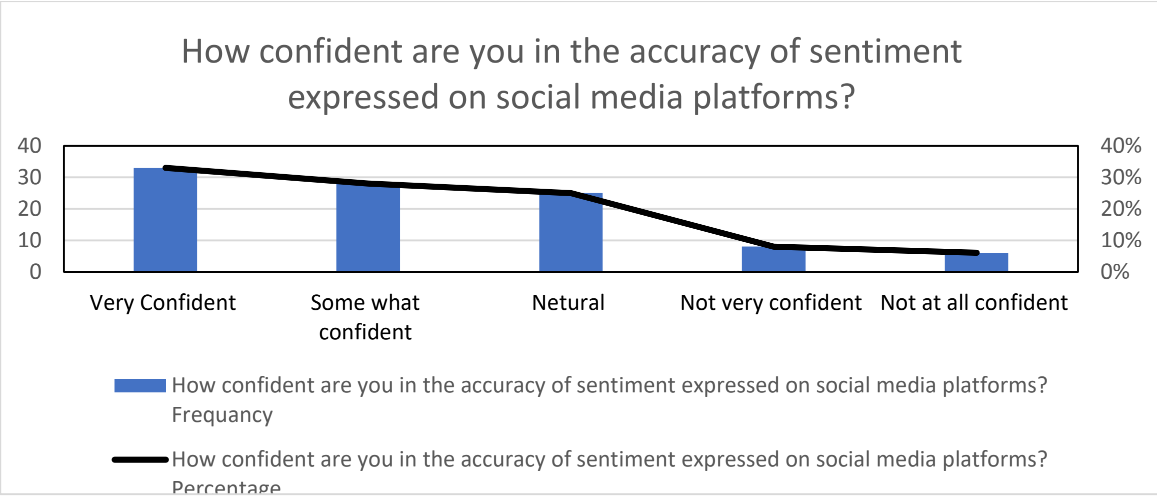
1. **H0:** Social media sentiment does not significantly influence investor decision-making.

Table 2 Frequency of Social Media Utilization for Investment Research and Decision-Making.



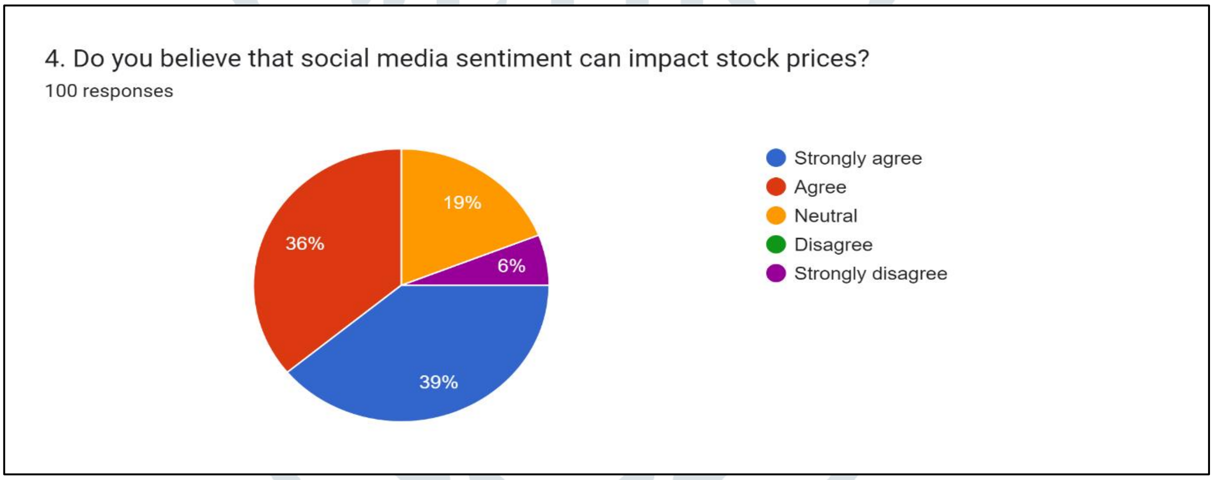
According to the preceding observation, 40% of the respondents use social media platforms for investment-related research and decision-making multiple times daily. 26% of respondents use social media platforms daily, 23% use them daily, and 11% use them rarely for investment-related and decision-making purposes.

Table 3 Social Media Sentiment Confidence Level



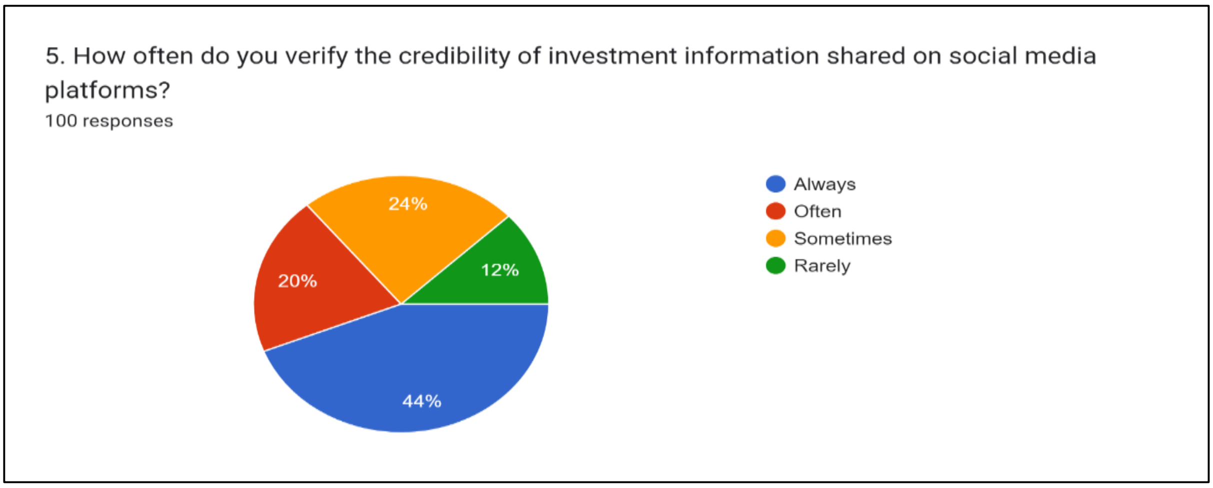
According to the preceding observation, 33% of the respondents are very confident about the sentiment expressed on social media, 28% are somewhat confident, 25% are neutral, and 8% are not very confident. Additionally, 6% of the respondents are not at all confident about the sentiment expressed on social media.

Table 4 Perceived Influence of Social Media Sentiment on Stock Prices



According to the preceding observation, 39% of the respondents strongly agree that they believe social media sentiment can impact stock prices, 36% agree, 19% are neutral, and 6% strongly disagree, stating they believe social media sentiment cannot impact stock prices.

Table 5 Credibility Verification Frequency for Social Media Investment Info



According to the preceding observation, 44% of the respondents always verify the credibility of investments shared on social media platforms, 20% of the respondents often, 24% of the respondents sometimes, and 12% of the respondents Rarely verify the credibility of investment information shared on social media platforms.

According to the research the above hypothesis is rejected.

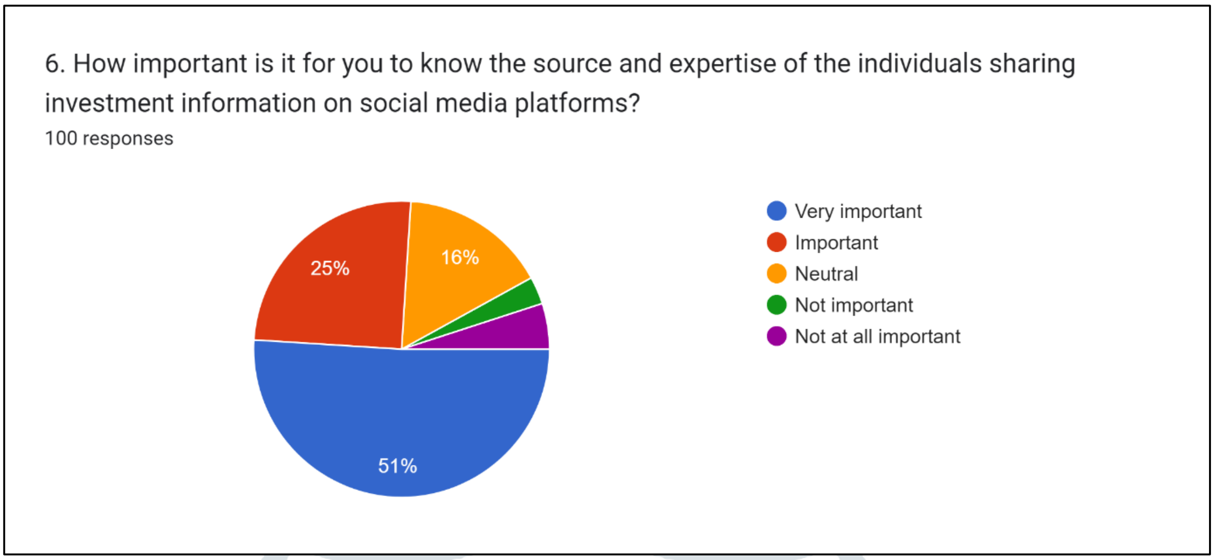
H1: Social media sentiment significantly influences investor decision-making.

The above hypothesis is accepted

Interpretation: Based on our observations, it appears that a significant portion of respondents use social media platforms for investment-related research and decision-making, with 40% doing so multiple times daily. Additionally, about one-third of respondents are confident in the sentiment expressed on social media, while a small percentage are not confident at all. Furthermore, a majority of respondents believe that social media sentiment can impact stock prices. Lastly, a sizable percentage of respondents consistently verify the credibility of investment information shared on social media platforms. Overall, these findings highlight the relevance and influence of social media in the realm of investment decisions.

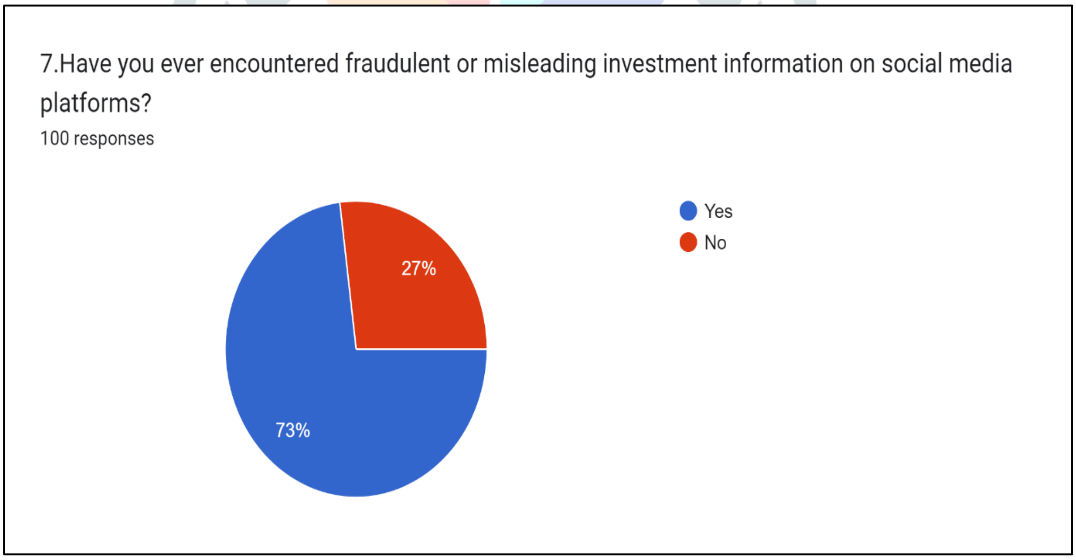
2. **H0:** Investment information shared on social media platforms is not perceived as credible and reliable by investors.

Table 6 Significance of Source and Expertise in Social Media Investment Info



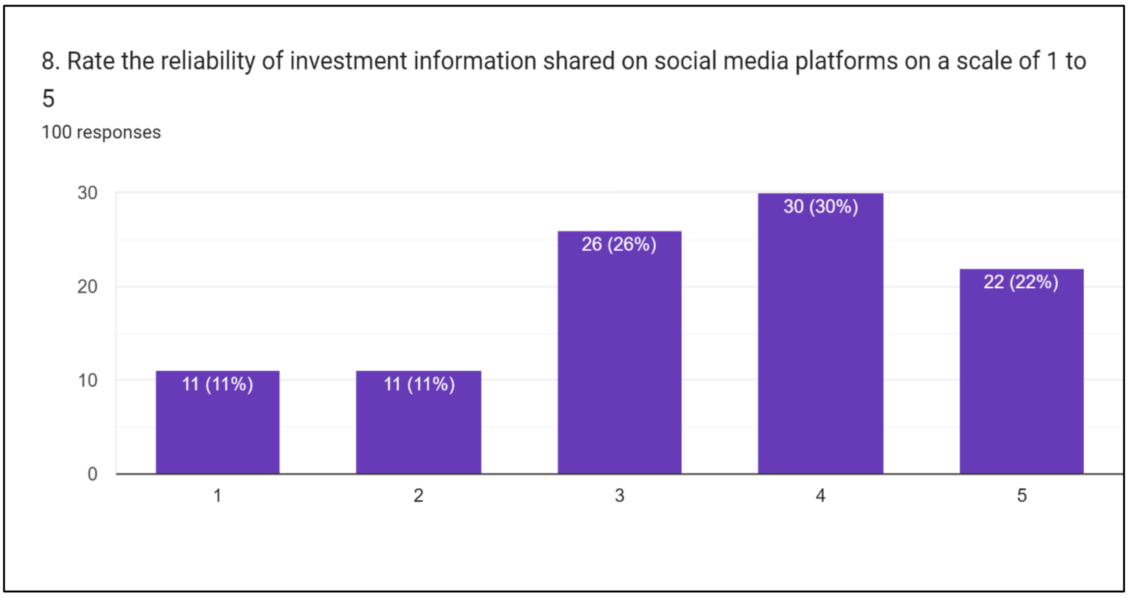
The majority of respondents (76%) place importance on knowing the source and expertise of individuals sharing investment information on social media platforms, with 51% considering it very important and 25% considering it important. This indicates that users recognize the significance of credibility and knowledge when it comes to investment advice received through social media.

Table 7 Incidence of Fraudulent Investment Info on social media



A significant number of respondents (73%) claim to have encountered fraudulent or misleading investment information on social media platforms, highlighting the prevalence of misinformation in this context.

Table 8 Social Media Investment Info Reliability Rating



When rating the reliability of investment information shared on social media platforms, a substantial portion of respondents (52%) expressed some level of doubt. While 22% consider the information extremely reliable 30% find it reliable, 11% consider it unreliable and 11% find it extremely unreliable. This indicates a mixed perception of the trustworthiness of investment information found on social media, emphasizing the importance of independent verification and critical analysis.

According to the research the above hypothesis is rejected.

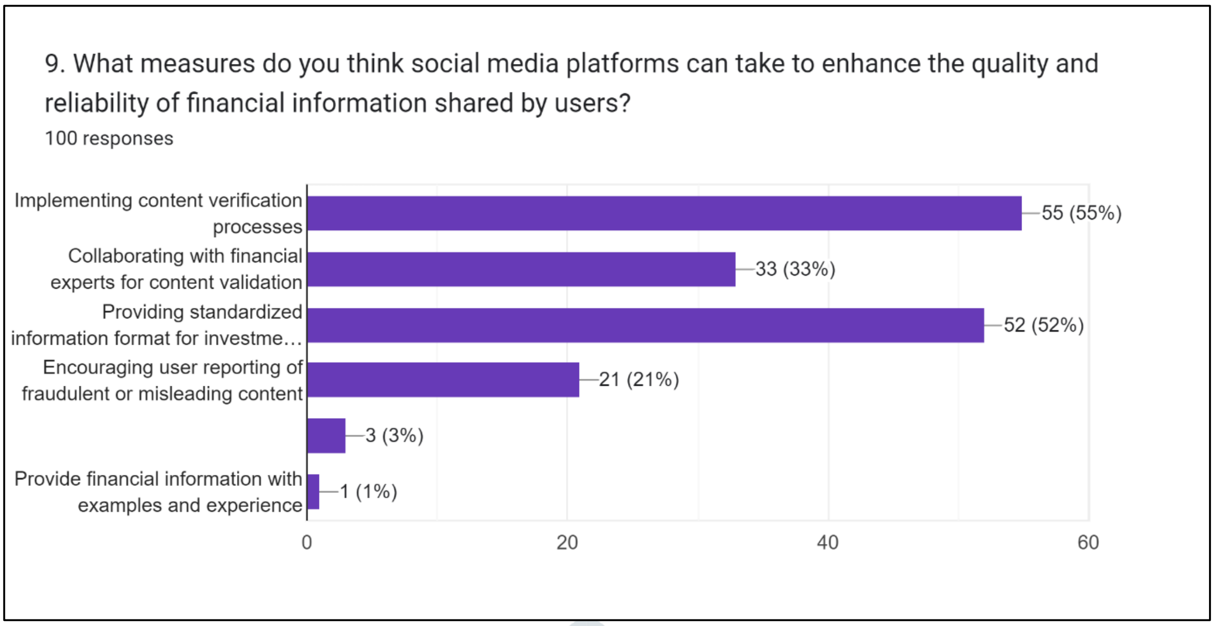
H1: Investment information shared on social media platforms is perceived as credible and reliable by investors.

The above Hypothesis is accepted

Interpretation: while there is a recognition of the importance of source credibility and expertise in investment information shared on social media platforms, there is also a prevalent issue of encountering fraudulent or misleading information. This highlights the need for users to exercise caution and skepticism when consuming investment advice on social media. The mixed perception of reliability further emphasizes the importance of independently verifying information and critically analyzing it before making investment decisions.

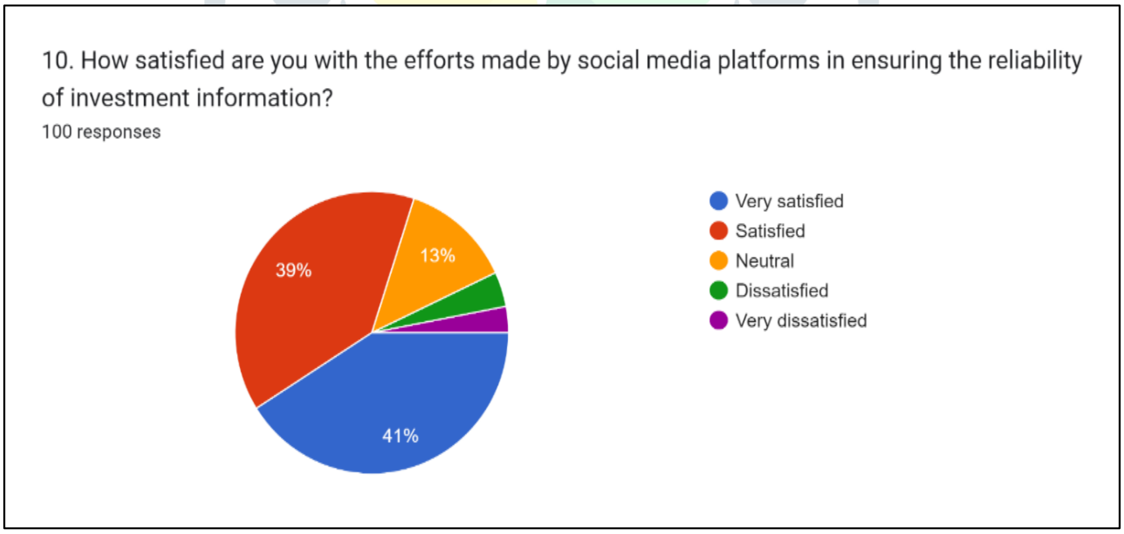
3. **H0:** There are no specific areas that need improvement in social media platforms to ensure the quality and reliability of financial information shared by users.

Table 9 Enhancing Quality and Reliability: social media Financial Info



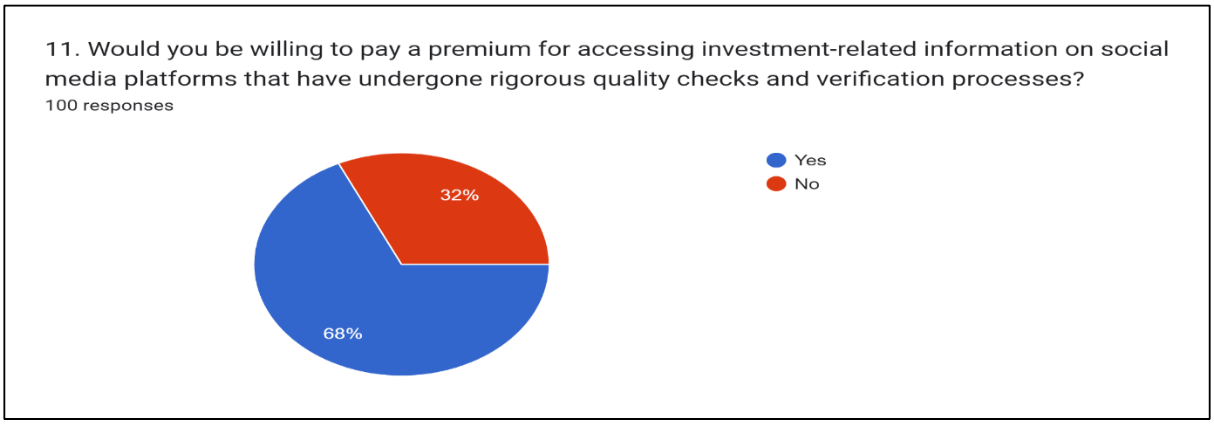
The majority of respondents believe that social media platforms can enhance the quality and reliability of financial information shared by users by implementing content verification processes (55%). This could involve fact-checking and verifying information before it is posted or shared on the platform. Additionally, providing standardized information formats for investment-related posts (52%) can help ensure consistency and accuracy. Collaborating with financial experts for content validation (33%) is also seen as beneficial, as their expertise can help verify the accuracy of information shared on the platform. Encouraging user reporting of fraudulent or misleading content (21%) is another measure that can help identify and remove unreliable information.

Table 10 User Satisfaction with Social Media Investment Info Reliability Efforts



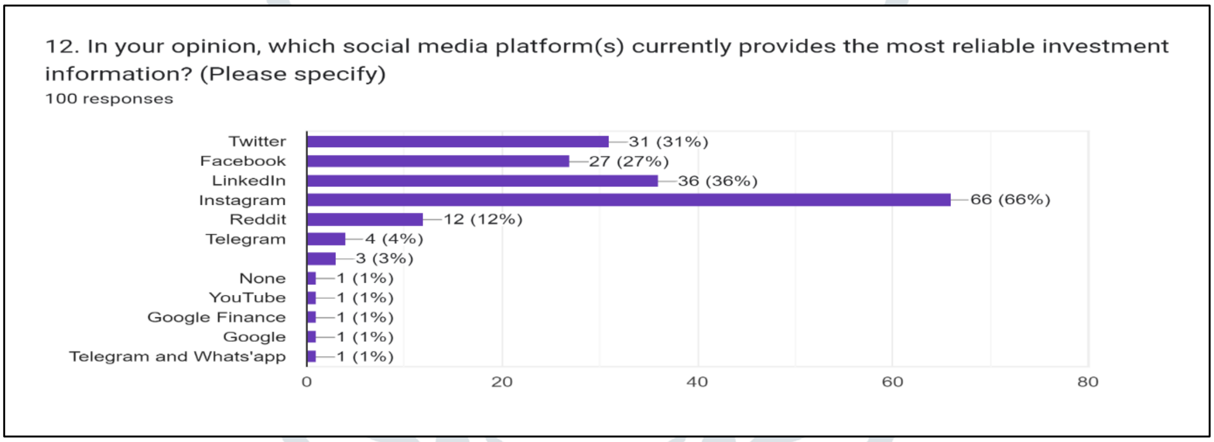
Overall, the respondents' satisfaction with the efforts made by social media platforms to ensure the reliability of investment information is relatively high. 41% of respondents were very satisfied, indicating that they believe social media platforms are effectively ensuring the reliability of investment information. 39% of respondents were satisfied, suggesting that they have some level of confidence in the platforms' efforts. However, there is still a small percentage of dissatisfied respondents (4%) and very dissatisfied respondents (3%), indicating that improvements can be made in this area.

