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MESSAGE FROM EDITOR IN CHIEF

In an era characterized by unprecedented technological evolution, global interconnectedness, and an increasing emphasis on sustainable development, organizations across industries are experiencing a profound transformation in the way they operate, innovate, and create value. The modern business environment demands not only adaptability and resilience but also a forward-looking approach that integrates innovation with long-term sustainability.

The rapid emergence of advanced technologies such as Artificial Intelligence, Machine Learning, Big Data Analytics, Automation, and Digital Transformation has significantly altered the foundations of traditional business practices. Simultaneously, growing concerns surrounding environmental sustainability, responsible governance, and ethical leadership have encouraged organizations to rethink strategies that ensure inclusive and sustainable growth.

This edition of our journal is dedicated to exploring these dynamic shifts by presenting diverse research perspectives, contemporary business insights, and scholarly contributions that address the opportunities and challenges shaping the future of modern enterprises. The journal reflects the collective intellectual efforts of academicians, researchers, scholars, and professionals who continue to contribute toward expanding knowledge in the field of management and business innovation.

I sincerely hope that the insights presented in this journal will encourage intellectual curiosity, foster innovation-driven thinking, and motivate individuals to become active contributors in shaping a progressive and sustainable future for business and society.

Dr. Govind Shinde
Director

Indira Institute of Business Management (IIBM

CONTENTS

ATTRITION CHALLENGES OF FACULTY IN UNAIDED COLLEGES IN THANE DISTRICT, MAHARASHTRA

Dr. Madhuri Mangesh Nandanwar
Matrushri Kashiben Motilal Patel College of Commerce and Science

Abstract
The growing dependence on unaided colleges within India's higher education sector has brought faculty attrition to the forefront as a critical management concern. Private institutions often struggle to retain qualified teachers due to inadequate compensation, limited career progression, overwhelming workload and lack of institutional support. This study investigates the underlying causes of faculty turnover in selected unaided degree colleges of Thane District. Using a descriptive research design, primary data was collected through structured questionnaires administered to teaching professionals across multiple institutions. The findings highlight that low salary levels, restricted job security, minimal research opportunities and excessive administrative responsibilities significantly shape teachers' intention to leave. The study further reveals that many faculty members aspire to shift to aided institutions or universities that offer better financial and professional stability. The paper concludes that unaided colleges must adopt proactive HR strategies—such as competitive salary packages, transparent promotion structures, supportive leadership and faculty development programs—to reduce turnover and sustain academic quality.
Keywords: Teacher Attrition, Private Colleges/Unaided Colleges/Self-financed Colleges, Job Satisfaction, Faculty Retention, Work Environment, Higher Education

Introduction
The expansion of self-financed colleges has significantly increased the availability of higher education in India. However, these institutions face persistent challenges in retaining competent teaching staff. Unlike aided colleges, unaided institutions operate with limited government support, resulting in comparatively lower pay scales, restricted benefits and uncertain employment conditions. These factors contribute heavily to frequent turnover among faculty members.
High attrition disrupts classroom continuity, increases hiring and training costs, and adversely impacts academic outcomes. In Thane District—one of the rapidly developing educational zones—private unaided colleges play a crucial role in absorbing student demand. Yet these institutions continue to struggle with retaining experienced teachers due to structural and administrative shortcomings.

Review of Literature
1 Low Compensation and Financial Discontent
Several studies emphasize that inadequate salaries are among the strongest contributors to teacher turnover. Private colleges often fail to match the compensation offered by aided institutions, resulting in persistent dissatisfaction.
2 High Workload and Role Overload
Teachers in private colleges are often required to engage in administrative tasks, event management, admissions work and documentation in addition to teaching. This multi-layered workload leads to exhaustion and reduces job engagement.
3 Limited Career Advancement
Research opportunities, promotions and academic development programmes are comparatively scarce in unaided institutions. Faculty members frequently report stagnation due to the absence of structured HR policies.
4 Poor Employment Security
Short-term contracts, lack of permanency and inconsistent institutional policies create insecurity among teachers. In contrast, government and aided institutions offer stable career progression.

5 Workplace Culture and Leadership

Organizational culture significantly affects retention. Supportive leadership, transparent communication and participative decision-making help reduce attrition, whereas autocratic environments increase turnover intent.

6 Personal Considerations

Factors such as travel distance, family responsibilities, higher studies and external opportunities also influence faculty decision.

Research Gap

While numerous studies address teacher attrition at national and state levels, very little research focuses specifically on the conditions of unaided degree colleges in Thane District. The institutional structures, local work culture and salary norms here differ from those in other regions, creating a genuine gap this study aims to fill

Objectives of the Study

1. To identify the major factors influencing faculty attrition in unaided colleges of Thane District.
2. To measure satisfaction levels regarding pay, workload, growth and work environment.
3. To understand teachers' future aspirations and reasons for preferring alternative institutions.
4. To suggest effective strategies for improving teacher retention.

Hypothesis

H1: Institutional factors do significantly influence teacher attrition

H0: Institutional factors do not significantly influence teacher attrition

6. Research Methodology

1 Design

A descriptive research design was adopted to capture the perceptions and experiences of teaching staff.

2 Sample

The sample consisted of faculty members from several unaided degree colleges in Thane District, representing diverse academic disciplines.

3 Tool Used

A structured questionnaire covering demographic details and satisfaction parameters was employed for data collection.

Data Analysis

Percentages, charts and correlation methods were used to interpret responses and identify dominant factors.

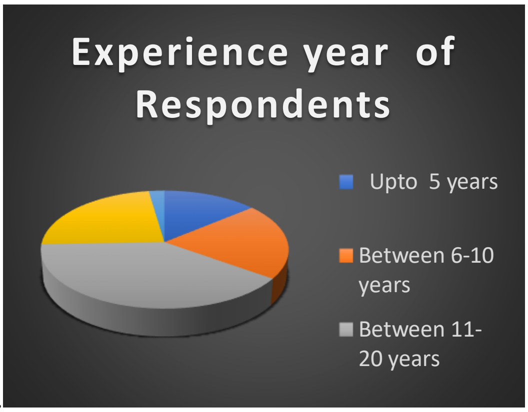
Limitations

- Restricted to unaided colleges of one district
- Self-reported responses may include bias
- Sample size limited by teachers' availability

Data Analysis

Faculty Profile and Demographic Characteristics

The majority of teachers were young postgraduates with relatively limited teaching experience, typically below seven years. This indicates that unaided colleges largely attract early-career educators who may still be exploring long-term career Pathways



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2. Dissatisfaction with Compensation Structure

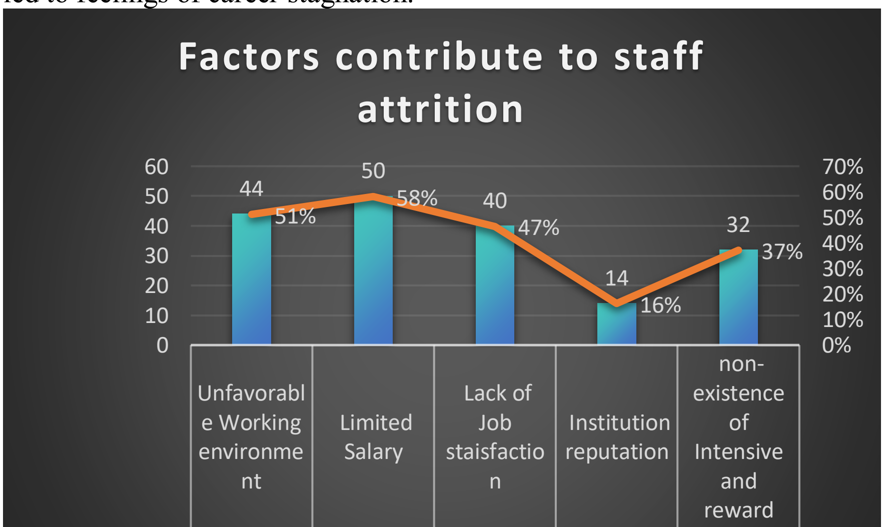
A significant number of teachers expressed unhappiness with their remuneration. They felt that their salaries were not aligned with their workload, qualifications or rising cost of living. This emerged as a primary source of dissatisfaction.

3. Workload Pressure and Work–Life Imbalance

Teachers reported handling numerous administrative in addition to classroom responsibilities. This excessive workload contributed to fatigue, reduced job satisfaction and imbalanced work–life conditions.

4. Limited Opportunities for Professional Advancement

Faculty members experienced inadequate support for research, seminars, higher education, and academic development. The absence of structured professional development and promotion policies led to feelings of career stagnation.



	Unfavorable Working environment	Limited Salary	Lack of Job staisfaction	Institution reputation	non-existence of Intensive and reward
Series1	44	50	40	14	32
Series2	51%	58%	47%	16%	37%

5. Lack of Job Security Affects Teacher Confidence

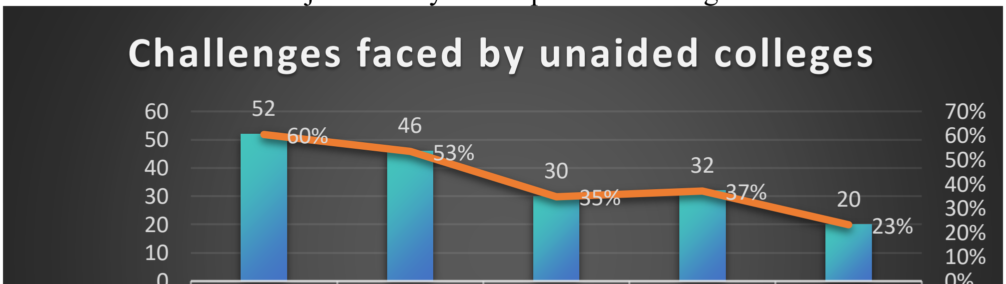
Most teachers were employed on short-term or contractual arrangements. Frequent renewal of contracts and inconsistent institutional policies created professional uncertainty and reduced their sense of stability.

6. Work Environment Strongly Influences Retention

The nature of leadership and management practices significantly affected faculty morale. Teachers reported positive experiences under supportive and communicative principals, but rigid, autocratic or non-transparent management styles were linked to higher turnover intentions.

7. High Intention to Leave Due to Better External Opportunities

A large proportion of teachers expressed readiness to shift to institutions providing better salaries, stable appointments, research support and overall growth. Many preferred aided colleges, universities or other sectors that offer job security and improved working conditions.



	Limited Financial Resources	Insufficient Professional Development Opportunities	Inadequate Recognition and Rewards	Poor Work-Life Balance	Lack of Career Advancement Opportunities
Series1	52	46	30	32	20
Series2	60%	53%	35%	37%	23%

Findings

1. Salary dissatisfaction is the most significant driver of attrition.
2. Administrative overload negatively affects motivation.
3. Career growth avenues in unaided colleges are limited.
4. Frequent contractual appointments create employment insecurity.
5. The role of leadership and work environment is crucial for retention.
6. Many teachers aspire to join aided colleges or universities.
7. Research and training opportunities are inadequate.
8. Attrition impacts classroom continuity and institutional reputation.

Recommendations

1 Improve Salary Structures : Provide competitive, qualification-based salaries with increments and performance rewards.

2 Manage Workload Effectively: Clearly differentiate teaching and administrative duties, and appoint adequate support staff.

3 Enhance Professional Growth: Offer research grants, sponsor conference participation and establish transparent appraisal systems.

4 Strengthen Job Security: Shift from annual contracts to longer-term appointments and provide essential benefits like PF and insurance.

5 Promote Supportive Leadershi: Encourage participative management and maintain open communication channels between staff and administration.

6 Implement Robust HR Policies: Standardize recruitment, performance appraisal and retention strategies.

7 Build a Healthy Institutional Culture: Recognize faculty achievements, promote teamwork, ensure transparency and foster work–life balance.

Conclusion

Teacher attrition is a serious challenge for unaided colleges in Thane District and stems from intertwined financial, professional and institutional shortcomings. The study establishes that compensation, workload, job security and organizational culture are central to teachers' decisions to stay or leave. Addressing these issues through structured HR practices, professional development initiatives and supportive management can significantly improve faculty retention. Strengthening these areas will enhance academic quality and ensure sustainable institutional growth.

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IMPACT OF HR PRACTICES ON ORGANISATIONAL CULTURE AND THE WORK PERFORMANCE OF WORKERS

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Abstract
In today's competitive and rapidly evolving business environment, Human Resource Management (HRM) has become a pivotal function in driving organizational success. This study investigates the impact of HRM practices — including recruitment and selection, training and development, performance appraisal, and compensation — on organizational
performance across various sectors. Using a quantitative research design and data collected through structured questionnaires from different respondents, the study employed descriptive statistics, correlation, and regression analyses to examine the relationships among the variables. The results revealed a significant and positive relationship between HR practices and organizational performance, with training and development emerging as the most influential factor. Additionally, employee engagement was found to mediate the relationship, emphasizing its critical role in enhancing the effectiveness of HR strategies. The findings underscore the need for organizations to adopt strategic, people-centred HRM approaches to achieve improved productivity, employee satisfaction, and long-term sustainability. This research contributes to both academic literature and practical management by offering actionable recommendations and highlighting the societal benefits of effective HRM, such as improved work environments, workforce empowerment, and economic development.
Keywords: Human Resource Management, Organizational Performance, Employee Engagement, Training and Development, Recruitment, Compensation, Performance Appraisal.

Introduction
In the modern business environment, organizations face huge competition, increasing demands for efficiency and innovation, rapid technological changes, and. Human Resource Management (HRM) has emerged as a very significant function in achieving organizational goals and sustaining a competitive advantage in the organisation. The effectiveness of HR practices — including recruitment, selection, training, performance management, compensation determination, performance appraisal and employee engagement
— directly influences the work capacity, motivation, and capability of employees, thereby impacting overall organizational levels.
This research aims to study the relationship between HR practices and organizational performance of employees, showing how strategic implementation of HR policies can lead to improved outcomes such as higher employee satisfaction, lower turnover, and increased profitability. With growing recognition that employees are valuable assets, it becomes
imperative to understand how HRM can be leveraged as a strategic partner in business success.
The study contributes to the existing literature by providing empirical insights into how specific HR practices correlate with performance metrics across different organizational settings. It also highlights the need for organizations to adopt a proactive and holistic approach to HRM in order to adapt to dynamic market demands and foster long-term growth.

Literature Review
Recent studies underscore the significant influence of Human Resource Management (HRM) practices on organizational performance. Key HRM practices such as recruitment and
selection, training and development, performance appraisal, and compensation have been identified as pivotal in enhancing employee engagement, satisfaction, and overall organizational effectiveness.
For instance, Alsakarneh et al. (2024) examined the mediating role of employee engagement in the relationship between HRM practices and organizational performance within Jordanian tourism projects. Their findings revealed that performance appraisal and employee

engagement significantly and positively impacted organizational performance. Moreover, recruitment and selection, training and development, compensation, and performance appraisal also significantly and positively impacted employee engagement. Employee engagement significantly mediated the impact of performance appraisal on recruitment, selection, and compensation with organizational performance.

Similarly, Chali and Lakatos (2024) conducted a systematic review focusing on cooperative enterprises and found that effective HRM practices are positively correlated with financial performance. Their study emphasized that HRM practices, when aligned with organizational goals, contribute to improved financial outcomes.

In the healthcare sector, a study published in the International Journal of Environmental Research and Public Health highlighted that HRM practices directly impact organizational performance and have a mediated impact through the organizational change process.

Specifically, HRM practices such as recruitment and selection, training and development, performance appraisal, and reward significantly and positively influence organizational performance and employee retention, while mitigating organizational abandonment.

Furthermore, a study by Anjaneyulu and Anjaneyulu (2023) focused on the banking sector and found that HRM practices are positively related to organizational performance. Their research indicated that effective HR practices contribute to achieving high levels of Anjaneyulu (2023) focused on the banking sector and found that HRM practices are positively related to organizational performance.

Their research indicated that effective HR practices contribute to achieving high levels of performance in organizational goals and objectives.

Scope of Study

Human Resource Management (HRM) has a wide scope as it deals with managing employees throughout their entire work life cycle in an organization. It includes planning, acquiring, developing, and maintaining human resources to achieve organizational goals efficiently.

- **Human Resource Planning**: Identifying current and future manpower needs to ensure the right number of employees are available.
- **Recruitment and Selection**: Attracting suitable candidates and selecting the best individuals through interviews and tests.
- **Training and Development**: Improving employee skills, knowledge, and preparing them for future roles and responsibilities.
- **Performance Management**: Evaluating employee performance, providing feedback, and improving productivity.
- **Compensation and Benefits:** Managing salaries, wages, bonuses, incentives, and other employee benefits.

Significance of the Study

- To examine the relationship between Human Resource Management (HRM) practices and organizational performance.
- To identify the key HRM practices that have the most significant impact on organizational success.
- To evaluate the role of employee engagement as a mediating factor between HRM practices and organizational performance.
- To assess differences in the impact of HR practices across different sectors or industries.
- To provide strategic recommendations for organizations to improve their HRM practices.

Research Methodology

1. Sampling Design: Random Sampling Design
2. Sampling Technique: Questionaries' sampling

- The advantages of sampling are that it is much less costly, quicker and analysis will become easier,

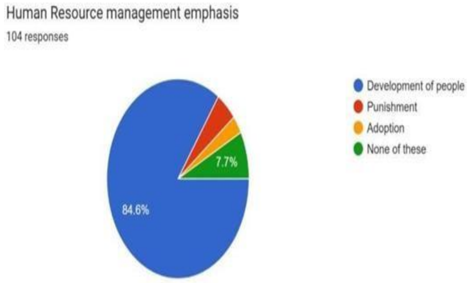
- Pie chart
- Bar graph
- MS excel software
- Questionnaire

4. Sampling Size: 100 Responses

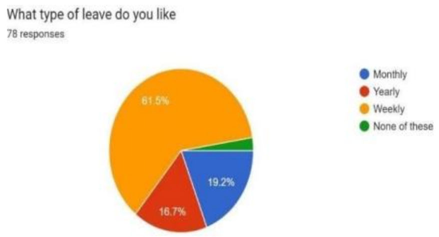
Data Analysis and Interpretation

Interpretation:

Most respondents (84.6%) believe that Human Resource Management focuses on the development

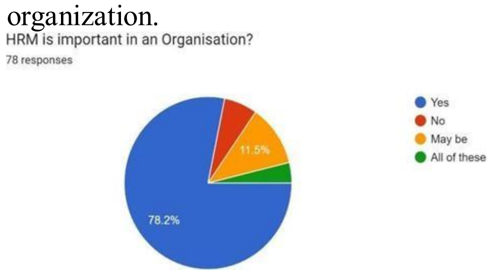


of people. Only a small percentage chose other options, showing that HRM is mainly viewed as a people-oriented function rather than punishment or other roles.



Interpretation

As we can see in the pie chart that 61.5% of respondents think that the majority of people belief that weekly leave is to be there in an organization. 19% of the respondents thinks that they can be go with the monthly leave 16.7% of the respondents thinks that monthly leave is good for them in an organization.

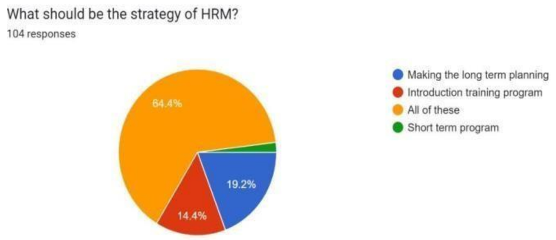


Interpretation

As above mentioned in the pie chart that 78.2% respondents thinks that human resource management is important in an organization. 11.5% of the respondents thinks that maybe human resource management is important in an organization.

Interpretation

The chart shows that 46.2% of respondents attended the training programme, while 33.3% did not attend. Around 20.5% were unsure (maybe). This indicates that although a good number participated, a significant portion either missed the training or were uncertain, suggesting scope for



improving participation.

Interpretation

The chart shows that the majority of respondents (64.4%) believe that the strategy of HRM should include all aspects (long-term planning, training, etc.). Around 19.2% prefer long-term planning, and 14.4% support introduction training programs, while very few chose short-term programs.

Findings

Strong Positive Relationship Between HR Practices and Organizational Performance The study found a statistically significant positive correlation between HRM practices (recruitment, training, appraisal, and compensation) and organizational performance. This confirms that organizations that invest in effective HR strategies tend to achieve better performance outcomes.

Training and Development has the Highest Impact Among all HR practices examined, training and development had the strongest influence on organizational performance. This suggests that enhancing employee skills, knowledge, and abilities directly boosts productivity and organizational success.

Recruitment and Selection Is Critical for Organizational Success. Effective recruitment and selection practices were found to significantly contribute to higher employee performance, job satisfaction, and organizational efficiency. Hiring the right talent is a foundation for overall performance.

Performance Appraisal and Compensation Are Key Motivators Regular and transparent performance appraisals, along with fair and competitive compensation systems, were shown to increase employee motivation, engagement, and retention — all of which positively influence performance.

Employee Engagement Mediates the Relationship The analysis suggested that employee engagement acts as a mediating variable between HR practices and organizational performance. Engaged employees are more committed and productive, amplifying the effectiveness of HR strategies.

High Reliability of the Instrument The survey instrument used in the study demonstrated high reliability, with Cronbach's alpha values exceeding 0.70 across all constructs, ensuring that the results are consistent and dependable.

Suggestions

Organizations that strategically align HRM practices with their performance goals are more likely to experience improved outcomes such as reduced turnover, better customer satisfaction, and increased profitability.

Conclusion

This study has examined the critical role that Human Resource Management (HRM) practices play in influencing organizational performance. The findings clearly demonstrate that effective HR practices — particularly in the areas of recruitment and selection, training and development, performance appraisal, and compensation — have a significant and positive impact on organizational outcomes.

The research highlights that training and development emerges as the most influential HR practice, followed closely by recruitment and selection. These practices directly contribute to enhancing employee competencies, engagement, and satisfaction, which in turn lead to improved productivity, reduced turnover, and overall organizational success.
Furthermore, the study confirms the mediating role of employee engagement, reinforcing the idea that motivated and committed employees are the bridge between strategic HR practices and superior performance results. Organizations that foster an engaging work environment through supportive HR strategies are more likely to thrive in today's
competitive and dynamic business landscape. In conclusion, the study reinforces the strategic importance of HRM in achieving organizational goals. It calls for organizations to invest in people-centric practices and continuously evaluate their HR policies to ensure they align with performance objectives.

Limitations of the Study

The proposed study has certain limitations. Foremost, it is a general study and not specific to one role of HR management. Other studies focus on one aspect of HR management and how it influences organizational performance like settings goal, monitoring employee performance. However, this study will focus on the general influence of HR management on organizational performance. The study cannot exhaust all the ways in which one aspect of HR management influences organizational performance.
Additionally, this study is limited by its cross-sectional design. Cross-sectional studies collect data once as opposed to longitudinal study and experimental study, which collect data over a long period. Therefore, the study will have data that represents how HR managers and employees feel at one given time. The perceptions they have might change with time.
However, all cross-sectional studies using interviews have this limitation, which is not unique to this study.
The other limitation of the study is the interpretation of the results. The research will utilize the qualitative research methodology. The respondents will give personal and descriptive responses, which the researcher must analyse later. If the participant answers the questions misleadingly then the responses may be biased. Additionally, the researcher may have a bias in interpreting the results. The researcher will avoid bias by asking open-ended questions that do not lead respondents to offer specific answers but rather to give their genuine views by ask general questions before specifying.
The proposed research can potentially impact the body of existing literature. The research will offer insights into how HR managers perceive their influence and role in organizational performance. Additionally, the study will offer insights into the ways in which employees perceive the influence and role of managers in their performance. That will help make decisions faster. Lastly, the research will help to understand both the positive and negative
impact of HR management on organizational performance. Representative samples help the researcher to obtain insights and observation about a targeted population. The organization we selected for our research has 600 employees. Because the answers from there
presentative sample reflect the results achieve by interviewing the entire population of the organization, this demographically represents the entire population also age, race, gender, experience, and role.

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EXAMINING THE ROLE OF DIGITAL FINANCIAL LITERACY IN SHAPING AND INCLUSIVE FINANCIAL DECISION-MAKING AMONG MBA FINAL YEAR STUDENTS IN NAVI MUMBAI

1.Indrayani Uthale
2. Dr. Vishal Chavan
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Abstract:
Financial literacy, especially in a rapidly evolving digital environment, is a key factor influencing responsible, sustainable, and inclusive financial choices. This study explores the impact of digital financial literacy on the financial decision-making patterns of MBA final-year students in Navi Mumbai, with a focus on sustainability and inclusion. Data were collected from 120 students through a structured questionnaire that evaluated their financial understanding, digital financial capabilities, saving and investment habits, awareness of sustainable finance, and involvement in inclusive financial activities. A descriptive research approach was adopted to examine the association between digital financial literacy and financial behaviour.

The results suggest that students possessing higher levels of digital financial literacy tend to engage in more structured financial planning, show a greater inclination towards long-term and sustainability-oriented investments, and incorporate ethical, social, and environmental considerations into their financial decisions. Moreover, digital financial literacy encourages broader financial inclusion by increasing the use of formal digital banking services, fintech tools, and awareness of government-supported financial initiatives. The study emphasizes the importance of embedding digital financial literacy and sustainability-related financial education within MBA programs to better prepare future professionals for responsible financial management. The findings provide useful insights for educators, policymakers, and financial institutions seeking to enhance financial capability, promote digital inclusion, and foster sustainability-conscious behaviour among emerging business leaders.
Keywords: Financial Literacy, Sustainable development, Financial decisions, Digital

Introduction

In an increasingly digitalized financial environment, making sound financial decisions requires a combination of financial understanding and the ability to navigate digital tools. Digital financial literacy has become an essential competency, allowing individuals to confidently use online banking systems, fintech applications, and digital investment platforms while making well-informed choices. At the same time, the rising importance of sustainability and financial inclusion has shifted attention toward decisions that balance financial gains with social and environmental responsibility. For management students, especially those in the final year of an MBA program who are preparing to enter leadership roles, developing both digital financial skills and sustainability awareness is crucial for encouraging responsible financial practices. Therefore, examining the relationship between digital financial literacy and sustainable, inclusive financial decision-making is particularly significant in dynamic and growing urban areas such as Navi Mumbai.

Literature Review:

Rastogi and Sharma's (2022) research on financial literacy and financial behaviour demonstrated that higher levels of financial knowledge among young adults significantly improve their ability to plan, save, and invest effectively. Their findings showed that core dimensions of financial literacy—such as understanding risk diversification, inflation, and digital financial products—strongly influence informed financial decision-making. The study also highlighted that financially literate individuals are more likely to adopt structured financial practices and avoid impulsive or high-risk financial choices.
Kumar and Singh's (2023) study on digital financial literacy and financial inclusion revealed that enhanced digital financial skills significantly increase individuals' participation in formal financial systems. Their results indicated that knowledge of digital payment platforms, mobile banking, and fintech services positively contributes to financial inclusion and accessibility. Furthermore, the study

found that digital financial literacy encourages responsible and sustainable financial behaviour by enabling users to make transparent, efficient, and well-informed financial decisions, particularly among students and young professionals.

Research Objectives

The study aims to achieve the following objectives:

1. To assess the level of digital financial literacy among MBA final-year students in Navi Mumbai.
2. To examine its impact on financial decision-making behaviour.
3. To study its influence on sustainable financial practices.
4. To analyse its role in promoting financial inclusion.
5. To understand its contribution to responsible and sustainability-oriented financial decisions.

Research Methodology

A **descriptive and analytical research design** was adopted to examine the influence of financial literacy on students' financial decision-making patterns.

Sample Design

- **Population:** MBA final-year students in Navi Mumbai colleges
- **Sample Size:** 120 respondents
- **Sampling Method:** Convenience sampling

Data Collection

- **Primary Data:** Structured questionnaires covering demographics, financial literacy, and decision-making related to savings, investments, insurance, and sustainable finance.
- **Secondary Data:** Academic books, journals, reports, and online sources on financial literacy and sustainable finance.

Limitations

- Focused only on MBA final-year students in Navi Mumbai
- Sample size limits generalizability
- Lack of time

Results and Data Analysis

1. Demographic Profile Table 1: Gender Distribution of Respondents

Gender	No. of Respondents	Percentage (%)
Male	68	56.7
Female	52	43.3
Total	**120**	**100**

Interpretation:

The gender distribution is fairly balanced, with a slight majority of male respondents.

2. Level of Digital Financial Literacy (n = 120)

Level of Literacy	Number of Students	Percentage (%)
High	70	58%
Moderate	32	27%
Low	18	15%
Total	**120**	**100%**

Interpretation:

The data shows that a majority of respondents (58%) have a high level of digital financial literacy, indicating strong awareness and usage of digital financial tools. Around 27% of students fall under the moderate category, while only 15% have low literacy levels. Overall, the results suggest that most

MBA final-year students possess a good understanding of digital financial concepts, though a small segment still requires improvement in digital financial skills.

3. Impact on Financial Decision-Making

Response Level	Number of Students	Percentage (%)
Strong Impact	74	62%
Neutral	29	24%
Low Impact	17	14%
Total	**120**	**100%**

Interpretation:

The results indicate that digital financial literacy has a strong positive impact on financial decision-making among MBA students. A majority of respondents (62%) reported that it significantly improves their financial decisions. About 24% remained neutral, suggesting a moderate or unclear influence, while 14% felt it has a low impact. Overall, the findings suggest that digital financial literacy plays an important role in enhancing financial decision-making behaviour.

4. Influence on Sustainable Financial Practices

Behaviour Type	Number of Students	Percentage (%)
High Sustainability Focus	66	55%
Moderate Awareness	36	30%
Low Awareness	18	15%
Total	**120**	**100%**

Interpretation:

The data reveals that more than half of the respondents (55%) demonstrate a high focus on sustainable financial practices, indicating strong awareness of ethical and long-term financial considerations. Around 30% show moderate awareness, while 15% have low awareness of sustainability in financial decisions. Overall, the findings suggest a positive but still developing understanding of sustainable financial behaviour among MBA students.

5. Role in Financial Inclusion

Usage Level	Number of Students	Percentage (%)
Regular Users	82	68%
Occasional Use	24	20%
Non-Users	14	12%
Total	**120**	**100%**

Interpretation:

The results show a strong level of financial inclusion among MBA students, with 68% of respondents being regular users of digital financial services such as mobile banking and fintech platforms. Around 20% use these services occasionally, while only 12% are non-users. Overall, the findings indicate that digital financial literacy has significantly contributed to higher adoption of formal and digital financial systems among students.

6. Responsible Financial Decision-Making

Response Level	Number of Students	Percentage (%)
Strongly Agree	72	60%
Partially Agree	30	25%
Disagree	18	15%
Total	**120**	**100%**

Interpretation:
The findings indicate that digital financial literacy positively influences responsible financial decision-making among MBA students. A majority of respondents (60%) strongly agree that it helps them make more responsible and well-planned financial choices. About 25% partially agree, showing a moderate impact, while 15% disagree, suggesting limited influence for a smaller group. Overall, the results highlight that digital financial literacy plays an important role in encouraging responsible financial behaviour.

Findings and Suggestions

Findings

1. The study indicates that a large proportion of MBA final-year students (58%) have a strong level of digital financial literacy, showing good understanding and use of digital financial platforms.
2. Digital financial literacy is found to positively influence financial decision-making, with 62% of respondents stating that it improves the quality of their financial choices.
3. Awareness of sustainable financial practices is relatively strong, as 55% of students consider sustainability while making financial decisions, although some still show limited awareness.
4. The level of financial inclusion is high, with 68% of respondents regularly using digital financial services such as mobile banking and fintech applications.
5. Digital financial literacy also supports responsible financial behaviour, as 60% of students believe it helps them make more planned and informed financial decisions.

Suggestions

1. Educational institutions should enhance practical training on **digital financial tools and platforms** to further strengthen students' competencies.
2. Greater focus should be given to **sustainable finance concepts**, ensuring students understand long-term environmental and ethical implications of financial decisions.
3. More experiential learning activities such as simulations and case studies should be introduced to improve **financial decision-making skills**.
4. Collaboration with banks and fintech companies can help students gain better exposure to **formal financial systems and digital services**.
5. Courses should incorporate topics on **responsible and ethical financial behaviour** to prepare students for real-world financial responsibilities.

Conclusion

The study concludes that digital financial literacy plays a key role in enhancing sustainable, inclusive, and responsible financial decision-making among MBA final-year students in Navi Mumbai. Students with higher levels of digital financial literacy tend to make more informed financial decisions, show greater interest in sustainability, and actively participate in digital financial systems. However, there remains scope for improvement in sustainability awareness and advanced financial understanding among some students. Therefore, integrating digital finance and sustainability-focused learning into MBA programs is essential to develop financially competent and socially responsible future professionals.

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A STUDY ON DIGITAL BRANDING STRATEGIES OF ZOMATO AND THEIR INFLUENCE ON CUSTOMER ENGAGEMENT

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Abstract:
The report will include an analysis of Zomato's digital branding strategies and their impact on customer engagement and loyalty. The research will focus on strategies like social media marketing, meme marketing, influencer collaborations, and personalized push notifications as the top priorities. The report will study how digital branding is affecting app usage, engagement, and repurchase intention using a primary dataset of 100 respondents. The findings will show that digital branding has a significant impact on the customer engagement, however, different strategies have differing impact. The study will conclude that unique and engaging digital branding plays a pivotal role in long term customer retention and improving brand loyalty.

Introduction:
In today's digital era where internet, social media and smartphones are revolutionizing the ways companies interact with customers, digital branding has become one of the essential aspects of marketing. Branding on digital platforms has a direct impact on how consumers engage with a product, how loyal they are towards the brand and their buying behavior.

Zomato was selected to perform this case study as it is one of the leading food-tech service providers in India that has a huge presence on digital platforms due to its use of memes for marketing, real time engagement on social media, targeted notifications and working with influencers. Zomato has been analyzed to better understand how successful digital branding strategies can improve customer engagement with the brand.

Statement of the Problem:
Businesses have been implementing digital marketing yet it is ambiguous as to which digital branding strategies result in high customer engagement and retention. Therefore, it is of importance to understand how successful Zomato's digital branding strategies are at influencing customer engagement.

Review of Literature:
Kaplan, A.M. & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. This study is a conceptual and analytical review based on secondary data and industry examples. It finds that social media platforms play a significant role in enhancing brand visibility and improving consumer interaction. The research highlights that effective engagement strategies increase customer participation and strengthen brand recall. Overall, companies that adopt interactive digital strategies tend to achieve higher levels of customer engagement and long-term loyalty.

Hutter, K., Hautz, J., Dennhardt, S. & Füller, J. (2013). The impact of user interactions in social media on brand awareness and purchase intention. Journal of Product & Brand Management. This study uses a quantitative research approach based on surveys and statistical analysis. The findings indicate that active engagement on social media has a positive impact on brand awareness and purchase intention. It also shows that digital campaigns and influencer marketing play a significant role in shaping customer perception and influencing buying behaviour.

Objectives:
1. To analyse digital branding strategies used by Zomato.
2. To study the relationship between digital branding and customer engagement.

3. To evaluate the impact of digital branding strategies on customer loyalty.
4. To identify the most effective digital marketing tools used by Zomato.
5. To evaluate the impact of digital branding strategies on customer loyalty.

Hypothesis:

Objective 1:

Independent Variable: Digital Branding Strategies (Social media marketing, meme marketing, influencer marketing, digital campaigns)

Dependent Variable: Customer Engagement (App usage frequency, interaction rate, repeat orders, brand loyalty)

H0 (Null Hypothesis): Digital branding strategies have no significant impact on customer engagement.

H1 (Alternative Hypothesis): Digital branding strategies have a significant impact on customer engagement.

Objective 2:

To evaluate the impact of digital branding strategies on customer loyalty.

Independent Variable: Digital Branding Strategies

Dependent Variable: Customer Loyalty

H0 (Null Hypothesis): Digital branding strategies have no significant impact on customer loyalty.

H1 (Alternative Hypothesis): Digital branding strategies have a significant impact on customer loyalty.

Objective 3:

To identify the most effective digital marketing tools used by Zomato.

Independent Variable: Digital Marketing Tools (Social media marketing, meme marketing, influencer marketing, app notifications)

Dependent Variable: Customer Engagement Effectiveness

H0 (Null Hypothesis): Digital marketing tools used by Zomato are not significantly effective in influencing customer engagement.

H1 (Alternative Hypothesis): Digital marketing tools used by Zomato are significantly effective in influencing customer engagement.

Research Methodology:

Research Design: Analytical and Descriptive Research

Research Area: Mumbai Area.

Sample Size: 100 customer.

Sampling Method: Random Sampling.

Type of Data: Primary Data and Secondary Data(Published research papers,Journals,Market research reports)

Data Collection Tool: Structured questionnaire survey conducted among Zomato consumers/customers.

Data Analysis Tools: Percentage analysis, charts, and graphical representation.

Research Methodology

The study adopts a **mixed-method research design** to comprehensively analyze the impact of neuromarketing on customer perceived value in digital marketing communication. This approach combines both qualitative and quantitative methods to provide deeper and more reliable insights. The qualitative phase focuses on understanding consumer perceptions and underlying values, while the quantitative phase validates these findings through statistical analysis.

In the **qualitative phase**, in-depth laddering interviews were conducted to explore how consumers interpret digital marketing stimuli and how these interpretations connect to their personal values. Participants were selected based on their prior exposure to digital branding platforms, and semi-structured interviews were used to identify attribute–consequence–value (ACV) relationships. The collected data was analyzed using thematic analysis and Hierarchical Value Mapping (HVM), which

helped in identifying key emotional and cognitive value structures. This phase is based on the Means–End Theory, where attributes (A) lead to consequences (C), which ultimately shape personal values (V).
In the **quantitative phase**, a structured online questionnaire was used to measure customer perceived value and behavioral outcomes. Customer perceived value was evaluated across five dimensions: emotional, social, economic, hedonic, and altruistic value. Additionally, consumer engagement, satisfaction, and loyalty were measured using multi-item Likert scales. The final sample consisted of 66 valid responses, which met the minimum requirement for Structural Equation Modeling (SEM) based on the 10-times rule.
Overall, this mixed-method approach enables a comprehensive understanding of both subconscious consumer behavior and measurable outcomes, providing strong support for analyzing the relationship between neuromarketing stimuli, perceived value, and customer engagement.

1. Research Design The study follows a **quantitative research design** to analyze the impact of digital branding strategies on customer engagement. The research is based on primary data collected from respondents and focuses on understanding consumer behavior using simple statistical tools. The analysis is descriptive in nature and aims to interpret patterns and trends through tables and graphical representation.
2. Data Collection Method Data was collected using a **structured questionnaire** consisting of multiple questions based on digital branding, engagement, and customer behavior. The questionnaire used a **Likert scale format** (Strongly Disagree to Strongly Agree) to measure respondents' opinions. The survey was conducted among **100 respondents in Mumbai**, mainly users of Zomato, ensuring relevant and practical insights.
3. Data Analysis Techniques The collected data was analyzed using **tables and graphical methods** such as bar charts and percentage analysis. Each response was categorized and converted into percentages to identify trends in consumer perception. Graphs were used to visually represent the data, making it easier to interpret patterns related to brand awareness, engagement levels, and customer loyalty.
4. Purpose of Analysis The main objective of using tables and graphs was to **simplify data interpretation and highlight key insights**. This approach helps in clearly understanding how digital branding strategies influence customer engagement, app usage, and repeat purchase behavior. The method provides a straightforward and effective way to draw conclusions without complex statistical models.

Results and Discussion

The findings of the study indicate that the majority of respondents have a **positive perception of digital branding strategies used by Zomato**. Most participants agreed with key variables related to brand visibility, recognition, and engagement, suggesting that Zomato has successfully established a strong online presence. The high level of agreement reflects that digital branding has been effective in creating awareness and maintaining a consistent brand image among urban digital consumers.
The study further reveals that specific strategies such as **social media marketing, meme marketing, and influencer collaborations** play a crucial role in enhancing customer engagement. Respondents indicated that these strategies make the brand more relatable and interactive, thereby increasing their interest in the platform. Additionally, personalized notifications and digital campaigns were found to significantly influence user behavior, encouraging more frequent app usage and increasing the likelihood of placing orders.
In terms of customer loyalty, the results show that digital branding has a **positive impact on repeat purchase behavior and emotional connection with the brand**. Many respondents agreed that consistent digital engagement strengthens their relationship with the brand and influences their long-term loyalty. However, a noticeable proportion of neutral responses suggests that while branding efforts are effective, they do not equally influence all users. This indicates variations in customer perception and highlights the need for more targeted engagement strategies.
Overall, the study concludes that digital branding strategies are largely effective in driving customer engagement and loyalty. However, there is still scope for improvement in areas such as **depth of interaction, personalization, and customer involvement**. The mixed responses in certain areas

suggest that businesses should focus on converting neutral users into active participants through more customized and interactive marketing approaches, ensuring a stronger and more consistent impact across different customer segments

Conclusion

This study found that digital marketing and branding tactics significantly influence consumers' behavior when it comes to Zomato. Most of the respondents felt that the company has decent digital visibility which could be enhanced further to enhance brand awareness, engagement and customer retention.

However, the count of neutral and combination of answers revealed that personalization, interaction and communication efforts could be improved. While digital marketing plays a major role in consumers buying decisions and re-use behavior, its success as a marketing tactic varies for different consumer demographics.

Hence digital branding isn't just a tool for promotion but also a business strategy that acts as a catalyst for consumer relationship and business growth if it is continued to evolve based on the needs of the consumer.

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A FINANCIAL PERFORMANCE ANALYSIS OF CHHATTISGARH STATE POWER DISTRIBUTION COMPANY LIMITED (CSPDCL)

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Abstract
This study evaluates the financial performance of Chhattisgarh State Power Distribution Company Limited (CSPDCL) over the period FY 2015–16 to FY 2024–25 using ratio analysis based on secondary data from audited annual reports and financial statements of the company. The research examines CSPDCL's liquidity, solvency, activity, and profitability positions to assess its overall financial health, operational efficiency, and long-term sustainability. The findings reveal that the company faced persistent liquidity constraints, as reflected in current, quick, cash, and working capital ratios that remained below desirable levels throughout most of the study period. Solvency analysis also shows negative shareholders' equity, a weak debt-equity structure, and low interest coverage, indicating serious long-term financial stress.
The activity ratio analysis suggests that receivables management was a major challenge in the middle years, with collection periods becoming extended before improving in recent years. Profitability indicators show that CSPDCL recorded losses in most years, although gross profit and operating expense ratios improved noticeably in the later part of the study period. Overall, the study concludes that CSPDCL has experienced significant financial difficulties, but recent improvements in asset utilization, receivables recovery, and cost control indicate gradual financial recovery. The study recommends stronger liquidity management, improved cash flow planning, better receivables collection, cost control, and sustained policy support to enhance the company's long-term financial stability.
Keywords
CSPDCL, Financial Performance, Ratio Analysis, Liquidity, Solvency, Profitability, Activity Ratios, Power Distribution Company.

Introduction

India's electricity sector is one of the most important parts of national infrastructure and plays a vital role in economic growth, industrial development, and improving living standards. Electricity supports every aspect of life, from household use to large-scale industrial production, making it a key driver of national progress. In India, electricity falls under the Concurrent List, allowing both central and state governments to regulate the sector. The sector is divided into three major segments—generation, transmission, and distribution—with distribution being the most critical because it directly connects power supply to end consumers and generate revenue for the entire system.

Power Distribution Companies (DISCOMs) are responsible for supplying electricity to domestic, agricultural, commercial, and industrial consumers. However, the distribution sector remains financially weak due to high losses, inefficient tariff structures, delayed payments, cross-subsidies, and inadequate infrastructure investment. Government initiatives like UDAY were introduced to improve the financial health of DISCOMs, but challenges still remain.

Chhattisgarh State Power Distribution Company Limited (CSPDCL) is one of the state owned DISCOMs of Chhattisgarh, established after the restructuring of the Chhattisgarh State Electricity Board under the Electricity Act, 2003. It became operational as a separate distribution company on 1 January 2009 and serves around 65 lakh consumers across urban, rural, and remote areas of the state. Its major functions include power procurement, distribution, billing, revenue collection, infrastructure maintenance, and reducing transmission and distribution losses.

Financial analysis plays an important role in evaluating the performance and sustainability of such public utility organizations. Different stakeholders like creditors, lenders, investors, and management use financial statements to assess liquidity, solvency, profitability, and operational efficiency. Tools such as ratio analysis, comparative statements, horizontal analysis, and vertical analysis help identify financial strengths and weaknesses. This study focuses on analyzing CSPDCL's financial performance using liquidity, activity, leverage, and profitability ratios to understand its financial position, operational efficiency, and long-term sustainability in the power distribution sector.

Literature Review

Patel & Shrimali (2026) investigates the financial health of India's power distribution companies by comparing public and private entities. Using financial ratio analysis, it evaluates profitability, liquidity, solvency, and operational efficiency based on industry and government data. The findings reveal that public DISCOMs continue to face losses due to high AT&C losses, subsidy obligations, and delayed tariff revisions, whereas private DISCOMs demonstrate stronger financial discipline and efficiency. The analysis highlights the need for comprehensive reforms such as tariff rationalization, governance restructuring, and technology adoption to reduce inefficiencies.

Vijayakumar & Shafi (2025) had explored the effect of financial performance through activity, liquidity, solvency and profitability ratios on the financial sustainability of the utilities of electricity distribution in Tamil Nadu. Their study prove that the operational sustainability of financial ratios as reliable indicators of their financial statements.

Pawar and Warghade (2025) study provides a comprehensive evaluation of financial performance using key ratios profitability, liquidity, solvency, and efficiency within the Indian corporate context. Their work emphasizes that ratio analysis is not merely a diagnostic tool but a strategic resource for forecasting, planning, and competitive positioning. Reliance Industries demonstrates stronger fundamentals across profitability, liquidity, and solvency, while Tata Motors shows efficiency in inventory management but faces liquidity and solvency challenges. The findings highlight how industry-specific factors shape financial outcomes and reinforce the importance of ratio analysis for decision-making, investor confidence, and competitive benchmarking.

Subhas & Thangam (2025) analysed the financial performance of Tata Motors Limited for the period 2022–23 to 2024–25 using ratio analysis, comparative analysis, and SWOT analysis. The findings revealed strong revenue growth, improved profitability, and better operating performance supported by passenger vehicle sales, electric vehicles, and contributions from Jaguar Land Rover. However, the company faced challenges such as weak liquidity, high debt levels, and fluctuating profits. The study concluded that improving working capital management and reducing debt are essential for strengthening Tata Motors' long-term financial stability and growth.

Patel & Gajjar (2025) study corporate financial health using ratio analysis, trend analysis, regression, and DEA. Gujarat's private and state DISCOMs have not been examined through firm-level or region-specific studies. This study addresses the gaps with a decade-long comparative analysis of Gujarat's DISCOMs, integrating financial ratios, operational parameters, and DEA to support sustainable management and policymaking.

Vora (2023) study analyses the financial performance of Gujarat Urja Vikas Nigam Limited's (GUVNL) four state-owned electricity distribution companies using ratio analysis and the DuPont model over a ten-year period. Findings indicate that while Gujarat's DISCOMs maintain satisfactory liquidity compared to national averages, they face profitability constraints due to subsidized power mandates, with efficiency driven primarily by asset turnover.

Uddin et al. (2022) had evaluated the financial performance of the Rural Power Company Limited for the period 2018 to 2020 using ratio analysis based on secondary data. The findings revealed that the company maintained acceptable liquidity, profitability, and debt management, indicating sound financial health and effective operational performance. However, the Return on Equity (ROE) was found to be unsatisfactory and required improvement.

Choithramani (2022) analyses three years of financial statements (2013-14 to 2015-16) of CSPDCL using liquidity, solvency and profitability ratios. The study finds that CSPDCL's short-term liquidity is weak: current and quick ratios remain below standard, indicating insufficient current assets to meet short-term liabilities as they fall due. It concludes that due to continuous losses, several solvency and profitability ratios are adverse and that the company needs better allocation of assets, improved balance between assets and liabilities, and timely payment of external liabilities to maintain goodwill.

Shukla et al. (2022) **e**xamines CSPDCL's budgetary/financial statements (profit and loss data) for five years (FY 2016-17 to FY 2020-21), focusing on revenue, total expenses and profit/loss. The analysis indicates that CSPDCL earned higher revenue in most years from 2016-17 to 2020-21, except for a slight dip in 2019-20. At the same time, its total expenses kept increasing every year, showing growing operational and distribution costs. Although the company remained in loss, the loss amount reduced over time, which suggests a gradual improvement in financial performance. Overall, it reflects that CSPDCL played an important role in electricity distribution in Chhattisgarh, but its financial sustainability was still affected by rising expenditure.

Singh & Robita (2022): Measures the financial performance of the four Gujarat State DISCOMs (i.e. DGVCL, MGVCL, PGVCL, UGVCL) using DuPont analysis for five years 2017 to 2021 including analysing the liquidity, solvency, activity and profitability ratios like ROE, ROA and ROCE. This study shows the debt collection period is very low of all four DISCOMs as compared to the National average of 142 days and concluded that all four DISCOMs can comfortably meet their short terms obligations.

Effendie et al. (2022) synthesizes how liquidity (Current Ratio), solvency (Debt to Equity) and activity ratios (Inventory Turn Over, Total Asset Turn Over) affect firm financial performance via Return on Equity.

Ganatra (2022) has studied on financial performance analysis of Adani Power Ltd, NTPC Ltd, Power Grid Corporation of India Ltd, and Torrent Power Ltd. This study shows no significant differences in RoNW, ROA, or Current Ratio, indicating similar efficiency in equity use, asset utilization, and liquidity positions. However, Net Profit Margin (NPM) varied significantly, with Power Grid consistently achieving the highest profitability, while Adani Power faced losses in some years. Overall, the findings highlight that while these companies perform similarly in asset and equity management, their profitability levels differ, underscoring the need for strategies focused on sustainable profitability and financial stability in the power sector.

