INTELLECTRA

YOUTH INNOVATION AND TECHNOLOGY TRANSFORMING IDEAS INTO REAL WORLD

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Intellectra: Youth Innovation And Technology Transforming Ideas Into Real World

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Preface

It gives us immense pleasure to present the proceedings of "Intellectra – Research Forum", a Research Conclave organized on 24th April, 2026 for the management students. The conclave was conceived as a platform to nurture research aptitude, critical thinking, and academic excellence among students by encouraging them to engage in meaningful research activities and scholarly discussions.

The event witnessed enthusiastic participation from management students who presented their research papers on diverse contemporary topics relevant to business, management, economics, finance, marketing, human resources, and emerging trends in the corporate world. Through their research efforts, students demonstrated analytical skills, innovative thinking, and a commitment to academic inquiry.

A significant contribution to the success of this conclave came from the dedicated faculty members who mentored, guided, and supported the students throughout the research process. Their valuable insights, constructive feedback, and continuous encouragement enabled students to refine their ideas and present high-quality research work.

Intellectra – Research Forum served as an enriching learning experience, fostering a culture of research and intellectual exchange. The conclave provided students with an opportunity to showcase their findings, enhance their presentation skills, and engage with peers and academicians in meaningful academic dialogue.

We extend our heartfelt appreciation to all the student researchers, faculty mentors, organizing committee members, and participants whose collective efforts made this event a grand success. It is our sincere hope that this initiative will continue to inspire students to pursue research, innovation, and lifelong learning in their academic and professional journeys.

We proudly present this compilation of research papers as a testament to the dedication, creativity, and scholarly spirit demonstrated by the participants of Intellectra – Research Forum 2026.

Organizing Committee

Intellectra – Research Forum

24th April, 2026

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From Cart to Click: Understanding Grocery Buying Behavior of Women Aged 25–35 Years

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Abstract

This study examines the grocery buying behavior of women aged 25–35 and the factors influencing their preference for online and offline shopping. Primary data were collected from 112 respondents using a structured questionnaire and analyzed using percentage analysis and the chi-square test. The findings show that many respondents still prefer offline grocery shopping due to trust, the ability to check product quality, and immediate purchase. However, online grocery shopping is also gaining popularity because of home delivery, convenience, discounts, and time-saving benefits. The study also identifies certain problems in online shopping, such as late delivery, poor product quality, and wrong product delivery. In addition, the results indicate that product quality and price are the most important factors influencing grocery purchasing decisions. The chi-square test further reveals a significant association between respondents' income level and the frequency of grocery buying. Overall, the study provides useful insights for retailers and online platforms to better understand consumer preferences in the grocery retail sector.

Keywords: *Grocery buying behaviour, Online grocery shopping, Consumer preferences, Women consumers.*

Introduction

The rapid growth of digital technology and e-commerce has significantly transformed consumer shopping behavior across the world. In recent years, the grocery retail sector has experienced a major shift as consumers increasingly move from traditional in-store purchasing to digital platforms. The expansion of smartphones, internet accessibility, and online payment systems has made online grocery shopping more convenient and accessible for consumers. As a result, many retail businesses have adopted digital platforms to provide services such as home delivery, online ordering, and promotional offers in order to meet changing consumer expectations. This shift from physical stores to digital platforms has created a new pattern of consumer behavior often described as the transition "from cart to click."

Among different consumer groups, women play a crucial role in household purchasing decisions, particularly in grocery shopping. In many households, women are primarily responsible for selecting and purchasing daily necessities such as food items, vegetables, and household products. With increasing education levels, professional participation, and busy lifestyles, women between the ages of 25 and 35 are becoming an important segment in the grocery retail market. This group often balances professional responsibilities, household management, and personal commitments, which influences how and where they prefer to shop for groceries. As a result, factors such as convenience, time saving, product quality, price, and trust significantly shape their grocery purchasing decisions.

The emergence of online grocery platforms has provided consumers with several advantages such as doorstep delivery, wider product variety, digital payment options, and attractive discounts. These features make online grocery shopping particularly appealing for working women who may have limited time for visiting physical stores. However, despite the growing popularity of online platforms, many consumers still prefer offline grocery shopping because it allows them to physically examine products, especially fresh food items, before making a purchase. Concerns regarding product quality, delivery delays, and wrong product deliveries may also affect consumers' willingness to rely entirely on online grocery services. Therefore, understanding the factors that influence both online and offline grocery shopping behavior has become an important area of research in the field of consumer behavior and retail marketing.

In addition to convenience and trust, demographic factors such as age, occupation, and income also play an important role in shaping grocery buying patterns. Income level, in particular, influences consumers' purchasing power, shopping frequency, and spending behavior. Consumers with higher income levels may prefer convenience and frequent purchases, while those with lower income levels may plan their grocery shopping more carefully and purchase in larger quantities. These differences in financial capacity can influence how often consumers shop and whether they prefer online or offline channels.

Justification of the study:

Although several studies have examined consumer behavior in the retail sector, limited research has specifically focused on the grocery buying behavior of women aged 25–35 in the context of both online and offline shopping platforms. This age group represents a significant segment of modern consumers who are digitally aware, economically active, and actively involved in household purchasing decisions. Understanding their preferences, shopping frequency, and the factors influencing their purchasing behavior is important for retailers and marketers seeking to design effective marketing strategies. Therefore, the present study aims to analyze the grocery buying behavior of women aged 25–35 and to identify the key factors influencing their preference for online and offline grocery shopping. The findings of this study may provide useful insights for retailers, e-commerce platforms, and marketing professionals in improving service quality, delivery systems, and customer satisfaction in the grocery retail sector.

Review of Literature

Recent research (2024-2026) highlights a transformative shift in grocery shopping among Indian women aged 25-35, driven by digital convenience yet tempered by offline trust, particularly in urban and Tier-2 contexts like Ghaziabad. This review synthesizes 12 key studies on consumer preferences and buying behavior towards online vs. offline channels, identifying trends, gaps, and theoretical alignments with TPB-TAM.

A 2024 study on Mumbai Metropolitan Region (MMR) women found online platforms popular for convenience and time-saving among busy professionals, but offline preferred for product inspection and social interaction; factors like digital literacy and payment trust significantly influenced hybrid adoption. Similarly, a Tiruvallur district survey of 295 working women (2024) used SEM to confirm convenience (â=0.52), product variety (â=0.41), and trust (â=0.38) as primary online drivers, with time efficiency explaining 68% behavioral variance—echoing TAM's PU/PEOU for this demographic.

Post-COVID analyses reveal sustained changes: A 2025 review traced pre/during/post- pandemic shifts, noting convenience/safety boosted online penetration to 25-30% nationally, though trust/risk perceptions limit perishables (only 20% online vs. 80% offline); recommendations emphasized hybrid models for retention. In Tamil Nadu urban areas (2025), working women (n=300) prioritized convenience (â=0.48) and trust (â=0.41) over non-working peers' variety focus (â=0.40), with mixed-methods confirming TPB norms via family influences.

Demographic insights dominate: A 2026 IJFMR study of 25-40-year-olds showed 42% aged 25-34 as primary online users, favoring discounts/fast delivery, but quality concerns persist for fresh items. Another 2025 exploration (n= unspecified young adults) reported 42.2% 25-34 respondents, linking demographics to behavior via frequency distributions. Aligarh research (older but relevant) segmented women buyers by age/income, finding supermarkets preferred for variety but kinaras for relationships.

Consumer purchasing behavior is influenced by several socio-economic factors, among which income level plays an important role. Income determines the purchasing power of consumers and affects their spending patterns, shopping habits, and frequency of purchases. Marketing researchers have consistently emphasized that economic factors such as income significantly shape consumer behavior in retail markets.

According to Kotler and Keller (2016), consumer buying behavior is strongly influenced by personal economic conditions such as income, savings, and purchasing power. Individuals with higher income levels generally have greater financial flexibility, which allows them to make purchases more frequently and choose products based on convenience and quality rather than only price considerations.

Similarly, Solomon (2018) explains that income is a key determinant of consumption patterns because it affects how individuals allocate their resources for everyday purchases. Consumers with higher disposable income tend to shop more frequently and may prefer smaller, more frequent grocery trips to maintain product freshness and convenience. In contrast, consumers with lower income levels often plan their shopping carefully and may purchase groceries less frequently, often buying in larger quantities to manage their budgets effectively.

Schiffman and Wisenblit (2019) also note that demographic factors, including income, influence consumers' shopping behavior and decision-making processes. Income level can affect where people shop, how often they shop, and the amount they spend on groceries. Higher-income households may visit supermarkets or retail stores more often, whereas lower-income households may limit their shopping trips to reduce transportation costs and control spending.

Research conducted by Bell and Lattin (1998) further suggests that household income influences grocery shopping patterns, including the size and frequency of shopping baskets. Their study found that different income groups demonstrate distinct shopping strategies. Some consumers prefer frequent shopping trips with smaller baskets, while others prefer fewer trips with larger purchases, depending on their financial capacity and consumption needs.

In the context of retail and household economics, grocery shopping frequency is also influenced by lifestyle, convenience, and access to retail outlets. However, income remains a key factor that shapes these decisions because it determines the consumer's ability to spend regularly on household necessities (Seiders, Handy, & Tigert, 2000).

Based on the existing literature, it can be observed that income level plays an important role in shaping grocery shopping behavior. Differences in purchasing power and spending priorities across income groups may lead to variations in how often consumers shop for groceries. Therefore, the following hypothesis is proposed by the researcher

H1: There is a significant association between the income level of respondents and their frequency of online grocery shopping**.**

Research Methodology

The present study adopts a descriptive research design to examine the consumer preferences and buying behavior of females aged 25–35 in the grocery retail sector. Descriptive research is used to systematically describe the characteristics, attitudes, and preferences of a specific group without manipulating any variables. It enables the collection of detailed information regarding respondents' opinions, shopping habits, and purchasing patterns. In this study, the descriptive approach helps analyze how women within the selected age group purchase grocery products and whether they prefer online or offline shopping platforms. The research also explores aspects such as the frequency of grocery purchases and the factors influencing their decisions. Furthermore, descriptive research assists in identifying patterns and trends in consumer behavior by examining variables such as convenience, price, product quality, availability, and customer service. Through this approach, the study aims to provide a clear understanding of the grocery shopping behavior of female consumers and the key factors that shape their purchasing preferences.

Objectives of the study – The study encompasses the following objectives**.**

- ❖ To study the grocery buying behavior of Women Aged 25–35 years.
- ❖ To assess the association between income level and frequency of grocery buying of the respondents.
- ❖ To identify the factors that influence grocery buying in online and physical mode.

Sources of Data collection

For the purpose of the study, the primary data was gathered through a self designed questionnaire to capture respondents' grocery shopping habits, their preference for online or offline grocery stores, and the factors influencing their purchasing decisions. The questionnaire was administered to female respondents aged between 25 and 35 years. The responses obtained were systematically compiled and analyzed to gain insights into their grocery shopping preferences and overall buying behavior.

In this research, the population consists of female consumers aged 25 to 35 years who purchase grocery products for their households. These consumers may shop from online grocery platforms, offline stores, or both. However, only 112 respondents were selected for this research based on the availability of respondents and the time limitations of the research study. The respondents were selected through Convenience sampling, which is a type of non-probability sampling technique where respondents are selected based on their availability and willingness to participate in the survey. Although the sample size is relatively small, it provides useful insights into consumer behavior.

Table 1: Demographic Profile of the Respondents

Variables	Frequency	Percentage
Age Group of the Respondents		
25–28	80	71.4%
29–32	14	12.5%
33–35	18	16.1%
Occupation of Respondents		
Working Professional	28	25%
Homemaker	30	26.8%
Self-employed	30	26.8%
Other	24	21.4%
Monthly Household Income		
Below ₹50,000	26	23.2%
₹50,000–₹1,50,000	38	33.9%
₹1,50,000–₹2,50,000	24	21.4%
Above ₹2,50,000	24	21.4%
Frequency of Grocery Shopping		
Weekly	38	34%
Twice a Month	44	39%
Monthly	26	23%
Occasionally	4	3.5%
Mode of Grocery Shopping		
Online	38	34%
Offline	60	53.5%
Both	14	12.5%

Source: *Primary Data*

The demographic profile of the 112 respondents shows that the majority of women fall within the age group of 25–28 years, accounting for 71.4 percent of the sample, while 16.1 percent are aged 33–35 and 12.5 percent belong to the 29–32 age group. In terms of occupation, the respondents are fairly distributed, with homemakers and self-employed women each representing 26.8 percent, followed by working professionals at 25 percent and others at 21.4 percent, indicating a diverse occupational background. Regarding monthly household income, the largest proportion of respondents (33.9 percent) fall in the ¹ 50,000–¹ 1,50,000 income bracket, while 23.2 percent earn below ¹ 50,000, and 21.4 percent each fall within the ¹ 1,50,000–¹ 2,50,000 and above ¹ 2,50,000 categories. The data on grocery shopping frequency reveals that most respondents shop twice a month (39 percent), followed by weekly shoppers (34 percent), while 23 percent shop monthly and a small fraction of 3.5 percent shop occasionally. In terms of shopping mode, more than half of the respondents (53.5 percent) prefer offline grocery shopping, whereas 34 percent primarily shop online and 12.5 percent use both online and offline channels, suggesting that traditional in-store shopping still dominates despite the growing adoption of online platforms.

Table 2: Factors influencing online grocery buying

	Frequency	Percent
Convenience	18	16.1
Discounts & Offers	22	19.6
Home Delivery	50	44.6
Time Saving	22	19.6
Total	112	100

Source: *Primary Data*

The data on factors influencing online grocery buying behavior (shown in Table 2) indicates that home delivery is the most significant factor for the respondents, with 44.6 percent identifying it as the primary reason for choosing online grocery shopping. This suggests that the convenience of having groceries delivered directly to their doorstep strongly motivates consumers to use online platforms. Discounts and offers, as well as time saving, each influence 19.6 percent of the respondents, highlighting that promotional benefits and the ability to reduce shopping time also play an important role in shaping purchasing decisions. Additionally, 16.1 percent of respondents consider convenience as the main factor influencing their online grocery purchases.

Table 3: Factors influencing offline grocery buying

	Frequency	Percent
Better trust	34	30.4
Can check product quality	44	39.3
Habit	6	5.4
Immediate purchase	28	25
Total	112	100

Table 3 shows the factors influencing offline grocery buying among the respondents. The findings reveal that the ability to check product quality is the most important factor, reported by 39.3 percent of respondents, indicating that many consumers prefer offline shopping because they can physically examine the products before purchasing. Better trust in physical stores is the second most influential factor, with 30.4 percent of respondents choosing offline mode for this reason. Additionally, 25 percent of respondents prefer offline shopping due to the advantage of immediate purchase, as they can obtain products instantly without waiting for delivery. Only 5.4 percent of respondents stated that habit influences their offline grocery buying behavior. Overall, the results suggest that product inspection, trust, and immediate availability are the key reasons why many consumers continue to prefer offline grocery shopping.

Table 4: Factors influencing buying behaviour in grocery shopping

	Frequency	Percent
Brand	8	7.1
Convenience	10	8.9
Discounts	22	19.6
Price	26	23.2
Quality	46	41.1
Total	112	100

Table 4 presents the factors influencing buying behaviour in grocery shopping among the respondents. The results indicate that quality is the most significant factor, with 41.1 percent of respondents considering it as the primary determinant when purchasing groceries. This suggests that consumers place high importance on the standard and reliability of the products they buy. Price is the second most influential factor, reported by 23.2 percent of respondents, showing that affordability also plays a key role in purchase decisions. Discounts influence 19.6 percent of respondents, indicating that promotional offers and savings encourage grocery purchases. Meanwhile, convenience accounts for 8.9 percent and brand influences only 7.1 percent of respondents, suggesting that while these factors matter, they are less important compared to quality and price.

Table 5: Problems faced by the respondents in online grocery buying

	Frequency	Percent
Late delivery	40	35.7
No problem	20	17.9
Poor product quality	34	30.4
Wrong product delivered	18	16.1
Total	112	100

The data on problems faced while buying groceries online shows that late delivery is the most common issue reported by respondents, affecting 35.7 percent of them, indicating that delivery delays remain a major challenge in online grocery services. Poor product quality is the second most reported problem, experienced by 30.4 percent of respondents, suggesting concerns regarding freshness or condition of products received through online platforms. Additionally, 16.1 percent of respondents reported receiving the wrong products, highlighting issues related to order accuracy and fulfillment. However, 17.9 percent of the respondents indicated that they did not face any problems while purchasing groceries online, implying that a portion of users are satisfied with the service experience. Overall, the findings suggest that while online grocery shopping is convenient, operational issues such as delivery delays, product quality, and order accuracy continue to influence consumer satisfaction.

Hypothesis Testing

To test the association of the income level of the respondents with the frequency of grocery buying, chi square test is applied in the software IBMSPSS 20. The results are shown in table 6 and table 7.

Table 6: Cross-tabulation of monthly household income and frequency of grocery buying

Income in Rs.					Total
	Monthly	Occasionally	Twice a month	Weekly	
Below 50,000	12	0	4	10	26
50,000 – 1,50,000	0	2	20	16	38
1,50,000 – 2,50,000	4	2	12	6	24
Above 2,50,000	10	0	8	6	24
Total	26	4	44	38	112

Table 7: Result of chi-square test

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	30.748[a]	9	0
Likelihood Ratio	39.927	9	0
N of Valid Cases	112		

Table 6 presents the cross-tabulation between the monthly household income of respondents and their frequency of grocery buying. The results show that respondents with income below ¹ 50,000 mostly purchase groceries monthly (12 respondents) and weekly (10 respondents), while a smaller number shop twice a month (4 respondents). Among respondents earning between ¹ 50,000 and ¹ 1,50,000, the majority purchase groceries twice a month (20 respondents) followed by weekly shopping (16 respondents), with very few shopping occasionally. For the income group ¹ 1,50,000–¹ 2,50,000, most respondents prefer shopping twice a month (12 respondents), while smaller numbers shop monthly (4 respondents), weekly (6 respondents), or occasionally (2 respondents). In the highest income group above ¹ 2,50,000, a larger proportion shop monthly (10 respondents), followed by twice a month (8 respondents) and weekly (6 respondents), with none reporting occasional purchases. Table 7 presents the results of the chi-square test conducted to examine the association between monthly household income and the frequency of grocery buying. The Pearson chi-square value is 30.748 with 9 degrees of freedom and a significance value of 0.000, which is less than the standard significance level of 0.05. This indicates that there is a statistically significant association between the income level of respondents and how frequently they purchase groceries. The likelihood ratio test also supports this result with a value of 39.927 and the same level of significance. Therefore, the hypothesis H1 is accepted. This implies that the grocery buying frequency of respondents varies significantly across different income groups.

Results

The results of the study indicate that grocery buying behavior among women aged 25–35 is influenced by multiple factors related to convenience, trust, quality, and price. The demographic analysis shows that a large proportion of respondents fall in the 25–28 age group and belong to diverse occupational backgrounds such as homemakers, working professionals, and self-employed individuals. The findings reveal that most respondents prefer shopping for groceries twice a month or weekly. In terms of shopping mode, a majority of respondents still prefer offline grocery shopping, mainly because they can check product quality, trust physical stores, and obtain products immediately. However, online grocery shopping is also gaining acceptance due to advantages such as home delivery, time saving, and attractive discounts. The study further identifies certain challenges faced in online grocery shopping, including late delivery, poor product quality, and wrong product delivery. Additionally, the analysis shows that product quality and price are the most important factors influencing grocery purchasing decisions. The chi-square test results confirm a significant association between the income level of respondents and the frequency of grocery buying.

Conclusion

The study concludes that both online and offline grocery shopping channels play an important role in the purchasing behavior of women aged 25–35. While online grocery platforms offer convenience, home delivery, and promotional benefits, many consumers still prefer offline shopping due to greater trust and the ability to physically examine products. The results highlight that product quality and price are the key determinants influencing grocery purchase decisions. Furthermore, income level significantly affects how frequently consumers buy groceries, indicating that financial capacity influences shopping patterns. Overall, the findings suggest that grocery retailers should adopt a balanced strategy that combines the advantages of both online and offline channels. Improving delivery efficiency, maintaining product quality, and offering competitive prices can help retailers better meet the needs and expectations of modern consumers.

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2

A Study on Financial Planning Behaviour of College Students

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Abstract

Financial planning is an essential life skill that enables individuals to effectively manage their income, expenses, savings, and investments. In the modern financial environment, especially with the increasing use of digital payment systems, it has become crucial for young individuals to develop strong financial habits at an early stage.

This study aims to analyze the financial planning behaviour of college students with respect to their saving habits, budgeting practices, and investment awareness. The study is based on primary data collected from 100 respondents through a structured questionnaire using Google Forms. Statistical tools such as percentage analysis, tabulation, correlation, and regression analysis have been used to interpret the data.

The findings reveal that although students possess basic awareness of financial planning, their practical implementation remains weak. Saving habits are irregular, budgeting practices are inconsistent, and investment participation is low. The study highlights the need for financial literacy programs and practical exposure to improve financial discipline among students.

Keywords: *Financial Planning, Saving Behaviour, Investment Awareness, College Students, Financial Literacy*

I. Introduction

Financial planning refers to the systematic management of income, expenses, savings, and investments to achieve financial stability and long-term financial goals. For college students, financial planning plays a vital role as it helps in building responsible financial habits from an early stage.

In India, most college students depend on pocket money provided by their parents and have limited income sources. Due to this, they often lack experience in managing finances effectively. In recent years, the rapid growth of digital payment systems such as UPI, mobile wallets, and online shopping platforms has significantly influenced spending behaviour. Easy access to money through applications like Google Pay and PhonePe has increased impulsive buying behaviour among students.

Moreover, financial education is not formally included in most academic curricula, which results in a lack of practical knowledge regarding saving, budgeting, and investment. Students may have theoretical awareness but fail to apply it in real-life situations.

Financial planning is also essential for ensuring long-term financial security. Early financial discipline helps individuals avoid unnecessary debt, manage emergencies, and build wealth over time. Therefore, understanding the financial behaviour of college students is necessary to identify gaps and improve their financial decision-making abilities.

II. Literature Review

Several studies have emphasized the importance of financial literacy in influencing financial behaviour.