Table 11 Premium Paying Willingness for Verified Investment Info on social media



Most respondents (68%) are willing to pay a premium for accessing investment-related information on social media platforms that have undergone rigorous quality checks and verification processes. This suggests that users value reliability and quality in investment information and are willing to invest in platforms that provide these assurances. However, there are still 32% of respondents who are not willing to pay a premium, suggesting that cost may still be a factor for some users.

Table 12 Most Reliable Social Media Platforms for Investment Info



Among the social media platforms mentioned, Instagram received the highest percentage (66%) of respondents who believe it currently provides the most reliable investment information. Twitter (31%), Facebook (27%), and LinkedIn (27%) also received substantial mentions as reliable platforms. Other platforms mentioned include Reddit (12%), as well as YouTube, Google, Telegram, and WhatsApp. This suggests that different platforms have varying degrees of perceived reliability when it comes to investment information, and it may depend on the user's preference and experience.

According to the Research above hypothesis is rejected.

H1: There are specific areas that need improvement in social media platforms to ensure the quality and reliability of financial information shared by users.

The above hypothesis is accepted

Interpretation: Social media platforms can enhance the quality and reliability of financial information shared by users by implementing content verification processes, collaborating with financial experts for content validation, providing standardized information formats for investment-related posts, and encouraging user reporting of fraudulent or misleading content. Overall, respondents expressed relatively high satisfaction with the efforts made by social media platforms to ensure the reliability of investment information. The majority of respondents are willing to pay a premium for accessing investment-related information on platforms that have undergone rigorous quality checks and verification processes. Instagram was perceived as the social media platform providing the most reliable investment information, followed by Twitter, Facebook, and LinkedIn. However, other platforms like Reddit, YouTube, Google, Telegram, and WhatsApp were also mentioned for their reliability in investment information.

Conclusion

Based on our research findings, it is evident that social media platforms have a notable impact on investment decision-making. Many investors rely on these platforms for conducting research and sentiment analysis before making investment choices. However, there is a mix of trust and caution regarding the reliability of information shared on social media. This highlights the need for efforts to enhance the credibility of investment-related content on these platforms. Our study also identified Instagram as the most reliable platform for investment information, followed by Twitter, Facebook, and LinkedIn, while other platforms like Reddit, YouTube, Google, Telegram, and WhatsApp also hold credibility.

Moving forward, it is imperative for social media platforms to prioritize measures aimed at improving the reliability of investment information. Implementing content verification processes and collaborating with financial experts are crucial steps in this regard. Standardized information formats can facilitate consistency and clarity for users. Additionally, encouraging users to report fraudulent or misleading content will help maintain a trustworthy investment environment on social media platforms.

From a researcher's perspective, further analysis should be conducted to evaluate the impact of social media sentiment on actual investment outcomes and financial market trends. Longitudinal studies can help track changes in investor behaviour and the evolving role of social media in investment decision-making. Furthermore, platforms can explore the potential of offering premium services that undergo rigorous quality checks and verification processes, catering to users who prioritize reliable investment information and are willing to pay for it.

Overall, understanding the influence of social media on investment decisions and taking steps to enhance its credibility will contribute to a more informed and reliable investment environment for investors.

References

1. Mistri, E., & Japee, G. (2020). Analyzing the role of social media in investment decision with special reference to South Gujarat. *GAP GYAN - A GLOBAL JOURNAL OF SOCIAL SCIENCES*, *3*(3), 60–64. https://doi.org/10.47968/gapgyan.330011
2. Rosa, L. (2022, August 3). Analyzing the Effect of Social Media Sentiment on Stock Prices. *International Journal of Business and Management*, *17*(9), 20. https://doi.org/10.5539/ijbm.v17n9p20
3. Hasselgren, B., Chrysoulas, C., Pitropakis, N., & Buchanan, W. J. (2022, December 23). Using social media & Sentiment Analysis to Make Investment Decisions. *Future Internet*, *15*(1), 5. https://doi.org/10.3390/fi15010005
4. Yu, Y., Duan, W., & Cao, Q. (2013, November). The impact of social and conventional media on firm equity value: A sentiment analysis approach. *Decision Support Systems*, *55*(4), 919–926. https://doi.org/10.1016/j.dss.2012.12.028

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Age, Risk and Proactivity: Unravelling the Dynamics of Financial Literacy in Retirement Planning

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***Abstract*:**

This research delves into the intricate relationship between age, risk, proactivity, and financial literacy as they shape effective retirement planning strategies. We examine how age impacts individuals' understanding of financial concepts crucial for retirement, explore the influence of risk tolerance and technology comfort on strategic savings decisions, and investigate the correlation between proactive debt management and enhanced retirement preparedness. The study employs a multifaceted approach, incorporating quantitative analyses and behavioural assessments to offer a comprehensive view of the dynamics at play. The findings contribute valuable insights for policymakers, financial educators, and individuals aiming to secure a financially stable retirement.

Keywords: **Age, Risk and Proactivity**

Introduction:

The research outlined in this document focuses on the intricate dynamics surrounding age, risk, proactivity, and financial literacy, particularly in the context of effective retirement planning strategies. In an era where the global population is experiencing a significant aging trend, the imperative of comprehensive retirement planning has gained paramount importance. This study aims to unravel the nuanced relationship between these key variables and their impact on individuals' ability to navigate the complexities of retirement preparedness.

The investigation also extends its focus to the influence of risk tolerance and technology comfort on strategic savings decisions. Recognizing that these factors play a crucial role in shaping financial behaviours, the study aims to dissect their impact on individuals' choices regarding retirement planning.

This comprehensive exploration aims to contribute substantial insights to the ever-evolving landscape of retirement planning. By unravelling the complex dynamics of financial literacy through the lenses of age, risk, and proactivity, the study endeavours to provide a robust foundation for informed policy decisions, tailor financial education initiatives to specific demographics, and empower individuals with the knowledge and tools necessary to navigate the path towards a more secure and fulfilling retirement.

Through this research undertaking, we embark on a journey not only to comprehend the challenges inherent in retirement planning but also to illuminate pathways towards a more financially secure and fulfilling retirement for individuals across diverse life stages. As we navigate this complex terrain, the ultimate goal is to empower individuals to make informed decisions, fostering a sense of financial security and well-being in their retirement years.

Review of Literature:

Sara Sadia & Jhara Samia (2023), study on the **“Exploring Retirement Realities in Bangladesh: Conditions, Challenges, and Cultural Dynamics.”** This research delves into the complexities of post-retirement life in Bangladesh, shedding light on the challenges faced during this often-overlooked phase. Through a thorough literature review, the study proposes a comprehensive questionnaire to explore the nuances of retirement experiences. The findings uncover varied experiences based on job backgrounds, gender, and both positive and negative aspects of retirement. The research concludes by offering recommendations for inclusive policies and support systems tailored to the unique needs of retirees in Bangladesh. Overall, this study contributes valuable insights to inform future interventions aimed at enhancing the well-being of individuals transitioning into post-employment life in the country.

Dhal Gagan's (2017) study, titled **"Middle Class Retirement in India: A Qualitative Study of Active Ageing, Health, Family Relationships, and Quality of Life,"** employs a qualitative approach to investigate the experiences of middle-class retirees in India through 40 semi-structured interviews. Focusing on retirees aged 58 to 75, the research uncovers a sense of "retirement pride" influenced by life achievements, family success, health, and financial freedom. Despite relishing freedom, retirees paradoxically yearn for routine, which they control through creative engagement in meaningful activities, part-time work, volunteering, and family interactions. Both genders prioritize health for active aging, cultivating fulfilling social relationships, with women exhibiting adeptness in balancing diverse activities alongside family responsibilities. In essence, the study portrays a positive Third Age for middle-class retirees in India characterized by resilience, acceptance, freedom, health, and purposeful engagement.

Shendkar Dinesh (2016), focuses on the **"Study of Financial Planning for Retirement amongst individuals in the select age group of 25 years to 45 years in Pune city."** The research highlights the global challenge of prolonged retirement periods due to an aging population, stressing the importance of strategic planning. In India, with a predicted substantial increase in the elderly population by 2050, proactive measures for retirement financial planning are crucial. The study identifies external and individualistic factors influencing retirement planning, emphasizing the need to understand the behaviours of young Indians and the factors driving their retirement investments. Recognizing the critical role of intermediaries in connecting individuals with retirement products, the study calls for scrutiny. Additionally, it emphasizes the significance of assessing individuals' awareness of retirement planning options for informed decision-making in the evolving landscape of retirement preparedness.

Problem of the study:

The research problem of the study revolves around exploring the relationship between various factors and effective retirement planning. The objectives focus on understanding the impact of age, risk tolerance, technology comfort, and proactive debt management on financial literacy and retirement preparedness. The hypotheses provide testable predictions related to these factors, aiming to contribute insights into the dynamics of retirement planning strategies.

Objectives of the study:

1. Examine the impact of age on financial literacy for effective retirement planning.

2. Assess how risk tolerance and technology comfort influence strategic retirement savings decisions.

3. Investigate the correlation between proactive debt management and enhanced retirement preparedness.

Hypotheses of the study:

H1: Younger individuals are hypothesized to exhibit lower levels of financial literacy, potentially leading to challenges in their retirement planning.

H2: Examine the hypothesis that higher risk tolerance and greater technology comfort lead to more strategic decisions in retirement savings.

H3: Investigate the hypothesis that proactive debt management positively correlates with enhanced retirement preparedness.

Research Methodology:

Primary Data:

1. Collected randomly in Mumbai using a structured questionnaire, with 66 responses received.
2. Utilized simple random sampling for the selection of participants.

Secondary Data:

1. Gathered from various sources, including research articles, newspapers, magazines, and websites.
2. Complemented primary data (66 responses) to provide a comprehensive understanding of the research topic.

Statistical Analysis:

1. Emphasized effective data preparation for efficient analysis.
2. Prepared tables and diagrams based on the information sheet.

3. Conducted statistical analysis post fieldwork completion on the 66 responses to draw meaningful insights.

Significance of the study:

The study holds significance as it unravels key factors influencing retirement planning, including age, risk tolerance, technology use, and proactive debt management. Its findings offer valuable insights for individuals, policymakers, and educators, guiding the development of tailored financial education strategies. Understanding these dynamics is crucial in addressing the complexities of retirement planning in an ever-changing financial landscape.

Limitation of the study:

1. Reliance on self-reported data introduces potential biases and inaccuracies due to the subjective nature of respondents' perceptions.

2. The cross-sectional design restricts the establishment of causation or exploration of changes over time in the variables studied.

3. The diverse sample composition may limit generalizability to specific demographic groups or regions.

Data Analysis and Interpretation:

1. **Demographic Information:**

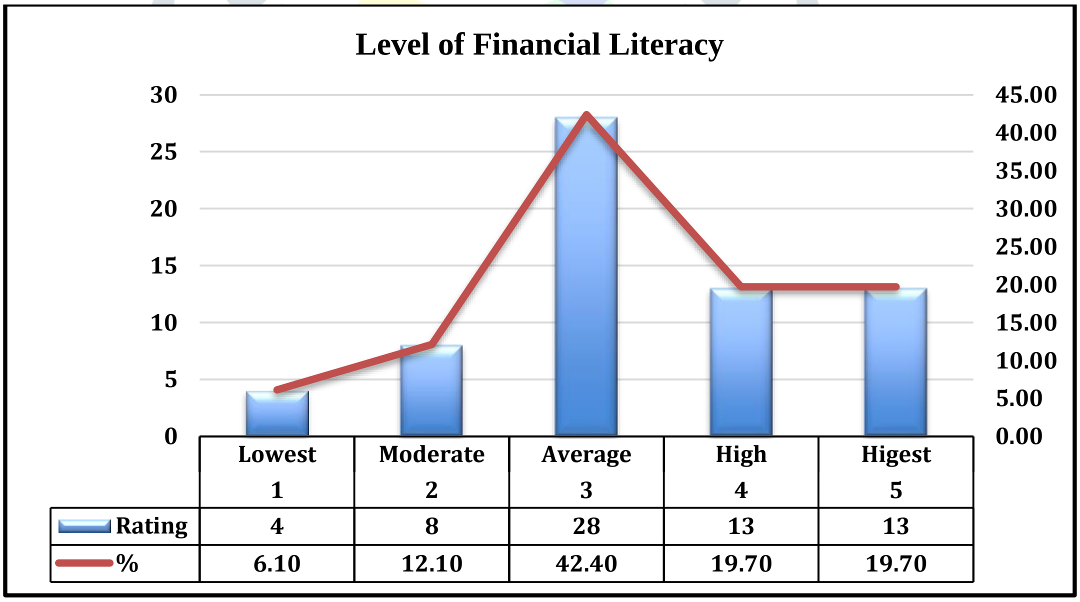
Demographic Variables	Categories /Groups	Frequency/ Count	Percentage (%)
Age	Under 25	33	50.00
	25 to 40	18	27.30
	41 to 60	14	21.20
	61 and above	1	1.50
Gender	Male	28	42.40
	Female	38	57.60
	Prefer not to say	--	--
Educational Level	High School or less	6	9.10
	Some College / Associate Degree	14	21.20
	Bachelor's Degree	30	45.50
	Postgraduate Degree	11	16.70
	Others (B.Tech, LLM, CA, CS)	5	7.50
Income Level	Below ₹ 1,00,000	33	50.00
	₹ 1,00,000 to ₹ 5,00,000	7	10.60
	₹ 5,00,000 to ₹ 10,00,000	18	27.30
	₹ 10,00,000 and above	8	12.10

Employment Status	Employed	31	47.00
	Unemployed	5	7.60
	Students	29	43.90
	Retired	1	1.50

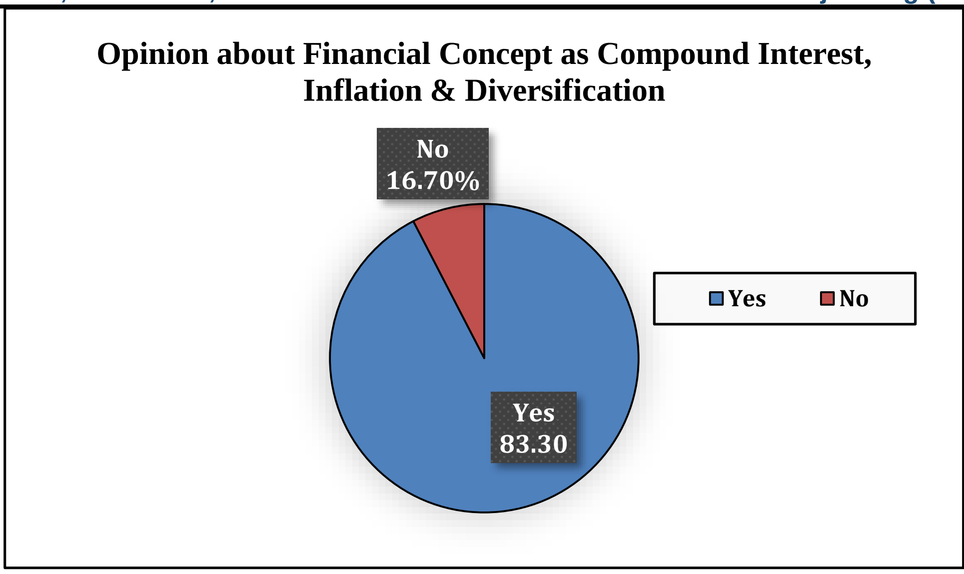
The study exploring "Age, Risk, and Proactivity: Unravelling the Dynamics of Financial Literacy in Retirement Planning," the demographic breakdown reveals a predominant female presence (57.60%), underscoring the need for gender-specific considerations in understanding financial attitudes and retirement planning. The age distribution is diverse, with 50% under 25, 27.30% aged 25 to 40, and 21.20% between 41 to 60, offering insights into how distinct age groups approach financial literacy in the context of retirement planning. The educational profile is varied, with 45.50% holding Bachelor's Degrees and 16.70% possessing Postgraduate Degrees, providing a foundation for exploring the correlation between education levels and financial literacy. The income distribution, ranging from below ₹ 1,00,000 to ₹ 10,00,000 and above, allows for a comprehensive examination of the relationship between income levels and retirement planning behaviours. Employment status is diverse, with 47.00% employed, 43.90% students, and smaller percentages of unemployed (7.60%) and retired individuals (1.50%), creating a varied context for analysing financial literacy dynamics across different employment statuses.

H1: Younger individuals are hypothesized to exhibit lower levels of financial literacy, potentially leading to challenges in their retirement planning.

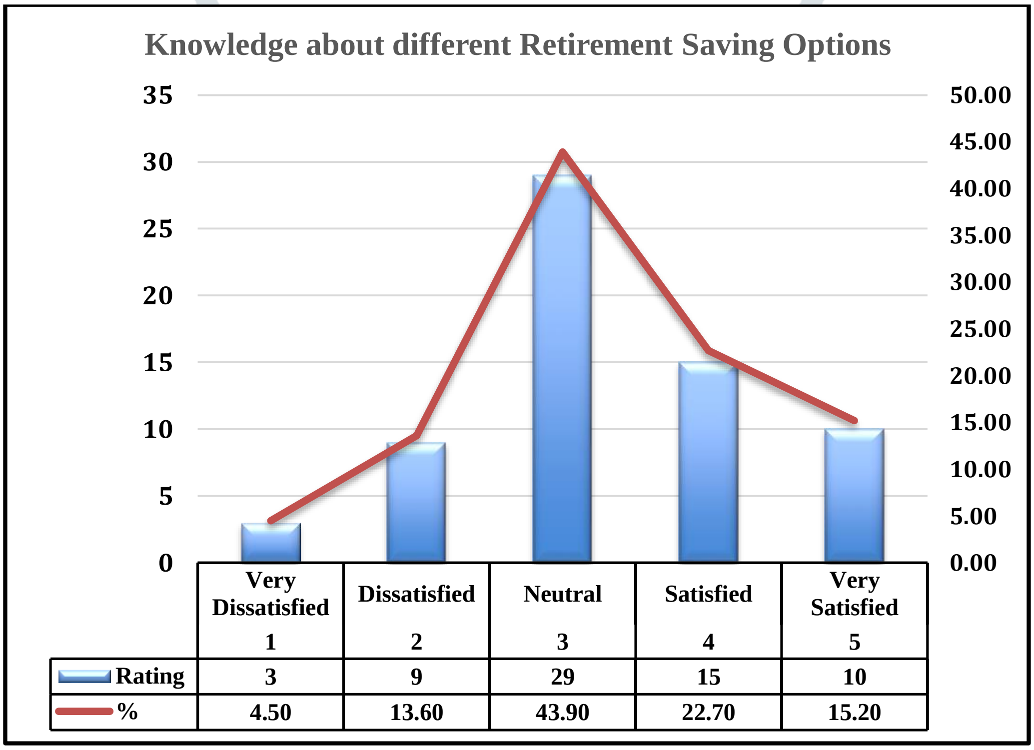
<u>**Financial Literacy for Retirement Planning:**</u>



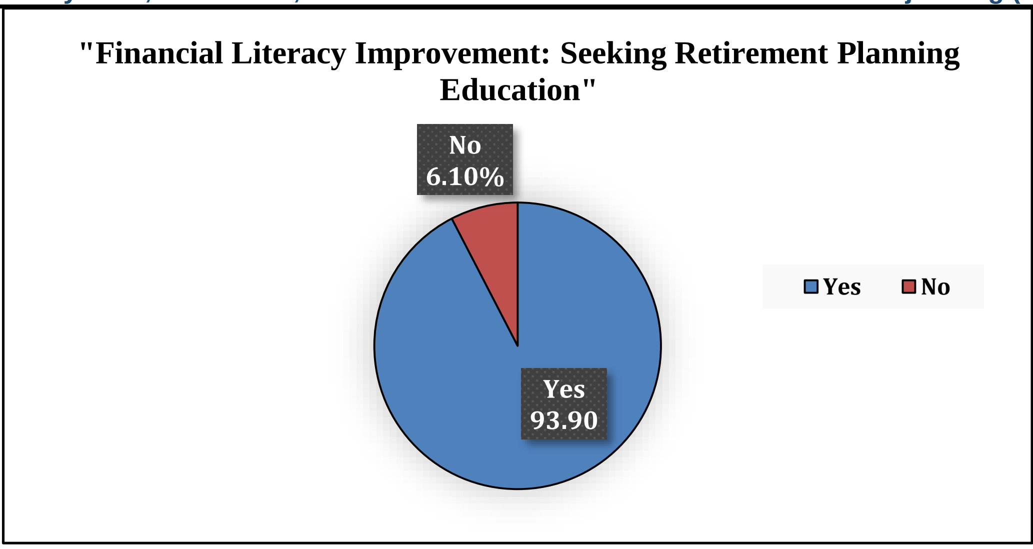
The survey on financial literacy for retirement planning, aligned with the study's focus on "Age, Risk and Proactivity: Unravelling the Dynamics of Financial Literacy in Retirement Planning," reflects a diverse range of self-assessments. The majority, 42.40%, considers their financial literacy to be average. Additionally, 39.40% collectively rate their knowledge as either high (19.70%) or the highest (19.70%). This distribution underscores the varied perceptions of financial literacy, providing valuable insights into how individuals perceive their preparedness in the context of age, risk considerations, and proactive financial planning for retirement.



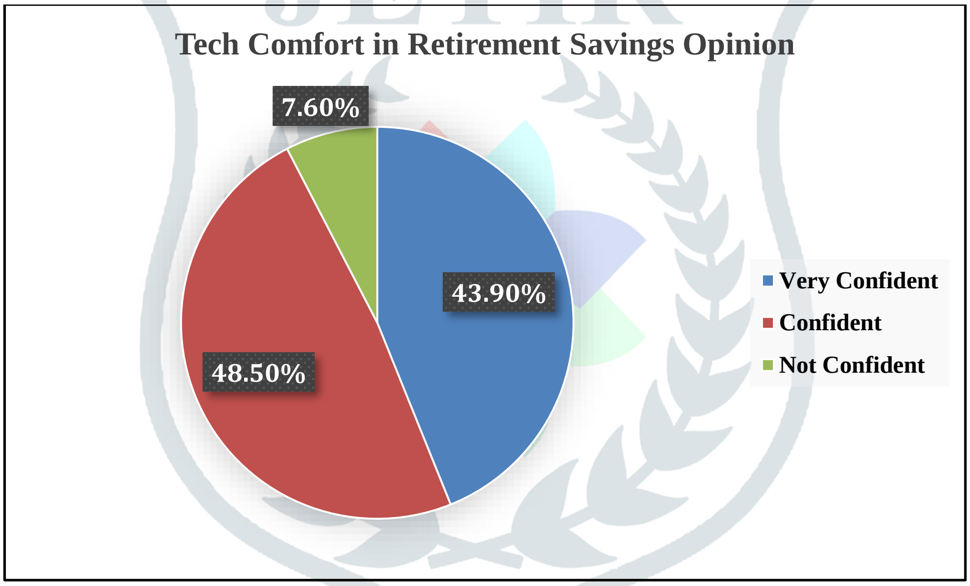
The survey indicates a high comfort level with financial concepts, as 83.3% of respondents affirm their understanding of concepts like compound interest, inflation, and diversification. However, a notable 16.7% express discomfort or lack of familiarity with these financial principles. This distribution suggests a majority possess a solid grasp of these concepts, while a significant minority may benefit from further education or clarification in these areas.



The survey on knowledge about retirement saving options, as aligned with the title "Age, Risk and Proactivity: Unravelling the Dynamics of Financial Literacy in Retirement Planning," reveals a diverse range of sentiments. While a significant 43.90% express a neutral stance, indicating a balanced view of their knowledge, 13.60% convey dissatisfaction. On a positive note, 38.90% are either satisfied (22.70%) or very satisfied (15.20%). This distribution suggests that, in the context of the study's focus on age, risk, and proactivity, there are varying levels of contentment and areas for improvement in individuals' understanding of retirement saving options.



A significant majority, 93.9% of respondents, actively seek financial education or resources to enhance their financial literacy for retirement planning, indicating a strong commitment to self-improvement. Conversely, a small percentage of 6.1% indicates a lack of active engagement in seeking financial education. This highlights the proactive stance of the majority in taking steps to enhance their understanding of financial concepts relevant to retirement planning.