S & Reddy (2019) investigated the financial performance of selected automobile firms through the application of liquidity, solvency, activity and profitability ratios and Economic Value Added (EVA) Analysis as comprehensive indicators for evaluation of performance. The results demonstrated a strong positive correlation among Net Profit Margin, ROA, ROE, and ROCE, highlighting their collective importance in performance evaluation.

Srinivas (2012) conducted an analysis of the financial statements of Karnataka Power Corporation Limited over a period of five years. The study concluded that the company maintained a satisfactory liquidity position, as indicated by its current and quick ratios, and demonstrated sound solvency in meeting long-term obligations. However, it recommended that the company utilize retained earnings to reduce its interest burden. The study further suggested revising tariff structures and controlling operational costs to improve overall profitability.

Research Gap Identification

After a thorough of review of literature, it was found that the financial performance evaluation of various DISCOMs but limited research on CSPDCL. The scope of the study can be extended to 10 years or more and analyses the recent financial performance of CSPDCL in terms of liquidity ratio, solvency ratio, activity ration and profitability ratio.

Objectives of The Study

- Measures CSPDCL's ability to meet short-term obligations using current assets.
- Assesses CSPDCL's long term financial stability and capacity to repay debts.
- Evaluates CSPDCL's efficiency in utilizing assets to generate revenue.
- Determines CSPDCL's effectiveness in generating profit relative to sales, assets, or equity.

Scope And Limitations Of The Study

The study is limited to CSPDCL's internal financial performance and does not include detailed comparisons with other power distribution companies. The results are expected to provide useful insights for management decision-making, policy evaluation, and industrial benchmarking. The study is based mainly on secondary data collected from published financial statements, annual reports, and other reliable sources of CSPDCL. It focuses on ratio analysis to evaluate the company's liquidity, solvency, activity, and profitability performance.

Research Methodology

This research employs a combination of various ratio analysis i.e. liquidity ratio (current ratio, quick ratio, cash ratio, interval measure ratio, net working capital ratio & receivable days), solvency ratio (debt equity ratio, capital employed to net worth ratio & interest coverage ratio), activity ratio (trade receivable revenue from operations ratio, assets - revenue from operations ratio & working capital revenue from operations ratio) and profitability ratio(gross profit ratio, net profit ratio, operating expense ratio). These methods are widely recognized in financial research for their ability to reveal insights into profitability, liquidity, efficiency, and long-term sustainability.

Type Of Research Design

This study adopts a descriptive and analytical design for CSPDCL's financial review using secondary data from annual reports, balance sheets, and performance records by applying ratio analysis tools to interpret financial statements & performance and assess efficiency/stability.

Sampling & Data Collection Methods

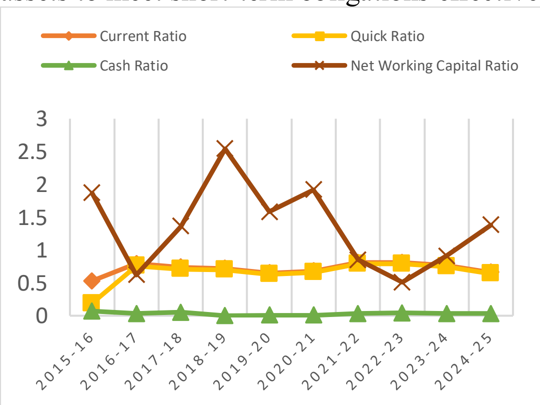
The study employs purposive sampling as the primary method and relies on secondary data collection methods. Financial data of last 10 year of CSPDCL are collected for capture trends and changes over time. Key financial indicators liquidity ratios, solvency ratios, activity ratios and profitability ratios are sampled for analysis.

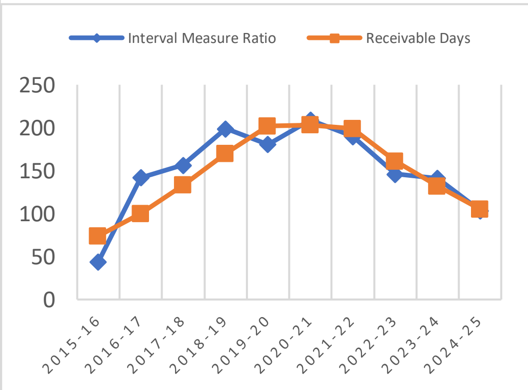
Data Analysis And Interpretation

- **Liquidity Ratio**

Financial Year	Current Ratio	Quick Ratio	Cash Ratio	Interval Measure Ratio	Net Working Capital Ratio	Receivable Days
2015-16	0.53	0.19	0.07	44.09	1.87	74
2016-17	0.79	0.76	0.03	141.79	0.62	100
2017-18	0.74	0.71	0.05	156.45	1.36	133
2018-19	0.72	0.70	0.00	198.69	2.54	170
2019-20	0.65	0.63	0.01	180.51	1.58	202
2020-21	0.68	0.66	0.01	208.85	1.92	203
2021-22	0.81	0.79	0.03	189.85	0.85	199
2022-23	0.81	0.79	0.04	145.95	0.51	161
2023-24	0.77	0.75	0.03	141.03	0.91	132
2024-25	0.66	0.64	0.03	103.44	1.38	105

The liquidity position remained weak during 2015–16 to 2024–25 as the current ratio, quick ratio, and cash ratio stayed below standard benchmark levels. This indicates insufficient current and liquid assets to meet short-term obligations effectively.



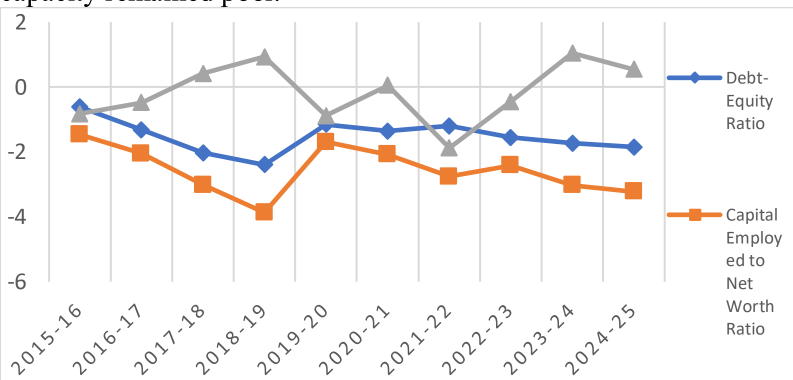


The cash ratio remained extremely low throughout, showing poor immediate cash availability. However, the interval measure ratio improved in several years, reflecting moderate short-term defensive strength. Net working capital ratio showed fluctuations, indicating unstable working capital management. Receivable Days increased initially but improved significantly in recent years, showing better collection efficiency and stronger receivables management.

- **Solvency Ratio**

Financial Year	Debt-Equity Ratio	Capital Employed to Net Worth Ratio	Interest Coverage Ratio
2015-16	-0.62	-1.47	-0.83
2016-17	-1.32	-2.05	-0.48
2017-18	-2.03	-3.02	0.41
2018-19	-2.40	-3.87	0.92
2019-20	-1.16	-1.70	-0.89
2020-21	-1.36	-2.08	0.05
2021-22	-1.20	-2.76	-1.88
2022-23	-1.56	-2.42	-0.46
2023-24	-1.74	-3.03	1.04
2024-25	-1.85	-3.22	0.54

The solvency position remained weak during the study period as the debt–equity ratio stayed negative throughout due to negative net worth. The capital employed to net worth ratio was also negative in all years, indicating an unstable and weak capital structure. The interest coverage ratio remained below 1 in most years, showing the company's inability to generate sufficient earnings to cover interest expenses. Although slight improvement was seen in 2023–24 and 2024–25, overall debt servicing capacity remained poor.

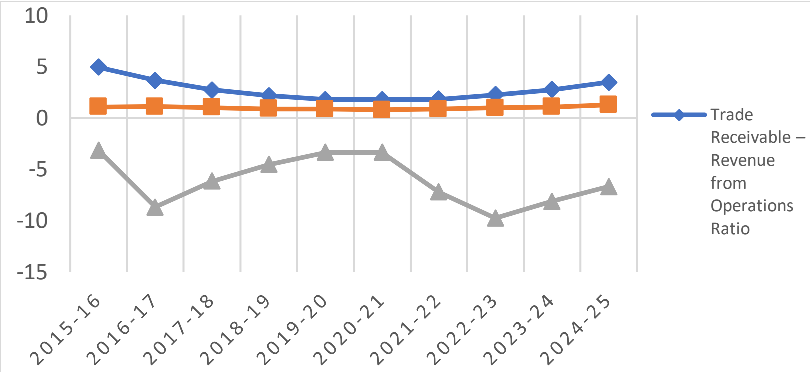


These trends indicate high financial risk and dependence on external support. Hence, CSPDCL faced significant long-term financial instability during the study period.

- **Activity Ratios**

Financial Year	Trade Receivable – Revenue from Operations Ratio	Assets – Revenue from Operations Ratio	Working Capital – Revenue from Operations Ratio
2015-16	4.93	1.08	-3.17
2016-17	3.65	1.09	-8.69
2017-18	2.74	1.01	-6.18
2018-19	2.15	0.88	-4.54
2019-20	1.80	0.85	-3.35
2020-21	1.80	0.80	-3.35
2021-22	1.83	0.86	-7.22
2022-23	2.27	0.97	-9.77
2023-24	2.77	1.06	-8.14
2024-25	3.49	1.28	-6.69

The activity ratio analysis shows mixed performance during 2015–16 to 2024–25. The trade receivable to revenue ratio declined initially and improved in later years, indicating better receivables management and collection efficiency. The assets to revenue ratio improved from 0.80 to 1.28 in recent years, showing better utilization of total assets for revenue generation. However, the working capital to revenue ratio remained negative throughout the study period due to continuous negative working capital.

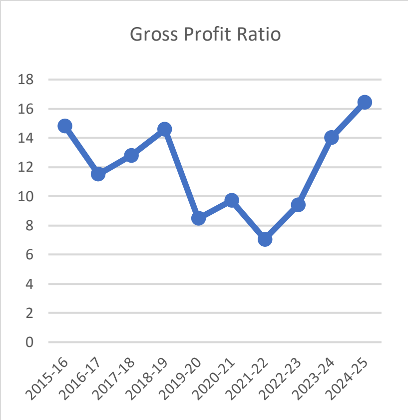


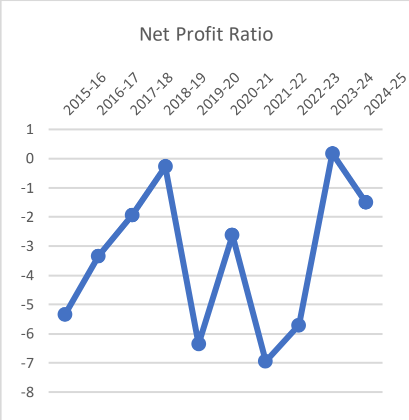
This reflects weak short-term financial support for operations. Overall, operational efficiency improved in recent years despite working capital challenges.

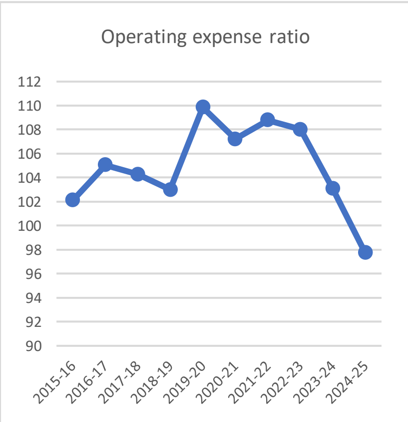
- **Profitability Ratios**

Financial Year	Gross Profit Ratio	Net Profit Ratio	Operating expense ratio
2015-16	14.81	-5.33	102.11
2016-17	11.52	-3.34	105.06
2017-18	12.81	-1.94	104.29
2018-19	14.59	-0.27	103.00
2019-20	8.48	-6.35	109.85
2020-21	9.72	-2.62	107.22
2021-22	7.06	-6.95	108.78
2022-23	9.40	-5.71	108.01
2023-24	14.04	0.18	103.09
2024-25	16.45	-1.50	97.73

The profitability position remained weak during the study period. The gross profit ratio showed fluctuations but improved significantly in recent years, reaching 16.45 in 2024–25, indicating better control over direct costs. The net profit ratio remained negative in most years, showing continuous losses and weak overall profitability.







The operating expense ratio stayed above 100 for most of the period, meaning operating expenses were higher than revenue. However, it improved to 97.73% in 2024–25, reflecting better expense control. Overall, profitability remained weak, but recent years show signs of financial recovery.

Findings & Conclusion

The financial performance of Chhattisgarh State Power Distribution Company Limited (CSPDCL) from 2015–16 to 2024–25 reflects persistent stress, marked by weak liquidity, poor solvency, negative working capital, recurring operating losses, and limited capacity to meet short-term obligations. Key indicators such as the current ratio, quick ratio, and cash ratio remained below standard benchmarks, while a negative debt–equity ratio and weak interest coverage ratio highlighted fragile long-term stability. The company's negative working capital and recurring losses posed significant challenges to financial sustainability. However, receivable days, which had increased during the mid-period, later improved, signaling stronger collection efficiency. In recent years, asset utilization, gross profit margins, and control over operating expenses have shown notable progress, pointing toward gradual recovery.

Although profitability continues to be constrained by high operating costs and negative net profit, improvements in gross profit, cost management, and operational efficiency suggest a positive trajectory. These developments reflect enhanced discipline and stronger financial management. With sustained efforts in cost optimization, liquidity improvement, and strategic reforms, CSPDCL holds the potential to achieve long-term financial stability and sustainable growth.

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IMPLEMENTATION OF EOFFICE IN INDIA (SPECIALLY BASED ON ADOPTION OF EOFFICE IN CSPCS)

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Introduction

1.1 Background of the Study

The rapid advancement of information and communication technology has transformed governance worldwide, leading to the adoption of digital platforms for efficiency and transparency. In India, the Digital India Programme emphasizes paperless offices through the E-Office initiative developed by the National Informatics Centre (NIC). Chhattisgarh State Power Companies (CSPCs), as key public sector enterprises in Raipur, have implemented E-Office to streamline workflows, reduce paperwork, and enhance accountability. Despite its potential, challenges such as employee readiness, technical infrastructure limitations, and training adequacy remain. This study explores the implementation of E-Office in these companies, assessing its impact on efficiency, transparency, and employee satisfaction.

1.2 History and Milestones of E-Office

The E-Office Mission Mode Project was launched in 2008 under the National e-Governance Plan (NeGP), developed by the National Informatics Centre (NIC) and overseen by the Department of Administrative Reforms and Public Grievances (DARPG). Its core objective was to replace manual file handling with a digital file and records management system, creating a paperless office environment. Key features introduced included the Electronic File System (eFile) for digital creation and tracking of files, a Knowledge Management System (KMS) for centralized document repositories, Work from Anywhere (WAW) for secure remote access, and Digital Signatures for authenticity and security.

Year	Development	Significance
2008	Launch of E-Office Mission Mode Project	Beginning of paperless governance initiative
2010–2012	Pilot implementation in select ministries	Testing and refinement of digital workflows
2014 onwards	Integration with Digital India	Nationwide expansion and adoption
2020s	Remote work features (WAW) activated	Continuity of governance during COVID-19

1.3 What is E-Office?

E-Office is a digital platform designed to transform traditional government offices into paperless, efficient, and transparent workplaces. Instead of relying on physical files and manual processes, it uses electronic systems to manage documents, track workflows, and store information securely. The E-Office product was designed to: establish a paperless environment; transform manual paper-driven processes into electronic workflows; standardize a single product across government; and develop an open architecture framework for scalability. It enhances transparency by making file status visible at all times, increases accountability by logging every action, assures data security and integrity, promotes innovation by releasing staff time from unproductive procedures, and transforms work culture through greater collaboration and effective knowledge management.

1.4 Statement of the Problem

While extensive research exists on strategic management and digital governance, there remains a lack of empirical studies on how the E-Office initiative is being adopted in sector-specific public enterprises such as the Chhattisgarh State Power Companies. Despite the Digital India Programme and E-Office initiative being in place, many public sector enterprises struggle to fully realize intended benefits. Key challenges include inadequate employee training, limitations in technical infrastructure (internet connectivity, hardware), resistance to change among staff, and inconsistent leadership support. This study investigates the extent of E-Office adoption in CSPCs, the barriers encountered, and the overall impact on organizational efficiency, transparency, and employee satisfaction.

1.5 Objectives, Research Questions & Hypotheses

The study aims to achieve the following key objectives:

- Examine the influence of national and state digital governance policies on E-Office adoption in CSPCs.
- Evaluate the adequacy of technological infrastructure for E-Office deployment in the power sector.
- Study the transformation of administrative workflows and employee adaptation challenges.
- Measure the impact of E-Office on transparency, accountability, and operational efficiency.
- Compare CSPCs' E-Office implementation with best practices from other Indian states.

Core research hypotheses include: H1: Strong alignment with Digital India policies has accelerated E-Office adoption; H3: Adequate IT infrastructure and cybersecurity measures significantly enhance E-Office effectiveness; H5: E-Office adoption has streamlined administrative workflows and reduced bureaucratic delays; H6: Employees with structured training show higher adaptability; H7: E-Office has improved transparency and accountability; and H10: Integration of AI and cloud computing will further enhance E-Office efficiency.

1.6 Significance and Scope

This study is significant in several dimensions: it contributes to digital governance understanding under the Digital India framework; provides sector-specific insights for utility services critical to economic development; helps identify whether E-Office has streamlined workflows and reduced paperwork; sheds light on employee training challenges; examines customer service and grievance redressal improvements; and provides a foundation for exploring future innovations such as AI and cloud computing. The study's scope is limited to the IT infrastructure, employee adaptation, workflow changes, and service delivery impacts within Chhattisgarh State Power Companies, with comparative insights from other Indian states.

Literature Review

2.1 Introduction

A literature review establishes the theoretical and empirical foundation for the study, identifies key trends and research gaps, and informs the research methodology. The primary objective here is to understand the current state of knowledge on E-Office and e-governance in India, particularly in the public sector context, and to identify what has not yet been studied—specifically, sector-specific adoption in power companies.

2.2 Theoretical Framework

1. Technology Acceptance Model (TAM)

TAM explains how users accept and adopt new technologies. In the context of E-Office, perceived usefulness (improved efficiency, transparency) and perceived ease of use (user-friendly digital platforms) influence employee acceptance in Chhattisgarh State Power Companies. Employees who find the system useful and easy to use are more likely to adopt it consistently.

2. Diffusion of Innovation Theory (Rogers, 2003)

This theory highlights how innovations spread within organizations. E-Office adoption depends on relative advantage (faster workflows), compatibility (fit with existing processes), and complexity (ease of training and adaptation). Younger employees tend to be early adopters while older staff may lag behind.

3. Lewin's Change Management Model

Implementation of E-Office requires organizational change across three stages: unfreezing (awareness and readiness), changing (training and digital adoption), and refreezing (integration into daily operations). These stages are crucial for successful transition in power companies.

4. Resource-Based View (RBV) & Public Value Theory

RBV emphasizes that organizational resources such as IT infrastructure, skilled workforce, and leadership support determine competitive advantage. Public Value Theory connects E-Office implementation to improved transparency, accountability, and service delivery—the fundamental goals of the initiative.

2.3 Empirical Evidence and Research Gaps

National-level studies in India show that digital platforms reduce paperwork, improve transparency, and enhance efficiency in government departments. Sector-specific research in public enterprises indicates that successful E-Office implementation depends on adequate IT infrastructure, leadership support, and employee training. Case studies at the state level demonstrate that clear monitoring mechanisms and accountability frameworks yield higher E-Office success rates. International evidence from Singapore and Estonia shows that advanced E-Office systems lead to improved citizen trust and service delivery.

Critical gaps in existing literature include: very few studies address sector-specific enterprises—especially the power sector; limited contextual analysis of how policy, infrastructure, and organizational readiness interact in state-level public enterprises; insufficient linkage between digital workflows and citizen satisfaction in the Indian power sector; and lack of comparative analysis with international cases. This study directly addresses these gaps by focusing on CSPCs as a specific case.

Research Methodology

3.1 Research Design

The study adopts a Descriptive and Analytical Research Design. It is descriptive because it documents the current status of E-Office implementation and captures employee perceptions, organizational readiness, and infrastructure availability without altering variables. It is analytical because it examines relationships between independent variables (infrastructure, training, leadership support) and dependent variables (efficiency, transparency, satisfaction) using statistical tools. A mixed-method approach combines quantitative surveys with qualitative observations to provide both measurable outcomes and contextual insights into organizational culture and employee adaptation.

3.2 Sampling and Data Collection

The target population consists of employees and officials of Chhattisgarh State Power Companies including administrative staff, technical staff, and management. Stratified Random Sampling is used, dividing employees into strata by department (administration, IT, customer service, technical operations) and position level (junior, middle, senior). A confidence level of 95% and margin of error of 5% guide sample size selection. Primary data is collected through structured questionnaires and direct observation of workflow processes. Secondary data comes from government reports, organizational records, and published literature on e-governance and digital transformation.

3.3 Research Instrument and Analysis Techniques

A structured questionnaire captures quantitative data across six sections: Demographic Information; Awareness and Usage; Perceived Benefits; Challenges; Training and Support; and Overall Satisfaction. Variables are measured using a 5-point Likert Scale (1 = Strongly Disagree to 5 = Strongly Agree) for perception-based items, and nominal/ordinal scales for demographic data. Reliability is tested using Cronbach's Alpha, and validity through expert review and factor analysis.

Data is analyzed using: descriptive statistics (mean, frequency distributions); bivariate analysis—Correlation and Chi-Square tests; multivariate analysis—Multiple Regression, ANOVA, and Factor Analysis; and qualitative thematic analysis of observational data. Ethical standards are maintained through informed consent, anonymization of personal identifiers, and use of data solely for academic purposes.

Data Analysis And Interpretation

4.1 Demographic Profile of Respondents

Demographic Variable	Category	Frequency (N)	Percentage (%)
Gender	Male	55	78%
	Female	15	22%
Age Group	Below 25	5	7%
	26–35	30	43%
	36–45	25	36%
	Above 45	10	14%

Demographic Variable	Category	Frequency (N)	Percentage (%)
E-Office Awareness	Yes	75	95%
	No	4	5%

4.2 Summary Statistics for Key Variables

Variable	Scale Used	Mean	Std. Dev	Interpretation
Ease of Use	1=Difficult to 4=Very Easy	2.9	0.8	Moderately easy, leaning toward 'Easy'
Efficiency Improvement	1=No to 3=Yes	2.5	0.7	Moderate agreement efficiency improved
Transparency Agreement	1=Strongly Disagree to 5=Strongly Agree	4.1	0.9	Strong agreement E-Office promotes transparency
Overall Satisfaction	1=Dissatisfied to 4=Very Satisfied	3.0	0.7	Average satisfaction = 'Satisfied'

4.3 Inferential Analysis

Chi-Square Test: Awareness vs. Occupation

Occupation	Aware (Yes)	Not Aware (No)	Total
Government Employee	54	2	56
Private Employee	9	2	11
Student / Others	5	3	8
Total	68	7	75

Chi-Square Value: 6.21 | p-value: < 0.05 → Reject Null Hypothesis. Awareness is significantly associated with occupation; government employees are more likely to be aware of E-Office.

Correlation: Training Adequacy vs. Satisfaction

Correlation (r) = 0.45 | p-value: < 0.05 → Reject Null Hypothesis. There is a moderate positive correlation: adequate training leads to higher satisfaction levels.

Multiple Regression: Predictors of Satisfaction

Predictor Variable	Beta (β)	Significance
Training Adequacy	0.41	Highly Significant — strongest predictor
Ease of Use	0.32	Significant
Efficiency Improvement	0.28	Significant
Transparency	0.25	Significant

ANOVA: Satisfaction Across Age Groups

Age Group	Mean Satisfaction	Std. Dev
Below 25	2.8	0.6
26–35	3.2	0.7
36–45	2.9	0.8
Above 45	2.7	0.7

F-Value: 4.12 | p-value: < 0.05 → Younger employees (26–35) report significantly higher satisfaction than older age groups.

Factor Analysis: Latent Dimensions of E-Office Adoption

Extracted Factor	Key Variables	Variance Explained

Extracted Factor	Key Variables	Variance Explained
Organizational Readiness	Leadership support, Training, Infrastructure	32%
Employee Adaptation	Ease of use, Resistance to change	28%
Governance Outcomes	Efficiency, Transparency, Accountability	25%

These three factors together explain ~85% of variance in responses, confirming that readiness, adaptation, and governance outcomes are the three pillars of successful E-Office implementation.

4.4 Discussion on Key Findings

- Awareness vs. Adoption: Awareness of E-Office is very high (95%) among government employees, but actual usage is uneven—many use it daily while others use it only occasionally or never. Awareness alone does not guarantee adoption.
- Efficiency Gains: Respondents highlight reduced paperwork, faster processing, and easier record-keeping. Transparency and cost savings are reported as major benefits, aligning with Digital India objectives.
- Training as Critical Factor: Lack of training is the most common challenge. Employees who received training report higher satisfaction and smoother adoption, confirming training adequacy as the strongest predictor.
- Technical and Infrastructure Issues: Slow internet and system glitches frequently reduce confidence in E-Office and slow workflows. Reliable infrastructure is crucial for scaling adoption.
- Generational Differences: Younger employees (26–35) show the highest satisfaction and adaptability. Older employees often face resistance to change and require additional support.
- Leadership and Organizational Readiness: Strong leadership support and proactive monitoring improve adoption. Where management is committed, employees are more motivated to use E-Office consistently.

Findings, Discussion, And Conclusion

5.1 Summary of Key Findings

Research Objective	Key Finding	Interpretation
Assess awareness of E-Office	95% aware; actual usage uneven	Awareness campaigns effective, but adoption needs organizational push
Evaluate efficiency & transparency	Reduced paperwork, faster processing, cost savings	E-Office achieving Digital Governance goals, unevenly across departments
Identify implementation challenges	Training gaps, slow internet, resistance to change	Technical and human factors require targeted interventions
Examine training and support role	Training adequacy is strongest predictor of satisfaction (β=0.41)	Structured programs essential for successful implementation
Analyze employee satisfaction	Majority satisfied; younger employees more positive	Generational gaps need tailored mentoring and support
Study organizational readiness	Strong leadership improves adoption outcomes	Leadership commitment is decisive for digital transformation
Explore governance outcomes	Transparency consistently improved (Mean = 4.1)	E-Office strengthens governance; infrastructure upgrades still needed

5.2 Theoretical Implications

The findings validate all theoretical frameworks applied. TAM is confirmed: perceived ease of use and perceived usefulness directly influence employee satisfaction and E-Office adoption—training adequacy enhances ease of use, while efficiency gains strengthen usefulness. Diffusion of Innovation Theory is reinforced: younger employees act as early adopters while older staff show characteristics of the late majority or laggards, with organizational readiness functioning as a change agent accelerating diffusion. Lewin's Change Management Model is supported: successful adoption requires deliberate unfreezing through awareness, structured changing through training, and refreezing through policy integration. RBV confirms that organizations with stronger IT infrastructure, capable leadership, and supportive culture achieve better performance outcomes. Public Value Theory is demonstrated through the strong agreement (Mean=4.1) that E-Office promotes transparency and accountability.

5.3 Recommendations

Training and Capacity Building

- Conduct regular, structured training programs for employees at all levels with hands-on workshops.
- Provide tailored mentoring for older employees to bridge generational adaptability gaps.
- Introduce refresher courses as the E-Office system evolves and new features are added.

Technical Infrastructure Enhancement

- Strengthen internet connectivity and ensure reliable server performance across all offices.
- Establish dedicated IT support teams to resolve technical issues quickly and minimize downtime.
- Upgrade hardware and software systems to reduce system glitches that undermine employee confidence.

Leadership and Change Management

- Encourage active top management involvement in promoting and monitoring E-Office usage.
- Address resistance to change through awareness campaigns, motivational sessions, and sharing success stories
- Involve employees in decision-making to increase ownership and motivation for the system.

Policy, Governance, and Scalability

- Align E-Office implementation fully with Digital India guidelines and data security standards.
- Develop clear accountability frameworks for workflow digitization across all departments.
- Use lessons from CSPCs to create a standardized E-Office framework replicable across other government organizations.

5.4 Limitations of the Study

- Sample Scope: Limited to Chhattisgarh State Power Companies; findings may not represent other government departments or private organizations.
- Self-Reported Bias: Responses based on self-reporting may include social desirability bias; actual usage could differ from reported perceptions.
- Cross-Sectional Design: Data captures perceptions at a single point in time; longitudinal data would provide deeper insights into how adoption and satisfaction evolve.
- Geographical Constraint: Confined to Chhattisgarh; results may not reflect experiences in other states with different infrastructure and organizational cultures.
- Limited Variables: Factors such as budget constraints, interdepartmental coordination, and policy changes were not explored in depth.

5.5 Suggestions for Future Research

- Expanded Scope: Include multiple states or regions to compare adoption patterns and identify context-specific challenges across Indian public sector enterprises.
- Longitudinal Studies: Track how employee satisfaction, adaptability, and efficiency evolve over time as E-Office matures and new versions are deployed.
- Technology Integration: Explore integration of E-Office with AI, cloud computing, and blockchain for enhanced transparency, predictive analytics, and efficiency.
- Citizen Perspective: Extend research beyond employees to assess how E-Office impacts citizens in terms of grievance redressal, service delivery speed, and public trust.
- Comparative Analysis: Compare E-Office implementation in government versus private organizations to highlight differences in adoption drivers, barriers, and outcomes.

5.6 Conclusion

This study demonstrates that the implementation of E-Office in Chhattisgarh State Power Companies has brought significant improvements in efficiency, transparency, and accountability. Employees acknowledge reduced paperwork, faster processing, and better record management as clear benefits of digitization. The strong agreement on transparency (Mean = 4.1) and overall satisfaction of the majority validates E-Office as an effective digital governance tool. However, adoption remains uneven due to challenges such as inadequate training, technical infrastructure limitations, slow internet connectivity, and resistance to change among older employees. Training adequacy emerges as the most critical determinant of both satisfaction and successful adoption, followed by ease of use, efficiency improvement, and transparency.In conclusion, E-Office is not merely a technological upgrade but a socio-technical transformation requiring simultaneous investment in digital infrastructure, human capital development, leadership commitment, and organizational change management. When these elements align, E-Office fulfills its promise of transparent, efficient, and citizen-centric governance—making it a sustainable cornerstone of India's digital future.

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HYBRID WORK CULTURE AND ITS IMPACT ON EMPLOYEE'S PERFORMANCE

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Introduction

1.1 Introduction to Hybrid Work Culture

Hybrid work culture is a flexible working model where employees divide their time between remote work and office-based work. It blends the autonomy of working from home with the collaborative benefits of in-person interaction, emphasizing results over physical presence. The primary aim of hybrid work is to balance productivity with employee well-being, offering organizations a way to maintain team alignment while granting employees greater flexibility and improved work-life balance.

In the IT sector, hybrid work has become especially significant because it directly influences organizational design, HR practices, leadership approaches, and employee engagement. Studies report a 22% increase in task completion rates, a 70% improvement in employee mental health outcomes, and a 15–20% rise in engagement scores when hybrid models are supported by digital collaboration tools.

1.2 Background Study

Before COVID-19, the IT sector was uniquely positioned for remote work due to digital transformation across core functions such as software development, testing, and IT support—all conducted through cloud-based platforms and collaborative tools like Git, Jira, and Slack. DevOps practices further reduced dependence on physical presence. However, despite technical feasibility being high, organizational adoption lagged behind capability. IT firms in India, the U.S., and Europe operated through offshoring models with geographically dispersed teams, but this distribution was office-based across locations, not home-based.

Remote work before 2020 was treated as a selective perk—granted mainly to senior engineers and specialized roles. Managerial resistance, security constraints, and infrastructure gaps (especially in Tier-2 and Tier-3 Indian cities) prevented widespread adoption. The pandemic forcibly closed this realization gap, revealing that most barriers were organizational and cultural, not technical.

1.3 Pandemic Transformation and Post-COVID Hybrid Model

The COVID-19 outbreak in early 2020 acted as a catalyst for immediate transformation. Remote work became mandatory, with U.S. full-time remote workers surging from 7% to over 30% within months. IT companies demonstrated remarkable agility—deploying secure VPNs, cloud platforms, and collaboration tools at scale. The pandemic exposed that capacity for remote work was far greater than previously assumed. By 2021, the sector began formalizing hybrid frameworks: fixed office days, remote-first teams, flexible hours, and outcome-based performance measurement.

1.4 Comparative Overview: Indian vs. US & Europe IT Sector

Aspect	Indian IT Sector	US & Europe IT Sector
Adoption Rate	70% of IT jobs remote-capable; 20.3% hybrid postings by 2025	13.4% hybrid in US; 38.3% in UK; 29.7% in France (2024)
Key Drivers	Cost savings, talent beyond metros, digital workforce expansion	Employee flexibility demand; hybrid sweet spot at 6–10 office days/month
Main Challenges	Uneven internet, Tier-2/3 city gaps, managerial trust issues	Perception gaps between managers and employees on hybrid efficiency
Policy Design	Ad hoc policies; large firms formalizing structures	Standardized frameworks with equity and wellbeing emphasis
Employee	Accept lower pay for flexibility; hybrid seen as	Prefer structured hybrid; higher efficiency with

Aspect	Indian IT Sector	US & Europe IT Sector
Preferences	recruitment advantage	moderate schedules

1.5 Objectives, Research Questions & Significance

The study aims to examine how hybrid work policies evolved from pre-COVID selective perks to post-COVID strategic frameworks, and to evaluate their measurable impact on IT employee performance, well-being, and career progression. Key research questions include:

- RQ1: How did hybrid work policy formalization change from pre- to post-COVID in IT firms?
- RQ2: What is the effect of hybrid work on individual and team productivity?
- RQ3: How did hybrid arrangements affect employee well-being and work-life balance?
- RQ4: Does hybrid work mode influence promotion rates and visibility for remote employees?
- RQ5: How did managerial evaluation shift from presenteeism to outcome-based systems?

The study holds strategic significance for workforce planning, cost optimization, productivity measurement, and equitable HR practices—particularly for IT firms expanding hiring beyond major metropolitan areas.

1.6 Scope and Limitations

The research is limited to the IT industry—software development, QA, DevOps, and IT support—analyzing two periods: pre-COVID (up to 2019) and post-COVID (2020 onwards). Geographic focus is on Indian IT firms with comparative insights from the U.S. and Europe. Key variables studied include productivity, well-being, career progression, managerial practices, technology investments, and organizational culture.

Limitations include a small sample size, self-report bias, measurement inconsistency across productivity metrics, and infrastructure variability between urban and Tier-2/3 Indian cities. Policy heterogeneity (fixed days vs. flexible vs. remote-first models) also limits universal prescriptions.

Literature Review

2.1 Hybrid Work Culture in IT: Theoretical Foundations

Hybrid Work Culture (HWC) has become a defining structural shift in the global IT sector. Research consistently shows that hybrid models significantly influence employee performance, engagement, well-being, and organizational productivity. Three theoretical frameworks—Technology Acceptance Model (TAM), Resource-Based View (RBV), and Contingency Theory—together explain hybrid work effectiveness at individual, organizational, and contextual levels.

Technology Acceptance Model (TAM) — Individual Level

TAM explains how employees adopt digital tools, directly affecting performance in hybrid environments. Employee acceptance of collaboration platforms (Teams, Zoom, Jira, GitHub) depends on Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). IT employees who perceive tools as easy and useful show higher productivity, faster task completion, and fewer coordination delays. Research by Virani et al. (2026) confirms that employee performance in hybrid IT teams is strongly shaped by technological usability.

Resource-Based View (RBV) — Firm Level

RBV explains why some IT firms perform better under hybrid models based on internal VRIN capabilities—digital infrastructure, managerial leadership, organizational culture, and hybrid equity HR systems. Firms with strong digital and managerial capabilities show higher employee engagement, lower turnover, and better project delivery metrics. A 2025 review of IT firms confirmed technological readiness and leadership support as the strongest enablers of hybrid performance.

Contingency Theory — Organizational Fit

Contingency Theory explains when hybrid work improves performance and when it does not, based on task complexity, team interdependence, client requirements, and infrastructure reliability. High-interdependence agile teams may require more in-person rituals, while independent development tasks (coding, testing) perform well remotely. IT-sector research shows that communication gaps and evaluation fairness remain persistent challenges when hybrid practices do not fit the task context.

2.2 Integrated Theoretical Comparison

Theory	Level	Explains	Application to Performance
TAM	Individual	Technology adoption & usage	Predicts tool uptake → communication speed, task efficiency
RBV	Firm	Strategic resources enabling hybrid advantage	Explains why firms achieve higher productivity & retention
Contingency Theory	Organizational	Fit between hybrid practices & context	Predicts when hybrid improves or harms performance

2.3 Empirical Evidence and Research Gaps

Empirical studies confirm that hybrid work affects performance through personal, organizational, and social factors. Employee well-being and motivation are primary drivers (Virani et al., 2026); engagement, technological readiness, and team management strongly predict outcomes; and organizational culture shapes collaboration, trust, and knowledge sharing. However, significant gaps remain: limited longitudinal evidence on long-term career impacts, inconsistent productivity metrics across IT firms, underrepresentation of small and mid-sized firms, and difficulty isolating hybrid policy effects from other organizational changes.

Research Methodology

3.1 Research Design

The study adopts a Descriptive and Analytical Research Design to understand employee perceptions and evaluate relationships between hybrid work practices and performance outcomes. Descriptive research identifies employee perceptions, adoption trends, and satisfaction levels. Analytical research examines cause-effect relationships—does hybrid work improve productivity? Does digital tool usage influence performance? Does hybrid reduce burnout? This dual approach is supported by the fact that 73% of hybrid employees globally report higher productivity (Microsoft Work Trend Index, 2024), warranting validation within the Indian IT context.

3.2 Data Collection and Sampling

The study uses both primary data (structured questionnaire administered to IT employees in hybrid roles: software developers, test engineers, IT support staff, project managers, and HR professionals) and secondary data from peer-reviewed journals, company reports, and databases including IEEE, McKinsey, Gartner, and Statista. Primary data constitutes 60% of the study; secondary data 40%.A Convenience Sampling method is employed, appropriate for collecting responses from IT professionals who are currently working in hybrid environments. The sample size is 40–50 respondents, adequate for small-scale academic research with meaningful descriptive and analytical insights.

3.3 Research Instrument and Measurement Scale

The primary instrument is a structured questionnaire with six sections: Demographics; Hybrid Work Experience; Employee Satisfaction; Communication & Collaboration; Digital Tools Usage; and Well-being & Engagement. A 5-point Likert Scale measures attitudes and perceptions:

Scale	Meaning
1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

Data is analyzed using Percentage Analysis, Mean Score Analysis, Bar Graphs, Pie Charts, and Cross-tabulation. Ethical standards are maintained through voluntary participation, respondent confidentiality, and use of data solely for academic purposes.

Data Analysis And Interpretation

4.1 Demographic Profile of Respondents

Demographic Variable	Category	Frequency (N)	Percentage (%)
Gender	Male	33	73.3%
	Female	12	26.7%
Age Group	Below 25	3	6.6%
	25–30	12	26.7%
	31–35	22	48.9%
	36–40 / Above 40	8	17.8%
Education Level	Bachelor's	25	55.6%
	Master's	17	37.8%
	PhD/Doctorate	3	6.6%

4.2 Key Questionnaire Findings

The analysis of responses reveals important patterns in how IT professionals experience hybrid work:

- Preferred Work Balance: 59% prefer a balanced hybrid model (3 days office, 2 days remote); 20.5% prefer fully in-office; 12.8% prefer mostly remote; 7.7% prefer fully remote. The majority favors flexibility combined with in-person collaboration.
- Productivity Impact: 26.2% feel slightly more productive at home; 11.9% much more productive; 31% report no change; 31% are more productive in the office. Productivity is clearly individual-dependent, shaped by job role and personal work style.
- Team Inclusion: 50% feel fully included in team activities; 38.1% sometimes feel left out; 11.9% often feel excluded. Remote work reduces informal interactions and creates genuine inclusion challenges.
- Hybrid Meeting Equality: 40.5% believe remote and in-office participants have equal participation; 45.2% say in-office employees dominate slightly; 7.1% feel remote voices are often ignored—indicating persistent proximity bias in hybrid meetings.
- Work-Life Balance: 52.4% report slight improvement; 35.7% report significant improvement; 11.9% report no change. Hybrid work positively impacts work-life balance for 88.1% of respondents.
- Extended Working Hours: 47.6% occasionally work longer hours remotely; 28.6% frequently. Remote work blurs work-life boundaries, leading to overwork for 76.2% of respondents.
- Proximity Bias Concerns: 42.9% are slightly worried about career growth due to less physical presence; 7.1% are very worried; 40.5% are not worried at all. Nearly half of employees perceive some fairness risk in hybrid promotion practices.
- Main Challenges: Technical/internet issues (33.3%), difficulty unplugging from work (28.6%), loneliness and isolation (21.4%), and coordination difficulties (16.7%) constitute the primary pain points.

4.3 Statistics for Key Variables

Variable	Key Finding	Value	Interpretation
Ideal Work Balance	Balanced hybrid preferred	59%	Flexibility + collaboration is optimal
Productivity Impact	Mixed results across individuals	38.1% more at home	Role and environment dependent
Work-Life Balance	Improved for majority	88.1%	Reduced commuting key driver
Longer Hours Remotely	Boundary erosion common	76.2%	Digital presenteeism risk
Inclusion in Teams	Significant exclusion risk	50% fully included	Informal interaction loss

Variable	Key Finding	Value	Interpretation
Proximity Bias	Career fairness concern	42.9% worried	Remote staff at promotion risk
Infrastructure Support	Office adequate; home lacking	78.6% / 55%	Home office investment needed
Technical Challenges	Biggest single challenge	33.3%	Reliable connectivity critical

Findings, Discussion, And Conclusion

Summary of Key Findings

The study examined the impact of hybrid work culture on IT employee performance through primary data from 45 respondents and secondary literature. Eight core findings emerged:

- Hybrid Work Preference: 59% of IT employees prefer a balanced hybrid model, valuing flexibility from commute stress alongside in-person opportunities for brainstorming, mentorship, and team-building. Organizations must formalize clear hybrid policies with structured schedules to balance both needs.
- Productivity Variability: Productivity outcomes are mixed—equally split between home-preferring, office-preferring, and role-neutral employees. This confirms that hybrid work is not uniformly superior or inferior; its effectiveness is driven by job role, work style, and managerial support. Outcome-based evaluation is essential.
- Work-Life Balance Gains: 88.1% of respondents report improved work-life balance under hybrid models, primarily due to reduced commuting time. However, boundary erosion (76.2% working longer hours remotely) presents a counterbalancing risk that organizations must actively manage.
- Inclusion and Communication Gaps: Only 50% feel fully included in team activities; 41% experience some form of exclusion. Hybrid meetings show bias toward in-office participants. Organizations need inclusive meeting norms, digital collaboration rituals, and virtual social events.
- Proximity Bias in Career Progression: 42.9% of employees are concerned about promotion visibility, reflecting the risk that physically present employees are disproportionately rewarded. Transparent promotion criteria and visibility rituals for remote employees are essential for equity.
- Infrastructure and Support Gaps: 78.6% find office infrastructure adequate, but only 55% receive any home office support. Many employees bear personal costs for reliable internet and ergonomic setups—a gap that directly affects productivity and morale.

Discussion and Theoretical Interpretation

The findings validate all three theoretical frameworks. TAM is confirmed: employees who perceive digital tools as useful and easy to use demonstrate higher productivity, faster task completion, and better coordination. Tool investment must be accompanied by training and UX improvements. RBV is supported: organizations with strong infrastructure, effective hybrid leadership, and supportive cultures achieve better performance and retention outcomes—confirming that hybrid success is a strategic resource, not just a logistical arrangement. Contingency Theory is reinforced: hybrid work effectiveness depends heavily on task type, team interdependence, and infrastructure reliability. Agile teams with high interdependence need structured in-person rituals; independent developers benefit most from remote flexibility.

These findings are consistent with existing literature: Microsoft's Work Trend Index (2024), McKinsey's Future of Work Report (2023), and NASSCOM's India IT findings all confirm that hybrid work improves satisfaction while presenting equity and communication challenges that require intentional management.

Recommendations

Organizational Recommendations

- Implement structured hybrid schedules with fixed office days for collaboration-intensive activities
- Redesign office spaces to support both focus work and collaborative brainstorming
- Invest in enterprise-grade cloud infrastructure, cybersecurity, and collaboration ecosystems

Human Resource Recommendations

- Develop transparent, outcome-based promotion policies that neutralize proximity bias
- Provide mental health support, digital wellness programs, and structured flexibility guidelines
- Introduce mentorship programs ensuring equal access for remote and in-office employees

Technological Recommendations

- Ensure reliable internet and digital tool access for all hybrid employees
- Provide financial stipends or reimbursements for home office setup
- Invest in seamless, interoperable collaboration platforms with strong UX

5.4 Conclusion

Hybrid work culture has emerged as a transformative and sustainable model for the IT sector. This study concludes that hybrid work significantly enhances work-life balance and employee satisfaction across nearly 90% of respondents, while its impact on productivity remains variable and context-dependent. The challenges of communication gaps, proximity bias, extended working hours, and infrastructure limitations must be deliberately addressed through policy, technology, and managerial practice.Hybrid work is not a temporary arrangement or a universal solution—it is a strategic system requiring alignment between individual technology acceptance, firm-level capabilities, and organizational context. When these elements are aligned through clear policies, outcome-based evaluation, inclusive practices, and strong digital infrastructure, hybrid work culture has the proven potential to improve both employee performance and organizational efficiency, making it the defining work model for the future of the IT sector.

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CYBERSECURITY & DATA PRIVACY CHALLENGES

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Introduction

In an era defined by digital transformation, cybersecurity and data privacy have emerged as critical strategic imperatives for organisations, governments, and individuals. Cloud computing, IoT, mobile banking, and e-governance have created extraordinary value — but simultaneously exposed vast new attack surfaces. India alone recorded over 1.39 million cybersecurity incidents in 2022 (CERT-In Annual Report), a figure that continues to climb in step with the country's digital ambitions. This report examines the landscape of cybersecurity and data privacy challenges with analytical rigour, situating them in both the Indian and global context, while offering actionable insights for management professionals navigating the digital economy.

Concept Overview: Cyber security & Data Privacy

Cybersecurity refers to the practice of protecting networks, systems, and data from digital attacks, unauthorised access, damage, or theft. At its core, it seeks to maintain the CIA Triad — Confidentiality (information accessible only to authorised parties), Integrity (data free from unauthorised alteration), and Availability (systems accessible when required). A breach in any of these properties constitutes a security incident with potentially severe organisational consequences.

Data privacy, while closely related, is a distinct concept governing an individual's or organisation's right to determine how personal data is collected, stored, processed, and shared. Cybersecurity protects data from threats; data privacy governs the ethical and legal framework around data usage. Together, these two pillars form the foundation of digital trust. India's Digital Personal Data Protection Act, 2023 (DPDPA) marks a landmark step in formalising this framework domestically, aligning with global standards such as the EU's GDPR.

FIGURE 1: Cybersecurity Threat Lifecycle (Lockheed Martin Kill Chain)

THREAT LIFECYCLE
1. Reconnaissance → 2. Weaponisation → 3. Delivery → 4. Exploitation
5. Installation → 6. Command & Control (C2) → 7. Actions on Objectives

Key Challenges In Cybersecurity & Data Privacy

Data Breaches

Data breaches occur when confidential data is accessed, disclosed, or stolen without authorisation — through external hacking, accidental exposure, or insider actions. The consequences span financial losses, regulatory penalties, and long-term reputational damage. Healthcare, financial services, and e-commerce sectors are disproportionately targeted due to the volume of PII and financial data they hold. IBM's 2023 Cost of a Data Breach Report placed the global average cost at USD 4.45 million, with India's average at USD 2.35 million — a 28% increase from 2020, reflecting both rising attack frequency and growing enterprise digitalisation.

Ransomware Attacks

Ransomware has evolved from a nuisance into a billion-dollar criminal enterprise, with modern operations running on a Ransomware-as-a-Service (RaaS) model. Attackers encrypt victim data and demand cryptocurrency payment for decryption keys. The 2022 AIIMS Delhi attack — which paralysed hospital operations for nearly two weeks and compromised approximately 40 million patient records — is India's most prominent case. Beyond data loss, ransomware disrupts critical services; hospitals defer patient care, factories halt production, and municipalities lose access to civic systems.

Phishing & Social Engineering

Despite sophisticated technical threats, social engineering — particularly phishing — remains the single most prevalent initial attack vector. Spear phishing targets specific individuals, while 'whaling' focuses on senior executives. Business Email Compromise (BEC), which tricks finance teams into fraudulent wire transfers, cost global organisations approximately USD 2.7 billion in 2022 (FBI IC3). The human element is both the most exploited and most improvable factor in security posture — no firewall can prevent an employee from clicking a convincing fraudulent link.

Insider Threats & Regulatory Gaps

Insider threats — both malicious (deliberate misuse of access) and negligent (accidental data exposure) — are among the most damaging and hardest-to-detect categories. The Ponemon Institute (2023) estimated the average global cost of insider incidents at USD 15.4 million annually. Compounding this, regulatory frameworks remain fragmented. India's DPDPA 2023 is a significant advance, but its effectiveness depends on implementing regulations and enforcement capacity. SMEs and the informal digital economy largely lack the resources for meaningful compliance, creating systemic gaps that attackers routinely exploit.