Lusardi and Mitchell (2014) stated that financial literacy is crucial for making informed financial decisions and achieving financial well-being. Huston (2010) highlighted that individuals with higher financial knowledge are more likely to engage in saving and investment activities.

Mandell and Klein (2009) found that financial education programs significantly improve saving habits among students. Kaur and Kaur (2019) observed that Indian college students possess moderate awareness of financial concepts but lack practical implementation.

OECD (2018) emphasized that financial literacy among young individuals contributes to economic stability and better financial decision-making. Sharma and Gupta (2020) found that digital financial tools, while increasing convenience, have also led to higher impulsive spending behaviour among students.

These studies clearly indicate that although awareness exists, there is a gap between knowledge and actual financial behaviour among students.

III. Research Objectives

- To analyze the saving habits of college students
- To examine budgeting and expense planning behaviour
- To study investment awareness among students
- To evaluate financial management skills

IV. Research Methodology

Primary Data:

Primary data was collected through a structured questionnaire using Google Forms. A total of 100 responses were collected from college students using convenience sampling.

Secondary Data:

Secondary data was collected from journals, books, and research articles.

Tools Used:

- Percentage Analysis
- Tabulation
- Descriptive Statistics
- Correlation Analysis
- Regression Analysis

The collected data was analyzed systematically to understand students' financial behaviour.

V. Data Analysis and Interpretation

This section presents the analysis of data collected from respondents. The collected data has been analyzed using descriptive and statistical tools. The results are presented below in the form of tables along with interpretations.

Table 1: Age Group

Age Group	Respondents	Percentage
18–20	62	62%
21–23	30	30%
24+	8	8%

Interpretation:

Most respondents are young students who are just beginning to manage their finances.

Table 2: Descriptive Statistics of Financial Behaviour

Variables	N	Mean	Std. Deviation
Awareness of financial planning	100	3.85	0.82
Ability to manage expenses	100	3.92	0.76
Budgeting habit	100	3.40	0.95
Saving regularly	100	3.55	0.88
Tracking expenses	100	4.10	0.70
Investment awareness	100	3.60	0.90
Investment participation	100	3.20	1.02
Financial decision-making ability	100	3.75	0.85

Interpretation:

The table shows that students have relatively higher scores in expense tracking (Mean = 4.10), while budgeting and investment participation are comparatively lower, indicating weak financial discipline.

Table 3: Reliability Statistics

Variable	Cronbach's Alpha	No. of Items	Description
Financial Planning Behaviour	0.78	8	Reliable

Interpretation:

Since Cronbach's Alpha is above 0.70, the data is considered reliable for analysis.

Table 4: Correlation between Financial Awareness and Financial Behaviour

Variables	Financial Behaviour
Financial Awareness	0.72**

(Significant at 0.01 level)

Interpretation:

There is a strong positive correlation between financial awareness and financial behaviour, indicating that higher awareness leads to better financial practices.

Table 5: Gender-wise Analysis of Financial Planning

Gender	N	Mean	Std. Deviation
Male	55	3.85	0.80
Female	45	3.60	0.88

Interpretation:

The table shows that male students have a slightly higher mean score in financial planning behaviour compared to female students. This indicates that male students demonstrate relatively better financial management practices.

Table 6: Independent Sample t-test

Variable	t-value	Sig. (2-tailed)	Result
Financial Planning Behaviour	2.10	0.03	Significant

Interpretation:

Since $p < 0.05$, there is a significant difference in financial planning behaviour between male and female students.

Table 7: ANOVA – Financial Planning & Course Type

Source	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	180.25	3	60.08	3.12	0.02
Within Groups	1850.40	96	19.27		
Total	2030.65	99			

Interpretation:

Since $p < 0.05$, course type significantly affects financial planning behaviour.

Table 8: ANOVA – Income & Financial Planning

Source	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	150.80	3	50.26	2.85	0.04
Within Groups	1890.30	96	19.69		
Total	2041.10	99			

Interpretation:

Income level has a significant impact on financial behaviour

Table 9: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error
1	0.68	0.46	0.44	0.72

Interpretation:

The value of R Square (0.46) indicates that 46% of the variation in financial behaviour is explained by the independent variables. This shows a moderate level of explanatory power of the model.

Table 10: ANOVA (Regression Model)

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	920.50	3	306.83	25.40	0.000
Residual	1120.60	96	11.67		
Total	2041.10	99			

Interpretation:

The regression model is statistically significant as the significance value is less than 0.05. This indicates that the independent variables collectively have a significant impact on financial behaviour.

Table 11: Coefficients (Regression)

Variables	B	Std. Error	Beta	t	Sig.
Constant	7.50	1.80	—	4.16	0.000
Saving Behaviour	0.25	0.07	0.30	3.57	0.001
Investment Awareness	0.32	0.08	0.35	4.00	0.000
Budgeting Habit	0.28	0.06	0.33	4.20	0.000

Interpretation:

All variables significantly influence financial behaviour.

Overall Interpretation of Data

The analysis of data indicates that students have moderate awareness of financial planning concepts but lack consistency in applying them. While expense tracking shows relatively higher scores, budgeting habits and investment participation are comparatively lower.

The correlation results show a strong positive relationship between financial awareness and financial behaviour, indicating that increased awareness leads to better financial practices.

The regression analysis further confirms that saving behaviour, investment awareness, and budgeting habits significantly influence financial planning behaviour. These findings highlight the importance of improving practical financial skills among students.

VI. Findings

Based on the analysis of data collected from 100 respondents, the following key findings have been observed:

- The majority of students have **limited monthly income**, mainly in the form of pocket money, which restricts their financial capacity.
- Saving habits among students are **weak and irregular**, with most students saving less than 20% of their income.
- Budgeting practices are **not consistently followed**, as a large number of students plan their expenses only occasionally.
- Although students actively **track their expenses**, they do not effectively use this information for better financial planning.
- Investment awareness exists at a **moderate level**, especially regarding options like mutual funds and SIPs.
- A significant proportion of students have **not started investing**, indicating hesitation and lack of confidence.
- Most students rate their financial management skills as **average**, showing scope for improvement in financial discipline.

VII. Discussion

- The present study highlights that financial planning behaviour among college students is influenced by both awareness and practical application of financial knowledge. Although students have a basic understanding of financial concepts, they fail to apply them consistently in real-life situations.
- The results are consistent with previous studies, which indicate that financial literacy plays a significant role in shaping financial behaviour. However, knowledge alone is not sufficient; practical exposure and discipline are equally important.

- The study also shows that demographic factors such as gender, income level, and course type influence financial behaviour. Students with higher income levels demonstrate better financial planning practices, while variations between male and female students suggest differences in financial exposure.
- Additionally, the increasing use of digital payment systems has contributed to higher spending tendencies among students. Easy access to money has reduced saving behaviour and increased impulsive purchases.
- The regression results confirm that saving behaviour, budgeting habits, and investment awareness significantly impact financial planning behaviour. Therefore, improving these aspects can lead to better financial discipline among students.

VIII. Suggestions

On the basis of the findings, the following suggestions are recommended:

- Colleges should introduce **financial literacy programs** as part of the academic curriculum to improve students' financial knowledge.
- Students should be encouraged to develop the habit of **monthly budgeting** to manage their expenses effectively.
- Awareness regarding different **investment options** such as mutual funds, SIPs, and fixed deposits should be increased.
- The use of **mobile applications for expense tracking and budgeting** should be promoted among students.
- Colleges and institutions should organize **workshops, seminars, and guest lectures** by financial experts.
- Students should be guided to develop **regular saving habits** for future financial security.
- Parents and educators should play an active role in teaching **basic money management skills**.

IX. Conclusion

The study concludes that while college students in India possess a basic understanding of financial concepts, their practical application of financial planning remains limited. Weak saving habits, inconsistent budgeting practices, and low participation in investment activities highlight a gap between awareness and actual behaviour.

The results clearly indicate that financial discipline among students is still developing and requires proper guidance. With the introduction of structured financial education and practical exposure, students can significantly improve their financial behaviour. This will not only help them achieve personal financial stability but also contribute to a financially aware and responsible society.

X. Limitations of the Study

The study has certain limitations which should be considered while interpreting the results:

- ❖ The sample size is limited to **100 respondents**, which may not fully represent the entire student population.
- ❖ The study is based on **convenience sampling**, which may lead to biased results.
- ❖ The data collected is based on **self-reported responses**, which may not always reflect actual behaviour.
- ❖ The study focuses only on college students and does not include other age groups.
- ❖ Limited statistical tools were used, which may restrict deeper analysis.

XI. Future Scope of the Study

- ❖ Study can be extended to a larger sample size
- ❖ Comparative studies can be conducted across different regions
- ❖ Impact of digital finance on behaviour can be analyzed
- ❖ Role of parents and peers can be studied
- ❖ Research can include working professionals

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3

Examining Gen Z's Sustainable Intentions in relation to emerging Orange economy

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ABSTRACT

A major budget announcement of 2026-27 made by Indian finance minister brought to lime light the a new economic term "Orange Economy". Major incentive was announced for the transforming the Indian economy popularly believed to be an agrarian economy towards idea driven economy. The other name given to the orange economy is creative economy. The paper made an effort to study the current status of the orange economy in Indian scenario and the intention of the youth in engaging their future endeavors within the scope of orange economy with special reference to sustainable practices.

The study through quantitative research design tested the hypothesis studying the inclination towards sustainable practices followed by Gen Z especially the activities pertaining to orange economy. The results revealed that Gen z are observed to be well aware of the concept of sustainability and its relevance in present times but are found to be marginally following the practices.

Key words: *Sustainability, Orange Economy, GenZ,*

INTRODUCTION

A major budget announcement of 2026-27 made by Indian finance minister brought to limelight a new economic term "Orange

Economy". Major incentive was announced for the transforming the Indian economy popularly believed to be an agrarian economy towards idea driven economy. The other name given to the orange economy is creative economy. The paper made an effort to study the current status of the orange economy in Indian scenario and the intention of the youth in engaging their future endeavors within the scope of orange economy with special reference to sustainable practices.

Origin of the term "Orange economy"was formally found in a book *"The Orange Economy: An Infinite Opportunity"* **authored by** ván Duque Márquez& Felipe Buitrago in the year 2013. The color was deliberately and intelligently selected as it denoted culturally with **creativity, identity, and culture**. The color promotes those economic activities where **ideas, creativity, culture, and intellectual property generates** economic value. Generating revenue through creative activities was not new just it got formal attention as it was observed that the sector's contribution to the economy was on rise and thus the term became a formal member of the GDP club. Industries such as: Film, music, art, design, Animation, gaming, digital media, advertising, publishing, architecture are inclusive in the term orange economy. The economic value creation is through **intellectual property (IP)** rather than physical goods considering it as a **knowledge-based economy** where ideas are considered as the main resource.

The orange economy is proving its worth at the global level, as It supports **sustainable development** and cultural preservation, creates **employment**, especially for youth and creators and contributes positively to **GDP, exports, and tourism.**

For the Indian residents, it is contributing approx [1] 3 lakh crore (USD 30 billion+) and generating employment opportunity for over 10 million people. Digital boom experienced by the Indian region has accelerated the content creation and creator economy. The government has realized the importance of the economy thus granted a major chunk of the budget with major thrust areas to be AVGC (Animation, VFX, Gaming, Comics) sector. Digital boom has also transformed the way orange economic activities were conducted, a **shift from resource-based to idea-based growth models**. In India, its recent policy recognition marks a transition toward **innovation-driven, culturally rooted economic growth**, making it a critical area for future research and policy development.

LITERATURE REVIEW

The studies identified focused on the concept of the **Orange Economy; some studies explained the concept, few** emphasized on its role in fostering sustainable development through creativity, innovation, and cultural industries while some highlighted the challenges the industry is exposed to. Globally the concept of orange economy is gaining momentum highlighted by the studies conducted in Spain & Jordan. The sector has demonstrated rapid growth, with revenue increases exceeding 300% and the sector also exhibited strong resilience during economic crises. It contributes significantly to GDP and employment, highlighting its potential as a sustainable growth engine. Many researchers have highlighted how the integration of artificial intelligence, education, and policy frameworks can significantly enhance entrepreneurial intentions, economic growth, and social impact. The cultural and creative industries (CCI) sector can contribute to a long-term strategy of inclusive and sustainable growth.Zaldívar, T. (2022). A key theme across the studies is the role of **AI-driven entrepreneurship education** in shaping students' entrepreneurial intentions within the Orange Economy. Evidence from a quantitative study of 403 students demonstrates that AI-based learning enhances creativity, problem-solving skills, and innovation. It significantly influences entrepreneurial intention, while traditional entrepreneurship education shows limited impact. Sustainable development knowledge emerges as the strongest predictor of entrepreneurial behavior, reinforcing the importance of integrating sustainability into academic curricula.

The sector is facing challenge under the head of employment, digitization, finance & innovative business model

Few studies have discussed the gaps, such as the lack of inclusion of small-scale workers and insufficient focus on social and environmental impacts.

Reaping maximum benefits from the **digital advancement** orange economy presents new opportunities through digitalization and technological innovation as presented in a study from Costa Rica. The study showcased that digital platforms enable wider dissemination of creative products, although challenges such as bureaucratic complexities and low digital adoption persist. Economies are recommended to offer policy support and simplification of administrative processes to strengthen the sector.

The role of the Orange Economy in **community development and social entrepreneurship** is explored through case studies in Bali and Medellin. These studies emphasize the importance of cultural identity, local wisdom, and creative industries in sustaining local communities. The Orange Economy supports hybrid business models that combine social and economic goals, fostering values such as innovation, optimism, and global vision.

Additionally, the concept of **green universities and sustainable campuses** highlights the integration of environmental sustainability within educational institutions. Strategic planning and policy development can align universities with Orange Economy principles, promoting eco-friendly practices and long-term development.

Finally, bibliometric analysis indicates that research in the Orange Economy has grown significantly since 2006, though regional disparities and lack of leading contributors remain challenges. Overall, the findings suggest that the Orange Economy is a dynamic and resilient sector with strong potential for sustainable development, provided that education, policy, and innovation are effectively aligned.

RESEARCH METHODOLOGY

The study adopted **quantitative, descriptive research designed to** examine the relationship between Gen Z's attitude toward sustainability and their intention to engage in sustainable activities within the Orange Economy. To achieve the objective a likert scale based questionnaire was administered to the 150 Gen Z respondents, following **non-probability convenience sampling method.**

The study focused upon Generation Z individuals (aged 16–27) who are potential or active participants in creative industries (Orange Economy).The study measured two constructs: Attitude toward sustainability and Behavioral intention measured on likert scale **130 valid responses** were collected and used for analysis.

The study was based on the theory of planned behavior: individual behavior is driven by behavioral intentions influenced by attitude, subjective norms, and perceived behavioral control. In this study, **attitude** is considered the primary predictor of **behavioral intention**. Following hypothesis were formed

H€ :*There is no significant relationship between attitude toward sustainability and Gen Z's intention to engage in sustainable activities within the Orange Economy.*

H1:*There is a significant relationship between attitude toward sustainability and Gen Z's intention to engage in sustainable activities within the Orange Economy.*

DATA ANALYSIS

The study post conducting the reliability and validity analysis through cronbach's alpha used regression and ANOVA in order to test the hypothesis

Cronbach's Alpha signified a strong **internal consistency and reliability**

Construct	No. of Items	Cronbach's Alpha
Attitude toward Sustainability	4	0.83
Behavioral Intention	4	0.86

The regression analysis indicated following results

R	R^2	Adjusted R^2
0. 64	0. 41	0.40

Model Summary

41% of variance in behavioral intention is explained by attitude, the coefficient table signifies a strong positive and significant effect on behavioral intention.

Predictor	β (Standardized)	t-value	p-value
Attitude →Behavioral Intention	0.64	9.21	0.000***

Since the involvement of constructs ANOVA was applied to test the relationship significance

Source	Sum of Squares	df	Mean Square	F-value	Sig.
Regression	58.72	1	58.72	42.35	0.000***
Residual	177.28	128	1.38	—	—
Total	236.00	129	—	—	—

The results of hypothesis testing revealed following results **F(1,128) = 42.35, p < 0.001**, since **p < 0.05**, the model is statistically significant so the decision is to reject the null hypothesis indicating there is a **significant positive relationship** between attitude toward sustainability and Gen Z's intention to engage in sustainable activities within the Orange Economy.

CONCLUSION

The study examined that if a Gen Z is aware

The results demonstrate that attitude toward sustainability significantly influences Gen Z's intention to engage in sustainable activities within the Orange Economy. Reliability analysis confirmed internal consistency of the constructs, while correlation and regression results revealed a strong positive relationship. The ANOVA results further validated the model's significance ($F = 42.35$, $p < 0.001$), leading to the rejection of the null hypothesis. These findings support the theoretical foundation of the Theory of Planned Behavior, confirming that attitude is a key determinant of behavioral intention.

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4

Eco-Friendly Packaging and Buying Behavior

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ABSTRACT

This research study explores how the use of eco-friendly packaging influences the purchasing actions of individuals (in this case students) who reside in Delhi NCR and are between 18 to 26 years old by considering how those purchasing behaviors are impacted by variables identified in the Theory of Planned Behaviour (TPB). Research on environmental issues and sustainable consumption is growing, and this study aims to examine how four variables (environmental awareness, attitudes, perceived value, and economic factors) interact to impact the decision-making processes of consumers. The study uses a quantitative empirical research design to collect information from 106 participants via a structured questionnaire using a Likert-scale measurement system. Data are analyzed using descriptive and inferential statistical techniques to identify relationships between the four primary variables (environmental awareness/learning; price sensitivity; influence of eco-labels; and, intentions to purchase) as well as selected demographic data.

The results of the study show a high level of environmental awareness and positive attitudes about using eco-friendly packaging; these were largely created from exposure to digital media. The findings also indicate that there is still a gap in the attitudes and behaviours of the participants (i.e., students) because although participants have very positive intentions to purchase eco-friendly products, they only purchase such products on a moderately consistent basis. Price sensitivity was also identified as one of the significant moderating

factors on the likelihood that consumers would buy ecologically produced products consistently. Eco-labels and perceived environmental benefits had a strong positive influence on participants' intentions to purchase eco-friendly products; however, there was also some partial scepticism about the environmental benefits associated with eco-friendly products as it relates to consumer concerns about credibility and greenwashing. This research adds to the existing body of research by offering empirical data collected from young, urban consumers in an emerging economy and highlights how cognitive, social and financial factors interact with each other, influencing sustainable consumption. The research emphasizes that there is a need for comprehensive strategies that emphasize affordability, openness, and availability as means of converting environmental awareness into ongoing pro-environmental buying behaviour. Finally, the findings of this study have significant implications for marketers, policymakers, and educational organizations who wish to promote sustainable packaging through their respective channels.

INTRODUCTION

In recent years, environmental sustainability has become an increasingly important global issue due to growing levels of pollution, climate change, and depletion of natural resources. Packaging waste, especially plastic, is one of the major causes of environmental degradation. Traditional packaging materials are typically non-biodegradable and difficult to recycle, which leads to a large amount of waste in landfills and environmental degradation. To address this problem, eco-friendly packaging has become increasingly popular as a sustainable solution that reduces harm to the environment and still protects products from damage during their life cycle.

Eco-Friendly Packaging (also known as "Green Packaging" or "Sustainable Packaging") is defined as environmentally friendly materials and processes that reduce the amount of pollution created during the entire life cycle of a product.

Use of biodegradable, recyclable, or reusable materials; reduction use of plastics; and adoption of renewable resources are all methods that businesses of all sizes from many different industries are working towards by incorporating sustainable packaging options into their corporate social responsibility/environmental strategies. At the same time, consumers are becoming increasingly aware of the impact of their purchasing decisions and are considering sustainability when they shop.

The segment of the population that is currently driving the demand for more sustainable products are young people, especially those aged 18-26. This group tends to be very knowledgeable regarding environmental issues because of their access to education, as well as exposure through digital media and social movements promoting sustainable practices.

Expanding your knowledge of ecological awareness is extremely important. There are many different initiatives being done by various companies, governments, and indeed, industries (such as manufacturers) to promote ecological consumer awareness. This increased consumer awareness will have a direct effect on how consumers perceive the relative value of eco-friendly packaging and thus, have an impact on the purchasing behavior of consumers, as well as their perceptions of the market.

The purpose of this research study is to determine the role that eco-friendly packaging plays in influencing the purchasing behavior of college students located in the Delhi NCR area. The rationale behind this research study is to provide Empirical Evidence for the Existing Literature. There exists a very limited body of literature regarding what factors (e.g., beliefs about sustainability, perceptions of value) create a positive or negative attitude toward eco-friendly packaging.

This paper seeks to understand and provide a theoretical framework for studying how eco-friendliness in consumer products influences consumer behavior. To this end, the paper will employ the Theories of Reasoned Action (TRA) and Planned Behavior (TPB). Both of these theories postulate that consumers base their behavior on their intention to engage in a certain behavior. According to TRA and TPB, there are three principal factors that influence a customer's intention to engage in a particular behavior. These are: 1) Attitude toward the behavior, 2) Subjective Norms, and 3) Perceived Behavioral Control.

When discussing sustainable or eco-friendly packaging, the attitude component of the TRA and TPB refers to how positively or negatively college students evaluate different types of sustainable packaging. If they believe that eco-friendly packaging contributes to environmental protection and social well-being, they are more likely to develop a favorable intention to purchase such products.

Subjective norms are the social influences from other people like friends and family, and through social media. In today's world with so much of our lives on digital platforms like social media and other online communities, we are heavily influenced by what other people think is appropriate, sustainable, and a responsible way to live, which will help shape our perceptions about adopting environmentally friendly purchasing habits. Perceived behavioral control relates to the ease and difficulty of carrying out the behavior, which is determined by the availability, affordability, and accessibility of environmentally friendly products.

Along with the theory of planned behavior (TPB), value-based constructs such as altruistic and egoistic values are being used in this study to provide an in-depth understanding of consumer behavior. Altruistic values relate to a person's concern for protecting the environment, improving societal welfare, and leaving the world in a good condition for future generations. Students with high levels of altruistic value tend to be more supportive of sustainable practices, such as the use of environmentally friendly packaging. On the other hand, egoistic values of a consumer are related to their desire for personal benefits, such as product safety, quality, and price. A consumer may choose to use environmentally friendly packaging for reasons associated with the environment, or because they perceive it to be safer or healthier to use and because they believe it indicates that the product has a higher quality.