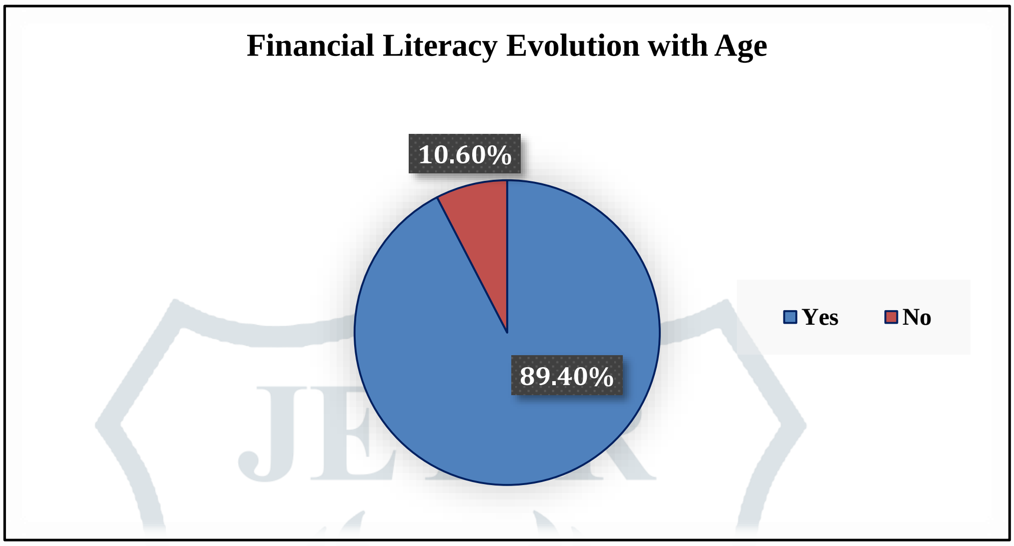
The survey results indicate a range of confidence levels among respondents regarding their ability to make informed financial decisions for retirement. A notable 43.9% express high confidence, categorizing themselves as "Very confident." Additionally, 48.5% fall under the "Somewhat confident" category, suggesting a moderate level of assurance in their decision-making abilities. However, a minority of 7.6% admits to a lack of confidence in making informed financial decisions for retirement. These findings underscore a generally positive outlook among respondents, with the majority feeling confident or somewhat confident in their financial decision-making capabilities for retirement planning.

The above hypothesis is accepted.

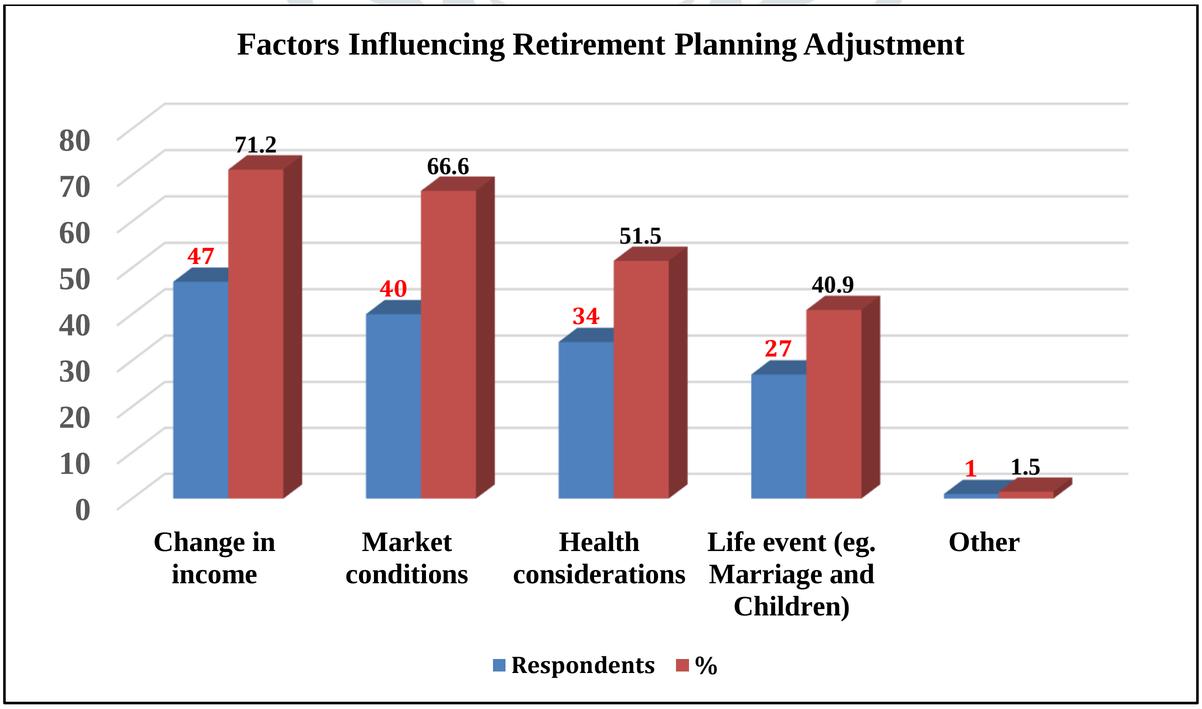
Interpretation: The survey on financial literacy for retirement planning unveils a varied landscape, with 42.40% perceiving their knowledge as average and 39.40% expressing high confidence. While 83.3% are comfortable with financial concepts, 16.7% seek further understanding. Regarding retirement saving options, 43.90% are neutral, 13.60% dissatisfied, and 38.90% satisfied. Notably, 93.9% actively seek financial education, showcasing a proactive commitment to enhancing financial literacy for retirement planning.

Impact of Age on Financial Literacy, Risk Tolerance and Technology Comfort:

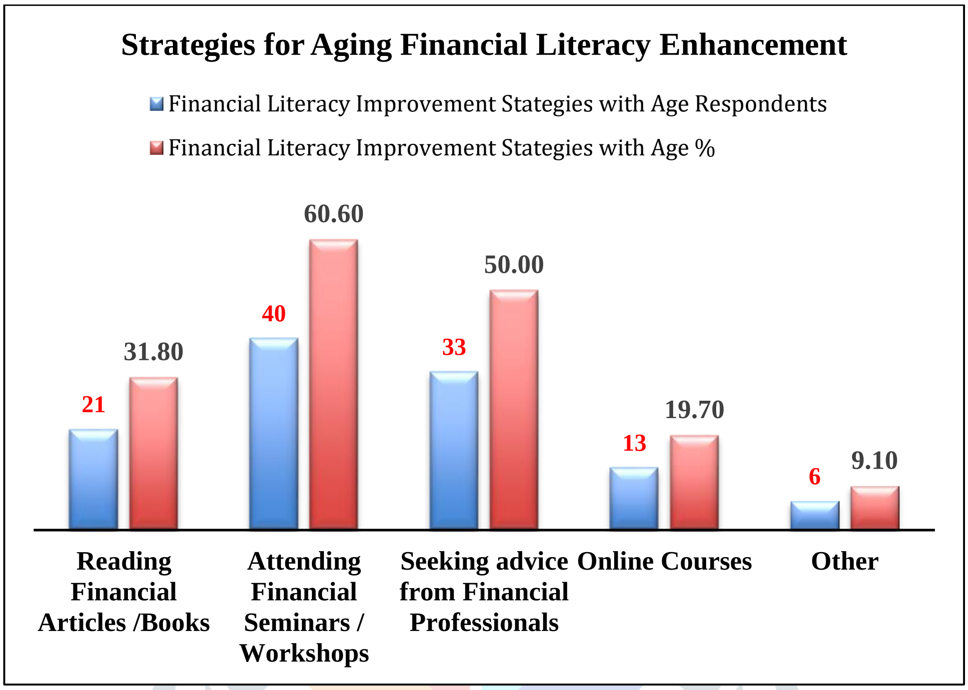
H2: Examine the hypothesis that higher risk tolerance and greater technology comfort lead to more strategic decisions in retirement savings.



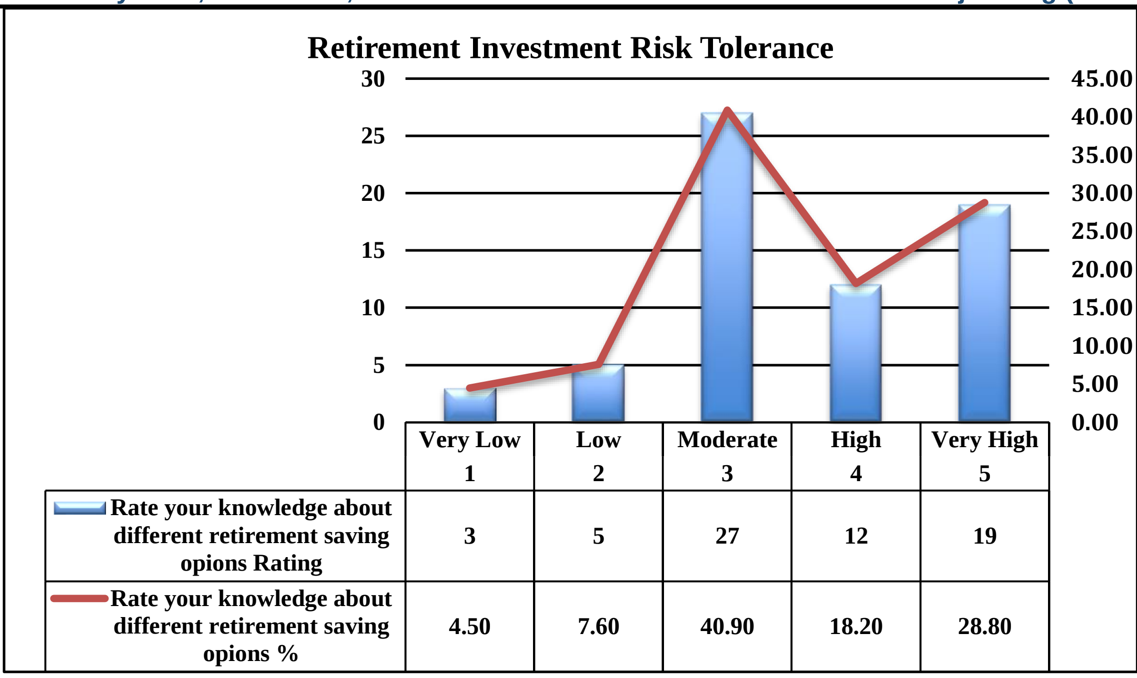
The overwhelming majority of respondents, 89.4%, acknowledge noticing changes in their financial literacy as they age. This suggests a heightened awareness or perhaps a continuous learning process throughout different life stages. On the contrary, a smaller percentage of 10.6% indicates no perceived changes in financial literacy over time. These findings highlight the dynamic nature of financial knowledge and the ongoing importance of adapting to evolving financial landscapes as individuals progress through different stages of life.



Respondents cite various factors influencing their decisions to adjust their retirement plans. A significant 71.20% point to changes in income, underlining the financial aspect's pivotal role. Market conditions, deemed influential by 60.60%, highlight the sensitivity to external economic factors. Health considerations, with 51.50%, emphasize the impact of personal well-being on retirement planning. Life events, such as marriage and children, play a role for 40.90% of respondents, indicating the interplay between personal life changes and financial decisions. A minor 1.50% attribute adjustments to other factors not explicitly specified. These findings illustrate the multifaceted nature of decision-making in retirement planning, influenced by both internal and external variables.

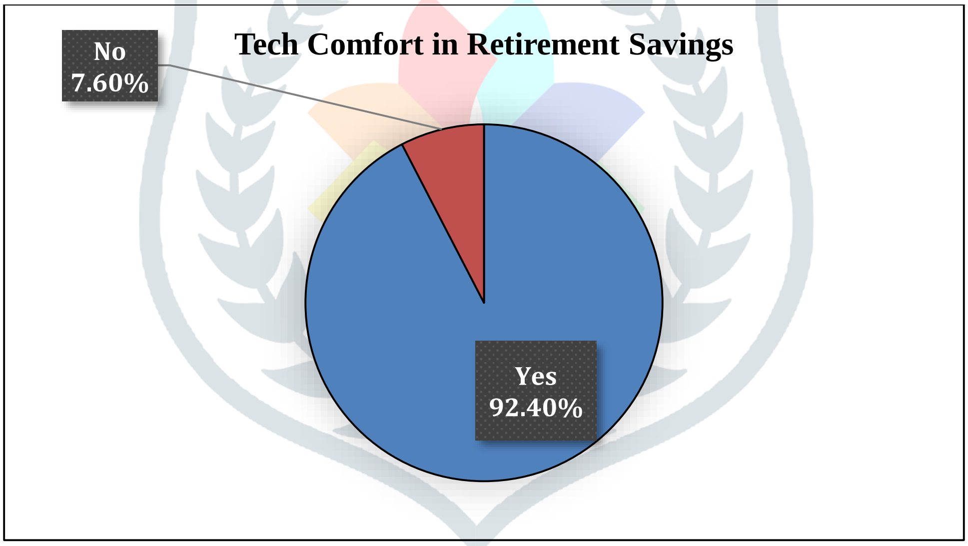


The table "Financial Literacy Improvement Strategies with Age" outlines respondents' approaches to enhancing financial literacy as they age. The majority, 60.60%, actively attend financial seminars or workshops, indicating a strong preference for interactive learning. Seeking advice from financial professionals is also prevalent, with 50.00% leveraging expert guidance. Additionally, 31.80% read financial articles or books, highlighting a commitment to self-directed learning. Online courses and other strategies are utilized by smaller percentages, showcasing a diverse range of approaches to financial education with advancing age.



	Very Low 1	Low 2	Moderate 3	High 4	Very High 5
Rate your knowledge about different retirement saving opions Rating	3	5	27	12	19
Rate your knowledge about different retirement saving opions %	4.50	7.60	40.90	18.20	28.80

The table presents respondents' ratings on their risk tolerance for retirement investments on a scale of 1 to 5. The majority fall into the "Moderate" category at 40.90%, followed by "Very High" at 28.80%. A significant proportion also indicate "High" risk tolerance at 18.20%. Lower percentages are distributed among "Low" (7.60%) and "Very Low" (4.50%). This suggests a diverse range of risk tolerance levels among participants in the context of retirement investment decisions.



The table indicates that 92.40% respondents are comfortable using technology for managing retirement savings, indicating a widespread tech-friendly approach. However, 7.60% expressed discomfort, suggesting a small segment may prefer traditional methods or face tech-related challenges in retirement savings management.

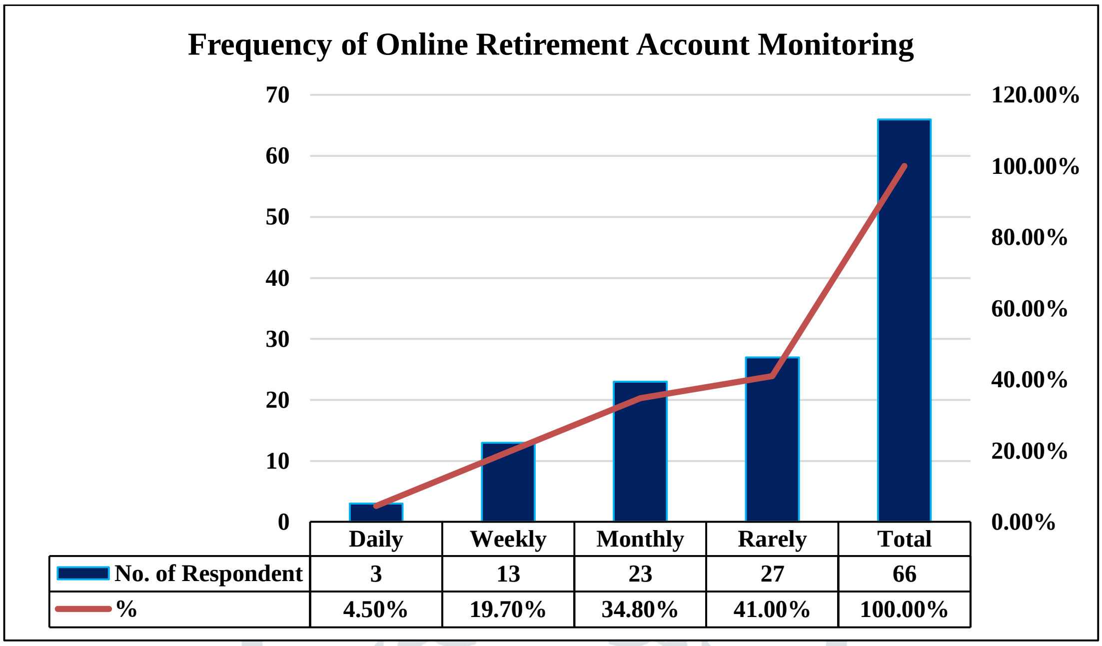
The above hypothesis is accepted.

Interpretation: The analysis of respondents' financial behaviours and attitudes towards retirement planning supports the hypothesis that higher risk tolerance and greater technology comfort contribute to more strategic decisions in retirement savings. The majority displaying a "Moderate" risk tolerance (40.90%) suggests a balanced approach, while the significant proportion with "Very High" risk tolerance (28.80%) aligns with the hypothesis of strategic decision-making. Furthermore, the widespread comfort with technology (92.40%) indicates that enhanced technological comfort may lead to more strategic choices in retirement planning.

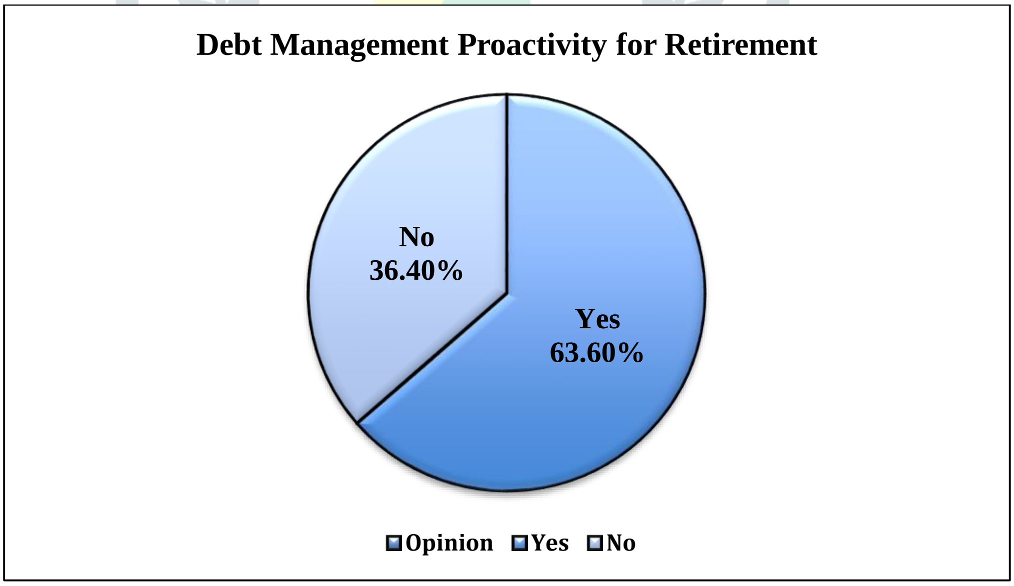
Overall, these findings strongly endorse the hypothesis, highlighting the pivotal roles of risk tolerance and technology in shaping retirement savings strategies.

Proactive Debt Management and Retirement Preparedness:

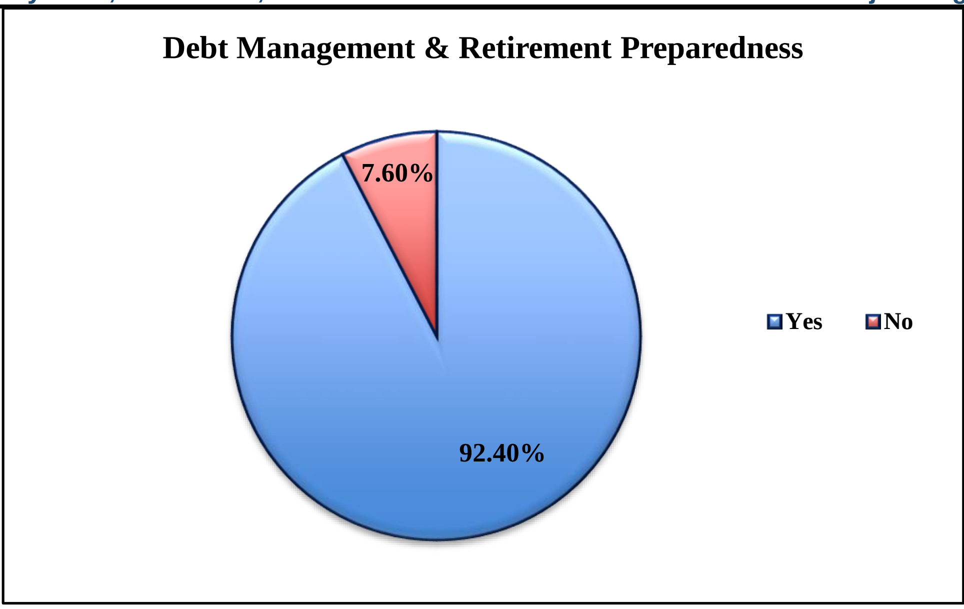
H3: Investigate the hypothesis that proactive debt management positively correlates with enhanced retirement preparedness.



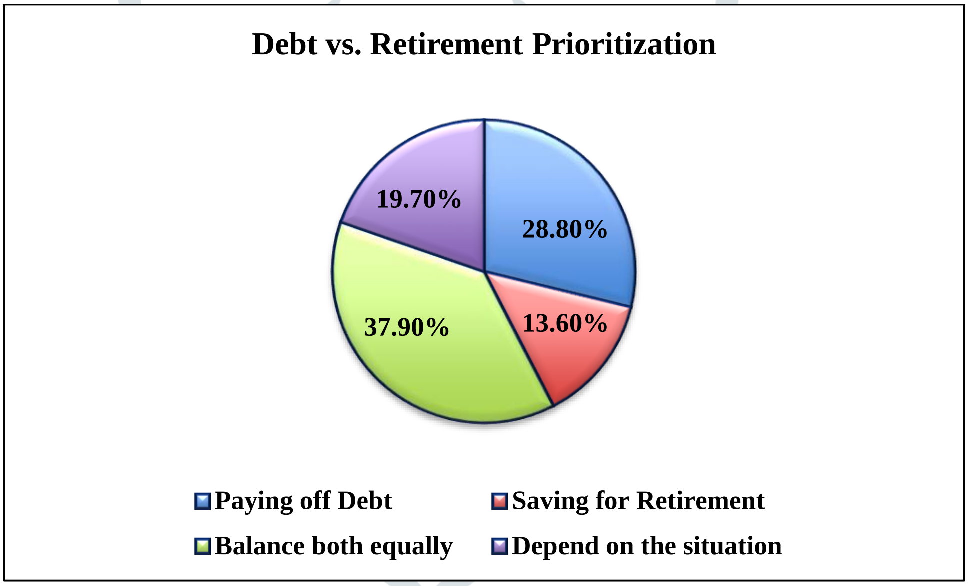
The survey reveals diverse habits in monitoring online retirement savings accounts. A significant portion, 41.0%, rarely checks, while 34.8% opt for monthly checks. Weekly monitoring is undertaken by 19.7%, and a minimal 4.5% check their accounts daily. This distribution highlights a spectrum of engagement levels in managing retirement finances.



The majority, 63.60%, express proactivity in managing debts for retirement preparation, indicating a proactive approach to ensuring financial readiness. However, 36.40% report not being proactive, suggesting a significant portion may need to explore more active debt management strategies to enhance their retirement preparedness.