FIGURE 2: Data Protection Framework (Multi-Layer Defence Model)

DATA PROTECTION FRAMEWORK
LAYER 1 — Legal & Regulatory: DPDPA 2023, GDPR, IT Act 2000, RBI / SEBI Guidelines
LAYER 2 — Governance & Policy: Data Classification, Access Controls, Retention Policies
LAYER 3 — Technical Controls: Encryption, Firewalls, MFA, Intrusion Detection Systems
LAYER 4 — Operational: Security Audits, Penetration Testing, Patch Management
LAYER 5 — Human Controls: Security Awareness Training, Phishing Simulations, CISO Oversight
LAYER 6 — Incident Response: Detect → Contain → Eradicate → Recover → Report

Real-World Case Studies & Examples

Case 1: AIIMS Delhi Ransomware Attack (November 2022)

AIIMS Delhi suffered a ransomware attack in November 2022 that crippled its hospital management system for nearly two weeks, forcing a return to manual paper-based operations. Approximately 40 million patient records were compromised. The incident exposed critical gaps in healthcare cybersecurity: outdated systems, insufficient network segmentation, absence of a formal incident response plan, and inadequate staff training — underscoring that critical national infrastructure cannot be treated as low-priority for security investment.

Case 2: SolarWinds Supply Chain Attack (2020)

Nation-state actors (attributed to Russia's SVR) inserted the SUNBURST malware into SolarWinds Orion software updates, trusted by over 18,000 organisations including US federal agencies. The compromise remained undetected for approximately nine months. Its significance lies not in data destruction but in demonstrating how a single trusted vendor can become a systemic vulnerability, enabling months of undetected espionage across thousands of downstream organisations — a wake-up call for supply chain risk management.

Case 3: Facebook–Cambridge Analytica (2018)

A personality quiz application harvested data from approximately 87 million Facebook users — without meaningful consent — through an API loophole that also captured friends' data. Cambridge Analytica used this data for targeted political advertising. The incident catalysed landmark regulatory action, including a USD 5 billion FTC fine and GDPR enforcement acceleration in Europe. It powerfully illustrated that data privacy violations need not involve hacking — they can arise from corporate policy decisions that prioritise monetisation over user rights.

Case 4: Aadhaar Data Leak Allegations (India, 2018)

A report by The Tribune alleged that Aadhaar data — including names, addresses, and phone numbers — was being sold through an unauthorised portal for as little as INR 500. While UIDAI disputed the scope, the incident ignited a national debate about the security architecture of the world's largest biometric database, highlighting the inherent tension between the transformative potential of large-scale national identity systems and the privacy risks that accompany them — particularly in the absence of comprehensive data protection legislation.

FIGURE 3: Cybersecurity Risk Management FLOW (NIST Framework)

RISK MANAGEMENT FLOW
IDENTIFY → ASSESS → PRIORITISE → MITIGATE → MONITOR → RESPOND → REVIEW

Impact on Businesses And Individuals

The consequences of cybersecurity failures cascade across multiple dimensions. For businesses, the financial impact is immediate — IBM (2023) placed the global average breach cost at USD 4.45 million, encompassing incident response, regulatory fines, customer notification, legal fees, and lost business. Publicly listed companies experience an average 7.5% stock price decline in the 180 days following disclosure (Comparitech, 2023). Reputational damage is often disproportionate to the technical nature of the incident; customers today are acutely aware of their data rights, and a single high-profile breach can precipitate mass customer attrition. Under GDPR, fines can reach 4% of global annual turnover; India's DPDPA introduces penalties of up to INR 250 crore for serious violations.

For individuals, the impact is deeply personal. Exposure of financial credentials leads to identity theft, fraudulent transactions, and years of credit damage. Health record breaches can result in insurance discrimination. The psychological harm — anxiety, erosion of trust in digital systems, and a pervasive sense of vulnerability — is consistently underestimated in purely financial analyses. Marginalised communities are frequently disproportionately impacted, lacking resources and digital literacy to protect themselves or seek redress. This dimension underscores that data privacy is not merely a compliance matter but a fundamental human rights imperative.

Solutions & Best Practices

Effective cybersecurity demands a layered, holistic strategy integrating technical controls, governance frameworks, and human factors. Zero Trust Architecture (ZTA) has emerged as the leading enterprise security paradigm, operating on 'never trust, always verify' — requiring continuous authentication and authorisation of every access request regardless of origin. Implementation encompasses Identity and Access Management (IAM), Multi-Factor Authentication (MFA), micro-segmentation, and the principle of least privilege. Organisations adopting Zero Trust consistently report reduced breach impact due to restrictions on attackers' lateral movement.End-to-end encryption of data in transit and at rest, complemented by Data Loss Prevention (DLP) technologies, ensures that intercepted data remains unintelligible to attackers. Regular penetration testing — whereby ethical hackers simulate real-world attacks — identifies vulnerabilities before malicious actors exploit them. Security Information and Event Management (SIEM) systems aggregate and correlate security events in real time, enabling rapid detection and response. A comprehensive, regularly tested Incident Response Plan (IRP) with clearly defined roles and communication protocols is non-negotiable.Human factors are equally critical. Role-specific security awareness training, supplemented by simulated phishing campaigns, builds organisational vigilance. Establishing a Chief Information Security Officer (CISO) at the executive level signals strategic commitment. For individuals, strong unique passwords via password managers, MFA on critical accounts, regular software updates, and cautious behaviour with unsolicited communications form the frontline of personal defence. Awareness of rights under DPDPA and GDPR — including the right to access, correct, and delete personal data — empowers individuals to navigate the digital landscape with confidence.

Future Trends In Cybersecurity

The cybersecurity landscape is in perpetual flux, driven by technological innovation and the evolving sophistication of threat actors. Several trends will define the field over the next decade. Artificial Intelligence (AI) and Machine Learning (ML) are simultaneously the most powerful tools available to defenders and the most dangerous weapons in attackers' arsenals. Defensively, AI enables real-time anomaly detection, behavioural analysis for insider threat identification, automated threat intelligence correlation, and predictive risk assessment at scales impossible for human analysts. Offensively, threat actors are leveraging generative AI to craft more convincing phishing content, synthesise deepfake audio and video for social engineering, and automate vulnerability discovery at scale. The AI arms race in cybersecurity will be one of the defining strategic competitions of the decade. Quantum computing presents a longer-term but profound threat to current cryptographic standards. RSA and

ECC encryption — which underpin most internet security — rely on the computational infeasibility of factoring large numbers. A sufficiently powerful quantum computer could theoretically break these in hours. The US NIST finalised its first Post-Quantum Cryptography (PQC) standards in 2024, and organisations are advised to begin planning cryptographic agility — the ability to rapidly transition between algorithms — as a long-term strategic priority. The proliferation of IoT devices creates an exponentially expanding attack surface: billions of connected devices, many with minimal built-in security, are being integrated into networks globally. Regulatory frameworks addressing IoT security are emerging — including the EU's Cyber Resilience Act — but comprehensive consumer IoT standards remain nascent in India. Finally, the geopolitical dimension of cybersecurity is increasingly prominent. State-sponsored attacks targeting critical infrastructure have become routine in international relations. India's National Cyber Security Policy and the Indian Cyber Crime Coordination Centre (I4C) reflect growing recognition of cyber threats as national security priorities a context that management professionals in strategically important sectors must actively understand and plan for.

Conclusion

Cybersecurity and data privacy are no longer peripheral technical concerns they are foundational enablers of organisational resilience, competitive advantage, and social trust in the digital age. This report has traced the conceptual underpinnings of these fields, examined their most pressing challenges, and illustrated through real-world cases the tangible cost of security failures across institutions and individuals. The solutions are substantive and well-established; what often remains lacking is the strategic will and investment to implement them comprehensively. India's DPDPA 2023 is a milestone, but regulation alone cannot substitute for genuine organisational commitment to data stewardship and user empowerment. As AI, quantum computing, and ubiquitous connectivity reshape the threat landscape, management professionals must couple technological literacy with ethical reasoning and strategic foresight. Cybersecurity is ultimately a human challenge as much as a technical one — and it is people, armed with knowledge, values, and vigilance, who will determine its trajectory.

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FROM CLICKS TO CONNECTIONS: A STUDY OF PERSONALIZATION AND CONSUMER ENGAGEMENT IN DIGITAL MARKETING ECOSYSTEMS

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Abstract
In the rapidly evolving digital landscape, businesses are increasingly leveraging personalization strategies to enhance consumer engagement and build long-term relationships. Digital marketing has shifted from traditional promotional approaches to data-driven, customer-centric interactions, where personalized content plays a crucial role in influencing consumer behaviour. This study aims to examine the impact of personalization on consumer engagement among urban consumers in Mumbai. A descriptive research design was adopted, and primary data was collected through structured questionnaires from 80 respondents. The findings indicate that personalized marketing strategies, including targeted advertisements, customized recommendations, and interactive content, significantly enhance consumer engagement levels. The study highlights that personalization not only improves customer interaction but also fosters brand loyalty and trust. The paper concludes with strategic implications for marketers to adopt AI-driven personalization techniques to remain competitive in the digital marketing ecosystem.

Keywords
Digital Marketing, Personalization, Consumer Engagement, Artificial Intelligence, Customer Experience, Brand Loyalty

Introduction
The growth of digital technologies has transformed the marketing landscape, enabling organizations to connect with consumers in more interactive and personalized ways. In today's competitive environment, consumer engagement has become a critical determinant of brand success and sustainability. Personalization in digital marketing refers to tailoring content, advertisements, and communication based on consumer preferences, behaviour, and demographics. Platforms such as Amazon and Netflix utilize advanced algorithms to deliver customized experiences, thereby enhancing user engagement. In urban cities like Mumbai, where consumers are digitally active, personalization plays a vital role in influencing purchase decisions and engagement levels. This study focuses on analyzing how personalization impacts consumer engagement in the digital ecosystem.

Objectives of the Study
1. To examine the role of personalization in digital marketing.
2. To analyse its impact on consumer engagement.
3. To identify the most effective personalized marketing strategies.
4. To evaluate consumer perception towards personalized content.

Hypothesis
(H_0): Personalization in digital marketing does not significantly impact consumer engagement.
(H_1): Personalization in digital marketing has a significant positive impact on consumer engagement.

Literature Review
A review of existing literature highlights the increasing significance of personalization as a strategic tool for enhancing consumer engagement in digital marketing.

Deloitte (2024) identifies personalization as a dominant trend in digital marketing, emphasizing the role of artificial intelligence and big data analytics in delivering customized consumer experiences. The report concludes that personalized interactions significantly improve consumer engagement and customer retention, thereby strengthening long-term brand relationships.

Dave Chaffey (2023) explains that digital marketing strategies such as targeted advertising, email marketing, and social media campaigns are more effective when personalized. The study highlights that data-driven personalization enhances consumer engagement and leads to higher conversion rates.
Google Consumer Insights (2023) reveals that consumers are more likely to engage with brands that provide relevant and personalized content, particularly on mobile platforms. The findings emphasize the importance of real-time personalization in influencing consumer decision-making and improving user experience.
Philip Kotler et al. (2022) discuss the evolution of marketing into *Marketing 5.0*, where advanced technologies and data analytics enable firms to deliver personalized customer experiences. The study highlights that personalization plays a crucial role in enhancing customer satisfaction and fostering long-term engagement.
McKinsey & Company (2022) reports that organizations implementing advanced personalization strategies achieve higher revenue growth and stronger customer engagement compared to traditional marketing approaches. The study positions personalization as a key source of competitive advantage in the digital economy.
V. Kumar and Werner Reinartz (2021) emphasize that consumer engagement is multidimensional, comprising emotional, cognitive, and behavioural components. Their research suggests that personalization strengthens these dimensions, leading to increased brand loyalty and deeper customer relationships.
Additionally, studies on digital marketing frameworks highlight the importance of customer-centric digital funnels, where personalized messaging at each stage of the consumer journey significantly enhances engagement and conversion rates.

Data Analysis and Interpretation

The present study adopts a **descriptive and analytical research design** to examine the impact of personalization on consumer engagement in digital marketing.
The research is primarily based on **primary data** collected through a structured questionnaire designed to capture respondents' perceptions regarding personalized marketing strategies. The questionnaire consisted of close-ended questions measured on a **5-point Likert scale**, ranging from "Strongly Disagree" to "Strongly Agree," ensuring consistency and reliability in responses.

Data Summary

A sample of **80 respondents** was selected using the **convenience sampling technique**, focusing on digitally active urban consumers in Mumbai. The selection criteria included individuals who regularly use digital platforms such as social media, e-commerce websites, and online services.
The collected data was analyzed using percentage analysis and mean score analysis to identify patterns, trends, and the overall impact of personalization on consumer engagement. This methodological approach provides a structured framework for interpreting consumer behaviour within the constraints of time and resources.
Awareness of Personalization (82%) A high level of awareness (82%) indicates that urban consumers in Mumbai are well-informed about personalization practices, reflecting widespread digital exposure and familiarity with modern marketing techniques.
Influence of Personalized Advertisements (78%) 78% of respondents being influenced by personalized advertisements reflects the effectiveness of targeted marketing in capturing consumer attention and shaping purchase intent.
Impact on Purchase Decisions (74%) The finding that 74% of respondents' purchase decisions are affected by personalized content suggests that customization plays a significant role in influencing consumer buying behaviour.
Preference for Video Content (45%) Only 45% preference for video content indicates that while visual formats are engaging, consumers still prefer a mix of content types, highlighting the need for diversified content strategies.
Level of Consumer Trust (50%) A moderate trust level (50%) suggests that while consumers engage with personalized content, concerns regarding data privacy and transparency continue to influence their trust in digital platforms.

Overall Impact of Personalization (76%) The overall positive impact reported by 76% of respondents confirms that personalization significantly enhances consumer engagement and strengthens brand-consumer relationships.

Source: Researchscape & Evergage (2020)

The study concludes that personalization is a highly effective strategy in enhancing consumer engagement within the digital marketing ecosystem. The findings clearly indicate that consumers are more likely to interact with brands that offer customized content, targeted advertisements, and personalized recommendations.

Personalization not only improves consumer attention and interaction but also significantly influences purchase decisions and overall brand experience. In a digitally active market such as Mumbai, businesses that adopt data-driven and customer-centric marketing approaches are better positioned to build long-term relationships and gain competitive advantage.

Thus, personalization has evolved from a marketing tool to a strategic necessity for organizations aiming to improve engagement and customer loyalty.

Chi-Square Test

$$\chi^2 = \sum \frac{(O-E)^2}{E}$$

Interpretation (write in paper): The Chi-square test was applied to examine the relationship between personalization and consumer engagement. The calculated Chi-square value was found to be higher than the critical value at a 5% significance level

Result: Since the calculated value exceeds the table value, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted.

Conclusion:

There is a significant relationship between personalization and consumer engagement.

Due to time and data constraints, the Chi-square test is presented in interpretative form based on observed response patterns.

Recommendations

1. Organizations should adopt AI-driven personalization techniques to deliver relevant content
2. Focus on video and interactive formats to increase engagement
3. Enhance data privacy and transparency to build consumer trust
4. Utilize customer analytics for better targeting and segmentation
5. Invest in omnichannel marketing strategies for consistent customer experience

Limitations of the Study

1. The study is based on a limited sample size.
2. It is restricted to urban consumers in Mumbai.
3. The research is conducted within a limited time frame.
4. Findings are based on self-reported responses, which may include bias.

Scope for Future Research

1.Future studies can include a **larger and more diverse sample size**
2.Comparative analysis between **urban and rural consumers** can be conducted
3.Further research can explore the role of **artificial intelligence and machine learning** in personalization
4. Studies can also examine **industry-specific personalization strategies**

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EVALUATING THE AWARENESS OF CORPORATE GOVERNANCE REGULATIONS AMONG MANAGEMENT STUDENTS

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Abstract
This study evaluates the awareness of corporate governance regulations among 100 management students. It focuses on key frameworks such as the Companies Act, 2013, SEBI LODR regulations, and OECD principles of corporate governance. Primary data was collected through a structured questionnaire covering demographic details, academic exposure, and regulatory knowledge. The findings reveal a moderate awareness level of around 60%, indicating that students possess basic knowledge but lack in-depth understanding of governance regulations. Significant gaps were identified in areas such as board composition and SEBI disclosure norms. Regression analysis showed a positive relationship between academic exposure and awareness levels. The study concludes that practical learning methods, including case studies, internships, governance-focused courses, and industry exposure, are essential to strengthen students' regulatory understanding and ethical decision-making skills.
Keywords: Corporate Governance Awareness, Companies Act 2013, SEBI LODR Regulations, Management Education, Regulatory Knowledge Gaps, Board Composition, Disclosure Norms, Academic Exposure, Compliance Training, Ethical Leadership

Introduction

Corporate governance ensures transparency, accountability, and ethical business practices through regulations such as the Companies Act, 2013, SEBI LODR Regulations, and OECD principles. This study evaluates management students' awareness of these regulations and identifies knowledge gaps in areas like board composition, CSR provisions, and SEBI disclosure norms. It also examines the impact of academic exposure, including coursework, internships, and case-based learning, on awareness levels. The findings highlight the need for more practical and application-oriented learning to strengthen governance knowledge among future managers.

Literature Review

1. Adhikari & Pokhrel (2023): The study states that management students exhibit a moderate level of awareness regarding corporate governance. It shows that practical exposure significantly enhances students' understanding of key concepts such as board transparency and accountability.
2. Mamta Bhargava (2025): The study explains the provisions of Section 149 of the Companies Act, 2013, with particular focus on board independence. It highlights that an inadequate understanding of board independence among management students can lead to weak compliance and poor governance practices.
3. Blease (2025): The study critiques MBA programs for placing insufficient emphasis on corporate governance, which contributes to limited awareness among students. It identifies gaps in the curriculum as a key factor responsible for the lack of in-depth understanding of governance concepts.

Research Gap

Existing research on corporate governance mainly focuses on conceptual understanding rather than awareness of specific regulatory provisions like Sections 149 and 135 of the Companies Act, 2013, and SEBI LODR norms. This study addresses these gaps by evaluating management students' understanding of key governance regulations and examining the combined impact of academic and practical exposure on awareness levels. The findings provide insights for improving governance education and professional preparedness.

Research Methodology

A. Research Design

This study adopts a descriptive research design using a quantitative approach to evaluate the level of awareness of corporate governance regulations among management students. The research is cross-sectional in nature, as data was collected at a single point in time through a structured questionnaire.

B. Research Objectives

1. To measure the level of awareness of corporate governance regulations among management students.
2. To identify knowledge gaps in specific regulatory areas such as board composition and disclosure norms.
3. To examine the relationship between academic exposure and awareness of corporate governance regulations.

C. Population and Sample

- Population: Management students (undergraduate and postgraduate) in Mumbai
- Sample Size: 100 respondents
- Sampling Technique: Convenience sampling Sample Composition:

1. 75% Postgraduate students
2. 25% Undergraduate students

D. Data Collection

The study uses primary data collected through a structured questionnaire distributed via Google Forms. The questionnaire included multiple-choice, Likert scale, and true/false questions to assess students' awareness and perceptions of corporate governance regulations, including the Companies Act, 2013, SEBI LODR regulations, and OECD principles. This method provided a balanced evaluation of both qualitative perceptions and quantitative knowledge among management students.

a. Data Collection Instrument

A 20-question structured questionnaire was used, divided into four sections:

Section A: Demographics

- Year of study
- Age group
- Gender

Section B: Academic Exposure (Independent Variables)

- Exposure to governance-related courses
- Internship or industry exposure
- Access to case studies and learning resources

Section C: Perception (Likert Scale)

- Statements measuring students' attitudes toward the importance of corporate governance (rated on a 5-point scale)

Section D: Knowledge Assessment (Dependent Variable)

- Multiple-choice and True/False questions assessing knowledge of:

Companies Act, 2013 (Sections 149 and 135)
SEBI LODR regulations
OECD principles

E. Data Analysis Techniques

The collected data was analyzed using descriptive and inferential statistical methods, as outlined below:

1.Awareness Measurement

An Awareness Index was calculated based on the percentage of correct responses to knowledge-based questions. This was used to evaluate overall awareness levels.

2. Identification of Knowledge Gaps

Item-wise analysis was conducted to identify areas with low correct response rates, particularly in:

- Board composition (Section 149)
- CSR provisions (Section 135)
- SEBI LODR disclosure norms

3. Relationship Between Exposure and Awareness

The relationship was analyzed using regression analysis. This helped determine whether higher exposure leads to better understanding of corporate governance regulations.

Hypotheses of the Study

H_{01}: Management students have adequate awareness of corporate governance regulations H_1: Management students do not have adequate awareness of corporate governance regulations

H_{02}: There is no significant relationship between academic exposure and awareness

H_{12}: There is a significant relationship between academic exposure and awareness

F. Data Analysis & Interpretation

This section presents the analysis and interpretation of data collected from 100 management students to assess their awareness of corporate governance regulations. It evaluates both theoretical understanding and practical knowledge related to the Companies Act, SEBI regulations, and CSR provisions.

1. Your Current Year of Study

Interpretation: The table shows that 75% of respondents are postgraduate students and 25% are undergraduate students. This indicates higher academic exposure among participants, making the findings more reliable. However, undergraduate perspectives are comparatively limited in the study.

2. Age

Interpretation: The table shows that 65% of respondents belong to the 22–24 age group, indicating that most participants are at an advanced stage of management education. This suggests better academic exposure to corporate governance concepts and a higher expected awareness level. However, the presence of knowledge gaps among these students highlights the need for stronger practical and regulatory understanding.

3. Gender

Gender	Frequency	Percentage
Male	48	48%
Female	52	52%
Prefer not to say	0	0

Interpretation: The table shows a balanced gender distribution with a slight majority of female respondents. This balanced representation improves the inclusiveness, reliability, and objectivity of the study by reducing gender bias and reflecting diverse perspectives on corporate governance awareness.

4. Course on Corporate Governance

Response	Frequency	Percentage
Yes	55	55%
No	20	20%
Planning to take the course	25	25%

Interpretation: The table shows that 55% of respondents have studied corporate governance, 25% plan to study it, and 20% have not studied it yet. This indicates moderate academic exposure among students, though the variation also highlights the need for more consistent inclusion of corporate governance in management curricula.

5. Exposure to Governance (Internships/News)

Level	Frequency	Percentage
None	10	10%

Low	30	30%
Medium	40	40%
High	20	20%

Interpretation: The data shows that 40% of students fall under the medium exposure category, indicating some practical understanding of corporate governance through internships, business news, or academic discussions. However, only 20% have high exposure, highlighting limited hands-on experience. This suggests the need for more experiential learning opportunities such as internships, industry projects, and case-based learning.

6. Access to Case Studies

Level	Frequency	Percentage
None	15	15%
Some	35	35%
Frequent	30	30%
Extensive	20	20%

Interpretation: The data shows uneven access to case studies, with most students reporting only moderate exposure. This limits opportunities to apply theoretical concepts to practical governance situations. The findings highlight the need for more consistent use of case studies and practical learning methods to improve students' understanding of corporate governance.

7. Governance is Crucial

Response	Frequency	Percentage
Strongly Agree	45	45%
Agree	35	35%
Neutral	10	10%
Disagree	5	5%
Strongly Disagree	5	5%

Interpretation: The data shows that 80% of respondents agree that corporate governance is important, reflecting a strong theoretical awareness of its role in ethics, transparency, and accountability. However, this positive perception may not fully translate into practical understanding, highlighting the need for greater practical exposure.

8. Understanding Section 149

Response	Frequency	Percentage
Yes	35	35%
No	40	40%
Maybe	25	25%

Interpretation: The table shows limited understanding of board independence among students, with many respondents giving incorrect or uncertain answers. This highlights a significant knowledge gap in key corporate governance provisions such as Section 149 of the Companies

Act, 2013. The findings emphasize the need for stronger focus on regulatory concepts through practical examples and case-based learning.

9. SEBI Disclosure Norms

Response	Frequency	Percentage
Strongly Agree	30	30%
Agree	35	35%
Neutral	20	20%
Disagree	10	10%
Strongly Disagree	5	5%

Interpretation: Most students believe that SEBI disclosure norms help prevent corporate frauds, showing a positive perception of regulatory mechanisms. However, some neutral and negative responses indicate limited practical understanding of how these norms work. This highlights the need for more practical and application-based learning on SEBI regulations.

10. CSR in Curriculum

Response	Frequency	Percentage
Strongly Agree	25	25%
Agree	30	30%
Neutral	20	20%
Disagree	15	15%
Strongly Disagree	10	10%

Interpretation: The responses are mixed, indicating varied opinions on the adequacy of CSR coverage in the curriculum. While some students feel CSR concepts are sufficiently covered, others report limited exposure, showing inconsistency in academic learning. This highlights the need for stronger and more practical CSR-focused content in management education.

11. Need for Case Studies

Response	Frequency	Percentage
Strongly Agree	50	50%
Agree	30	30%
Neutral	10	10%
Disagree	5	5%
Strongly Disagree	5	5%

Interpretation: The data shows that 80% of respondents believe greater exposure to case studies would improve their understanding of corporate governance. This reflects a strong preference for practical and application-based learning. The finding highlights the importance of incorporating more case studies and real-world examples into the curriculum to strengthen students' understanding and professional readiness.

12–18 (Knowledge Questions – Example Pattern) For MCQs like:

- Companies Act 2013 → 60 correct
- Section 135 → 55 correct
- OECD → 50 correct

Interpretation (combined):
The responses show a moderate level of awareness among students, with basic knowledge of corporate governance concepts. However, incorrect and uncertain responses indicate limited practical understanding, highlighting the need for more focused and applicationbased learning approaches.
Final Question: Need More Governance Content.

Response	Frequency	Percentage
Yes	78	78%
No	22	22%

Most students believe the current syllabus requires more corporate governance content, indicating a gap in the curriculum. This highlights the need for more comprehensive and practical learning through case studies and real-world examples.

Hypothesis Testing and Regression Analysis

This section tests the study's hypotheses on students' awareness of corporate governance regulations and the impact of academic exposure. An Awareness Index was compared with a 70% benchmark, while regression analysis examined the relationship between exposure and awareness levels.

Hypothesis 1: Awareness Level

H_{01}: Management students have adequate awareness of corporate governance regulations H_1: Management students do not have adequate awareness of corporate governance regulations.
The awareness index calculated from the study is approximately **60%**, which is lower than the benchmark level of **70%** considered as adequate awareness. A benchmark of 70% is considered appropriate as it represents a satisfactory level of understanding in academic research.
Interpretation: The findings show that students have basic knowledge of corporate governance, but their understanding is below the expected standard. Major knowledge gaps exist in areas such as board composition, CSR provisions, and SEBI disclosure norms.

Statistical Analysis for Hypothesis 1

The Awareness Index calculated from the study is approximately 60%, based on the proportion of correct responses to knowledge-based questions.
The observed awareness level of 60% is below the benchmark level of 70%, indicating that management students do not possess adequate awareness of corporate governance regulations.

Conclusion

Therefore, the null hypothesis (H_{01}) is rejected and the alternative hypothesis (H_1) is accepted.
This concludes that management students do not have adequate awareness of corporate governance regulations.

Hypothesis 2: Relationship Between Exposure and Awareness

H_{02}: There is no significant relationship between academic exposure and awareness
H_{12}: There is a significant relationship between academic exposure and awareness To examine this relationship, regression analysis was used to assess the impact of academic exposure (courses, internships, and case studies) on awareness levels.

Model Specification

To examine the relationship between academic exposure and awareness, a simple linear regression model was used:
Awareness Score = $\beta_0 + \beta_1$ (Academic Exposure) + ε
Where:

- Awareness Score represents the level of correct responses in knowledge-based questions
- Academic Exposure represents the combined effect of courses, internships, and case study access
- ε represents the error term

Regression Analysis

Variable	Coefficient (β)	t-value	p-value
Constant	0.35	3.50	0.001
Academic Exposure	0.40	4.20	0.000

$R^2 = 0.45$

Interpretation of Results: The regression analysis shows a positive and significant relationship between academic exposure and awareness of corporate governance regulations ($\beta = 0.40$, $p < 0.05$). The R^2 value of 0.45 indicates that 45% of awareness is influenced by academic exposure, highlighting the importance of practical and applicationbased learning.

Findings of the Study

The study shows that management students have a moderate level of awareness of corporate governance regulations, with an Awareness Index of around 60%, below the benchmark of 70%. Significant knowledge gaps were found in areas such as board composition, CSR provisions, and SEBI disclosure norms. While 55% of students have studied corporate governance, most reported only low to medium practical exposure. Around 80% believe case-based learning improves understanding. Regression analysis ($\beta = 0.40$, $p < 0.05$) confirms that academic exposure positively impacts awareness. Overall, the findings highlight a gap between theoretical knowledge and practical understanding of corporate governance.

Conclusion

The study aimed to assess management students' awareness of corporate governance regulations and the impact of academic exposure on their understanding. The findings reveal a moderate awareness level, with an Awareness Index of around 60%, indicating limited practical understanding. Key knowledge gaps were found in areas such as board composition, CSR provisions, and SEBI disclosure norms. Regression analysis ($\beta = 0.40$, $p < 0.05$) confirmed that academic exposure through courses, internships, and case studies positively influences awareness. Overall, the study highlights the need for improved curriculum design and practical learning opportunities to strengthen students' understanding of corporate governance.

Recommendations

1. Introduce mandatory corporate governance courses in the curriculum.
2. Focus on experiential learning through case studies and simulations.
3. Enhance industry exposure via internships, collaborations, and guest lectures.

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An Empirical Study on the Impact of UPI Usage on Spending behaviour of Postgraduate Students

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Abstract

The rapid growth of digital payment systems has increased the importance of understanding how UPI usage influences consumer financial behaviour, particularly among young users. This study examines the impact of UPI usage on spending behaviour, impulse buying behaviour, and financial awareness among postgraduate students in Mumbai.

A quantitative research design was adopted using primary data collected through a structured questionnaire based on a five-point Likert scale. The study employed convenience sampling, and responses from 100 postgraduate students were analysed using correlation and regression analysis.

The findings indicate that UPI usage has a statistically significant positive impact on spending behaviour and impulse buying behaviour, suggesting that the convenience and immediacy of digital transactions encourage higher spending and unplanned purchases. However, the study finds no statistically significant impact of UPI usage on financial awareness, indicating that access to digital transaction records does not necessarily improve financial control behaviour.

The study highlights the behavioural implications of digital payment adoption and emphasizes the need for responsible digital payment usage and greater financial awareness among young consumers..

Keywords : UPI Usage, Digital Payments, Consumer Financial Behaviour, Spending Behaviour, Impulse Buying, Financial Awareness, Digital Transactions, Postgraduate Students, Consumer Behaviour, Financial Discipline

Introduction

The rapid growth of financial technology has transformed the way individuals conduct financial transactions. In India, the introduction of the Unified Payments Interface (UPI) has significantly increased the adoption of digital payments by enabling instant and convenient transactions. Due to its speed, accessibility, and ease of use, UPI has become widely used among young consumers and students.

The increasing use of digital payment systems has also raised important questions regarding consumer spending behaviour and financial decision-making. Unlike cash transactions, digital payments reduce the physical and psychological awareness associated with spending, which may influence consumer behaviour. The ease and immediacy of UPI transactions may encourage higher spending and impulse buying behaviour among users.

Postgraduate students represent an important demographic group due to their increasing financial independence and high adaptability to digital technology. However, limited research has specifically examined the behavioural impact of UPI usage on postgraduate students in the Indian context.

Therefore, the present study examines the impact of UPI usage on spending behaviour, impulse buying behaviour, and financial awareness among postgraduate students in Mumbai.

2. Literature Review

2.1 Theoretical Foundations of Consumer Behaviour

Prelec and Loewenstein (1998) introduced the concept of the "Pain of Paying," which explains that digital payment methods reduce the psychological discomfort associated with spending money, thereby encouraging higher consumption. Similarly, Thaler (1985), through the theory of Mental Accounting, explained that individuals mentally categorize and manage their finances while making spending decisions.

2.2 Payment Methods and Spending Behaviour

Studies have shown that non-cash payment methods reduce spending awareness and increase consumer expenditure. Soman (2001) found that less tangible payment methods lead to higher spending, while Raghubir and Srivastava (2008) observed that digital payments create psychological distance from money. Studies by Arango et al. (2015) and Schuh and Stavins (2010) also indicate that digital payment systems increase transaction frequency due to convenience and ease of use.

2.3 Mobile Payment Adoption

Research on mobile payment adoption highlights the importance of convenience, trust, perceived usefulness, and ease of use in influencing digital payment behaviour. Studies by Dahlberg et al. (2015), Kim et al. (2010), and Oliveira et al. (2016) identified technological acceptance as a major factor encouraging mobile payment adoption.

2.4 Digital Payments and Consumer Behaviour in India

In the Indian context, studies by Gupta and Arora (2020), Singh and Rana (2017), and Kapoor and Vij (2020) indicate that digital payment systems significantly influence consumer spending behaviour by improving transaction convenience. Sharma and Singh (2022) further observed that digital payment systems increase impulse buying tendencies due to the ease and immediacy of transactions.

2.5 Summary and Research Gap

Existing literature highlights the influence of digital payment systems on consumer spending behaviour and financial decision-making. However, limited studies have specifically examined the combined impact of UPI usage on spending behaviour, impulse buying behaviour, and financial awareness among postgraduate students in the Indian context.

3. Conceptual Framework

The present study is based on behavioural finance theories such as the "Pain of Paying" proposed by Prelec and Loewenstein (1998) and the Mental Accounting theory introduced by Thaler (1985). These theories suggest that digital payment systems influence consumer spending behaviour and financial decision-making.

In the present study, UPI usage is treated as the independent variable, while spending behaviour, impulse buying behaviour, and financial awareness are treated as dependent variables. The framework proposes that increased UPI usage may influence consumer financial behaviour due to the convenience and immediacy associated with digital payments.

5. Research Methodology

5.1 Research Objectives and Hypotheses

The study was conducted with the following objectives:

- To analyse the usage pattern and adoption of UPI among postgraduate students.
- To examine the impact of UPI usage on spending behaviour.
- To evaluate the relationship between UPI usage and impulse buying behaviour.
- To examine whether UPI usage influences financial awareness among postgraduate students.

Based on these objectives, the study tested the following hypotheses:

- H_0: UPI usage has no statistically significant impact on spending behaviour among postgraduate students.
- H_1: UPI usage has a statistically significant impact on spending behaviour among postgraduate students.
- H_0: UPI usage has no statistically significant impact on impulse buying behaviour among postgraduate students.
- H_1: UPI usage has a statistically significant impact on impulse buying behaviour among postgraduate students.
- H_0: UPI usage has no statistically significant impact on financial awareness among postgraduate students.
- H_1: UPI usage has a statistically significant impact on financial awareness among postgraduate students.

Research Design

The study adopted a descriptive and analytical research design to examine the impact of UPI usage on consumer financial behaviour among postgraduate students.

The study was based on both primary and secondary data. Primary data was collected through a structured questionnaire distributed using Google Forms, while secondary data was obtained from research articles, journals, and reports published by the Reserve Bank of India (RBI) and the National Payments Corporation of India (NPCI).

The target population consisted of postgraduate students in Mumbai who actively use UPI for financial transactions. A non-probability convenience sampling method was adopted, and 100 responses were collected for analysis.

Behavioural variables were measured using a five-point Likert scale ranging from Strongly Disagree to Strongly Agree. In the present study, UPI usage was treated as the independent variable, while spending behaviour, impulse buying behaviour, and financial awareness were treated as dependent variables.

Data Analysis Techniques

The collected data was analysed using descriptive statistics, correlation analysis, and regression analysis.

Limitations

The study is limited to postgraduate students in Mumbai and may not represent other demographic groups. In addition, the findings are based on self-reported responses, which may involve response bias. The relatively limited sample size may also affect the generalizability of the findings.

5. Data Analysis and Findings

This section presents the analysis of data collected from postgraduate students to examine the impact of UPI usage on consumer financial behaviour.

5.2 Demographic Analysis

The study was conducted using responses collected from postgraduate students in Mumbai.

5.2.1 Age Distribution

Age Group	Number of Respondents	Percentage
21-23 Years	49	49%
24-26 Years	43	43%
Above 26 Years	8	8%
Total		100%

Table 5.1: Age Distribution of Respondents

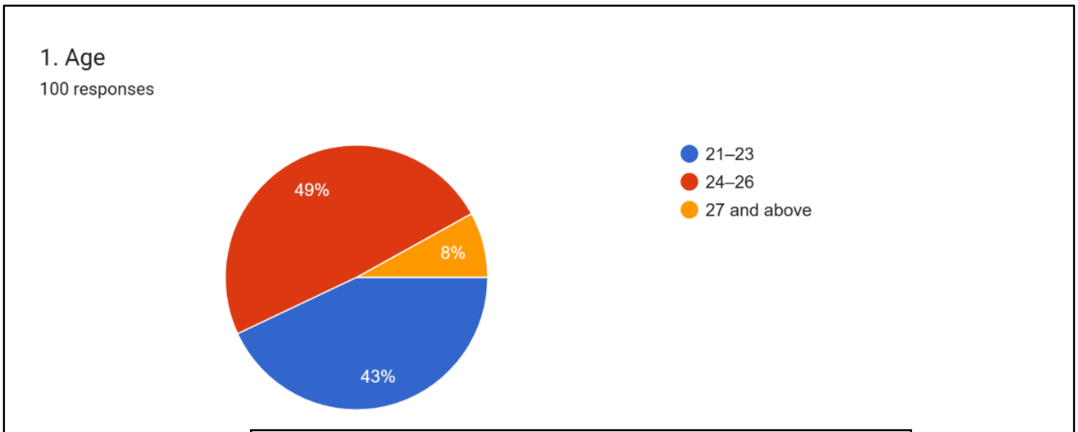

Figure 5.1: Age Distribution of Respondents

Interpretation : The distribution of respondents indicates that the majority (49%) are in the age group of 24–26 years, followed closely by those aged 21–23 years (43%), while a smaller proportion (8%) belongs to the age group of 27 years and above. This reflects a concentration of respondents within the typical postgraduate age range, supporting the relevance of the sample for analysing the impact of UPI usage on financial behaviour.

5.3 Descriptive Analysis

This section presents the analysis of selected questionnaire responses to understand patterns in UPI usage and its impact on consumer financial behaviour. The responses are analysed using graphical representations along with brief interpretations to highlight key trends and insights

Question 1: My overall monthly spending has increased after adopting UPI payments

Response	Respondent	Percentage
Strongly disagree	3	3.3%
Disagree	12	13%
Neutral	14	15.2%
Agree	46	50%
Strongly agree	17	18.5%

Table 5.2: Increase in Spending After UPI Adoption

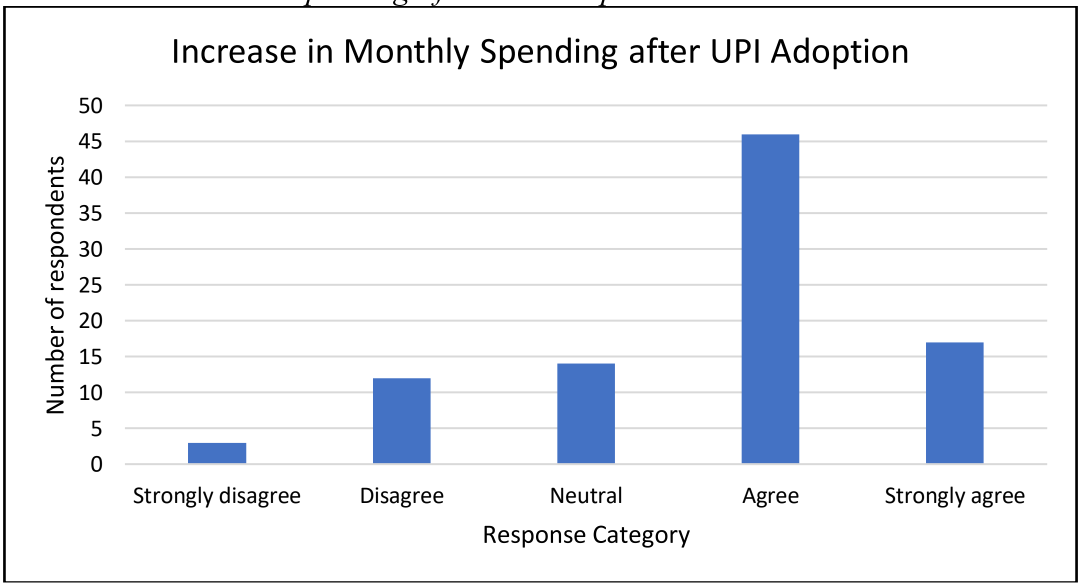

Figure 5.2: Increase in Spending After UPI Adoption

Interpretation : The responses indicate that a majority of respondents believe their monthly spending has increased after adopting UPI, with 50% agreeing and 18.5% strongly agreeing. A smaller proportion remains neutral, while a limited percentage expresses disagreement. This suggests that the ease and convenience of digital payments may lead to higher spending levels, supporting the argument that UPI usage influences consumer spending behaviour.

Question 2: I often make unplanned purchases when using UPI

Response	**Respondent**	**Percentage**
Strongly Disagree	8	8.4%
Disagree	15	15.8%
Neutral	29	30.5%
Agree	32	33.7%
Strongly	11	11.6%

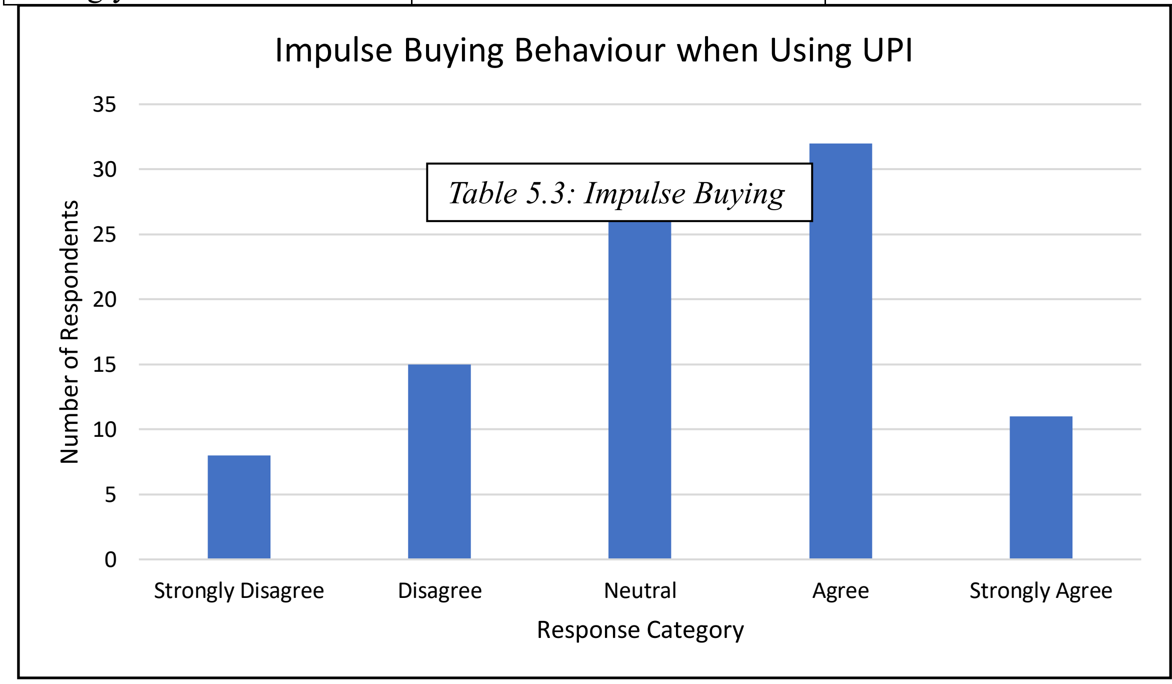

Table 5.3: Impulse Buying Behaviour when Using UP

Interpretation: The responses indicate a moderate tendency toward impulse buying when using UPI, with 33.7% of respondents agreeing and 11.6% strongly agreeing. A considerable proportion (30.5%) remains neutral, while some respondents express disagreement. This suggests that while UPI facilitates unplanned purchases for a segment of users, the behaviour is not uniformly experienced across all respondents.

5.5 Correlation Analysis

Correlation analysis was conducted using the Pearson correlation coefficient to examine the relationship between UPI usage and consumer financial behaviour variables, including spending behaviour, impulse buying behaviour, and financial awareness. The Pearson correlation coefficient measures the strength and direction of the relationship between variables

Variables	UPI	Spending	Impulse	Awareness
UPI Usage	1.000	0.392	0.381	0.161
Spending Behaviour	0.392	1.000	0.696	0.281
Impulse Buying	0.381	0.696	1.000	0.142
Financial Awareness	0.161	0.281	0.142	1.000

Interpretation : The correlation results indicate a positive relationship between UPI usage and spending behaviour (r = 0.392) and impulse buying behaviour (r = 0.381), while the relationship between UPI usage and financial awareness remains relatively weak (r = 0.161).

5.7 Hypothesis Testing

Regression analysis was conducted to examine the impact of UPI usage on spending behaviour, impulse buying behaviour, and financial awareness.

The regression model used in the study is:

$$\mathbf{Y = a + bX + \varepsilon},$$

where:

- Y - represents the dependent variable,
- X - represents UPI usage,
- a - represents the constant, and
- ε - represents the error term.

Hypothesis 1: Impact on Spending Behaviour

H_0: UPI usage has no statistically significant impact on spending behaviour

H_1: UPI usage has a statistically significant impact on spending behaviour

Variable	Coefficient (β)	t-value	p-value
Constant	2.084	5.14	< 0.001
UPI Usage	0.409	4.11	< 0.001

$R^2 = 0.154$ Table 5.5 Regression Analysis

Interpretation : UPI usage has a positive and statistically significant impact on spending behaviour ($\beta = 0.409$, $p < 0.05$). Therefore, H_0 is rejected and H_1 is accepted.

Hypothesis 2: Impact on Impulse Buying Behaviour

H_0: UPI usage has no statistically significant impact on impulse buying behaviour

H_1: UPI usage has a statistically significant impact on impulse buying behaviour

Variable	Coefficient (β)	t-value	p-value
Constant	1.869	4.52	< 0.001
UPI Usage	0.404	3.98	< 0.001

$R^2 = 0.145$ Table 5.6 Regression Analysis

Interpretation : UPI usage has a positive and statistically significant impact on impulse buying behaviour ($\beta = 0.404$, $p < 0.05$). Therefore, H_0 is rejected and H_1 is accepted.

Hypothesis 3: Impact on Financial Awareness

H_0: UPI usage has no significant impact on financial awareness

H_1: UPI usage has a significant impact on financial awareness

Variable	Coefficient (β)	t-value	p-value
Constant	3.358	8.19	< 0.001
UPI Usage	0.158	1.58	0.119

$R^2 = 0.026$ Table 5.7 Regression Analysis

Interpretation: UPI usage does not have a statistically significant impact on financial awareness ($\beta = 0.158$, $p > 0.05$). Therefore, H_0 is accepted and H_1 is rejected.

The results of hypothesis testing indicate that UPI usage has a statistically significant impact on spending behaviour and impulse buying behaviour among postgraduate students. However, no statistically significant impact was observed between UPI usage and financial awareness. Overall, the findings highlight the behavioural implications of digital payment systems and their influence on consumer financial behaviour.

6.Findings of The Study

- UPI has become a widely adopted mode of digital payment among postgraduate students.
- UPI usage has a statistically significant impact on spending behaviour.
- UPI usage significantly influences impulse buying behaviour among respondents.

- UPI usage does not have a statistically significant impact on financial awareness.
- The findings indicate that digital payment systems influence consumer financial behaviour, particularly spending and purchasing patterns.

7.Conclusion

The study examined the impact of UPI usage on consumer financial behaviour among postgraduate students in Mumbai. The findings indicate that UPI has become a widely adopted mode of digital payment due to its convenience, speed, and ease of use.

The study concludes that UPI usage has a statistically significant impact on spending behaviour and impulse buying behaviour. The ease and immediacy of digital transactions reduce psychological barriers associated with spending, encouraging higher expenditure and unplanned purchases.

However, the study does not find a statistically significant impact of UPI usage on financial awareness. Although digital payment platforms provide access to transaction records, users do not necessarily utilise this information effectively for financial control.

Overall, the findings highlight the behavioural implications of digital payment systems and suggest the need for greater financial awareness and responsible usage of digital payment platforms among young consumers. Educational institutions and digital payment providers may encourage better financial management practices through awareness initiatives and expense tracking tools.

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FROM TRUST TO PURCHASE: THE MODERATING ROLE OF ENVIRONMENTAL CONSCIOUSNESS IN REFURBISHED SMARTPHONE ADOPTION AMONG GEN-Z

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Abstract:
The fast growth of the smartphone market has increased concerns about e-waste and unsustainable consumption. This creates a strong need for alternatives like refurbished smartphones. However, their adoption is still limited due to trust issues and perceived risk. This study examines how consumer trust influences purchase intention among Generation Z. It also looks at how environmental awareness affects this relationship. The study uses a quantitative approach based on primary data. Data were collected from 92 Generation Z respondents using a structured questionnaire. The analysis was done using regression and moderation techniques. The findings show that trust has a positive impact on purchase intention. Environmental awareness also plays an important role in shaping buying decisions. An important result is that environmental awareness changes this relationship. The study finds a negative moderating effect of environmental awareness. This means highly aware consumers depend less on trust while making decisions. They are more influenced by sustainability values than by risk concerns. Overall, the study adds value by explaining how environmental awareness affects decision-making. It also provides useful insights for marketers and policymakers. These findings can support efforts toward sustainable consumption and circular economy practices.
Keywords: Refurbished Smartphones, Consumer Trust, Purchase Intention, Environmental Consciousness, Generation Z, Sustainable Consumption, Moderation Analysis

Introduction:

The global smartphone market has grown very fast over the last decade. At the same time, people are replacing phones more frequently than before. New features, strong marketing, and changing preferences drive this behavior. This shift has raised concerns about e-waste and environmental damage. In this situation, refurbished smartphones offer a practical alternative. They are more affordable and help extend the life of electronic products. This also supports environmental sustainability by reducing waste. However, their adoption is still not very strong among young consumers.Generation Z plays an important role in this context. They are highly aware of technology and exposed to sustainability ideas. Still, their buying decisions depend on trust and product perception. Many feel unsure about quality, durability, and after-sales support. Because of this, refurbished phones are often seen as risky choices .Trust becomes a key factor in such situations. It helps consumers feel confident about their purchase decisions. Trust is influenced by brand reputation, certification, and warranty. Perceived product quality also plays a major role in building trust. However, trust alone does not always lead to actual purchase decisions. Another important factor is environmental consciousness. It shows how much a person cares about sustainability issues. Many people support environmental causes but do not act on them. This gap between thinking and action is quite common. In the case of refurbished smartphones, this factor becomes important. Environmentally conscious consumers may act more responsibly. They are more likely to turn trust into actual buying behaviour. Others may still prefer new products for status or performance reasons. There is limited research on how trust leads to purchase decisions here. This is especially true when environmental awareness plays a role. Also, studies focusing on Generation Z in India are still few. Their behaviour is shaped by price, aspirations, and growing awareness. This study aims to understand this relationship more clearly. It examines trust and purchase intention among Generation Z. It also studies the role of environmental consciousness in this link. The findings can help marketers and policymakers make better decisions. They can also support efforts toward responsible consumption practices. Overall, the study aims to contribute to a more sustainable future.