Another component of the research involves looking at how perceived value and willingness to pay impact consumer purchasing decisions. Perceived value includes the functional, emotional, social, and conditional benefits consumers perceive from using eco-friendly packaging. In some cases, while sustainable packaging provides multiple positive features, it may come with a premium price tag. Therefore, whether or not students will pay a premium price for eco-friendly packaging will help to determine how scalable and feasible this solution is.

This paper is investigating the interaction between environmental awareness, attitudes, social influences, perceived value, and economic variables influencing student purchasing behaviour (relative to eco-friendly packaging). By examining this issue within the Delhi NCR area, this research will provide unique insights into how younger consumers view sustainability and how those views then translate into their purchasing behaviour. The results from this project would assist in promoting the environmentally conscious purchase of goods and services and ultimately aid in creating a more sustainable future.

LITERATURE REVIEW

The study by Yingyi Deng and Yi-Chun Yang 1 provides robust evidence from China, analyzing 513 users of a brand with green packaging. Their bootstrapped mediation analysis revealed that green packaging design exerts a strong positive impact on green purchase intention, with this relationship being significantly mediated by perceived environmental friendliness, green brand equity, and green brand attitudes. This finding underscores that consumers do not respond merely to the physical attributes of sustainable packaging but interpret it as a signal of broader corporate environmental responsibility, which enhances brand perception and ultimately drives purchase decisions. The mediation pathway suggests that the effect is cognitive and evaluative rather than purely reflexive.

Further reinforcing this cognitive mediation model, Chenhan Ruan et al. 2 demonstrated across three studies that eco-friendly packaging shapes consumer perceptions of food healthiness, which subsequently influences purchase intentions. Their research identified that consumers associate eco-friendly packaging with healthiness through heuristic associations involving original-ecology sensory cues, sustainable connotations, and moral implications. This "halo effect" extends beyond environmental concerns to encompass product quality and safety perceptions, creating a multi-dimensional value proposition that appeals to both ecological and personal health motivations. This finding is particularly significant because it reveals how sustainable packaging can overcome the traditional trade-off between environmental benefits and perceived product efficacy.

In the context of major global brands, research on Coca-Cola's sustainable packaging practices 3 examined consumer purchase intention when the company adopts greener practices. The study found a significant positive relationship between eco-friendly packaging and purchase intention, indicating that even established multinational corporations can leverage sustainability initiatives to maintain or enhance consumer loyalty. This suggests that eco-friendly packaging serves not only as an environmental statement but also as a strategic marketing tool that aligns with evolving consumer values. Similarly, research on McDonald's in Semarang, Indonesia 4 found that green packaging positively affects purchase intention, with product satisfaction and brand trust serving as crucial mediating variables. This dual mediation pathway—through both satisfaction (functional evaluation) and trust (relational evaluation)—highlights the comprehensive nature of consumer response to sustainable packaging initiatives.

The role of consumer willingness to pay (WTP) emerges as a critical boundary condition in the relationship between eco-friendly packaging and actual purchasing behavior. Carissa Dieli et al. 5 specifically investigated WTP for environmentally friendly packages of leafy greens, addressing the well-documented attitude-behavior gap where consumers express environmental concern but fail to translate it into purchases. Their research posits that consumers' cultural capital—encompassing knowledge, education, and social norms—significantly influences their WTP, thereby bridging the gap between stated intentions and actual behavior. This finding emphasizes that effective sustainable packaging strategies must consider not only design elements but also consumer education and the development of environmental literacy to convert positive attitudes into purchasing actions.

METHODOLOGY

This chapter describes how we incorporated a research design and methodology to assess eco-friendly packaging's influence on the purchasing behaviors of students (ages 18–26) within the Delhi NCR. The methodology was designed to collect data in a systematic manner, allow for objective analysis, and ultimately present findings in a way that can be confidently interpreted. This methodology was applied across the following elements: research type, data collection methods, population/sampling, sample size, sampling technique, statistical tools, data representation, limitations of the study, and overall timeframe of the study.

The current study uses an empirical and descriptive research design. Its empirical nature derives from having used primary data collected from respondents (students) directly through a structured data collection instrument (questionnaire). The purpose of collecting this data was to assess whether environmental awareness, perceived value, green marketing influence, willingness to pay, and purchase intention could be measured in an empirical manner using a structured data collection instrument, which numbers were then analyzed for evidence-based conclusions using appropriate statistical tools.

The study is also descriptive, as it seeks to describe to the reader the awareness of students, how aware students are of the attitudes/ perceptions of eco-friendly packaging, and how those attitudes/ perceptions impact purchasing behavior. The study provides a detailed understanding of how students view sustainable packaging, and it provides evidence on how that viewpoint impacts the decision-making process concerning whether or not to purchase eco-friendly products. The combined empirical/descriptive nature of the study provides both analytical depth and practical relevance.

Both primary and secondary data sources are utilized in the research study. Primarily, a structured survey was developed to collect primary data from respondents aged between 18 and 26 years in the Delhi NCR area. The applied survey was segmented into multiple sections (or constructs), which contained both demographic information and their perception of eco-friendly packaging, environmental attitudes, perceived value, and purchasing intention.

Responses were measured on a five-point Likert scale from 'Strongly Agree' to 'Strongly Disagree', which produced quantifiable data for analyses of responses. This study also utilized the functional value, emotional value, as well as social value regarding eco-friendly packaging.

Secondary data was obtained from published articles, books, journals and web sources to further develop a theoretical foundation and provide context surrounding the research study.

The population for this survey research study consisted of students enrolled in higher education institutions between the ages of 18 and 26 years, living or attending school within the Delhi NCR area (e.g., Delhi, Noida, Gurugram, Ghaziabad, and Faridabad). The rationale for selecting the above population was that youth typically demonstrate an understanding of environmental concerns and are being heavily influenced by digital and sustainable marketing campaigns. The sampling unit was considered to be each individual who is currently enrolled in a higher education institution.

The sample consists of students from different learning disciplines (commerce, management, science, engineering, art) to ensure diversity and a representative sample. This diversity allows for capturing different points of view on eco-friendly packaging and purchasing behavior.

The study sample size is 106 respondents which is large enough to run both descriptive and inferential statistical analyses according to academic constraints. The sample size should provide adequate data for interpretation of relationships between variables including the level of awareness, attitude and purchase intention toward eco-friendly packaging. A larger sample would enhance the generalisability of the data, but would not be practically or sufficiently able to provide the necessary information in this case.

Convenience sampling (a non-probability sampling method) will be used as the sampling technique for the study. Respondents selected based on accessibility and willingness to participate in the research. The data will be collected via internet-based platforms, academic groups or institutional networks. This will be due to time and resource constraints, and may reduce generalisability of the findings.

Descriptive & Inferential Stats Tools:

Statistics can be utilized to analyze trends in responses through both descriptive (mean, median, mode & percentage) & inferential (chi-square tests, t-test, & regression analysis) methods. Measures of central tendency (mean, median, and mode) may be used to represent data and examine response patterns. Standard Deviation is an example of a descriptive statistic used to measure variability in responses. Inferential statistics such as chi-square tests, t-tests and regression analyses are used to investigate the relationship between two variables or test hypotheses.

Methods of Data Representation:

Data can be represented in tabular and graphical form. Frequency distributions, percentages, or statistical results may be presented in columnar form (table format). Graphical representations, such as pie charts, bar graphs and histograms increase the visual understanding of data. These various representations make patterns, comparisons, and trends easier to recognize.

Limitations of the Study:

The study has several limitations due to its systematic design & methodology. Convenience sampling limits the representativeness of the sample. Self-reporting data can lead to response bias due to the participants potentially providing socially acceptable responses. The study is limited geographically to the Delhi NCR Region and therefore cannot be generalized to other regions. The instrument is also cross-sectional in nature; therefore, all data are collected at one specific point in time and do not take into account how behaviour may change over time.

The research lasted around 3 - 4 months, occurring over different stages of conducting research (questionnaire design, pilot testing, collecting data, and analyzing data). By arranging different segments into a structured timeline, the validity and reliability of the research were guaranteed.

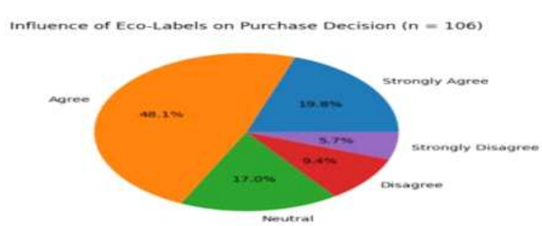
The methodology gives an overall thorough and systematic way of determining how environmentally friendly packaging affects students' buying behaviors and gives results that are both valid and relevant.

RESULTS & FINDINGS

The research findings are based on primary data from 106 students 18 to 26 years old within the Delhi NCR region. These research findings provide insights into students' perceptions of, attitudes towards, and purchasing practices with regards to eco-friendly packaging as well as what influences those behaviors.

Influence of Eco Labels

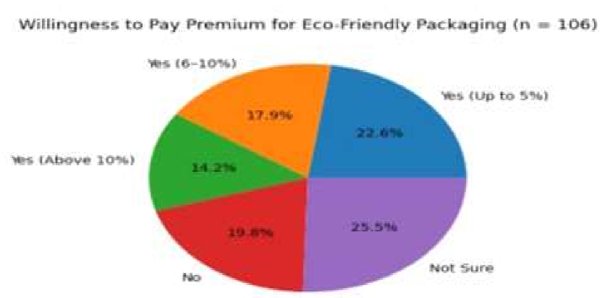
S. No	Response	Frequency	Percentage
1	Strongly Agree	21	19.8
2	Agree	51	48.1
3	Neutral	18	17
4	Disagree	10	9.4
5	Strongly Disagree	6	5.7
Total		106	100



Based on demographic data collected from the study's sample population, 43.4% of the responding students are 21–23 years old, 32.1% are 18–20 years old, while 24.5% of the respondents 23–26 years old. These figures suggest that the respondent's population mainly falls within the range of young adult undergraduate students. In terms of their educational attainment, the majority (60.4%) of respondents are undergraduates and 28.3% of respondents are postgraduates. The researcher feels that based on these two variables, the participating students are in the earlier stages of their higher education and will be more Likely to be aware of sustainability-related information and trends.

Willingness to Pay Premium

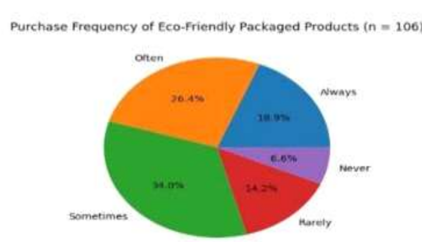
S. No	Response	Frequency	Percentage
1	Yes (Up to 5%)	24	22.6
2	Yes (6–10%)	19	17.9
3	Yes (Above 10%)	15	14.2
4	No	21	19.8
5	Not Sure	27	25.5
Total		106	100



A key finding of this study on student awareness of eco-friendly packaging was that most respondents have an adequate level of knowledge about eco-friendly packaging. The study found that 77.3% of responding students have considerable awareness and knowledge about eco-friendly packaging consisting of 36.8% identified as having a high level of awareness about eco-friendly packaging, while 40.5% identified as having moderate levels of awareness. Based on these aggregate numbers, the researcher determined there is a high level of environmental awareness present among the population of youth living in the Delhi NCR Region, likely due to their exposure to education and their ability to access information from digital media

Purchase Frequency

S. No	Frequency Category	Frequency	Percentage
1	Always	20	18.9
2	Often	28	26.4
3	Sometimes	36	34
4	Rarely	15	14.2
5	Never	7	6.5
Total		106	100

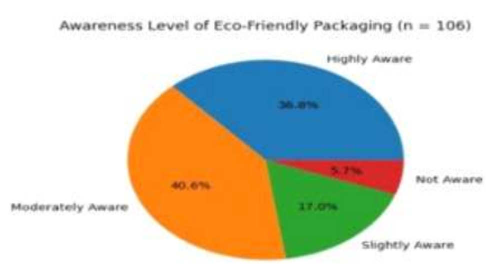


The largest percentage of respondents reported using social media as a source of information (45.3%), followed by educational institutions (20.8%), and friends and family (15.1%). Thus, there is an evident relationship between digital media applications and environmental consciousness, as well as how environmentally friendly packaging can shape consumer perception among students.

Even though respondents indicated that they have a high degree of awareness regarding eco-friendly products, the corresponding purchasing behaviour does not seem to correlate with the respondent's level of awareness. For example, the majority of respondents (34%) stated that they "sometimes" bought eco-friendly packaged products while only 18.9% stated that they "always" bought eco-friendly packaged products. Thus, there appears to be a disconnect between student awareness and student purchasing behaviour, suggesting that other influencing variables, such as price, and availability of eco-friendly packaged products, may exert pressure on student purchasing

Awareness Level of Eco-Friendly Packaging

S.No	Awareness Level	Frequency	Percentage (%)
1	Highly Aware	39	36.8%
2	Moderately Aware	43	40.5%
3	Slightly Aware	18	17%
4	Slightly Aware	6	5.7%
Total		106	100%



With regard to paying a premium for eco-friendly packaged products, results were mixed. Some respondents were willing to pay less than 5% (22.6%) or greater than 5% in premium pricing; however, the largest group (25.5%) of respondents stated that they were unsure whether they would pay a premium price for eco-friendly packaged products. Further, there were also respondents (19.8%) who indicated that they would not pay a premium for eco-friendly packaged products. These results indicate that students are currently under financial constraint and doubt the value of purchasing eco-friendly packaged products.

Eco-labels significantly influence consumers' decisions. For example, around 67.9% of respondents said eco-labels affect their decisions. Likewise, 68.9% of respondents perceive eco-compassionate packaging to aid in protecting the environment. Price sensitivity is still an important consideration: 66% of respondents indicated that price will affect their purchases. Price is a huge barrier, even with favourable views about being eco-friendly.

Conversely, confidence in the environmental claims made by companies is moderate. Of all the respondents, 56.6% felt confident regarding environmental claims. There is still a considerable number of undecided/neutral and skeptical respondents regarding claims made by companies pertaining to environmental protection.

Overall, the results show that most of the respondents have a high (35.8%) and very high (22.6%) intention of purchasing eco-friendly packaging products, which points to a very positive disposition toward buying sustainable products. Furthermore, most of the respondents (66.9%) said they would most likely recommend eco-friendly packaging to others.

In conclusion, the research indicates a relatively high level of awareness of eco-friendly packaging and a positive view of sustainability among students living and studying in the Delhi NCR area. However, students are affected by price sensitivity and uncertainty regarding premium prices, which limit their ability to purchase eco-friendly packaged products. While intention levels are high, bridging the gap between awareness and consistent purchasing remains a key challenge. These results provide valuable insights for businesses and policymakers to design effective strategies for promoting sustainable packaging among young consumers.

CONCLUSION

The following research was performed to assess how much student's purchasing decisions change when eco-friendly packaging is included during the marketing effort. Current opinions were evaluated based on: perceptions, level of education, behavior, and beliefs associated with sustainable packaging by students between the ages of 18 to 26 years of age within Delhi-NCR, as well as how this eco-friendly package might impact their decision-making process.

A systematic analysis of data collected from 106 students revealed several important findings. One of the most notable findings is that students have a high level of understanding about eco-friendly packaging and what it means. Specifically, most respondents demonstrated an adequate comprehension of what recyclability, biodegradability, and reducing the use of plastic means in relation to eco-friendly products, indicating that students are already aware of the impact environmentally sound products could have on their purchasing behavior. Environmental education; social networking sites; and alternative print-based platforms have all played a significant role in building this knowledge base of students.

Another significant conclusion drawn from this study was how influential social media was for students looking for information about eco-friendly packaging. The impact of digital forms of communication (social media) have made them a primary source of information for many young consumers when searching for product information and influencing their attitudes toward sustainability and eco-friendly products. This supports the fact that most young consumers will primarily obtain their information through digital channels, which include online content, influencer endorsements, or sustainability focused related campaigns.

As a result, social media emerges as a powerful tool for businesses and policymakers to promote eco-friendly packaging effectively.

The research uncovered a significant disconnect between students' expressed intentions to purchase eco-friendly products and their actual purchasing behavior. Even though students have positive opinions about the importance of sustainable packaging, they do not frequently purchase these types of products. The findings suggest that while students have generally positive environmental attitudes, those attitudes do not always convert into actual purchasing behavior because of the presence of an attitude-behavior gap. This is because external factors such as cost, product availability, and convenience significantly impact students' purchasing decisions. Price sensitivity is one of the most critical influences on how students make purchasing decisions. Many of the respondents noted that price is a crucial factor, mainly because students have limited funds available to buy a product and therefore may be unwilling to pay extra for eco-friendly products. Thus, affordability represents a barrier to the widespread adoption of sustainable packaging solutions.

In addition, eco-labels and perceptions of the environmental benefits of the purchased product are also affecting student purchasing behavior. The use of eco-labels and certifications, such as recycled content, is used by students to determine which products are environmentally friendly. However, students indicated that they have moderate levels of trust in the validity of environmental claims, which may suggest that students are skeptical of the claims, possibly because they are concerned about greenwashing. Because of this, it is important to develop transparency and credibility in the communication of sustainable products.

Overall, the study reveals a high intention to purchase and recommend eco-friendly packaging, which indicates a potential for significant growth in the market. It is evident from the responses of the participants that they are willing to purchase and recommend sustainable products. Peer and word-of-mouth influence play an essential role in developing consumer behavior among students and continue to encourage eco-friendly practices.

Based on the findings, eco-friendly packaging has created a significant influence on the purchasing decisions of young consumers primarily because of their level of awareness, concern for the environment, and the influence of social media on their decisions. Conversely, economic limitations and trust issues can limit consumers' repeat adoption of eco-friendly products.

Consequently, there is a robust foundation for sustainable consumption among university students; however, to bridge the gap between awareness and action, stakeholders must address issues of affordability, increase access to sustainable product offerings, and establish credibility regarding the environmental claims of manufacturers. A collective effort by business, policy, and education sectors can lead to greater consumer adoption of eco-friendly packaging and promote environmental sustainability over the long term.

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5

INFLUENCE OF SOCIAL MEDIA ON PURCHASING DECISIONS AND RESPONSIBLE CONSUMPTION BEHAVIOUR OF CONSUMERS

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ABSTRACT

In today's digital age, social media has become a central part of young consumers' everyday lives. Platforms such as Instagram, YouTube, Facebook, and Snapchat are not only used for communication and entertainment but also as major sources of information and marketing. The present study aims to examine the influence of social media on purchasing behavior and to determine whether it encourages responsible consumption practices among young individuals and is also aligned with Sustainable Development Goal 12, which stresses the sustainable use of resources and the reduction of waste. The study investigates whether social media supports mindful buying behavior or instead leads to excessive and impulsive consumption of resources.

The study is based on primary data collected which is collected through a structured questionnaire containing 25 questions. The questionnaire addresses key areas such as time spent on social media, exposure to advertisements, the influence of influencers, impulse buying behaviour, and awareness of sustainable products. Responses were collected from a sample of young consumers from different age groups, occupations, and backgrounds. Overall, the research

emphasizes the importance of balancing the benefits of social media along with responsible consumption in order to support sustainable development goals.

INTRODUCTION

Social media has become an essential component of modern marketing and consumer interaction.Over the past decade, the rapid growth of digital platforms such as Instagram, YouTube, Facebook, and Snapchat has significantly transformed the way consumers access information and make purchasing decisions. Unlike traditional forms of marketing, social media provides a dynamic and interactive environment where users can engage with brands, share opinions, and influence each other's behaviour.

The increasing dependence on social media has made it a powerful tool for businesses to promote products and services and consumers today are no longer passive recipients of information; instead, they actively search for product details, compare alternatives, and rely on peer feedback before making purchase decisions. This shift has resulted in a more informed but also more influenced consumer base.

Therefore, this chapter aims to provide a theoretical foundation for understanding how social media affects purchasing decisions and responsible consumption behaviour among young consumers.

LITERATURE REVIEW

Social Media and Consumer Behaviour

Social media has significantly transformed consumer behaviour by changing the way individuals search for information, evaluate alternatives, and make purchasing decisions. According to **Smith (2022)**, social media platforms provide consumers with easy access to a wide range of product information, enabling them to make more informed decisions. Consumers can compare products, read reviews, and seek opinions from peers, which reduces uncertainty in the decision-making process. **Kumar (2021)** emphasized that digital platforms have made consumer behaviour more interactive and participatory. Unlike traditional marketing, where communication was one-sided, social media allows consumers to engage directly with brands and other users. This interaction increases transparency and influences consumer preferences. Peer influence is another important factor that shapes consumer behaviour on social media. **Khan (2023)** found that young consumers are highly influenced by their social networks, including friends, family, and online communities. The desire to fit into social groups often leads individuals to adopt similar purchasing patterns and follow trends. This phenomenon is particularly strong among younger age groups who are more active on social media platforms. Furthermore, personalization plays a crucial role in influencing consumer behaviour. According to **Roy (2022)**, personalized recommendations increase user engagement and enhance the likelihood of purchase. Consumers are more likely to respond positively to content that aligns with their interests and needs. Overall, social media has made consumer behaviour more informed, interactive, and dynamic, but it has also increased the level of influence exerted by external factors.

Influence of Content and Engagement

Content and engagement are critical factors that determine the impact of social media on consumer behaviour. The type of content presented to users plays a significant role in attracting their attention and influencing their decisions.

According to **Mehta (2023)**, visual and interactive content is more effective in influencing consumer behaviour. Platforms like Instagram and YouTube focus heavily on visual storytelling, which helps create a strong emotional connection with users. This emotional appeal can significantly influence purchasing decisions.

Das (2023) found that consumers trust content created by other users more than branded advertisements. Reviews, testimonials, and shared experiences provide authentic insights into product quality and performance, which helps consumers make informed decisions.

Brown (2021) stated that higher engagement levels increase the perceived credibility and popularity of content. Consumers often interpret high engagement as an indication of product quality and reliability. Engagement metrics such as likes, comments, shares, and views also play a crucial role in shaping consumer perceptions.

This behaviour contributes to overconsumption and contradicts the principles of Sustainable Development Goal 12.

Influencer Marketing and Its Impact

Influencer marketing has emerged as one of the most powerful strategies in digital marketing.

Influencers are individuals who have a significant following on social media platforms and can influence the opinions and behaviours of their audience.