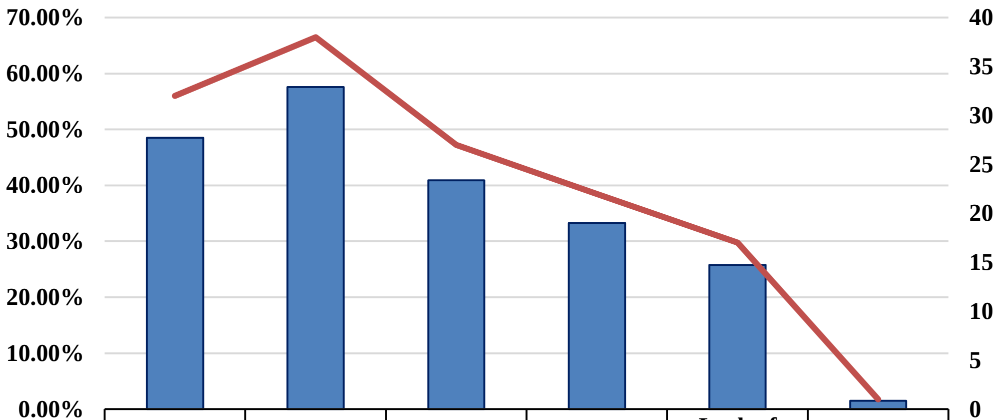


Almost everyone, approximately 92.4% (61 respondent), agrees that proactive debt management has a positive impact on retirement preparedness, indicating a widely held belief. Conversely, a minority, comprising 7.6% (5 respondents), believes that such proactive measures do not have a favourable impact. These results underscore a strong consensus regarding the beneficial relationship between debt management practices and retirement readiness among the surveyed individuals.



The majority of respondents, encompassing 37.9% (25 individuals), prioritize a balanced approach, equally emphasizing both paying off debt and saving for retirement. Following closely, 28.8% (19 respondents) prioritize paying off debt, while 13.6% (9 respondents) prioritize saving for retirement. Additionally, 19.7% (13 respondents) adopt a flexible strategy, depending on the situation. These findings highlight diverse approaches among the surveyed individuals in managing the interplay between debt repayment and retirement savings.

Barriers to Effective Retirement Planning



	Lack of knowledge	Limited Income	Fear of invesment risks	Uncertainty about the future	Lack of access to financial advice	Others
Responses in %	48.50%	57.60%	40.90%	33.30%	25.80%	1.50%
No of Responses	32	38	27	22	17	1

As per the survey findings, respondents pinpointed lack of knowledge (53.70% - 32 responses) and limited income (50.00% - 38 responses) as the foremost barriers to effective retirement planning. The fear of investment risks (42.80% - 27 responses) is also a prominent concern. Additionally, uncertainties about the future (27.80% - 22 responses) and restricted access to financial advice (24.10% - 17 responses) were recognized as noteworthy challenges. Only a minimal 1.90% (1 response) cited other barriers, underscoring the diverse obstacles individuals encounter in navigating successful retirement planning.

The above hypothesis is accepted.

Interpretation: The survey indicating a positive correlation between proactive debt management and enhanced retirement preparedness. The data reveals that a significant majority of respondents (92.4%) believe in the positive impact of proactive debt management on retirement readiness. This widespread consensus suggests that individuals who actively manage their debts are more likely to be well-prepared for retirement. The findings emphasize the importance of incorporating proactive debt management strategies into retirement planning for better financial preparedness.

Conclusion: The survey sheds light on the intricate dynamics of financial literacy in retirement planning under the theme "Age, Risk, and Proactivity." The findings highlight diverse confidence levels and a proactive commitment to financial education. The analysis supports the hypothesis that higher risk tolerance and technological comfort contribute to more strategic decisions in retirement savings. Additionally, a positive correlation between proactive debt management and enhanced retirement preparedness underscores the importance of active debt handling. As age, risk, and proactivity emerge as pivotal factors, the research emphasizes the need for tailored financial education strategies to address these dynamics. These insights provide valuable guidance for individuals, policymakers, and educators navigating the complexities of retirement planning in an ever-evolving financial landscape.

Suggestion:

1**.** Commence your journey toward effective retirement planning by engaging in a comprehensive evaluation of your risk tolerance. Gain a deep understanding of your comfort level with financial risks, and leverage this valuable insight to craft and align a retirement savings strategy that resonates with your financial goals and preferences.

2. Maintain an active and proactive approach to financial education, consistently seeking opportunities to enhance your knowledge in areas such as retirement planning, investments, and financial management. Attend workshops, webinars, or seminars to stay well-informed about the latest industry trends.

3. Give priority to proactive debt management by incorporating regular reviews and strategic planning into your financial routine. This involves assessing and managing debts systematically, potentially with the assistance of professional advice, to establish a solid financial foundation for retirement.

4. Embrace the efficiency offered by technology in monitoring and managing your retirement savings. Explore user-friendly apps, online platforms, and digital tools to gain real-time insights into your financial situation, facilitating more informed and efficient decision-making throughout your retirement planning journey.

References:

1. Sara, S. (n.d.). Exploring Retirement Realities in Bangladesh: Conditions, Challenges, and Cultural Dynamics. *Electronic Research Journal of Social Sciences and Humanities*.
2. Wels, J. (2018, September 5). Assessing the impact of partial early retirement on self-perceived health, depression level and quality of life in Belgium: a longitudinal perspective using the Survey of Health, Ageing and Retirement in Europe (SHARE). *Ageing and Society*, *40*(3), 512–536. https://doi.org/10.1017/s0144686x18001149.
3. Dhal, G. (n.d.). Middle class retirement in India: a qualitative study of active ageing, health, family relationships and quality of life. *University of Surrey*.

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A study on Innovative techniques adopted by Best Bus Services with reference to Chalo Bus app (Mumbai Sub- urban region)

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ABSTRACT

The study endeavored to understand the innovative techniques adopted by Best Bus Services in order to bring out necessary changes into their service pattern. The Advancement in technology and digitalization forced every sector to make use of advance technology in their services which will lead to generate a greater demand and will improve efficiency and productivity of that particular industry. However, after the introduction of the app various changes have been observed and noted too in passengers/commuters' expectations. It is equally very important for commerce industry to understand the needs and expectations of the passengers and try to fulfill them through the best possible way. A survey has been conducted with a random sampling of 60 passengers belonging to the Mumbai suburban region. The findings of the study will help to identify the changes which have occurred after introduction of the bus app.

Key Words: Innovation, Creativity, Advancement, Generation friendly.

Introduction:

Chalo is India's First bus transportation technology company that provides live bus tracking services and contactless payment solutions to transform everyday bus travel into a safer and more reliable experience. The legal name of Chalo is Chalo Mobility Private limited. It is launched in Mumbai in partnership with Brihanmumbai Electric Supply and Transport (BEST) undertaking. Chalo mobile app will let passengers to purchase online tickets and bus pass via an electronic wallet. The Chalo app is free, that allows commuters to track their bus live location and informs them when their bus will reach the destination stop. Passengers expectations matters, because if you can meet them than they are likely to spend more after a positive experience. The Chalo app allows passengers to buy passes which is more convenient than paying cash to the conductor. Along with app they do have a Chalo card, commuters can recharge the Chalo card wallet with any amount from Rs. 10 onwards, in multiple of Rs. 100/- the balance on card never expires.

Why Innovation is important?

- In this era of competition where we can see every sector has achieved and adopted advanced technology in order to retain their customers, clients, passengers and so on.
- That is why innovation in products/ services is a must.
- So that one can continue their activities for a longer period of time.

- Chalo is operating in several Indian cities and plans to expand its network to other cities too.
- Chalo is working with city government across the country, is operational in 31 cities throughout India.
- And live- tracks nearly 15,000 buses daily.

Review of Literature

Gutierrez, Aaron et al (2020) points out the prominent challenges for public transport during the times of COVID 19. The world came to a standstill with the lockdown imposed. Once the initial restrictions were lifted, people started travelling again, but the preference for public transport declined. The major reason for avoiding this mode was the fear of contracting the infection. The fear was obvious, and was bound to impact the psychology of the customer. The innovative technique adopted by Best Bus has improved its service parameter post pandemic.

Rahul N. Wadekar1, K.Y. Shinde2 and Kanwalpreet Kaur Puri3 (2021) Consumer Behaviour Towards Best Bus in Mumbai City Post Lockdown. The Objectives of the Study was 1. To evaluate the change in preference of BEST Bus. 2. To find influence of population strata on preference of BEST Bus post lockdown. Primary data is collected through online questionnaire and secondary data is collected from online material. Non -random convenience sampling. Sample size was 61. Residents of Mumbai City. Data has been collected from total 61 respondents out of which 34 are female respondents and 27 are male respondents. This is a positive aspect for BEST, and in case the people are satisfied, they might opt for the service in the coming days as well. The decrease in preference for services was seen towards educational purpose and sight- seeing.

Ms. Kanwalpreet Kaur Puri, Asst. Professor, JM Patel College, Goregaon West Mr. Sohil Altaf Pirani, Research Scholar, BAMU University (2019), Consumers Perception towards BEST Bus Service in Mumbai City. The main purpose of the study was to identify Consumer's Perception towards travelling by BEST BUS and to Find Out Various Factors That Influences THE PREFERENCE OF TRAVELLING. The Data has been collected through online questionnaire. The Secondary source of data has been collected through Books, Journals and Magazines. Sample size was 75 respondents belonging to Mumbai city. This study also throws light on several factors such as professional drivers, comfort level, cost of ticket, frequency of bus, fixed timings of bus, waiting time etc that correlates to frequencies of travelling by BEST BUS.

Scope of the Study

This study would be undertaken to analyze the innovative changes that have occurred in the service provided by Best Bus services in Mumbai. It would also be helpful to us to understand the factors that has influence passenger's perception towards the bus app.

Research Methodology

It's a specific procedure used to identify, select, process and analyze the information used in the research paper. In order to present the accurate fact. It also helps the researcher to evaluate over all reliability and validity of the research paper. In short research methodology emphasis on systematic way or method of doing research.

Problem of the study: The study is based on innovative techniques adopted by Best Bus Services with reference to its app and what are the problems face by the commuters at the time of operating or using the bus app.

Research Objective:

1. To study the innovative techniques adopted by Best Bus Services.
2. To identify the factors that has influenced passengers towards the use of the Chalo bus app.
3. To analyse how commuter's expectations helps Best bus services to improve further in terms of products and services.
4. To study the limitations of the Chalo bus app.

Hypothesis

In light of the discussion in preceding sections, the following hypotheses are proposed:

- H0: There are no major changes occurred in best bus services after introducing the Chalo app.
- H0: There is a major change occurred in best bus services after introducing the Chalo app.

Research Design

The research design provides guidelines about the data element. The study is based on both primary data and secondary data. The primary data was collected through structured questionnaire for which the sample size was 60 respondents (Bus passengers) were selected from different areas of the city. Secondary data gathered from different database sites; articles and journals written by various authors also referred.

Area of the Study

The study is undertaken in and around the Mumbai city and its suburban areas.

Research Approach

The questionnaire method of survey is used for collecting primary data from commuters belonging to Mumbai region. We appealed all respondents to fill in the questionnaire, by themselves by self- explaining the various aspects mentioned in it. It contained both open ended and close ended questions in the structured form which is very easy to understand at a glance.

Sample Technique

A convenient sample (Probability sampling method) of 60 commuters belonging to Mumbai region shared their information regarding the study. They were requested to complete the questionnaire on voluntary basis. The study was done in January 2024.

Data Usage

The analyses and interpretation are done on the basis of primary data. However, for conclusion and recommendation both primary and secondary data is used along with the verbal knowledge and information obtained from respondents. The data collected from these sources were analysed using tools like chi- squared test methods.

Table- 1: Age, Gender and Occupation Wise Demographic Pattern of Individual Commuter/ Passenger.

Demographic Category of Commuters	Parameters	Number of Representatives	
		Total (60)	**Percentage**
Gender	Male	25	58.3
	Female	35	41.7
	Other	-	-
Age	18-29 YEARS	54	90
	30-44 YEARS	5	8.3
	45-59 YEARS	1	1.7
	60 & ABOVE	-	-
Employment	Student	41	68.3
	Self- Employed	1	1.7
	Private Service	15	25
	Public Service	1	1.7
	Business	1	1.7
	Others	1	1.7

Table- 1: Indicates Demographic categories includes gender, Male- 58.3 and female- 41.7. majority of the respondents belongs to the age criteria from 18-29 years. Employment status 68.3 percent were students, 25 percent belonging to private sector job and other profession includes public sector, self-employed, others and business were 1.7 percent.

Table- 2: Do you think introduction of Chalo Bus app of Best Bus Services is one of the innovative techniques adopted by them?

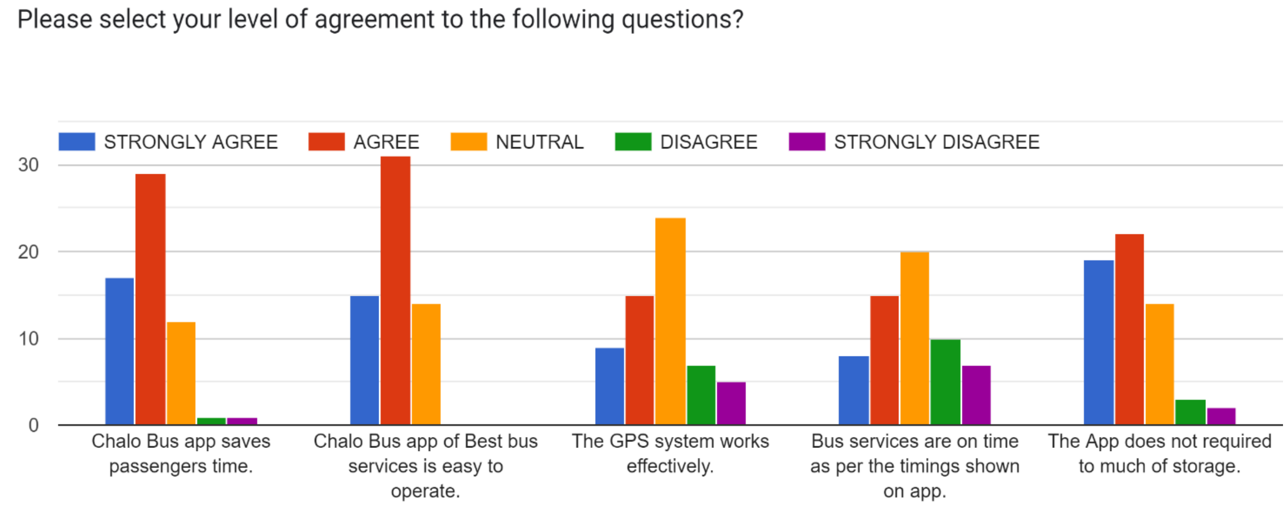
Mode of Preference	Total (60)	Percentage
Yes		65
No		3.3
May Be		31.7

Table 2 Indicates that 65 percent of commuters felt that introduction of Chalo bus app of best bus services is one of the innovative techniques adopted by them, whereas 31.7 holding neutral opinion and 3.3 with the opinion of no.

Table- 3: Do you think Chalo Bus App of Best Bus services has improved their service parameters.

Mode of Preference	Total (60)	Percentage
Yes		50
No		18.3
May Be		38.3

Table 3 highlighted that 50 percent of the commuters think that Chalo Bus app of Best Bus services has improved their service parameters, 18.3 with the opinion of No and 38.3 holding neutral opinion.



Conclusion:

1) It is concluded that passengers want friendly and efficient service at the time of travelling.
2) And not just friendly it should feel like the services has been personalized for them.
3) Focus on retaining the passengers/ commuters rather than losing them.
4) Should come up with even more effective services.

References

https://bbrc.in/wp-content/uploads/2021/05/BBRC_Vol_14_No_05_Special-Issue_05.pdf

Retrieved January 05, 2021https://www.theweek. in/news/biz-tech/2020/11/09/india-likely-to-seebehavioural-change-in-urban-mobility-post-covidpuri.html

Retrieved January 05, 2021 https://theprint.in/india/8- hours-just-to-get-to-from-work-why-despite-openingup-travel-in-mumbai-is-a-nightmare/512182/

Retrieved January 06, 2021 https://www.hindustantimes. com/mumbai-news/public-transport-usage-to-seedecline-after-covid-19-outbreak-ends-study/storyOkwrdWvCfX809fKi6fD6aM.html

file:///C:/Users/c71vd/Downloads/3816-Article%20Text-4749-1-10-20190627.pdf

Kothari, C.R., Garg, G.(2019). Research Methodology Fourth Edition.New Delhi: New Age International Publications

Mohan,S.,Elangovan,R.(2017). Research Methodology In Commerce. New Delhi: Deep And Deep Publications

Sharma,R.D.,Chahal,H.(2004).Research Methodology In Commerce And Management.New Delhi: Anmol Pulications

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

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A Study on Role of E-Commerce in Promoting and Distributing Rural Produce in Indian Market

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Abstract

Wandering into the core of provincial India, where agribusiness is the backbone of networks, this study dives into the ground-breaking capability of web-based business for advancing and selling country items in the Indian market. It portrays the difficulties looked at by neighbourhood makers, the promising accounts of strengthening through internet-based stages, and the vital job of government drives. The study by Jamaluddin, Khan, and Sreeraman Aithal, which shed light on the intricate dynamics of the adoption of e-commerce in the agricultural sector, is the subject of the literature review. Discoveries show the beginning yet significant steps in web-based business reception, challenges faced by country makers, and the positive effect on jobs and the rustic economy. The review closes with bits of knowledge into the cooperative future between online business organizations, the public authority, and homesteads, accentuating the requirement for custom fitting systems and stages. This examination rests on different sources, including government reports, insightful investigations, and genuine stories from country craftsman.

Keywords: Rural India, E-commerce, Agricultural Sector, Empowerment, Government Initiatives, Livelihoods, Challenges, Adoption, Rural Producers, Digitalization, Online Platforms.

Introduction

In the core of rustic India, where horticulture shapes the foundation of networks, a squeezing challenge perseveres: the battle of neighbourhood makers to break into more extensive business sectors because of an absence of promoting outlets, framework, and associations. This obstacle stunts their pay potential as well as upsets large monetary development. Enter the capability of Internet business, an encouraging sign that could change this scene. Picture this: A rancher in a distant town, furnished with a cell phone, displaying the rewards for all the hard work on a web-based stage, associating with clients in clamouring urban communities and even past lines. The commitment lies in the capacity of web-based business to engage these provincial makers, furnishing them with a phase to show their merchandise, draw in a more extensive customers, and secure fair costs. It's not only an exchange; it's an impetus for higher wages, further developed jobs, and the expanding influence of monetary flourishing. This story acquires strength through the genuine accounts of those on the ground, winding around bits of knowledge from government reports, scholarly investigations, and business reports, portraying how web-based business can be the impetus for provincial resurgence.

Literature Review

Mr. N. Jamaluddin a's study, Adoption of E-Commerce Practices among the Indian Farmers, addsto our knowledge of information systems and has management implications for the Indianagricultural sector. How quickly people learn to use modern technologies, like the Internet, is a big part of how technologies change or are brought together. There are a lot of studies about how people use modern technology, but only a few of them look at the agriculture services business. Boththe people who make this technology and the people who use it need to know about the things thataffect the choice of farming technology. This study suggests that the Technology Acceptance Model, which is the basis of a lot of research on the spread of Information Technology (IT), will be more useful if it is combined with specific issues like infrastructure, perception, and trust on the customer side and more basic elements of the security aspects of technology and service on the side of the information providers in the Agriculture sector in India. (Jamaluddin 43)

Indian farmers have a lot of problems with post-harvest loses, and E-commerce could help them find ways to deal with these problems. Indian farmers lose a total of Rs 93,000 crore every year because their infrastructure, technology, and storage spaces are not good enough. E-commerce canhelp farmers deal with these problems by giving them access to a larger market and better prices for their goods. By doing this, farmers will be able to do business over the Internet. Farmers can avoid being cheated by unfair pricing if they use e-commerce platforms to get real-time information about market demand and prices. This helps them make better choices about how to plan their crops and how much to charge for them. This piece also talks about how important technology is for cutting down on waste after harvest. For example, using cold storage facilities can help keep crops from going bad, and using mobile apps can help farmers keep track of their output and make sure it gets supplied on time.

For the Indian agriculture business to fix the problems it is having right now, there needs to be more cooperation between e-commerce companies, the government, and farms. It looks like e- commerce could help farmers reach a bigger market at better prices, which would help the agriculture business grow and improve. (Khan 1)

The study "A Study on Challenges Faced by Farmers Using E-Commerce in Agriculture: A Surveyof Thrissur District in the State of Kerala, India" looks at the problems that country farmers face when they try to use the internet to market and sell their goods. This work is in the International Journal of Case Studies in Business, Information Technology, and Education, which is reviewed by experts in the field. Smallholder farmers in India's farming business find it hard to use e- commerce for a number of reasons. The goals of the study are to find out how far along rural agriculture is in adopting e-commerce, what stops rural farmers from using e-commerce sites, andhow e-commerce affects the incomes of rural farmers and the rural economy. For the study, interviews were done with two hundred farmers in the Thrissur area of the Indian state of Kerala. Most farmers in the area have smartphones and access to the internet, but only a small number, according to the data, sell their goods on e-commerce websites. According to the study, farmers do not use e-commerce as extensively as they could since they do not know how to use the internet, there is insufficient infrastructure, and they are skeptical of online deals. The study also talks abouthow crucial it is for the government to back and pass laws that make it easier for farmers to do business online. There needs to be a lot of control and help for farmers to use e-commerce. (Sreeraman Aithal 2, para.

Objectives

1. To identify the current state of e-commerce adoption in the rural agricultural sector in India.
2. To examine the challenges faced by rural producers in accessing e-commerce platforms for promoting and distributing their products.
3. To analyse the impact of e-commerce on the livelihoods of rural entrepreneurs and the rural economy.
4. To investigate the role of government policies and initiatives in promoting e-commerce adoptionin the rural business sector.
5. To suggest strategies for enhancing the adoption and effective use of e-commerce by rural farmers for promoting and distributing their produce.

Research Methodology

The essential objective of this venture is to figure out how well rustic items can be advanced and sold in the Indian market by utilizing online business. The study primarily relies on secondary data collection and employs exploratory and qualitative research methods. The exploration includes a broad writing survey from articles, diaries, sites, and news sources to grasp the upsides and downsides of web-based business for rustic makers, its effect on provincial living, and its true capacity for advancing country products. The information is obtained from legitimate papers, web sources, research reports, and meetings on stages like YouTube. Nonetheless, restrictions incorporate an absence of continuous information, restricted inclusion addressing explicit districts, and the shortfall of essential examination, prompting a few dependences on suspicions and expected varieties in perceptions over the long haul.

Findings

Findings based on the research objectives derived from secondary research are:

1. The adoption of e-commerce in the rural agricultural sector in India is still in its early stages. However, there has been a significant increase in e-commerce adoption in recent years, which indicates a positive trend towards the use of e-commerce in the rural sector.

2. Rural producers face various challenges in accessing e-commerce platforms, such as lack of infrastructure, limited access to technology, and low levels of digital literacy. These challenges hinder their ability to promote and distribute their products effectively.

3. E-commerce has had a positive impact on the livelihoods of rural entrepreneurs and the rural economy. It has allowed them to reach a wider market, increase their sales, and improvetheir incomes. E-commerce has also created new employment opportunities and has contributed to the overall growth of the rural economy.

4. Government policies and initiatives play a crucial role in promoting e-commerce adoption in the rural business sector. Initiatives such as “Digital India” and “Startup India” have helped to create a supportive ecosystem for e-commerce adoption in the rural sector. However, there is a need for more targeted policies and initiatives to address the specific challenges faced by rural producers.

5. To enhance the adoption and effective use of e-commerce by rural farmers, strategies such as improving digital literacy, providing access to technology, and developing rural infrastructure are necessary. Additionally, there is a need for the development of specialized e-commerce platformsthat cater to the needs of rural producers. Overall, the promotion and adoption of e-commerce cansignificantly benefit the rural agricultural sector in India.

Conclusion

1. Ecommerce is still A new sector for rural producers they are still trying to cope up with the digitalization from the research we come to know that big brands like Amazon and Flipkart can come up with initiatives it would be helpful for the rural producers and farmers to educate themselves about the ecommerce system.

2. Even though there is a very good penetration of Internet throughout India there are still some places in India where Internet connectivity has not yet reached. Moreover, even if there is connectivity rural India is unable to make optimum use of it for their businesses hence there is a lack of infrastructure and digital education within the rural business.