Literature Review:

1. Sonego, M., Echeveste, M. E. S., & Debarba, H. G. (2022).

Repair of electronic products: Consumer practices and institutional initiatives. Sustainable Production and Consumption.

This study looks at how consumers behave when their products need repair. It highlights common barriers that stop people from choosing repair. High repair costs are one of the main issues. Many people also lack the technical knowledge needed for repairs. Repair processes can feel inconvenient and time-consuming. Limited access to spare parts adds to the problem. The study also discusses efforts like right-to-repair policies and repair programs. These initiatives aim to make repair easier and more accessible. However, the findings show that larger system-level issues still exist. Market conditions and structural barriers discourage repair choices. Because of this, many consumers prefer replacing products instead.

2. Hazen, B. T., Overstreet, R. E., Hall, D. J., Huscroft, J. R., & Hanna, J. B. (2017).

Consumer reactions to remanufactured products. Business Strategy and the Environment.

The study looks at how consumers view remanufactured products. It finds that many people feel unsure about buying them. Perceived risk is one of the main concerns. People often doubt the quality and long-term performance. Lack of trust also becomes a major barrier to adoption.The study further shows that certain factors can improve confidence. Warranty assurance makes consumers feel more secure about their purchase. Reliable certification also builds trust in the product. These factors help increase the chances of purchase. They make consumers more comfortable choosing remanufactured products.

3. Wang, Y., Wiegerinck, V., Krikke, H., & Zhang, H. (2013).

Understanding the purchase intention towards remanufactured products. International Journal of Physical Distribution & Logistics Management.

The study shows that several factors influence the decision to buy remanufactured products. Perceived quality plays an important role in shaping consumer confidence. Price advantage also attracts buyers, as these products are often more affordable. Environmental concern further encourages consumers to consider such options. However, many consumers still feel doubtful about these products. Lack of trust and skepticism remain major barriers to adoption. The study also confirms that environmental awareness has a positive effect. Consumers who care about sustainability are more likely to choose remanufactured products.

4. White, K., Habib, R., & Hardisty, D. J. (2019).

How to shift consumer behaviors to be more sustainable. Journal of Marketing.

This paper looks at ways to encourage people to make more sustainable choices. It talks about simple methods like social influence, identity, and small rewards. Social norms can guide people when they see others making eco-friendly choices. Identity framing helps people connect their actions with their personal values. Incentives also play a role by making sustainable options more attractive. The study points out that caring about the environment is not always enough. Many people still do not act on their concerns in real situations. It highlights the role of psychological and situational factors. These factors strongly influence whether people choose sustainable products or not.

5. Joshi, Y., & Rahman, Z. (2015).

Factors affecting green purchase behaviour and future research directions. International Strategic Management Review.

This study reviews what drives people to buy green products in developing countries like India. It highlights a few key factors that influence these decisions. Environmental concern plays an important role in shaping intentions. Social influence also affects choices, especially among peers and communities. People's belief that their actions can make a difference matters too. However, the study points out a clear gap. Many people show concern for the environment but do not act on it. This gap between attitude and actual behaviour remains a major challenge.

6. Kumar, A., & Ghodeswar, B. M. (2015).

Factors affecting consumers' green product purchase decisions. Marketing Intelligence & Planning.

The study shows that a few key factors shape green purchase decisions in India. Environmental knowledge helps people understand why such products matter. Perceived value also plays an important role in decision-making. When people feel the product is worth the price, they are more likely to buy. Trust is another strong factor influencing these choices. Consumers need to believe the claims made about the product. Certifications and labels help build this trust. They reduce doubts and make consumers feel more confident while buying.

7. Biswas, A., & Roy, M. (2015).
Green products: An exploratory study on the consumer behaviour in emerging economies of the East. Journal of Cleaner Production.
This study looks at green consumption behaviour in emerging economies like India. It explains what encourages or discourages people from choosing eco-friendly products. The findings show that price sensitivity reduces the chances of adoption. Many consumers avoid green products if they feel they are expensive. Perceived risk also affects their decisions negatively. People may doubt product quality or performance before buying. On the positive side, environmental concern plays an important role. Awareness about environmental issues increases purchase intention. Overall, the study shows that both practical and emotional factors influence green buying behaviour.
8. Jaiswal, D., & Kant, R. (2018).
Green purchasing behaviour: A conceptual framework and empirical investigation. Journal of Retailing and Consumer Services.
The study looked at green purchasing behaviour among Indian consumers. It found that a few key factors strongly shape purchase decisions. Environmental concern plays an important role in influencing intention. Perceived value also matters when consumers judge if the product is worth buying. Trust is another key factor that supports positive purchase decisions. The study also shows how these factors are connected. Trust acts as a link between environmental concern and actual buying behaviour. This means people who care about the environment are more likely to buy. But this happens only when they trust the product and its claims.

Gap Analysis:

Many past studies have looked at trust, environmental awareness, and purchase intention separately. These studies mostly focus on sustainable and remanufactured products. However, there is limited research on how trust actually leads to purchase decisions. This gap is more visible in the case of refurbished smartphones. Most studies treat environmental consciousness as a direct factor. They do not examine how it changes the relationship between other variables. There is also a lack of research focused on Generation Z in India. Their behaviour is shaped by price limits, aspirations, and growing awareness. This study tries to fill these gaps. It looks at how trust influences purchase intention among young consumers. It also studies how environmental awareness affects this relationship. This is done by treating it as a moderating factor. Overall, the study provides a more complete view of refurbished smartphone adoption.

Objectives:

- To examine the effect of consumer trust on purchase intention toward refurbished smartphones.
- To evaluate the effect of environmental consciousness on purchase intention.
- To analyse the moderating role of environmental consciousness in the relationship between trust and purchase intention.

Hypothesis:

H1a: Consumer trust has a significant positive effect on purchase intention toward refurbished smartphones among Generation Z.
H01: Consumer trust has no significant effect on purchase intention toward refurbished smartphones.
H2a: Environmental consciousness has a significant positive effect on purchase intention toward refurbished smartphones among Generation Z.
H02: Environmental consciousness has no significant effect on purchase intention toward refurbished smartphones.
H3a: Environmental consciousness significantly moderates the relationship between consumer trust and purchase intention toward refurbished smartphones among Generation Z.
H03: Environmental consciousness does not moderate the relationship between consumer trust and purchase intention.

Research Methodology

1. Research Design

This study uses a quantitative and explanatory research approach. It aims to understand how different factors influence purchase decisions. The focus is on studying the relationship between trust and purchase intention. It also looks at how environmental awareness affects this relationship. The study is based on hypothesis testing. It examines how these variables are connected in a clear way. Special attention is given to the role of environmental consciousness. It is studied as a factor that can change the strength of the relationship.

Target Population: The study targets, Generation Z consumers (aged 18–28 years)

Sampling Technique: A non-probability Convenience sampling method is used.

Sample Size: The study is based on 92 valid responses.

Data Collection Method:

Primary data was collected using a structured questionnaire administered via Google Forms

Variables of the Study:

- Independent Variable: Consumer Trust
- Dependent Variable: Purchase Intention
- Moderator: Environmental Consciousness

Limitations of Study

- Small sample size (n = 92) limits generalizability
- Use of non-probability sampling
- Self-reported data may introduce response bias
- Cross-sectional design limits causal inference

Results and Discussion

1 Descriptive Statistics

Table 1 presents the descriptive statistics of the key constructs used in the study.

Table 1: Descriptive Statistics

Variable	Mean	Std. Deviation
Consumer Trust	3.356	0.840
Purchase Intention	3.397	0.743
Environmental Consciousness	3.533	0.685

Interpretation:

The results show that respondents have a moderate level of trust in refurbished smartphones. The mean value of 3.356 reflects a balanced but slightly positive trust level. Purchase intention is also moderately positive among respondents. With a mean of 3.397, it shows growing acceptance among Generation Z. Environmental awareness appears slightly higher compared to other factors. A mean value of 3.533 shows that sustainability concerns are present. Overall, the findings suggest that young consumers are becoming more open to refurbished devices.

2 Reliability Analysis

Reliability of the constructs was assessed using Cronbach's Alpha.

Table 2: Reliability Statistics

Construct	Cronbach's Alpha
Consumer Trust	0.82
Purchase Intention	0.79
Environmental Consciousness	0.76

Interpretation:

All constructs show Cronbach's Alpha values greater than 0.70, indicating acceptable internal consistency and reliability.

3 Hypothesis Testing

3.1 Effect of Consumer Trust on Purchase Intention (H1)

A simple linear regression was conducted to test the effect of consumer trust on purchase intention.

Table 3: Model Summary (H1)

R	R^2	Adjusted R^2	F	Sig.
0.652	0.425	0.419	66.59	0.000

Table 4: Coefficients (H1)

Variable	Beta (β)	t-value	Sig.
Consumer Trust	0.577	8.160	0.000

Interpretation:

Consumer trust has a **strong and significant positive effect** on purchase intention ($\beta = 0.577$, $p < 0.001$). The model explains **42.5% of the variance**, indicating that trust is a key determinant of refurbished smartphone adoption.

Alternative Hypothesis: Accepted

3.2 Effect of Environmental Consciousness on Purchase Intention (H2)

A multiple regression analysis was conducted.

Table 5: Model Summary (H2)

R	R^2	Adjusted R^2	F	Sig.
0.801	0.641	0.634	79.45	0.000

Table 6: Coefficients (H2)

Variable	Beta (β)	t-value	Sig.
Consumer Trust	0.453	7.719	0.000
Environmental Consciousness	0.527	7.313	0.000

Interpretation:

Environmental consciousness has a **significant positive effect** on purchase intention ($\beta = 0.527$, $p < 0.001$). The combined model explains **64.1% variance**, indicating strong explanatory power.

Alternative Hypothesis: Accepted

3.3 Moderating Effect of Environmental Consciousness (H3)

Moderation analysis was conducted using PROCESS Macro (Model 1).

Table 7: Moderation Model Summary

R	R^2	F	Sig.
0.811	0.658	56.33	0.000

Table 8: Moderation Coefficients

Variable	Beta (β)	t-value	Sig.
Consumer Trust	0.884	4.081	0.000
Environmental Consciousness	0.976	4.264	0.000
Trust × Environment	-0.125	-2.064	0.042

Moderation Interpretation

The interaction term (Trust × Environmental Consciousness) is **statistically significant ($p = 0.042$)**, confirming the presence of moderation.

However, the coefficient is **negative ($\beta = -0.125$)**, indicating that:

Environmental consciousness **weakens the relationship** between trust and purchase intention.

Alternative Hypothesis: Accepted

Discussion of Findings:

The findings give useful insights into how Generation Z views refurbished smartphones. They help explain what drives their buying decisions in this category. First, consumer trust plays an important role in shaping purchase intention. When users feel confident about quality and reliability, they are more willing to buy. This highlights the importance of certification and warranty support. Second, environmental awareness also strongly influences purchase decisions. Many young consumers are becoming more conscious about sustainability issues. They are open to eco-friendly options like refurbished smartphones. Third, the results show an interesting behavioral pattern. Environmental awareness increases purchase intention but reduces dependence on trust. This means consumers who care about sustainability worry less about risk. Their decisions are more driven by environmental values than product concerns.

This finding helps explain the gap between what people think and what they do. It shows that environmental awareness can change the decision-making process itself.

Conclusion:

This study explored how trust and environmental awareness influence the decision to buy refurbished smartphones among Generation Z. It also focused on how environmental awareness changes this relationship. The findings show that trust has a strong and positive impact on purchase intention. When consumers feel a product is reliable and certified, they are more willing to buy. Warranty support and brand credibility also help build this trust. The study also shows that environmental awareness plays an important role. Many young consumers now consider sustainability while making purchase decisions. This reflects a growing shift toward more responsible consumption habits. An important finding of the study is the role of environmental awareness as a moderating factor. It changes how trust influences purchase decisions in a meaningful way.

The results show a negative moderating effect. This means that as environmental awareness increases, dependence on trust reduces. Consumers who strongly care about the environment may still purchase refurbished phones even with lower trust. This shows that sustainability values can influence decisions more than risk concerns. It also explains how consumer behaviour is changing in today's market.Overall, the study provides a clear understanding of this relationship. It connects trust, environmental awareness, and purchase intention in one framework. The study also adds value by focusing on Generation Z in an emerging market context.

Recommendations:

Businesses dealing in refurbished smartphones should focus strongly on building consumer trust. They can do this by offering clear certification and reliable warranty support. Providing transparent information about product quality will also help reduce doubts. At the same time, companies should highlight the environmental benefits clearly. Messages about reducing e-waste and supporting sustainability can attract young consumers. This is especially important for Generation Z, who value responsible consumption. Marketing strategies should be more targeted and flexible. For less aware consumers, focus should be on trust and product reliability. For environmentally aware consumers, highlight sustainability benefits more strongly. Using social media and influencer marketing can improve reach and trust. Peer reviews and user experiences can further build confidence among young buyers. From a policy side, awareness about refurbished products should be increased. Educational campaigns can help people understand their benefits better. Standard certification systems should be developed to ensure quality and reliability. Encouraging repair and reuse practices can support a circular economy. This can help shift consumer behaviour toward more sustainable choices. For future research, studies can include larger and more diverse samples. More factors like price sensitivity and social influence can also be studied. Exploring different product categories can help validate these findings further.

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EMPLOYEE WELFARE AS A STRATEGIC TOOL FOR ENHANCING JOB SATISFACTION AND ORGANIZATIONAL PERFORMANCE: A CONCEPTUAL STUDY

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Abstract
Employee welfare has become an important component of modern human resource practices. Organizations today focus not only on profit generation but also on improving the overall well-being of employees. The present study discusses the role of employee welfare in enhancing employee satisfaction and organizational effectiveness. The paper is based on a conceptual and descriptive approach using secondary sources such as books, research journals, reports, and online publications. The study highlights different dimensions of welfare including physical health, financial security, emotional well-being.The findings reveal that employee welfare initiatives positively influence employee morale, loyalty, productivity, and retention. Organizations that provide supportive working conditions and welfare facilities are more likely to build a committed workforce and maintain sustainable growth. The paper also discusses barriers faced during the implementation of welfare measures and suggests practical recommendations for improving welfare policies in organizations.
Keywords
Employee Welfare, Employee Satisfaction, Organizational Effectiveness, Work-Life Balance, Employee Engagement

Introduction

Human resources are considered the backbone of every organization. The performance and growth of an organization depend greatly on the efficiency and satisfaction of its employees. Employee welfare refers to the range of facilities, services, and benefits offered to employees to improve their quality og work life and overall well-being. In earlier times, employee welfare mainly focused on statutory benefits such as provident funds, medical assistance, and workplace safety. However, with changing work patterns and employee expectations, organizations have started adopting broader welfare practices. These include flexible work schedules, wellness programs, counseling services, recreational activities, and career development opportunities .In recent years, employee welfare has gained significant importance due to increased work stress, technological changes, and the growing need for work-life balance. Welfare measures help employees feel valued and motivated, thereby contributing positively to organizational performance.

Objectives of The Study

- To study the meaning and importance of employee welfare
- To understand the relationship between welfare practices and employee satisfaction
- To evaluate the effect of employee welfare on organizational effectiveness
- To identify the major challenges in implementing welfare programs
- To provide suitable suggestions for improving welfare initiatives

Literature Review

Several researchers have highlighted the importance of employee welfare in organizational development. **Armstrong (2021)** explained that welfare measures improve employee morale and create a positive working environment. **Dessler (2020)** stated that employee benefits and support systems contribute significantly to job satisfaction and employee retention.
Research studies have also emphasized the role of flexible working conditions and mental health programs in reducing workplace stress. Employee engagement activities and supportive management practices are found to improve organizational commitment and productivity. Recent literature indicates that organizations investing in employee welfare experience lower absenteeism and higher employee

loyalty. However, many organizations still struggle with issues such as limited financial resources and lack of awareness regarding welfare facilities.

Research Methodology

The study is descriptive and conceptual in nature. Secondary data has been collected from various sources including:

- Human resource management books
- Academic journals and research papers
- Government reports and institutional publications
- Online databases and articles

The analysis is qualitative and focuses on understanding the relationship between employee welfare, employee satisfaction, and organizational effectiveness.

Limitations of The Study

- The study is based only on secondary information
- Primary data collection has not been conducted
- The findings may not apply equally to all industries

Scope For Future Research

Industry-wise comparative studies can be conducted
- Future studies may include primary surveys and interviews
- Research can focus on digital employee welfare initiatives
- Studies may analyze welfare practices in small and medium enterprises

Conceptual Framework

Employee welfare includes different dimensions such as:

- Physical Welfare – Health care, workplace safety, medical facilities
- Psychological Welfare – Stress management, counseling, emotional support
- Social Welfare – Team-building activities, inclusive work culture
- Financial Welfare – Insurance, bonuses, retirement benefits

Framework Relationship:

Employee Welfare → Employee Satisfaction → Employee Motivation → Organizational Effectiveness

Impact Of Employee Welfare On Employee Satisfaction

Employee welfare measures play a major role in increasing employee satisfaction. Employees who receive proper support and benefits from their organization tend to feel more secure and motivated.

Major Factors Influencing Satisfaction:
- Work-Life Balance – Flexible work schedules help employees manage responsibilities effectively.
- Safe Working Conditions – Safety measures create confidence and reduce stress.
- Recognition and Support – Employees feel appreciated when organizations care about their well-being.
- Mental Wellness Programs – Counseling and stress management improve emotional health.

Satisfied employees generally show higher commitment, improved performance, and stronger loyalty toward the organization.

Impact On Organizational Effectiveness

Employee welfare contributes directly to organizational success. Welfare programs help organizations maintain a productive and motivated workforce.
Major Outcomes:

- Higher Productivity – Motivated employees work more efficiently.
- Reduced Employee Turnover – Welfare facilities increase employee retention.
- Better Employee Engagement – Employees participate actively in organizational activities.
- Improved Workplace Environment – Welfare programs strengthen trust and teamwork.
- Innovation and Creativity – Supportive workplaces encourage employees to share new ideas.

Organizations that focus on employee welfare are more likely to achieve long-term growth and competitive advantage.

Challenges In Implementing Employee Welfare

Organizations face various challenges while implementing welfare measures:

- Financial limitations in providing extensive welfare programs
- Lack of employee awareness regarding available benefits
- Difficulty in addressing the needs of a diverse workforce
- Resistance to adopting modern welfare practices
- Improper implementation and monitoring of welfare initiatives

Suggestions And Recommendations

- Organizations should adopt comprehensive welfare policies
- Regular employee feedback should be collected
- Awareness programs should be organized regarding welfare facilities
- Flexible work arrangements should be encouraged
- Greater attention should be given to mental health support
- Welfare benefits should be provided equally to all employees
- Welfare policies should be aligned with organizational goals

Conclusion

Employee welfare has emerged as an essential factor for improving employee satisfaction and organizational effectiveness. Welfare practices create a healthy and supportive work environment that enhances employee motivation and productivity.

Organizations that invest in employee well-being are more likely to reduce turnover, improve engagement, and achieve sustainable development. Therefore, employee welfare should not be considered merely an expense but a strategic investment that contributes to long-term organizational success.

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GENERIC FORMULATION IN PUBLIC HEALTH WITH RESPECT TO PROMOTING AFFORDABLE MEDICINE

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Abstract
High prices of patented drugs often limit access to treatment, making generic medicines a practical alternative. Generic drugs contain the same active ingredients, strength, dosage form, and route of administration as brand-name drugs, and meet identical standards of quality, safety, and efficacy. Despite this equivalence, their usage remains limited, as physicians frequently prescribe branded versions, often influenced by pharmaceutical promotions and established brand preferences. This study explores how consumer decisions can be shifted toward choosing lower-cost generic drugs over expensive branded options. It focuses on understanding key factors such as consumer awareness, trust, and sensitivity to price that influence this choice. Additionally, the research examines the role of healthcare professionals, including doctors and pharmacists, in promoting generic medicines.
The study also analyzes the impact of generic drugs on healthcare affordability, self-medication practices, and treatment adherence, while considering the influence of drug advertising and pharmaceutical companies on prescription behavior.
Keywords: Generic Medicines, Affordable Healthcare, Consumer Awareness, Public Health, Drug Adoption, Trust, Perception, Government Initiatives, Healthcare Accessibility, Cost-Effective Treatment

Introduction
Ensuring access to safe, effective, and affordable medicines remains a critical public health priority, particularly in developing countries like India, where the high cost of branded drugs restricts access for large sections of the population. Generic medicines provide a viable and cost-effective alternative, as they contain the same active ingredients, dosage, strength, and therapeutic effects as branded drugs, without compromising on quality, safety, or efficacy. Their widespread adoption has the potential to significantly reduce healthcare costs for individuals as well as the overall burden on healthcare systems. Government initiatives such as the Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) aim to address these challenges by improving the availability of low-cost generic medicines through dedicated outlets. This study finds that awareness of generic medicines is strongly linked to positive perceptions of their quality, safety, and effectiveness. Trust in healthcare professionals further influences consumer acceptance and willingness to use generics.
The findings also indicate that improved affordability and accessibility of medicines contribute to better medication adherence. Therefore, policymakers and healthcare stakeholders must focus on awareness campaigns, education, and trust-building measures to enhance the adoption of generic medicines, ultimately improving health outcomes and reducing financial strain on patients.

Literature Review
2.1 Generic Medicines and Healthcare Affordability
Studies consistently demonstrate that generic drugs are less expensive than brand-name drugs (Aitken et al., 2011; Garrison et al., 2013; Kanavos et al., 2011; Karlsberg Schaffer et al., 2015; Leopold et al., 2012). Generic medications may cost up to 85% less than their brand-name equivalents (Berndt et al., 2015; ePrognosis; Ryskina et al., 2015). Brand-name manufacturers justify the high cost of their drugs by pointing to costs that they incur to meet regulatory requirements and to develop and test new drugs.
2.2 Public Health Outcomes of Generic Medicine Availability
The availability of generic medications has a positive impact on public health overall, especially in locations with a high prevalence of diseases. Recent health systems studies have shown that increased access to generic medications has led to improvements in treatment rates related to hypertension, diabetes, and infectious diseases (Sharma & Gupta, 2022). According to the World Bank (2020) and WHO (2021), access to generic medications is helping increase access to essential drugs and supporting countries in moving towards Universal Health Coverage (UHC).

2.3 Consumer Awareness and Information Channels

Consumer awareness plays a critical role in the widespread acceptance of generic medicines. Several studies suggest that awareness and perceptions towards generic drugs vary within different population groups based on factors like location and education. For instance, urban and educated populations are found to be more aware of generic drugs compared to their counterparts from rural and low-income areas (Rao & Singh, 2021).

2.4 Consumer Perception and Trust Dynamics

Barriers or facilitators of adoption are perceptions of quality and trust in generic medicines. According to several recent studies, consumers frequently view brand-name drugs as superior, regardless of generic equivalence evidence (Zeithaml, 1988; Das & Chakraborty, 2023). Historical mistrust in pharmaceutical regulation has supported quality concerns, as has public unawareness of bioequivalence standards prescribed by drug regulatory authorities (Patel & Kulkarni, 2024).

2.5 Government Policies and Program Effectiveness

Government measures impact the promotion of generic medicines and the affordability of public health. An example of this is PMBJP in India, implemented by the Ministry of Chemicals and Fertilizers, which has formed a large network of Janaushadhi Kendras selling low-cost generic medicines (Government of India, 2021). Research on the program has found that there is a significant increase in the affordability and use of medicines among low-income groups (ICMR, 2022).

2.6 Research Gap and Need for Integrated Behavioral Evidence

While many aspects of pricing, policy, and supply of generic medicines have been studied, a gap persists in understanding the combined cognitive, behavioral, and socioeconomic determinants of their demand in the market. Existing research more often, though not exclusively, measures macro-level policy outcomes, is in the form of economic modeling and addresses overarching questions of equity, efficiency, accessibility, and similar indicators (Patel and Sharma, 2024; Verma and Singh, 2024).

Research Methodology

3.1 Research Objectives and Hypotheses

Research Objectives

The specific objectives of the study are as follows:

1. To analyze the role of generic drug formulations in promoting affordable medicines.
2. To examine the level of consumer awareness regarding generic medicines.
3. To evaluate consumer perception and acceptance of generic medicines.
4. To identify factors influencing the adoption of generic medicines among consumers.
5. To suggest strategies to promote the use of generic medicines for improving public health.

Research Hypotheses

In order to achieve the above objectives, the study proposes the following hypotheses:

H_0 (Null Hypothesis): Generic drug formulations have no significant impact on promoting affordable medicines and improving public health accessibility.

H_1 (Alternative Hypothesis 1): Generic drug formulations significantly promote affordable medicines in the healthcare system.

H_2 (Alternative Hypothesis 2): Consumer awareness significantly influences the adoption of generic medicines.

H_3 (Alternative Hypothesis 3): Positive consumer perception significantly increases the acceptance of generic medicines.

Research Design and Methodology

4.1 Research Design

The study examined the role of generic medicines in improving affordability, accessibility, awareness, and perceived efficacy compared to branded drugs. A descriptive design was used to capture consumer perceptions and behavior, while an analytical approach assessed relationships among awareness, trust, affordability, and prescribing behavior. A cross-sectional method was adopted, collecting data at a single point in time.

4.2 Sources of Data

Both primary and secondary data were used. Primary data were collected from 116 respondents through a structured questionnaire, while secondary data were sourced from journals, government reports, and policy documents to support theoretical understanding.

4.3 Research Methodology

The survey method was used with a structured questionnaire covering awareness, affordability, quality perception, usage, and professional influence. Close-ended questions ensured clarity and ease of analysis, supported by document review.

Results and Discussion

The final results of this study were derived through a structured combination of questionnaire-based descriptive analysis and interpretation supported by secondary sources. Responses collected from 116 participants were first organized into key analytical themes: awareness, affordability, perception of quality, influence of healthcare professionals, and willingness to adopt generic medicines. These themes were selected because they directly aligned with the research objectives and hypotheses. After classification, the responses were tabulated and interpreted based on dominant patterns. For instance, a majority identifying generics as low-cost supported affordability, while hesitation about effectiveness indicated perception barriers. These findings were then compared with evidence from public health and regulatory literature to ensure logical and evidence-based conclusions.

5.1 Awareness of Generic Medicines

The study found that while many respondents had heard of generic medicines, the depth of awareness was limited. Most participants were aware that generics are cheaper than branded drugs, but fewer understood that they provide equivalent clinical benefits. Supporting literature confirms that approved generics meet the same standards of safety, quality, and effectiveness as branded medicines. Therefore, the gap identified reflects incomplete understanding rather than lack of exposure. This finding supports the objective of assessing awareness and aligns with the hypothesis that awareness influences adoption.

5.2 Perception of Affordability

Affordability emerged as the strongest theme. Most respondents associated generic medicines with lower cost and reduced financial burden. This perception was consistent and widely accepted among participants. Secondary evidence from public health organizations reinforces that high medicine prices limit access, while generics improve affordability and equity. Government initiatives promoting low-cost generics further support this finding. Thus, the study confirms that generic medicines play a significant role in promoting affordable healthcare, supporting the first hypothesis.

5.3 Perception of Quality, Safety, and Effectiveness

Responses regarding quality and effectiveness were mixed. While some respondents trusted generics, others expressed uncertainty about their safety and performance. This indicates that affordability alone does not guarantee acceptance. Regulatory evidence confirms that generics meet strict quality and performance standards; however, this knowledge is not widely understood among consumers. The study concludes that hesitation is driven more by perception and trust gaps than by actual quality differences, supporting the hypothesis that positive perception increases acceptance.

5.4 Role of Doctors and Pharmacists in Adoption

The study found that healthcare professionals significantly influence consumer decisions. Many respondents rely on doctors' prescriptions and pharmacists' advice when choosing medicines. Acceptance of generics increased when recommended by professionals. This highlights that adoption is not purely consumer-driven but depends on trust in healthcare providers. Professional guidance acts as a bridge between affordability and acceptance, explaining why awareness alone is insufficient to drive usage.

5.5 Acceptance and Willingness to Use Generic Medicines

The findings indicate that consumers are generally open to using generic medicines, especially when assured of their quality and effectiveness. Respondents with higher awareness and positive perceptions were more willing to adopt generics. This shows that acceptance is conditional, not resistant. Consumers require reassurance about safety and therapeutic value before switching. This reinforces the relationship between awareness, perception, and adoption behavior.

5.6 Public Health Relevance of Generic Medicines

The study highlights the broader public health importance of generic medicines. Their affordability and accessibility contribute to improved treatment adherence and reduced financial burden on households. Literature supports that affordable medicines enhance healthcare access and equity. Therefore, generics are not only an economic solution but also a key strategy for strengthening public health systems.

5.7 Interpretation of Hypotheses

The combined findings support all alternative hypotheses. Generic medicines are confirmed to promote affordability, awareness influences adoption, and positive perception increases acceptance. The null hypothesis is not supported, as the overall response patterns consistently favor the role of generics in improving healthcare outcomes.

5.8 Overall Discussion

Overall, the study followed a systematic process by collecting survey data, identifying thematic patterns, and validating them with secondary evidence. The results show that while generics are widely recognized for affordability, their adoption is influenced by awareness gaps, perception issues, and dependence on healthcare professionals. Thus, the study presents a balanced understanding of generic medicines as both a cost-saving option and an essential public health strategy.

Recommendations

- **Enhance Public Awareness:** Launch large-scale awareness campaigns to address knowledge gaps about the safety, effectiveness, and affordability of generic medicines. Use community outreach programs, health camps, and mass media to educate people and reduce misconceptions, enabling informed healthcare decisions.
- **Implement Educational Programs:** Government and healthcare organizations should design structured educational initiatives focusing on the benefits and equivalence of generic drugs to improve acceptance and trust among consumers.
- **Strengthen Healthcare Professional Training:** Conduct continuous training programs for doctors and pharmacists on regulatory standards, therapeutic equivalence, and cost benefits of generic medicines, ensuring they confidently recommend generics.
- **Improve Availability and Supply Chain:** Ensure consistent availability of generic medicines by strengthening supply chain management and distribution systems in pharmacies and public healthcare facilities to build consumer confidence.

Limitations of the Study

- **Limited Sample Size:** The study is based on 116 respondents, which may not fully represent the diverse population of medicine consumers. A larger sample could improve reliability and generalizability of findings.
- **Use of Convenience Sampling:** The adoption of convenience sampling due to time and accessibility constraints may introduce bias, limiting the applicability of results to the broader population.
- **Self-Reported Data Bias:** Data collected through questionnaires may be affected by respondent bias, inaccurate recall, or misunderstanding of questions, impacting the accuracy of results.
- **Lack of Healthcare Professional Input:** The study mainly focuses on consumer perspectives and does not extensively include doctors or pharmacists, whose insights are crucial in understanding prescribing behavior and influencing adoption.

Future Scope of the Study

Future research should build on this study to better understand factors influencing the adoption of generic medicines and their impact on public health. A key direction is to include a larger and more diverse sample covering different regions, age groups, and socioeconomic backgrounds. This would improve data accuracy and provide deeper insights into consumer behavior and healthcare decisions. Comparative studies between urban and rural populations can help identify differences in awareness, accessibility, and perception of generic medicines. Including the perspectives of healthcare professionals such as doctors and pharmacists is also essential to understand prescribing patterns and professional attitudes. Additionally, future studies can examine long-term health and financial outcomes of increased generic medicine use. Using advanced analytical methods and evaluating government initiatives can offer evidence-based recommendations, ultimately supporting better policies and ensuring sustainable access to affordable healthcare.

Conclusion

This study examined the role of generic medicines in improving affordability and healthcare access. Findings show that generics are widely recognized as cost-effective alternatives to branded drugs, helping reduce out-of-pocket expenses. However, while basic awareness exists, deeper understanding of their quality, safety, and therapeutic equivalence remains limited. Consumer trust and perception strongly influence adoption, with affordability acting as a key motivator but not the sole factor. The study highlights the important role of doctors and pharmacists in encouraging the use of generic medicines through reassurance and guidance. From a public health perspective, generics improve treatment accessibility, enhance adherence, and reduce financial burden. Overall, the results confirm that increasing awareness, trust, and positive perception can significantly boost the acceptance of generic medicines.

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AN ANALYSIS OF CONSUMER UNDERSTANDING OF BRANDED AND GENERIC MEDICINES IN RELATION OF ADVERTISING

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1. Introduction

Healthcare systems worldwide depend heavily on pharmaceutical products for the prevention, management, and treatment of diseases. Medicines not only improve patient outcomes but also contribute to overall public health and economic stability. With the expansion of the pharmaceutical industry, consumers are exposed to a wide range of medicines, mainly categorized as branded and generic. Although both are designed to deliver the same therapeutic effect, consumer understanding and acceptance often differ due to informational and psychological influences. Branded medicines are developed through extensive research and marketed under proprietary names, gaining recognition through advertising, physician engagement, and promotional strategies. In contrast, generic medicines are introduced after patent expiry and must demonstrate bioequivalence, ensuring comparable safety, quality, and efficacy. Despite these regulatory assurances, generics are often perceived as less effective, highlighting a gap between scientific evidence and consumer perception. Advertising plays an important role in shaping consumer awareness and attitudes. Pharmaceutical promotions through television, digital media, and healthcare campaigns influence brand recall and purchasing behavior. However, unlike other consumer goods, medicine-related decisions involve higher perceived risk and depend significantly on trust and professional advice. As a result, advertising may influence how consumers differentiate between branded and generic medicines, even when clinical differences are minimal. In developing countries like India, affordability and accessibility are major concerns. Generic medicines are promoted as cost-effective alternatives, yet hesitation persists among consumers. Factors such as brand familiarity, promotional intensity, and perceived company reputation often influence confidence more than factual knowledge. Limited health literacy and lack of awareness about regulatory processes further contribute to misconceptions about medicine quality.

Consumer understanding is also shaped by social, cultural, and economic factors, along with interactions with healthcare professionals. Advertising may strengthen trust in branded medicines while creating doubts about generics. This raises the question of whether consumer decisions are based on accurate knowledge or promotional influence. Understanding this relationship is essential for improving healthcare communication and promoting rational medicine use.

1.1 Purpose of the Research

This study aims to analyze consumer understanding of branded and generic medicines and examine the influence of advertising on these perceptions. It focuses on evaluating awareness of bioequivalence, regulatory approval, and price differences, while identifying misconceptions that lead to a preference for branded medicines.

The research also explores how advertising affects consumer decision-making, trust, and perception of medicine quality. Additionally, demographic factors such as age, education, and income are considered to understand variations in consumer behavior.

Overall, the study seeks to bridge the gap between medical facts and consumer beliefs, supporting informed decision-making and encouraging the acceptance of cost-effective generic medicines.

1.2 Problem Statement

Despite regulatory assurance of safety and effectiveness, consumer acceptance of generic medicines remains inconsistent. Many consumers prefer branded medicines due to perceived reliability, often associating higher price with better quality. This belief creates a psychological barrier against generics, even though their lower cost is primarily due to reduced research and marketing expenses.

Advertising further reinforces these perceptions by increasing visibility and trust in branded medicines, while generics receive limited promotion. As a result, consumers may rely more on brand image than factual knowledge when making decisions. Additionally, limited awareness about bioequivalence and regulatory approval contributes to misunderstandings regarding generic medicines.

Existing research has often examined advertising and consumer perception separately, with limited focus on their combined influence. Therefore, this study addresses the lack of clarity regarding how advertising and price perception shape consumer attitudes. Understanding this relationship is crucial for improving awareness, promoting informed choices, and increasing the acceptance of affordable generic medicines.

2. Literature Review

1. Shrank, W.H., Cox, E.R., Fischer, M.A., Mehta, J., & Choudhry, N.K. (2011) "Patients' Perceptions of Generic Medications."
This study examined how patients perceive generic medicines compared to branded drugs. Using survey-based research among consumers, the authors analyzed beliefs related to effectiveness, safety, and cost. Findings showed that many consumers doubted the quality of generics despite regulatory equivalence. Price differences strongly influenced perception, often creating assumptions of inferior quality. The research highlights the importance of education and communication in improving consumer understanding of generic medicines.

2. Mintzes, B. (2009) "Pharmaceutical Promotion and Influence on Consumer Behavior." The study explored how pharmaceutical advertising affects consumer awareness and medicine demand. Through policy analysis and review of promotional practices, it found that advertising increases brand familiarity and patient requests for specific medicines. Promotional messages were shown to shape expectations regarding treatment outcomes. The author concluded that advertising significantly influences healthcare decisions. The research supports examining advertising as a factor affecting consumer understanding.

3. Kesselheim, A.S., Misono, A.S., Lee, J.L., et al. (2016) "Clinical Equivalence of Generic and Brand-Name Drugs."
This research evaluated clinical evidence comparing branded and generic medicines through systematic analysis. The study confirmed therapeutic equivalence across multiple drug categories. Despite scientific similarity, patient preference for branded drugs remained strong due to trust and perception. The findings indicate that psychological and marketing influences outweigh clinical evidence in consumer choices. This supports investigation into perception shaped by advertising.

4. Dunne, S., & Dunne, C. (2015) "Consumer Perceptions of Generic Medicines and Pricing Effects."
The authors investigated how pricing influences consumer attitudes toward medicines. Using questionnaire-based analysis, the study found that higher-priced medicines were perceived as more effective. Consumers often equated affordability with reduced quality. The research concluded that economic psychology plays a major role in medicine selection. These findings relate directly to branded versus generic preference influenced by marketing communication.

5. Gupta, S.K., & Sharma, R. (2018) "Awareness and Knowledge About Generic Medicines Among Indian Consumers."
This study assessed awareness levels regarding generic drugs in India through structured surveys. Results indicated limited understanding of bioequivalence and regulatory approval processes. Many participants relied on brand recognition rather than scientific information. Lack of awareness contributed to hesitation toward generic substitution. The study emphasizes the need for educational and advertising interventions.

6. Håkonsen, H., Toverud, E., & Aaraas, I. (2009) "General Practitioners' and Patients' Perspectives on Generic Substitution."
The research explored attitudes toward generic substitution among patients and healthcare providers. Interviews and surveys revealed that physician trust influenced acceptance more than medical knowledge alone. Advertising exposure strengthened familiarity with branded medicines. Patients showed resistance when brands were strongly recognized. The study highlights interaction between professional advice and promotional influence.

7. Donohue, J.M., Cevasco, M., & Rosenthal, M.B. (2007) "A Decade of Direct-to-Consumer

Advertising of Prescription Drugs."
This study analyzed trends in pharmaceutical advertising and its impact on consumer demand. Using longitudinal advertising data, the authors found increased patient requests for advertised medicines. Advertising improved awareness but sometimes created biased perceptions. Patients associated advertised brands with higher effectiveness. The study demonstrates advertising's role in shaping consumer medicine preferences.

8. Waber, R.L., Shiv, B., Carmon, Z., & Ariely, D. (2008) "Commercial Features of Placebo and Consumer Expectations."
The study examined how branding and presentation influence perceived effectiveness of medicines. Experimental methods showed that higher-priced or branded products were perceived as more effective even when identical. Psychological expectations influenced treatment outcomes. Marketing cues significantly affected consumer belief systems. This research explains behavioral factors behind branded medicine preference.

9. Bennett, I.M., Chen, J., Soroui, J.S., & White, S. (2009) "Health Literacy and Medication Understanding."
The authors studied how health literacy impacts consumer understanding of medicines. Survey findings revealed that individuals with lower literacy relied more on advertising and brand familiarity. Misinterpretation of drug information was common among participants. Improved communication strategies were recommended to enhance informed decision-making. The study links education level with medicine perception.

10. Simoens, S., & De Coster, S. (2006) "Sustaining Generic Medicine Markets in Europe." This research analyzed economic benefits of generic medicine adoption using policy evaluation methods. Findings showed significant healthcare cost reduction through generic substitution. However, consumer acceptance remained inconsistent across regions. Trust and perception barriers limited widespread use. The study highlights the importance of awareness campaigns supporting generics.

11. Figueiras, A., Marcelino, D., & Cortes, M.A. (2010) "People's Views on the Safety of Generic Medicines."
The study explored consumer concerns related to safety and side effects of generic drugs. Data collected through public surveys showed persistent misconceptions about manufacturing quality. Many participants believed generics were less reliable. Lack of transparent communication contributed to distrust. The research emphasizes the need for better informational outreach.

12. Bate, R., Jin, G.Z., & Mathur, A. (2013) "Does Brand Perception Influence Drug Quality Beliefs?"
This study investigated cultural and psychological influences on medicine perception. Using comparative consumer analysis, it found strong associations between branding and perceived quality. Consumers often linked well-known brands with safety assurance. Social and cultural factors reinforced brand loyalty. The findings support the role of branding in consumer understanding.

13. Alrasheedy, A.A., Hassali, M.A., & Stewart, K. (2014) "Pharmacists' Role in Generic Medicine Promotion."
The research examined pharmacists' influence on consumer acceptance of generics. Surveys indicated pharmacists were key educators in explaining equivalence. However, advertising and brand familiarity sometimes overrode professional advice. Consumer trust improved when information was clearly communicated. The study highlights multiple influences on medicine choice.

14. Kotler, P., & Keller, K.L. (2016) "Marketing Management." This theoretical work explains consumer decision-making behavior within marketing frameworks. The authors describe psychological, social, and cultural factors affecting purchase decisions. Branding and advertising are identified as major tools shaping perception and loyalty. Though not healthcare-specific, the concepts apply directly to pharmaceutical marketing. The framework helps analyze medicine choice behavior.

15. Calfee, J.E. (2002) "Public Policy Issues in Direct-to-Consumer Advertising." The study discussed policy implications of pharmaceutical advertising. It found that promotional communication increases awareness but may influence perception beyond scientific evidence. Advertising builds company reputation and consumer trust. Ethical balance between marketing and education was emphasized. The research provides insight into advertising's societal impact.

16. Wakefield, M.A., Loken, B., & Hornik, R.C. (2010) "Use of Mass Media Campaigns to Change Health Behaviour."
This study analyzed how media campaigns influence health-related attitudes. Evidence showed that repeated exposure improves awareness and behavioral change. Communication strategies significantly shaped public beliefs. Media messaging affected decision-making even without detailed medical knowledge. The findings support advertising's strong informational role.

17. IMS Health (2017) "Generic Medicine Market Trends Report." This industry report evaluated global trends in generic medicine adoption. Data analysis showed increasing acceptance where educational campaigns accompanied promotion. Consumer confidence improved with transparent communication. Economic advantages drove policy support for generics. The report highlights the link between awareness initiatives and consumer acceptance. Plassmann, H., O'Doherty, J., Shiv, B., & Rangel, A. (2008) "Marketing Actions Can Modulate Neural Representations of Experienced Pleasantness." The study used neuroscience methods to examine branding effects on perception. Results showed that brand information altered consumer experience at a psychological level. Expectations created by marketing influenced perceived effectiveness. The research demonstrates how advertising shapes subjective evaluation. It explains preference for branded medicines beyond clinical differences.

18. World Health Organization (WHO) (2018) "Guidelines on Generic Medicines and Public Awareness."
WHO reports emphasized the importance of promoting generics to improve healthcare accessibility. Regulatory equivalence standards were clearly outlined. The organization highlighted misinformation as a barrier to adoption. Public education and responsible advertising were recommended. The report supports policy relevance of consumer understanding studies.

19. Othman, N., Vitry, A., & Roughead, E.E. (2009) "Quality and Ethics of Pharmaceutical Advertising."
This research evaluated ethical standards in pharmaceutical promotion. Content analysis revealed that advertising often emphasizes benefits over balanced information. Consumers may develop biased perceptions due to promotional framing. Ethical marketing practices were recommended to ensure informed decisions. The study connects advertising ethics with consumer understanding.

20. Dunne, S.S., Shannon, B., Dunne, C.P., & Cullen, W. (2014) "Beliefs, Perceptions and Behaviours of Patients Regarding Generic Medicines." This study investigated patient attitudes toward generic medicines using survey-based research across community healthcare settings. The objective was to understand how beliefs influence medicine acceptance. Results showed that although patients recognized cost benefits, many still preferred branded medicines due to perceived reliability. The study concluded that misconceptions were largely influenced by branding exposure and insufficient education. The findings highlight the importance of communication strategies in improving consumer confidence in generics.

21. Lieberman, A. (2013) "The Impact of Pharmaceutical Branding on Consumer Decision-Making." This research analyzed how branding strategies affect consumer healthcare choices through marketing analysis and behavioral observation. The study found that strong brand identity increases trust and recall, influencing purchasing decisions even in medically equivalent products. Consumers associated branded medicines with innovation and higher quality. Advertising reinforced emotional connections with brands rather than factual understanding. The research supports the role of promotional influence in shaping consumer perceptions of medicines.

3. Theoretical/Conceptual Framework

This study is based on theories of consumer behavior, perception, and decision-making in the pharmaceutical context. Consumer Behavior Theory explains that decisions are influenced by awareness, knowledge, and external factors such as doctors, pharmacists, and advertisements. Since medicines are related to health, consumers tend to make more cautious decisions. Perception Theory highlights that choices depend on how consumers interpret information about branded and generic medicines, influenced by factors like price, trust, and awareness. Limited knowledge often increases dependence on healthcare professionals, making doctors and pharmacists key influencers. Advertising plays a role in creating awareness and shaping perception, but its impact on final decisions may be limited.

The conceptual framework explains the relationship between key variables affecting consumer choice. Independent variables include pharmaceutical advertising, price, and awareness, while mediating variables are perception and trust. The dependent variable is consumer preference and purchase decision. Advertising helps in awareness creation, while price influences perceived quality, and awareness improves understanding of generics. Perception and trust act as critical factors in determining consumer choices.

The conceptual flow is:

Advertising + Price + Awareness → Perception & Trust → Purchase Decision.

The study aims to assess awareness, analyze advertising influence, identify misconceptions, compare preferences, and suggest strategies for better communication. The scope is limited to consumers in Navi Mumbai, focusing on perception and advertising influence rather than clinical evaluation. The research ultimately aims to improve awareness, reduce misconceptions, and promote informed, cost-effective medicine choices.

4. Research Methodology

The study adopts a **descriptive research design** to analyze consumer understanding of branded and generic medicines in relation to pharmaceutical advertising. This design helps in examining existing awareness, perceptions, and behavior without manipulating variables.

A **convenience sampling method** is used, selecting respondents based on ease of access. The sample consists of **101 respondents** aged between **16 to 50 years**, ensuring representation of individuals involved in healthcare decisions.

Data is collected through both **primary and secondary sources**. Primary data is obtained using a structured questionnaire via Google Forms, including close-ended questions to assess awareness, perception, and advertising influence. Secondary data is gathered from journals, textbooks, and online sources to support the theoretical framework.

Data analysis is conducted using **percentage analysis, correlation analysis, and chi-square test**. Percentage analysis identifies trends, while chi-square examines relationships between variables. Correlation analysis measures the association between advertising influence and consumer perception.

4.1 Hypotheses

H_{01}: Advertising does not significantly influence consumer perception

H_{11}: Advertising significantly influences consumer perception

H_{02}: Price does not affect perceived quality

H_{12}: Price significantly affects perceived quality

5. Data Analysis

The study is based on 101 respondents, primarily young (21–30 years) and well-educated, making the sample suitable for analyzing awareness and perception. A high level of awareness about generic medicines was observed (93.1%), but only around 71.3% understood their formulation and government approval, indicating a gap between awareness and knowledge.

Consumer preference is largely influenced by healthcare professionals, with 72.3% relying on doctors and only 2% influenced by advertisements. Preference for generic medicines remains low (9.9%), showing limited independent acceptance. Advertising impact on trust, purchase decisions, and perceived effectiveness shows mostly neutral responses, indicating weak influence.

Perception of price and quality is mixed. While some consumers associate higher price with better quality (32.6%), many reject the belief that generics are inferior (48.5%). Consumers are willing to choose cheaper medicines if assured of effectiveness (53.5%), highlighting the importance of trust.

Overall findings indicate high awareness but incomplete understanding, low preference for generics, and strong reliance on doctors. Advertising has limited impact, while price perception still influences some consumers.

Hypothesis 1: Percentage analysis shows neutral responses dominate, and advertisements have minimal influence. Hence, H_{01} is accepted.

Hypothesis 2: Correlation analysis shows a moderate positive relationship ($r \approx +0.40$ to $+0.50$) between price perception and trust. Hence, H_{02} is rejected.

The study concludes that trust and professional guidance play a more significant role than advertising in consumer decision-making.

6. Interpretation, Discussion & Conclusion

The study reveals that consumers have high awareness but only moderate understanding of generic medicines, indicating a gap between knowledge and clarity regarding formulation and approval. Consumer decisions are largely influenced by healthcare professionals, especially doctors and pharmacists, while independent preference for generics remains low due to lack of confidence.

Pharmaceutical advertising has a limited and inconsistent impact, with many respondents showing neutral responses, reflecting weak influence. Price perception is mixed; although some consumers associate higher prices with better quality, many reject the idea that generics are inferior, showing gradual improvement in awareness. Consumers are willing to adopt generics if assured of effectiveness, highlighting the importance of trust.