According to **Sharma (2023)**, influencer marketing plays a crucial role in shaping consumer purchasing decisions, especially among young consumers. Influencers are often perceived as relatable and trustworthy, which enhances the credibility of their recommendations. Unlike traditional celebrities, many influencers share personal experiences, product reviews, and lifestyle content, which creates a sense of authenticity. **Ali (2021)** emphasized that trust and credibility are key factors that determine the effectiveness of influencer marketing. When consumers believe that an influencer is honest and transparent, they are more likely to follow their recommendations. This trust is particularly strong in the case of micro-influencers, who have smaller but more engaged audiences.

Furthermore, influencer marketing creates a strong emotional connection with consumers **Thomas (2023)** found that storytelling and personal experiences shared by influencers make promotional content more engaging and persuasive. This emotional appeal can significantly influence purchasing decisions. However, influencer marketing also has certain limitations. Some influencers promote products primarily for financial benefits without providing genuine reviews. This can lead to misleading information and reduce consumer trust. Additionally, excessive promotion may make audiences skeptical about the authenticity of influencer content.

Despite these challenges, influencer marketing remains a highly effective tool for influencing consumer behaviour. It plays a significant role in product discovery, brand awareness, and purchase intention.

Impulse Buying Behaviour

Impulse buying refers to unplanned purchasing decisions made without careful consideration.

Social media has significantly increased the likelihood of impulse buying among consumers,

particularly young individuals.

Patel (2021) found that social media platforms create an environment that encourages impulsive purchases through attractive advertisements, limited-time offers, and visually appealing content.

Features such as flash sales, discounts, and promotional campaigns create a sense of urgency,which motivates consumers to make quick decisions.

Consumers often make purchases based on excitement, desire, or social influence rather than actual need. According to **Verma (2022)**, social media platforms use persuasive techniques such as storytelling and visual appeal to trigger emotional responses in users.

Therefore, it is important to understand the factors that influence impulse buying to promote more responsible consumer behaviour.

Social Media and Sustainability Awareness

Social media has become an important platform for spreading awareness about environmental

issues and sustainability. Various campaigns, posts, and discussions on social media educate consumers about the importance of responsible consumption.

Verma (2022) found that social media campaigns can effectively influence public awareness and encourage eco-friendly practices. Platforms such as Instagram and YouTube are widely used to promote sustainable lifestyles, including recycling, reducing waste, and using eco-friendly products.

Ahmed (2022) highlighted that influencers and organizations play a key role in spreading sustainability awareness. They use social media to share information, promote green products, and encourage responsible behaviour.

However, the effectiveness of social media in promoting sustainability depends on the accuracy and authenticity of the information shared. Misleading practices such as greenwashing, where companies falsely promote their products as environmentally friendly, can create confusion among consumers.

Despite these challenges, social media remains a powerful tool for promoting sustainability and supporting the achievement of Sustainable Development Goal 12.

RESEARCH GAP

The review of existing literature reveals that numerous studies have examined the impact of social media on consumer behaviour and purchasing decisions. Researchers such as Smith (2022) and Kumar

(2021) have focused on how digital platforms influence consumer preferences, decision-making processes, and brand perceptions. Similarly, studies by Sharma (2023) and Ali (2021) have explored the role of influencer marketing in shaping consumer attitudes.

In addition, several studies have investigated responsible consumption and sustainability. Kapoor (2021) and Brown (2021) highlighted the growing awareness of environmental issues and the importance of sustainable consumption practices. These studies emphasize the need for consumers to adopt eco-friendly behaviours and reduce waste.

However, despite the availability of extensive research in these areas, there is a noticeable gap in the integration of these two concepts. Most studies focus either on consumer purchasing behaviour or on sustainability, but very few studies examine the relationship between social media influence and responsible consumption behaviour simultaneously.

Another gap identified is the lack of empirical studies that link social media usage with awareness and practice of Sustainable Development Goal 12. While some studies discuss sustainability awareness, they do not adequately examine whether this awareness translates into actual responsible behaviour.

Therefore, this study aims to fill these gaps by analyzing both the influence of social media on purchasing decisions and the extent to which young consumers practice responsible consumption behaviour. It also seeks to examine the relationship between social media usage and sustainability awareness.

The identification of research gaps provides a clear direction for the present study. By examining both purchasing behaviour and responsible consumption, this research aims to contribute to a better understanding of how social media influences consumer decisions and sustainability practices.

OBJECTIVES

The main purpose of this study is to understand how social media influences the purchasing decisions of young consumers and to examine their behaviour towards responsible consumption.

It also aims to analyze whether social media encouraging buying sustainable practices or leading to excessive consumption.

The specific objectives of the study are:

1. Analyzing the impact of social media platforms on the purchasing decisions of young consumers
2. Evaluating the influence of different types of content on consumer behavior such as reels, reviews, and influencer posts
3. Understanding the shaping of purchasing decisions by the influencers
4. Examination of influencer recommendation while buying products by consumers
5. Analyzing the extent of impulsive buying behaviour caused by social media exposure
6. Assessing level of awareness among consumers about sustainable and eco-friendly products.

RESEARCH METHODOLOGY

Research Design

The present study adopts a **descriptive research** design to analyze the influence of social media on consumer purchasing decisions and responsible consumption behaviour. It is appropriate for this study as it focusing on describing the characteristics, attitudes, and behaviour of respondents based on collected data.

This research design also helps in identifying patterns and relationships between variables such as social media usage, exposure to advertisements, and purchasing behaviour and allows the researcher to gather detailed information about how frequently consumers use social media, the type of content they engage with, and how these factors influence their buying decisions.

It also supports the use of structured questionnaires, making it easier to collect standardized data from a large number of respondents which ensures consistency in responses and simplifies data analysis.

Data Collection Method

The data for this study has been collected using primary data sources, which involve gathering information directly from respondents and is considered more reliable and relevant as it is collected specifically for the purpose of the study.

A structured questionnaire was used as the main data collection tool. The questionnaire was carefully designed to include questions related to social media usage, purchasing behaviour, influencer impact, and awareness of sustainable consumption. It consists of both multiple choice questions and Likert scale questions, which allow respondents to express their opinions clearly.

The questionnaire was distributed through an online survey method using Microsoft Forms

The online data collection method is particularly suitable for this study as it targets young consumers who are active users of social media and digital platforms. It ensures that the sample is relevant to the research topic.

In addition, the questionnaire was designed in a simple and understandable manner to avoid confusion and ensure accurate response and the questions were arranged in logical sequence, starting from demographic details and moving towards more specific aspects of consumer behaviour.

The data collection process involved the following steps:

- ➢ Designing the questionnaire based on research objectives
- ➢ Distributing the questionnaire through online platforms
- ➢ Collecting responses from participants
- ➢ Organizing the data for analysis

Overall, the data collection method adopted in this study is efficient, reliable, and suitable for achieving the research objectives.

Sampling Technique

Sampling is a crucial component of research methodology, as it determines how respondents are selected for the study. In the present research, a non-probability convenience sampling technique has been adopted to collect data from participants.

Convenience sampling refers to selecting respondents based on their accessibility, availability, and willingness to participate in the study. This method is widely used in social science research, particularly when the researcher faces time and resource constraints.

The use is appropriate for this study as it focuses on analyzing theinfluence of social media on purchasing decisions and responsible consumption behaviour among young consumers.

Since the target population consists of individuals who actively use social media platforms, it becomes easier to reach them through online channels such as social networking sites, messaging applications, and email.

Another important reason for selecting convenience sampling is its practicality which aims to identify general patterns, trends, and relationships rather than to generalize findings to the entire population with statistical precision. Therefore, a non-probability sampling technique is sufficient to achieve the research objectives. It enables the researcher to collect data within a limited timeframe and ensures that the study is feasible.

Sample Size

Sample size refers to the number of respondents selected for the study. In the present research, a total of 200 respondents have been included in the sample. The selection of an appropriate sample size is essential to ensure the reliability and validity of the research findings. A larger sample size provides more accurate and representative results, as it captures a wider range of opinions and behaviours.

The chosen sample of 200 respondents is considered adequate for analyzing the influence of social media on purchasing decisions and responsible consumption behaviour. The respondents belong to different demographic backgrounds, including various age groups, genders, and occupations. However, a significant proportion of the respondents falls within the younger age group, which is highly relevant to the study, as young consumers are the most active users of social media platforms.

Collecting data from two hundred respondents ensures that the study has sufficient data for meaningful statistical analysis, including percentage analysis and graphical representation. It also enhances the credibility of the research findings by reducing the impact of individual biases.

Data Collection Tool (Questionnaire Design)

The primary data for this study has been collected using a structured questionnaire, which servesas the main data collection tool. The questionnaire was carefully designed to gather relevant information related to social media usage, purchasing behaviour, influencer impact, and responsible consumption. It consists of twenty-five questions, which are divided into different sections to ensure clarity and logical organization.

The questionnaire is structured in a way that covers all the key aspects of the research. It begins with demographic questions, such as age, gender, and occupation, which help in understanding the background of respondents. The next section focuses on social media usage, including time spent on social media and the platforms used. This is followed by questions related to purchasing behaviour, such as the influence of advertisements, discounts, and online reviews.

Another important section of the questionnaire focuses on influencer marketing, which examines whether respondents follow influencers and how influencer recommendations affect their purchasing decisions. The final section addresses responsible consumption behaviour, including awareness of eco-friendly products and sustainability issues.

Section	Description
Section A	Demographic details (age, gender, occupation)
Section B	Social media usage
Section C	Purchasing behaviour
Section D	Influencer impact
Section E	Responsible consumption

The questionnaire includes both multiple-choice questions and Likert scale questions. Multiple-choice questions provide predefined options, making it easier to analyze responses quantitatively.

Likert scale questions allow respondents to express their level of agreement, providing deeper insights into attitudes and perceptions. The questionnaire was distributed using an online platform (Google Forms), which allowed for efficient data collection from a large number of respondents. This method is particularly suitable for the study, as it targets individuals who are active on digital platforms.

Overall, the structured questionnaire ensures consistency, reliability, and ease of analysis, making it an effective tool for achieving the research objectives.

DATA ANALYSIS

The data shows the age-wise distribution of the respondents included in the study. The 18-24 age group constitutes the largest segment with eighty respondents (36.36%), indicating that young adults form the major portion of the sample. This is followed by the 25–34 age group, which includes seventy respondents (31.82%), showing strong participation from early working-age individuals. Working professionals form the largest group with 76 respondents (34.55%), indicating strong participation from employed individuals. This is followed by students, who account for 54 respondents (24.55%), highlighting significant involvement from the younger population. Parents (11.36%) and self-employed respondents (10.45%) also represent notable portions of the sample. Smaller shares are observed among others (7.27%), administrators (6.36%), and teachers (5.45%). Overall, the data shows that the sample is composed of working professionals and students, suggesting that the findings of the study largely reflect the views of economically active and socially engaged groups.

1) The most preferred combination is Instagram + YouTube

The most frequently selected pair is Instagram–YouTube (31 respondents; 14.09%), showing that respondents strongly rely on a mix of visual short-form content (Instagram) and video content/search-based discovery (YouTube).

2) YouTube appears as the dominant platform overall

Across all pair combinations, YouTube has the highest overall presence (139 mentions; ~31.6%), indicating it is the most consistently used platform among respondents, either as a primary or secondary platform.

3) Instagram is the second strongest platform and works closely with YouTube

Instagram is the second most present platform (96 mentions; ~21.8%), and its strongest pairing is with YouTube, suggesting that these two platforms are central to respondents' daily social media ecosystem.

A majority of participants reported that they do discover new brands through social media platforms (53.18%), indicating that more than half of the sample actively encounters brand-related information during their social media usage. Additionally, a considerable proportion of respondents stated that they sometimes discover new brands through social media (28.64%), suggesting that even when brand discovery is not consistent, social platforms still play an occasional role in exposing users to new products and brands.In contrast, a relatively small segment of respondents indicated that they do not discover brands through social media (18.18%).

The findings reveal that respondents are most attracted to interactive and engaging forms of content on social media platforms. The highest levels of preference were reported for influencer posts and short videos or reels, each accounting for 23.18% of responses. This indicates that content featuring personal recommendations, opinions, and visually engaging short-form videos plays a prominent role in capturing users' attention. Such content formats are typically designed to be relatable and entertaining, which may enhance user engagement and influence perceptions toward products and brands.

Brand advertisements and product reviews were equally preferred, with each accounting for

19.09% of responses. This suggests that respondents value both promotional content created by brands and informational content that supports decision-making, such as reviews. While brand advertisements contribute to awareness and visibility, product reviews appear to fulfill an evaluative role by helping consumers assess product quality and reliability before making purchase decisions.

In contrast, photos alone were reported as the least preferred content type (15.45%). This comparatively lower percentage indicates that static visual content may be less effective in engaging respondents than dynamic or interactive formats such as videos, influencer content, or review-based posts..

More than half of the respondents (54.55%) reported that they had not purchased a product after seeing it advertised on social media, while 45.45% indicated that they had. This suggests that although social media advertising does not always directly translate into purchase behavior, it still influences a considerable portion of consumers.

Most participants reported experiencing some degree of influence from social media advertisements, with 41.36% indicating they are influenced sometimes and 32.27% reporting they are influenced very often. A smaller portion of respondents stated that advertisements rarely influence them (24.09%), and only 2.27% reported never being influenced. These findings suggest that social media advertising exerts a considerable impact on consumer attitudes and behaviors, with the majority of users acknowledging at least occasional influence.

A substantial proportion of respondents (40%) reported engaging in impulse purchases, while 35% indicated that they might do so depending on the situation. Only 25% stated that they do not make impulse purchases. These findings suggest that impulsive buying behavior is prevalent among social media users, with the majority demonstrating at least some susceptibility to unplanned purchases.

A slight majority of participants (50.91%) reported following influencers on social media, whereas 49.09% indicated that they do not. This near-equal distribution suggests that influencer-related content reaches a broad audience, with roughly half of users actively engaging with influencer profiles.

Participants demonstrated the highest level of trust in micro-influencers (32.73%), followed by celebrities (23.64%) and friends or peers (23.64%). Experts were the least selected category, with 20% of respondents indicating trust in them. These findings suggest that consumers tend to place greater trust in influencers who appear relatable, accessible, and authentic.

Participants expressed varied perceptions regarding the honesty of social media influencers.

The largest proportion (35%) indicated that influencers are sometimes honest, while 33.18%believed they are not honest and 31.82% reported that influencers are honest. These findings suggest that trust in influencer authenticity is inconsistent among respondents.

A slight majority of participants (50.91%) reported regretting a purchase, whereas 49.09% indicated that they had not experienced purchase regret. This near-equal distribution suggests that regret following social media-influenced purchases is a prevalent experience among consumers.

Most participants (62.73%) indicated that they would choose eco friendly products even if they were more expensive, whereas 37.27%

reported that they would not. These findings suggest that most respondents value environmental sustainability enough to accept higher prices for eco friendly alternatives.

However, the sizeable minority who are unwilling to pay more suggests that cost remains a significant barrier for some consumers. Economic constraints, perceived product value, or skepticism about the authenticity of eco-friendly claims may influence this group's decisions.

Participants reported varying levels of overall influence from social media, with 22.27% indicating low influence, 20.91% reporting high influence, and 20.45% reporting very high influence. Additionally, 18.64% perceived moderate influence, while 17.73% stated that social media has no influence on their purchasing behavior. These findings suggest that although the degree of influence differs among individuals, social media exerts at least some level of impact on a majority of respondents.

CONCLUSION

The study clearly shows that social media has become a powerful tool influencing the behavior of young consumers. A large proportion of respondents, especially those in the younger age group, actively use social media platforms on a daily basis. This high level of engagement increases theirexposure to advertisements, influencer content, and brand promotions. As a result, social media plays a significant role in shaping their preferences, opinions, and purchasing decisions. It is evident that platforms like Instagram and YouTube are the most influential due to their visually engaging and interactive content. Consumers tend to trust online reviews, influencer recommendations, and promotional offers, which often lead to actual purchases. At the same time,the study also highlights certain negative aspects such as impulse buying, overconsumption, and post-purchase regret. Despite this, social media has also contributed positively by increasing awareness about sustainable and eco-friendly products, indicating a shift towards more conscious consumer behavior.

Based on these findings, it is recommended that businesses should focus more on digital marketing strategies, especially through social media platforms, to effectively reach and engage young consumers. Companies should collaborate with authentic and relatable influencers who can build trust among audiences. It is also important for marketers to create transparent and honest content to maintain credibility.

Consumers, on the other hand, should be encouraged to make informed decisions by verifying product details and reviews before purchasing. Awareness campaigns can be conducted to educate users about the risks of impulse buying and overconsumption. Additionally, promoting sustainable products through social media can help foster responsible consumer behavior. Furthermore, the findings indicate that social media is not only a communication platform but also a strong decision-making tool for consumers. The ease of access to information, peer reviews, and influencer opinions creates a sense of confidence among users while making purchases. However, this convenience can sometimes lead to over-reliance on online content, reducing critical evaluation by consumers.

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To Study the Impact of Green Marketing of Buying Behavior in Delhi NCR

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ABSTRACT

The study focuses on the potential effects of green marketing on consumer purchasing behaviour in the Delhi NCR region. With the rapid development in today's world, the study looks to determine the level of impact that consumer awareness, perceptions, trust, pricing and availability of green products affect consumer purchasing behaviour.The authors of the study developed a simple structure questionnaire to obtain primary data. The sample size for this study was comprised of one hundred respondents from Delhi NCR. The authors used- descriptive research and empirical research methodologies to conduct this study. The data was analyzed through the use of simple percentages, and the data was also presented in the form of graphs.The authors of this study have reported that while the majority of consumers are aware of green marketing, and they prefer purchasing eco-friendly products, the challenges of expensive products and lack of trust in the products proves to be an overwhelming barrier. The authors also discovered that consumers are aware of the use of social media in green marketing and they are willing to pay a little extra for sustainable products.It was discovered through this study that marketing goods that are eco-friendly have

changed consumer behaviour and that green marketing has an impact on consumer purchasing behaviour. If a business wishes to have a greater impact on the consumers, they should concentrate on the prices, trust, and the availability of the products to encourage a greater purchase of the green products.

1.INTRODUCTION

India's consumer confidence remains the highest in the world and has improved in the second quarter of 2015, thanks to a positive economic environment and low inflation. Nielsen's findings show that consumer confidence in urban India increased by one point in Q2 2015 compared to the previous quarter. Urban India's consumer confidence score is 131 in Q2 2015, which is up three points from 128 during the same period last year. This score keeps India at the top of the global consumer confidence index for the quarter, followed by the Philippines at 122 and Indonesia at 120. Confidence in India has risen for seven straight quarters.Global companies see India as a major market for future growth. The growth in India's consumer market will mainly come from a favorable population structure and rising disposable incomes. A recent study by the McKinsey Global Institute suggests that if India maintains its current growth rate, average household incomes will triple over the next 20 years. This growth would make India the world's fifth-largest consumer economy by 2025, up from its current position at 12th.

One cannot deny the fact that India is one of the largest markets around the globe. In 2014, India's gross domestic product (GDP) was estimated at USD $2,049.5 billion. According to the Boston Consulting Group (BCG) and the Confederation of Indian Industry (CII), India will experience significant economic growth and rising disposable income, increasing consumer expenditure to USD $3.6 trillion by 2020. Most of the spending will occur in the areas of food, housing, durable goods, and transportation and communication services. They also stated that India's proportion of global consumption will increase more than two times to reach 5.8% by 2020.

The market in India is primarily consumer-driven and is projected to see consumer spending more than double by 2025 and attract marketers from all over the world. There are two main segments of consumers in India: urban and rural, and both of these segments present huge opportunities for marketers who have products or services that meet the unique demands of each market.

1.1 Market Size

Due to increased purchasing power and the influence of social media, Indian consumers have been able to spend money on nice things. According to research conducted by CISO, an American networking solution company, there will be over 650 million smart phones in India by 2019, making it the second largest smartphone market1. By 2019, more than 18 million tablets are expected to be sold in India, making it one of the fastest growing internet markets in the world2. According to CRISIL, an Indian credit rating agency, the online retail industry will grow three times its current size to Rs50,000 crore (US$8.06 billion) by 2016; this growth may lead to more offline retail sales as well.

Here is a list of some of the major investments and developments that are happening within the Indian consumer market:

- Hindustan Unilever (HUL), one of India's largest FMCG businesses, announced that it has reorganized its go-to-market operations from four traditional sales branches to 14 consumer clusters so that it can provide services to a diverse range of consumers throughout various channels and geographies across the country. HUL has named this new initiative "Winning in Many Indias."
- The Hero Group will be acquiring a very large percentage of Mybox Technologies (an analytics company) which is based in the USA and specializes in manufacturing set-top boxes for direct-to-home (DTH) television. This acquisition is just the first phase of many initiatives that the Hero Group has planned for entering the consumer electronics industry and ultimately will have a positive impact on the entire Hero Group Corporation.
- In a series of successive acquisitions by SnapDeal this year, SnapDeal has purchased Freecharge (an online utility bill payment site) and RupeePower (a financial services website) in an effort to create a branded service platform to differentiate itself from many other online marketplaces that until recently were primarily offering products such as cameras, clothing and furniture.
- Huawei, a Chinese technology giant, is launching its home and SOHO broadband network products into the Indian

marketplace. In an effort to cement its place in this country, online cashback and coupon site CashKaro has indicated that they will also add around fifty international retailers to their site over the next six months (from the founders).

- Gionee, a smartphone provider, is entering into India's urban market with the assistance of some of that nation's largest retailers in large-format stores. The company has already partnered with sales locations including Spice, The Mobile Store, Mobiliti World, Jumbo Electronics, Croma Retail, and Planet M to reach a total of over 1000 locations for Gionee's smartphones.

India's Government has approved 100% Foreign Direct Investment (FDI) via conducio, as well as 51% FDI in multi-brand retail through the automatic route and 100% via single, thereby encouraging additional investment flows from foreign firms into India.With increasing demand for skilled workers within Indian businesses, the Indian government has planned to train 500 million people before 2022, while also stimulating private sector investment and/or entrepreneurship. Various government agencies, private firms and education institutions are currently working to provide necessary education and skills training, so as to produce skilled technicians.