3. It is evident that whenever urban companies have held hands of these rural entrepreneurs their businesses have flourished, and they have taken advantage of economies of scale. To take an example we see how Tata's initiative of Okhai has helped tribal women to keep the year-old traditions of weaving knitting stitching and other Rural talents alive. Similarly, we see a lot of examples throughout the research.

4. It is seen that government has taken initiatives for these rural entrepreneurs coming up with different schemes and financial aids helping them to educate themselves and scale up their businesses internationally.

5. We see that a lot of FPC and FPO buy produce from farmers but there are limitations to it. Sincethe produce goes under a quality check not every farmer's produce is not bought if it fails the quality control tests. Hence Just like these FPO's there is a need of an ecommerce platform wherefarmers can at least supply dry produces directly to the consumers without the interference of anymiddleman. Not just this but also the rural artisans who are very underpaid for their extremely good skills will have a platform where they can showcase their talents and demand a fair price fortheir efforts.

Such ecommerce platforms will also help them with the logistic system and the payment gatewayshence encouraging them increasingly to go digital. This will make the unorganized sector moreorganized and make in India a successful mission.

Scope

- The study is confined to a handful articles and journals.
- As there was no access to any such rural producers to talk about, the research is fully basedon secondary data, few assumptions and YouTube information.

Limitation

Lack of real time data: Since the research paper and journals are not of recent dates they speak in future and part tenses. No primary research was conducted due to time constraints and lack of contact with rural producers and farmers.

Limited coverage: The research papers and articles speak only for specific parts of the country and not of India as whole. Few assumptions are made which might be true or untrue.

Lack of control on quality: The study only examines existing literature and up-to-date news articlesand reports. Hence the authenticity of the reports used cannot be guaranteed. There were no actualinterviews or primary research conducted. so, the observations might have a slight change as per thechanging times.

Bibliography

1. *The Ministry of Agriculture and Farmers' Welfare, National Institute of AgriculturalEconomics and Policy Research (NIAP),*

2. *the Food and Agriculture Organization of the United Nations (FAO)*

3. *"Empowering Farmers Through E-Commerce in India: Opportunities and Challenges" byJain and Singh*

4. *The research article "E-Commerce for Rural Livelihood: An Empirical Study in India" byShukla and Shukla (2020)*

5. *"E-commerce and Rural Livelihoods in India: A Study of Farmer Producers'Organizations in Two States" by Dubey, A., & Arora, S. (2021)*

6. *"E-commerce and Rural Livelihoods in India: A Study of Farmer Producers'Organizations in Two States" by Dubey and Arora, published in 2021.*

7. *"Empowering Rural Women through E-commerce: A Study on the Impact of Amazon Saheliin India" by Dey et al. (2021)*

8. *"Assessing the Impact of E-commerce on Rural Artisans: A Case Study of India" by Singhand Rai (2021) along with statistical data*

9. *The research paper "E-commerce as a Tool for Empowering Rural Women: A Case Study of ShoppinPal in India" by Panigrahi and Patnaik (2020)*

10. *A Study on Challenges Faced by Farmers Using E-Commerce in Agriculture - A Survey of Thrissur District in the State of Kerala, India Shibi B.1 & P. S. Aithal 2 1 Post-Doctoral Fellow, Srinivas University, International Journal of Case Studies in Business, IT, and Education (IJCSBE), ISSN: 2581-6942, Vol. 6, No. 2, November 2022*

11. *Ecommerce for Economic Empowerment of Women: Challenges and Strategic Interventions Dr.K.Suneetha [VOLUME 6 I ISSUE 2 I APRIL – JUNE 2019] e ISSN 2348 –1269,Print ISSN 2349-5138 May 22, 2019*

bliography:

12. *https://www.tilonia.com/*

13. *https://worldartcommunity.com/shops/kalaaplanet/*

14. *http://www.gramshree.net/*

15. *https://www.lijjat.com/under-construction*

16. *https://sell.amazon.in/grow-your-business/amazon-saheli*

17. *https://economictimes.indiatimes.com/small-biz/sme-sector/indian-farmers-face-rs- 93000-cr-post-harvest-loss-e-commerce-can-address-such-pressing- challenges/articleshow/77558911.cms?from=mdr*

18. *Nashik's Sahyadri Farms turns grapes of wrath to export cup of gold. Farmers aremillionaires , https://modelgaon.org/en/fpc-fpo/*

19. *https://www.aboutamazon.in/news/small-business/saheli-a-friend-in-need-for-women-entrepreneurs*

20. *https://www.instamojo.com/blog/ecommerce-for-rural-artisan-community-brand-story*

21. *https://economictimes.indiatimes.com/industry/services/retail/e-commerce-boost-for-200- rural-products/articleshow/70424027.cms?from=mdr*

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The Impact of Artificial Intelligence (A.I) on Advertising

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ABSTRACT :

This research delves into the transformative impact of Artificial Intelligence (AI) on advertising. Focusing on user engagement, personalization, and the influence of AI on purchasing decisions, the study explores the dynamic intersection of technology and marketing strategies. Findings indicate a positive trend, with a significant majority recognizing the effectiveness of AI-driven advertising. This abstract encapsulates the multifaceted exploration of AI's role in shaping the future of advertising strategies, contributing valuable insights to the ongoing discourse on the digital evolution of marketing.

INTRODUCTION :

In the dynamic landscape of contemporary marketing, the integration of Artificial Intelligence (AI) has emerged as a transformative force, reshaping the way advertisers conceptualize, create, and deliver campaigns. AI technologies have infiltrated every facet of the advertising ecosystem, offering unparalleled opportunities for precision targeting, personalized content delivery, and data-driven decision-making. This research paper seeks to explore the multifaceted influence of AI on advertising, examining its profound implications on campaign effectiveness, user engagement, and the overall evolution of marketing strategies.

OBJECTIVES :

- Gauge the level of awareness and knowledge among users regarding the presence and impact of AI in advertising.
- Investigate and analyze user perceptions of AI-driven advertising to understand how individuals view and interact with personalized content.
- Examine whether AI-driven advertising influences user behavior, including purchasing decisions, brand perceptions, and overall engagement with advertised content.

LITERATURE REVIEW :

Abid Haleem in his research on Artificial intelligence application for marketing published on August,2022 focuses on 3 main learning's :

4.1 Specific utilities of artificial intelligence in various marketing segments.

The author highlights the significant role of AI and machine learning in marketing, emphasizing its impact on customer experience, targeted advertising, and overall efficiency. It discusses how AI aids in automating processes, reducing human error, and enabling personalized marketing strategies. The use of AI in market research, segmentation, and predictive analytics is emphasized, along with its application in conversational search queries and social media engagement. Challenges such as the need for extensive data and collaboration with third-party organizations for data management are also addressed. The evolving nature of AI technology and its parallel growth with big data are highlighted, concluding with a mention of AI's ability to analyze large datasets for insights and its applications in catboats and personality prediction.

4.2 Various AI-based transformations for marketing sectors.

The author here underscores AI's crucial role in transforming marketing strategies, from trend identification to budget allocation. It highlights AI's impact across all phases of marketing campaigns, aiding in content generation, security testing, and decision transparency. The text emphasizes the democratization of AI for small and medium-sized businesses, its dynamic evolution in neural networks, and its ability to process large datasets. AI's role in targeted advertising, deep learning for self-learning systems, and the changing landscape of how people search online is discussed. The passage concludes by acknowledging AI's influence on traditional marketing, its integration with the Internet of Things for enhanced data handling, and its anticipated impact on data transparency and security. It also recognizes AI's optimization of email campaigns and its broader applications in automation, data analytics, and natural language processing across industries.

4.3 Artificial intelligence applications for marketing

Here he has highlighted diverse applications of AI in marketing across industries, emphasizing its impact on campaign performance, customer experience, and operational efficiency. Programmatic advertising, powered by AI and machine learning, addresses challenges and reduces errors in marketing processes. The technology accelerates marketing campaigns, cuts costs, and enhances efficiency, leading to a higher return on investment. Real-time analytics enables data-driven decision-making during campaigns. AI applications in marketing, such as covering digital marketing, error reduction, business process connectivity, massive data analysis, personalized content delivery, customer support, marketing automation, workload reduction, customer-centric decision-making, and more. AI-driven insights contribute to better customer experiences, increased satisfaction, and revenue growth.

RESEARCH METHODOLOGY

This is a research project combining primary and secondary. Primary data was collected through surveys using quota sampling to select a sample of respondents. Meanwhile, secondary data was obtained by analyzing numerous research articles on the Internet.

Primary data

- Questionnaire

Secondary data

- Internet
- Research Paper

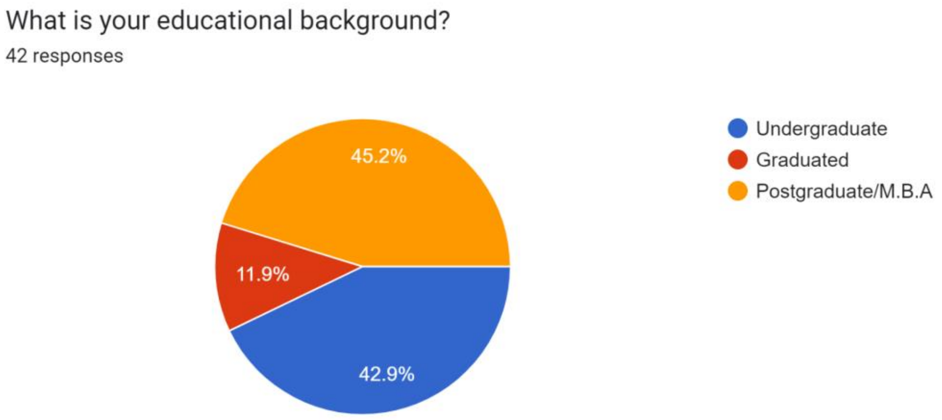
Data Collection and Analysis

Below are given responses of random people of different educational background to understand consumer base of A.I

This survey was attended by 42 random consumers and all the said participants were technologically sound.

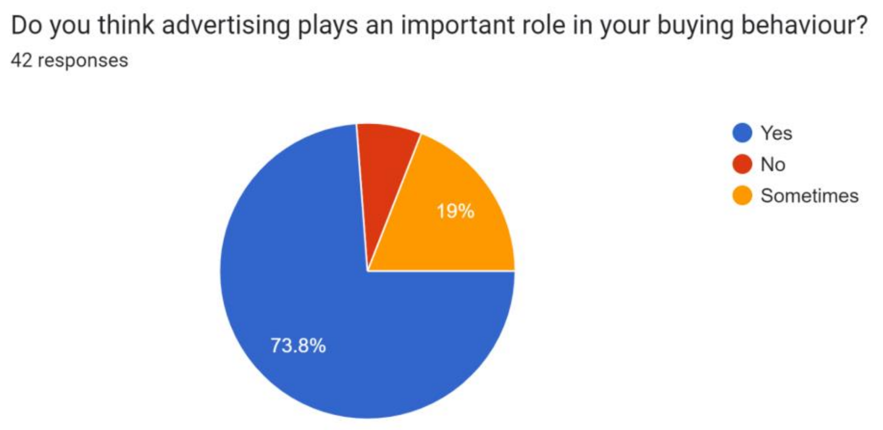
Questions

Fig 5.1



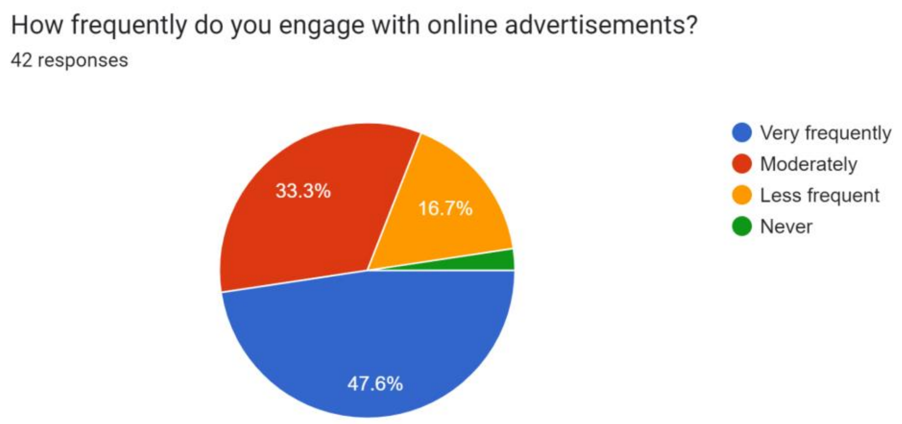
In the survey around 45.2% of respondents were undergraduate,while 42.9% of respondents were postgraduate/M.B.A and only 11.9% graduated. This states the basic educational background to set a base of the survey.

Fig 5.2



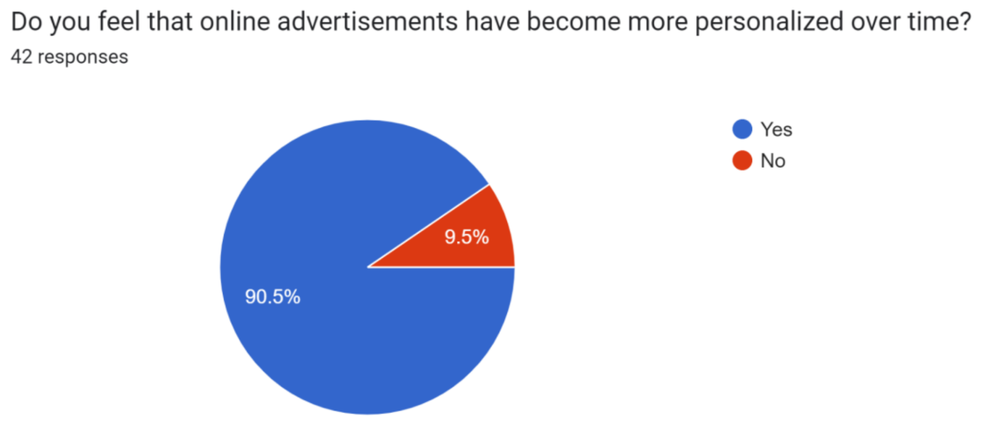
73.8% respondents agree that their buying behavior is highly influenced by advertising, while 19% think that in some specific cases the rest doesn't get affected by advertising of a brand.

Fig 5.3



With over half (47.6%) reporting very frequent involvement, the audience is clearly sizable and actively engaged. A significant percentage (33.3%) interacts moderately, whilst 16.7% interact less frequently. A small portion of respondents said they never engaged, highlighting the significance of comprehending the elements that contribute to disengagement in order to specifically improve advertising tactics.

Fig 5.4



The survey results overwhelmingly indicate a positive perception among participants, with 90.5% believing that online advertisements have become more personalized over time. This majority endorsement suggests a general acknowledgment of the industry's strides in tailoring content to individual preferences. Conversely, a small but noteworthy 9.5% feel that online ads have not witnessed enhanced personalization. Understanding the perspectives of this minority can offer valuable insights into potential areas for improvement in the effectiveness and perception of personalized advertising strategies.

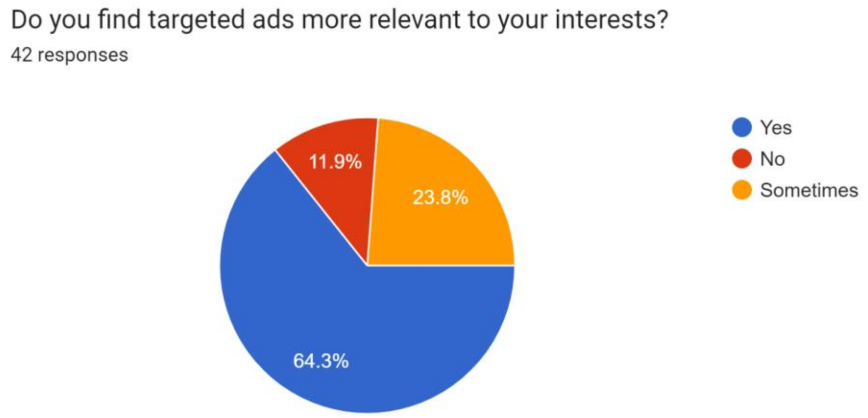
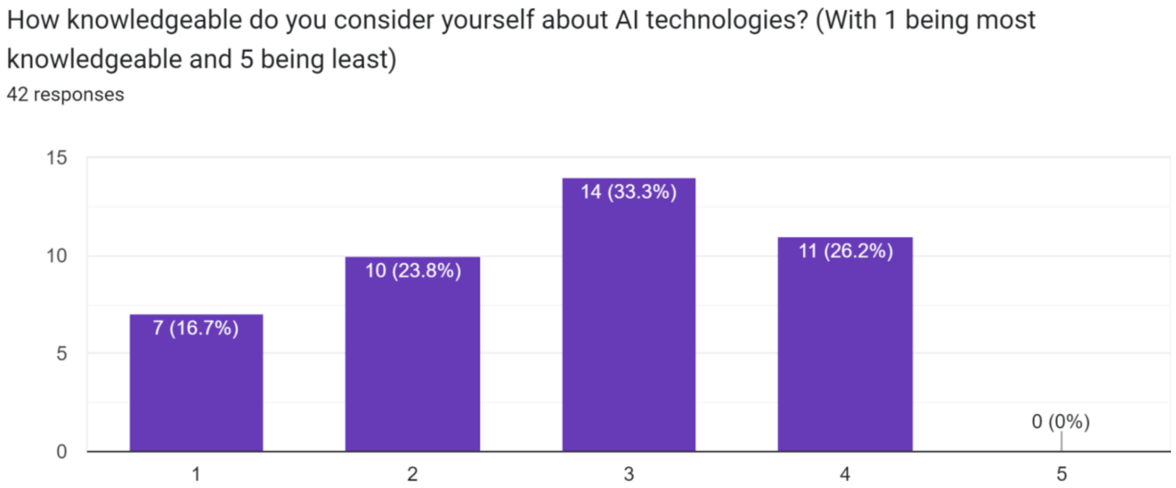


Fig 5.5Results reveal that a substantial portion of respondents, 64.3%, find targeted ads more relevant to their interests. This indicates a positive correlation between effective targeting strategies and user engagement. However, a notable 11.9% expressed dissatisfaction, suggesting that there is room for improvement in tailoring ads to certain segments. The "Sometimes" response from 23.8% emphasizes the nuanced nature of user preferences, indicating that while targeted ads are generally relevant, occasional discrepancies exist.

Fig 5.6



A diverse range of self-perceived knowledge levels about AI technologies among respondents. The distribution is as follows: 16.7% consider themselves most knowledgeable (rated as 1), 23.8% as very knowledgeable (rated as 2), 33.3% as moderately knowledgeable (rated as 3), 26.2% as less knowledgeable (rated as 4), and notably, none rated themselves as the least knowledgeable (rated as 5). This indicates a generally positive self-assessment in terms of AI knowledge, with a majority positioning themselves within the knowledgeable to moderately knowledgeable range.

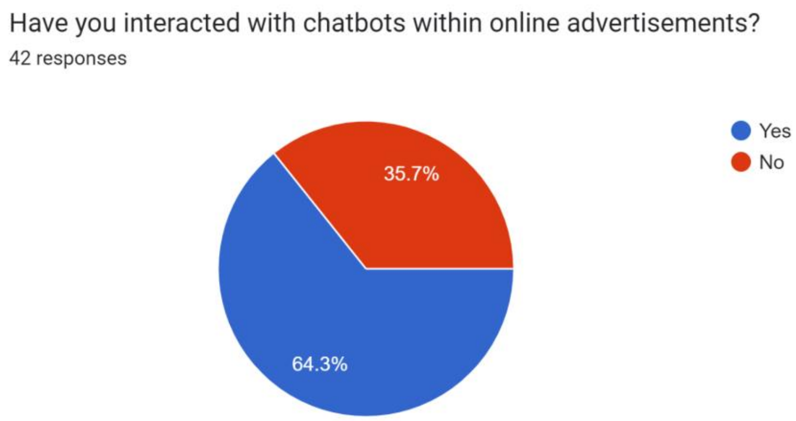
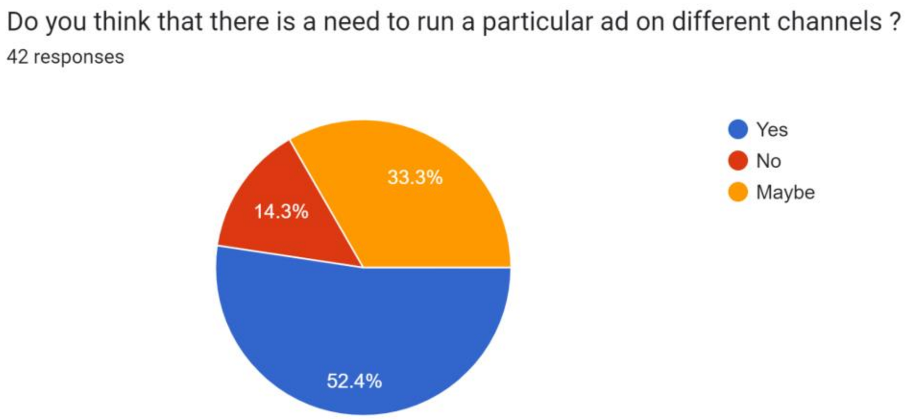


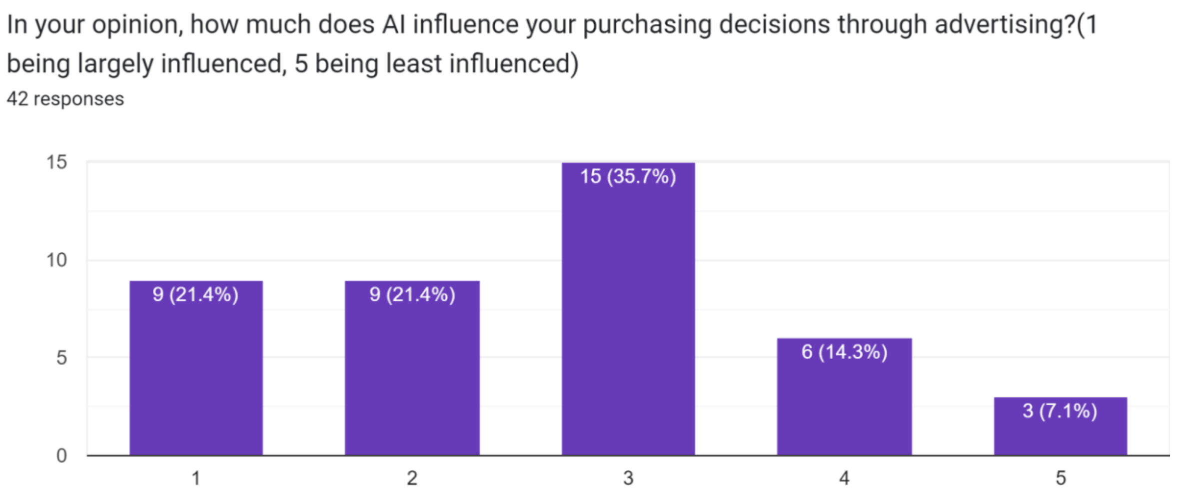
Fig 5.7 The results indicate that a majority of respondents, 64.3%, have interacted with chatbots within online advertisements, while 35.7% have not. This suggests a significant level of user engagement with this AI-driven technology in the context of online advertising. The positive response aligns with the growing utilization of chatbots as interactive tools in digital marketing strategies.

Fig 5.8



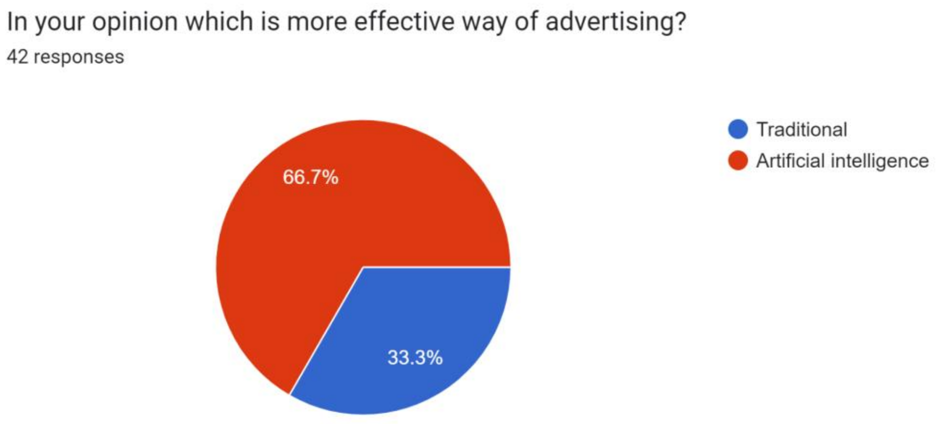
Most respondents (52.4%) believe it's necessary to run a particular ad on different channels for effective reach, while 14.3% disagree. The "Maybe" response from 33.3% suggests a nuanced view, recognizing that the decision may depend on specific contextual factors and the nature of the advertising content.