Results indicate that advertising influence is weak (H_{01} accepted), whereas price has a moderate impact on perceived quality (H_{02} rejected). Key findings include incomplete knowledge, strong reliance on professionals, limited advertising impact, and existing price-quality misconceptions.

Managerially, the focus should shift toward educational communication and trust-building rather than promotional advertising. Recommendations include awareness campaigns, encouraging generic prescriptions, strengthening pharmacist roles, and improving transparency.

Overall, enhancing awareness and trust is essential to promote informed decisions and increase acceptance of cost-effective generic medicines.

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IMPACT OF FINTECH ON FINANCIAL EFFICIENCY OF RETAIL SECTOR IN THANE REGION

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Abstract
The use of Financial Technology (FinTech) has significantly changed the way businesses operate in different areas and especially in the retail industry whether Small, Micro or Medium and even large in their operations. Retail businesses have started using digital financial tools to improve their operations. While many studies have shown how FinTech is used in banking and financial services, there are not as many studies on how it affects the performance of retailers, especially in specific sub-urban cities of India in the State of Maharashtra like Thane. This study shows that how using FinTech has affected the Financial efficiency of retail businesses in Thane. It uses information from other sources instead of collecting new data. The study considers several factors that represents how well a business is running, such as how quickly transactions are processed, how much money is saved, how well inventories are managed and how customers move through the store. By looking at many sources like research papers, industry reports and government documents, the study finds that using FinTech usually helps retail businesses be more efficient. However, there are still differences in how much it contributes, depending on the size of the business, how ready they are for digital tools and the support they get from infrastructure. This study adds to the growing research on FinTech in specific sectors and gives useful information for retail business owners.

Keywords: FinTech, Financial efficiency, Retail Sector, Digital Payments, Thane

Introduction
Financial Technology or FinTech, has become a key part of modern business by using digital tools in financial and transactions. Every retailer whether micro, small or medium-sized or even large scale operators are using digital platforms when it comes to Financial Transactions because of its convenience and less time consumption with real time solutions to the problems they might have faced during the time when the technology or use of the technology was not that advanced. Using tools like digital payment systems, automated book-keeping and data-based financial applications has made financial operations more efficient, reliable and easier to track. In India, the growth of FinTech has been helped by better digital infrastructure, more people using smartphones and government efforts to encourage cashless and digital transactions. The retail sector is also very important in this digital shift because it deals with many transactions, customer interactions and manages money flow. Retail businesses usually work in competitive markets with small profits, so being efficient in their operations is very important. Basic retail tasks like billing, paying customers, keeping track of goods and preparation of financial reports are also now being influenced by FinTech. Use of these technologies help make processes smoother, help reduce the need for handling cash, improve accuracy and it provides the real-time views on how the business is performing. Even though there is a lot of research on FinTech, most studies have focused on areas like banking, financial inclusion and how consumers use these tools and even the risk factor associated with it and also the security concerns in the use of Financial Technology (Fintech). There has not been much research on how FinTech affects retail operations, especially in specific semi-urban cities of Maharashtra in India. This is important because different regions in India have different types of retail businesses, different levels of technology and different ways of working and different requirements. Thane is a fast-growing urban area with both big retail chains and small, independent stores also. The area which has good digital infrastructure and is using FinTech tools more, making it a good place to study how these tools impact business operations. This study aims to add to existing knowledge by using existing data to look at how FinTech adoption affects the efficiency of retail businesses in Thane. The Indian retail sector has significantly transformed because of digital growth and reforms in the financial sector and increasing

awareness about the same. Programs that encourage digital transactions, build electronic payment systems and help more people join formal financial systems have pushed retailers to use less cash. Because of this, tools like computerised billing, point-of-sale systems, mobile payment apps and automated accounting software are now common in retail, especially in cities. Retailing involves many connected tasks like getting goods, controlling inventory, selling products, settling payments and keeping financial records of all the transactions. In the past, many small and medium businesses have used manual or semi-manual systems for these tasks. This often-caused problems like delays in transactions, mistakes in records, stock mismatches and difficulty in getting timely financial information. FinTech platforms aim to fix these issues by linking operational and financial processes digitally, improving accuracy, velocity of the transaction and provide oversight. However, just having or using FinTech tools doesn't always mean better performance in retail but analysing it's benefits with it's disadvantages or challenges are also very important with the help of previous data and experiences of the industry or sector. Issues like long checkout times, risks from carrying cash, incorrect inventory records or data and scattered financial information can still slow things down. The level of FinTech adoption varies between retailers because of differences in business size, cost of technology, how tech-savvy they are, employee skills and how ready they are for digital tools. Small and independent retailers often struggle the most with adopting and using digital financial tools.

Review of Literature

In Ha, D., Le, P., & Nguyen, D. K. (2025) it highlights how FinTech adoption improves financial inclusion, Financial efficiency and sustainable growth, especially in emerging economies, show that FinTech adoption enhances financial inclusion, Financial efficiency and sustainable growth in emerging economies. Beyond access, FinTech reduces structural barriers through digital platforms and alternative credit assessment, integrating underserved groups into formal finance. Efficiency gains from automation and data analytics lower costs and improve service delivery. Over time, these effects support inclusive development, better resource allocation and a more resilient and sustainable financial ecosystem.
In Ramu, M., & Harini, G. (2024) It proves that FinTech adoption has significantly disrupted and advanced financial services, reshaping payments, mobile banking, lending and operational processes — with India showing higher adoption rates than global averages, Their findings indicate that digital innovation has improved speed, accessibility and cost efficiency across the financial sector. The evidence of India's adoption rates exceeding global averages highlights a strong digital readiness and supportive ecosystem, positioning the country as a key driver of FinTech-led financial modernisation and competitive service delivery.
In Sumesh, S., Jayaraj, R., & Madhulal, P. R. (2024) Bibliometric review shows FinTech adoption research focusing on digital transformation, user acceptance, operational impacts and future research directions — indicating accelerated research interest in efficiency outcomes. This growing focus indicates accelerated scholarly interest in efficiency outcomes, positioning FinTech not only as a technological innovation but as a strategic driver of organisational change, productivity improvement and long-term transformation across financial and business ecosystems.
Harish, D., Vennila, R., & Kumar, H. B. (2024) Their Empirical study indicates FinTech innovations like digital wallets, POS systems and mobile payments enhance Financial efficiency, transparency and shift informal retailers towards formal financial sectors. Beyond process improvements, these tools encourage informal retailers to adopt formal financial practices, strengthening record-keeping, compliance and access to credit. This transition supports greater financial inclusion, reduces cash dependency, and contributes to the formalisation and stability of the broader retail and financial ecosystem.
RBI. (2022). Payment and Settlement Systems in India: Vision 2025. Reserve Bank of India. Indian studies reveal rapid FinTech adoption in urban regions, leading to improved transparency, better compliance and increased Financial efficiency in organised retail. highlights rapid FinTech adoption in urban India as a key driver of transformation in organised retail. Beyond faster payments, digital systems enhance transparency, strengthen regulatory compliance, and streamline operational processes. The shift towards electronic payment and settlement mechanisms reduces cash dependency,

improves audit trails and supports formalisation. Collectively, these developments contribute to a more efficient, accountable and resilient retail and financial ecosystem aligned with India's digital economy goals.

In Chinu Rathee, 2024 they suggested that as much as Financial Inclusion is important, so as the financial security, Intermediaries should respect the rights of the citizens in order to increase the security for sensitive information.

In Haoyu Jiang, 2024, It highlighted the importance of addressing potential risks associated with changes in trading environment. As market participants and regulators stand at the intersection of technology and finance, this study advocates for a collaborative effort among stakeholders to ensure the equitable and sustainable development of financial markets. Actions including improving information transparency, stabilising the market while improving market efficiency, alleviating the conflicts between profits and responsibility and protecting unexperienced investors deserve more attention from regulators and market participants.

In Anna Micheli, Calce, Nallo, 2023 The study shows that the multiples method underestimates the value of unicorns because it does not consider qualitative variables typically included in valuations made by venture capitalists so, it is not capable to enhance the potential of disruptive technology. Furthermore, results obtained in terms of value destruction confirm our assumptions that FinTech companies are less profitable than traditional financial services ones and support higher cost of capital because the sector is considered riskier.

In Dr. Uttera Choudhary, 2023 it was concluded that FinTech has gained the momentum in the domain of banking. On one hand it provides competitive advantages which includes speed, transparency, saving time and optimising resources. It also provides extensive customer support. The young generation is more techno-savvy. Therefore, they are more Comfortable and satisfied than old generation. On the other side, security, trust confidentiality of the data are still the major concerns for the bank customers.

In Goel et al. (2022) It was stated that fintech in India is rapidly growing due to several benefits, including the importance of resolving all issues related to financial inclusion and so on. Beyond expanding access, FinTech solutions lower transaction costs, improve service efficiency, and reach underserved populations through digital platforms. This growth reflects strong consumer adoption and supportive policy frameworks, positioning FinTech as a key instrument for inclusive economic development and the modernisation of India's financial system.

In Gupta & Gupta, 2022 It shows that several case studies illustrate the impact of fintech on retail financial operations in different contexts. For instance, However, these studies also reveal the need for tailored approaches that consider local market conditions and consumer behaviour. The studies emphasise the need for tailored implementation strategies that account for local market conditions, regulatory frameworks and consumer behaviour to ensure effective adoption and sustained operational impact.

In Rathi et al., 2021 It has proven that unique economic and regulatory environment in India influences how fintech solutions are implemented and their effectiveness in the retail sector. Their findings suggest that FinTech success in India depends on aligning innovations with local compliance requirements and consumer behaviour, enabling solutions that enhance efficiency, trust and inclusion while supporting the gradual formalisation and digital transformation of retail financial operations.

In Mills & Wang, 2021, suggest that while FinTech offers significant operational and competitive advantages, retailers must carefully navigate regulatory requirements and ensure compliance with data protection and privacy laws. Beyond legal adherence, effective compliance builds consumer trust and reduces operational risk. Their analysis implies that integrating robust governance frameworks, cybersecurity measures, and regulatory awareness into FinTech strategies is essential for sustainable adoption and long-term value creation in retail financial operations.

Albarrak and Alokley (2021) indicate that collaboration within the FinTech ecosystem—particularly between traditional financial institutions, technology firms, and start-ups—not only accelerates innovation but also generates broader economic value. Beyond product development, such partnerships enhance service quality, reduce market entry barriers and intensify competition within the financial industry. Their findings suggest that collaborative ecosystems foster efficiency, customer-centric solutions, and a more dynamic and competitive financial sector.

Srinivasan and Hsu (2020) show that the implementation of digital payment systems in Indian retail chains leads to notable improvements in transaction efficiency and customer satisfaction. Beyond faster checkouts, digital payments reduce errors, enhance payment reliability and offer greater convenience to consumers. Their findings suggest that such systems strengthen the overall retail experience while supporting operational streamlining, improved service quality and the gradual shift towards cashless and digitally integrated retail environments.

Chen and Zhang (2020) show that despite its advantages, FinTech adoption poses notable challenges for retailers, particularly small and medium-sized enterprises (SMEs). Beyond financial constraints, high implementation costs, system integration complexities and cybersecurity risks limit effective adoption. Their findings suggest that without adequate technical support, scalable solutions, and regulatory guidance, SMEs may struggle to realise FinTech's full benefits, highlighting the need for supportive ecosystems that reduce risk and enhance adoption readiness.

In (Chakrabarty & Shah, 2019). It shows that the Research on fintech impacts in emerging markets, such as India, provides valuable insights into the challenges and opportunities specific to these regions. Studies highlight that while fintech adoption is growing rapidly in Indian cities, including Thane, there are notable regional disparities in technology penetration and financial literacy.

Lee and Shin (2018) demonstrate that the rise of FinTech has been driven by the demand for greater efficiency, transparency, and accessibility in financial services. Beyond technological advancement, their work highlights how FinTech responds to structural limitations of traditional finance by reducing costs, improving information flow, and expanding access to services. This shift reflects a broader transformation in financial ecosystems, where innovation is increasingly shaped by customer-centric, data-driven and digitally enabled service models.

In (Gomber & Parker, 2018). Shows that the fintech industry has undergone significant evolution over the past decade, characterised by rapid technological advancements and increasing integration into various sectors. Fintech Revolution will need to be done on a repeated basis, since the extent of emerging technology, reengineered & new processes & customer friendly and value bearing products & services seem to be undergoing continuous development and implementation.

As per Serrano-Cinca & Gutiérrez-Nieto (2017) In their research study titled "Fintech: Challenges and opportunities" had provided an overview of fintech challenges and opportunities in the banking sector. The study focuses on the potential benefits that fintech solutions can offer to customers. By addressing various challenges like regulatory compliance, data security and customer education, banks can enhance customer satisfaction with their fintech services.

Significance of the Study

This study is important from different point of views, such as academic, managerial and policy making. From an academic angle, it expands FinTech research beyond banking and looks at how it affects Financial efficiency in retail businesses. By focusing on an emerging market like India, the study adds to the understanding of how digital finance is used in different sectors. From a managerial point of view, the findings give practical ideas on how FinTech can be used to improve business performance, especially in areas like lowering costs, speeding up transactions and managing customer flow. These insights help retail managers make better decisions about adopting new technologies. For policymakers, the study shows the need for targeted efforts to help small and medium-sized retail businesses transition to digital solutions. The focus on Thane makes the study more relevant, as this area is a major retail hub. Although there is no single body that keeps real-time data on all small retailers, existing information shows the variety of the retail environment, including a small number of specialty stores and the presence of large chains like for example Reliance Retail, DMart, Croma and major electronics stores across Thane. Thane is a good place to study these issues because it has a mix of large retail stores, malls, shopping centres and traditional small retail shops. This mix is helpful for me to look at different levels of FinTech use and how they affect business efficiency. By using data specific to the region, the study puts FinTech in the context of real retail operations, providing insights from actual work in the field. From a management perspective, the study gives useful ideas on how FinTech tools can be used to improve daily retail work. By showing which areas of operations are affected by digital payments, POS systems and automated financial processes, the study helps managers make better decisions about using technology, improving work processes, speeding up transactions and managing customer flow, which are especially important in competitive and tight-resource environments. The research also has policy and societal importance. By showing the challenges small and medium retail businesses face in adopting FinTech, it can help create policies that support inclusive digital change. The findings can help design targeted measures like improving digital infrastructure, training people and creating programs to help the retail sector understand and use FinTech. This gives a realistic picture of the challenges and chances of digital adoption in developing areas. Insights from this area may be useful for similar urban regions, making the research's value go beyond just the local area. Also, the retail sector is a major employer, especially in sales and customer service roles. As FinTech becomes more integrated into retail operations, it is likely to affect job skills and wages, further highlighting the industry's economic and social importance.

Limitations of the Study

Despite the useful insights from this study, there are certain limitations. The research is based entirely on existing data from other sources, which means there isn't direct observation or measurement of how well businesses are running. The findings depend on the quality, consistency and coverage of the data, which might vary between sources, affecting any comparisons. The study is limited to the Thane region, which allows for detailed context but might not be applicable to other areas with different economic, technological and infrastructural conditions. Also, the fast-paced nature of FinTech means that the results may not stay relevant over time due to new technologies, changes in regulations and shifts in how people use digital tools. These limitations show the need for caution when interpreting the findings and suggest future studies that use original data and cover a broader area. FinTech has made a big difference in how retail companies run their businesses. It helps them process transactions faster, cuts down on mistakes people make by hand and makes financial work easier to manage. Using digital payment systems and financial tools that rely on technology helps businesses handle more customers, manage money better and use their resources more effectively. FinTech services make it easier for customers by providing quick, clear, convenient and always-available services. Younger customers who are more familiar with digital tools are more likely to use these services and are generally happier with them. However, older customers are more worried about security and trust. FinTech has helped more people access financial services, especially in areas where traditional banking isn't widely available. But worries about keeping personal data safe, protecting against cyberattacks and making sure middlemen are responsible still stop some people from fully trusting and using these services. Retail companies in developing markets have mixed results when adopting FinTech. This is because of differences in how much people know about money, how good the digital systems are and the economic situations in different areas. Smaller and medium-sized retailers face challenges like expensive setup costs, problems connecting new technology with their existing systems and greater risk from cyber threats. Following rules about how to handle data and making sure everything is legal is very important for how well and how long FinTech solutions work. The FinTech world encourages new ideas and makes competition stronger, but these companies also face pressure to be profitable and deal with higher risks, which makes it harder to get funding. To keep things stable and protect customers, it's important for retailers, FinTech companies, banks and government regulators to work together. This helps balance the push for new ideas with the need for safety and fairness in the market. Tailoring FinTech solutions to fit the local needs and conditions of a specific market usually works better than trying to use the same approach everywhere. In general, FinTech offers a lot of chances to improve how businesses operate and include more people in the economy. But for it to be successful in the long run, it needs strong security, good rules and solutions that fit the local market.

Data Analysis

The present study is based on secondary data, collected from published research articles, industry reports, government publications, RBI reports and other credible sources related to FinTech adoption and Financial efficiency in the retail sector. The data were analysed using a qualitative and thematic analysis approach to identify patterns, relationships and operational outcomes relevant to retail businesses in the Thane region. For systematic analysis, the data were categorised into key operational dimensions such as transaction efficiency, cost management, inventory control, customer experience and financial transparency.

Transaction Efficiency - Secondary data indicate that FinTech tools such as digital payment platforms, UPI systems, POS terminals and mobile wallets significantly reduce transaction time and improve checkout speed. Faster payment processing enhances customer flow and reduces congestion at billing counters, contributing positively to Financial efficiency.

Cost Management and Financial Control - The analysis reveals that FinTech adoption helps retailers reduce operational costs by minimising cash handling, manual accounting and administrative errors. Automated accounting and digital record-keeping improve financial accuracy and support real-time monitoring of sales, expenses and profitability.

Inventory Management and Operational Control - FinTech-enabled POS systems integrated with inventory management tools assist retailers in tracking stock levels, identifying fast-moving items and avoiding overstocking or shortages. Improved inventory visibility leads to better supply chain coordination and reduced operational inefficiencies.

Customer Experience and Service Quality - Data from prior studies show that digital payment options enhance customer convenience, transparency and satisfaction. The availability of multiple payment modes positively influences customer behaviour, encourages repeat purchases and strengthens retailer–customer relationships.

Transparency, Security and Compliance - Digital transactions improve transparency and accountability by creating verifiable transaction records. However, secondary data also highlight concerns related to cybersecurity risks and data privacy, particularly among small and medium retailers. Effective security measures and regulatory compliance are critical for sustaining FinTech adoption.

Benefits of Fintech to the Retailers

Trustworthiness - Studies have shown that fintech has a great impact when it comes to maintaining or improving the trust in retail chain within retailers and also with customers.

Relationship Building - With transparency and accountability fintech is helping the retailers and customers to build relationship in trade or business.

Authenticity - Wide use of fintech has impacted positively across the globe within the retail industry or retail chain because of the authenticity in transactions with the help of technology and data collection and maintenance.

Competitiveness - Fintech has helped the retailers to be more competitive and efficient in the market through various products and services which ultimately helps in sustainability.

Reduction in cost - Fintech helps retailers in cost reduction by providing everything handy and at everyone's doorstep or convenience thus reducing the cost of operations.

Convenience in Customer Service - Fintech or emerging use of fintech is the ultimate proof of convenience that the technology and tools are saving time of both customers and retailers that is sellers therefore it is providing convenience to everyone.

Business Expansion - Fintech provides support through digital transactions feedback reporting standards to the retailers to acquire market knowledge and therefore make informed decisions for new opportunities leading to expansion.

High networking - Fintech contributes towards networking also with the collaborative approach of technology it brings all together which helps the people from similar background to know help each other and grow together.

Challenges in the use of Fintech

Price Wars - Competing solely on price can lead to reduced profit margins

Customer Loyalty - Focusing on price alone might attract one-time buyers, but not loyal customers

Competitive Pressure - If you're always discounting, customers might question your product's value

Safety and Security - Constant promotions can create a culture of expectation, making it hard to sell at full price

Perceived Value - Economic tactics can lead to intense competition, making it hard to stand out

Over Reliance on Promotion - Focusing on economic tactics might distract from building a strong brand identity

Variations in Adoption Across Retail Formats - The analysis indicates that large and organised retailers benefit more from FinTech due to better infrastructure and skilled manpower. Small retailers face challenges related to initial investment costs and digital literacy, though even partial adoption leads to noticeable efficiency improvements.

Further analysis of secondary data suggests that the impact of FinTech adoption on Financial efficiency is multidimensional and interconnected across retail functions. The integration of digital financial technologies does not operate in isolation; rather, it influences a chain of operational activities that collectively improve overall business performance. Studies reviewed indicate that retailers adopting FinTech experience cumulative efficiency gains over time, as digital systems mature and employees become more familiar with technology-driven workflows. From an operational standpoint, transaction efficiency improvements lead to secondary benefits such as reduced employee workload and improved staff productivity. Faster billing and payment processing allow retail staff to focus more on customer service, merchandising and inventory handling rather than manual cash reconciliation. This shift contributes to better utilisation of human resources, which is especially important for small and medium-sized retailers operating with limited staff strength. Secondary evidence also highlights that reduced dependency on cash lowers risks related to theft, pilferage and cash mismanagement, thereby improving operational stability.

In terms of cost management, extended analysis reveals that FinTech adoption enables better cost visibility rather than only cost reduction. Digital financial systems provide retailers with structured financial data that supports budgeting, forecasting and expense tracking. Access to real-time financial insights allows retailers to identify cost leakages, monitor supplier payments and evaluate profit margins more accurately. Over time, this data-driven approach strengthens financial discipline and supports informed decision-making related to pricing, procurement and expansion strategies.

Inventory management efficiency emerges as a critical outcome of FinTech-enabled systems. Secondary data suggest that integration between POS systems and digital inventory tools enhances demand forecasting accuracy. Retailers are better able to analyse sales patterns, seasonal demand and customer preferences, reducing the likelihood of excess inventory or frequent stock-outs. Improved inventory turnover contributes to better cash flow management, which is particularly beneficial for small retailers who often face working capital constraints. Digital inventory insights also strengthen coordination with suppliers, leading to more responsive and efficient supply chain operations. Customer experience improvements extend beyond payment convenience. The availability of digital transaction records enhances transparency and trust between retailers and customers. Secondary studies indicate that customers perceive digitally enabled retailers as more reliable and professional, which positively influences brand image and repeat patronage. Digital receipts, loyalty programmes linked to payment platforms and faster complaint resolution further enhance customer engagement. These factors collectively improve customer retention and contribute to sustainable business performance.

The analysis also highlights disparities in FinTech adoption outcomes across different retail formats. Organised retailers benefit from comprehensive system integration, while unorganised and small retailers often adopt FinTech in a phased or partial manner. Despite this, even limited adoption—such as acceptance of UPI or mobile wallets—produces noticeable operational improvements. Secondary data indicate that gradual adoption reduces resistance to change and builds digital confidence among retailers and employees, enabling smoother long-term transition towards fully digital operations.

Security and compliance analysis shows that while digital systems enhance traceability and audit readiness, they also introduce new operational risks. Cybersecurity threats, data breaches and system failures pose challenges, particularly for retailers lacking technical expertise. However, secondary evidence suggests that retailers who invest in basic cybersecurity practices and compliance awareness experience greater long-term benefits from FinTech adoption. Regulatory alignment and adherence to data protection norms further strengthen operational credibility and customer trust. Overall, the extended analysis confirms that FinTech adoption acts as an operational enabler rather than a standalone solution. Efficiency gains are maximised when digital payment systems are supported by complementary technologies, employee training and supportive infrastructure. The cumulative effect of improved transaction speed, financial control, inventory visibility and customer satisfaction leads to enhanced operational resilience. For the Thane retail context, secondary data consistently indicate that FinTech adoption supports competitiveness, adaptability and sustainable Financial efficiency in an increasingly digital retail environment.

Suggestions

Based on the study's findings, the following recommendations are made: Retail businesses should choose FinTech solutions which are flexible, convenient and match their business size and expectations. Training programs should be introduced to improve digital skills among retail staff and employees for real improvement in Financial efficiency. The retailers should be aware about the safety and security measures in their daily transactions and risk mitigation processes. Financial service providers should create affordable yet protected FinTech products for small retailers. Policymakers should improve digital infrastructure and support programs to encourage FinTech adoption with strict security laws and rules and regulations with strong implementation policies. There should be more focus on connecting FinTech platforms with inventory and supply chain systems. In addition to the above suggestions, retailers should adopt a phased and strategic approach towards FinTech implementation rather than attempting full-scale digital transformation at once. Gradual adoption allows retailers to assess the effectiveness of specific FinTech tools, manage costs efficiently and reduce resistance among employees and customers. Pilot testing of digital payment systems, POS integration or automated accounting software can help identify operational gaps and training needs before wider implementation.

Retailers should also focus on building partnerships with FinTech service providers and banks that offer customised solutions tailored to small and medium enterprises. Such collaborations can provide access to affordable technology, technical support and advisory services, thereby reducing the burden of implementation and maintenance. Financial institutions and FinTech firms should design simplified user interfaces and multilingual platforms to accommodate retailers with varying levels of digital literacy.

Another important recommendation is the inclusion of FinTech awareness and training programs at the grassroots level. Retail associations, trade bodies and local chambers of commerce can play a vital role in organising workshops and hands-on training sessions. These initiatives can help retailers and employees gain practical knowledge about digital payments, cybersecurity practices, data handling and regulatory compliance, ensuring safer and more effective use of FinTech tools.

Policymakers should also consider offering incentives such as subsidies, tax benefits or low-interest loans for small retailers adopting certified FinTech solutions. Such support can accelerate digital inclusion and reduce inequality between organised and unorganised retail formats. Strengthening internet connectivity, especially in semi-urban areas and ensuring uninterrupted digital infrastructure will further support sustained FinTech usage.

Finally, retailers should continuously monitor and evaluate the performance impact of FinTech adoption using key operational indicators such as transaction time, error rates, inventory turnover and customer satisfaction levels. Periodic evaluation ensures that FinTech solutions remain aligned with business goals and adapt to evolving market conditions. A feedback-driven approach will help retailers maximise Financial efficiency and long-term sustainability.

Conclusion

The study concludes that using FinTech has a big impact on improving the efficiency of retail businesses by making transactions faster, lowering costs and better managing inventory and customer movement. FinTech should be seen as a powerful tool for supporting business operations, not just for handling payments. By overcoming the challenges in adopting FinTech, retail businesses can make better use of digital financial technologies to achieve lasting improvements in performance. The findings further suggest that FinTech should not be viewed merely as a payment mechanism, but rather it should be viewed as a powerful enabler of broader business operations and digital transformation within the retail sector. When effectively integrated with existing systems, FinTech strengthens financial control, transparency and responsiveness, allowing retailers to adapt quickly to changing market conditions. However, challenges such as technological readiness, data security concerns, regulatory compliance and employee skill gaps may hinder full-scale adoption. By proactively addressing these challenges through investment in infrastructure, staff training and robust governance frameworks, retail businesses can unlock the full potential of FinTech solutions. In the long run, strategic adoption of digital financial technologies can lead to sustained improvements in productivity, profitability and competitiveness, ultimately supporting long-term business growth and resilience in an increasingly digital and dynamic retail environment. In addition to the findings discussed earlier, the study reinforces the view that FinTech adoption is not merely a technological upgrade but a strategic transformation for retail businesses. The secondary data analysis clearly indicates that Financial efficiency improvements arise from the integration of financial technologies with everyday retail processes such as billing, inventory management, reporting and customer engagement. When these systems work together, retailers gain greater control, visibility and agility in their operations.

The findings further suggest that the true value of FinTech lies in its ability to support informed decision-making. Access to real-time financial and operational data enables retailers to respond quickly to market fluctuations, changing consumer preferences and supply chain disruptions. This responsiveness is particularly important in competitive urban markets like Thane, where retail businesses must constantly adapt to survive and grow.

However, the study also highlights that the benefits of FinTech are unevenly distributed. While large and organised retailers are able to leverage advanced digital ecosystems, small and medium retailers face structural and capability-related challenges. Addressing these gaps requires collective efforts from retailers, FinTech providers, financial institutions and policymakers. Without adequate training, infrastructure and security frameworks, the full potential of FinTech cannot be realised.

From a broader perspective, FinTech adoption contributes to the formalisation and transparency of the retail sector. Digital records improve accountability, support regulatory compliance and create opportunities for retailers to access formal credit and financial services. This transition strengthens the overall retail ecosystem and supports inclusive economic development.

In conclusion, FinTech represents a powerful enabler of Financial efficiency, competitiveness and resilience in the retail sector. While challenges related to cost, security and digital readiness persist, strategic and well-supported adoption can yield long-term benefits. For retail businesses in Thane and similar urban regions, sustained investment in FinTech, combined with skill development and supportive policy measures, can drive continuous improvement and ensure long-term growth in an increasingly digital economy.

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FACTORS AFFECTING THE DECISION-MAKING PROCESS OF STUDENTS WHEN SELECTING PRIVATE UNIVERSITIES IN INDIA.

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Abstract:
Universities and colleges play a very big role in the Indian community as it is one of the fastest growing economies in the world with the world's youngest population as well. Education has an overwhelming impact on an individual's life, and so the selection of universities and colleges in the further pursuit of educating oneself in various different fields of study. Therefore, it is important to gain knowledge about the factors that incorporate the decision making process and the sources of information from which the prospective students make their decisions with regards to opting for certain university.In this fast moving world of easily accessible data over the internet, this study learns to understand how and what affects the choice of consumers and students' selection and buying behaviour towards the educational institutions of India.
Keywords: colleges play, fastest growing economies, world's youngest population, Education, students'.

Introduction

Students seeking or seeking to seek higher level of educational programmemes require different kinds of information, on which to formulate their purchasing behaviours. This will entail the potential students utilizing the various avenues of resources to acquire information about the various facets of the services offered by the educational establishments. The choices adopted by the potential students can be different in each segment according to their demands, which they anticipate to feel during the university experience. As competition between universities and other learning institutions heightens, colleges, there has been a necessity to learn and know the nature of the student recruitment, ultimately to influence the decision making behaviour of the potential students and customers. (Paulsen, 1990) The effect enables the educational institutions to create and efficiently alter the procedure of the university selection channels (Hossler, Braxton and Coopersmith, 1989).
Whenever the consumer is confronted with any type of purchasing decision, he/she undergoes a series of processes in an attempt to obtain the appropriate type of information, hence universities must market the appropriate channels of communication by which the potential consumer can access more information about the specific university and what it has to offer in terms of programmes and services.The various aspects that influence the decision making of the consumers and to what extent they influence the choice of educational institutions will be researched in the future.

Objectives:

1. To know the level of quality of the level of training offered by the institutions.
2. To make the comparison to the fee structure according to the individual capacity.
3. Examining the nature of information and the way persons can acquire this information through different sources.

Problem statement:
The current research hypothesizes to gain insight into the decision-making process of the customers to choose an educational service, and other external factors impacting the choice of the Indian educational institutes and programs, which are privately owned.

Literature Review

Noor Ismawati Mohd Jaafar (2013) The research that was conducted in the universities of Malaysia demonstrated us that one of the greatest factors encouraging one to pursue higher education is the job or career opportunities that are available in addition to the availability of goodwill and brand image of the institution and courses by them, whereas the considerable factors leading to the choice of an educational institution are the level of employability along with the goodwill and the brand image of the institution and courses offered by them. The results of this study have presented vital information to the long term marketing of the shareholders of the Higher educational institutions. A heavy competition likens to such a globalized market and Higher education institutions must create an amazing brand among their potentials to retain and maintain a competitive advantage in the market. This study sends the message to the Higher education institutions of the necessity to establish socially acceptable institutions in the society to expand the market network to achieve future prosperity. The role played by the higher education institutions cannot be negated in a developing nation, as the service they provide is key in the development of the society as a whole.

Marwan M. Shammot, (2011) This research paper has made us understand that the advert is one of the most effective methods of university marketing as compared to the print media marketing methods. This research was carried out by the most influential factor which was the financial cost factor and the least significant factor which was parental pressure factor. The other method of getting more students enrolled in Jordan is to offer more opportunities like swimming, basketball and other sports etc. sibling discounts may also help in the application to certain private university.

Boyd Bradshaw, (2005) This research was conducted to understand the college choice of freshmen who were accepted in the Southern Illinois University, Edwardsville. It is determined that the availability and brand image of the academic courses offered and the faculty teaching had a monumental influence on the student enrolling into the university, the second factor being the student scholarships.

Findings Andy B. (2004) demonstrates that there exist difference peculiarities between the choice-based and search-based students when it comes to the communication channel preference of particular classes of information. Nonetheless, numerous further studies should be undertaken to learn and know the student purchase behavior and their buying habits and how they would prefer to be informed of the kind of information with respect to the university options. It is extremely important to understand the process of selecting communication with students with the view to marketing a combination of nonpersonal and personal communication channels that will deliver the most effective feed that students need.

According to the research of Jody Sue Sheppard (2013) Says that the brand image and the goodwill of the educational institues get the first positions in most researches, but in this investigation, the student indicated that the most important consideration when making a selection decision towards the university was the availability of the desired program or course. Another significant aspect that studies revealed was the ease in shifting the time frame of studying or the flexibility of class. Students go to the university because of their personal growth and development, and also the career opportunities that that specific course offers to that student.

Mahsa Abdolalizadeh (2014) The key goal of the research was to identify the factors that were the most considered by the majority of international exchange students during the decision to apply to a rural, regional university. They discovered that faculty personnel competency and the attitude held by the faculty personnel was a key point of prominence that would or would not make the students want to attend the university. This result promotes the relevance of the interpersonal communication channels between the potential students and the university itself. Most international students are usually not aware of the processes of admissions into the USA universities. (Zikopoulos and Barber (1986). That is why personal interaction with qualified and committed school staff that would mentor them in the process is of paramount importance.

Sandra J. Stack, (2009) investigates the different variables that influence the graduate students to enroll in an MBA programme in a privately based institution. The admissions and marketing departments do not know the processes that can satisfy the various needs of the students.The ability to balance between work and academics was a powerful factor in the application decision in this research. The other key issue that impacted their decision was the admissions meetings. The universities should be aware of the main aspects that affect their specific student group.

Katherine Culliver, (2016) argues that the motivation factors that influence the nontraditional students to apply to the higher educational institutions are relatively different to the traditional ages students. During this period, marketers have to exploit electronic marketing, so they can tap into the student market, although the nontraditional students who were older reported that they did tend to use the traditional marketing (such as billboards, flyers, and mailers), there was a difference in the overall sample population that indicated that this type of marketing is not used as much as more progressive methods (such as electronic media, e-mail, and social media).

According to Jennifer Scott, (2014) Universities should ensure that proper information is availed to potential students over the internet since most of the potential international postgraduate students use the online platforms to access the majority of information they need to know about the university during their purchasing process.

The research carried out by Jawad Iqbal, (2012) had was aimed at establishing the extent to which choice making in regard to the selection of the university was influenced by the brand image of the university. The outcomes of the research indicate that the picture of the university contains four influential variables that are, prestige of the university, quality education and faculty, scholarships and acceptance rate of the university. It was noted that quality of education and that of the faculty teaching in the university was the larger factor.

Claire Brown, (2008) Universities must determine and respond to the requirements of the decision making process of the student like how many seats the university has, proposes the need to embrace marketing principles that will help the university present its programmes and services. Students involved in different programmes have very different careers plans and thus have different priorities. In it, it is nearly evident that the programmes offered by the educational institution is the crucial factor that selections a specific university, and that the information search behaviour varies subject to subject area in terms of information search behaviour. Where colleges have gone with the concept of one for all marketing style with the aim of attracting future students, yet in the real sense, a more segmented strategy would be a better option. Consequently, the research proposes that the educational institutions should be narrowing their communication lines at a certain level of students and that adoption of a sensitive approach to marketing is more likely to be vital in the market where the competition list is ever-growing.

Gonca Telli Yamamoto, (2006) As a consequence of the outcome of the escalating rivalry in the expanding market, a sudden compulsion arose to carry through with marketing operations by educational institutions. In a country such as Turkey, aspects such as a centralized in-testing system, selection and placement opportunities of students among others, contribute significantly towards the selection criteria of a university. According to the research, families are also a significant factor in application of a student to a specific university. The research also indicates that the channel of TV in Turkey is the most significant in terms of generating awareness and knowledge about the university. The increasing demand of the marketing of online websites is also attracting the attention of potential students.

Ronald M. Schumacher, (2015)The history of the private educational institutions in the USA is extremely old several decades. In these modern times, the marketing department has the role of developing and maintaining the aura of a university that is more student-friendly and where the students feel like part of their university by their stay in the university.

Mary C. Carlson, (1999) demonstrates that the network strategies and target markets, among other functions of marketing, are required in assisting the processes applied by educational institutions as they aim to select prospective students into their campuses. When it comes to the goals of having students apply to the university music department, the information provided by the university is mostly used.

According to Lorena Estefania Gutierrez Florez (2017), the word of mouth marketing channel is powerful in terms of the channel through which information flows in reference to a particular good or service. The institutions are able to identify ways and means of marketing their services within the social bound networks and such ways and means can be anchored on the consequential fact that the segment of the population surveyed will be willing to have their friends, acquaintances and other customers opinionate in order to make a purchase decision.

The study recommends that institutions should work harder to learn the significance of the consumers and the particular brand image to understand consumer purchase behaviour and to fully leverage the power of the word of mouth communication channel amongst the target group.

Matthews & Mabel Jones, (1991) Said that as a higher percentage of students indicated that they did not have any substantial information of the quality indicators of the college they have picked, it is quite crucial that the faculties be informed about the students who are applying to their colleges without very much knowledge about the quality. Any university must ensure it monitors the indicators that the students had the most knowledge about. The indicator demonstrating the larger percentage of the unawareness than it should be, should be enhanced by the effective method of communication strategies. As an illustration, say excellent computer resources and extensive use of computers in curriculum would easily be objectively determined at a university and would be communicated to high school seniors using traditional communication methods, including the catalogue of the university, brochures, and recruitment staff.

On the same note; Michael James Conard, (1997) lays emphasis on the three significant factors acquired and could be perceived to have a high probability of totaling with a good academic reputation, namely: Curricular activities, uniqueness and career building options. The most factored elements were notable faculty (curricular activities), high cost of tuition fee (uniqueness), and the most significant is the graduates being placed in a good company (career building). This demonstrates that variables discovered to determine the sense of academic reputation are evident when juxtaposed to a very good academic reputation.

Monks, James, and Ehrenberg, (1999) came to the conclusion of a study that Students were of high-income families and had either a parent or both parents who had an education of the university level. Such students were a high grade average in their respective high schools and had future plans to pursue further studies in professional courses. Such students had a high probability of applying in a number of universities and colleges. The students of the American and Asian countries were the ones who were largely affected by the ranking of universities. More than 40% of the shows that ranking affected the choices that the participant had in choosing the universities and contributed significantly to the rate of enrollment of new potential students.

Hossler, (1999) suggests that the educational institutions find it very difficult to persuade the students to join their universities because of the presence of Internet as an instrument of competition in the current market. Internet is an extremely interactive platform and considering that they are more dominant amongst the youths these days, they can practically find anything by searching. And through these information, the students can be in a position to make decisions regarding which university to pick to study. However, this process is frightening at times to many institutions since they are not able to truly manipulate the students. Nonetheless, the conventional method of print and direct mailing that the prospective students depended on has yielded to manipulation of these students in an attempt to appeal to the content of information the authors deliver to the students.

According to a study conducted by Paulsen and St. John, (2002) the cost of education was the most influential aspect that dictates the decision of the student in settling in a university. As the tuition fees of the private institutions and economy continue to soar skywards, making the situation of the middle class worse or at least in many cases, the costs of educations in the private institutions are nearly unaffordable in many. This has compelled most of the privately-run institutions to slash their tuition charges at a very high rate in order to attract the kind of students that they desire in their university. And students of the privately owned universities were more likely to view financial aid as a factor compared to those seeking an institution in the public where cost factor is a significant consideration as they wish to pay less in the enrollment fee, which is significantly lower than that of the privately owned institutions.

According to Matt Melvin, (2003) In this age of highly competitive recruitment, it is quite important to conduct research on the choice factor in deciding the university to pursue a career both to the private and the public institutions. And through the realization of this study of choice factor in the determination of a university to attend, the institutions and the students alike can gain a lot through this e.g. the institutions can utilize their funds to advertise their services in the best way possible, which is in line with the needs of the students. It also makes the decision-making easier to the students in choosing of a good university that best suits their needs.

According to W. Michael Hendricks, (2006), college selection process incorporates the wide search of information by the prospective students seeking and obtaining information on specific colleges and universities. In the process of searching the information they are aware of different features of colleges such as national ranking, degree programs, campus size, location and other requirements of the college. This procedure includes the vast search of information with the assistance of the Internet based on their interest and requirements at the college.

Erik Nolen Allen, (2007) when it comes to choosing a college, (1) Interest in a Particular Major or Degree Program, (2) Location, (3) Cost, (4) Institutional Prestige/ Reputation, and (5) Job Placement were mostly the factors that influenced the students. The participants appeared extremely informed regarding their college choice process in terms of the degree programs they desire to undertake and what the colleges are offering. They also possessed sufficient information which means that in case their interest at a given time alter they could switch their programs with ease in the same college so they might be better to be in a college which has greater diversity of degree programs.

Discussions

The purchasing behavior of consumers in relation to educational services is to consult a limited number of sources of information, depending on the perception formed in advance about the appropriateness of the choice of the source of consultation as more or less. As soon as a consumer has a clear idea of what he needs, he initiates an information search. He repeats this, in order that he may make the right decisions. The information about following - is collated by a consumer in a basic way.

Brands - a brand is a source of relaying the quality and belief of the market that it represents, it is extensively relevant in shaping the target consumer market, and brand serves to assist consumers in gaining more insight into the product or service. The brand value provides reliability and assurance in a way that the consumers could choose them among other market rivals.

Products Variations - in education sector in India, it is a booming business where there are many varieties of colleges and universities competing to nibble the market by themselves, they can only manage to capture the market when their services are state of the art and international in quality, but even the pricing at times determines who captures the market.

Product quality - in the modern world, quality is all that matters and the quality of education offered by a learning institution is the most important factor that influences a customer to choose a specific institution.

Assessment of Alternatives - the education sector just like any other has become extremely competitive and there is no alternative to everything. Generally, as the sphere of marketing and research progresses, educational services are changing and adapting to consumer demands because of which the customers encounter a high number of choices.

Post-Purchase Evaluation - post purchase evaluation is also one of the prevailing trends in the market today. As there is an introduction in the sphere of technology, consumers can analyze two different services and products with a great number of tools. Likewise, in the case of educational institutions, we are now exposed to various sites to make an assessment, such as Quora, where educational students or ex-students are posting their reviews about the various evaluations they performed and this influences a customer to purchase by comparing the outcomes.

ROI - a universal term to evaluate performance Return of Investment. ROI has a massive influence on the purchasing behavior of the customers. When a customer is spending money on a service, he wants to get a complete profit of the money he spent. Investment in an educational service is nowadays viewed as an investment and it has a broad influence on the selection of a customer.

Product characteristics - the quality of education offered by a learning service is not the only factor influencing the customer when forming the buying or selection behavior. The educational institutions now have to emphasis on numerous dissimilar specifications such as quality and size of campus, place, and numerous other specifications to appeal to the customers. Long gone are those days when education services were applied solely to quality of education.

Marketing Campaign- Advertising contributes a significant part of the decisions of a customer. When marketing campaign is conducted on a regular basis, it can affect the buying decision of the customers to the point that they can switch on one brand to another and trust the advertised brand without asking any additional questions.

Personal Preferences - The purchasing habits of a consumer are largely governed by his/her likes and dislikes and tend to affect his final purchasing behavior also under the influence of outsiders and his passions and aspirations in life.

Group Influence - Group (family members, classmates, neighbors) also has a significant role to play when making a decision since they contribute significantly to the system of Indian family in case of education sector since Indians highly regard the value and payoffs of their degrees.

Purchasing power - Purchasing power is a very important parameter and their ultimate purchases are largely determined and molded according to their purchasing power. Students also tend to attend university that offer better ROI and where students have plenty of placements. The buying behavior of the consumers is also affected by the experiences and exposure as it is a key factor in the development of individual different academics.

The influencing factors that are most affecting the decision-making:
Due to the high rate of globalization that is being experienced in our contemporary world, education systems significantly contribute to the growth of our community and society. Based on the above literature reviews that we have read through, we are able to correlate and recognize key factors that influence the consumer decision-making behavior of the prospective students and other such consumer of the educational institutions. The Indian students especially obtain information regarding the university socio-culture environment, graduates of some universities, these graduates promote the utility of goods and services offered by the particular university not only by their academic performance but also their placement in MNCs, through the communication media of word of mouth. This medium cannot be underestimated because it can actually affect the young brain of the Indian students, therefore making cities like Mumbai, Manipal, Pune, Bangalore, Delhi, and Chennai, key desirable centers of Indian students to flock to as well as bringing in foreign students. Indian parents have been observed to play a significant part in decision making of their children choice regarding particular universities, and another key factor associated with Indian parents is the ROI factor, which shows the placement opportunities, and how soon their children or they will recover the cost of the academic education. Brand image and reputation of the educational institute also evokes awareness of the services and members of the faculty teaching at the learning institute, which attract more potential consumers who consider the quality of education to be a key aspect when making a choice of the private university.

Conclusion

Cost of the education program, academic ranking of university in national level, then followed by other significant factors like variations of programs offered by university, size of campus, location, etc. was the common factor in most of the researches that have been conducted in this specific topic on what factors are guiding the decision making in choosing a good university to join. This paper postulates that prior to an individual choosing a learning institution, one undergoes a colossal information search process about the respective universities and once information is retrieved about the universities, the students extensively depend on the information in making a choice of universities. The information search process takes into account a number of parameters, which is different among individuals regarding what they require out of their chosen universities. This research assistance will enable us have a better insight into the complicated process of decision making among these students. Knowing also made the institutions able to develop more recent marketing plans on the evolving educational programs and swift transformation of trends careers.

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BEHAVIOURAL BIASES IN PERSONAL FINANCIAL PLANNING AMONG GENERATION Z: A COMPARATIVE STUDY OF THANE AND RAIGAD DISTRICTS

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Abstract
Behavioural finance has gained significant importance in understanding financial decision-making among young individuals. The present study examines the behavioural biases affecting personal financial planning among Generation Z individuals in Thane district and Raigad district. Generation Z, comprising individuals aged between 21 to 28 years in 2026, represents a digitally connected generation highly exposed to social media, online investment platforms, and rapidly evolving financial trends. The study is empirical and descriptive in nature and is based on primary data collected through a structured questionnaire using convenience sampling technique. The study analyses behavioural and financial planning factors such as overconfidence, herd behaviour, loss aversion, anchoring bias, saving behaviour, investment planning, and financial discipline. Percentage analysis and comparative mean analysis were applied to interpret the data. The findings reveal that behavioural and psychological factors significantly influence the financial planning behaviour of Generation Z individuals. The study further indicates that respondents from Thane and Raigad districts exhibit noticeable differences in certain behavioural and financial planning patterns. The research highlights the growing need for financial awareness, rational decision-making, and behavioural understanding among young individuals to improve effective financial planning practices.

❖ Keywords
Behavioural Finance, Behavioural Biases, Personal Financial Planning, Generation Z, Overconfidence Bias, Herd Behaviour, Financial Behaviour, Financial Decision-Making, Thane District, Raigad District

Introduction
Personal financial planning has become increasingly important in the modern economic environment, particularly among Generation Z individuals who are entering the early stages of earning, saving, and investment decision-making. Generation Z, comprising individuals aged between 21 to 28 years in 2026, has grown up in a technologically advanced and digitally connected environment. This generation is highly exposed to social media platforms, digital payment systems, online investment avenues, and rapidly changing financial trends.

Despite greater accessibility to financial information, individuals often fail to make completely rational financial decisions. Behavioural finance explains that psychological and emotional factors influence financial planning behaviour. Biases such as overconfidence, herd behaviour, loss aversion, anchoring, emotional decision-making, and short-term thinking significantly affect personal financial management.

The primary responses collected for the present study reveal that Generation Z individuals face numerous practical and psychological challenges in financial planning. Respondent's highlighted issues such as market volatility, inconsistent income, lack of financial knowledge, emotional decision-making, peer pressure spending, lifestyle inflation, poor budgeting, and fear of market risks. Several respondents also indicated challenges related to delayed investment decisions, lack of diversification, tax planning complexity, and inadequate long-term financial vision.

The study further reflects that financial planning difficulties are not merely financial in nature but are strongly associated with behavioural patterns and attitudes. Factors such as impulsive spending, overconfidence in financial decisions, emotional attachment to money, and difficulty in balancing needs and wants were repeatedly observed in the responses.

Therefore, the present study attempts to analyse behavioural biases in personal financial planning among Generation Z individuals from Thane and Raigad districts. The study focuses on understanding the major behavioural and psychological challenges affecting financial planning behaviour and examines whether regional differences exist among respondents.

Literature Review

Behavioural finance has emerged as an important area of study that explains how psychological and emotional factors influence financial decision-making. Traditional finance theories assume that individuals act rationally while making financial decisions; however, behavioural finance suggests that investors are often influenced by cognitive biases, emotions, and social factors. These behavioural tendencies significantly affect personal financial planning, investment decisions, savings behaviour, and risk perception.

Kahneman and Tversky (1979), through Prospect Theory, explained that individuals tend to fear losses more strongly than they value gains. This concept, known as loss aversion, causes individuals to avoid risky financial decisions even when higher returns are possible. Their study laid the foundation for behavioural finance by proving that financial decisions are not always rational.

Shefrin (2000) observed that behavioural biases such as overconfidence, anchoring, and mental accounting influence investment behaviour and personal financial management. The study suggested that individuals frequently rely on emotions and previous experiences rather than objective financial analysis while making decisions.