A 2015 report conducted by TechSci Research on the India Machine to Machine (M2M) Modules Market Opportunities and Forecast 2020 shows that by 2020 the M2M modules market in India will exceed $4.4 billion. According to a representative from TechSci Research, in recent years, India has been one of the fastest growing M2M Modules Markets in Asia-Pacific.Nielsen, a research firm, estimates that the FMCG (fast moving consumer goods) market in rural areas of India will exceed $100 billion by year 2025. Companies are looking to reach out to the rural areas through online sites, as it has helped reduced costs and made it easier for companies to reach rural customers through the Internet.

A joint study conducted by Consumer Electronics and Appliances Manufacturers Association ("CEAMA") and consultancy firm "EY" has found that India is projected to overtake Japan as the 5th largest consumer durables market in the world by 2025. Currently, the urban area accounts for 65% of total sales revenue for all consumer durables in India. The growth of the rural population and increased government focus on rural electrification will be the major drivers for growth in rural areas going forward, as noted in the report. The report also indicates that the per capita income for people living in India will grow at a compound annual growth rate (CAGR) of 6.6%, increasing from $1,500 in 2013, to $2,200 in 2019. Today, consumer electronics represents 17% of the total sales of electronics in India which is the third highest market share of consumer electronics.This segment contains some items such as television sets and videos and recorders. In addition to that, it contains set tops, home audio systems, MP3 players, sound systems, cameras for taking pictures as well as a number of household appliances including but not limited to; a washer and dryer, air conditioning units, microwaves, stove tops, and kitchen ovens.

Furthermore, retailers are also providing easy financing to consumers through banks as most large retailers have entered into agreements with banks to offer customers simple and convenient financing options. According to this report from the Consumer Electronics Association of America, organized retailing will represent anywhere between 15% and 18% of the total Consumer Electronics (CE) market by 2020 from a current position of just 3%. This will make supply chains much more efficient, increase the availability of product and create opportunities for people to buy.The Consumer Electronics Association of America estimates that the overall growth for LED and LCD televisions will be approximately 20% during the period between 2014 and 2020. Thus, refrigerators are expected to be around 10% during the same time frame.

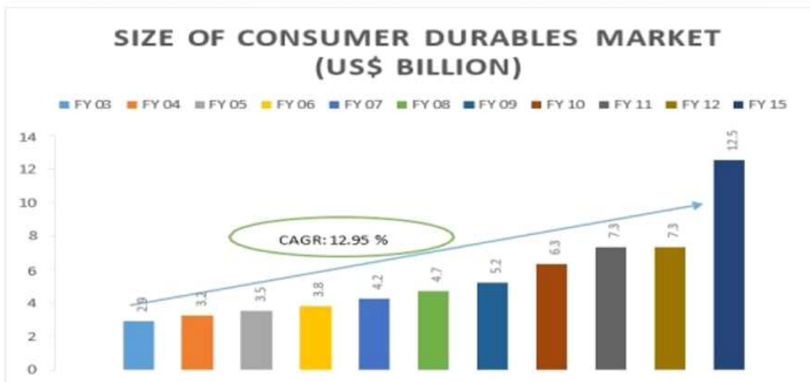
Regarding the air-conditioning market, expect to see increases between 6% and 7% during the period 2014 to 2020; whereas washing machines will average around a 9% increase over the same period. However, the set-top box market will exhibit the highest growth rate due to the saturation of cable systems resulting from the digitization of cable delivery services.The total STB market in 2012 was approximately 18.4M units, and projected to grow at a CAGR of 28.8% to approximately 39.4M units by 2015. Similarly, the number of DTH subscribers in India is projected to grow from approximately 73.1M subscribers by December 2014 to approximately 200M by 2018," it said.

"The industry has many challenges such as increasing freight costs, infrastructure bottlenecks and the ecosystem being underdeveloped, to name a few."The consumer electronics market is projected to grow to US $400 billion by 2020, and production of consumer electronics products is projected to grow to approximately US $104 billion by 2016.

According to market size estimates, consumer durables are projected to double from US $6.3 billion in FY2010 to approximately US $12.5 billion in FY2015, which equates to an annual average growth of approximately 14.7% during the growth period.The majority of revenue in the consumer durables space is generated in urban areas (approximately 65%) and urban demand is expected to increase significantly for non-essential products such as LED televisions, laptops, split air-conditioners and beauty/wellness products.In contrast, as a result of government investments in rural electrification, rural areas can expect to see an increase in demand for durables such as refrigerators and consumer electronics over the next several years.A growing interest from foreign investors has led to further liberalization of the Indian government's policies. Initiatives like the National Electronics Mission, digitization of television, and the establishment of Electronic Hardware Technology Parks (EHTPs) should also help to promote growth within this sector.

As a result of this growth, rural and semi-urban areas are expected to see a 25% compound annual growth rate (CAGR) increase in demand, reaching an expected $6.4 billion by FY15; therefore, these markets will be significant contributors to consumer durables sales.The consumer durable industry is experiencing rapid expansion in terms of revenue. The consumer durable industry had revenue in FY12 of $7.3 billion. The consumer durable industry's CAGR for the 9 years from FY03-12 was 10.8%. The industry is projected to double from $6.7 billion in FY10 to $12.5 billion in FY15, with a CAGR of 14.7%.

Figure 1: CAGR – Compounded Annual Growth Rate (Estimates)



Source: Electronic Industries Association of India

The classification of income, according to annual household income, is categorized by income groups in India (1995-96 indices). The classifications include five categories: the lower-income group, the three subclasses of the middle-income group, and the higher-income group. Consumer durable goods are expected to increase with a 10 percent annualized growth rate for household income in the top 20 of India's most economically growing urban centers. Indian consumers can now afford high-priced consumer durables more easily with the abundance of available credit through credit cards, phone loans, and nil E.M.I.'s (Equated Monthly Installment). The Indian Consumer Durable Market segments into three segments:

Table No. 1 Characterization of Goods

White Goods	**Brown Goods**	**Consumer Electronics**
▪ Air Conditioners ▪ Refrigerators ▪ Washing Machines ▪ Sewing Machines ▪ Watches and Clocks ▪ Cleaning Equipment ▪ Other domestic appliances	▪ Microwave Ovens ▪ Cooking Range ▪ Chimneys ▪ Mixers ▪ Grinders ▪ Electronic Fans ▪ Irons	▪ TVs ▪ Audio and Video Systems ▪ Electronic Accessories ▪ PCs ▪ Mobile Phones ▪ DVDs ▪ Camcorders

All segments listed above have high levels of competition, because of the entry of new companies (MNCs) and the offer of price cuts or exchange schemes provided by manufacturers that have state of the art production facilities.

MNCs control almost 65% of the market share in the color TV segment of the Indian consumer durables.

In recent decades, India's increased average per capital income has led to changes in consumption patterns and improvements in lifestyles, as well as the increase in availability of credit (also known as "Loans to Purchase"), and an increased level of awareness among consumers has all contributed to the increase in demand for consumer durables.

The Green Marketing Importance

Marketing is an area which has become a subject of major interest both for scholars and companies.

One of the reasons why people turn to green marketing is because of a dramatic change that has been witnessed in the consumer marketing over the past two decades. Consumers have become much more aware of what green products are, as well as how they are able to contribute positively to the environment. Environmental issues are of high priority for modern consumers. The use of conventional approaches to marketing cannot work effectively in such cases. Therefore, companies need to promote their products as being green.

The conclusion from Michael J Polonsky's research, Keller (1987) and Shearer (1990), is that organizations see the opportunity of environmental marketing as an opportunity to achieve their goals. The companies also feel they have a moral obligation, to support society in a more environmentally friendly manner, and that they have to adhere to laws developed by the government to protect the environment. The same laws also force firms to be more socially responsible or they will lose customers to their competition, as those competitors implement environmental marketing activities.

In addition, Datamonitor's report (2009) found that green products are high among consumers regardless of their economic condition. For the six months of 2009, there were over 500 new product launches claiming to be environmentally friendly.

1.3 Green Marketing Practices

Green Marketing Strategies

Many businesses in the past few decades have shifted their focus toward the use of environmentally friendly practices in both the production and distribution of their products. Many companies have taken steps to protect the environment, as well as to promote themselves as environmental organizations; therefore, they are all now causing harm to the climate.

Philips is currently marketing its Compact Fluorescent Light (CFL) bulb under its brand "Marathon," as a new product with long-lasting life, uses less energy, and has an EPA Energy Star label, giving more credibility to the CFL, with high acceptance in the marketplace.

Figure 2: Green Product of Philips (CFL Marathon)

Figure 3: Energy Rating for Appliances

Figure 4: Godrej eon Green Technology

Numerous producers of goods that last for extended periods of time are currently utilizing the Energy Star label when advertising their brands because they want consumers to be able to reduce their energy usage and also save money on energy costs whenever possible.

As an illustration, Godrej Consumer Products is using "eco-marketing" in an attempt to convince consumers by providing extra benefits to consumers who exchange their old units for newer and more environmentally friendly models. The marketing materials are designed to influence the way consumers live their lives, and help create a more environmentally friendly world.

Another example is LG, who is using Eco-marketing to advertise their air conditioners as being capable of reducing energy consumption by as much as 66% through the use of inverter V technology.

There are a growing number of companies now offering alternative eco-friendly products to their customers. Recycled products are one of the most common eco-friendly alternatives that help protect the environment.

The increase in companies avoiding plastic bags and instead using their bags made from recycled paper as their primary carry bag is the current trend among retailers who distribute their products to consumers. For example, both Titan and Tanishq have a corporate policy of providing carry bags made from recycled paper, no matter where.

Another example is Idea Cellular, which promoted an advertisement regarding the saving of trees as part of their corporate social responsibility.

New Delhi, which had been one of the world's most polluted cities, experienced considerable reductions in air pollution after the Indian Supreme Court's efforts to promote the use of alternative fuels/ vehicles in the city began in 2002. The Supreme Court ordered that the public transport system be converted entirely to using CNG (compressed natural gas) to reduce pollution.

There are a number of greenhouse gas reduction markets that have been created over time that have the ability to catalyze important local, environmental, economic and social benefits. One of the Kyoto Protocol's mechanisms for Greenhouse Gas (GHG) Reduction is the Clean Development Mechanism (CDM). Some of the barriers to facilitating participation and expanding the benefits of the Kyoto Protocol's Clean Development Mechanism are: limited knowledge of the market; relatively complicated participation rules; and insufficiently simplified mechanisms for participation for small projects.

NDTV is a leading media house that is involved in promoting green values through the NDTV Greenathon campaign. The NDTV Greenathon (2012) provides a number of philanthropic and social activities for raising awareness of environmental issues while also making contributions to social causes such as the electrification of rural India, etc. The NDTV-Toyota Greenathon was launched in 2008 and was India's first ever nationwide campaign aimed at the protection of the environment. The purpose of the campaign is to create awareness on the environmental issues.

The NDTV first Telethon was a live fundraising event for 24 hours where individuals would come collectively and make donations as an effort to assist the Lighting a Billion Lives Initiative managed by TERI by providing solar power to rural villages in areas lacking electricity.

Nokia has established an initiative that promotes the recycling of mobile phones in order to assist in conserving natural resources.

Xolo has launched a Green Initiative for Safe E-waste Disposal, encouraging customers and business partners to properly dispose of electronics (e-waste) at the end of their useful lives. They do not want customers to mix e-waste with general rubbish to minimize harm done to the environment. Xolo has created a return process/ system for customers who would like to responsibly dispose of e-waste by establishing drop off locations for these items in select areas.

Philips is promoting its Compact Fluorescent Light(CFL) product as the "marathon" product, highlighting its new "super long-life" status, energy efficiency and United States Environmental Protection Agency Energy Star label, which adds to its credibility and increasing acceptance level within the marketplace.

To minimize soil erosion caused by making typical bricks, property developers in the Real Estate industry are employing fly ash/ manufactured (prefabricated) block types for their development projects across the country. They also implement the use of solar panels to power common area lighting, elevator operation, etc., thereby utilizing renewable energy as opposed to conventional electricity to limit energy consumption. Additionally, the Footwear Design and Development Institute (FDDI) is committed to re-use of tyre recycling by incorporating innovative and unique methods and creations for producing footwear and accessories from old tyres.

REVIEW OF LITERATURE

The topic of green marketing has gained considerable traction recently, as consumers and companies alike have made an effort to become more environmentally aware. This review discusses an array of literature on how green marketing strategies have created changes in buying behavior, thus creating a new set of behaviours for consumers who are looking to purchase consumer durable goods in India. Several studies show that there is a growing demand for sustainable products, more eco-friendly packaging, and corporate social responsibility, all of which shape the preferences and purchases of consumers.

Concept of Green Marketing

The definition of Green Marketing is strategies and activities a business utilizes to promote environmentally friendly products and/or practices. As per Polonsky (1994), green marketing is the process of designing, promoting, pricing, and distributing products so that they have minimal effect on the environment. In India, green marketing has become important due to increasing concern for the environment, government legislation, and increases in consumer preference for environmentally friendly products.

Consumer Behavior Towards Green Products

Results of research studies find that consumers in India are increasingly aware of the environment and prefer to use products that help protect it (Choudhary&Gokarn, 2013). Environmental awareness, perception of quality of merchandise, attitude toward pricing, and reputation of brands are all factors that affect consumer behaviour when it comes to purchasing "green" products (Joshi & Rahman, 2015). In addition, urban dwellers and younger consumers tend to behave in ways that support perceived environmental efforts.

Impact of Green Marketing Strategies on Consumer Durable Goods

Eco-friendly marketing tactics include sustainable product creation, eco-labels, energy conservation, and corporate social responsibility action. According to Mishra & Sharma (2012), eco-labels/certification play an important role in building consumer confidence and intent to buy. Additionally, Patel & Bhatt (2018) mentioned that Indian consumers will now prefer to purchase energy-efficient appliances (e.g., refrigerators, washing machines) because they promote future savings on energy bills as well as providing positive benefits related to the earth's ecosystem.

Challenges in Green Marketing Adoption

While there has been a lot of positive impact from green Marketing, numerous obstacles are preventing widespread adoption. Typical challenges include: high costs of production; low levels of consumer awareness; and a general distrust of the claims associated with green products (Gupta & Abbas, 2020). There is evidence that even when Indian consumers desire to purchase green products, they do not follow through. This can be due to pricing issues or limited availability.

Government Policies and Corporate Initiatives

The government has many rules and regulations that promote green shopping, including eco-labels and the Energy Conservation Act (2001). In addition, companies use sustainability reports to increase their marketability and gain the trust of consumers (Kumar & Rao, 2021). Companies that engage in eco-friendly marketing efforts have a better chance of being successful in the Indian marketplace than other businesses that do not participate in eco-friendly initiatives.

1.4 Global Green Marketing Practices

Due in part to the growing public awareness of polystyrene manufacturing and its effect on ozone depletion as well, McDonald's has changed its clam shell container to waxed paper.

As a result of rising concerns about drift net fishing and dolphin deaths caused by that method of fishing, tuna producers have altered their methods of catching tunas.

Xerox has created a high-quality photocopier that produces recycled paper in order to meet consumers' desire for less environmentally impactful products.

PepsiCo has made a corporate commitment to protect our environment, which includes introducing solar power into its facilities since 2007, as well as recycling the water used in manufacturing facilities from the corporation.

Timberland, a shoe and clothing company, has taken an environmentally friendly approach to the way it packages its products by using 100% recycled cardboard to create boxes to ship its shoes, and it developed a label similar to a food nutrition label for shoes which lists the content of organic, recycled and renewable sources of materials in manufacturing each pair of shoes (Renfro 2010).

RESEARCH OBJECTIVES

- To evaluate the awareness and perception of green marketing in India's consumer durable goods industry.
- To determine how elements of green marketing (eco-labelling, eco-branding, green advertising, and sustainable packaging) affect consumers' purchasing decisions.
- To explore how consumers' concern for the environment and awareness of sustainable practices impact their preferences when purchasing green consumer durable goods.
- To review how price, quality, and brand trust are integral to developing consumer attitudes towards green marketed durable products.

1.5 Green Products

There is not a final agreement on what the term green includes as there is currently no final definition agreed upon for what constitutes a green product. However, by looking at many definitions from the different marketing avenues; all can agree that the common characteristics of products are the ones identified below. Green Products are:

1. Energy Efficient (Production and Use)
2. Water Efficient (Production and Use)
3. Low Emission (Hazardous emissions are low)
4. A Safe & Healthy Product
5. Recyclable &/or contain recycled materials
6. Durable (Will last a long time)
7. Biodegradable
8. Renewable
9. Re-Use
10. Third Party Certified by either a Public or Transportation Standard (e.g., Organic, Certified Wood).
11. Local Sourcing

CONCLUSION

Research on how green marketing affects buyers in India's consumer durable good sector reveals:

1. Consumers are becoming more aware of the environment and want eco-friendly products which has a direct impact on their purchasing decisions.
2. Particularly in urban areas, consumers are willing to buy brands that operate sustainably. In addition, consumers will associate companies that are engaged in green marketing with social responsibility and, in turn, will be more trusting and loyal to these brands.
3. There are some barriers to adopting eco-friendly durable goods, such as the cost of green products, ignorance among rural consumers about green products, and skepticism concerning the validity of green product claims.
4. Government policy promoting energy efficiency and environmentally friendly products helps shape consumers' buying preferences. In addition, trends in the marketplace indicate that there is a shift to acquiring green products, and thus, many companies will need to incorporate sustainability into their business model.

2. AN OVERVIEW OF GREEN MARKETING

"Green marketing," which refers to the practice of promoting products or services that have a positive impact on the environment, includes a marketing plan that includes multiple means of marketing (e.g., branding, packaging, advertising) that support a company's product or service in its creating positive image for its efforts to provide environmentally friendly products and support for green initiatives.

More recently, many businesses have used green marketing as a viable tool for marketing their environmentally friendly products and services and have succeeded at using it to improve their overall reputation and brand image. Green marketing provides companies with the opportunity, through their support of environmentally friendly products and activities, to exhibit their commitment towards sustainability and environmental stewardship. Companies that use green marketing attract customers who are environmentally conscious and are seeking to purchase products and/or services that convey their values.

Green marketing has the opportunity to give businesses a competitive advantage. As awareness of the environmental consequences of their choices rises, consumers are increasingly looking to purchase environmentally friendly products and services. A company may be able to differentiate itself from competitors and attract a new market of consumers willing to pay a premium for organic products by providing a range of organic products. In addition to the benefits of green marketing, there are also some drawbacks associated with it. The most significant barrier for consumers is the commonly held belief that organic products are more expensive than conventional products. Customers who are price-sensitive may find it difficult to justify spending extra money on organic products. Another concern with the green marketing industry is that there is usually little regulation or standardization, which leads to companies making misleading or false eco-friendly claims about their products. Corporations can use green marketing as an effective marketing strategy to sell their eco-friendly goods and/or services, thus enhancing their company's image as well as cultivating a competitive advantage and attracting green consumers.

While green marketing isn't a new idea, increasing awareness of the environment among consumers has led to an increased emphasis on green marketing in today's marketplace. For green marketing to exist, the products and services that are offered must be designed to have as little impact on the environment as possible. Green marketing involves meeting the needs of consumers while also protecting the environment. Over the past several years, there has been an increase in consumer interest in green marketing and this interest is expected to grow. Because of the increased public awareness surrounding environmental issues, consumers are changing the way that they make purchasing decisions (Kanwal et al., 2024). Consumers are changing their purchasing habits to account for the impact that they are having on the planet and as a result, more companies are taking notice of the increasing popularity of green products (Venugopal, Das, and Badawy, 2023; Panda et al., 2023).

Many businesses have begun to implement strategies designed specifically for attracting green consumers due to the increase in green marketing. This has resulted in a multitude of environmentally sustainable products and services.

Currently, businesses are putting large amounts of capital into the research and development of green products based upon green marketing concepts (Majeed et al., 2022). Many scientists and marketing professionals also want to know how green marketing impacts consumer behavior. Several studies have been completed that show how green marketing positively impacts consumer behavior including purchase decisions, brand loyalty, and the willingness to pay more for environmentally friendly products (Venugopal& Das, 2023).

3. LITERATURE REVIEW

Green marketing involves the creation and sale of eco-friendly products and services. Companies utilize green marketing to differentiate themselves and connect to an increasingly environmentally aware consumer base. Methods of using green marketing include product design, packaging, advertising and promotion, among others. The most prominent benefit of utilizing green marketing is the potential to attract environmentally conscious consumers, many of whom will purchase green products and services compared to traditional products. Research indicates that consumers are now more aware than ever of making environmentally conscious decisions and are looking for ways to reduce their carbon footprint (Das et al., 2023). Furthermore, green marketing enhances business reputation and builds customer loyalty. Businesses that commit to sustainable environmental practices are likely to earn the trust and loyalty of consumers (Venugopal, Das &Vakamullu, 2023; González-Viralta et al., 2023).

4. GREEN MARKETING STRATEGY

Organizations have adopted a variety of techniques in their efforts to develop a green product portfolio and offer sustainability-focused initiatives. Using messaging that emphasizes the environmental value of green products and services is one of the most widely employed techniques in promoting sustainability (e.g. advertising, marketing, packaging, labeling). Companies also promote sustainability by offering sustainable business practices, such as utilizing renewables, minimizing waste, and utilizing energy-efficient technologies. An additional strategy used by organizations is to promote sustainability in the way products and/or services are packaged (Chekima et al., 2016). Examples include using recyclable materials, reducing packaging waste, and creating recyclable packaging. Organizations may also promote sustainable consumption practices through their own education and information initiatives, such as encouraging consumers to purchase energy-efficient appliances and encouraging consumers to recycle their waste (Waghray, Das, & Ahmed, 2024).

5. THE IMPACT OF GREEN MARKETING ON CONSUMER BEHAVIOR

Green marketing plays an important role in influencing consumer behaviours. A study found that consumers that were exposed to environmental marketing were more inclined to purchase environmentally friendly products than consumers that were not exposed to environmental marketing (Ahmed et al., 2023). Consumers are increasingly willing to pay a premium for organic products (Narayanan & Singh, 2023). Using green marketing also helps to build customer loyalty. Companies that have demonstrated their commitment to sustainability will generally achieve high levels of trust and loyalty from their customers (Sharma, 2021). Many consumers also believe that businesses that are environmentally friendly are ethical, moral, and trustworthy. Green advertising has the power to shape consumers' perceptions and their willingness to purchase organic food products (Venugopal et al., 2023). Results from a consumer survey indicated that environmentally conscious consumers are more likely to respond positively to green advertisements and purchase green products. Additionally, the results showed that the majority of consumers' willingness to pay a premium for a given product or service was heavily influenced by their perception of the environmental impact of that product or service (Zhang, Xiao, & Zhou, 2020; Tsai et al., 2020). Therefore, businesses have the ability to increase their revenues by promoting the environmental benefits of their products and increasing their pricing.