Fig 5.9



According to the survey results, participants provided varying opinions on how much AI influences their purchasing decisions through advertising. The breakdown is as follows: 21.4% feel largely influenced (rated as 1), another 21.4% indicate a significant influence (rated as 2), 35.7% consider themselves moderately influenced (rated as 3), 14.3% feel less influenced (rated as 4), and 7.1% believe AI has the least impact on their purchasing decisions (rated as 5). This diverse range of responses highlights the nuanced role of AI in influencing consumer behavior through advertising.

Fig 5.10



As per the survey results, a significant majority of participants (66.7%) believe that Artificial Intelligence is a more effective way of advertising, while 33.3% express a preference for traditional advertising methods. This indicates a strong inclination toward recognizing the efficacy of AI-driven approaches in the contemporary advertising landscape.

6.CONCLUSION

This research explores the profound impact of Artificial Intelligence (AI) on advertising, emphasizing its transformative role in enhancing personalization, optimizing resource allocation, and revolutionizing user experiences in the digital landscape. The study covers diverse aspects such as user engagement with online ads, perceptions of personalization, and the influence of AI on purchasing decisions. Key findings indicate a positive trend with a majority acknowledging the effectiveness of AI-driven advertising. The research provides valuable insights into user behaviors, preferences, and the evolving dynamics of advertising strategies in the context of AI, contributing to the ongoing discourse on the future of marketing in the digital age.

7.BIBLIOGRAPHY/REFERENCE

(August,2022) Abid Haleem , Mohd Javaid , Mohd Asim Qadri , Ravi Pratap Singh , Rajiv Suman.

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A STUDY ON EVALUATING THE IMPACT OF ICICI BANK'S CSR ACTIVITIES ON OVERALL SOCIETY DEVELOPMENT

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Abstract:

The advancement of society is essential for raising living standards, stimulating the economy, and promoting social peace. It promotes human potential, environmental sustainability, and equitable opportunity, all contributing to a thriving community. Along with improving lives, this overall development of society increases global competitiveness and builds a sustainable future for future generations. CSR initiatives have the power to advance society by fostering social equality, economic growth, environmental sustainability, and better lives via responsible business activities and relationships. The technique used in this study is the Wilcoxon one-sample signed rank test. The findings of the study indicated that Education enhancement, Healthcare support, Women empowerment, Rural development, Diversity and inclusion, public health campaigns, Poverty alleviation, Support for different abled, Promotion of local sports, Job creation, Infrastructure development and Access to clean water are high impact factors of ICICI BANK's CSR activities on the overall development of the society.

Keywords: *Wilcoxon one-sample signed rank test, CSR, ICICI Bank*

Introduction:

The continuous commercial operations of businesses impact the social and environmental resources to achieve the key goals of sustainability and profit-making for organizations. As a result of organizations' attempts to strike a balance between the demands of the economy, society, and environment, corporate social responsibility, or CSR, has become crucial (Schwartz & Carroll, 2003; Maon, 2009). Therefore, CSR may be characterized as an organization's actions that go above and beyond the constitution's requirements for the good of society (Garriga & Melé 2004). It highlights the ethical responsibility that organizations have to the environment and society. Bowen (1953) described CSR as "the obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of our society's goals and values." Drucker (1954) broadens the concept's scope to include "it has to consider whether the action is likely to promote the public good, to advance the basic beliefs of our society, to contribute to its stability, strength, and harmony". Carroll (1979) put it this way: "The social responsibility of the business encompasses economic, legal, ethical, and discretionary expectations that society has organisations at a given time". "Companies should only be obligated to maximise their profit within the boundaries of the law and minimal ethical constraints," stated Friedman (1970), providing an altogether different explanation of CSR. Several scholars have conceived CSR as a magic bullet that connects the world's social and environmental problems to the general public. Undoubtedly, CSR is an ethical duty; but companies are also subject to social and environmental pressures from the community. Considering that organisations are highlighting the notion of CSR and reacting to such pressure (Bénabou & Tirole, 2009).

CSR and ethics are becoming more and more popular in the business world. This is especially the case in the banking industry, where they are seen as important instruments for interacting with the community. Dhingra and Mittal (2014) observed irregular CSR disclosure in Indian financial institutions, with just a small number of banks adhering to suggested practices. Several banks showed a careless attitude towards socio-environmental concerns, emphasising haphazard projects above the integration of CSR with operational procedures. The Reserve Bank of India appropriately released the "moral suasion" policy for banks on CSR, considering their potential environmental responsibilities. With a focus on initiatives like “poverty eradication, health and medical care, rural area development, self-employment training and financial literacy training, infrastructure development, education, and environmental protection,” among other things, the CSR in the Indian banking sector aims to provide financial services to the unbanked or underlapped areas of the nation and promote the nation's socioeconomic development. Under the heading of "corporate social responsibility, sustainable development, and non-financial reporting roles of banks," the Reserve Bank of India (RBI) released a notice on December 20, 2007, emphasising the role that banks play in CSR. The Reserve Bank of India emphasised the importance of CSR in 2011 and recommended that banks include social and environmental considerations into their commercial operations to promote sustainable growth. The RBI also announced the launch of Non-Financial Reporting (NFR), which would encompass all bank initiatives aimed at improving the social, economic, and environmental landscape. (Gourav, 2017).

This study, which evaluates the influence of ICICI Bank's CSR initiatives, is extremely important for comprehending the concrete consequences of CSR on the advancement of society. Analysing the individual projects and their results offers a useful perspective on how the efforts of a large financial institution support community development. Such study clarifies the efficacy of CSR programmes and provides other firms looking to integrate their commercial goals with social welfare with insightful lessons and benchmarks. Comprehending the immediate consequences of ICICI Bank's endeavours will aid in determining how corporate involvement might propel comprehensive social advancement, establishing a standard for conscientious corporate conduct in the financial industry.

Review of Literature:

1. **Ashok, Kumar, Patel. (2022).** The study investigated the relationship between CSR initiatives and financial performance using publicly accessible data on CSR activities carried out by significant Indian banks. The study's main goal was to find out how CSR activities affect a bank's reputation and goodwill, which in turn affects its overall performance and financial results. According to the research, an increasing amount of corporate social responsibility (CSR) activity is taking place in Indian banks, and these efforts are linked to both financial performance and a bank's goodwill and brand image. According to the study, these CSR efforts considerably increased the value that banks provided to society and produced observable financial gains. The results indicate that companies benefit monetarily from their philanthropic activities because they add more value to society. These observations indicate possible advantages other service-oriented companies would have if they adopted comparable corporate social responsibility initiatives.

2. **Pushpa, Suryavanshi. (2020).** This study aimed to evaluate and contrast the services provided by government sector banks and ICICI Bank, a well-known private sector bank. In order to illustrate the advantages of private banking institutions in India's financial environment, the goal was to evaluate how well ICICI Bank's services met the varied demands of its clients in comparison to those of government banks. The results showed that in comparison to government banks, ICICI Bank provided a wider range of services as a private sector organisation. The research emphasised the competitive edge that private banks has in offering a wider range of effective and efficient services, successfully meeting the changing demands of their clientele. This highlighted how important it is for private banks like ICICI to provide stable, customer-focused banking products in order to support a more competitive and customer-focused banking industry.

3. **Laxmi, Rani. (2020).** This study aimed to investigate the idea of "green banking" in relation to the environmental effects of the banking sector. The study specifically examined how green banking products are implemented in the banking industry, emphasizing assessing the green banking activities carried out by SBI and ICICI Banks in India. According to the study, SBI and ICICI Banks have effectively launched green banking programs. These programs aimed to lessen their enterprises' internal and external carbon footprints. Both banks showed that they were taking proactive steps to reduce the environmental effect of their banking operations by implementing green banking products and initiatives. This demonstrates their dedication to environmentally friendly operations and represents their part in supporting environmental preservation in India's banking industry.

4. **Mohammad, Saleh, et al. (2020).** The study aimed to draw attention to the Corporate Social Responsibility (CSR) disclosures that Indian banks made during the fiscal years 2014–15 and 2016–17. It was especially concerned with assessing the social projects that Indian banks supported, such as public health, sanitation, employment creation, basic education, and rural development. The study's findings provided several new perspectives on how Indian banks spent during the designated time on corporate social responsibility. Notably, the increase of the necessary CSR spending decreased by a compound rate of 7.70 percent. At the same time, there was a recorded 8.39% drop in real CSR spending. Nevertheless, throughout the course of the study, the aggregate amount spent on CSR by all sample banks grew by a compound growth rate of 22.60 percent. Furthermore, a noteworthy rise of 21.80 percent was seen in the compound growth of CSR expenditure across all sectors when analysing spending across different industries.

5. **V.P.Vignesh, et al. (2017).** This study aimed to examine the corporate social responsibility (CSR) initiatives of ICICI Bank, a leading private sector bank in India, over a five-year period. The study also sought to explore how the bank's CSR activities have evolved and highlight the various initiatives it has undertaken outside of its core banking services. The analysis results demonstrated a steady rise in ICICI

Bank's CSR engagement over the five-year period. The data presented various CSR endeavours, including "educational programs, healthcare initiatives, environmental sustainability projects, and community development initiatives." These results underscored the bank's growing dedication to societal welfare and its integration of CSR principles into its business strategies, surpassing mere philanthropic endeavors.

6. **Vinayak, Patil., et al. (2017).** This research examined several viewpoints on CSR initiatives and the effects they have on society critically. The objective was to investigate the developing pattern of companies integrating corporate social responsibility (CSR) tactics into their commercial operations. The research showed that there has been a noticeable increase in the adoption of CSR initiatives by businesses worldwide in recent years. Companies are using corporate social responsibility (CSR) more and more to encourage sustainability and accountability in response to demands from the public, investors, and customers. This tendency is further supported by government guidelines that support the incorporation of CSR frameworks into business vision, purpose, and strategic planning. In particular, the study highlights the potential benefits of broad corporate social responsibility (CSR) programs in the context of rural development. It also highlights the potential for responsible business practices to lead to societal advancement and improved business operations.

7. **Anita, & Ashok, (2016).** The research examined how financial organizations, especially banks, integrate social and environmental problems into their daily operations to understand better how they assist sustainable development. The primary objective of the research was to investigate the corporate social responsibility (CSR) practices of Indian banks and the extent to which these initiatives align with the triple bottom line of profit, planet, and people. The importance of financial institutions—banks in particular—using their CSR activities to support sustainable development was underlined in the study. It brought to light the deliberate integration of social and environmental factors into the decision-making processes of banks.

8. **K., S., Rangasamy. (2015).** This study aimed to examine how ICICI Bank has changed its participation in CSR beyond traditional banking services by analyzing its efforts over a five-year period. The principal aim was to comprehend the bank's growing participation in corporate social responsibility endeavors and the resulting effects on the well-being of society. Over the course of the five years, the study found that ICICI Bank's involvement in CSR projects was clearly on the rise. It featured various projects, including community development, worker welfare, and moral corporate conduct. These results highlighted the bank's proactive dedication to social welfare, proving that CSR is essential beyond traditional banking services.

Objective of the Study:

1. To analyze the impact of ICICI Bank’s CSR activities on overall society development.

2. To give appropriate suggestions to refine their CSR strategies and focus more towards potential areas for improvement.

Hypothesis:

H_0: The impact of ICICI Bank’s CSR activities on overall society development is insignificant (Median = 3)

H_1: The impact of ICICI Bank’s CSR activities on overall society development is significant (Median ≠ 3)

Research Methodology:

Data collection: Both Primary and secondary data

Sample size: 130 NGO representatives

Sampling Technique: Non-probability purposive sampling

Statistical Technique: Non-parametric One Sample Wilcoxon Sign Rank Test. (The Non-parametric One Sample Wilcoxon Sign Rank Test is a statistical method employed to assess if a sample's median significantly differs from a hypothesized population median.)

Statistical tool: SPSS 26

Table No: 1 Demographic Profile of the Respondents

Variables	Category	Frequency	Percentage
Gender	Male	70	54.00
	Female	60	46.00
Age	20 – 30 years	40	31.00
	31 – 40 years	50	38.00
	41 – 50 years	30	23.00
	50 years and above	10	8.00
Educational Background	HSC	10	8.00
	Graduate	60	46.00
	Post-Graduate	50	38.00
	PhD/Doctorate	10	8.00
Years of Experience in NGO Sector	Less than 2 years	20	15.00
	2-5 years	40	31.00
	6-10 years	40	31.00
	More than 10 years	30	23.00

Data was collected from 130 NGO representatives, out of which 70 (54%) were male and 60 (46%) were female. Of these, 40 respondents (31%) were between the ages of 20 and 30, and 50 (38%), were between the ages of 31 and 40. Regarding educational background, 60 people (46%), 50 (38%) and 10 (8%), respectively, received Bachelor's, Master's, and Doctorate degrees. Twenty respondents (15%) had less than two years' experience in the NGO sector, forty had two to five years' experience (31%), forty had six to ten years' experience (31%), and thirty had more than ten years' experience (23%). This wide range of demographic representation guarantees a thorough comprehension of the many viewpoints and experiences found in the NGO sector.

Data Analysis and Interpretation:

Table No: 2 One Sample Wilcoxon signed ranked test

Impact of ICICI BANK's CSR activities on overall development of the society.	Observed Median	P – value
Education enhancement	4	0.000
Healthcare support	4	0.000
Women empowerment	4	0.000
Rural development	4	0.000
Diversity and inclusion	5	0.000
Public health campaigns	4	0.000
Poverty alleviation	5	0.001
Support for different abled	4	0.000
Promotion of local sports	5	0.000
Job creation	4	0.031
Infrastructure development	5	0.000
Access to clean water	5	0.000

Non-parametric one-sample Wilcoxon signed ranked test is applied to evaluate the impact of ICICI BANK's CSR activities on the overall development of the society. It is seen that p-value < 0.05, Education enhancement, Healthcare support, Women empowerment, Rural development, Diversity and inclusion, Public health campaigns, Poverty alleviation, Support for different abled, Promotion of local sports, Job creation, Infrastructure development and Access to clean water are high impact factors of ICICI BANK's CSR activities on overall development of the society.

Table No: 3 Summary of Hypothesis

Alternate Hypothesis	Result
Ha1: The median of Education enhancement not equals 3	**Supported**
Ha2: The median Healthcare support not equals 3	**Supported**
Ha3: The median of Women empowerment not equals 3	**Supported**
Ha4: The median of Rural development not equals 3	**Supported**
Ha5: The median of Diversity and inclusion not equals 3	**Supported**
Ha6: The median of Public health campaigns not equals 3	**Supported**
Ha7: The median of Poverty alleviation not equals 3	**Supported**
Ha8: The median of Support for different abled not equals 3	**Supported**
Ha9: The median of Promotion of local sports not equals 3	**Supported**
Ha10: The median of Job creation not equals 3	**Supported**
Ha11: The median of Infrastructure development not equals 3	**Supported**
Ha12: The median of Access to clean water not equals 3	**Supported**

Conclusion:

The evaluation of ICICI Bank's corporate social responsibility endeavours produced remarkable revelations about their influence on the advancement of society. Many aspects were identified as critical to the overall advancement; statistically significant effects were noted in the areas of public health campaigns, poverty alleviation, support for individuals with disabilities, women's empowerment, rural development, diversity and inclusion, education improvement, healthcare support, job creation, infrastructure development, and clean water access. These results highlight the important role that ICICI Bank's CSR initiatives play in promoting social growth by highlighting their considerable effect across a range of industries. The overall impact in all these different areas is a narrative of diversity, empowerment, and revolutionary change ingrained in the communities that ICICI Bank's CSR programmes influence. The results provides guidance for the future by highlighting the crucial role that responsible and strategic CSR plays in accelerating the advancement of society as a whole.

Suggestions:

- **Increase Attention to Selected High-Impact Areas:** Given the significant effects on women's empowerment, healthcare support, and education improvement, focusing resources and efforts on these areas might result in greater societal development results.
- **Work Together for Rural Development:** Given the significant influence on rural development, establishing alliances with regional authorities, non-governmental organisations, and local communities might increase the scope and intensity of influence in these areas.
- **Inclusive approaches to diversity and inclusion:** Expanding on the benefits of diversity and inclusion, more equal effects across various groups may be achieved by creating more inclusive policies and programs within corporate social responsibility (CSR) operations.
- **Sustainable Infrastructure Development:** Using corporate social responsibility (CSR) to support sustainable infrastructure development advances society and supports environmental sustainability objectives.
- **Empowerment Programmes for Economic Stability:** Increased attention to reducing poverty and creating jobs via skill-building courses and entrepreneurial endeavors may substantially contribute to society's long-term advancement.
- **Water and Sanitation activities:** Health outcomes and quality of life can be greatly enhanced by bolstering clean water access and sanitation activities in underprivileged communities.
- **Accessibility and Inclusivity for Differently Abled:** The promotion of accessibility and inclusivity for persons with disabilities may be achieved by giving priority to programs that address their needs. This approach can help create a more equally distributed and inclusive society.
- **Education and Local Sports Promotion:** Increasing the scope of educational programs and local sports initiatives may support social integration, health, and talent development as well as overall community development.

References:

1. V.P.Vignesh, Kumar., P.Bala, Subbulakshmi. (2017). A Private Bank Involvement in CSR with Special Reference to ICICI Bank. *International Journal of Economics and Management Studies, 4(3):1-7. doi: 10.14445/23939125/IJEMS-V4I3P101*
2. K., S., Rangasamy. (2015). CSR Initiatives of ICICI Bank.
3. Pushpa, Suryavanshi. (2020). ICICI Bank and Services for Society. *Social Science Research Network, doi: 10.2139/SSRN.3515114*
4. Vinayak, Patil., Sangeeta, Jauhari., Deepti, Maheshwari. (2017). CSR Activities and its Impact on Socioeconomic Upliftment: An Integrated Review. Learning Community-*An International Journal of Educational and Social Development, 8(2):65-. doi: 10.5958/2231-458X.2017.00009.4*
5. Laxmi, Rani. (2020). Green Banking for Sustainable Development: Initiatives by SBI & ICICI. *68(30):12271-12283.*
6. Ashok, Kumar, Patel. (2022). Perception of bank employees towards csr activities. *International Journal of E-business Research, 22(1):5-12. doi: 10.18374/ijbr-22-1.1*

7. Megha, Mehta., Kshitija, Chaugule. (2014). Corporate social responsibility: a case study of icici bank. *Sai Om Journal of Commerce & Management: A Peer Reviewed International Journal, 1(2):18-25.*
8. Namrata, Singh., Rajlaxmi, Srivastava., Rajni, Rastogi. (2014). A Road Way to Corporate Social Responsibility: A Case Study of ICICI Bank. *IOSR Journal of Business and Management, 16(1):38-42. doi: 10.9790/487X-16143842*
9. Gourav. (2017). Role of commercial banks in promoting csr. *International Journal of Advance Research and Innovative Ideas in Education, 3(4):818-821.*
10. Anita, Sharma., Cma, Ashok, Panigrahi. (2016). CSR in Indian Banks and Financial Institutions. *Social Science Research Network,*
11. Mohammad, Saleh, Miralam., Vikram, Jeet. (2020). Nature and Extent of Corporate Social Responsibility in the Indian Banking Sector. *Research in World Economy, 11(5):48-. doi: 10.5430/RWE.V11N5P48*
12. Statistical Modeling and Analysis for Complex Data Problems. (2005). *Netherlands: Springer US.*
13. Weaver, K. F., Morales, V. C., Dunn, S. L., Godde, K., Weaver, P. F. (2017). An Introduction to Statistical Analysis in Research: With Applications in the Biological and Life Sciences. *Germany: Wiley.*
14. PANNEERSELVAM, R. (2014). RESEARCH METHODOLOGY. India: PHI Learning.
15. Jones, J. S. (2022). Exploratory and Descriptive Statistics. United Kingdom: SAGE Publications.
16. Heiberger, R. M., Holland, B. (2013). Statistical Analysis and Data Display: An Intermediate Course with Examples in S-Plus, R, and SAS. Switzerland: Springer New York.

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A Study of Application of Mathematics in Business, Commerce and Management

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ABSTRACT

There are several applications of mathematics, like electronic games, automated teller machines, safe websites, statistical data analysis, and opinion polls. The applications of mathematics are pretty broad as they are fundamental to practically every subject, including industry, commerce, physics, chemistry, economics, biology, psychology, astronomy and many more. It has created several tools for management and commerce. In order to support the achievement of the business objectives—maximizing profits, minimizing expenses, and guaranteeing optimal resource utilization—this paper aims to provide an overview of some of the key areas of mathematics such as algebra, matrices, statistics, probability, linear algebra, and operational research in business.

Key-Words: Business and Commerce, Mathematics

1. INTRODUCTION

Mathematics and statistics are important and employed in practically every aspect of human life, including industry, commerce, physics, chemistry, economics, biology, psychology, astronomy, engineering, medicine, and many others, hence its use is wide-ranging. Statistics is the branch of mathematics that we employ to investigate and understand the unpredictable environment in which we live. People all are aware with the use of statistics in opinion surveys and market research, but they are also essential in the production and testing of many items. Mathematics fosters logical thinking, problem-solving, and reasoning skills. Mathematics is one of the most important factors in today's globalized world and has shown to be quite helpful in the business sector. In the fields of accounting (financial, cost, corporate, and management accounting), inventory management, sales forecasting, marketing, and financial analysis, business organizations use mathematics. One feels helpless in every area of commerce and business without mathematics.

2. LITERATURE REVIEW

Klimova's (2019) study illustrates that mobile apps can be effective in the enhancement of student's performance in terms of their language learning by implementing smartphone app learning in a continuous assessment

Johnson et al. (2016) found out that learning programs that use web-based teaching offer students more adaptability to learn at their own pace and at convenient times, reduced travel time, and additional opportunities for reviewing course materials.

Grane (2016) demonstrates that multimedia content is not separate from the format, but that the interaction design of the applications for mobile devices determines the accessibility of content for users, especially for pre-schooled-aged children. The quality of mobile applications targeted at early childhood thus depends on two conditions: taking into consideration the developmental stage of the child when formulating content and activities and employing an interaction design that is appropriate to the child's cognitive and psychomotor development. This interaction design presents key difficulties in the search for simplicity due to the elevated presence of distractors and active elements on the screen that are often unnecessary. Although research demonstrates the potential of quality interactive resources for learning, the apps reviewed did not adapt to the needs of the target group. It was suggested that complements the heuristics analysis with observations of the interaction of children with the apps, define a direct implication, and establish a relationship with developers to improve interactive materials and adaptability.

Ling et al (2014) sought to understand whether the use of mobile applications had an impact on students' learning of the new statistical concept when learning through examples with the mobile app, students performed better on problems that required them to apply their knowledge, which corresponds to the third level of learning in Bloom's taxonomy.