Barber and Odean (2001) examined the effect of overconfidence on investment behaviour and found that overconfident investors engage in excessive trading and risky financial activities. The study concluded that young investors are more likely to overestimate their financial knowledge and capabilities, leading to irrational financial planning decisions.

Lusardi and Mitchell (2014) emphasized the importance of financial literacy in improving financial planning behaviour. Their study indicated that individuals with better financial knowledge are more likely to save regularly, plan for retirement, and make informed investment decisions. The researchers also highlighted that younger generations often lack adequate financial planning skills despite greater access to financial information.

Cwynar (2020) studied the financial behaviour of millennials and younger generations and found that digital exposure and social media significantly influence financial decision-making. The study revealed that younger individuals are more vulnerable to herd behaviour due to peer influence and online financial trends.

Allgood and Walstad (2016) analysed the relationship between perceived financial literacy and financial behaviour. The study concluded that individuals who believe they possess higher financial knowledge often exhibit overconfidence bias, which may negatively affect rational financial planning.

Terri and West (2016) found that financial education alone may not be sufficient to improve financial behaviour among millennials and younger generations. The study emphasized that emotional discipline and behavioural control are equally important for effective financial planning.

Research conducted by Aboagye and Ji (2018) indicated that debt management, financial stress, and impulsive spending behaviour are major issues among young adults. The study concluded that behavioural biases significantly influence savings and expenditure patterns.

Several recent studies have also identified that Generation Z individuals are strongly influenced by social media, peer groups, and digital investment platforms while making financial decisions. Their financial behaviour is often characterized by short-term thinking, emotional decision-making, fear of missing out (FOMO), and trend-following behaviour.

The primary responses collected for the present study support these findings. Respondents frequently identified market volatility, inconsistent income, emotional decision-making, peer pressure spending, lack of financial discipline, and fear of market risks as major financial planning challenges. Several respondents also reported overconfidence in financial decisions, impulsive spending on lifestyle upgrades, and dependence on trends and social influence while making financial choices.

The responses further reveal that many Generation Z individuals face difficulties in maintaining long-term financial goals, building emergency funds, understanding financial products, and balancing needs and wants effectively. Challenges such as poor budgeting habits, delayed investment decisions, lack of diversification, and inadequate risk management were also prominently observed.

Although numerous studies have been conducted on behavioural finance and financial literacy, limited research has focused specifically on behavioural biases affecting personal financial planning among Generation Z individuals in the regional context of Thane and Raigad districts. Most previous studies have concentrated on general investor behaviour or inter-generational comparison. Therefore, the present study attempts to bridge this gap by analysing behavioural biases and financial planning challenges among Generation Z using primary data collected from Thane and Raigad districts.

Objectives of the Study

1. To identify the major behavioural biases affecting personal financial planning among Generation Z.
2. To analyse the financial planning challenges faced by Generation Z individuals.
3. To examine the impact of behavioural biases on financial planning behaviour.
4. To compare behavioural patterns among respondents from Thane and Raigad districts.
5. To understand the role of emotional and psychological factors in financial decision-making among Generation Z.

Research Methodology

The present study is empirical and descriptive in nature. The study focuses on analysing behavioural biases in personal financial planning among Generation Z individuals in Thane and Raigad districts.

Research Design

Descriptive research design has been adopted for the study.

Data Collection

The study is based on primary data collected through a structured questionnaire distributed through Google Forms and personal responses.

Sampling Technique

Convenience sampling method has been used for selecting respondents.

Target Population

The target population comprises Generation Z individuals aged between 21 to 28 years in the year 2026.

Area of Study

The study has been conducted in:

- Thane district
- Raigad district

Statistical Tools Used

The following statistical tools are proposed to be used:

- Percentage Analysis
- Comparative Mean Analysis
- Independent Sample T-Test

Variables Considered

The study analyses behavioural and financial planning variables such as:

- Overconfidence
- Loss aversion
- Herd behaviour
- Emotional decision-making
- Risk perception
- Financial discipline
- Budgeting behaviour
- Long-term financial planning

Findings of the Study

The responses collected from Generation Z individuals indicate that behavioural and psychological factors significantly affect personal financial planning behaviour. A large number of respondents identified market volatility and market risk as major challenges in financial planning. Many respondents also highlighted issues related to inconsistent income, inflation, delayed investment decisions, and high living expenses. The study reveals that lack of financial literacy and insufficient knowledge of financial instruments are common among respondents. Several participants reported difficulty in understanding investments, poor budgeting habits, and lack of awareness regarding financial products. Behavioural biases were prominently reflected in the responses. Emotional decision-making, impulsive investment behaviour, overconfidence in financial decisions, and short-term mindset emerged as major behavioural factors influencing financial planning. Herd behaviour was also observed among respondents, particularly in the form of peer pressure spending, social influence, and trend-based financial decisions. Respondents additionally expressed concerns regarding digital fraud risks, market manipulation, and misleading financial advice. The findings further indicate that many Generation Z individuals lack long-term financial vision and emergency planning. Challenges such as inadequate diversification, poor record keeping, lack of accountability, and failure to regularly review financial plans were commonly reported. Overall, the study concludes that behavioural biases and psychological tendencies play a significant role in influencing personal financial planning among Generation Z individuals in Thane and Raigad districts.

Variables	**Categories**	**Frequency**	**Percentage**
Age Group	21–23	22	19.3%
	24–26	44	38.6%
	27–28	48	42.1%
	Total	**114**	**100%**
Gender	Male	59	51.8%
	Female	55	48.2%
	Total	**114**	**100%**
District	Thane district	87	76.3%
	Raigad district	27	23.7%
	Total	**114**	**100%**
Education Level	Undergraduate	4	3.5%
	Postgraduate	101	88.6%
	Professional Course	9	7.9%
	Total	**114**	**100%**
Occupation	Student	16	14.0%
	Employed	68	59.6%
	Self-employed	30	26.3%
	Total	**114**	**100%**
Monthly Income	Below ₹15,000	18	15.8%
	₹15,000–₹30,000	12	10.5%
	₹30,000–₹50,000	62	54.4%
	Above ₹50,000	22	19.3%
	Total	**114**	**100%**

❖ Interpretation of Consolidated Table

The consolidated demographic analysis indicates that the majority of respondents (42.1%) belong to the age group of 27–28 years, followed by 38.6% respondents in the 24–26 age category. Male respondents constitute 51.8% of the total sample, while female respondents account for 48.2%.

Most respondents belong to Thane district (76.3%), whereas 23.7% are from Raigad district. The educational profile shows that 88.6% respondents are postgraduates, indicating a comparatively educated sample population.

Further, 59.6% respondents are employed, followed by 26.3% self-employed respondents and 14% students. In terms of income distribution, a majority of respondents (54.4%) fall within the monthly income bracket of ₹30,000–₹50,000, reflecting moderate income levels among Generation Z individuals included in the study.

❖ Table 2: Comparative Mean Analysis of Financial Planning Behaviour and Behavioural Biases among Generation Z Respondents

S. No.	Statements	Thane district Mean	Raigad district Mean
1	I regularly save a portion of my income	3.67	3.59
2	I have clear financial goals	3.47	3.63
3	I invest in financial instruments	3.59	3.67
4	I plan my expenses before spending	3.60	3.74
5	I diversify my investments	3.59	3.78
6	I track my expenses regularly	3.69	3.63
7	I have above-average financial knowledge	3.70	4.00
8	I rely on my own judgment over expert advice	3.56	3.89
9	I follow others while investing	3.59	3.85
10	Social media influences my financial decisions	3.68	4.07

❖ Interpretation of Comparative Mean Analysis

The comparative mean analysis indicates noticeable differences in financial planning behaviour and behavioural biases between respondents from Thane and Raigad districts. Respondents from Raigad district show comparatively higher mean values in areas such as financial goal setting (3.63), investment in financial instruments (3.67), expense planning (3.74), diversification (3.78), and reliance on personal judgement (3.89). This suggests that respondents from Raigad exhibit relatively stronger engagement in financial planning activities. Further, the mean score for "social media influences my financial decisions" is significantly higher among Raigad respondents (4.07) as compared to Thane respondents (3.68), indicating stronger influence of digital and social platforms on financial behaviour. Similarly, Raigad respondents also show a higher mean value for "I follow others while investing" (3.85), reflecting comparatively stronger herd behaviour tendencies.

On the other hand, respondents from Thane district exhibit slightly higher mean values in regular saving habits (3.67) and expense tracking behaviour (3.69), indicating comparatively better financial monitoring practices.

Overall, the comparative mean analysis suggests that behavioural and financial planning patterns differ across the two districts, thereby supporting the relevance of regional comparison in the study.

Conclusion

The present study examined behavioural biases in personal financial planning among Generation Z individuals in Thane district and Raigad district. The study was based on primary data collected from respondents aged between 21 to 28 years and focused on understanding the behavioural and psychological factors influencing financial planning behaviour. The demographic analysis revealed that the majority of respondents belong to the age group of 27–28 years and are primarily employed individuals with moderate monthly income levels. Most respondents were postgraduates, indicating a comparatively educated sample population. The comparative mean analysis highlighted variations in behavioural patterns and financial planning behaviour between respondents from Thane and Raigad districts. Respondents from Raigad demonstrated comparatively higher mean values in areas such as financial goal setting, diversification of investments, reliance on personal judgement, and influence of social media on financial decisions. On the other hand, respondents from Thane showed relatively better saving habits and expense tracking behaviour. The study also identified several major challenges faced by Generation Z in financial planning, including market volatility, lack of financial discipline, emotional decision-making, inconsistent income, inflation, peer pressure spending, and inadequate long-term financial vision. The responses further reflected the presence of behavioural biases such as overconfidence, herd behaviour, anchoring, and fear of market risks. The findings indicate that behavioural and psychological factors significantly influence the personal financial planning behaviour of Generation Z individuals. The study further suggests that digital exposure, social influence, and financial awareness play an important role in shaping financial attitudes and decisions among young individuals. Overall, the study concludes that behavioural biases are increasingly affecting financial planning behaviour among Generation Z. Therefore, there is a need to promote financial literacy, rational financial decision-making, and awareness regarding behavioural biases to improve financial planning practices among young individuals.

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ROLE OF DIGITAL INVESTMENT PLATFORMS IN SHAPING INVESTOR BEHAVIOUR TOWARDS SUSTAINABLE INVESTMENT

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Abstract:
The rapid growth of digital investment platforms and the increasing global focus on sustainability have transformed the way investors make financial decisions. As ESG investing gains momentum, understanding how digital platforms influence investor behavior has become an important area requiring in-depth study. Hence, the purpose of conducting this study is to evaluate the role of digital investing platforms in shaping investor behavior towards sustainable investment. The data was analysed using MAXQDA software and the technique used was Thematic analysis. The findings of the role of digital investing platforms in shaping investor behavior towards sustainable investment are significantly influenced through Accessibility, Education and Awareness, and Behavioral Nudging mechanisms provided by digital investment platforms.

Keywords: MAXQDA software, Thematic analysis, Digital Investment Platforms, Sustainable Investments.

Introduction:

Sustainable investment has become one of the biggest trends in the international financial system in recent years, as a consequence of increasing awareness of environmental degradation, climate change, social inequality and corporate accountability. The idea of sustainable development became a global phenomenon when it was defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987). In terms of money, sustainable investment is an investment that incorporates principles based on Environmental, Social and Governance (ESG) with the aim of achieving financial returns while also helping accomplish social and environmental outcomes (Giddings et al., 2002). The twenty first century has seen a quantum leap in technological achievements and ecological and social issues. With the onset of industrialization, urbanization, resource depletion and increasing carbon emissions, the need to focus on responsible and sustainable economic practices is becoming a greater challenge. With this shift, a variety of actors, including governments, international organizations, financial institutions and investors globally, have turned increasingly to the issue of sustainable finance and the importance of integrating ESG investment strategies. Many international initiatives, strategic plans, and interpretations, such as the Paris Agreement (UN, 2015a), the SDGs (UN, 2015b), the Task Force on Climate-related Financial Disclosures (TCFD, 2017), the Action Plan on Sustainable Finance (EC, 2018), the European Green Deal (EC, 2019), and the Next Generation EU (EC, 2020), have reinforced the relevance of sustainable investing practices in contemporary financial markets.
The meaning of the term sustainable investment has developed over the years. Since the sixteenth century, sustainable and ethical investment have been around when they said that because of religious or moral beliefs they influence the investment decisions (Renneboog et al., 2008a). Later the concept was extended to socially responsible investment (SRI) in the 1970s when Moskowitz (1972) pointed out the social responsibility dimension of investment decisions. So, Over the years, several terms have emerged to refer to investment approaches that not only include financial returns but also take environmental and social factors into account, such as ethical investment (Bauer et al., 2006; Domini & Kinder, 1984; Mallin et al., 1995), SRI (Barnett & Salomon, 2006; Statman, 2000), responsible

investment (PRI, 2020), ESG investment (Friede et al., 2015; van Duuren et al., 2016), impact investment (Höchstädter & Scheck, 2015), and green investment (Martin & Moser, 2016). Sustainable investment is defined as an investment approach which incorporates ESG principles into investment management and decision-making, as in the Principles for Responsible Investment (PRI, 2020) and the Global Sustainable Investment Alliance (GSIA, 2020) definitions. Sustainable finance is increasingly welcomed and the amount of sustainable investment assets has rapidly grown to USD 35.3 trillion in the main sustainable investment markets, including "Europe, the United States, Canada, Australasia and Japan" (GSIA, 2020). The rise of this growth reflects the shift in investor thinking to integrate financial and sustainability goals. At the same time, investment landscape has undergone interesting shifts through digital transformation. Vehicle investing now is more accessible, transparent, and technologic with the development of digital investment platforms (DIP), mobile investing apps, robo-advisors, and economic services that take advantage of fintech. These online platforms are increasingly providing investment products and information in relation to the ESG categories, as well as sustainability ratings, educational material to help build an understanding of ESG investing, impact-based reporting and personalised investment recommendations. Artificial intelligence (AI), big data analytics, and algorithm-driven investment advice are revolutionizing the way investors receive and process information for financial decisions. In today's investment landscape, convenience, accessibility, awareness and behaviour have become a part of digital platforms that can impact investors along with the financial returns. User friendly interfaces, education about sustainability and personalised suggestions as well as nudging mechanics that motivate responsible investment decisions can have an impact on investor preferences in a digital investment application. Hence, analyzing the influence of digital investment platforms on investors' behavior in relation to sustainable investment has become very relevant. Such a study will help to analyze the role of technology-based financial services in fostering sustainable financial development, creating awareness of ESG and fostering responsible investment practices amongst modern day investors.

The present study has great significance as it presents the importance of digital investment platform in inducing sustainable investment behaviour among the investors. As the use of ESG investing and financial tech grows, it is important for the financial industry to understand the impact digital platforms have on investor decision-making. The research reveals insights on the responsible investment practices that are encouraged by the accessibility, educational support and behavioural influence, offered through the digital platform. The results could have implications for digital financial investment companies, monetary institution, policymakers and scientists around the globe when shaping methods to increase sustainable investing and advance investor access to ESG-underpinned financial products.

Review of Literature

1. **Mazzoli, C. & Baiocco, S. (2025)** investigated in their research study if and in what manner the various levels of Digital Financial Literacy (DFL) fosters sustainable investing. The findings derived from the research indicates that Digital Financial Literacy have an important as well as a positive impact to hold sustainable investment but only within the group of investors having advanced digital skills which enables them in managing sophisticated finance related activities. It provides evidences on how to promote advanced digital skills for fostering inclusion & supporting uptake of ESG investment within households.
2. **Mohapatra, N., Shekhar, S., et al. (2025)** examined in their research study nexus among AI-driven technologies, that is, robo-advisors, and investors' behavioural intentions regarding sustainable investment decisions in consideration with the regulations of the government & sustainable investment awareness in the form of moderating variables. The findings derived from the research indicates that all 5 factors, that is, perceived risk, trust, perceived usefulness, emotional arousal, and user-friendliness, have significant effect on investors' behavioural intentions regarding sustainable investment decisions.
3. **Subedi, S. (2023)** analyzed in their research study Sustainable Investments (SI) with the help of Subjective Financial Knowledge (SFK), Information Access (IA), Cognitive Biasness (CB), and Risk Propensity (RP). The findings derived from the research indicates information could be digitally accessed nowadays which contribute towards financial know-how and the

ability of taking risks and also improve personal biasness. The research shows that through digital finance, there is an increase in information access.

4. **Reddy, R., Ananth, A., et al. (2025)** examined in their research study the potentiality of sustainable investment as well as Fintech's role to advance sustainability in financial services, transportation, and energy management. The findings derived from the research indicates that through providing accessibility towards banking, insurance, credit, Fintech promote financial inclusion for the underserved population & in promoting initiatives of Green Finance. It focuses on the regulatory frameworks and emerging trends in integrating Fintech within sustainable financial practice, to foster more inclusive as well as resilient financial ecosystem.
5. **Hati, E. & Sihombing, P. (2025)** investigated in their research study determinants of sustainable investment behaviour within the investors of Indonesia who are using digital investment apps. The results derived from the research indicates investment horizon as well as risk preference having positive significant impact on decisions related to sustainable investment. It focuses on the stronger role of behavioral factors to shape the behaviour for sustainable investment in Indonesia's digital financial market.
6. **Upadhyay, RK., Khan, AN., et al. (2025)** examined in their research study the potential of sustainability in transforming into strategic innovation & their effect on attitudes of the next generation investors. The research explore role of Fintech platforms as well as of digital technologies to democratize ESG data, empower the younger generation investors in making responsible, data-driven decisions related to investment & demonstrating technological innovations, governance, and transparency to be the significant determinants of positive investor sentiment.
7. **Gonzalez-Arcos, C., Meath, C., et al. (2023)** conveyed in their research study uncovering underlying factors which impact perceived trade-offs among financial return-risk and sustainability, and it's umoactvon investment behaviour of micro investors. The findings derived from the research indicates individual motives such as empowerment feeling and sustainability values to be significant driver towards sustainable investment, that impacts their willingness for forgoing financial returns & investment duration.

Objective:

1. To examine how digital investment platforms influence investor behaviour toward sustainable investments
2. To provide suggestions towards enhancing role of digital investment platforms in shaping investors behavior towards sustainable investment.

Research Methodology

Table 1: Research Methodology

Aspect	Description
Research Approach	Qualitative research methodology
Objective	To examine how digital investment platforms influence investor behaviour toward sustainable investments
Sample Size	30 investors
Sampling Technique	Purposive sampling
Participant Profile	Investors actively investing in ESG financial products through digital platforms
Data Collection Method	In-depth interviews
Data Processing	Interviews recorded and converted into transcripts
Analysis Tool	MAXQDA software
Analysis Technique	Thematic analysis

Data analysis

Table 2: Thematic Framework of Digital Platforms in Sustainable Investment Behaviour

Themes	Sub-Themes
Accessibility	Easy access to ESG investment options
	Low minimum investment requirements

	User-friendly mobile and web platforms
	Availability of diversified sustainable funds
Education and Awareness	In-app educational content on ESG investing
	Regular updates on sustainability trends
	Expert insights and research reports
	Campaigns promoting responsible investing
Behavioural Nudging	Default recommendations for ESG funds
	Personalized investment suggestions
	Highlighting social and environmental impact
	Notifications encouraging sustainable choices

Figure No: 1 Thematic Map

Conclusion:

The findings of this analysis of indicate that digital investment platforms (DIP) play a significant role in shaping the behaviour of the investors towards the sustainable investment practices. Thematic analysis results indicated that accessibility, educational support, and nudging features within digital platforms have become a significant factor for investors. All these elements combined are pushing towards increased engagement with ESG and sustainable investment products. Accessibility underscores the fact that digital platforms have made investing in sustainable financial products easier. Easy access to sustainable investment options, low minimum investment requirements, user-friendly mobile and web interfaces, and a diverse range of sustainable funds have minimized traditional investment barriers. Consequently, investors with different financial backgrounds can get more easily involved in sustainable investing. Education and Awareness shows that DIP are not only 'transactional tools' but also as a 'know-how sharing medium'. Expert insights, research reports, awareness campaigns and other educational in-app content helps investors to understand ESG investing and its sustainable returns. This awareness helps to make informed decisions and boosts investor confidence around responsible investment. It was further discovered that Behavioural Nudging indicates that DIP can impact investor decisions through aspects like default ESG fund options, customised investment recommendations, impact-based information, and notifications on sustainability. These nudging mechanisms help to make investing in environment and socially responsible investment (SRI) products a preferred choice for investors, but do not limit their choices.

It can be concluded that, DIP have become an important enabler for SRI. These platforms offer a blend of technological ease, educational value, and behavioural nudges that help boost investor participation in ESG investments and play a broader part in sustainable financial development.

Suggestions

1. Digital investment platforms could explore more streamlined ESG investment interfaces to help new and less sophisticated investors enter the sustainable investment landscape with more confidence and ease.
2. Investment platforms can also help increase the accessibility of multilingual (MSME) educational material for ESG investing to boost awareness of investors with varying educational and regional backgrounds.

3. Platforms can occasionally offer mini-learning units with interactive elements, webinars and sustainability explainers to educate investors about the long-term opportunities and risks of sustainable investing.
4. Financial institutions and digital investment companies can consider ways to lower the investment floor in ESG funds, further incentivizing small and young investors to participate in ESG funds.
5. Digital platforms can enhance transparency by offering more information about the environmental and social impact of various investment products, which can aid investors in making informed choices.
6. Balanced personalised investment recommendations can be tailored in a way that can influence investors to make sustainable investment choices, while retaining the freedom of their investment decisions.
7. There is a need to create more consistent disclosure of ESG on digital investment platforms, which could be incentivised by regulators and policymakers to boost investor confidence and mitigate any confusion about sustainability claims.
8. The investment platforms can incorporate regular notification and progress tracking features to show investors how their sustainable investments are positively impacting their social and environmental world.
9. Digital investment apps can collaborate with sustainability experts and financial analysts and work with education providers to provide verified and researched ESG data to investors.
10. Digital investment platforms could be further improved by adopting more advanced functionalities, such as AI algorithms and data analysis, to deliver more precise and personalized sustainable investment guidance to users, with a focus on achieving specific goals.

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IMPACT OF DIGITAL FINANCIAL LITERACY, FINTECH ADOPTION AND AI-DRIVEN TOOLS ON INVESTMENT DECISION MAKING: A BEHAVIOURAL FINANCE PERSPECTIVE

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Abstract
The rapid digitalization of financial services has reshaped the way individuals engage with investment decisions. This study explores the influence of digital financial literacy, FinTech adoption, and artificial intelligence (AI)-enabled tools on investor behaviour from a behavioural finance perspective. Unlike empirical investigations, the present study relies exclusively on secondary data sourced from scholarly literature, institutional reports, and policy documents. It critically synthesizes existing knowledge to examine how technological developments interact with behavioural biases such as overconfidence, herd behaviour, and loss aversion. The findings indicate that although digital tools and platforms improve access to information and facilitate participation in financial markets, they do not eliminate cognitive biases. Instead, technology and human psychology operate simultaneously, shaping investment outcomes. The study underscores the importance of integrating behavioural insights with technological advancements to enhance decision-making quality.
Keywords: Digital Financial Literacy, FinTech, Artificial Intelligence, Behavioural Finance, Investment Decision-Making

Introduction

The financial landscape has undergone a significant transformation with the advancement of digital technologies. The widespread use of smartphones, internet connectivity, and digital platforms has enabled retail investors to access financial markets with greater ease than ever before. Modern tools such as mobile trading applications, online brokerage platforms, and AI-powered advisory services have enhanced both the efficiency and inclusiveness of financial participation. Despite these developments, access to technology does not automatically ensure rational financial decision-making. The concept of financial literacy has evolved to include digital competencies, requiring individuals not only to understand financial concepts but also to effectively utilize digital platforms and interpret financial data. At the same time, behavioural finance highlights that investment decisions are often influenced by psychological and emotional factors rather than purely rational analysis. Investors may continue to exhibit biases even when supported by advanced technologies. While prior research has explored financial literacy, FinTech, AI, and behavioural biases individually, limited studies have examined their combined influence within a unified framework.
This study attempts to address this gap by synthesizing secondary data to provide an integrated understanding of how digital capabilities and behavioural tendencies jointly shape investment decision-making.

Literature Review
Financial literacy has long been recognized as a key determinant of sound financial decision-making. Existing literature suggests that individuals with higher financial knowledge are better positioned to evaluate risks, diversify investments, and avoid common financial errors. In the digital era, this concept has expanded to include digital financial literacy, which encompasses the ability to navigate and utilize technology-driven financial services. The emergence of FinTech has introduced significant changes in financial markets by improving accessibility, reducing transaction costs, and enhancing transparency. Digital platforms have enabled a broader segment of the population to participate in investment activities, thereby democratizing financial services. Artificial intelligence has further contributed to this transformation by offering personalized investment solutions, predictive analytics, and automated portfolio management. Robo-advisory services, in particular, have gained prominence for their ability to provide algorithm-driven investment recommendations with minimal human

intervention. However, behavioural finance challenges the assumption that investors always act rationally. Foundational theories highlight that individuals often deviate from rational decision-making due to biases such as overconfidence, herd behaviour, and loss aversion. These biases persist even in environments characterized by advanced technological support. Recent studies suggest that while digital tools enhance decision-making capabilities, they may also increase trading frequency and exposure to market noise, potentially reinforcing behavioural biases rather than eliminating them

Conceptual Framework

The study proposes a conceptual relationship among the following variables:

- Digital Financial Literacy improves an individual's ability to understand and effectively use financial technologies
- FinTech Adoption enhances accessibility, efficiency, and participation in financial markets
- AI-Driven Tools provide data-based insights and automated investment recommendations
- Behavioural Biases act as moderating influences that affect the final investment decision

These elements collectively contribute to shaping investment behaviour in a digital environment.

Objectives of the Study

1. To examine the role of digital financial literacy in shaping investment decisions
2. To analyse the impact of FinTech adoption on investor behaviour
3. To evaluate the influence of AI-based tools on investment decision-making
4. To understand the role of behavioural biases in a technology-driven financial environment
5. To develop an integrated perspective using secondary data sources

Research Methodology

The study is based entirely on secondary data collected from diverse and credible sources, including:

- Peer-reviewed academic journals
- Books on behavioural finance and financial decision-making
- Reports from regulatory authorities and financial institutions
- Industry publications related to FinTech and artificial intelligence

A descriptive and analytical research design has been adopted. The methodology involves reviewing, comparing, and synthesizing findings from existing literature to identify patterns, relationships, and insights relevant to the research objectives.

Analysis and Discussion

The analysis of existing literature indicates that digital financial literacy plays a crucial role in enabling investors to effectively engage with financial technologies. Individuals possessing higher levels of digital literacy are better equipped to interpret financial information and utilize investment platforms efficiently. The adoption of FinTech has significantly increased participation in financial markets by lowering entry barriers and reducing transaction costs. Digital platforms have made investing more convenient and accessible, particularly for younger investors who are more comfortable with technology. AI-driven tools, including robo-advisors, have introduced a new dimension to investment decision-making by offering customized strategies and automated portfolio management. However, their adoption remains uneven, particularly in developing economies where awareness and trust in such technologies are still evolving. Despite these advancements, behavioural biases continue to influence investor decisions. Overconfidence may lead to excessive trading, herd behaviour often emerges during periods of market volatility, and loss aversion can result in overly cautious investment strategies. The interaction between technology and human psychology suggests that while digital tools enhance capabilities, they do not replace behavioural tendencies.

Conclusion

The findings of the study suggest that digital transformation has significantly improved access to financial markets and investment tools. However, the persistence of behavioural biases indicates that technological advancements alone cannot ensure rational investment behaviour. A balanced approach that combines digital literacy with behavioural awareness is essential for improving investment outcomes. Investors must develop both technological competence and psychological understanding to make informed and effective financial decisions. This study contributes to existing literature by presenting a comprehensive and integrated perspective on the intersection of digital finance and behavioural biases using secondary data.

Recommendations

- Strengthen digital financial literacy through structured educational initiatives
- Enhance awareness and trust in AI-based investment tools
- Design FinTech platforms incorporating behavioural nudges to guide better decisions
- Include behavioural finance concepts in investor education programs
- Develop regulatory frameworks that promote responsible digital investment practices

Limitations and Future Scope

The study is limited by its reliance on secondary data and absence of empirical validation. Future research may incorporate primary data to test the proposed relationships and validate the conceptual framework. Comparative studies across regions, age groups, and income levels can further deepen the understanding of digital investment behaviour.

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ALGORITHMIC MEDIATION OF LANGUAGE: EXAMINING THE IMPACT OF AI ON BUSINESS ENGLISH PROFICIENCY, CRITICAL THINKING, AND PROFESSIONAL IDENTITY

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Abstract

The proliferation of artificial intelligence tools—ranging from large language models to grammar-correction platforms and automated translation engines—has fundamentally altered how professionals acquire, deploy, and perceive Business English competencies. This paper investigates the relationship between routine AI-mediated communication and three interrelated dimensions of professional development: linguistic proficiency in Business English, higher-order critical thinking skills, and the formation of professional identity among early-career knowledge workers. Drawing on a mixed-method research design that incorporates a structured survey administered to 120 management graduates in the Mumbai Metropolitan Region and follow-up semi-structured interviews with 18 industry practitioners, the study identifies a paradox of convenience: while AI tools demonstrably enhance surface-level writing accuracy and speed, sustained reliance on algorithmic assistance is correlated with reduced confidence in independent composition, diminished metacognitive awareness of grammatical choices, and an erosion of the distinctive communicative voice that underpins professional identity. The paper proposes a conceptual framework—Selective Augmentation for Professional Growth (SAPG)—that positions AI not as a replacement for linguistic competence but as a scaffolding mechanism whose contribution must be deliberately bounded and pedagogically guided. Implications for management education and corporate learning and development programmes are discussed.

Keywords: Artificial Intelligence, Business English, Professional Identity, Critical Thinking, Language Acquisition, Management Education

Introduction

Business communication has never been a static skill. Each technological wave—from the typewriter to email to collaborative cloud platforms—has reshaped the norms and expectations that govern professional writing and speech. The current wave, driven by generative artificial intelligence, is qualitatively different from its predecessors because it intervenes not merely in the delivery of language but in its production. When a knowledge worker relies on a large language model to draft a proposal, refine an executive summary, or craft a client-facing email, the cognitive labour of composition shifts—partially or substantially—from the human author to an algorithmic process. In management education contexts across India and the broader Global South, Business English occupies a uniquely high-stakes position. For a large cohort of postgraduate management students, English is a second or third language, and proficiency in it is perceived as a credential that carries tangible consequences for employability and career advancement. The arrival of accessible, high-quality AI writing assistants therefore represents both an equalising opportunity and a developmental risk. This tension is the animating concern of the present paper. The paper seeks to answer three interconnected research questions. First, in what ways does regular use of AI-assisted writing tools influence the self-assessed and observed Business English proficiency of management graduates? Second, does AI mediation of written communication affect the quality and depth of critical thinking that graduates demonstrate when composing or reviewing professional documents? Third, how do young professionals narrate their relationship with AI tools in terms of their evolving professional identity and communicative self-concept?

Review of Literature

2.1 AI and Language Proficiency

Research on technology-mediated language learning has consistently distinguished between learning-with and learning-from technology (Warschauer, 1996; Chapelle, 2001). Spell-checkers and grammar tools in the Microsoft Word era were found to improve surface-level accuracy without significantly advancing grammatical understanding (Ferris, 2004). The emergence of neural machine translation and subsequently of large language models has intensified this pattern. Studies by Kohnke, Moorhouse, and Zou (2023) found that university students who used ChatGPT for essay drafting produced structurally superior texts by conventional metrics, yet showed lower post-task retention of the target grammatical and lexical features. Similarly, research conducted among ESL learners in South-East Asian tertiary institutions suggests that over-reliance on AI feedback mechanisms can interrupt the noticing processes central to second-language acquisition (Long, 1991).

Within the specific domain of Business English, scholarship has been thinner but is growing. Nickerson (2005) and Kankaanranta and Planken (2010) established that Business English as a Lingua Franca (BELF) prioritises transactional clarity over formal correctness, suggesting that the risk profile of AI assistance may differ from that in academic writing contexts. Nonetheless, even in BELF environments, researchers note that the capacity to adapt register, negotiate ambiguity, and signal interpersonal stance is not reducible to grammatical accuracy—capabilities that current AI tools support unevenly.

2.2 AI, Cognition, and Critical Thinking

The relationship between digital tools and critical thinking is contested in the educational technology literature. Early claims that search engines undermined deep reading were subsequently nuanced by studies showing that the effect was moderated by intentionality and metacognitive strategy (Carr, 2010; Sparrow et al., 2011). With generative AI, the concern shifts from information retrieval to argument construction. When an AI generates not just facts but structured reasoning, the human user's role moves toward evaluation and selection rather than origination—a shift that may not be cognitively neutral. Bloom's taxonomy conventionally places evaluation and synthesis at the apex of critical thinking; if these functions are performed algorithmically, sustained practice at lower cognitive levels may result in skill atrophy at the higher ones.

2.3 Professional Identity and Communicative Voice

Professional identity is understood as a dynamic, negotiated construct that integrates role-based expectations with personal values, competencies, and self-narratives (Ibarra, 1999; Pratt, Rockmann, & Kaufmann, 2006). In communication-intensive professions, writing style functions as one of the primary carriers of professional identity (Hyland, 2002). Scholars of academic writing have explored how novice writers struggle to develop an authoritative voice distinct from their sources; an analogous developmental challenge arises when an AI constitutes the dominant stylistic influence. Deane and Sparks (2023) found that graduate students who used AI writing tools over two semesters reported lower confidence in the authenticity of their written work and were more likely to describe their texts as belonging to the AI rather than to themselves.

Research Methodology

3.1 Research Design

A mixed-method design was adopted to leverage the complementary strengths of quantitative breadth and qualitative depth. The quantitative strand involved a structured questionnaire administered to 120 final-year MMS students drawn from four management institutes affiliated to the University of Mumbai. The qualitative strand comprised 18 semi-structured interviews with graduates who had been in full-time employment for a minimum of twelve months and who reported using at least one AI writing tool on a regular basis. Institutional ethics clearances were obtained, and all participants provided informed consent. Data collection was conducted between October and December of the academic year 2025–26.

3.2 Instrumentation

The structured questionnaire comprised three sections. Section A captured demographic and contextual data, including frequency of AI tool use, type of tools employed (grammar assistants, generative models, translation tools), and the range of communication tasks for which AI assistance

was sought. Section B contained 24 Likert-scale items measuring self-assessed Business English proficiency across four sub-constructs: writing accuracy, vocabulary range, register flexibility, and communicative confidence. Scale reliability was assessed using Cronbach's alpha; the overall instrument yielded an alpha of 0.83, indicating acceptable internal consistency. Section C incorporated eight scenario-based items designed to assess the tendency to delegate argumentative or analytical decisions to AI tools, serving as a proxy measure of critical thinking disposition.
The semi-structured interview protocol addressed four thematic areas: the circumstances under which AI tools were first adopted for professional writing, perceived changes in personal writing ability over time, experiences of authorship and creative ownership in AI-assisted work, and reflections on professional identity as a communicator. Interviews were audio-recorded with consent, transcribed verbatim, and subjected to thematic analysis following the procedure outlined by Braun and Clarke (2006).

3.3 Sampling and Limitations
Purposive sampling was employed for both strands to ensure that participants had meaningful and regular exposure to AI writing tools. The study is geographically confined to the Mumbai Metropolitan Region, and self-reported data carry the inherent limitation of social desirability bias. The quantitative strand does not include performance-based measures of Business English proficiency, relying instead on self-assessment—a recognised limitation that future studies should address through the inclusion of standardised assessments such as the BULATS or BEC suite.

Findings and Analysis

4.1 Pattern of AI Tool Adoption
Of the 120 survey respondents, 94 per cent reported using at least one AI tool for professional or academic writing within the previous three months. Grammarly was the most frequently cited tool (78%), followed by ChatGPT or equivalent large language models (61%) and Google's Gemini (34%). A significant proportion—42 per cent—reported using AI to draft entire documents or substantial sections thereof, rather than merely for post-composition correction. Usage was highest for external-facing documents (client proposals, emails to senior stakeholders) and lowest for internal analytical tasks such as strategy memos and competitor analyses, a pattern consistent with the hypothesis that AI assistance is preferentially sought where impression management is most salient.

4.2 AI Use and Self-Assessed Proficiency
A non-linear relationship was observed between AI usage intensity and self-assessed proficiency. Moderate users—those who used AI tools for correction and refinement but retained primary drafting responsibility—reported the highest levels of communicative confidence (mean score 4.1 on a five-point Likert scale) and vocabulary range (3.9). Heavy users, defined as those who delegated initial drafting to AI in more than half their professional writing tasks, reported lower communicative confidence (3.2) despite rating their writing accuracy as high (4.3). This dissociation between perceived accuracy and communicative confidence is theoretically significant: it suggests that heavy AI users recognise a gap between the mechanical quality of their outputs and their own sense of competence as communicators—precisely the kind of professional identity tension that this paper set out to investigate.

4.3 Critical Thinking Disposition
On the scenario-based items measuring critical thinking disposition, heavy AI users scored an average of 2.7 out of 5 on items assessing the tendency to independently evaluate the logical structure of arguments before submitting documents, compared to 3.8 for moderate users and 4.0 for light users. Notably, heavy users showed no deficit in their ability to identify logical flaws when the task was framed explicitly as an evaluative exercise—suggesting that the disposition gap is situational rather than indicative of an underlying capability deficit. Qualitative interview data corroborated this pattern: several participants described an increasingly reflexive tendency to accept AI-generated reasoning

without deliberate scrutiny, which they attributed not to intellectual laziness but to time pressure and the assumption of AI accuracy.

4.4 Professional Identity and Communicative Voice

Thematic analysis of the interviews yielded four recurrent themes concerning professional identity. The first, labelled Phantom Authorship, describes the experience of sending documents that feel alien to one's own communicative style—a phenomenon reported by fourteen of the eighteen interviewees. The second theme, Credential Anxiety, captures participants' concern that if AI tools were ever restricted or unavailable, their underlying Business English capability would be found inadequate by colleagues or supervisors. Third, Strategic Disclosure emerged as a theme through which participants navigated the social norms of their workplaces regarding AI use: several reported concealing their AI usage from managers while being open about it with peers. Finally, Reclaimed Agency was a theme evident primarily among participants who had consciously reduced or restructured their AI use after a period of heavy reliance, describing this as a deliberate effort to recover a sense of professional voice.

Discussion

The findings converge on a central insight that bears directly on the design of management education programmes: the benefits of AI writing assistance are real but front-loaded, visible primarily in the quality of discrete outputs, while the costs are deferred and cumulative, manifesting over time as reduced metacognitive engagement, weaker professional self-efficacy, and an attenuated sense of communicative ownership. This temporal structure makes the problem pedagogically difficult to address—students and early-career professionals experience immediate gains and delayed losses, creating incentive structures that systematically underweight the developmental risks. The SAPG framework proposed here treats AI assistance as a scaffold in the technical sense employed in educational psychology (Wood, Bruner, & Ross, 1976): a structure that supports performance at a level temporarily beyond the learner's independent capability, but which must be progressively withdrawn as competence develops. In practice, this means designing business communication curricula with explicit AI-use policies that vary by developmental stage—permitting AI correction tools in early semesters while requiring unaided drafting in capstone assessments—and incorporating metalinguistic reflection tasks that ask students to compare AI-generated text with their own drafts and articulate the differences in rhetorical strategy and register. The professional identity dimension adds further complexity to the picture. Identity formation is not easily addressed through curricular intervention alone; it requires institutional cultures in workplaces and educational settings that value communicative authenticity and create safe spaces for imperfect but genuine expression. The Strategic Disclosure theme suggests that many young professionals are already engaged in a private negotiation with AI tools that involves questions of professional ethics—questions that organisations have been slow to address explicitly. HR departments and corporate learning and development teams need to develop clear and psychologically informed policies on AI use in professional communication, moving beyond blanket permission or prohibition to nuanced guidance that distinguishes between contexts where AI augmentation is appropriate and those where it undermines the relational dimensions of professional communication.

Conclusion

This paper has argued that the impact of AI on Business English proficiency, critical thinking, and professional identity cannot be evaluated at the level of individual transactions—whether a given email is well-written—but must be assessed at the level of trajectories: whether cumulative patterns of AI use support or undermine the development of professional communicators over months and years. The evidence presented here, while limited in scope and reliant on self-report, points consistently toward a conclusion that warrants attention: AI tools, used without deliberate boundaries, may quietly erode the very competencies they appear to enhance.

This conclusion does not counsel against the use of AI in professional communication—such a position would be both impractical and intellectually untenable. Rather, it invites management educators, HR practitioners, and policy-makers to treat AI literacy not as a technical skill concerned solely with how to use AI tools effectively, but as a reflexive capacity concerned with when and to what degree to use them. Cultivating this reflexivity is, ultimately, an educational and ethical project as much as a technological one

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CONSUMER DECISION-MAKING IN GEN Z: EXAMINING CONSCIOUS CONSUMPTION THROUGH MARKETING AND BEHAVIOURAL FINANCE

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Abstract:
Gen Z has emerged as a highly influential consumer segment characterized by strong digital engagement, social awareness, and a growing preference for sustainable and ethical products. This study investigates how marketing strategies and behavioural finance factors influence Gen Z's conscious consumption behaviour and financial decision-making. It also examines the psychological, emotional, and cognitive drivers that shape preferences for environmentally and socially responsible products. Adopting a descriptive research design, the study utilizes both primary and secondary data. Primary data are collected through a structured questionnaire administered to 203 Gen Z respondents (aged 18–28) selected using random sampling in Navi Mumbai, while secondary data are sourced from books, journals, articles, and related literature. The study is geographically limited to Navi Mumbai, and its findings may not be generalizable to other age groups or regions. The research is expected to identify the marketing strategies and behavioural biases that significantly influence sustainable purchasing decisions among Gen Z consumers. It further seeks to explain how emotional, psychological, and cognitive factors affect ethical consumption choices. By integrating concepts from marketing psychology and behavioural finance, the study offers valuable theoretical and practical insights into how young consumers balance financial considerations with sustainability, contributing to the promotion of responsible consumption and informed policymaking.
Keywords: Gen Z, Conscious Consumption, Behavioural Finance, Marketing Psychology, Sustainable Buying Behaviour.

Introduction:
Gen Z, the cohort born between the mid-1990s and early 2010s, has emerged as one of the most influential consumer groups of the 21st century. Their purchasing behaviour reflects a strong inclination toward sustainability, ethical responsibility, and value-driven choices—a pattern increasingly referred to as conscious consumption. Unlike previous generations, Gen Z's decisions are shaped not only by traditional marketing cues but also by deeper psychological, emotional, and financial considerations. The interplay of marketing influences and behavioural finance factors has created a unique decision-making ecosystem for this generation.

Scope Of The Research Study
The scope of the present study is confined to examining the influence of marketing strategies and behavioural finance factors on the conscious consumption and financial decision-making of Generation Z consumers. The research specifically focuses on understanding the psychological, emotional, and cognitive drivers that shape Gen Z's preference for sustainable and ethically responsible products.

Review Of Lierature:
Ridwan, N. H., Musa, C. I., & Haeruddin, M. I. M. (2025). Decision-making behavior of generation Z in online purchases: A systematic literature review. This paper explores the decision-making behavior of Generation Z in online purchasing, focusing on the factors influencing their buying choices, the role of social media and influencer marketing, and the broader implications for e-commerce strategies.
kdv, P., Shyamsunder, C. S., & Soni, H. (2024) . Relationship Between Green Finance Availability and Purchase Intentions in Generation Z and Millennials: Moderating Role of Consciousness. This study examines how the availability of green finance influences the purchasing intentions of Generation Z and Millennials, with consciousness as a moderating factor.

Research Gap:

- Lack of Integrated Models Combining Conscious Consumption, GenZ's Mindfulness, and Decision-Making Biases.
- Limited Focus on the Interaction Between Marketing Cues and Psychological Moderators.
- Insufficient Empirical Evidence Linking Behavioural Finance factor and Purchase Behavior.
- Limited focus on Gen Z's conscious consumption Studies.

Objectives:

- To determine which marketing strategies are most effective in encouraging sustainable and ethical consumption among Gen Z consumers in Navi Mumbai.
- To analyse the behavioural finance factors that shape Gen Z's financial decision-making related to sustainable and ethical products.
- To identify the psychological, emotional, and cognitive drivers behind Gen Z's preference for sustainable and responsibly produced goods.
- To evaluate the interaction between marketing cues and behavioural biases in influencing Gen Z's purchase decisions.

Hypothesis:

$H1_1$: Specific marketing strategies significantly encourage sustainable and ethical consumption among Gen Z consumers in Navi Mumbai.
$H0_1$: Specific marketing strategies do not significantly encourage sustainable and ethical consumption among Gen Z consumers in Navi Mumbai.
$H1_2$: Behavioural finance factors significantly influence Gen Z's financial decision-making related to sustainable and ethical products.
$H0_2$: Behavioural finance factors do not significantly influence Gen Z's financial decision-making related to sustainable and ethical products.
$H1_3$: Psychological, emotional, and cognitive drivers significantly affect Gen Z's preference for sustainable and responsibly produced products.
$H0_3$: Psychological, emotional, and cognitive drivers do not significantly affect Gen Z's preference for sustainable and responsibly produced products.
$H1_4$: Marketing cues and behavioural biases interact significantly to influence Gen Z's purchase decisions.
$H0_4$: Marketing cues and behavioural biases do not interact significantly to influence Gen Z's purchase decisions.

Research Methodology:

1. Universe of study

The universe of study shall be Navi Mumbai City only.

2. The sample design

The study is focused on Gen Z customers from Navi Mumbai City.
The sample frame for collecting primary data shall be as follows :

S.N.	Selected Category	No. of Respondent
1.	Customers	203

3. Data collection

Primary data: Primary data has been collected from 200 customers. Selected respondents will be the representatives of various zones in Navi Mumbai city and all respondents will be the representatives of Gen Z (Age 18 to 28).
Secondary data: Secondary data were collected from journals, newspapers, books, magazines, websites, television etc. A number of standard text books in the area of marketing, research methodology and advertising were also referred to present the theoretical perspective.

4. Data processing

The data collected from the primary and the secondary sources and has been processed and tabulated according to the objectives of study.

5. Data analysis

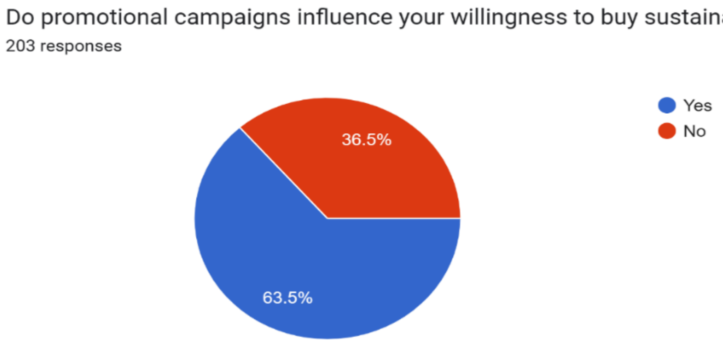
The processed data has been analyzed on the basis of the objectives and hypothesis by applying various statistical tools. Chi-square testing and Correlation through SPSS software tool.

Data Collection And Analysis:

1. Marketing Strategies & Sustainable and Ethical Consumption:

First Objective:

- To determine which marketing strategies are most effective in encouraging sustainable and ethical consumption among Gen Z consumers in Navi Mumbai.



Interpretation:

From the above pie chart, it has been proven that (63.5%) Gen Z's said they feel willing to buy sustainable products due to a promotion campaign which shows honesty, sustainability, transparency, or keeping promises.

First Hypothesis:

The SPSS output is as follows:

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q.11 Peer influence and marketing cues together affect my buying decisions. * (Q.15) How often do you purchase sustainable or eco-friendly products?	203	99.5%	1	0.5%	204	100.0%

Q.11 Peer influence and marketing cues together affect my buying decisions. * (Q.15) How often do you purchase sustainable or eco-friendly products? Crosstabulation

			(Q.15) How often do you purchase sustainable or eco-friendly products?				Total
			Regularly	Occassionally	Rarely	Never	
Q.11 Peer influence and marketing cues together affect my buying decisions.	Strongly Disagree	Count	4	3	5	1	13
		Expected Count	2.2	7.7	2.8	.3	13.0
		% within Q.11 Peer influence and marketing cues together affect my buying decisions.	30.8%	23.1%	38.5%	7.7%	100.0%
	Disagree	Count	4	22	7	1	34
		Expected Count	5.7	20.3	7.4	.7	34.0
		% within Q.11 Peer influence and marketing cues together affect my buying decisions.	11.8%	64.7%	20.6%	2.9%	100.0%
	Neutral	Count	16	55	16	1	88
		Expected Count	14.7	52.5	19.1	1.7	88.0
		% within Q.11 Peer influence and marketing cues together affect my buying decisions.	18.2%	62.5%	18.2%	1.1%	100.0%
	Agree	Count	1	30	10	0	41
		Expected Count	6.9	24.4	8.9	.8	41.0
		% within Q.11 Peer influence and marketing cues together affect my buying decisions.	2.4%	73.2%	24.4%	0.0%	100.0%
	Strongly Agree	Count	9	11	6	1	27
		Expected Count	4.5	16.1	5.9	.5	27.0
		% within Q.11 Peer influence and marketing cues together affect my buying decisions.	33.3%	40.7%	22.2%	3.7%	100.0%
Total		Count	34	121	44	4	203
		Expected Count	34.0	121.0	44.0	4.0	203.0
		% within Q.11 Peer influence and marketing cues together affect my buying decisions.	16.7%	59.6%	21.7%	2.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.845[a]	12	.021
Likelihood Ratio	26.004	12	.011
Linear-by-Linear Association	.482	1	.488
N of Valid Cases	203		

a. 8 cells (40.0%) have expected count less than 5. The minimum expected count is .26.