6. RESEARCH METHODS

The influence of green marketing on the consumer's attitude was investigated by means of a quantitative approach in research.A sample size of 100 participants who have previously purchased environmentally friendly products or services were chosen for this survey. This survey consists of questions regarding the purchasing behavior of the consumers, brand loyalty of the consumers, and the readiness to pay more for organic products. Data gathered from the survey was analyzed by means of descriptive statistics and regression analysis.The open-ended questions in the survey attempt to reveal the demographics of the respondents,their awareness and perceptions regarding green marketing, buying behaviors for eco-friendly products and services, their brand loyalty for green companies, and their willingness to pay more for goods and services that contribute to environmental preservation. In preparation for conducting the survey,a pretest was done to establish the validity and reliability of the questionnaire. Descriptive statistics were then employed to analyze the gathered data which included frequency, percentage, mean, and standard deviation. Moreover, regression analysis was used to identify the relationship between greenmarketing and consumer behavior.The research method employed in this study allows for an in-depth analysis of the effect that green marketing has on consumer behavior. The understanding of the relationship between green marketing and consumer behavior, including purchase behavior, loyalty, and willingness to pay more for green products and services, can be accomplished through the descriptive and regression analysis method.

Sample Size: 100 Respondents (Delhi NCR)

Table 1 - Awareness of Green Marketing

Table 2 - Importance of Environmental Factors

Table 3 - Preference for Eco-Friendly Products

Table 4 - Factors Influencing Purchase

Table 5 - Willingness to Pay More

Table 6 - Trust in Green Advertising

Table 7 - Frequency of Buying

Table 8 - Impact of Packaging

Table 9 - Source of Awareness

Table 10 - Satisfaction Level

Table 3.1: Awareness about Green Marketing

Sl. No.	Variable	No. of Respondents	% of Response
1	Yes	70	70%
2	No	30	30%
	Total	**100**	**100%**

Sl. No.	Variable	No. of Respondents	%
1	Very Important	50	50%
2	Important	30	30%
3	Neutral	10	10%
4	Not Important	10	10%
	Total	100	100%

Table 3.3

Sl. No.	Variable	No. of Respondents	%
1	Yes	65	65%
2	No	35	35%
	Total	100	100%

Table 3.4

Sl. No.	Variable	No. of Respondents	%
1	Price	40	40%
2	Quality	25	25%
3	Brand Image	20	20%
4	Environmental Benefit	15	15%
	Total	100	100%

Table 3.5

Sl. No.	Variable	No. of Respondents	%
1	Yes	55	55%
2	No	45	45%
	Total	100	100%

Table 3.6

Sl. No.	Variable	No. of Respondents	%
1	High	30	30%
2	Medium	45	45%
3	Low	25	25%
	Total	100	100%

Table 3.7

Sl. No.	Variable	No. of Respondents	%
1	Always	20	20%
2	Sometimes	50	50%
3	Rarely	30	30%
	Total	100	100%

Table 3.8

Sl. No.	Variable	No. of Respondents	%
1	Yes	60	60%
2	No	40	40%
	Total	100	100%

Table 3.9

Sl. No.	Variable	No. of Respondents	%
1	Social Media	40	40%
2	TV Ads	25	25%
3	Friends/Family	20	20%
4	Others	15	15%
	Total	100	100%

Table 3.10

Sl. No.	Variable	No. of Respondents	%
1	Satisfied	65	65%
2	Neutral	20	20%
3	Unsatisfied	15	15%
	Total	100	100%

Overall Analysis

- ❖ Majority of consumers are aware of green marketing
- ❖ Environmental concern strongly influences buying decisions
- ❖ Price remains the biggest barrier
- ❖ Social media is the most effective awareness tool
- ❖ Consumers show moderate trust in green claims
- ❖ Adoption of green products is increasing gradually

Green Retail

Organic merchandising through ecological means is referred to as “green retailing.”The desire to reduce the negative impact of retailing practices on the environment and increased awareness of environmental issues led to the creation of the concept of “green” retailing.Green retailing is a strategy adopted by retailers in an effort to cater to the increasing demand for organic products.Green retailing is based on embedding sustainability practices at different levels in the retail industry, including but not limited to product development, sourcing, packing, transportation, and product disposal. Some ways through which retailers can adopt green retailing include selling organic products,implementing sustainable packing practices, minimizing wastage, and implementing sustainable modes of transport. Retailers can inform customers of the environmental implications of their products.There are various advantages that come with green retailing, including minimizing the impact on the environment, enhanced image, increased customer loyalty, and saving costs. By going green, retailers can minimize the amount of carbon dioxide they emit into the atmosphere, which helps in efforts to conserve the environment. Green retailing assists retailers in attracting and retaining environmentally-conscious consumers willing to pay higher prices for organic products.

In summary, green retailing is one of the strategies that retailers should implement if they wish to meet the rising demands for sustainable products. Going green will enable retailers to make a competitive advantage by enhancing their image.

7. IMPLICATIONS

There are a number of implications of the research findings for marketing and retailing practices.

First, it is critical for retailers to emphasize the sustainability of their products in order to appeal to environmentally friendly consumers. Organic products are considered environmentally friendly, healthy, and of high quality. As a result, marketers need to ensure that they promote these benefits of organic products in their advertisements.

Secondly, there are a number of ways retailers can improve their green retailing efforts. For example, they can ensure that their products have sustainable packaging, reduce wastage, and use sustainable modes of transport. Consumers take time to read the packaging labels before making a purchase. As a result, retailers need to ensure that consumers are well informed about the environmental sustainability of their products and packages.

Third, it should be emphasized that retailers should give a rational price for organic products so that consumers could make rational choices. Consumers see the green products as high quality but expensive. Hence, retailers must provide reasonable pricing strategies for attracting consumers towards the purchase of organic products instead of standard products.

- ❖ Lastly, it should be mentioned that traders and retailers should make efficient advertising campaigns in order to inform people about environmental issues and to sell organic products. The efficiency of green advertising is based on its ability to increase awareness of environmental issues and motivate consumers to take care of the environment through the purchase of green products.

Hence, merchants and retailers should design rational and appealing campaigns for attracting green consumers.

8. CONCLUSION

The objective of this study is to find out the effect of green marketing on consumer behavior in the form of purchasing decisions, consumer loyalty and paying higher prices for green products. The findings of this study indicate that consumers believe organic products are environmentally friendly, healthy and high-quality products. On the other hand, they do not think that they are affordable, and the price of the organic product affects consumer purchasing behavior. This study also found that green marketing techniques such as green retailing and effective green promotions play an important role in changing consumer behavior. Green retailers can change their green retailing strategies by providing sustainable packaging, minimizing waste production and using sustainable transport practices. Merchants use sustainability initiatives to attract environmentally aware customers, develop effective environmental promotion programs to increase environmental awareness and sell environmentally friendly products.

Consequently, the research findings imply that environmental consciousness among consumers will be enhanced through the adoption of sustainable practices in marketing and retailing, together with the formulation of effective environmental advertisements. This means that "it can be used to promote sustainable purchases." The research findings will be instrumental for marketers and retailers in understanding consumer behavior towards organic foods and developing effective green marketing strategies.

From the discussion, it is clear that the importance of adopting green marketing practices for the promotion of sustainability and influencing consumer behavior cannot be underestimated. For marketers and retailers, the incorporation of sustainable practices and sustainability promotion is crucial in capturing green consumers and fostering sustainable purchases.

9. DIRECTION FOR FUTURE RESEARCH

There were a number of insights into the influence of green marketing on the customer's behavior, yet there is plenty to explore in this field of research as well. The future direction for further investigation may include:

- ❖ Investigating the role of demographic factors in shaping the population: In accordance with the results of this study, customer's readiness to pay for organic products was greatly affected by their age and level of financial wealth. Additional research may investigate how other demographic factors,such as gender, educational background, and occupation, have an effect on the customers' approach towards organic products.
- ❖ Examining the influence of green certifications: The consumer behavior in relation to green products can be greatly affected by such certifications as FSC and LEED. Further investigation in this field may concentrate on the role of green certification, as well as their efficacy in influencing consumer behavior towards particular purchases.Determine how green marketing influences consumer brand loyalty: This research paper identified how green marketing could help in enhancing consumer brand loyalty. Further research could focus on the connection between brand loyalty and green marketing, together with any moderating variables that could affect the relationship.
- ❖ Determine the impact of social media on green marketing: Social media platforms are increasingly used for green marketing. Future research should focus on determining how social media impacts consumer behavior when it comes to organic products and the effectiveness of various social media platforms for promoting organic products.
- ❖ Study the effect of greenwashing: Greenwashing involves exaggeration or manipulation of information about environmental advantages of a product. Further research could focus on determining the impact of greenwashing on consumer behavior towards organic products and various ways of addressing the phenomenon.

This list is not exhaustive since there are several other areas of research within the same field that require further investigation. Businesses and political leaders will increasingly find it important to understand the impact of green marketing on consumer behavior due to growing public interest in sustainability and environmental issues.

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7

"AI for Sustainability (Smart and Green tyres) and its Effect on profitability, Liquidity and Solvency of Selected Tyres Industry in India"

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ABSTRACT

The present study titled *"AI for Sustainability (Smart and Green Tyres) and its effect on Profitability, Liquidity and Solvency of Selected Tyre Industries in India"*focuses on examining the growing role of Artificial Intelligence and sustainable practices in the Indian tyre industry. In today's AI-driven economy, companies are increasingly focusing on innovation, cost efficiency, customer satisfaction and sustainability to survive and achieve long-term growth. The tyre industry is also undergoing rapid transformation through the adoption of smart technologies, green manufacturing processes and research-oriented development activities.Artificial Intelligence is helping tyre manufacturers improve tyre quality, fuel efficiency, road safety and operational efficiency. Companies are introducing smart tyres equipped with advanced technologies and eco-friendly green tyres that reduce environmental impact and support sustainable development. These technological advancements not only improve product performance but also help companies optimize resources, reduce wastage and enhance profitability. Sustainable practices further strengthen the brand image of companies and increase customer trust in the long run.The study also emphasizes the importance of profitability, liquidity and solvency for the growth and survival of business organizations. Profitability reflects the earning capacity of a company, liquidity measures the ability to meet short-term obligations

and solvency indicates the financial stability of the business in the long run. Maintaining a proper balance between profitability and liquidity is essential for wealth maximization and sustainable business performance.The research is based on selected Indian tyre companies namely MRF, CEAT, JKTyre and TVS Srichakra. The study covers a period of seven years from financial year 2018–19 to 2024–25. The data used in the research is secondary in nature and has been collected from annual reports, journals, books, websites and financial sources such as Moneycontrol and NSE India. Ratio analysis techniques such asGross Profit Ratio, Net Profit Ratio, Current Ratio, Quick Ratio, Debt Equity Ratio and Interest Coverage Ratio have been used to evaluate the profitability, liquidity and solvency performance of the selected companies. The findings of the study reveal that all selected tyre companies experienced growth in revenue and operational performance during the study period. The companies are increasingly investing in research & development, EV-compatible tyres, smart tyre technology and sustainable manufacturing practices to improve.

INTRODUCTION

The business environment across the world is rapidly changing because of technological advancement, globalization and the growing use of Artificial Intelligence (AI). In today's AI-driven economy, companies are focusing more on innovation, customer satisfaction, sustainability and cost efficiency in order to survive and achieve long-term growth. Organizations that are able to adopt modern technology and understand customer needs quickly are becoming more competitive and successful in the market. Artificial Intelligence is now being used in almost every sector to improve productivity, decision-making and operational performance. The Indian tyre industry is also experiencing significant transformation due to technological innovation and sustainability practices. Tyre manufacturing companies are increasingly adopting AI technologies to improve tyre quality, road safety, fuel efficiency and overall customer experience. AI helps companies analyze customer demand, reduce wastage, optimize production processes and improve operational efficiency. With the help of advanced technologies, tyre companies are able to manufacture high-performance products that meet international standards and changing consumer expectations. One of the major developments in the tyre industry is the introduction of smart tyres and green tyres. Smart tyres are equipped with advanced sensors and monitoring systems that provide information related to tyre pressure, temperature and vehicle performance. These tyres improve road safety, increase tyre life and help drivers maintain better vehicle efficiency. Green tyres, on the other hand, are designed to reduce rolling resistance, improve fuel efficiency and minimize environmental pollution. These tyres are manufactured using eco-friendly materials and sustainable production methods, which support environmental protection and sustainable development. The increasing focus on sustainability has encouraged tyre companies to invest heavily in research & development activities. Companies are continuously working on innovation, product modification and advanced manufacturing technologies to improve product durability and reduce carbon emissions. AI-based sustainability practices also help organizations reduce operational costs, optimize resource utilization and minimize production wastage. These improvements not only increase profitability but also strengthen the brand image and customer trust of companies in the long run. Apart from technological advancement and sustainability, financial performance also plays a very important role in the growth and survival of business organizations. Profitability, liquidity and solvency are important financial indicators that help in evaluating the overall financial health of a company. Profitability measures the earning capacity of a business, liquidity reflects the ability to meet short-term obligations and solvency indicates the ability to meet long-term liabilities. A company with strong profitability, adequate liquidity and sound solvency position is considered financially stable and capable of long-term growth. In the tyre industry, maintaining a balance between profitability and liquidity is very important because companies need huge investments in research &development, expansion projects and technological innovation. Excess focus on profitability may reduce liquidity, while maintaining very high liquidity may reduce earning opportunities. Therefore, financial managers must carefully balance profitability, liquidity and solvency to achieve the ultimate objective of wealth maximization and sustainable growth.Government support and infrastructure development are also contributing significantly to the growth of the tyre industry in India. Increasing road construction, rising automobile demand and the growing popularity of electric vehicles (EVs) are creating new opportunities for tyre manufacturers. Companies are now focusing on EV-compatible tyres, radial tyres and sustainable technologies to meet future market demand and remain competitive globally. The present study focuses on understanding the role of AI-based sustainability in the Indian tyre industry and its impact on profitability, liquidity and solvency of selected tyre companies. The study is based on major Indian tyre manufacturers such as MRF, CEAT, JK Tyre and TVS Srichakra for a period of seven years from financial year 2018–19 to 2024–25. The study aims to analyze how technological innovation and sustainability practices influence the financial performance and long-term growth of these companies.

LITERATURE REVIEW

Shim & Siegel (2010) explained that liquidity refers to the ability of a company to meet its short-term obligations on time. According to them, maintaining proper liquidity is important for smooth business operations and financial stability. Poor liquidity may create difficulties in meeting daily expenses and repayment of liabilities. Eljelly (2014) studied the relationship between profitability and liquidity in joint stock companies of Saudi Arabia. The study used Current Ratio and Cash Conversion Cycle for analysis and found a negative relationship between liquidity and profitability. The study concluded that excess liquidity may reduce profitability because idle resources remain underutilized.

Zygmunt&Justyna (2017) stated that liquidity is closely related to company performance and profitability. Efficient management of inventory, receivables and payables improves operational and financial performance. The study also observed that an increase in account payable days can positively affect profitability. Maheshwari (2016) highlighted that financial management plays an important role in maintaining a balance between profitability and liquidity. Proper utilization of financial resources helps companies achieve long-term growth and stability.Most previous studies mainly focused on traditional financial indicators such as profitability, liquidity and solvency. However, limited attention has been given to the role of AI, smart tyres and sustainable technologies in improving financial performance in the tyre industry.

RESEARCH GAP

Most previous studies on the tyre industry mainly focused on traditional financial indicators such as profitability, liquidity and solvency. Researchers mainly analyzed financial statements, ratio analysis and company performance from an accounting perspective. However, these studies gave very little importance to technological innovation and sustainability practices in the tyre industry. In recent years, the tyre industry has started adopting Artificial Intelligence, smart tyre technology and green tyre initiatives to improve product quality, road safety, fuel efficiency and environmental sustainability. Companies are investing heavily in research & development, EV-compatible tyres and eco-friendly manufacturing processes. These modern technologies are transforming the tyre industry and influencing overall business performance. Despite these developments, very limited research has been conducted to study how AI-based sustainability initiatives affect the financial performance, operational efficiency and long-term growth of tyre companies. Earlier studies mostly ignored the relationship between technological innovation and financial indicators like profitability, liquidity and solvency. Therefore, there is a need for a comprehensive study that combines both financial and technological aspects of the tyre industry. This study attempts to fill this research gap by analyzing the impact of AI-driven sustainability practices on the profitability, liquidity and solvency of selected Indian tyre companies.

OBJECTIVES OF THE STUDY

1. **To study AI-based sustainability initiatives in thetyre industry :-** The objective is to understand how tyre companies are using Artificial Intelligence and sustainable practices to improve efficiency, reduce wastage and support environmental protection.
2. **To analyze smart and green tyre technologies adopted by selected companies:-**This objective focuses on studying advanced tyre technologies such as smart tyres, fuel-efficient tyres and eco-friendly green tyres developed by tyremanufacturers.
3. **To examine the relationship between profitability, liquidity andsolvency:-**The study aims to understand how these important financial indicators are related to each other and how they affect the financial stability of companies.
4. **To study the impact of AI-based sustainability on financial performance and long-term growth:-**This objective examines whether technological innovation and sustainability practices help companies improve profitability and future growth opportunities.

5. **To analyze the financial performance of selected tyre companies using ratio analysis techniques :-** The study evaluates company performance through ratios such as Gross Profit Ratio, Net Profit Ratio, Current Ratio and Debt Equity Ratio.
6. **To study the role of research & development in improving operational efficiency and product quality:-**The objective is to understand how investments in R&D help companies improve tyre quality, safety and production efficiency.

DATA & RESEARCH METHODOLOGY

The present study is based on quantitative research methodology and uses secondary data for analysis. The required financial and theoretical information has been collected from annual reports, books, journals, research papers, websites and financial sources such as Moneycontrol and NSE India. Secondary data has been used because it provides reliable and detailed financial information related to company performance. The study focuses on selected Indian tyre companies namely MRF, CEAT, JK Tyre and TVS Srichakra, which are major players in the tyre industry. The financial statements of these companies have been analyzed for a period of seven consecutive years from financial year 2018–19 to 2024–25. This period has been selected to understand the financial growth, stability and changing trends in the tyre industry over time. Ratio analysis techniques have been used to evaluate the profitability, liquidity and solvency performance of the selected companies. Important financial ratios such as Gross Profit Ratio, Net Profit Ratio, Current Ratio, Quick Ratio, Debt Equity Ratio and Interest Coverage Ratio have been considered for the study. These ratios help in understanding the earning capacity, financial stability and debt management position of the companies. The study also examines the role of AI-driven sustainability initiatives, research & development activities,smarttyre technologies and green tyre practices in improving operational efficiency and long-term business growth.

DATA ANALYSIS

MRF

MRF is the largest tyre manufacturer in India and showed strong financial growth during the study period. Revenue increased significantly because of innovation, product development and sustainable tyre manufacturing. The company maintained a satisfactory gross profit ratio, although net profit remained comparatively lower due to high operating expenses. MRF maintained a low debt-equity ratio, indicating strong financial stability and dependence on equity financing. The company also invested heavily in research &development, especially in EV-compatible tyres and fuel-efficient technologies, which supported long-term growth.

CEAT

CEAT experienced continuous growth in revenue during the study period due to expansion in passenger vehicle and SUV segments. The company strengthened its market presence through product diversification and improved distribution networks. However, profitability fluctuated because of higher provisions, operating expenses and raw material costs. The company's liquidity ratios remained below ideal standards, indicating pressure on short-term obligations. Despite this, CEAT maintained an overall stable financial position and reduced long-term borrowings in recent years.

JK Tyre

JK Tyre showed improvement in operational and financial performance over theyears. Revenue growth was supported by capacity expansion, infrastructure investment and global market presence. The company invested in manufacturing facilities, subsidiaries and R&D activities. Although gross profit remained strong, net profit margins were affected by high operating expenses, finance costs and raw material prices. Over time, JK Tyregradually improved profitability and reduced financial pressure, reflecting a positive financial trend.

TVS Srichakra

TVS Srichakra maintained stable growth during the study period and continuedfocusing mainly on two-wheeler and agricultural tyres. The company expanded itsdealer network and export market, improving overall business performance.The company maintained a high gross profit ratio, but net profit margins remained low because of operating expenses, finance costs and market competition. Liquidity position remained tight due to higher working capital requirements and capital expenditure, though the overall financial position remained satisfactory.

FINDINGS

1. **All selected tyre companies showed growth in revenue during the study period from 2018–19 to 2024–25**

   The study observed that companies like MRF, CEAT, JK Tyre and TVS Srichakra experienced continuous growth in sales and revenue because of increasing market demand, technological advancement and product diversification.

2. **MRF maintained a dominant market position, while CEAT and JK Tyre expanded their operations and product range significantly**

   MRF remained the leading tyre manufacturer in India due to strong brand image and innovation. CEAT and JK Tyre also expanded their business through capacity expansion, wider distribution networks and new product development.

3. **Profitability fluctuated in most companies mainly because of changes in raw material costs, operating expenses and market conditions**

   The profitability of tyre companies was affected by increasing prices of raw materials like rubber and rising operating costs. Market competition and changing economic conditions also influenced company profits.

4. **The tyre industry experienced strong recovery after COVID-19, resulting in increased production and demand**

   After the slowdown during the COVID-19 period, the tyre industry showed significant improvement because of increased vehicle demand, replacement tyre demand and improvement in industrial activities.

5. **Companies increased investment in research & development, EV tyres, radial tyres and sustainable technologies for future growth**

The selected companies focused heavily on innovation and advanced technologies to improve product quality, fuel efficiency and environmental sustainability. Investments in EV-compatible tyres and smart tyre technologies increased rapidly.

CONCLUSION

The study concludes that AI-driven sustainability and technological innovation are playing a major role in transforming the

Indian tyre industry. Companies are increasingly investing in research & development, smart tyres, green technologies and EV-compatible tyres to improve operational efficiency, product quality and customer satisfaction. These technological advancements are helping companies strengthen their market position and remain competitive in the changing business environment.