3. MATERIAL AND METHOD

APPLICATION OF MATHEMATICS IN BUSINESS AND COMMERCE

Mathematics is used in almost every field of daily life. Business involves the buying and selling of goods in order to earn profit, it uses mathematics to record, classify, summarize and analyse the business transactions. So mathematics is used by commercial enterprises to record and manage the business operations such as, elementary arithmetic involving fractions, decimals, percentage, elementary algebra, statistics and probability. Now a days business management is using advanced mathematics such as calculus matrix algebra and liner programming. Practical applications include checking accounts, forecasting the sales, price discounts, mark-ups, mark-downs, payroll calculations, simple and compound interest, reducing wastage of resources. Some applications of mathematics in business and commerce are listed below:

3.1. ALGEBRA

Mathematical principles are needed to study accounting. It incorporates successful exploration of numerical, geometrical and logical relationships. Mathematics benefits accountant in comparison – mathematical formulas help business and commerce to compare income, cost, expenses and profits. The various formulas are derived using various percentage, ratios and equations. The various ratios are derived such as: inventory turnover ratios, profitability ratios, debtor turnover ratio, debt-equity ratio etc. Mathematics is helpful in deriving accounting equation. The basic idea in accounting is that total wealth of business is called Assets. There are two possible claims on assets(A) called liabilities(L) and capital(C). By using mathematical relation A=L+C, accountants use mathematics in order to arrive the total cost and taking decision regarding manufacturing or buying the product. The total cost formula for business is T= a+bx; where „T‟ is total cost,"a‟ is fixed cost,"b‟ is cost per unit produced and "x‟ is no. of units produced. Also profits are determined by subtracting total cost from total revenue and helps in analysing the financial health of business and prices are determined by adding some mark- up to cost. So accountant used addition and percentage to determine the prices of product

3.2. OPERATIONAL RESEARCH (OR)

OR is concerned with determining the maximum (profit, performance, yields) or minimum (loss, cost, risk) of some real world objectives. OR includes game theory, linear programming formulation techniques, PERT, CPM, transportation problems. Linear programming also called linear optimization is a method to achieve the best outcome (as maximum profit or lowest cost or ensuring best use of available resources) in a mathematical model whose requirements are represented by linear relationship. Some of industries that use LP model include transportation, energy, telecommunication and manufacturing. Linear function to be maximized by mathematical function.

3.3. STATISTICS AND PROBABILITY

Statistics is very indispensable for the businessman. It formulates various plans and policies and forecasts trends of future such as change in demand, market fluctuations using statistical techniques. On the other hand, future events are uncertain and to predict these uncertainties, probability is an effective tool to forecast sales, scenario, future returns and risk evaluation in the business world. Before introducing the product, team of market research analyse data relating to population, income of consumer, tastes, preferences, habits, pricing policy of competitors by using various statistical techniques. We can collect and analysis the data in the field of economy by using statistical methods. Probability theory serves as a useful tool for decision making, estimating number of defective units, sales expected and also in business policies. Through the use of statistical (regression) techniques Levine and Zervos (1998) [3] attempted to find the empirical relationship between various measures of stock market development, banking development, and long-run economic growth. They concluded that even after controlling for many factors associated with growth, stock market liquidity and banking development are both positively and robustly correlated with contemporaneous and future rates of economic growth, capital accumulation, and productivity growth. The small business firms especially those in the fashion industry should learn and apply probability theory since there line of business was more prone to chance occurrences (Orga, &Ogbo, 2012) [4]. In their study in Nigeria they observed that the small business firms fail despite the programmes of government directed at their survival. The application of probability theory in small businesswas examined to find the implications and in restoring the gap between the rich and the poor through better and informed decisions. The findings indicated that probability theory has wide application in small business firms; probability shows specificity in business situations and is inevitable in this era of information overload caused by ICT. In nutshell, statistics and probability are very useful in taking various decisions relating to material, production, finance, personnel and marketing in an Industry.

3.4. CALCULUS

Calculus is another branch of mathematics made up of two fields- differential calculus and integral calculus. Differential calculus plays valuable role in management and business for decision making in production (e.g. supply of raw material, wage rates and taxes). In calculus, the case when "y‟ is a function of "x‟ or we can say one variable(y) is dependent on other variable(x) and the derivative of "y‟ w.r.t. "x‟ i.e. dy/dx measures the change of variable "y‟ w.r.t. change in variable "x‟. Derivative enables a firm to make important production decisions. It is also called marginal function. Demand can be assumed as a function of price. This operator isalso helpful in calculating minimum cost and maximum profit. Also total cost of production and marketing depends on no. of units in mathematical relations, which can be described as $c(x) = F + v(x)$, where $c(x)$ is cost function $v(x)$ is variable cost and F is fixed cost. Revenue function $R(x)$ can be represented as $R(x) = xp(x)$, where "x‟ is no. of units and "p‟ is rate per unit. Hence knowledge of derivative is essential for understanding theeconomic relations. Another integral operator is used to calculate the total revenue in case of marginal revenue is given. So calculus plays a vital role in taxes, profit and revenue calculations which are very important for any business.

3.4. MATRIX AND LINEAR ALGEBRA

Matrices play prominent role in developing a solution required for commercial organizations. It has knowledge to deal with unique needs of various sectors of Industry. It gives opportunities to finance and logistics management and customer relationship by providing them a variety of solutions. Also product price matrices are helpful to set bulk purchase discount. Determinants and Cramer rule are helpful in problem solving related to business and economy. It enables oneself in obtaining and optimal solution to maximize profit or minimize cost problems. Linear algebra serves a purpose of powerful tool for its application in business. As total cost, revenue, supply, demand and population are all related with a system of linear equations. It is derived a production equation in input-output analysis and got Noble prize for his contribution. The model given by him was X=CX+d, where x is the production factor, c is consumption matrix and d is demand vector. If matrix I-C isinvertible then appropriate production for a given final demand can be computed directly via $X=(I-C)^{-1}$ d. This basic input- output analysis however is a very powerful tool. It can Predict what happens to an economy when final demand changes. By changing the consumption matrix this can represent what happens to an economy when the relative cost in terms of other goods (a change in one or more entries in internal demand) of producing one good can change both internal and final demand economy. It has applied the Leontief technological coefficients at total current impact of the fisheries sector at current production and then estimate total output supported throughout the economy at the current level of production. They recognized that the non-linearity of fisheries production could cause problems when doing predictions at various levels of production.

4. CONCLUSION

Thus, it is evident that mathematical methods and tools become crucial part of the business organization. Application of mathematics becomes necessary from the beginning i.e. from buying or estimating the cost of product to the end sales and earning profits. Mathematical formulae help business to do financial analysis using ratios, percentages, equations. The objective of minimizing cost & maximizing profit is achieved through linear programming and calculus. The estimation of future returns & profitability is done through probability distributions. It also helps in sale forecasting & risk evaluation. Matrices play important role in variety of solutions for consumer relationships and logistics management. Statistics helps in collection, presentation and analysis of data to arrive at conclusions. Statisticians have developed many tools for application and which can be utilized for business improvement. Statistical Thinking and Methods need to become part of the knowledge base of an organization. In his study, he outlined several issues related to the implementation of statistical methods in business and industry. Well planned systems and training are necessary for implementation. Enhancement of university education is also necessary. In the light of above, we conclude that knowledge of mathematics should be made compulsory for students of Commerce and Management as it plays a key role in any business.

5. REFERENCES

1) Abraham, B. Implementation of Statistics in Business and Industry. *Colombian Journal of Statistics,30, 2007, 1-11.*

2) Orga, C. C., & Ogbo, A. I. Application of Probability Theory in Small Business Management inNigeria. *European Journal of Business and commerce, 4(12), 2012, 72-82.*

3) Leontief, W. Input-output analysis, *The new Palgrave. A dictionary of economics, 2, 1987, 860-64.*

4) Karatzas, I., & Shreve, S. E. *Methods of Mathematical Finance.* Springer, 1998 (Vol. 39).

5) Veer, D., Shukla. P., Mathematics - “The Queen of Commerce”, *Shodh, Samiksha aur*

Mulyankan,2(6), 2009, 819-820.

6) Levine, R., & Zervos, S. Stock markets, banks, and economic growth. *American economic review,1998, 537-558.*

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A STUDY OF THE GROWING FAST FOODS IN INDIA: A CONSUMER VALUE PERSPECTIVE

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Abstract: *Indians have traditionally grown up eating home cooked food and had a preference for it. Globalization has played a very important role for fast food chains to set up their branches in India. This situation was definitely not favourable for the global fast food chains. India has undergone a rapid growth in the fast food industry in the recent years. These global chains have to compete with the local fast food vendors who already know the taste and preferences of their customers. Thus, the fast food industry has very well adapted to the Indian customers habits and preferences, targeting the younger crowd and it has definitely showed good results with a great increase in sales. This study targets to understand the reasons behind the rapid growth in the fast food industry through delivery apps, the factors that influence the youth to buy fast food and the new advances in technology and how it has affected the number of sales of the fast food industry.*

Keywords: Fast food, India, Consumer Behaviour, Unhealthy Lifestyle, Delivery apps

Introduction:

India is a diverse country. This can be seen in the cultures, traditions, beliefs and practices like religion, living conditions and also our food habits. Since the 1980s, when globalization was introduced in the country by the former Prime Minister, Rajiv Gandhi, India has been growing demographically and economically reducing the rate of Poverty in the country. With the changes that took place within the country, a key feature that showed drastic change was in the eating habits and the diet of the people in India. Traditionally, Indians have been known for consuming simple home cooked meals. As the people adapt to the fast paced lifestyle, change in eating habits became inevitable. It is very clear that Globalization and influence of the western culture has contributed to the change in the food consumption pattern of the people in India. This change is prominent in the urban areas, especially in the metropolitan cities. Fast food isn't a very new concept for Indians. Along with the global fast food chains, there are Indian fast food vendors who have equally benefited from the change in the customers taste and preferences towards fast food. But due to the global fast food chains opening up multiple branches and franchises in the country, they seem to be more popular and in demand especially among the young generation where they don't look at it just as a place to eat but more like a way of interacting with other people and enjoying the social environment.

Fast food and consumption pattern

According to the findings of the recent online survey from AC Nielson, India being at the seventh place, is among the top ten markets for weekly fast food consumption among the countries of Asia-Pacific region. Over 70 per cent of urban Indians consume food from take-away restaurants once a month or more frequently.

Fast food other than being addictive for its taste is more popular in today's generation for being more convenient. You save a lot of time by opting for easy food choices available in the fast food menu.

The accessibility of fast food chains are another reason why they attract a large crowd. For e.g. There will always find a McDonalds or Pizza Hut at Highways or Junctions to places where people often go for road trips and usually stop by for a break. The easiness of finding something quick to grab tells us about the lack of patience and always on the go lifestyle we have now.

Challenges faced by the fast food industry in India

As much as the Indians love to consume fast food, looking at it from an economic perspective it doesn't help us in increasing the country's GDP rather all the profits are being benefited from the home country of these MNC's.

Indians were traditionally vegetarians and majority of the people in the country still are so which does impact the fast food chains. With the variety in culture and traditions come a lot of restrictions in food for certain people which do not work in favour of the fast food chains.

Focusing on the environmental aspect, fast food chains never provide you with silverware or glassware instead they use plastic cups, containers and straw because it is cheaper and convenient which are often tossed in the garbage and cannot be recycled. Due to certain rules set by the government, all the chains were asked to use bio degradable cutlery.

It wasn't until a few years back when Zomato (launched in 2008) and Swiggy (launched in 2014) where introduced which has made our lives way too convenient. You can order any dish that you like at any time with amazing coupons and offers which will then be delivered to you at your doorstep. The fast food industry has boomed because of these delivery apps, especially during the pandemic when everybody was forced to sit at their homes.

Literature Review:

Goyal Anita and Singh Netra Pal (2007), in this paper the authors have studied about what are the factors that influence the consumers, especially the youth, that affects their choice in fast food. The results of the study indicated that even though the young consumers love fast food, their first preference was home cooked food.

Ernest; Kelloff, Ashley (2013)., In their study stated that a fast food culture tends to value pre-packaged, fast, cheap, and convenient in lieu of sustainable and healthy options. This culture is not isolated to food consumption, but impacts how leaders run their business. As uncertainty and complexity grows in global businesses, the fast food mentality has spawned reactive individuals rather than thoughtful and thorough leaders. This study provides a framework for understanding common mismanagement and remedies to prevent practitioners from propagating the fast food culture

Chakraborty S (2015). In India, we looked at consumer behavior and purchase habits in the fast-food industry. It discovered the characteristics that may influence their purchasing behavior and might be employed in store business strategies. It was discovered that with the advent of knowledge sharing through traditional and media communication channels such as word of mouth promotion, entertainment sources such as movies, music, and television, internet, awareness through education, relocation, and travel, and other communication sources from the company such as direct selling, advertisement, and so on, the attitude, personality, and perception of ordinary people remarkably shifted.

Khurshid Anwar Warsi(2005), In this study, the paper primarily focused on the beginning of fast food, an in depth study for various reasons for emergence , how much has the market expanded in India, Economic factors being affected and the challenges faced by the industry.

Statement of Problem:

The reason why the researcher has taken this topic is to understand why do consumers prefer fast food after knowing the high caloric content it has and its low nutritional value and how because of the choice of the consumer the fast food industry keeps growing, thus encouraging them to open up more chains which will have an effect on the health and lifestyle of the consumers.

The study helps us to understand the factors that influence the customer to purchase fast food. By understanding the factors, a solution can be found to promote healthy living and good eating habits, especially among the youth.

Objective of study:

1. To study the reason behind the emergence and growth of fast food industry in India.
2. To understand which age group contributes to the growth of fast food chains and doesn’t support them as much.
3. To understand what external factors influence the consumers to opt for fast food.
4. Consumer behaviours with respect to number of times and when they visit or order from the chains.
5. To understand which fast food chain do the consumers prefer and to see if it has established well enough in India

Limitation of study:

1. The data was collected over a short period of time
2. The results depend on how honestly the respondents have answered.
3. There was a lack of data, recent surveys and statistics, related to the topic
4. The data collected from the survey focuses more on the people from Mumbai and less from other parts of the country.

Scope of study:

1. The study tells us what are the habits that attract the consumer to fast food. It can help the consumer to introspect and make changes in their food habits if needed.

2. People who were living alone or couldn't afford healthier meals choose fast food.

3. The study will help us estimate the areas where fast food chains can work on to gain customer loyalty and open more branches in India.

Research Hypothesis:

H0: The emergence of food delivery apps has no effect on the sales of fast food.

H1: The emergence of food delivery apps has a significant effect on the sales of fast food

Research Methodology:

This research is primarily exploratory in nature. In part one, I referred to various research papers to get a starting base for my study and the literature review has been given so too. Data were collected in the second part of the research using the primary data collecting method via online questionnaires

Type of Research: The type of research being conducted is a descriptive type of research

Sample Design: This research targets every person who consumes fast food and uses various apps to order fast food.

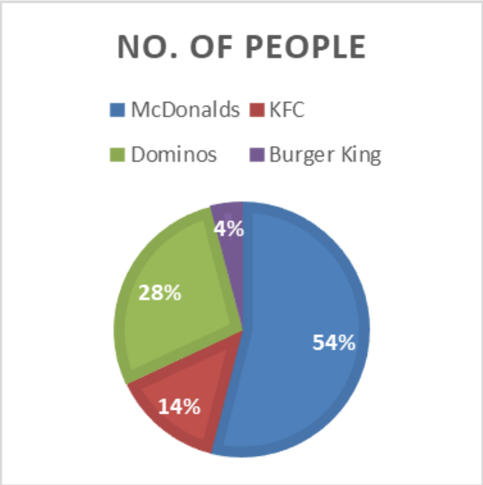
Universe: The research questionnaire is being collected by people living all over India but mainly focusing on people living in Mumbai

Sample Size: There are a total of 50 people who have responded to the questionnaire

Method of data collection: The method used to call the data was through an online questionnaire.

Research instrument: The method used for collecting the responses from the respondents was Google forms. It is easy to fill and convenient for the researcher to interpret the data in a systematic way.

Result and Discussions:



Fast food chain	No. of people
McDonalds	27
KFC	7
Dominos	14
Burger King	2
TOTAL	50

Chart 1: No of respondents **Table 1: No of respondents**

A total of 50 responses were received to the questionnaire. Let's see what the respondents have to tell us .The above data brings out that the majority of the respondent's favourite fast food joint is McDonalds and it is the most popular global fast food joint in India.

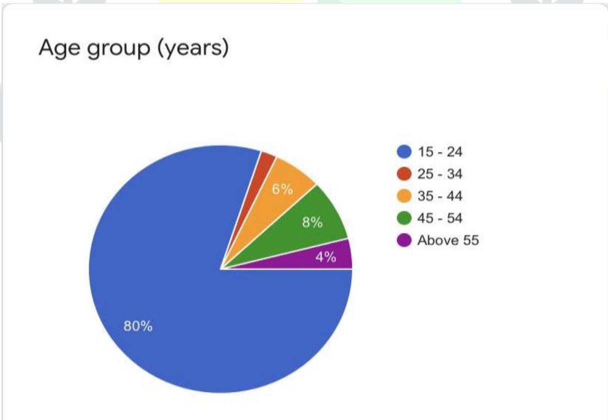


Chart 1: Age wise respondents

The study tells us that the majority of the people who visit fast food joints regularly are between the age of 15-25 for various reasons and it was found that the respondents are satisfied with the price and taste and moderately satisfied with hygiene. People who work prefer fast food because it is convenient and it saves time. The youth prefers fast food for its social environment more than adults do

STATEMENT	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
I prefer fast food because it is:					
Its economical	6	19	18	5	2
It's hygienic	2	11	25	8	4
The social environment is good	4	17	21	6	2
It's time saving	10	28	8	2	2
It's tasty	24	23	3	0	0

Table 2: Preferences of fast Foods

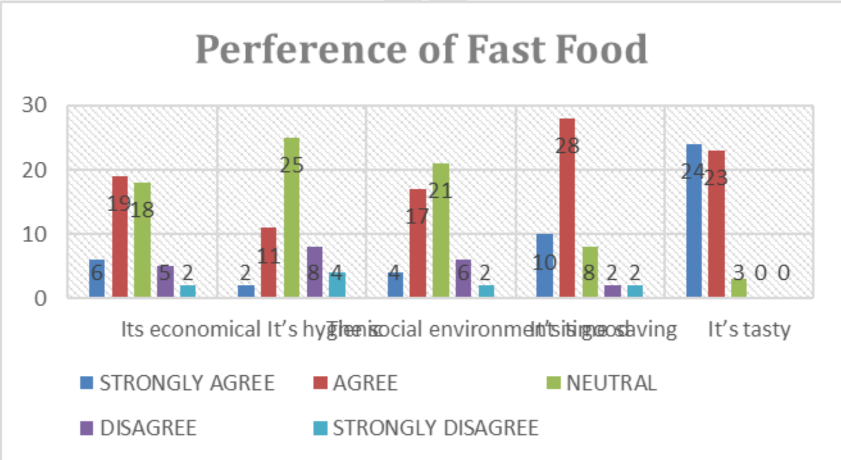


Chart 2: Preferences of fast Foods

The above chart & Table depicts how much the respondents agree to disagree to the various reasons of why people prefer fast food. There were 5 most common reasons given as options out of which, the majority of the respondents. Referring to the above chart, it is visible that the majority of the respondents agree to prefer fast food because it is time saving, economical and tasty. The maximum respondents disagreed to prefer fast food because of hygienic issues and economic factors.

How often do you use food delivery apps?				
Few times in a month	**Once in a few months**	**Every week**	**Never**	**Not Very Often**
16	**21**	**10**	**2**	**0**
32%	42%	20%	4%	0%

Table 3: Frequency Usage of Delivery Apps

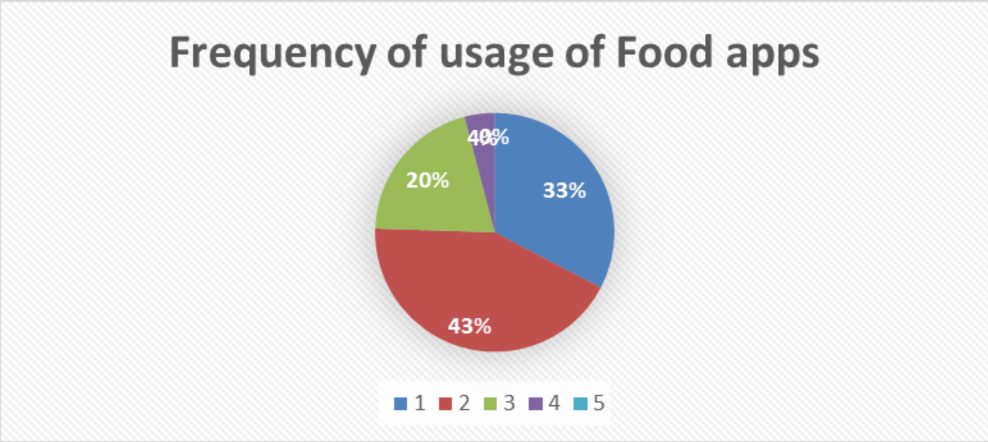


Chart 3: Frequency Usage of delivery Apps

Referring to the above charts, 16 of the respondents use the food delivery app few times in a month, 21 respondents use the food delivery app once use the apps, 10 of the respondents use it weekly and only 2 haven't used the food delivery app ever. There were was not a single respondent that do not use the food delivery apps.

Statements	Food delivery apps have increased the consumption of fast food.	The offers and discounts on the delivery apps tempt the customers to order more often.
strongly Agree	10	14
Agree	18	22
Neutral	7	3
Disagree	11	8
Strongly Disagree	1	1

Table 4: Reasons to Prefer Food Apps

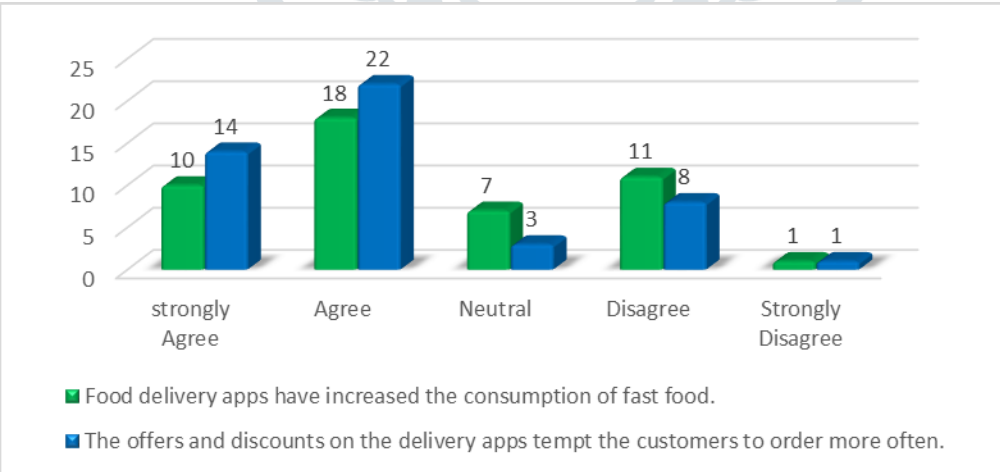


Chart 4: Reasons to Prefer Food Apps

From the above table 4 it can inferred that 10 respondents have increased their food consumption through food delivery apps and 14 respondents order fast food online due to discounts and offers. There were 18 respondents who agreed that food apps do increase the consumption of fast foods and 22 which was the highest that discounts and offers are the main reason for usage of food apps. There was only 1 in each case that strongly disagreed that fast food consumption has not increase due to any reasons and 7 and 3 respondents were neutral in coming to any conclusion for the study discussed.

Conclusion:

As per the study, it tells us that although the fast food industry has grown a lot in India it has not yet become an essential for the customers considering various reasons like nutritional factors, health, hygiene etc. It proves the hypothesis that the emergence of good delivery apps has increased the sales of fast food chains. A lot of consumers visit fast food chains not just for tasty food but also for a social gathering, fun etc. There is a lot of scope for the fast food industry to grow if they target at solving these issues as it keeps pace with the busy lifestyle we have now.

This study shows people are highly satisfied with online food delivery platform. The further also suggest that easy and convenience factor and quality of food factor which also affects significantly to consumers intension to buy food from food delivery platform. People are highly satisfied with online food delivery platform. Out of food tracking, verity of payment option, food coupons and offers only people are satisfied with easy and convenient quality of food, price of food, etc.

This study concludes that out of all online food delivery platform only Zomato and swigy are mostly prefer and also respondents are satisfied with their service. Since the respondents are satisfied with online food delivery platform when they are not facing any problem while ordering the food. Out of food tracking, verity of payment option, food coupons and offers only people are satisfied with easy and convenient quality of food, price of food, etc This study concludes that out of all online food delivery platform only Zomato and swingy are mostly prefer and also respondents are satisfied with their service.