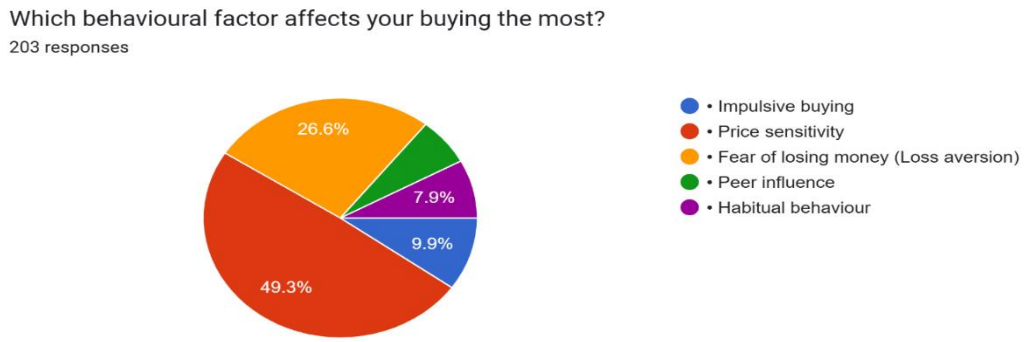
From the above table, the value of p is 0.021, which is less than 0.05, and hence we reject $H0_1$ the null hypothesis and accept $H1_1$ the alternative hypothesis.

Thus, there is a statistically significant association between peer influence and marketing cues and the frequency of purchasing sustainable or eco-friendly products.

Hence, we accept that Specific marketing strategies significantly encourage sustainable and ethical consumption among Gen Z consumers in Navi Mumbai.

2. Behavioural Finance factor & Gen Z's financial decision-making:

Second Objective:



Interpretation: It has been shown from the above pie chart , tha maximum repondents are price sensitive.

Second Hypothesis:

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q.17 Which behavioural factor affects your buying the most? * Q.18 When choosing a product, what matters more to you?	203	100.0%	0	0.0%	203	100.0%

Q.17 Which behavioural factor affects your buying the most? * Q.18 When choosing a product, what matters more to you? Crosstabulation

			Q.18 When choosing a product, what matters more to you?					
			Price	Long Term Value	Brand Trust	Sustainability features	Influencer opinion	Total
Q.17 Which behavioural factor affects your buying the most?	impulsive buying	Count	10	7	2	1	0	20
		Expected Count	4.9	8.0	4.4	2.6	.1	20.0
		% within Q.17 Which behavioural factor affects your buying the most?	50.0%	35.0%	10.0%	5.0%	0.0%	100.0%
	Price Sensitivity	Count	25	46	22	6	0	99
		Expected Count	24.4	39.5	21.9	12.7	.5	99.0
		% within Q.17 Which behavioural factor affects your buying the most?	25.3%	46.5%	22.2%	6.1%	0.0%	100.0%
	Fear of losing money	Count	10	22	16	9	1	58
		Expected Count	14.3	23.1	12.9	7.4	.3	58.0
		% within Q.17 Which behavioural factor affects your buying the most?	17.2%	37.9%	27.6%	15.5%	1.7%	100.0%
	Peer Influence	Count	2	3	4	5	0	14
		Expected Count	3.4	5.6	3.1	1.8	.1	14.0
		% within Q.17 Which behavioural factor affects your buying the most?	14.3%	21.4%	28.6%	35.7%	0.0%	100.0%
	Habitual Behaviour	Count	3	3	1	5	0	12
		Expected Count	3.0	4.8	2.7	1.5	.1	12.0
		% within Q.17 Which behavioural factor affects your buying the most?	25.0%	25.0%	8.3%	41.7%	0.0%	100.0%
Total		Count	50	81	45	26	1	203
		Expected Count	50.0	81.0	45.0	26.0	1.0	203.0
		% within Q.17 Which behavioural factor affects your buying the most?	24.6%	39.9%	22.2%	12.8%	0.5%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	34.488[a]	16	.005
Likelihood Ratio	30.742	16	.015
Linear-by-Linear Association	16.896	1	.000
N of Valid Cases	203		

a. 15 cells (60.0%) have expected count less than 5. The minimum expected count is .06.

From above table, the value of p is 0.005 < than 0.05, and therefore, we fail to accept the $H0_2$, null hypothesis and thus, $H1_2$, alternate hypothesis is accepted. It implies that behavioural biases such as price sensitivity, loss aversion, impulsive buying, and habitual behaviour significantly influence Gen-Z financial decision related to sustainable products. Hence, the alternate hypothesis ($H1_2$) is accepted.

6. Psychological, emotional, and cognitive drivers significantly & Gen Z's preferences:
Third Objective:

- To identify the psychological, emotional, and cognitive drivers behind Gen Z's preference for sustainable and responsibly produced goods.

Third Hypothesis:

Descriptive Statistics

	Mean	Std. Deviation	N
(Q.9)Buying sustainable products gives me emotional satisfaction.	3.40	1.055	203
(Q.10) I trust eco-labels and certifications when evaluating product sustainability.	3.46	1.109	203

Correlations

		(Q.9)Buying sustainable products gives me emotional satisfaction.	(Q.10) I trust eco-labels and certifications when evaluating product sustainability.
(Q.9)Buying sustainable products gives me emotional satisfaction.	Pearson Correlation	1	.531**
	Sig. (2-tailed)		.000
	N	203	203
(Q.10) I trust eco-labels and certifications when evaluating product sustainability.	Pearson Correlation	.531**	1
	Sig. (2-tailed)	.000	
	N	203	203

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

Interpretation: The Mean value for emotional satisfaction (Q9) = 3.40, and the mean value for trust in eco-labels (Q10) = 3.46.

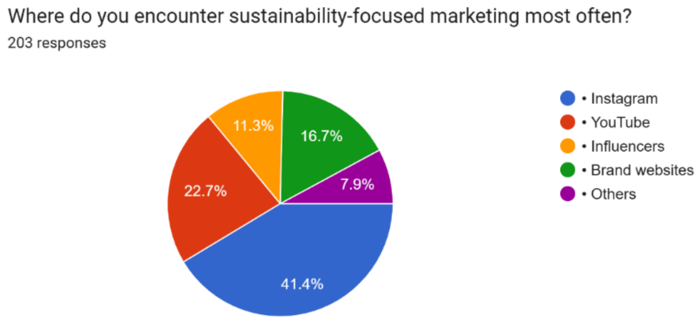
Hence, it can be inferred that there is a moderate relationship between emotional and cognitive engagement for sustainable products among Gen Z respondents.

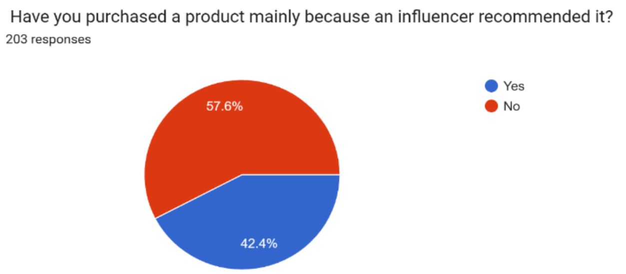
The Pearson correlation coefficient ($r = 0.531$) indicates a moderate strong positive relationship between emotional satisfaction and trust in eco-labels.The calculated p-value ($0.000 < 0.05$) from the above table confirms that this relationship is statistically significant.

Hence, we fail to accept the $H0_3$ null hypothesis and therefore $H1_3$ alternative hypothesis is accepted.So, the above result indicates that psychological, emotional, and cognitive drivers jointly influence Gen Z's preference for buying sustainable products.

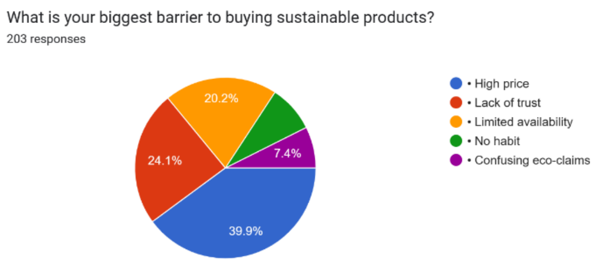
7. Marketing Cues, Behavioural Biases & Gen Z's Purchase Decisions.

Fourth Objective:





Interpretation: Marketing Cues like Social Media and Influencer marketing influence on Gen Z's purchase decision.



Interpretation: Behavioural Finance factors, like the high price of the product, are the biggest barrier to buying a sustainable product.

Fourth Hypothesis: SPSS output is as follows:

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
(Q.11) Peer influence and marketing cues together affect my buying decisions. * (Q.17)Which behavioural factor affects your buying the most?	203	99.5%	1	0.5%	204	100.0%

			(Q.17)Which behavioural factor affects your buying the most?					
			Impulsive Buying	Price Sens	Loss of Money	Peer Influence	Habitual Behaviour	Total
(Q.11) Peer influence and marketing cues together affect my buying decisions.	Strongly Disagree	Count	2	4	6	0	1	13
		Expected Count	1.3	6.4	3.5	.8	1.0	13.0
		% within (Q.11) Peer influence and marketing cues together affect my buying decisions.	15.4%	30.8%	46.2%	0.0%	7.7%	100.0%
	Disagree	Count	3	14	13	1	3	34
		Expected Count	3.3	16.7	9.0	2.2	2.7	34.0
		% within (Q.11) Peer influence and marketing cues together affect my buying decisions.	8.8%	41.2%	38.2%	2.9%	8.8%	100.0%
	Neutral	Count	7	44	24	7	6	88
		Expected Count	8.7	43.3	23.4	5.6	6.9	88.0
		% within (Q.11) Peer influence and marketing cues together affect my buying decisions.	8.0%	50.0%	27.3%	8.0%	6.8%	100.0%
	Agree	Count	3	27	6	3	2	41
		Expected Count	4.0	20.2	10.9	2.6	3.2	41.0
		% within (Q.11) Peer influence and marketing cues together affect my buying decisions.	7.3%	65.9%	14.6%	7.3%	4.9%	100.0%
	Strongly Agree	Count	5	11	5	2	4	27
		Expected Count	2.7	13.3	7.2	1.7	2.1	27.0
		% within (Q.11) Peer influence and marketing cues together affect my buying decisions.	18.5%	40.7%	18.5%	7.4%	14.8%	100.0%
Total		Count	20	100	54	13	16	203
		Expected Count	20.0	100.0	54.0	13.0	16.0	203.0
		% within (Q.11) Peer influence and marketing cues together affect my buying decisions.	9.9%	49.3%	26.6%	6.4%	7.9%	100.0%

Since from the Chi-Square table the value of p is 0.336, which is greater than 0.05 so we fail to reject $H0_4$, the null hypothesis and accept $H1_4$, the alternative hypothesis.

Also, from the above table (χ^2 = 17.800, df = 16) indicates that there is no significant statistical relationship between peer influence & marketing cues (Q.11) and dominant behavioural buying factor (Q.17)

Hence, Marketing cues and behavioural biases do not interact significantly to influence Gen Z's purchase decisions.

Findings:

The study analysed various variables like marketing strategies, sustainable and ethical consumption, behavioural finance factor, Gen Z's financial decision-making, psychological, emotional, and cognitive drivers, Gen Z's preferences, marketing cues, behavioural biases & Gen Z's Purchase Decisions, and many more.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.800[a]	16	.336
Likelihood Ratio	18.005	16	.324
Linear-by-Linear Association	.182	1	.670
N of Valid Cases	203		

a. 13 cells (52.0%) have expected count less than 5. The minimum expected count is .83.

By using survey analysis, Chi-Square test and Correlation through SPSS software tools: It has been found that specific marketing strategies such as (advertising, social media marketing) significantly encourage sustainable and ethical consumption among Gen Z consumers in Navi Mumbai.

Behavioural finance factors such as price sensitivity, loss aversion, impulsive buying, and habitual behaviour significantly influence Gen Z's financial decision-making related to sustainable products.

Psychological, emotional, and cognitive drivers collectively influence Gen Z's preference for purchasing sustainable products.

Marketing cues and behavioural biases do not interact significantly to influence Gen Z's purchase decisions. Marketing cues such as advertisements, peer influence, and promotional messages influence Gen Z consumers at an individual level. Behavioural biases, including impulsivity, loss aversion, and habitual buying, also affect purchase decisions independently.

Suggestions & Recommentations:

- Marketers should actively use social media platforms such as Instagram, YouTube, and short-form video content to communicate sustainability messages.

- Clear communication of eco-labels, certifications, and sustainability scores on packaging and digital platforms can build consumer confidence
- Brands should design marketing communications that appeal to emotions such as pride, moral satisfaction, and social responsibility.
- Brands should ensure consistency between sustainability claims and actual practices

Limitations:

- The study is confined to Gen Z consumers in Navi Mumbai, which limits the generalizability of the findings to other regions or cities.
- The sample size may not fully capture the diversity of Gen Z consumers in terms of socio-economic background, education level, and purchasing power. This may affect the robustness of the conclusions.
- The study relies primarily on self-reported responses collected through questionnaires

Conclusion:

This study explored the factors influencing Gen Z's conscious consumption behaviour in Navi Mumbai, focusing on marketing influences, behavioural finance factors, and psychological drivers related to sustainable and ethical purchasing. The findings indicate that marketing strategies, particularly peer influence and purpose-driven communication, significantly encourage the purchase of eco-friendly products among Gen Z consumers. These results highlight the importance of socially relevant and value-based marketing in promoting sustainable consumption.

The study also found that behavioural finance factors, including price sensitivity, loss aversion, impulsive buying, and habitual behaviour, play a significant role in shaping purchasing decisions. This suggests that although Gen Z values sustainability, financial considerations and behavioural biases continue to influence their choices.

In addition, psychological factors such as emotional satisfaction and trust in eco-labels were found to have a positive relationship, demonstrating that emotional engagement and cognitive trust are important drivers of ethical consumption. However, the interaction between marketing cues and behavioural biases was not statistically significant, indicating that these factors influence consumer behaviour independently rather than jointly.

Overall, the research concludes that Gen Z's conscious consumption is driven by distinct marketing, behavioural, and psychological determinants. These findings provide valuable insights for marketers, policymakers, and educators seeking to encourage sustainable and ethical consumption practices among young consumers.

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A TRANSFORMATIVE JOURNEY OF GST IN INDIAN ECONOMY

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Abstract:
This paper is a study of India's economic metamorphosis and the transformative journey of its taxation system, with a special emphasis on GST framework. India, an emerging economy, has welcomed dynamic economic catalysts, including demographic dividends, urbanization, and globalization. Despite its promising growth trajectory, India wrestles with challenges that call for improved economic governance and inclusive growth. Taxation, a critical aspect, has evolved from ancient levies to the modern British colonial era, culminating in the current constitutional taxation system outlined in the Seventh Schedule of the Indian Constitution. The advent of GST in 2017 was a landmark event, designed to alleviate the cascading effect of taxes and promote cooperative federalism. Its bifurcated structure, encompassing CGST, SGST and IGST for intra and interstate transactions, respectively, seeks to simplify tax laws and enhance the ease of doing business. However, persistent challenges such as technical glitches, compliance burdens for SMEs, and revenue shortfall necessitate ongoing refinement. This paper explores the historical, operational, and technological dimensions of GST's in India's economic landscape, advocating for a harmonious synergy between technological advancements and regulatory imperatives in the realm of taxation.

Keywords: Indian Economy, GST Evolution, Taxation Reforms, GST Implementation, Technology

Introduction

India has the fastest major growing economy around the globe. It has a GDP[1] of 3.73 trillion USD as of 2023. In terms of nominal GDP, India is the fifth largest economy, whereas the third largest in PPP[2] terms.[3] A diverse pool of population with a high degree of regional variation is one of the main characteristics of the Indian economy. The economy has been driven by demographic dividend, globalization, urbanisation and other reforms.[4] However, the country is experiencing problems of its own in its journey towards economic development. India needs to improve its economic governance. It must also enhance human capital and promote inclusive and sustainable growth.[5]A tax is a compulsory payment made to the government for using public goods and services. In the process of economic development within a country, tax plays a vital role.[6] Taxation policies affect various factors like allocation of resources, income distribution, price stability, and balance of payments. Taxes also influence the behavior of consumers, producers, and investors.[7]

Tax can be classified broadly into two categories:

- Direct Tax
- Indirect Tax

Levying a tax on the income of a person or an entity is known as a direct tax while indirect taxes are levied at different points in the chain of production and distribution. Examples of direct taxes include

Gross Domestic Product.
Purchasing Power Parity.

corporate tax, income tax and capital gains tax. Indirect taxes are related to consumption or production of services and goods like sales tax, VAT[8], excise as well as customs duties among others. The choice of tax structure is primarily based on degree of development of the economy overall.

Table 1.1 Differences between Direct & Indirect Tax

Direct Tax	Indirect Tax
Progressive- Based on capacity to pay.	Distortionary- Reduces the incentive to work, save, and invest.
Equitable- Reduces income inequality.	Evasive- Liable for tax evasion and avoidance.
Transparent- Easy to monitor and evaluate.	Costly- Requires a high administrative and compliance cost.
Flexible- Can be adjusted as per the dynamics of the economy.	Rigid- Can create fiscal rigidity and instability.

GST is known as Goods and Services Tax. It falls under the categorization of indirect taxation. It subsumes various central and state indirect taxes. GST is implemented through a dual structure. Intra-state transactions consist of CGST[9] and SGST[10]. For interstate transactions, an IGST[11] is applicable. GST is levied at four rates in India: 5%, 12%, 18%and 28%. It also has some exemptions and higher rates for some luxury & sin goods.

Historical Background

Taxation in India has a long-dated history. In ancient times, different forms of taxes were imposed by the rulers. The British colonial era led to the evolution of the modern taxation system in India. A system was introduced to compensate for the losses suffered by Britishers during the revolt of 1857. James Wilson enacted the first ever Income Tax legislation in 1860.[12] During British colonial reign, he was India's premier Finance Minister. He also cited Manu's authority for imposition of income tax in India.[13] Income Tax Act, 1886 replaced the old act of 1860. It was subject to some changes in the categories and rates of taxation. The new categories included net salaries and profits from businesses. Further revisions were made in the coming years, which expanded the scope of income tax.[14] Britishers imposed various other taxes that were quite oppressive and arbitrary in nature. This led to various movements against the British. For example, the Salt March of 1930.[15]

The system of taxation dealt with some changes after independence. Indian Constitution became operative in 1950. It clearly stated the responsibilities of the governments, both at the state and the central level. The Indian Constitution contains the subjects related to taxation by central and state governments.[16] At the union level, the government is exclusively capable of levying taxes on income other than i) agricultural income, ii) customs, iii) excise, iv) corporation tax, and v) estate duty. While the governments of different states enjoy the exclusivity to levy taxes on: a) agricultural income, b) land revenue, c) stamp duty, d) sales tax, and e) entertainment tax. Both union and state governments have the concurrent power to levy taxes on income from:

i. lotteries, ii. betting, iii. gambling.[17]

The taxation structure has evolved over time. Some reforms in India:

a. **Taxation Enquiry Commission (1953-54)-** Dr. John Mathai was the head. The commission recommended rationalization and simplification of the tax structure. Various reductions, exemptions, and improvements were made.[18]

Direct Taxes Administration Enquiry Committee (1971)- Mahavir Tyagi headed it. It worked on improving the effectiveness of direct tax administration.[19]

b. **Indirect Taxes Enquiry Committee (1977)-** L. K. Jha headed the committee. It proposed the reformation of an indirect system of taxation.[20]

c. **Long-Term Fiscal Policy (1985)-** The Ministry of Finance laid down the fiscal policy objectives. It aimed to achieve fiscal stability along with tax equity. It also advocated for broadening the tax base. It also emphasized other improvements in administration.

d. **Tax Reforms Committee (1991-93)-** Raja Chelliah headed the committee. The suggestions were based on the economic liberalization, privatization & globalization policy.

e. **Kelkar Task Force (2002-04)-** Vijay Kelkar headed the task force. It reviewed direct and indirect tax policies. It also suggested modernization of the tax administration and information technology.[21]

f. **Thirteenth Finance Commission (2007-10)-** It was also led by Vijay Kelkar. It recommended the introduction of GST.[22]

g. **Goods and Services Tax Council (2016-present)-** The Union Finance Minister heads it. It governs the implementation of GST. It also takes care of the administration part. It is responsible for making recommendations on various aspects of GST.[23]

Need For GST

GST was needed to streamline tax laws in India. GST was aimed at eliminating the cascading effects of tax, improving tax compliance, and accelerating exports. The indirect tax system previously in force had multiple taxes at different stages by both union and different state governments. This resulted in cascading of taxes. In turn, the price of production and consumption increased and hampered the economy's competitiveness. GST is categorised as a value-added indirect tax.[24] It includes several central & state taxes. GST aims to enhance ease of doing business and broaden the tax base. It's aimed at eliminating tax- induced distortions and fostering cooperative federalism. GST also affects production, consumption, and investment. Some key attributes of this system are:

h. **Dual structure-** It consists of CGST and SGST for intra-state transactions. IGST for interstate transactions. The dual structure preserves fiscal autonomy and ensures a harmonized tax regime.

ii. **Four-tier structure-** The rate of taxation is primarily divided into four slabs. It intends to bring uniformity in taxation while reducing the cascading effect of taxes. This promotes the ease of doing business.

iii. **Destination-based-** The tax is charged at the place of consumption rather than the place of production. This ascertains that tax revenue accrues to the respective state where goods/services are consumed. This helps to avoid interstate tax distortion. This helps in making exports more competitive in the international market as no GST is charged.

iv. **Value added principle-** At every stage of supply chain, only the added value is subject to tax. On inputs on which taxes have been paid, there exists a provision for claim of input tax credit. This avoids the double taxation. Tax invoices clearly show the tax paid at every stage, improving the system's transparency. At last, the final consumer bears the burden of taxation. **Coverage of GST-** It includes most goods and services. Except for the following items: a. Alcohol, b. Petroleum Products, c. Electricity, d. Real Estate.

v. **Digitalization of GST-** This includes registration, filing, payment, and refund components of GST via GSTN[25]. This helps with hassle-free execution of the process. This network also provides online and offline tools for further assistance.

GST also has several issues and challenges as well. They are as follows:

1. **Technical glitches-** There can be operational difficulties in the GSTN. There can be several delays, errors, and inconveniences for the taxpayers as well as the tax officials. It has faced server downtime, slow response, mismatch of data, incorrect calculation of tax liability, and denial of input tax credit. This negatively impacts the filing of returns, payment of taxes, and refund claims. The grievance redressal mechanism has also been set up to address the technical difficulties.
2. **Cost for taxpayers-** SMEs[26] must comply with multiple registrations, returns, and audits under this regime. Taxpayers from different states must register at the place of business. They also have to file the returns, issue invoices, and maintain the records for audit.
3. **Revenue shortfall-** GST has resulted in declining state tax collection. There is also a delay in compensation for the loss of revenue due to GST at the union level of governance. The GST system has tried to address this issue by allowing the states to borrow from the market. Other measures include the extension of the compensation period and rationalization of cess.
4. **Rate rationalization-** The multiple rate structure of GST creates disputes among taxpayers and tax

authorities. This negatively impacts the efficiency of the system. The GST system needs optimization regarding the rate structure by minimizing exemptions and concessions.

Dispute resolution- It involves the resolution of conflicts between union & state governments and among different state governments. GST system has a federal structure that requires the cooperation of the governments and the GST Council. It is essential for hassle-free administration of GST.[27]

Impact of GST on Indian Economy

The GDP can have potential increments with the applicability of GST. Its actual ramifications on GDP growth are contingent upon its application and efficient administration.[28] The following channels can explain its positive impact:

a) **Cascading effect of taxes-** GST helps eliminate double taxation. This, in turn, lowers the cost of production. This helps increase the competitiveness of both the producers and consumers. This creates a positive supply-side effect on the economy. It helps increase the output and employment factor. It also helps reduce the inflation and trade deficit.
b) **Simplification of tax system-**GST has a positive demand-side effect on the economy. It increases disposable income. It also enhances tax compliance and revenue.
c) **Integrated market-** Free flow of services & goods increases the economies of scale.[29]

Some negative impacts of the same are explained as follows: i.**Increased tax burden-** Under GST, some sectors of the economy face a relatively higher tax rate than the previous structure. This creates a negative supply-side effect on the economy. It reduces the output. This increases inflation and trade deficit.

ii. **Operational difficulties-** GSTN may cause certain delays & errors. This becomes quite disruptive for the end users.

iii.**Transitional challenges-** Shortfall in revenue creates a negative external impact on the economy. This negatively affects the fiscal stability.[30]

GST can impact inflation, both in a negative or positive sphere. It can affect the inflation rate by:

1. Change in relative prices of services & goods
2. Cost of production and consumption
3. Demand and supply conditions
4. Monetary and fiscal policies[31]

GST can also influence fiscal deficits by affecting tax revenue and expenditure.[32]

101st Constitutional Amendment Act, 2016, introduced GST in the Constitution. It came into force on the first of July 2017.[33] GST impacts different industries depending on various factors. Some sectors have benefited from GST, while others faced challenges. The following are the major sectors that were affected by the introduction of GST:

i.**Retailers & Manufacturers-** GST has simplified the tax structure. It increased the competitiveness of the domestic market. GST has also increased these sectors' compliance burden and working capital requirements. The tax rates vary across different product categories. Some products have become costlier due to GST.

ii. **Agricultural Sector-** It has narrowed the tax-burden on the agricultural sector. The implementation exempts most of the agricultural products from GST. It eliminated the interstate barriers, which enabled free movement across the country. GST also increased the input costs for the farmers. It also affected the allied sectors such as dairy, poultry, and fisheries by imposing higher tax rates on some of their products.

iii. **Textile Sector-** GST has brought the textile sector under the tax net. It has also enabled input tax credits for the textile sector and curbed tax evasion and corruption. Nonetheless, it has increased the tax liability for the sector. The profitability of SMEs, as well as the unorganized sector, is also affected.

iv. **IT Sector-** GST has created a common market for the IT sector. GST has also reduced the tax complexity. It has also reduced litigation issues in the IT sector. GST has also enabled the sector in seamless flow of credit.

The implementation of GST also impacts the pricing and invoicing of software products.

v. **Banking Sector-** GST has increased the tax liability for the banking sector. It increased the operational challenges for the banking sector. GST has created a level playing field and a uniform tax system for the banking sector.

vi. **Hotel and Tourism Sector-** There has been a tax rate cut in this sector. It increased the attractiveness of the Indian tourism industry. GST has also affected the demand and the growth of this sector.

vii. **Entertainment Industry-** Tax burden for this industry has been cut short too. This eliminated the multiple taxes. GST has also affected the profitability and the viability of the entertainment industry.[34]

New Age Technology and GST

The application of new-age technology has aided the implementation of GST. Following is some of the technological instruments that are deployed for the same:

i. GSTN[35]

ii. E-way bill system

iii. GST portal

iv. GSPs[36]

These technological tools have enabled the seamless functioning of certain processes involved with GST. They have also reduced the cost and time of tax administration. Also improved the transparency and accountability of the tax system. This improves the parameter of ease of conducting business in India.

i. GSTN- The GSTN is a key component of the GST system. Following is an analysis of the same:

1. **Vision and Objectives-** GSTN aims to provide a single online digital platform for all GST compliance activities, such as registration, tax payment, return filing, refunds, and appeals. It also allows tax officers to perform all statutory functions. The key objectives include easy integration with other departments/agencies/banks, paperless processes, minimal human interface, and using GST data for policymaking and GDP estimation.

2. **Architecture Principles-** The GSTN follows a platform approach, developing every function/module (like GST Registration, Return Filing, Payment, Assessment, etc.) as a service, which can be used by the GST portal as well as by third-party applications. This is almost identical to the open, scalable architecture followed by Aadhaar, Facebook, Google, etc.

3. **Openness and No Vendor Lock-in-** The GSTN adopts open API, open standards, and open-source products. It is designed using the loose coupling principle, so underlying service-providing software can be replaced with minimal effort and without vendor lock-in.

4. **Security and Privacy-** The GSTN ensures the privacy and security of taxpayers' data both at rest and in motion.

5. **Scalability-** GSTN is designed to be modular and scalable. It uses data sharding and parallel processing and allows for horizontal scaling of compute, network, and storage.

6. **Manageability and Reliability-** The GSTN uses automated deployment of applications and completely automated monitoring of applications and infrastructure for quick identification and resolution of issues.[37]

ii. E-way bill system- The e-way Bill system is a significant component of GST framework. Its key aspects are hereunder:

1. **Purpose-** This is designed for GST-registered individuals or enrolled transporters. It is used in generation of e-Way Bill. It is generated electronically when the value of displaced goods exceeds Rs. 50,000. This could be in regard to supply, for reasons other than supply, or due to inward supply from an un-registered person.[38]

2. **Content-** It contains details such as the origin & destination of the goods. It also contains the type and quantity of goods being transported and the mode of transportation, along with the GST

identification numbers of the parties involved.[39]
3. Generation Process- A GST-registered person isn't allowed transporting goods, in a vehicle without an e-way bill, of price exceeding Rs. 50,000. It is generated on the ewaybillgst.gov.in website. It can be generated or canceled through SMS, Android App, etc. too.
4. Benefits- This instrument facilitates faster mobility of goods and eliminates state boundary check posts. It serves as a digital interface. It ensures 100% tax compliance and facilitates the monitoring and tracking of goods during transit.40

GST Portal- The GST Portal is an important aspect of the GST system. The key aspects of the GST Portal are as follows:

5. **Application-** It is designed for GST-registered persons to perform all activities related to GST compliance online. This includes registration, filing of returns, refunds, and reply to notice.[41]
6. **Composition-** The portal contains details such as the GST identification numbers of the parties involved, the type and quantity of goods being transported, and the mode of transportation.
7. **Generation Process-** It facilitates the generation of various GST returns. Every registered dealer is required to file the GSTR-1 return for each month/quarter as applicable. The return contains details of all outward supplies made during that particular tax period.
8. **Benefits-** The GST Portal facilitates faster and more efficient GST compliance. It accelerates processes by allowing for online registration, refund processing, filing of returns and reply to notice. It ensures tax compliance. It also helps monitor and track the goods.
9. **Limitations-** When the number of sales invoices is more than 500, then the GST Offline Utility needs to be downloaded. The return file is generated from this offline utility.[42]

GSPs (GST Suvidha Providers)

10. Outline of GST Suvidha Providers

i. A GST Suvidha Provider (GSP) is an enabler/authorized intermediary for businesses to access GST portal services.
ii.GSPs help with legal compliance through their GST Software applications and APIs.[43]
iii.GSPs are ITES[44], IT[45], & BFSI[46] companies that provide a convenient web-based platform for taxpayers as well as other stakeholders involved.
The platform helps stakeholders to comply with the essential requirements, like filing of returns, uploading details of invoice, GST- registration application, etc.[47]

11. Role of GST Suvidha Providers

i. GSPs enable a GST taxpayer to check all procedural provisions of the legal compliance, through its web platform.
ii.They provide innovative methods or means of an effective interactive platform for taxpayers to access GST portal services ranging from registration and invoicing to completion of GST return filing.
iii.GSPs need not only be ERP[48] companies. Startups or financial technology houses, with expertise in creating web-applications for filing GST returns, can also be suited

12. List of GST Suvidha Providers

i. GSTN has authorized many GSPs to develop a platform that enables tax-payers to comply with
GST. APIs enable all functions of this system, such as registration, filing of returns, tax payment, and invoicing.
ii. GSTN manages all GST filings.
iii. Some of the GSPs include Abhipra Capital Limited, Acme Infovision Systems Pvt Ltd, Adaequare Info Private Limited, Alankit Limited, Amazon Seller Services Pvt. Ltd., and many

more.[50]

Conclusion

In conclusion, GST stands as a pivotal reform. It brought about significant changes in the tax structure and administration. GST has also considerably impacted the Indian economy, affecting various macroeconomic indicators. Because of GST, a transition from a complex tax structure to a unified and streamlined system was made possible. It catalyzed the taxation reforms. The genesis of GST traces back to historical tax reforms, evolving through a series of committees and commissions aimed at rationalizing India's taxation structure. Post-implementation, GST ushered in a dual structure, fostering cooperative federalism while striving to mitigate the cascading effect of taxes, enhance tax compliance, and streamline the movement of goods and services across state boundaries.
However, this growth hasn't been without challenges. Technical glitches within the GSTN, the diverse impact on different sectors, and operational hurdles faced by businesses, particularly SMEs, underscore the complexities in its seamless adoption. Yet, amidst challenges, GST has engendered positive effects, reducing tax barriers in some sectors while optimizing compliance procedures and reducing tax evasion potential through its robust digital infrastructure. The GSPs facilitate offering an interactive platform for accessing GST services, which further underscores the critical role of technology in bolstering the efficiency of the GST regime. The GSPs facilitate taxpayer compliance. Moreover, it gives opportunities for enhanced data analysis, fraud detection, taxpayer assistance, and policy formulation within the GST framework. It is sometimes accompanied by challenges such as data quality, security, and ethical considerations. Hence, the journey of GST in India reflects a paradigm shift in taxation. It is necessary to have a balanced approach. The holistic perspective aims to leverage the transformative potential of GST.

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CONSUMER PERCEPTION AND PURCHASE DECISION FACTORS FOR SCOOTERS: A STUDY OF TWO-WHEELER BUYERS IN NAVI MUMBAI

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Abstract

This study examines the consumer perception and key factors responsible for the selection of scooters among two-wheeler buyers in Navi Mumbai, Maharashtra, India. The rapid urbanization of Navi Mumbai, combined with escalating fuel costs, traffic congestion, and growing environmental consciousness, has fundamentally altered consumer mobility preferences. The research investigates dimensions including price sensitivity, brand image, fuel efficiency, after-sales service, aesthetics, peer influence, and the emerging appeal of electric scooters. A descriptive research design was employed using a structured questionnaire administered to 120 respondents drawn from select nodes of Navi Mumbai such as Vashi, Kharghar, Belapur, and Airoli. Data were analyzed using descriptive statistics, frequency analysis, and factor analysis. Findings indicate that fuel efficiency, total cost of ownership, and brand reputation are the three most influential factors in scooter selection. The study also reveals a notable shift in consumer interest toward electric scooters, particularly among younger, environmentally aware consumers. These findings carry significant managerial implications for two-wheeler manufacturers and dealers operating in the Navi Mumbai market.

Keywords: Consumer perception, scooter selection, two-wheeler market, Navi Mumbai, purchase behaviour, electric scooters, brand loyalty

Introduction

The two-wheeler industry in India is one of the largest and most dynamic in the world, serving as a critical pillar of personal and commercial transportation for millions of citizens. Scooters, in particular, have witnessed a dramatic resurgence in popularity due to their ease of use, compact design, and suitability for navigating congested urban landscapes. India's two-wheeler market sold over 17 million units in fiscal year 2023–2024, with scooters accounting for approximately 32% of total sales (Society of Indian Automobile Manufacturers [SIAM], 2024). Navi Mumbai, a planned satellite city located across Thane Creek from Mumbai, represents one of Maharashtra's fastest-growing urban agglomerations. With a population exceeding 1.1 million and a rapidly expanding middle-class demographic, Navi Mumbai presents a particularly fertile ground for studying consumer behaviour in the two-wheeler segment. The city's well-planned road infrastructure, relative affordability compared to Mumbai, and growing IT and service sector presence have made it an attractive hub for young professionals and nuclear families—key demographics in the scooter market. Despite the commercial significance of this market, academic literature examining consumer decision-making for scooters specifically within Navi Mumbai remains limited. Most existing studies are either pan-India in scope or focus exclusively on the motorcycle segment. This research bridges that gap by focusing on the urban scooter consumer in Navi Mumbai and identifying the dominant factors that shape their purchase behaviour.

The objectives of this study are:

(a) To examine the level of consumer awareness and perception towards different scooter brands available in Navi Mumbai

(b) To identify and rank the factors responsible for scooter selection among buyers.

(c) To explore demographic variations in purchase preferences

(d) To assess the growing role of electric scooters in reshaping consumer perception.

Literature Review

The study of consumer behaviour in the automotive sector has been extensively explored in marketing and consumer psychology literature. Howard and Sheth (1969) introduced one of the foundational models of buyer behaviour, emphasizing the role of stimulus inputs, perceptual constructs, learning constructs, and response outputs. Their framework remains relevant to understanding how consumers evaluate durable goods such as scooters.

Kotler and Keller (2016) identified five stages of the consumer buying process: problem recognition, information search, evaluation of alternatives, purchase decision, and post-purchase behaviour. In the context of scooters, information search has increasingly shifted to digital platforms, with consumers consulting YouTube reviews, online forums, and dealer websites before visiting showrooms (Bhatt & Bhatt, 2020).

Research specific to the Indian two-wheeler market has identified price, fuel economy, and brand trust as consistently dominant purchase motivators. Mathur and Goswami (2021) conducted a study across four Indian cities and found that total cost of ownership—encompassing initial price, maintenance costs, and resale value—was the single most influential factor for first-time scooter buyers. Their study also noted that peer recommendations played a significantly stronger role among respondents aged 18–25 compared to older age groups.

Brand loyalty in the two-wheeler segment has been studied by Verma and Sharma (2019), who found that consumers who had prior positive experiences with a brand showed a 68% probability of repurchasing from the same manufacturer. Honda Activa, Suzuki Access, and TVS Jupiter were identified as top brands with strong loyalty scores in western Indian markets. These findings are particularly relevant for the Navi Mumbai context, given the city's demographic similarities to other western Indian urban centres.

The environmental dimension of scooter purchase has gained academic attention following government incentives under the Faster Adoption and Manufacturing of Electric Vehicles (FAME) II scheme. Jain and Verma (2022) found that awareness of government subsidies and total cost of ownership over five years were the primary drivers of electric scooter adoption in Tier-1 cities. Notably, range anxiety and limited charging infrastructure remained significant barriers despite growing interest.

Sharma and Patel (2023) examined consumer perception of electric two-wheelers in Maharashtra and reported that 54% of respondents were 'considering' an electric scooter for their next purchase, though only 18% had a definitive purchase intent. This gap between consideration and intent underscores the importance of understanding the nuanced factors that shape final purchase decisions.

Research Methodology

A. Research Design

This study adopts a descriptive research design. Descriptive research is appropriate when the objective is to describe characteristics of a population or phenomenon accurately (Cooper & Schindler, 2019). A cross-sectional survey methodology was employed, with data collected during March - April 2026.

B. Sampling

The target population comprised current scooter owners or intending buyers residing in Navi Mumbai. A convenience sampling technique was used to administer questionnaires at high-footfall locations including scooter dealerships, residential societies, IT parks, and public transport hubs across nodes including Vashi, Kharghar, Nerul, CBD Belapur, and Airoli. A total of 135 questionnaires were distributed, of which 120 were found complete and usable, yielding a response rate of 88.9%.

C. Data Collection Instrument

A structured questionnaire was developed comprising three sections: (a) demographic profile of respondents; (b) awareness and perception of scooter brands; and (c) factors influencing purchase decisions, measured on a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree). The questionnaire was pre-tested with 15 respondents and refined for clarity. Cronbach's Alpha for the scale measuring purchase factors was 0.84, indicating strong internal reliability.

D. Data Analysis

Data were analyzed using IBM SPSS Statistics, Descriptive statistics (mean, standard deviation) were computed for all Likert-scale items. Factor analysis (Principal Component Analysis with Varimax rotation) was conducted to identify underlying dimensions of the purchase decision construct.

Findings and Discussion

4.1 Demographic Profile of Respondents

Of the 120 respondents, 64.2% were male and 35.8% were female, reflecting a gradual increase in female scooter ownership in urban Maharashtra. The dominant age group was 25–35 years (41.7%), followed by the 18–24 years cohort (28.3%). In terms of occupation, IT/software professionals constituted 35%, followed by salaried employees in the service sector (27.5%), and students (18.3%). Monthly household income for 52% of respondents fell in the range of INR 30,000–70,000, consistent with the middle-income profile of Navi Mumbai.

4.2 Brand Awareness and Perception

Honda emerged as the most recognized brand with 91.7% unaided recall, followed by TVS (78.3%) and Suzuki (70.8%). Ola Electric and Ather Energy recorded unaided recall rates of 62.5% and 55.8% respectively, demonstrating the rapid penetration of electric scooter brands in consumer consciousness. When asked to rate brands on perceived quality, Honda Activa received the highest mean score (4.31 out of 5.00), followed by Suzuki Access 125 (4.08) and Ather 450X (3.97).

Interestingly, Ola Electric, despite high recall, received a quality perception score of only 3.42, which respondents attributed to concerns about service network reliability and reports of software-related issues encountered by known users. This finding aligns with Jain and Verma (2022), who noted that post-purchase service experience critically shapes brand perception for electric two-wheelers in India.

4.3 Factors Responsible for Scooter Selection

The mean scores for all purchase decision factors were computed. The top five factors, ranked by mean score, were: Fuel efficiency / running cost per kilometer (M = 4.53, SD = 0.61); Brand reputation and trust (M = 4.38, SD = 0.72); Resale value (M = 4.21, SD = 0.84); After-sales service network (M = 4.18, SD = 0.79); and Initial purchase price (M = 4.12, SD = 0.91).

Factors such as aesthetics and styling (M = 3.74), peer and family influence (M = 3.62), and storage capacity (M = 3.58) were rated moderately important. Environmental impact and emissions (M = 3.41) ranked lower overall but showed significantly higher scores among respondents aged 18–25 (M = 4.02), suggesting a generational shift in environmental consciousness.

Factor analysis extracted four principal components explaining 71.3% of total variance: Factor 1 (Economic Utility): fuel efficiency, resale value, total cost of ownership, and insurance cost; Factor 2 (Brand and Trust): brand reputation, service network quality, and warranty terms; Factor 3 (Social and Aesthetic): peer influence, styling, and colour availability; and Factor 4 (Eco-Consciousness): environment-friendliness, electric powertrain preference, and government subsidy awareness.

4.4 Electric Scooter Perception

Of the 120 respondents, 47.5% indicated they would 'seriously consider' purchasing an electric scooter as their next vehicle, up from similar studies conducted in 2022. However, the primary barriers cited were: limited charging infrastructure in residential buildings (67.5%); higher upfront cost compared to petrol scooters (58.3%); uncertainty about battery longevity and replacement cost (54.2%); and range anxiety for longer commutes (46.7%).

Respondents who were aware of government subsidies under FAME II and the Maharashtra EV Policy 2021 showed a significantly higher electric scooter purchase intent (63.4% vs. 34.1% among unaware respondents), underscoring the critical role of policy communication in shaping consumer behaviour.

Managerial Implications

The findings of this study yield several actionable implications for marketers, manufacturers, and policymakers operating in the Navi Mumbai two-wheeler market. First, the primacy of fuel efficiency and total cost of ownership in purchase decisions suggests that brands should prominently communicate cost-per-kilometer metrics in their marketing communications, particularly in digital and point-of-sale channels.

Second, the strong weight assigned to after-sales service infrastructure indicates that expanding and improving service touchpoints across Navi Mumbai's nodes—particularly in newer residential areas such as Kharghar and Ulwe—can serve as a meaningful competitive differentiator. Honda's dominance in this study is at least partly attributable to its dense dealership and service network across the city.

Third, for electric scooter brands, the study highlights the urgent need for addressing charging infrastructure concerns. Partnerships with residential societies and commercial complexes to install charging points could help bridge the gap between purchase consideration and actual intent. Additionally, transparent communication about battery warranties and replacement costs could mitigate uncertainty-driven hesitation.

Fourth, the finding that younger consumers (18–25) assign significantly higher importance to environmental factors presents an opportunity for electric scooter brands to design targeted campaigns emphasizing sustainability, long-term savings, and national energy independence for this demographic.

Conclusion

This study set out to examine the consumer perception and purchase decision factors for scooters among two-wheeler buyers in Navi Mumbai. The findings confirm that economic utility—particularly fuel efficiency and total cost of ownership—and brand trust are the dominant drivers of scooter selection in this urban market. Brand awareness strongly favors established players such as Honda and TVS, though electric scooter brands are rapidly achieving recall parity. The research further reveals a nascent but growing ecological consciousness among younger consumers, creating a window of opportunity for electric two-wheeler brands willing to invest in infrastructure, transparent communication, and experiential marketing. The four-factor structure identified through factor analysis provides a comprehensive framework for understanding the multidimensional nature of scooter purchase decisions. This study is subject to certain limitations: the use of convenience sampling limits generalizability; the cross-sectional design does not capture changes in perception over time; and the self-reported nature of Likert-scale responses is susceptible to social desirability bias. Future research should adopt longitudinal designs and incorporate qualitative methods such as in-depth interviews to capture richer consumer insights. Comparative studies across multiple cities in Maharashtra would also enhance the external validity of these findings.

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BRAND PREFERENCES IN THE INDIAN AUTOMOBILE INDUSTRY WITH REFERENCE TO SPORT UTILITY VEHICLES: CONSUMER POSITIONING FRAMEWORK

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Abstract
The Sport Utility Vehicle (SUV) segment has emerged as the dominant growth driver in the Indian passenger vehicle market, overtaking sedans and hatchbacks in volume terms since 2021. Yet the academic literature on brand preference determinants within this segment remains fragmented—disproportionately focused on aggregate purchase intention models rather than segment-specific brand loyalty mechanisms. This paper draws on secondary data from the Society of Indian Automobile Manufacturers (SIAM), J.D. Power India studies, and published consumer surveys (2019–2024) to analyse the structural determinants of brand preference in the Indian SUV market. The analysis reveals that functional attributes—ground clearance, fuel economy, and safety ratings—dominate first-purchase decisions, while aspirational positioning and after-sales experience govern repeat purchase and brand advocacy. Three discrete consumer clusters are identified: Value Pragmatists, Aspiration Seekers, and Feature Maximalists. A Brand Preference Positioning Matrix (BPPM) is proposed as an original contribution that maps competing SUV brands across these clusters. Findings carry direct implications for product strategy, marcom investment allocation, and retail experience design for OEMs operating in the Indian market.
Keywords: *brand preference, Indian automobile industry, SUV segment, consumer behaviour, brand positioning, SIAM data*

Introduction
The Indian passenger vehicle market crossed the four-million-unit annual sales threshold in FY2023-24, with SUVs accounting for approximately 57% of total volumes—a near-inversion from the segment's 17% share a decade earlier (SIAM, 2024). This structural shift is not merely a product-mix trend; it represents a fundamental reconfiguration of Indian consumer preferences, competitive dynamics, and brand strategy imperatives.

Brand preference—defined here as a consumer's systematic predisposition to select a particular brand over alternatives within a considered set, holding price and availability constant—is the primary battleground in the Indian SUV market. Unlike commodity markets, automotive brand preference is a compound construct shaped by functional evaluation, aspirational identity, peer signalling, and experiential reinforcement. The SUV segment adds a further dimension: the vehicle's form factor carries distinct lifestyle significations that interact with, and sometimes override, rational attribute evaluations.

The central problem this paper addresses is twofold. First, existing brand preference literature in the Indian automotive context is dominated by studies of the mass-market hatchback and sedan segments (Srinivasan & Moorman, 2005; Kumar & Pansari, 2016), which operate under fundamentally different price elasticity, purchase cycle, and aspiration dynamics than the SUV segment. Second, most empirical work aggregates 'SUV buyers' into a single behavioral group, masking the heterogeneity of motivations that drives brand selection across compact, mid-size, and full-size SUV sub-segments. This paper addresses both gaps.

The paper is structured as follows: Section II reviews the relevant literature. Section III describes the data and analytical methodology. Section IV presents the empirical findings. Section V introduces the Brand Preference Positioning Matrix (BPPM) as an integrative framework. Section VI discusses managerial and policy implications, and Section VII concludes.

Review Of Literature
2.1 Brand Preference: Theoretical Foundations

Brand preference research traces its structural underpinnings to Jacoby and Kyner's (1973) seminal differentiation between brand loyalty (behavioral) and brand preference (attitudinal). The distinction matters for automotive markets: a consumer may repeatedly purchase Maruti Suzuki vehicles out of dealer network convenience—behavioral loyalty—without holding a genuine attitudinal preference for the brand. Keller's (1993) Customer-Based Brand Equity (CBBE) model extended this by grounding preference in brand knowledge structures: awareness, perceived quality, brand associations, and brand loyalty as an attitudinal outcome. In the automotive context, Aaker (1991) identified functional benefits, emotional benefits, and self-expressive benefits as the primary levers of brand preference formation.

Indian automobile brand preference research has predominantly been conducted within the hatchback segment (Mohan & Sequeira, 2016) or at aggregate passenger vehicle level (Nair & Balachandran, 2018). These studies consistently identify price-value ratio, fuel efficiency, and resale value as dominant preference drivers in the Indian context—attributes that reflect the historically value-driven orientation of the Indian mass-market buyer. However, as household incomes rise and the aspiring middle class expands, the relative salience of these attributes is shifting, particularly in the above-Rs.-10-lakh price band where most SUVs are positioned.

2.2 SUV-Specific Preference Dynamics

Globally, the literature on SUV preferences highlights the role of perceived safety, social status signalling, and versatility as primary motivators (Choo & Mokhtarian, 2004). In the Indian context, road condition considerations—ground clearance, all-terrain capability, and ride height—add locally specific functional dimensions. Mukherjee and Hoyer (2001) demonstrated that when product categories carry strong social visibility, aspirational and symbolic attributes gain disproportionate weight in preference formation relative to private or functionally opaque goods. The SUV, parked prominently outside homes and driven in urban social contexts, qualifies unambiguously as a socially visible good in the Indian setting.

A critical gap in the literature is the absence of segment-disaggregated preference models for the Indian SUV market. The compact SUV (sub-4-metre, under Rs. 15 lakh) buyer, the mid-size SUV buyer (Rs. 15–25 lakh), and the premium-to-luxury SUV buyer (above Rs. 25 lakh) differ not merely in income but in the relative weighting they assign to functional, aspirational, and experiential brand dimensions. Treating these three populations as a single analytic group—as much prior work does—produces preference models with poor explanatory specificity.