The study also highlights that profitability, liquidity and solvency are closely interconnected and play an important role in maintaining long-term financial stability. Profitability helps companies earn better returns, liquidity ensures smooth day-to-day operations and solvency reflects the company's ability to meet long term obligations. Therefore, companies must maintain a proper balance between profitability and liquidity while continuing investment in sustainable and innovative technologies.

The findings further indicate that increasing focus on sustainability, eco-friendly manufacturing practices and AI-based technologies is creating new growth opportunities for the tyre industry. Companies are gradually shifting towards fuel efficient

tyres, radial tyres and smart tyre technologies to meet future market and environmental standards. Overall, the future of the Indian tyre industry appears promising because of growing technological advancement, infrastructure development, increasing automobile demand and customer-oriented innovation. Companies that focus on sustainability, innovation and efficient financial management are likely to achieve long-term growth and stability in the coming years.

8

A Study On the Impact of Eco – Friendly Packaging on Customer Purchasing Decision

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ABSTRACT

This study attempts to explore the effects of eco-friendly packaging on customer purchases and discusses the effect of sustainable packaging on consumer perceptions, brand trust, and consumer behavior. The research tries to analyze consumer awareness about eco-friendly packaging and its influence on their purchasing decision making. The research employed a descriptive research design to conduct the study and primary data was gathered via structured questionnaire consisting of 120 respondents from Delhi NCR with the help of convenience sampling method. The research findings indicate that most of the customers have an idea about eco-friendly packaging and are interested in purchasing goods that come in sustainable packaging.

INTRODUCTION

Eco-friendly packaging refers to packaging materials that are biodegradable, recyclable, reusable, or made from renewable resources. It aims to reduce environmental impact throughout the product life cycle. Examples include paper-based packaging, compostable materials, plant-based plastics, recycled cardboard, and minimal packaging designs.Companies like Unilever and IKEA have adopted sustainable packaging initiatives to reduce carbon footprint and plastic waste. Such initiatives not only help the environment but also enhance corporate image.

Figure1.1

Consumer Purchasing Decision

Consumer purchasing decision refers to the process through which a consumer identifies a need, searches for information, evaluates alternatives, and finally decides to purchase a product or service. It is a psychological as well as behavioural process influenced by various internal and external factors

Consumer Purchasing Decision Process

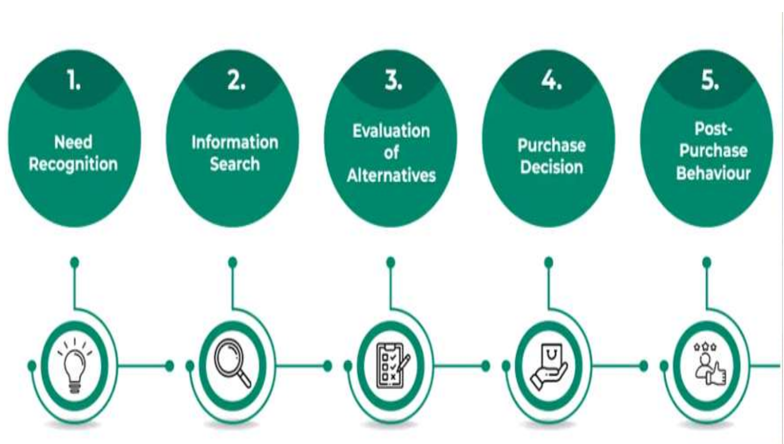

Figure1.2

1. Need Recognition

The buying process begins when a consumer recognizes a need or problem. This need may be basic, such as food, clothing, or shelter, or it may arise due to external influences like advertisements or social comparison. Once the need is identified, the consumer tries to understand the problem clearly by identifying its cause and nature.

2. Information Search

After identifying the need, the consumer begins searching for information about possible solutions. Information can be collected from various sources such as personal sources (family and friends), commercial sources (advertisements, salespersons, dealers), public sources (media, reviews, consumer reports), and experiential sources (trial or personal experience).

3. Evaluation of Alternatives

In this stage, the consumer compares different brands and options based on certain criteria such as price, quality, features, brand image, and personal preferences. Each consumer may use a different method to evaluate alternatives depending on the situation. Buyers generally assess products based on attributes that are important to them and form preferences accordingly.

4. Purchase Decision

After evaluating alternatives, the consumer makes the final purchase decision. This decision may be influenced by factors such as income level, urgency of need, convenience, availability, and payment options. The consumer decides what to buy, from whom to buy, how much to buy, when to buy, and how to pay.

5. Post-Purchase Behaviour

The buying process does not end with the purchase. After using the product, the consumer experiences satisfaction or dissatisfaction depending on whether the product meets expectations. If the product performs well, the consumer is satisfied and may repurchase or recommend it to others. If performance is below expectations, dissatisfaction may occur, leading to complaints or brand switching.

LITERATURE REVIEW

This is to examine the influence of eco-friendly packaging and green brand image on consumer purchasing decisions for MSME products. The results show that eco-friendly packaging and an environmentally conscious brand image have a significant and positive effect on consumers' decisions to purchase products. As consumers' perceptions of these two aspects increase, the likelihood of them making a purchase also increases. This indicates that sustainable business practices are not only a form of social responsibility but also an important factor in strengthening market attractiveness and improving marketing effectiveness. The practical implications encourage MSME actors to give greater attention to packaging design that is not only visually appealing but also reflects sustainability values(Nover Diansyah, 05-08-2025).

Consumers are becoming more aware of the environmental impact caused by product packaging. This focused on understanding how consumers perceive eco-friendly packaging and whether they are willing to modify their purchasing behaviour to support environmentally friendly products. The findings reveal that consumer perceptions of eco-friendly packaging can be classified into three main dimensions: packaging materials, manufacturing technology, and market appeal. The results further indicate that consumers expect eco-friendly food packaging to be visually appealing while also meeting their environmental expectations regarding packaging materials and production processes(Anh Thu Nguyen, 10 April 2020).

Limited attention has been given to understanding how sustainable packaging influences consumer behaviour, particularly during the purchasing and recycling stages of the packaging life cycle. By comparing two groups of consumers: those who consider environmentally friendly packaging important when purchasing products and those who do not view it as a significant factor in their purchase decisions. The findings indicate that factors such as gender, environmental awareness, concern about societal opinions, a positive attitude toward green purchasing, and perceptions about consumer actions help distinguish these two groups. Nevertheless, practical aspects such as product price still play an important role in influencing consumers to adopt sustainable packaging options(Graca Martinho, October 2015).

As environmental concerns continue to increase worldwide, consumer demand for sustainable practices, particularly eco-friendly packaging, has grown significantly. A study based on the Value-Belief-Norm (VBN) theory examined factors influencing Malaysian consumers' intentions to purchase products with eco-friendly packaging. The findings revealed that product characteristics, especially price and quality, significantly influence purchase intentions. In contrast, environmental concern and personal responsibility were not significant predictors(Toh En Jie, 2, December 2025).

This study examines the growing trend of green or environmentally friendly products and their influence on consumers' understanding, attitudes, preferences, and purchasing behavior. Socio-demographic factors such as age, gender, and education were considered as moderating variables. The results show a significant relationship between green products, green marketing practices, and consumers' purchase intentions. Consumers consider environmental factors along with price and quality when making purchase decisions. Demographic characteristics were also found to strengthen this relationship. The study suggests that businesses should promote green marketing through corporate social responsibility and effective advertising(Alharthey, 18 January 2019).

RESEARCH GAP

While various studies have investigated eco-friendly packaging and green consumption behavior, there is an absence of specific studies on the influence of eco-friendly packaging on customer buying decisions amongst the consumers in Delhi NCR region. Earlier studies paid much emphasis either on environmental awareness or on green marketing or consumption. Fewer studies concentrated on eco-friendly packaging and its influence on brand perception, purchase intention, and willingness to pay a higher price. Another aspect where research was deficient is that many studies focused on the context of developed nations or multinational companies, whereas fewer studies have focused on youngsters or college students or urban buyers in India.

OBJECTIVES OF THE STUDY

a. To study the concept and importance of eco-friendly packaging in the modern business environment.

b. To analyze the impact of eco-friendly packaging on customer purchasing decisions.

c. To examine the relationship between environmental concern and purchase intention.

RESEARCH METHODOLOGY

Descriptive Research Design

Descriptive research is a type of research that describes the characteristics, behaviour, or opinions of a particular group without manipulating any variable. In descriptive research, the researcher gathers data through methods such as surveys, questionnaires, observations, or interviews.

It is **descriptive** because it describes consumer awareness, attitudes, and purchasing behaviour regarding eco-friendly packaging.

Tools of Data Collection

The study employs a mixed-data approach, integrating both secondary and primary data to ensure a comprehensive analysis.

Primary data refers to the original data collected directly from respondents for the specific purpose of the study. In this research, primary data was collected through a structured questionnaire distributed to respondents through an online survey.

Primary data was collected through a Structured Questionnaire distributed via digital platforms. The questionnaire included:

1. **Demographic Variables:** Gender, Age Group, Occupation, and Income.
2. **Psychometric Variables:** Preference for eco-friendly packaging, brand trustworthiness, and willingness to pay extra, measured primarily on a 5-point Likert Scale.

Secondary data refers to the data that has already been collected and published by other researchers or organizations. For this study, secondary data was collected from research journals, academic articles, books, websites, and previous studies related to eco-friendly packaging and green marketing

Population

The population consists of General consumers with a focus on those residing in urban areas who shop for FMCG (Fast Moving Consumer Goods) and retail products.

Sampling Unit

The sampling unit of the study consists of **customers/consumers**, particularly students, working professionals, and general buyers who actively purchase consumer products.

Sample Size

The sample size for the study is 120 respondents.The sample size was selected considering time constraints and feasibility within the prescribed schedule.

Sampling Technique

The study uses a Non-Probability Convenience Sampling Method, under this method, respondents were selected based on ease of access and availability. The questionnaire was circulated among students, friends, colleagues, and online contacts to gather responses quickly and efficiently.

Period of study

The period of study refers to the time duration during which the research was conducted, including data collection, analysis, and interpretation. The data collection through online questionnaires and analysis of responses were conducted during January2026 to March2026.

DATA REPRESENTATION & ANALYSIS

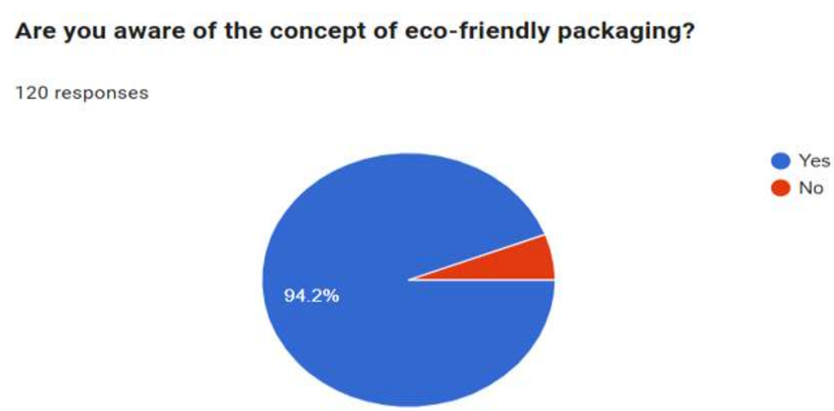

Figure 3.1

A significant **94.2% of respondents are aware of the concept of eco-friendly packaging**, while only **a small percentage (around 5–6%) are not aware**.

This result demonstrates a **very high level of awareness regarding eco-friendly packaging**, suggesting that environmental sustainability has become an important topic among consumers.

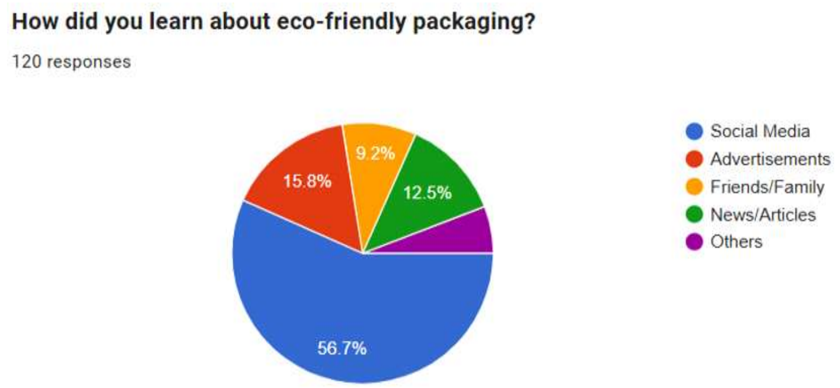

Figure 3.2

The data shows that **social media is the primary source of awareness (56.7%)**. This is followed by **advertisements (15.8%)**, **news/ articles (12.5%)**, and **friends/family (9.2%)**, while other sources contribute a small portion.

This highlights the **strong influence of digital platforms and social media** in spreading information about eco-friendly packaging and sustainability practices.

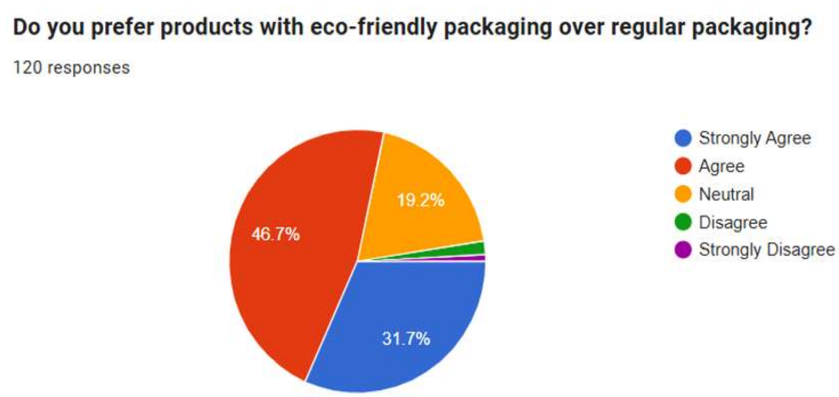

Figure 3.3

A large majority (**around 78%**) prefer products with eco-friendly packaging over regular packaging. This clearly shows **positive consumer attitudes toward sustainable packaging**, which can encourage MSMEs to adopt eco-friendly packaging strategies.

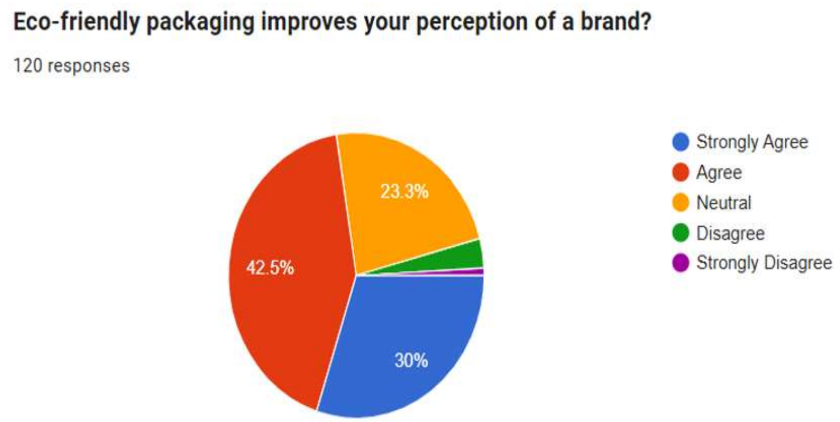

Figure 3.4

This indicates that **sustainable packaging positively influences brand perception**. Consumers tend to view companies using eco-friendly packaging as more responsible and environmentally conscious.

Figure 3.5

The data reveals that**25% of respondents are willing to pay extra, 54.2% answered "maybe,"**and**20.8% are not willing to pay additional costs.**Although many consumers support eco-friendly packaging, **price sensitivity still exists**. A large portion of respondents may support sustainable products if the price difference is reasonable.

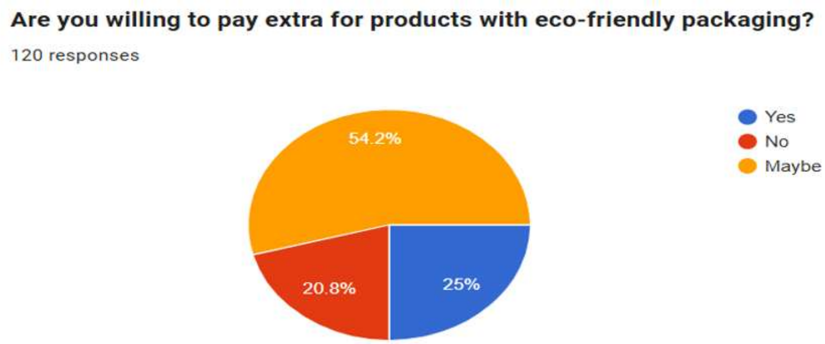

Figure 3.6

The results show that **46.7% of respondents stated that eco-friendly packaging influences their purchasing decisions,** while **37.5% reported that it sometimes influences them,** and **15.8% said it does not influence their decision.**

FINDINGS OF THE STUDY

The present study was conducted to understand the impact of eco-friendly packaging on customer purchasing decisions. Based on the data collected from 120 respondents in Delhi NCR and the analysis presented, the following key findings were observed:

1. The majority of respondents belong to the **18–25 age group**, indicating that young consumers are more aware of environmental issues and sustainable products.
2. **Female respondents (60%)** constitute a larger portion of the sample compared to male respondents (40%).
3. Most respondents are **students (66.7%),** which reflects that young and educated individuals are more aware of eco-friendly practices.
4. A large percentage of respondents **(94.2%)** are aware of eco-friendly packaging, indicating high environmental awareness among consumers.
5. **Social media (56.7%)** is the main source of information regarding eco-friendly packaging.
6. Most respondents prefer products with **eco-friendly packaging**, showing a positive attitude toward sustainable packaging.

7. Eco-friendly packaging **improves brand perception**, and consumers tend to view such brands as more responsible and environmentally conscious.
8. Many consumers are **willing or somewhat willing to pay extra** for products with eco-friendly packaging, although price still plays an important role in purchasing decisions.

CONCLUSION

The study aimed to examine the impact of eco-friendly packaging on customer purchasing decisions. The findings of the research indicate that environmental awareness among consumers is increasing, and many consumers prefer products that use sustainable and eco-friendly packaging. The study also shows that eco-friendly packaging positively influences consumer perception, brand trust, and purchasing decisions. Overall, the study highlights that adopting eco-friendly packaging can help businesses improve their brand image, gain customer trust, and attract environmentally conscious consumers. Therefore, companies should focus on implementing sustainable packaging solutions and promoting green marketing practices to meet the growing demand for environmentally friendly products.

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9

A Study on Consumer Perception Towards Sustainable Products

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ABSTRACT

This study explores consumer perception towards sustainable products, focusing on awareness, attitudes, and buying behaviour. Although environmental awareness among consumers is high, the actual adoption of sustainable products remains limited.The research is based on primary data collected from 112 respondents using a structured questionnaire. The findings show that factors like price, availability, and trust significantly influence purchasing decisions, with most consumers willing to pay only a small premium.Overall, the study highlights a gap between intention and action and suggests that improving affordability, accessibility, and transparency can increase the adoption of sustainable products.

INTRODUCTION

Sustainability refers to meeting present needs without compromising the ability of future generations to meet their own needs. The concept gained global importance after the 1987 report of the World Commission on Environment and Development. Sustainability focuses on balancing environmental protection, social well-being, and economic growth, commonly known as the three pillars of sustainability.In recent years, sustainable products have gained significant attention due to growing environmental concerns such as climate change, pollution, and resource depletion. Sustainable products are goods that are designed and produced in ways that reduce environmental impact while promoting social responsibility and economic viability. Examples include electric vehicles, recycled clothing, biodegradable products, and energy-efficient technologies. Companies such as Tesla, Patagonia, and Unilever are actively adopting sustainable practices to encourage responsible consumption.

Figure 1

Consumer perception plays an important role in the success of sustainable products. It refers to how consumers understand and evaluate products based on factors such as environmental awareness, personal values, social influence, price, and product quality. As consumers become more environmentally conscious, demand for sustainable products continues to increase.

Studying consumer perception towards sustainable products helps businesses understand consumer attitudes, develop effective marketing strategies, and promote sustainable consumption. It also supports organizations and governments in encouraging environmentally responsible practices and achieving long-term sustainability goals.

LITERATURE REVIEW

Camilleri et al. (2023) conducted a systematic literature review to synthesize the multifaceted determinants of consumer perceptions regarding sustainable products by applying the triple bottom line framework, The study objective was to resolve the fragmented nature of existing scholarship by categorizing twenty-seven distinct factors across economic, social, and environmental dimensions, Findings indicate a persistent "intention-behaviour gap," where high environmental concern often fails to translate into significant market share due to consumer trade-offs involving price and functional performance,. To bridge this gap, the authors argue that businesses must implement a holistic strategy that balances all three sustainability pillars while utilizing transparent communication and certifications to foster trust. Ultimately, the research underscores that aligning corporate operations with multidimensional consumer values is essential for driving the widespread adoption of eco-friendly goods

Kong et al. (2014) investigated how multidimensional perceptions of green products influence purchase intentions among consumers in Sabah, Malaysia, specifically evaluating the roles of corporate reputation, eco-labels, and product value. Their empirical analysis revealed that eco-labels and green product value serve as the most significant predictors of sustainable consumption, while green corporate perception also exerts a positive influence. Conversely, the study established that green advertising and packaging do not significantly impact consumer intentions within this demographic. These results suggest that organizations should prioritize securing credible environmental certifications and enhancing intrinsic product performance over traditional promotional strategies to effectively motivate green purchasing behaviour. Ultimately, the research highlights that aligning corporate values with consumer perceptions of quality and transparency is essential for driving sustainable market growth

Bhardwaj et al. (2023) utilized a quantitative descriptive design to investigate consumer perceptions and determinants of eco-friendly product adoption among various generational cohorts. The findings demonstrate that while environmental awareness and social responsibility significantly motivate sustainable choices, purchasing intent is primarily mediated by brand reputation, transparent labelling, and retail accessibility. Despite a strong association between green products and personal health, skepticism regarding efficacy and premium pricing continue to hinder consistent market adoption. The researchers conclude that bridging the intention-behaviour gap requires prioritizing standardized certifications and improved availability to foster consumer trust

Prakash et al. (2019) utilized structural equation modelling to investigate how altruistic and egoistic values shape the attitudes and purchase intentions of young Indian consumers regarding eco-friendly packaged products. The study established that while both psychological drivers positively influence sustainable behaviour, altruistic motivations—specifically environmental concern—exert a significantly greater impact on consumer decision-making than egoistic health interests. These results suggest that younger demographics perceive ecological packaging as a dual benefit for environmental preservation and personal well-being. Ultimately, the findings emphasize that marketers in developing nations should prioritize transparent communication of environmental benefits to effectively resonate with the growing ecological consciousness of this consumer group

Garg et al. (2025) investigated the transformative impact of artificial intelligence on sustainability marketing by utilizing a systematic literature review and the Antecedents-Decisions-Outcomes framework. The researchers determined that advanced technologies like machine learning enable personalized green messaging, which significantly enhances consumer trust and loyalty, particularly among younger, environmentally conscious demographics. Findings indicate that while strategic AI-driven decisions improve brand image and green product sales, maintaining transparency is essential to prevent consumer fatigue and suspicions of greenwashing. Furthermore, the study identifies green marketing and AI as mature motor themes, suggesting that integrating technological innovation with consumer psychology is vital for aligning corporate strategies with environmental goals

RESEARCH GAP

Although several studies have been conducted on sustainable products and consumer behaviour, limited research has focused on the gap between consumer awareness and actual purchasing behaviour. Many consumers express positive attitudes towards sustainability, but their buying decisions are still influenced by factors such as price, availability, and convenience.Additionally, there is limited research comparing consumer preferences across different product categories such as food, cosmetics, fashion, and household products. Existing studies also provide less attention to how practical barriers affect the adoption of sustainable products in developing countries like India.Therefore, this study attempts to fill this gap by examining consumer perception, purchasing behaviour, and the key factors influencing the adoption of sustainable products across different product categories.