References:

- Nanaiah, P. N. (2020). A study on consumer behaviour and the impact of food delivery apps on the college students in Bangalore. *International Journal of Research in Engineering, Science and Management (IJRESM) Volume-3, Issue-3*.
- Smith, A. D. (2024). COVID-19 and its perceived health belief impact on prepared food delivery services from a consumer behaviour perspective. *International Journal of Business Forecasting and Marketing Intelligence*, *9*(1), 9-49.
- Tandon, A., Kaur, P., Bhatt, Y., Mäntymäki, M., & Dhir, A. (2021). Why do people purchase from food delivery apps? A consumer value perspective. *Journal of Retailing and Consumer Services*, *63*, 102667.
- Upadhayay, D., Thakkar, H., & Ghiya, N. (2020). A Study of Impact of Promotion and Marketing Campaigns by Online Food Delivery Service on Buying Behavior of Customer of Ahmedabad. *Available at SSRN 3637941*.

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Role of Artificial Intelligence (AI) and Business Decision Making

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Abstract:-

Artificial intelligence is an important tool to improve companies' decision-making processes. It increases efficiency, encourages innovation, and reduces risk. It can analyze massive amounts of data at lightning speed to provide insights from complex data. Artificial intelligence also performs routine tasks, allowing human resources to focus on critical thinking. It allows organizations to anticipate market changes and opportunities by predicting future trends and possible outcomes. However, the use of artificial intelligence also brings with it problems such as algorithmic bias and ethical issues. Leveraging the power of artificial intelligence is critical for making strategic decisions that will shape the future of companies in the sector.

Keywords:-* *Artificial Intelligence, Business decision-making, Innovation, Data Analytics

INTRODUCTION

Artificial intelligence (AI) and robots are changing the way business is done. Artificial intelligence is the design and creation of information created by humans and machines. It uses learning, thinking, and self-correction to make decisions and save time and money. The AI machine collects data, predicts trends, and analyzes data. They integrate cloud technology, networking equipment, robotics, computers, and digital content, as well as business processes and daily operations. Artificial intelligence computers are used to increase efficiency, reduce costs, accelerate changes, and increase efficiency. Companies that use artificial intelligence software have an advantage over companies that do not. There are two types of machine learning: deep learning and machine learning. Machine learning uses human-like learning and gathers insights from information and data. This helps solve problems better. Deep learning uses neural networks to learn. People give examples of AI to learn how to solve problems. Deep learning is used to solve complex problems in complex systems. Artificial intelligence comes with problems. It relies on sensitive data, which raises concerns about data privacy and security. Companies need to use artificial intelligence responsibly and transparently. Automation can change the way work is done, so companies need to consider reassignment or promotion. Businesses should be aware of these issues when using artificial intelligence technology.

OBJECTIVES:-

1. Discover optimization goals, increase productivity, reduce risk, and provide information from insights to knowledge planning strategies to reduce business regret.

2. Explore the benefits and drawbacks/challenges of AI in business decisions.

3. Examine the information skills of the public.

4. Learn how AI can help identify opportunities, identify business trends, and manage resources when making business decisions.

LITERATURE REVIEW

Erica Sweeney in her article **'Hey, Siri:' Inside Apple's Speech AI and the technology behind it** explains the influence of Artificial intelligence (AI).

Apple Voice in AI and the technology behind it. Siri is Apple's virtual voice powered by artificial intelligence, machine learning, and technology. Language skills. Using the "Siri" or "Hey Siri" command, you can launch Siri and ask her to perform various tasks, such as sending a message to a friend, opening an app, taking a photo, or playing your favorite game song. Apple's voice assistant was launched in 2011, described at the time as "a revolution in Artificial Intelligence technology". The technology has improved since then, but many say Google and OpenAI's AI has surpassed Siri. But Apple has invested billions of dollars in the field of intelligence. The company announced in October 2023 that it was developing new intelligence and a "smarter Siri" using new technology.

What is Siri and how does it work?

Siri is Apple's voice-activated virtual assistant and is part of iOS, iPadOS, watchOS, and other Apple operating systems. He uses cognitive skills, vocal questions, and beautiful words to answer questions, study, and make suggestions.

Casey Watters and Michael K. Lemanski describe the development and use of artificial intelligence in their article "Public Skepticism Towards ChatGPT." ChatGPT is a new language developed by OpenAI that has attracted wide attention in many areas since its release. This literature review provides an overview of early ChatGPT literature across a variety of disciplines, exploring its applications, limitations, and ethical considerations. This review includes Scopus-indexed articles published between November 2022 and April 2023, which includes 156 articles related to ChatGPT. Findings indicate that negative emotions are present in discipline, although certain behaviors need to be taken into account. Reviews have highlighted ChatGPT's impact in a variety of settings, including healthcare, raising operational concerns, and ethical considerations. Although ChatGPT shows promise in improving communication, more research is needed to address its potential and limitations. This literature review provides insights into early research on ChatGPT to inform future research and practical applications of chatbot technology and the development and use of artificial intelligence.

RESEARCH METHODOLOGY

This is a research project combining primary and secondary. Primary data was collected through surveys using quota sampling to select a sample of respondents. Meanwhile, secondary data was obtained by analyzing numerous research articles on the Internet.

PRIMARY DATA:

- Questionnaire

SECONDARY DATA:

- Internet
- Research Paper

DATA COLLECTION

The primary data collection process was carried out through surveys. This method is widely considered the best way to collect important information. By using surveys, researchers can obtain important information directly from participants, thus providing clear and accurate information to support various studies.

Questions used in Questionary

1. How has AI positively influenced decision-making processes in your management strategy?

2. What challenges have you encountered while integrating AI into decision-making in your organization?

3. To what extent do you believe AI will reshape management strategy in the next 5 years?

4. How would you rate the overall accuracy of AI-driven decisions compared to traditional methods in your organization?

5. How important are ethical considerations in AI-driven decision-making for your management strategy?

6. Have you implemented specific training programs for employees to enhance their understanding of AI and its role in decision-making?

7. What measures have you taken to address concerns about data security related to AI-driven decision-making?

8. How would you assess the cost-effectiveness of implementing AI in decision-making for your management strategy?

9. Is there a structured mechanism for collecting feedback on AI-driven decisions from relevant stakeholders?

10. How collaborative is the decision-making process between AI systems and human decision-makers in your organization?

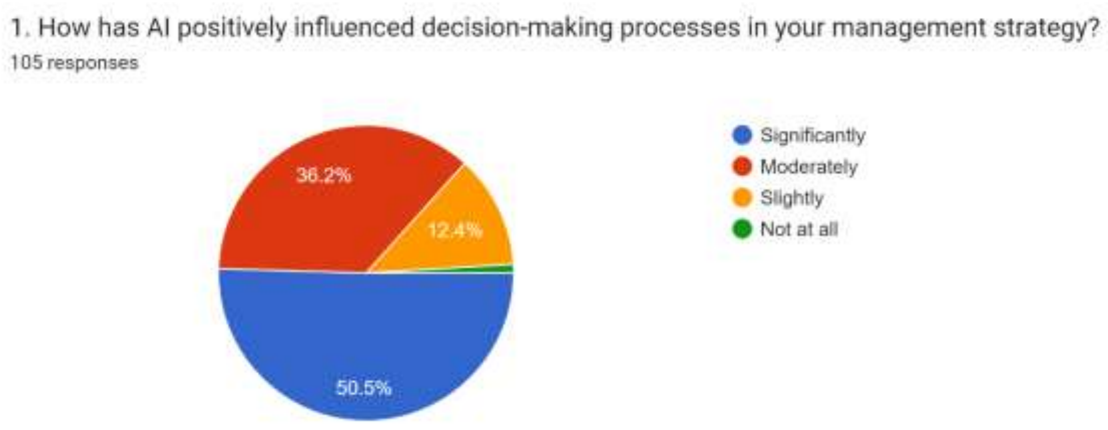
11. Are you aware of artificial intelligence?

12. Do you think artificial intelligence is easy to use?

13. Does artificial intelligence help you to save time?

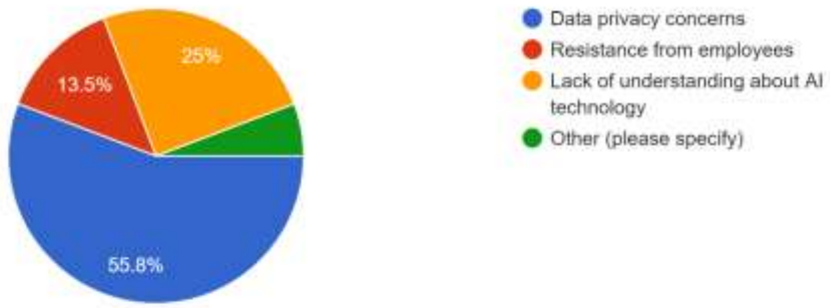
The survey was conducted to study the role of artificial intelligence(AI) in business decision-making.

Around 108 responses have responded to this Questionnaire.



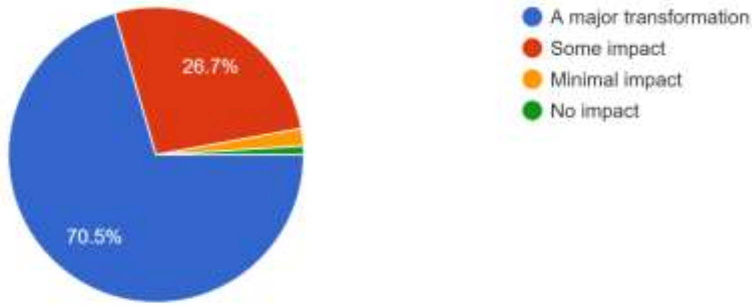
Around 50.5% of the respondents are significantly influenced by AI in decision-making, while 36.2% are moderately influenced, 12.4% are slightly influenced, and 1% are not influenced at all.

2. What challenges have you encountered while integrating AI into decision-making in your organization?
104 responses



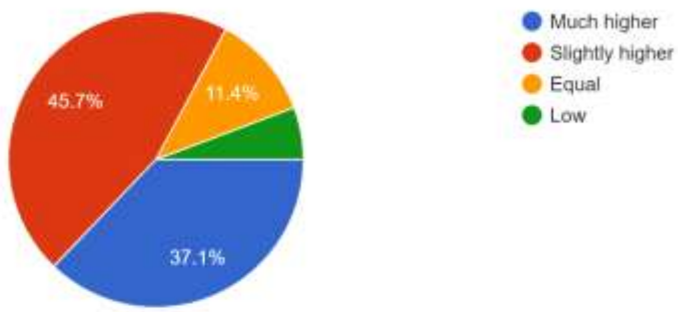
55.8% of the respondents reported data privacy concerns, 25% of them experienced resistance from employees, 13.5% faced a lack of understanding about AI technology, and 5.8% had other specific reasons.

3.To what extent do you believe AI will reshape management strategy in the next 5 years?
105 responses

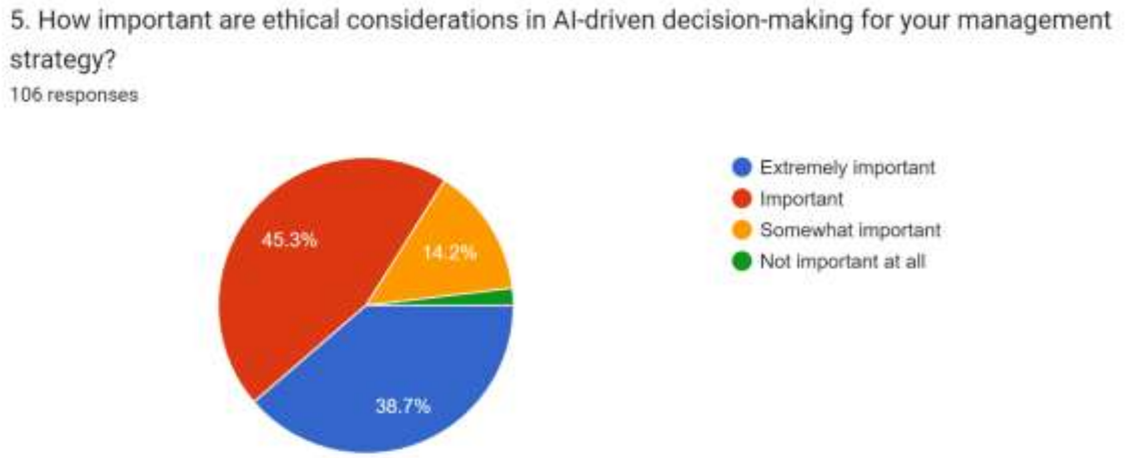


According to a survey, 70.5% of the respondents believe that AI has the potential to bring about significant changes in the next five years. 26.7% of the respondents believe that AI can have some impact, while only 1.9% of the respondents believe that AI will have minimal impact. The remaining 1% of the respondents believe that AI will have no impact in the next five years.

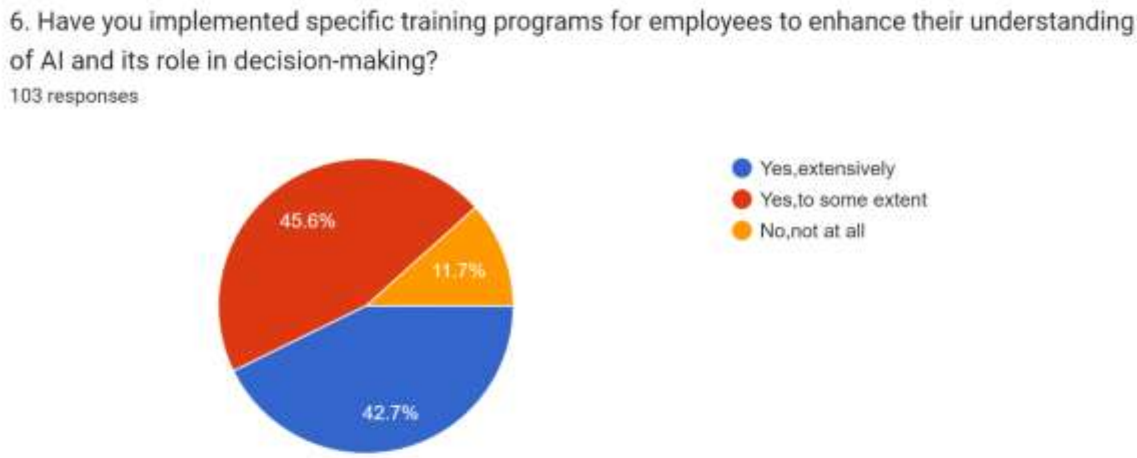
4. How would you rate the overall accuracy of AI-driven decisions compared to traditional methods in your organization?
105 responses



According to the survey, 45.7% of respondents consider the accuracy of AI to be slightly higher, while 37.1% of respondents believe that AI is much more accurate than traditional methods. 11.4% of the respondents rated the accuracy of AI to be equal to traditional methods. The remaining 5.7% of the respondents considered the accuracy of AI to be low.

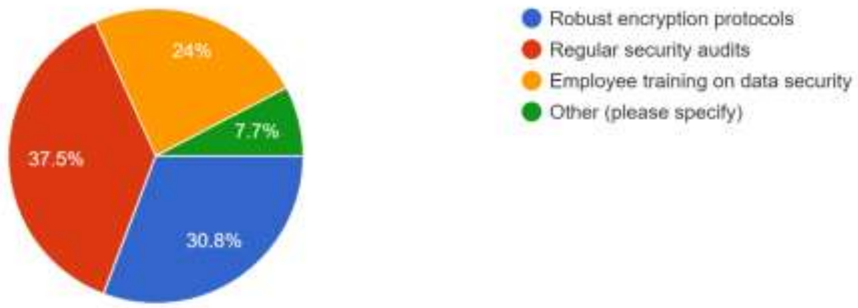


According to the survey, 45.3% of the respondents believe that decision-making driven by AI is important, while 38.7% of the respondents consider it to be extremely important. Additionally, 14.2% of the respondents think that AI-driven decision-making is somewhat important. Only 1.9% of the respondents believe that it is not important at all.



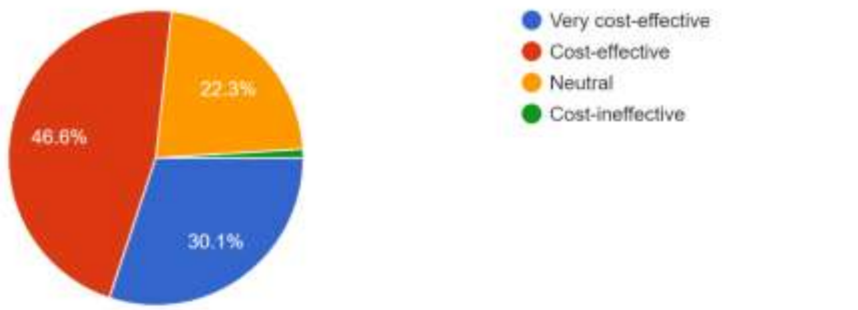
The survey found that 45.6% of respondents implemented employee training to some extent, 42.7% implemented it extensively, and 11.7% did not implement any training programs for their employees.

7. What measures have you taken to address concerns about data security related to AI-driven decision-making?
104 responses



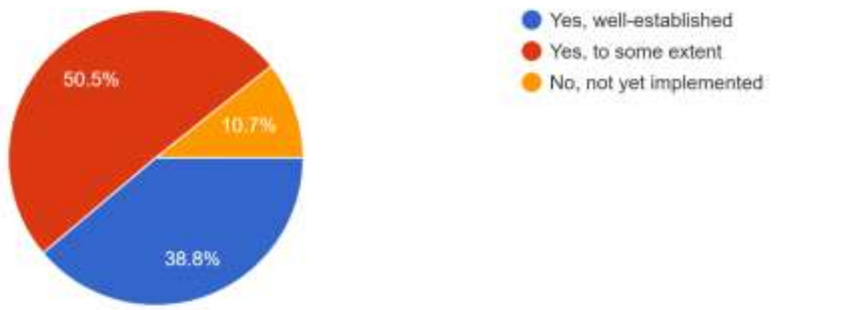
A survey found that 37.5% of respondents prioritize regular security audits, 30.8% prioritize robust encryption protocols, 24% prioritize employee training on data security, and 7.7% prioritize other specific reasons.

8. How would you assess the cost-effectiveness of implementing AI in decision-making for your management strategy?
103 responses



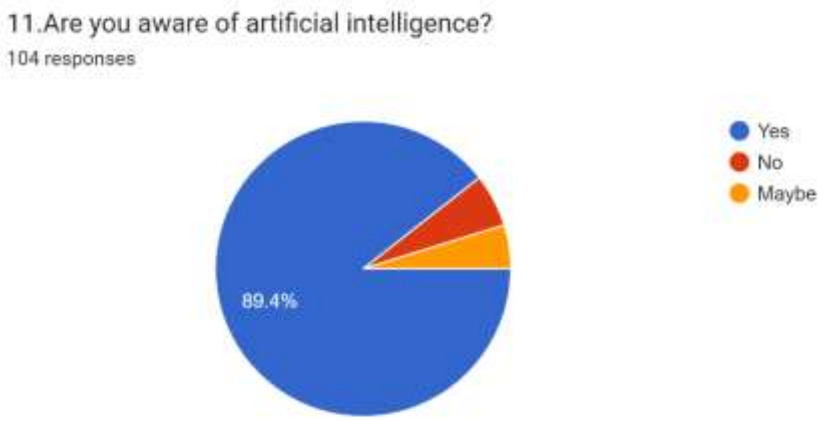
46.6% of the respondents rated it as cost-effective, 30.1% rated it as very cost-effective, 22.3% had neutral views, and the remaining 1% rated it as not cost-effective.

9. Is there a structured mechanism for collecting feedback on AI-driven decisions from relevant stakeholders?
103 responses

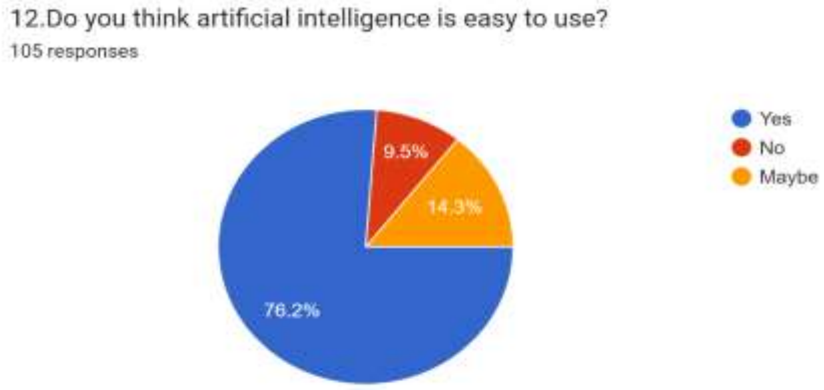


Around 50.5% of the respondents think that the mechanism is somewhat structured, 38.8% of the respondents think it is well-established or well-structured, and the remaining 10.7% think that the structured mechanism has not yet been implemented.

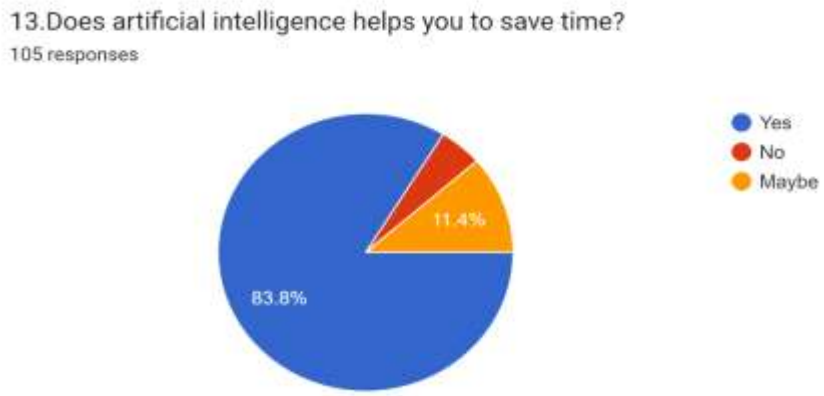
According to the survey results, approximately 50% of respondents believe that the decision-making process between AI systems and humans is moderately collaborative. 27.9% of the respondents think it is highly collaborative, while 19.2% of them believe it is slightly collaborative. Finally, only 2.9% of the respondents think that the decision-making process is not collaborative at all.



89.4% of respondents are aware of artificial intelligence, 5.8% of respondents are not aware of artificial intelligence, and, the rest of the 4.8% of respondents are maybe aware of artificial intelligence.



Approximately 76.2% of the survey respondents believe that using artificial intelligence is easy. 14.3% of respondents are unsure whether AI is easy to use or not, while the remaining 9.5% think that it is not easy to use AI.



According to a recent survey, 83.8% of the respondents believe that artificial intelligence helps to save time. 11.4% of the respondents think that AI may help to save time, while the remaining 4.8% of the respondents believe that AI does not help to save time.

CONCLUSION

The emergence of artificial intelligence has brought about significant changes in companies' decision-making processes. Thanks to AI's ability to analyze large amounts of data and create predictions and recommendations based on that data, businesses can make better, more informed decisions. Artificial intelligence can revolutionize corporate decision-making by providing fast and accurate insights into actions and options. It is important to ensure that AI is used responsibly and transparently to minimize unforeseen consequences and maintain customer trust. The future is undoubtedly the use of artificial intelligence in decision-making processes by institutions and consumers. Technology provides choice and an easy way to make business decisions. Artificial intelligence is an intelligent tool that uses data analysis and big data to help make decisions. Research shows that AI is not a replacement for humans, but rather a powerful tool to help make better decisions.

REFERENCE

1.Anupama Prashant1, Densy John Vadakkan2, Priyanka Surendran3, Bindhya Thomas4 https://thesai.org/Downloads/Volume14No6/Paper_103Role_of_Artificial_Intelligence_and_Business_Decision_Making.pdf

2.Casey Watters1, Micheal K Lemanski2, https://pubmed.ncbi.nlm.nih.gov/37680954/

3. Thijs Broekhuizen1, Henri Dekker2, Pedro de Faria3, Sebastian Firk4, Dinh Khoi Nguyen5,Wolfgang Sofka6,https://www.sciencedirect.com/science/article/pii/S0148296323005556?via%3Dihub