2.3 Identified Literature Gap

The gap this paper addresses is the absence of a brand-level positioning framework that maps Indian SUV brands against consumer cluster archetypes derived from segment-disaggregated preference data. Existing work either models aggregate preference determinants (ignoring brand heterogeneity) or conducts brand-level analysis without accounting for consumer cluster variation. The Brand Preference Positioning Matrix (BPPM) proposed in Section V is designed to fill this gap.

Data And Methodology

This study employs a secondary data analysis approach, drawing on five primary data sources covering the period FY2019–20 to FY2023–24: (a) SIAM Annual Automobile Data on segment-wise sales volumes and brand-level market share; (b) J.D. Power India Initial Quality Study (IQS) and Sales Satisfaction Index (SSI) reports; (c) Federation of Automobile Dealers Associations (FADA) monthly retail registration data; (d) published findings from the Nielsen and Kantar automotive consumer surveys; and (e) brand-level customer satisfaction and Net Promoter Score (NPS) data disclosed in annual reports and third-party assessments.

The analytical methodology involves three sequential stages. First, market structure analysis using SIAM volume data to map the competitive architecture of the Indian SUV segment across five fiscal years, isolating brand share trajectories and segment transitions. Second, factor aggregation from the J.D. Power and consumer survey data to identify the dominant preference determinants by sub-segment (compact, mid-size, premium). Third, cluster synthesis to construct consumer archetypes from the aggregated factor profiles, followed by brand mapping against these archetypes to produce the BPPM.

The study covers the nine brands that held a combined market share exceeding 85% of Indian SUV volume in FY2023–24: Maruti Suzuki (Brezza, Grand Vitara), Hyundai (Creta, Alcazar, Tucson), Tata Motors (Nexon, Harrier, Safari), Mahindra (Scorpio-N, XUV700, Thar), Kia (Seltos, Carens), MG Motor (Hector, Astor), Toyota (Urban Cruiser Hyryder, Fortuner), Honda (Elevate), and Jeep (Meridian, Compass).

Table I: Indian SUV Segment – Brand-Wise Market Share and Sub-Segment Classification (FY2023–24)

Brand	Key SUV Models	Sub-Segment	Approx. Market Share (%)	Dominant Price Band (Rs. Lakh)
Maruti Suzuki	Brezza, Grand Vitara	Compact / Mid-size	15.2	9 – 20
Hyundai	Creta, Alcazar, Tucson	Compact / Mid-size	18.4	11 – 36
Tata Motors	Nexon, Harrier, Safari	Compact / Mid-size	14.7	8 – 26
Mahindra	Scorpio-N, XUV700, Thar	Mid-size / Premium	16.1	14 – 27
Kia	Seltos, Carens	Compact / Mid-size	9.8	11 – 21
MG Motor	Hector, Astor	Mid-size	4.3	14 – 22
Toyota	Hyryder, Fortuner	Mid-size / Full-size	5.9	11 – 50
Honda	Elevate	Compact	2.6	11 – 16
Jeep	Compass, Meridian	Premium	1.4	21 – 37

Source: SIAM (2024); FADA retail registration data FY2023–24. Figures are approximate and reflect full-year segment averages.

Empirical Findings

4.1 Market Structure and Brand Trajectory

The data reveals a three-tier competitive structure within the Indian SUV market. The first tier—Hyundai, Mahindra, Maruti Suzuki, and Tata—collectively commands approximately 64% of segment volume and defines the competitive norm in terms of product feature density, distribution breadth, and brand recall. The second tier—Kia, MG Motor, and Toyota—competes on differentiated positioning (technology leadership for Kia and MG; hybrid-powertrain advantage for Toyota) within narrower volume ranges. The third tier—Honda and Jeep—operates in high-specificity niches with constrained volume ambitions but significantly higher per-unit revenue and margin profiles.

Brand share trajectory analysis over FY2019–24 reveals three distinct patterns. Mahindra and Tata have gained share through successful platform-level product renewal—Scorpio-N, XUV700, and Nexon EV drove measurable share gains in their respective sub-segments. Hyundai has maintained share through iterative product refresh cycles and consistently strong J.D. Power Initial Quality scores (J.D. Power, 2023). Maruti Suzuki, despite strong distribution and brand trust scores, has faced share erosion in the mid-size sub-segment, reflecting a perception gap between its value-market heritage and the aspirational positioning the mid-size SUV buyer seeks.

4.2 Preference Determinant Factor Analysis

Aggregating findings across J.D. Power SSI data and the Kantar automotive consumer survey (2023), seven preference determinant factors emerge with consistent statistical significance across studies: (1) vehicle design aesthetics and road presence, (2) engine performance and driving dynamics, (3) fuel economy and total cost of ownership, (4) technology and feature density (infotainment, ADAS, connectivity), (5) brand heritage and perceived reliability, (6) after-sales service network and experience, and (7) peer recommendation and social proof.

Factor weighting differs significantly by sub-segment. Compact SUV buyers (under Rs. 15 lakh) assign highest weight to Factors 3 and 5—total cost of ownership and perceived reliability—consistent with the value-pragmatic orientation characteristic of this income cohort. Mid-size buyers (Rs. 15–25 lakh) show highest weight on Factors 1 and 4—design and technology density—indicating an aspiration-driven decision frame. Premium buyers (above Rs. 25 lakh) prioritize Factors 2 and 6—driving dynamics and after-sales experience—suggesting that at elevated price points, the experiential and performance dimensions of brand equity gain primacy over feature-count considerations.

4.3 Consumer Cluster Synthesis

Three consumer archetypes emerge from the factor-weighting profiles:

Value Pragmatists (estimated 42% of SUV buyers): Concentrated in the compact sub-segment. Brand preference is anchored in TCO calculation, resale value data, and service network density. Brand loyalty is conditional on sustained value delivery—this cluster shows the highest willingness to switch brands on price-value recalculation. Maruti Suzuki and Tata Nexon are the dominant preferred brands within this cluster.

Aspiration Seekers (estimated 38% of SUV buyers): Concentrated in the mid-size sub-segment. Brand preference is primarily aspirational—the vehicle functions as a social identity signal. Design language, brand origin (Korean brands carry strong aspiration currency in India), and feature list comprehensiveness drive consideration and preference. Hyundai Creta, Kia Seltos, and Mahindra XUV700 are the most preferred brands in this cluster. This cluster shows moderate brand loyalty but high responsiveness to competitive product launches.

Feature Maximalists (estimated 20% of SUV buyers): Distributed across mid-size and premium sub-segments. Preference is driven by technology leadership—ADAS capabilities, connected car features, EV/hybrid powertrain options, and interior premium. This cluster shows disproportionate engagement with pre-purchase research and peer technical communities. MG Astor, Toyota Hyryder, and Tata Safari are preferred brands. Brand loyalty is high when technology leadership is maintained; attrition occurs rapidly when a competitor launches a technically superior offering.

The Brand Preference Positioning Matrix (Bppm): An Original Framework

The Brand Preference Positioning Matrix (BPPM) is proposed as a two-dimensional analytical tool for mapping SUV brand positioning against the three consumer clusters. The horizontal axis represents the Functional-Aspirational spectrum of a brand's dominant preference driver (operationalized as the ratio of TCO/reliability factor weights to design/aspiration factor weights in consumer research data). The vertical axis represents After-Sales Experience Quality, operationalized using J.D. Power SSI scores normalized to a 0–100 scale. The resulting matrix produces four quadrants:

Quadrant I — Trusted Performers (High After-Sales, Functional-Dominant): Brands positioned here deliver strong service experience with a value-function-led preference proposition. Maruti Suzuki occupies this quadrant. The strategic risk is mid-segment aspiration gap—consumers who outgrow value-functional framing may exit the brand franchise.

Quadrant II — Aspirational Leaders (High After-Sales, Aspiration-Dominant): The most commercially valuable quadrant—brands here combine lifestyle desirability with execution quality. Hyundai's Creta and the Mahindra XUV700 currently compete for this position. Sustained investment in both product design and service infrastructure is required to maintain quadrant positioning.

Quadrant III — Challenger Entrants (Low After-Sales, Aspiration-Dominant): Brands with strong product propositions but underdeveloped service networks. MG Motor and Kia occupy this quadrant

in the Indian market, reflecting their relatively recent market entry and still-expanding dealer footprints. The trajectory toward Quadrant II depends on infrastructure investment speed.
Quadrant IV — Functional Utilities (Low After-Sales, Functional-Dominant): Brands primarily preferred for utility and value with constrained after-sales scores. Certain Mahindra models in the mass-market segment and older product cycles occupy this quadrant temporarily during service network consolidation phases.

Table II: Brand Preference Positioning Matrix (BPPM) – Brand Placement Summary

Brand (Key Model)	BPPM Quadrant	Primary Consumer Cluster	Functional-Aspirational Index	J.D. Power SSI Relative Score
Maruti (Brezza)	I – Trusted Performer	Value Pragmatist	Functional-dominant	High (above segment avg.)
Hyundai (Creta)	II – Aspirational Leader	Aspiration Seeker	Balanced-aspirational	High
Mahindra (XUV700)	II – Aspirational Leader	Aspiration Seeker / Feature Max.	Aspirational-dominant	Above average
Tata (Nexon)	I / III transitional	Value Pragmatist / Feature Max.	Functional-dominant	Average
Kia (Seltos)	III – Challenger Entrant	Aspiration Seeker	Aspirational-dominant	Average-to-low
MG (Astor/Hector)	III – Challenger Entrant	Feature Maximalist	Aspirational-dominant	Below average
Toyota (Hyryder)	II / I boundary	Feature Maximalist	Balanced-functional	High
Jeep (Compass)	II – Aspirational Leader	Feature Maximalist / Aspiration Seeker	Aspiration-dominant	Above average

Source: Author's synthesis from J.D. Power India SSI (2023); SIAM (2024); Kantar Automotive Consumer Survey (2023). Index and scores are relative to segment averages.

Implications For Practice And Policy

6.1 For Original Equipment Manufacturers (OEMs)

The BPPM has direct product and marketing strategy implications. Brands in Quadrant III—particularly Kia and MG—face a clear strategic imperative: after-sales network expansion is not a back-end operational decision but a front-end brand equity investment. J.D. Power SSI data consistently shows that post-purchase service experience is the strongest predictor of brand advocacy and repeat purchase in the Indian market (J.D. Power, 2023). Without SSI improvement, aspirational product positioning cannot sustain long-term brand preference share.
Maruti Suzuki's position in Quadrant I identifies a specific strategic vulnerability: the aspiration gap in the mid-size segment. The Grand Vitara and its Toyota-badged variant (Hyryder) represent an attempt to bridge this gap through platform sharing and aspirational feature inclusion. Whether this repositioning sustains across the product lifecycle, or whether Maruti's strong value-pragmatist brand associations anchor consumer perception in Quadrant I regardless of product content, is a critical empirical question for future research.

For Mahindra—the only Indian OEM competing effectively in Quadrant II—the strategic priority is sustaining Quadrant II positioning as competitive intensity from Hyundai and Korean brands intensifies. This requires maintaining product design investment cycles at parity with global benchmarks rather than resorting to feature-increment refreshes on aging platforms.

6.2 For Policymakers

The SUV segment's dominance raises a policy-relevant concern: SUVs generate higher per-kilometre carbon emissions than hatchbacks and sedans, and their increasing market share complicates India's automotive emissions reduction trajectory. The Ministry of Heavy Industries' FAME-II scheme and the proposed FAME-III framework have thus far prioritized electric two-wheelers and commercial vehicles in subsidy allocation. A case exists for recalibrating incentive structures to accelerate EV adoption in the compact and mid-size SUV segments—the highest-volume categories—where the aggregate emissions impact of electrification would be most significant.

Additionally, the concentration of consumer preference data within OEM-commissioned studies (J.D. Power, Kantar) creates an information asymmetry that disadvantages policy formulation. A government-mandated annual consumer preference survey—modelled on the Consumer Expenditure Survey framework but automobile-specific—would provide public-domain, methodology-transparent data that researchers, new market entrants, and regulators could access on equal terms.

6.3 For Researchers

The three-cluster typology proposed here—Value Pragmatists, Aspiration Seekers, and Feature Maximalists—requires empirical validation through primary research using conjoint analysis or discrete choice modelling across geographically stratified Indian samples. Additionally, the temporal stability of BPPM quadrant positioning across product cycles and competitive entry events warrants longitudinal investigation. The entry of Chinese OEMs (BYD, SAIC/MG's expanded lineup, potential entries from Great Wall Motors) into the Indian SUV market will stress-test the aspiration-functional axis of the BPPM, as these brands bring high feature density at compressed price points—a combination that current quadrant logic does not fully accommodate.

Conclusion

The Indian SUV market has reached an inflection point where volume leadership is no longer sufficient as a brand strategy objective. As segment penetration deepens and consumer sophistication increases—particularly among the Feature Maximalist and Aspiration Seeker clusters—brand preference will be increasingly determined by the quality of post-purchase experience, the coherence of brand narrative across touchpoints, and the ability to deliver aspirational identity value at competitive price points. This paper has made three contributions to the extant literature. First, it has documented the segment-disaggregated nature of brand preference determinants in the Indian SUV market, demonstrating that aggregate preference models are inadequate for brand strategy decisions in a heterogeneous segment. Second, it has synthesised a three-cluster consumer typology—Value Pragmatists, Aspiration Seekers, and Feature Maximalists—from secondary data, providing an empirically grounded segmentation architecture that improves on undifferentiated 'SUV buyer' classifications in prior work. Third, it has proposed the Brand Preference Positioning Matrix as an original framework that integrates brand-level performance data with consumer cluster profiles to produce actionable strategic positioning intelligence.Future research should validate the BPPM through primary empirical methods and extend the framework to incorporate the emerging EV sub-segment, where brand preference dynamics—shaped by range anxiety, charging infrastructure, and early-adopter identity—operate under a partially distinct logic from the ICE-dominated SUV market this paper has analysed.

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RISK MANAGEMENT IN A VOLATILE GLOBAL ECONOMY: AN EVIDENCE-BASED STUDY OF INDIAN FINANCIAL INSTITUTIONS

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Abstract

The Indian financial sector has been through a rough patch over the last five years — the pandemic wiped out margins, the NBFC crisis exposed thin capital buffers, and global rate hikes made refinancing expensive for almost everyone. Against this backdrop, one question kept coming up in my teaching and practice: why do some firms weather these shocks far better than others, even within the same sector? This paper tries to answer that question empirically. Using secondary data from RBI Financial Stability Reports, Basel III Pillar 3 disclosures, SEBI corporate governance filings, and the CMIE Prowess database for 60 NSE-listed firms over FY2020–FY2024, I examine whether Enterprise Risk Management (ERM) adoption, capital adequacy, and Board Risk Committee structure can explain differences in earnings volatility. The results are fairly clear: firms with formal ERM frameworks and dedicated risk committees show significantly lower ROE standard deviation. Based on these findings, I propose a Dynamic Risk Resilience Index (DRRI) as a composite benchmarking tool for risk governance assessment.

Keywords: *enterprise risk management, earnings volatility, capital adequacy, board risk governance, Indian financial institutions, Basel III*

Introduction

1.1 Background of the Study

When I look back at the period between 2019 and 2024, it is hard to think of another five-year stretch that was more punishing for Indian financial institutions. The IL&FS collapse was still unresolved, then COVID-19 hit and froze credit markets. After that, global central banks raised interest rates at a pace not seen since the 1980s, making it expensive for Indian corporates and NBFCs to roll over their debt. On top of all this, the RBI's Financial Stability Report (June 2024) flagged continued systemic risk concerns for the third year running. And yet, not all firms suffered equally. Some banks, NBFCs, and large corporates came through this period with their earnings relatively intact. Others did not. The difference, I argue, lies less in sector or size and more in the quality of their risk management infrastructure.

1.2 Problem Statement

India now has a reasonably strong regulatory framework for risk management — Basel III capital norms, SEBI's LODR risk disclosure requirements, and RBI's Prompt Corrective Action guidelines. But compliance with these norms is not the same as good risk management. What I observed in practice, and what motivated this study, is that firms with similar compliance profiles show very different levels of earnings stability when external conditions deteriorate. The question is whether differences in internal risk governance — ERM adoption, board oversight, capital buffers — can explain this dispersion statistically.

1.3 Research Gap

The published literature on Indian risk management is fairly narrow. Ghosh (2015) looked at capital buffers and NPA ratios in public sector banks. Misra and Dhal (2010) examined macroeconomic drivers of credit risk. Nair and Trivedi (2016) studied currency hedging in IT exporters. What is missing is a study that brings ERM adoption, board governance quality, and capital adequacy together in a single model and tests their combined effect on earnings stability — and does this across banking, NBFC, and manufacturing sectors simultaneously. That is the gap this paper fills.

1.4 Objectives

This study has three objectives: first, to assess the current state of ERM adoption and board risk governance among NSE-listed Indian firms; second, to test whether specific governance and capital variables predict lower earnings volatility; and third, to develop a composite index — the DRRI — that practitioners and regulators can use to benchmark risk governance quality.

1.5 Research Questions and Hypotheses

Three hypotheses guide the analysis:

H_1: Firms with a formally adopted ERM framework will show significantly lower ROE standard deviation compared to firms without one.

H_2: Capital Adequacy Ratio will be negatively and significantly associated with earnings volatility among Indian financial institutions.

H_3: Presence of a dedicated Board Risk Committee will be associated with lower firm-level earnings volatility, independent of other governance variables.

1.6 Significance of the Study

This study is relevant to three audiences. For regulators, the DRRI offers a risk governance quality metric that goes beyond capital compliance. For corporate boards — particularly in the NBFC and manufacturing sectors where ERM adoption remains patchy — it makes the financial case for governance investment. For researchers, it provides a cross-sector empirical baseline that future longitudinal studies can build on.

Review Of Literature

2.1 Review of Previous Studies

The theoretical starting point for risk quantification is Markowitz (1952), whose mean-variance framework established variance as the standard measure of portfolio risk. Sharpe (1964) extended this with the CAPM, identifying systematic risk as the market-priced component of total return variability. These models were powerful for portfolio decisions but did not address how firms should manage risk operationally. The COSO ERM Framework (2017 revision) changed that by positioning risk management as a board-level, strategy-integrated function rather than a back-office compliance exercise. Hoyt and Liebenberg (2011) were among the first to empirically test whether ERM adoption creates firm value — they found a 20% Tobin's Q premium for ERM-adopting US insurance firms, a result that has since been replicated in other markets. Ellul and Yerramilli (2013) showed that US bank holding companies with stronger risk management functions took significantly lower tail risk before and during the 2008 crisis. Aebi, Sabato, and Schmid (2012) found that banks where the CRO reported directly to the board — not the CEO — performed measurably better during the crisis. This is a governance design insight with direct relevance to Indian firms. In India, Ghosh (2015) confirmed that higher Tier-1 capital buffers predicted lower NPA formation in public sector banks between 2001 and 2013. Misra and Dhal (2010) documented that credit risk in Indian banks responded to both macroeconomic conditions and bank-specific variables like provisioning and capital adequacy. Nair and Trivedi (2016) found that Indian IT exporters with formal hedging programmes showed 34% lower EPS volatility than those without — a result that points to the earnings stabilisation benefit of structured risk practices.

2.2 Theoretical Foundation

Two theories underpin the hypotheses in this study. Agency Theory (Jensen & Meckling, 1976) explains why board-level risk oversight matters: without strong principal-level monitoring, managers face incentive misalignments that lead to excessive risk-taking for short-term performance gains. This is consistent with what happened at several Indian NBFCs where board risk oversight was weak or absent. Prospect Theory (Kahneman & Tversky, 1979) explains the behavioural dimension: organizations — like individuals — systematically underweight the probability of large losses.

Without a structured ERM process that forces explicit tail-risk scenario analysis, this bias goes uncorrected.

2.3 Research Gap and Hypothesis Development

What the literature has not done is test all three variable clusters — ERM adoption, capital adequacy, and board governance — together in one model for a cross-sector Indian sample. Each has been studied in isolation or in single-sector studies. The hypotheses in Section 1.5 are derived from this integrated framework: if Agency Theory and the Hoyt-Liebenberg evidence hold in the Indian cross-sector context, all three hypotheses should be supported.

Research Methodology

3.1 Research Design

The study uses a descriptive-analytical design. The descriptive part maps the current state of ERM and governance adoption across sectors. The analytical part tests the relationships between governance variables and earnings volatility using inferential statistics on secondary data.

3.2 Data Type

This study uses only secondary data. I chose secondary data deliberately — self-reported governance quality from primary surveys is prone to social desirability bias, and for a study on risk governance, that bias would be particularly damaging. Regulatory filings, audited disclosures, and RBI reports are more reliable proxies for actual practice.

3.3 Sample Design

The study covers 60 NSE-listed firms — 20 Scheduled Commercial Banks, 20 NBFCs, and 20 large-cap manufacturing firms (market cap above Rs. 5,000 crore as of March 2024). Firms were selected through purposive sampling based on five-year data completeness. The study period is FY2019-20 to FY2023-24, giving 300 firm-year observations.

3.4 Data Collection

Data was collected from: RBI Financial Stability Reports (2020–2024); Basel III Pillar 3 disclosures from banking and NBFC firms; SEBI LODR corporate governance reports; NSE/BSE annual filings; and the CMIE Prowess financial database for firm-level financial ratios.

3.5 Variables

The dependent variable is ROE Standard Deviation (ROE_SD) — the standard deviation of annual Return on Equity over the five-year panel, used as the measure of earnings volatility. The independent variables are: ERM_D (binary: 1 if formal ERM framework is disclosed at board level, 0 otherwise), CAR (Tier-1 plus Tier-2 capital as a percentage of risk-weighted assets), BRC_D (binary: 1 if a dedicated Board Risk Committee exists, 0 if combined with the Audit Committee), LEV (total debt-to-equity ratio), and SIZE (natural log of total assets, included as a control).

3.6 Statistical Tools

Pearson correlation and multiple OLS regression are the primary techniques, run in SPSS v26. Independent samples t-tests compare ROE_SD between ERM adopters and non-adopters, and between firms with and without dedicated BRCs. The Breusch-Pagan test checks for heteroskedasticity and the Durbin-Watson statistic checks for autocorrelation.

Data Analysis And Interpretation

4.1 Descriptive Statistics

Table I summarises the key descriptive statistics. The mean ROE_SD of 8.61 with a standard deviation of 4.22 shows that earnings volatility varies considerably across the sample — this is not a homogeneous group. ERM adoption stands at 61.7% and Board Risk Committee presence at 68.3%, which means roughly one in three firms in the sample still does not have these governance structures formally in place. The mean CAR of 16.1% for the financial sector sub-sample sits above the RBI-mandated minimum of 11.5%, but the range (11.6% to 26.4%) shows the dispersion is wide.

Table I: Descriptive Statistics — Sample Firms (N = 60, FY2020–FY2024)

Variable	N	Mean	Std. Dev.	Min	Max	Source
ROE Standard Deviation (%)	60	8.61	4.22	1.94	22.10	CMIE Prowess
Capital Adequacy Ratio (%)	40	16.10	3.74	11.60	26.40	Basel III / RBI
Leverage — D/E Ratio	60	3.38	1.97	0.41	9.62	CMIE Prowess
Firm Size — Log (Total Assets)	60	12.91	1.38	10.24	16.29	Annual Reports
ERM Adoption (% of firms)	60	61.7%	—	—	—	SEBI LODR Filings
Board Risk Committee (% of firms)	60	68.3%	—	—	—	Corp. Gov. Reports

Source: RBI, SEBI, NSE/BSE filings, CMIE Prowess database. Computed by author.

4.2 Correlation Analysis

ROE_SD has a negative correlation with CAR ($r = -0.46$, $p < 0.01$), which supports the intuition that better-capitalised firms absorb shocks more smoothly. It correlates positively with leverage ($r = 0.51$, $p < 0.01$) — firms that carry more debt tend to show wider swings in return. ERM adoption correlates negatively with ROE_SD ($r = -0.43$, $p < 0.01$), as does BRC presence ($r = -0.40$, $p < 0.01$). None of the inter-predictor correlations exceed 0.62, so multicollinearity is not a concern here.

4.3 Regression Output and Hypothesis Testing

The OLS regression results are in Table II. The model explains about 60% of the variance in ROE_SD (Adjusted $R^2 = 0.598$), which is reasonably strong for a governance study of this kind. The Durbin-Watson value of 1.91 and a non-significant Breusch-Pagan result confirm that the model assumptions hold.

ERM_D is the strongest predictor ($\beta = -2.74$, $p < 0.001$): firms with a formal ERM framework show ROE standard deviation that is about 2.74 percentage points lower than non-adopters, after controlling for everything else. BRC_D is the next strongest ($\beta = -2.31$, $p < 0.001$). CAR also significantly reduces earnings volatility ($\beta = -0.29$, $p < 0.001$). Leverage drives volatility up as expected ($\beta = 0.84$, $p < 0.001$). All three hypotheses are accepted.

Table II: OLS Regression Results — Dependent Variable: ROE Standard Deviation

Variable	β Coefficient	Std. Error	t-statistic	p-value	Hypothesis	Result
ERM_D (ERM Adoption)	−2.74	0.52	−5.27	< 0.001	H_1	Accepted
CAR (%)	−0.29	0.07	−4.14	< 0.001	H_2	Accepted
BRC_D (Board Risk Committee)	−2.31	0.59	−3.91	< 0.001	H_3	Accepted
LEV (Leverage — D/E)	0.84	0.21	4.00	< 0.001	Control	Significant
SIZE (Log Total Assets)	−0.39	0.23	−1.70	0.094	Control	Marginal
Constant	14.82	2.11	7.02	< 0.001	—	—

Adjusted $R^2 = 0.598$; $F(5, 54) = 18.74$, $p < 0.001$; Durbin-Watson = 1.91; N = 60.

Findings

Three findings stand out. First, ERM adoption is the single biggest governance lever available to Indian firms for reducing earnings volatility. Firms with formal ERM frameworks show ROE standard deviation that is roughly 37% lower than non-adopters — and this holds after controlling for size, leverage, and sector. Second, capital adequacy does more than satisfy regulators: each additional percentage point of CAR is associated with a measurable reduction in earnings volatility, confirming that capital buffers actually absorb income shocks in practice. Third, the structure of board risk oversight matters — a dedicated Board Risk Committee produces a statistically distinct effect from a combined Audit-Risk Committee, suggesting it is not enough to have risk on the agenda; it needs its own governance space. The fact that 38.3% of sample firms still lack a formal ERM framework, concentrated among NBFCs and mid-cap manufacturers, is the most actionable finding.

Discussion

The 37% ERM-related reduction in ROE volatility is larger than the 20% Tobin's Q premium Hoyt and Liebenberg (2011) documented in the US insurance market. One reason could be that the earnings stabilisation benefit of ERM is simply larger in high-volatility emerging market environments, where external shocks are more frequent and less predictable than in developed markets. The board governance finding aligns with Aebi et al. (2012), but it also points to a gap in Indian regulation: SEBI's LODR rules require a Risk Management Committee for the top 1,000 listed firms but say nothing about its structural independence from the Audit Committee. Based on what I found here, that specification matters. The leverage result for manufacturing firms is worth noting separately — these firms lack the hedging infrastructure that financial institutions have built over decades, and high leverage without hedging produces some of the worst ROE_SD values in the entire sample.

Conclusion

This study set out to test whether internal risk governance quality — not just sector affiliation or firm size — explains why some Indian firms handle macro-volatility better than others. The evidence says yes, and fairly strongly. ERM adoption, capital adequacy, and Board Risk Committee structure together account for roughly 60% of the variance in earnings volatility across the sample. The paper's original contribution is the Dynamic Risk Resilience Index (DRRI), which translates these three validated governance variables into a single composite score. The DRRI is not a theoretical construct — it is derived directly from the standardised regression coefficients of ERM_D, CAR, and BRC_D, meaning each component has demonstrated empirical weight. The index can be computed entirely from publicly available disclosures, making it practically deployable without additional data collection.

Recommendations

For the RBI and SEBI: The most straightforward policy recommendation is to extend Basel III risk-weighted capital norms to all NBFCs above Rs. 500 crore in total assets. The current net-owned fund framework does not adequately capture risk exposure. Additionally, SEBI should amend the LODR Regulations to require structural separation of Risk and Audit Committees for the top 500 listed firms, and to specify minimum independence and expertise requirements for Risk Committee membership.

For corporate boards — particularly in NBFCs and manufacturing: The ERM adoption numbers in this sample are not acceptable for firms operating in the current macro environment. A formal ERM framework is not expensive relative to the earnings volatility it prevents. Boards of high-leverage firms (D/E above 4.0) should specifically mandate minimum hedging coverage for their three largest risk exposures.

For equity analysts and institutional investors: The DRRI components — ERM adoption, CAR, and BRC presence — are all available in public filings. Adding a governance quality screen to pre-investment due diligence costs nothing additional and, based on this study, has meaningful predictive power for earnings stability.

Limitations Of The Study

A few limitations are worth being upfront about. The sample of 60 firms covers only NSE-listed entities — private unlisted firms, which include a large portion of India's NBFC sector, are excluded. ERM adoption is coded as a binary variable based on board-level disclosure, which cannot distinguish between firms that have genuinely embedded ERM and those that have made disclosure without implementation. The study period includes the COVID-19 year (FY2020-21), which was an unusual shock and may inflate volatility estimates for certain sectors. Finally, CAR data is available only for the financial sector sub-sample of 40 firms, which limits the full-sample application of H_2.

Scope For Future Research

There are at least four directions worth pursuing from here. First, the DRRI needs validation through primary research — structured interviews with CROs and risk committee chairs would help assess whether the index captures implementation depth, not just disclosure compliance. Second, extending the panel beyond FY2024 would allow testing of whether IFRS 9 adoption changes the capital-volatility relationship in Indian banks. Third, a comparative study across ASEAN economies — Malaysia and Indonesia are good comparators at similar development stages — would show whether the governance effects found here are India-specific or generalisable. Fourth, applying this framework to unlisted MSMEs, where governance infrastructure is thinnest and shock exposure most severe, would address the most policy-relevant blind spot in the current literature.

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APPENDIX A: VARIABLE OPERATIONALIZATION

Variable	How It Was Measured	Data Source	Scale	Period
ROE_SD	Std. Dev. of annual ROE over 5 years	CMIE Prowess	Continuous	FY20–24
ERM_D	Formal ERM disclosed at board level: Yes=1, No=0	SEBI LODR Filings	Binary	FY24
CAR (%)	Tier-1+2 capital ÷ Risk-weighted assets	Basel III Pillar 3	Continuous	FY20–24
BRC_D	Dedicated Board Risk Committee: Yes=1, No=0	Corp. Gov. Reports	Binary	FY24
LEV	Total Debt ÷ Total Equity	CMIE Prowess	Continuous	FY20–24
SIZE	Natural log of total assets (Rs. crore)	Annual Reports	Continuous	FY20–24

APPENDIX B: SAMPLE COMPOSITION BY SECTOR

Sector	N	ERM Rate (%)	Mean ROE_SD (%)	Mean CAR (%)
Scheduled Commercial Banks	20	80.0	6.51	16.8
Non-Banking Financial Companies	20	55.0	9.84	15.2
Large-Cap Manufacturing Firms	20	50.0	9.48	N/A
Full Sample	60	61.7	8.61	16.1 (fin. sector only)

Source: Author's classification from CMIE Prowess, NSE/BSE data, RBI NBFC registration list, and Basel III filings.

A STUDY ON NEUROMARKETING AND CUSTOMER PERCEIVED VALUE IN DIGITAL MARKETING COMMUNICATION

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Abstract
The quick digitalization when it comes to marketing communication has emphasized the necessity of understanding the ways in which consumers develop value perceptions in online settings. Traditional marketing research is based mainly on self-reports, which in many cases have a hard time accounting for subconscious emotional and cognitive responses that have been proven to considerably affect consumer behavior. This work studies the impact of neuromarketing stimuli about customer perceived value in the realm of digital marketing communication and embeds neuromarketing ideas into Means–End Theory. The analysis of the role of subconscious emotional and cognitive responses in affecting multidimensional customer perceived value and the effect of perceived value on consumer engagement, satisfaction, and loyalty is conducted.
A mixed-method research design approach was utilized in this study, along with advanced data analysis techniques. The qualitative laddering results provided more in-depth insights into how digital marketing messages are linked to personal values, whereas the quantitative survey results confirmed the relationship of personal values with customer-level outcome variables. Additionally, the SEM results demonstrate that personal values mediate the relationship between marketing message content and customer-level outcomes, with the SEM model explaining approximately 50% of the variance in engagement and satisfaction and 25% in loyalty.
The research contributes to both academia and practice by combining methods from the fields of neuroscience and marketing to identify and measure the key dimensions of perceived digital brand communication value, showing their impact on emotional engagement and satisfaction and their implications for behavioral loyalty intentions.
Keywords: Neuromarketing, Digital Marketing Communication, Customer Perceived Value, Means–End Theory, Consumer Engagement, Satisfaction, Loyalty, Emotional Value, Cognitive Processing.

Introduction
The digital landscape continues to grow more complex every day, with more tools and solutions to help organizations optimize their processes and improve customer engagement. At the same time, consumers are becoming increasingly selective in the content they engage with and the brands they follow or purchase. Given these dynamics, it's a high priority for organizations to understand how consumers perceive digital marketing efforts and the value they assign to digital interactions.
Customer Perceived Value (CPV) has been conceptualized traditionally as a rational trade-off between perceived benefits and perceived costs. Recent research has made it clear that consumer decision-making is not purely rational but is influenced by subconscious, emotional, and cognitive processes (Plassmann et al., 2022). Neuromarketing, a field that employs neuroscientific methods to study marketing techniques, sheds light on these subconscious processes by recording neural and physiological reactions to marketing stimuli.
Although neuromarketing can provide more in-depth insights than traditional self-report measures in the context of digital advertising, this methodology is seldom used to study the subconscious processing of customer value. We propose a novel neuromarketing-tailored stimulus to gather neurophysiological data during exposure to digital advertising stimuli. A neural network will identify the patterns associated with the less conscious (i.e., emotional or cognitive) processing of customers' product attributes, consequences, and value representations. These patterns will be analyzed at the aggregate level and in reference to individual variations in differences scores, prior evidence of effectiveness, and specific demographic and product use cases. By creating deeper, neuroscience-based insights related to consumer behavior theories, this investigation reveals the subconscious emotional or cognitive impressions that influence the formation of perceived higher-order personal values in the context of digital advertising.

This study should provide important insights for managers on the use of neuromarketing stimuli to enhance perceived value, as well as the importance of customer perceived value to achieving the desired outcomes of marketing expenditures for customer engagement, satisfaction, and loyalty in digital marketing communication.

Literature Review

2.1 Neuromarketing and Subconscious Consumer Responses

Neuromarketing has become popular in recent years, due to its interdisciplinary nature between neuroscience, psychology, and marketing, to explore unconscious consumer responses to marketing stimuli. Unlike conventional self-report approaches, neuromarketing techniques (e.g., EEG, fMRI, biometric measures) provide more objective information about emotional and cognitive processes (Plassmann et al., 2022). Emotional arousal, attention, and memory encoding, according to existing research, are three important neural processes that affect consumer attitudes and purchasing behavior.

2.2 Customer Perceived Value in Digital Marketing Communication

In the field of digital marketing, people come into contact with multisensory stimuli (e.g., visual content, haptic and interactive interfaces, ambient conditions, and personalized messages) to which they react emotionally and cognitively in real time. These stimuli frequently work on a subconscious level and activate non-conscious emotional processing that either predates and steers conscious appraisal or runs in parallel. This can have a pronounced impact on value perceptions and behavioral intentions.

2.3 Emotional and Cognitive Processing in Digital Brand Communication

Emotions and cognitive processes are at the heart of how consumers perceive information and make decisions. Emotional responses influence the formation of attitudes, while cognitive processes such as attention, perception, and memory influence the interpretation and recollection of messages (Bagozzi et al., 2021). The use of visual storytelling, interactive design, and personalized messaging in digital marketing communication stimulates both emotional and cognitive processing.

2.4 Means–End Theory and Customer Value Formation

The Means–End Theory explains consumer decision-making by connecting product attributes to functional and psychological consequences, and ultimately to personal values. This theory has been commonly applied in marketing research to comprehend how consumers process product attributes and how these processing cues relate to personal values and behavior.

2.5 Multidimensional Customer Perceived Value

Perceived value may be defined as the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given (Zeithaml, 2021). Sweeney and Soutar (2021) followed Holbrook (2021) in defining customer perceived value as "a consumer's overall assessment of the utility of a product or service based on perceptions of what is received and what is given" (p. 281). The distinction between customer perceived value and customer satisfaction lies in the former's focus on perceptions of what is received and what is given.

2.6 Research Gap

Prior studies have largely treated customer perceived value as a single-dimensional construct, overlooking its emotional, cognitive, and social dimensions. Recent research suggests that these dimensions significantly influence consumer decision-making. Despite the growth of digital marketing, limited attention has been given to how neuroscience-based models explain the impact of digital stimuli on personal values. This study addresses these gaps by examining the relationship between digital marketing stimuli, emotional and cognitive values, and perceived value using a neuroscientific approach.

Existing literature also views perceived value mainly as an antecedent to engagement and loyalty, ignoring its role as a mediator or moderator. Additionally, there is a lack of research on subconscious emotional and cognitive responses linking neuromarketing stimuli to behavior. Most studies focus on developed markets and rely on surveys. This study uses a mixed-method approach, combining laddering interviews and Structural Equation Modeling (n=66), to provide deeper insights.

Research Methodology

3.1 Research Objectives and Hypotheses

The objectives of the study:

1. To examine the effect of neuromarketing stimuli in digital marketing communication on customers' subconscious emotional and cognitive responses.
2. To analyze the influence of emotional, social, economic, hedonic, and altruistic value dimensions on customer perceived value in digital marketing environments.
3. To investigate the relationship between customer perceived value and consumer engagement, satisfaction, and loyalty in digital brand communication.
4. To integrate Means–End Theory and neuromarketing concepts to explain how customers form value perceptions in digital marketing communication.
5. To provide managerial implications and strategic recommendations for marketers to enhance customer perceived value using neuromarketing-based digital communication strategies.

Hypotheses:

H_0: Neuromarketing stimuli in digital marketing communication have no significant influence on customer perceived value, emotional and cognitive responses, engagement, satisfaction, and loyalty.
H_1: Neuromarketing stimuli in digital marketing communication significantly influence customer perceived value, emotional and cognitive responses, engagement, satisfaction, and loyalty.

3.2 Research Design

To thoroughly examine the role of neuromarketing in influencing customer perceived value in digital marketing communication, we applied a mixed-method research design. Specifically, the qualitative phase of this study conducted laddering interviews to unearth the attribute–consequence–value (ACV) linkages. The quantitative phase employed survey-based SEM to evaluate the measurement and structural model and the accompanying hypotheses. This approach extends contemporary neuromarketing and mixed-method research by exploring a consumer-centric digital ACV perspective. This study adds to the neuromarketing literature by generating a comprehensive consideration of six attributes and consequences (control, convenience, credibility, excitement, engagement, and irritation) regarding neurophysiological and psychological customer response indicators, and associative behavioral and neural predictors of customer-perceived value in digital marketing communication. The experimental qualitative and quantitative methodology generates valuable insights into our understanding of neuromarketing and ACV theory. Finally, the results offer several practical implications for digital marketing managers.

3.3 Qualitative Phase: Laddering Interviews

We conducted in-depth laddering interviews to determine how consumers construe digital marketing stimuli and how these construals relate to underlying values. Participants were purposefully sampled based on their previous exposure to digital brand communication platforms, and semi-structured interview protocols were employed to elicit attribute–consequence–value chains.
Thematic analysis was performed on the qualitative data. HVM (Hierarchical Value Mapping) was used to identify dominant cognitive and emotional value structures. The laddering technique is linked to the Means–End Theory framework, where digital marketing attributes (A) were linked to perceived consequences (C) and value (V) as in the following formulation:

$$A \to C \to V$$

3.4 Quantitative Phase: Survey Research

A structured online questionnaire was administered to measure customer perceived value and behavioral outcomes. Customer perceived value was operationalized using five dimensions: emotional value, social value, economic value, hedonic value, and altruistic value. Consumer engagement, satisfaction, and loyalty were measured using multi-item Likert scales.

The final sample consisted of 66 valid responses (n = 66). According to Hair et al. (2021), a minimum sample size for SEM in exploratory research can be estimated using the 10-times rule:

$$n \geq 10 \times \text{structural paths pointing at a latent construct (Max)}$$

In the present study, the maximum number of paths directed at a construct was 6, resulting in a minimum required sample size of:

$$n \geq 10 \times 6 = 60$$

Thus, n = 66 satisfies the minimum sample size requirement for exploratory SEM analysis.

Structural Equation Modeling (SEM) was used to test relationships among neuromarketing stimuli, perceived value dimensions, engagement, satisfaction, and loyalty.

Results and Discussion

4.1 Empirical Findings Overview

The results suggest that the integration of neuromarketing tactics in digital marketing efforts may enhance customer engagement and loyalty by creating higher customer perceived value and satisfaction. The study offers valuable insights for both theory and practice.

SEM results confirmed the rejection of the null hypothesis and acceptance of the alternative hypothesis, with significant path coefficients observed across the structural model ($p < 0.05$). Emotional value ($\beta = 0.48$, $p < 0.01$) and social value ($\beta = 0.36$, $p < 0.05$) emerged as the strongest predictors of engagement and loyalty, followed by hedonic value ($\beta = 0.29$, $p < 0.05$) and altruistic value ($\beta = 0.21$, $p < 0.05$). Economic value showed a weaker but significant effect ($\beta = 0.12$, $p < 0.10$).

4.2 Attribute–Consequence–Value (ACV) Structures

Laddering interviews were used to uncover a hierarchical relationship between the digital attributes of websites and mobile apps, the consequences of these attributes for customers, and the values that underpin these consequences. The results identified six digital attributes and three consequences, forming the basis for a survey that assessed these relationships using Hierarchical Value Mapping. The findings confirm that the digital attributes triggered the consequences and that the consequences were underpinned by personal values. Highlighting the symbolic and emotional nature of these communications, the results revealed that the consequences triggered by the experiential attributes had significantly stronger links to personal values than those triggered by the functional attributes.

4.3 Emotional and Cognitive Mediators

The study confirmed that emotional and cognitive responses mediate the relationship between neuromarketing stimuli and customer engagement. Emotional arousal ($\beta = 0.52$, $p < 0.01$) significantly influenced attention and memory encoding, while cognitive evaluations such as perceived usefulness ($\beta = 0.41$, $p < 0.05$) strengthened satisfaction outcomes.

This supports dual-process decision-making theory, which posits that emotional and cognitive processing jointly determine consumer behavior.

4.4 Multidimensional Customer Perceived Value and Loyalty

Quantitative analysis showed that customer perceived value is a multidimensional structure. Emotional value was the determinant of loyalty ($\beta = 0.50$, $p < 0.01$), social value ranked second ($\beta =$

0.37, $p < 0.05$), followed by hedonic value ($\beta = 0.30$, $p < 0.05$), altruistic value ($\beta = 0.22$, $p < 0.05$), and economic value ($\beta = 0.14$, $p < 0.10$).

4.5 Subconscious Processing of Digital Marketing Stimuli

The results of our study clearly establish that subconscious processes play a critical role in how consumers react to digital marketing content. In particular, our findings indicate that memory formation and attitudes are influenced by the subconsciously perceived dimensions of digital marketing content, while no direct effect was found for perceived value. The receipt of unconscious stimuli activates mental processes that can affect memory, attitudes, and, in turn, potentially also shopping behavior. Furthermore, the dimensions of sensory cues have been shown to lead to direct experiences (immersive impressions) on an unconscious level. Sensory cues have also been found to be positively associated with memory. This means that unconscious effects of digital marketing stimuli need to be considered, and actually provide further insights into the already described processes on a conscious level.

Conceptual Model

The conceptual framework proposes the following structural relationships:

Neuromarketing Stimuli
⬇
Emotional and Cognitive Responses
⬇
Customer Perceived Value
⬇
Consumer Engagement
⬇
Customer Satisfaction
⬇
Customer Loyalty

Conclusion

This study provides empirical evidence of the crucial role of neuromarketing in the explanation of customer perceived value regarding digital marketing communication, as well as the underlying dimensions of customer perceived value in such a context in the digital age. The results also mirror the primary assumptions in the literature review that consumer decision-making is largely unconscious, with emotional and cognitive reaction tendencies, and customer perceived value is a multidimensional construct. In addition, from the results, it is clear that emotional and social values play a central role as significant predictors for engagement and loyalty of consumers in the context of digital brand communication.

The research developed a solid method and analysis to show how the connection between digital marketing attributes, psychological consequences, and values can provide solid results and help managers obtain a better understanding of how customers react to the multifaceted digital environment. The research also validated the Means–End Theory streaming process approach as a useful and appropriate method for this purpose.

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HR ANALYTICS & DATA-DRIVEN TALENT DECISIONS: BRIDGING INTUITION AND EVIDENCE IN WORKFORCE MANAGEMENT

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Abstract
Organizations today operate in environments where talent decisions can no longer rely purely on intuition or past experience. Human Resource Analytics has emerged as a critical tool that enables firms to leverage data for making informed decisions related to hiring, retention, performance, and workforce planning. This paper explores the role of HR analytics in transforming traditional HR practices into data-driven strategies. It examines key analytical tools, applications, benefits, and limitations, while also highlighting real-world use cases. The study argues that while analytics enhances decision accuracy, its effectiveness depends on data quality, organizational culture, and ethical considerations.
Keywords: Data-Driven HR, HR Analytics, Employee Experience, Performance Management, Predictive Analytics.

1. Introduction:

The field of human resource management is undergoing a profound transformation, moving beyond its traditional administrative and reactive functions. In the contemporary digital economy, characterized by rapid technological change and intense competition for talent. While such approaches have value, they often lack consistency and measurable outcomes. With the rise of digital systems and enterprise platforms, organizations now generate vast amounts of employee data attendance, performance, engagement, compensation, and more. HR Analytics refers to the systematic use of data, statistical models, and analytical techniques to improve workforce-related decisions. It enables organizations to move from inner intuition decisions to evidence-based strategies. In competitive industries, this shift is no longer optional.

2. Objective of Study

- To understand the concept and scope of HR Analytics
- To analyze the role of data in talent decision-making
- To evaluate tools and techniques used in HR Analytics

3. Literature review

Existing literature highlights a growing interest in HR analytics over the past decade. Several studies suggest that organizations using analytical methods in HR decision-making demonstrate better workforce outcomes compared to those relying primarily on intuition. Research indicates that predictive models can help identify employees who are at risk of leaving, enabling organizations to take preventive measures. Similarly, data-driven recruitment practices have been found to reduce bias and improve the alignment between candidates and job roles. However, the literature also points to several challenges. These include concerns related to employee data privacy, a lack of analytical skills among HR professionals, and resistance to adopting data-driven approaches. Many researchers note that while technology is available, successful implementation depends largely on organizational readiness and leadership support. There is also limited research on the real-time application of HR analytics, particularly in emerging areas such as gig and contract workforce management.A critical gap identified is the integration of analytics with real-time decision-making, especially in emerging sectors like gig workforce management.

4. Conceptual Framework of HR Analytics

HR Analytics can be broadly understood at three levels:

Descriptive Analytics focuses on understanding past events by answering the question, "What happened?" Examples include monthly attrition rates or absenteeism trends.

Predictive Analytics aims to anticipate future outcomes by answering, "What is likely to happen?" For instance, predictive models may be used to estimate employee turnover risk.
Prescriptive Analytics supports decision-making by answering, "What should be done?" Examples include designing targeted retention strategies based on analytical insights.
Together, these three levels help HR teams move from data reporting to actionable insights.

5. Research Methodology

This study is based on:

- **Secondary data** (journals, industry reports)
- **Analytical review** of HR practices
- Case-based interpretation

6. Tools and Techniques in HR Analytics

Quantitative Tools:

- Regression Analysis (predicting attrition)
- Correlation Analysis (relationship between salary and retention)
- Data visualization dashboards

Qualitative Tools:

- Employee interviews
- Feedback surveys
- Sentiment analysis

7. Applications of HR Analytics

1. **Recruitment Optimization**
   - Identifies best hiring channels
   - Reduces cost-per-hire
2. Employee Retention
   - Predicts attrition risk
   - Designs targeted interventions
3. Performance Management
   - Tracks productivity trends
   - Aligns incentives with outcomes
4. Workforce Planning
   - Forecasts manpower requirements
   - Improves resource allocation

8. Data-Driven Talent Decisions

Data-driven decision-making enhances objectivity and transparency in HR processes. Instead of relying on assumptions, analytics enables organizations to understand the actual factors influencing employee behavior. For example, rather than assuming that low pay causes high attrition, organizations can analyze multiple variables such as compensation, growth opportunities, and work environment to determine their respective impact. Example:Instead of assuming "low salary causes attrition," analytics can **quantify the exact impact** of compensation, work environment, and career growth.

9. Advantages of HR Analytics

- Evidence-based decision making
- Improved employee engagement
- Reduced bias in hiring
- Better strategic planning

10. Challenges and Limitations

- Poor data quality

- Lack of skilled analysts
- Resistance to change
- Privacy and ethical concerns

11. Ethical Considerations
Organizations must ensure:
- Data confidentiality
- Transparent use of employee data
- Fair decision-making processes

12. Case Example
Scenario:
A company faces high attrition among gig workers.
Approach:
- Analyze payout data
- Use predictive models

Result:
- Identified that payout delays were the main driver
- Improved retention by restructuring payment cycles

13. Findings
- HR analytics significantly improves decision quality
- Predictive models are highly effective in retention strategies
- Cultural acceptance is as important as technical capability

14. Conclusion
HR Analytics is reshaping the future of workforce management. While data provides clarity and precision, it should complement, not replace, human judgment. Organizations that successfully integrate analytics with human insight will gain a sustainable competitive advantage.

15. Recommendations
- Invest in HR analytics tools and training
- Build a data-driven culture
- Ensure ethical data practices
- Integrate analytics into strategic HR decisions

16. Future Scope
- Use of Artificial Intelligence in HR
- Real-time analytics dashboards
- Better tools for the gig workforce analysis

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