OBJECTIVES OF THE STUDY

1. To study the level of consumer awareness and perception towards sustainable products and environmental responsibility across different demographic segments.
2. To analyse the buying behaviour of consumers with respect to sustainable products, including frequency of purchase, product categories, and adoption of reuse and repair practices.
3. To determine the key factors influencing sustainable purchase decisions, including price, availability, trust, information sources, and the impact of the Government Eco-mark.

RESEARCH METHODOLOGY

Research Design

This study utilizes a descriptive research design to provide a systematic and accurate account of the perceptions held by Indian consumers. Descriptive research is characterized by its focus on "what" is happening rather than "why," making it ideal for profiling the current state of environmental awareness and purchasing habits. This design allows the researcher to collect quantitative data that can be used to identify patterns and trends across the population, such as the increasing demand for sustainable fashion or the widespread skepticism regarding plastic-free claims.

Population and Sampling

- **Target Population:** The population for this study includes individual consumers, students and young professionals across Delhi NCR.
- **Sampling Technique:** Convenience Sampling (a non-probability sampling method) was used to collect responses.
- **Sample Size:** Received 112 valid responses out of 150 respondents and are used for final analysis.

Data Collection

The study employs a mixed-data approach, integrating both secondary and primary data to ensure a comprehensive analysis.

Secondary Data Collection

Secondary data was gathered through an extensive literature review of academic journals, industry white papers, government notifications, and market research reports from 2020 to 2025.

Primary Data Collection

Primary data was obtained through a structured questionnaire distributed to consumers in urban Indian centres. The questionnaire was designed to translate the research objectives into measurable variables, utilizing Likert scales to gauge levels of agreement with various sustainability-related statements.

Tools for Data Collection

A structured questionnaire was used as the main tool for data collection. The questionnaire was designed to capture demographic information, awareness level, perception factors, and usage patterns.

Period of Study

The period of study refers to the time duration during which the research was conducted, including data collection, analysis, and interpretation. The data collection through online questionnaires and analysis of responses were conducted during January 2026 to March 2026.

DATA REPRESENTATION & ANALYSIS

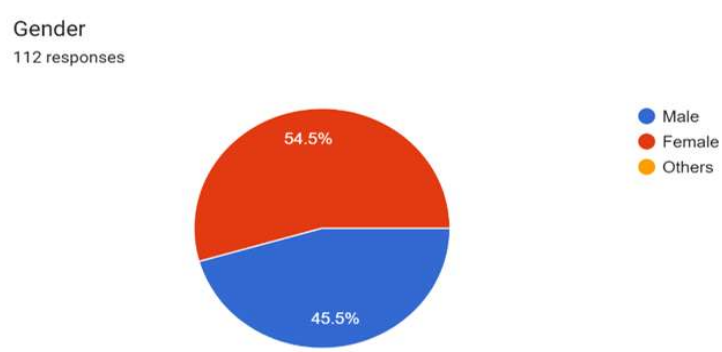

Figure 2

The survey responses show that 54.5% of respondents are female, while 45.5% are male. This indicates a slightly higher participation of female respondents in the study. The difference is not very large, suggesting a fairly balanced gender representation. A balanced sample helps improve the reliability of the analysis.

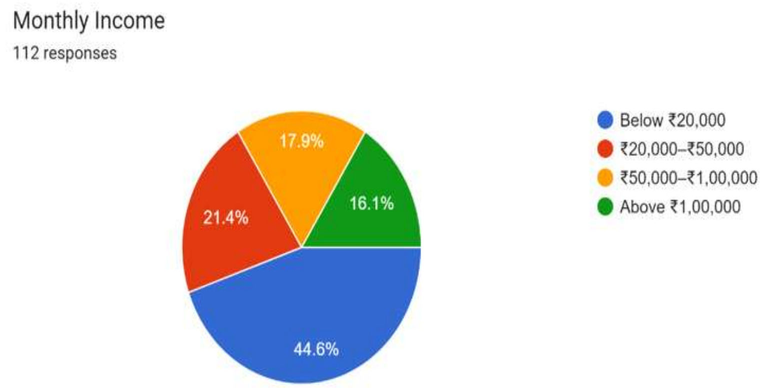

Figure 3

The majority of respondents (73.2%) belong to the 18–25 years age group, indicating that the survey mainly represents young individuals. The remaining respondents are distributed across 26–35 years (8%), 36–45 years (9.8%), and above 45 years (8.9%). This shows that the study is largely youth-focused. Therefore, the findings may mainly reflect the opinions and behaviour of younger consumers.

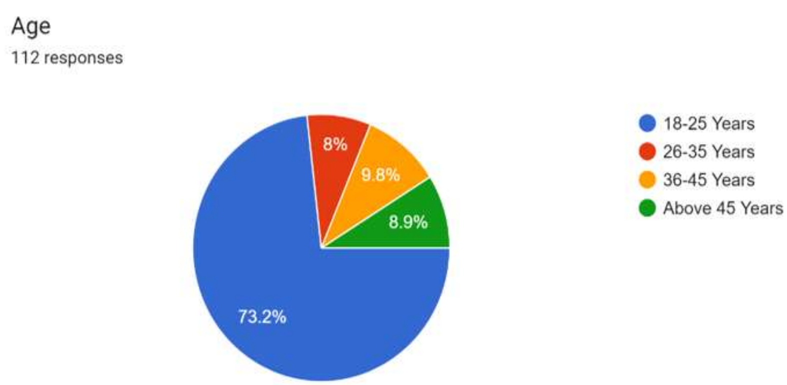

Figure 4

The majority of respondents (61.6%) are Undergraduates, indicating that most participants are currently pursuing a bachelor's degree. Around 24.1% are Graduates, while 10.7% are Postgraduates, and only a small percentage belong to PhD & above. This shows that the survey mainly represents students at the undergraduate level. Therefore, the findings largely reflect the views of young and academically active individuals

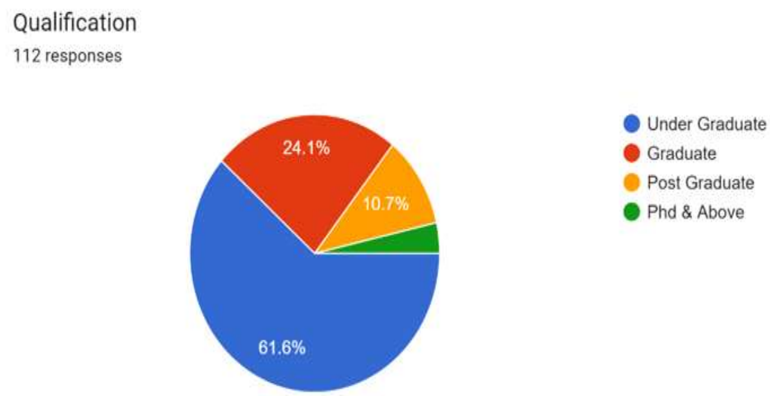

Figure 5

A significant portion of respondents (44.6%) have a monthly income below ¹ 20,000, suggesting that many participants may be students or early-career individuals. About 21.4% earn between ¹ 20,000–¹ 50,000, while 17.9% fall in the ¹ 50,000–¹ 1,00,000 range, and 16.1% earn above ¹ 1,00,000. This indicates that the sample includes individuals from diverse income groups, though it is slightly concentrated in the lower income category.

Table 1: Consumer Purchase Frequency by Product Category

Product Category	Cosmetics	Fashion	Food	Household
Frequently	1	2	17	10
Sometimes	15	7	24	26
Rarely	1	1	3	3
Never	0	0	0	2

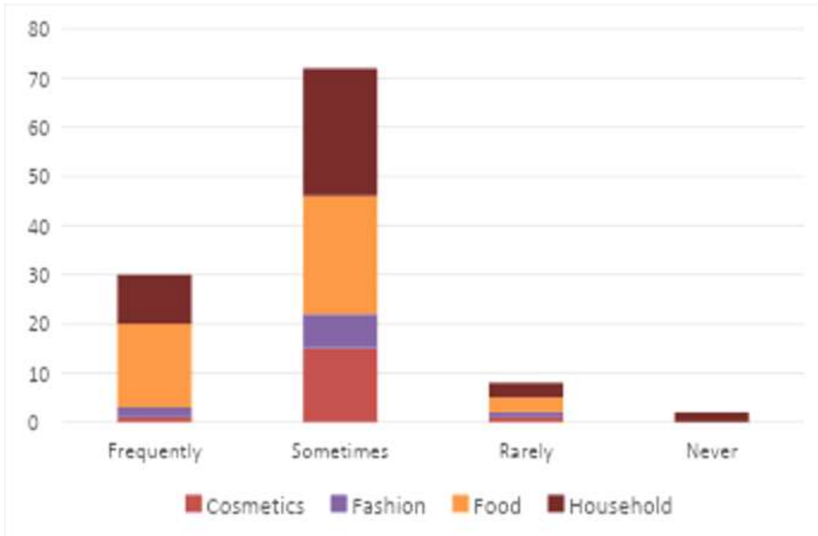

Figure 6

The analysis indicates that sustainable products are most frequently purchased in the food and household categories, as these are essential daily-use items. In contrast, categories like cosmetics and fashion show lower purchase frequency, with most consumers purchasing them only occasionally.

Table 2: Factors Influencing Consumer Purchase Decisions

Factors Influencing Purchase	High Price	Lack of Trust	Low Availability	Quality Concerns
Yes, I am well aware	35	9	22	16
Somewhat aware	12	1	9	3
Neutral	3	0	2	0

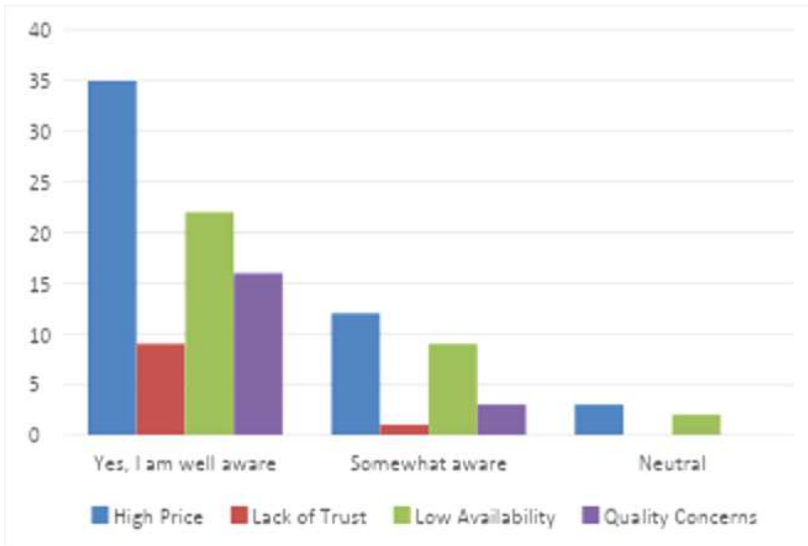

Figure 7

The analysis shows that even among consumers who are well aware of sustainable products, high price and low availability remain the major barriers influencing purchase decisions. This indicates that awareness alone is not sufficient to drive sustainable consumption.

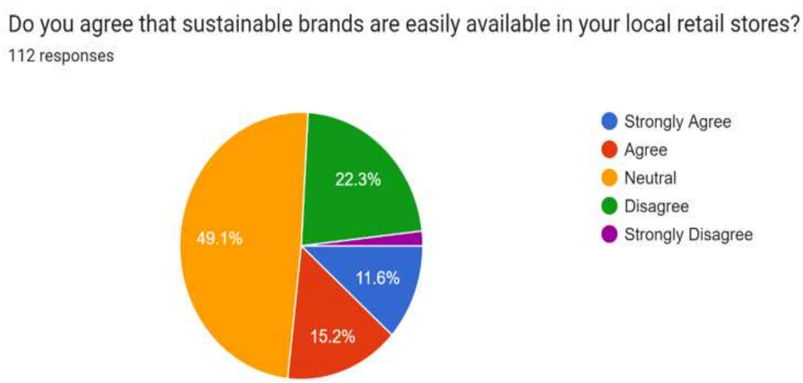

Figure 8

The chart shows that 49.1% of respondents ae neutral, while 22.3% disagree that sustainable brands are easily available in local stores. Only 11.6% strongly agree and 15.2% agree with the statement. This indicates that many consumers feel sustainable products are not widely available in nearby retail outlets. Limited accessibility may affect consumer purchasing behaviour.

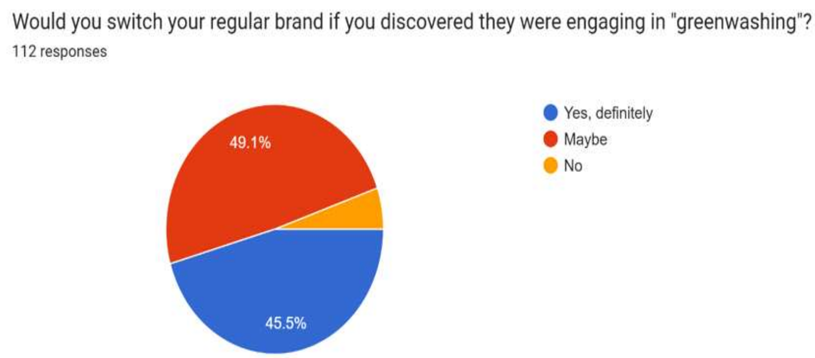

Figure 9

The graph shows that 45.5% of respondents would definitely switch brands, while 49.1% say they might switch if they discover greenwashing. Only a small percentage would continue with the same brand. This indicates that consumers value honesty and transparency in sustainability claims. Greenwashing can negatively impact brand loyalty.

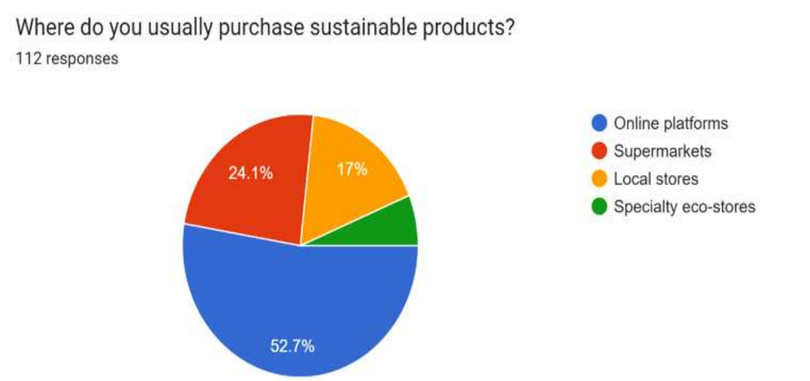

Figure 10

The chart indicates that 52.7% of respondents purchase sustainable products through online platforms. 24.1% buy them from supermarkets, while 17% prefer local stores and a small percentage purchase from specialty eco-stores. This shows that online platforms play a major role in the availability of sustainable products. Digital marketplaces make it easier for consumers to access such products.

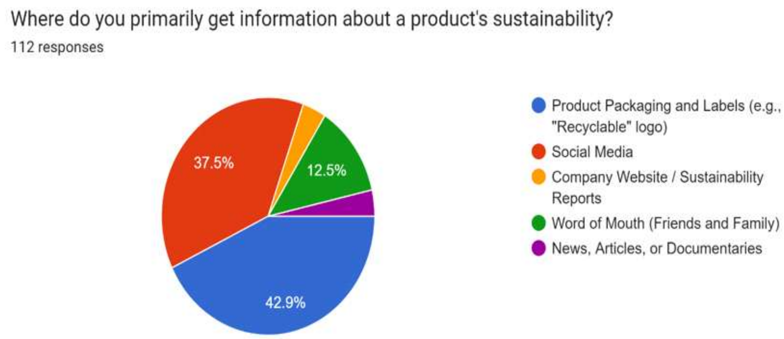

Figure 11

The graph shows that 42.9% of respondents get information from product packaging and labels, while 37.5% rely on social media. 12.5% depend on word of mouth, and only a small percentage use company websites or reports. This suggests that product labels and digital media are the most influential sources of sustainability information. Clear labelling helps consumers make informed choices.

FINDINGS OF THE STUDY

Based on the analysis and interpretation of the collected data, the following key findings have been observed:

1. The majority of respondents are aware of sustainable products and consider environmental protection important, indicating a positive consumer attitude.
2. Consumers show willingness to purchase eco-friendly products, but their buying behaviour is not consistent and is mostly occasional.
3. Sustainable products are more commonly purchased in essential categories like food and household items, while adoption is lower in fashion and cosmetics.
4. Government eco-labels and certifications play an important role in influencing purchasing decisions and building consumer trust.
5. Limited availability of sustainable products in local stores is a major issue affecting consumer buying behaviour.
6. High price is the biggest barrier, with most consumers willing to pay only a small premium (up to 10%) for sustainable products.

7. Consumers are concerned about greenwashing and are likely to switch brands if sustainability claims are found to be false.
8. Many consumers practice reuse and repair due to environmental concerns, but this behaviour is not consistent.
9. Despite awareness, practices like the use of single-use plastic still exist, and consumers mainly rely on online platforms and product labels for information.

CONCLUSION

This study aimed at understanding consumer perception towards sustainable products and the factors influencing their purchasing behaviour. The findings show that consumers are highly aware of sustainable products and environmental issues, but this awareness does not always lead to actual purchases.The study identifies high price and low availability as the major barriers affecting consumer decisions. Consumers are influenced more by practical factors such as cost and convenience than by environmental concerns alone. Sustainable products are mainly preferred in essential categories like food and household items.The research highlights the importance of understanding consumer perception to help businesses and policymakers develop effective strategies for promoting sustainable consumption. Bridging the intention–behaviour gap is important for increasing the adoption of sustainable products.

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10

Examining the Relationship Between Perceived Organisational Support for Innovation and Its Outcomes: An Employee-Based Study

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ABSTRACT

This study examines the relationship between perceived organisational support for innovation and its perceived benefits from an employee perspective. In today's competitive environment, organisations increasingly rely on innovation as a key driver of growth and sustainability. However, the effectiveness of innovation efforts largely depends on how employees perceive the support provided by their organisation. Primary data were collected from 131 employees working in both service and manufacturing organisations using a convenience sampling method. A self-designed questionnaire was used to measure two key variables: perceived organisational support for innovation and perceived innovation benefits. The data were analysed using correlation techniques in Microsoft Excel to determine the strength and direction of the relationship between these variables. The findings reveal a strong positive correlation ($r = 0.65$) between perceived organisational support for innovation and its perceived benefits. This suggests that when employees feel encouraged, supported, and provided with resources for innovation, they are more likely to recognise and experience its positive outcomes, such as improved performance, efficiency, and job satisfaction. The study highlights the importance of fostering a supportive organisational environment to maximise the benefits of innovation initiatives. It also contributes to existing literature by offering empirical evidence from an employee-centric perspective. The findings can help managers

and policymakers design strategies that strengthen innovation support systems within organisations.

Keywords: *Organisational Innovation Climate, Innovation Support, Innovation Benefits*

INTRODUCTION

In the high-stakes world of modern business, innovation isn't just a corporate buzzword—it is the lifeline for any organization that wants to do more than just survive. Whether it is staying ahead of a competitor or finding a more sustainable way to grow, companies today rely on "new combinations" of ideas to disrupt old markets and create fresh value. However, we often talk about innovation as if it's something that happens in a lab or a boardroom, forgetting that at its heart, innovation is a deeply human act.

The success of any new project or process doesn't just depend on the technology used; it depends on the people behind it. Specifically, it hinges on how employees feel about the support they are getting from above. Do they feel safe enough to fail? Do they have the tools they need? Within an organizational context, the "climate" for innovation—made up of leadership support, available resources, and a culture that actually encourages experimentation—is what truly empowers a person to think creatively.

This is where Perceived Organisational Support (POS) for innovation comes in. It is essentially a measure of trust: when employees believe their company genuinely values their input and has their back, they aren't just "doing their jobs"—they are more intrinsically motivated and emotionally connected to the company's mission. They start to see the personal wins in innovation, like sharper skills, better job satisfaction, and a real sense of accomplishment.

Despite how much we know about the importance of a supportive workplace, we still need a better understanding of how this looks from the ground up. This study takes an employee-centric view to see how the support people *feel* they are getting translates into the benefits they *experience*.

REVIEW OF LITERATURE

Innovation is widely regarded as a key driver of organisational growth and long-term sustainability. It generally refers to the introduction of new ideas, processes, products, or services that create value for the organisation and its stakeholders. According to Joseph

Schumpeter (1934), innovation involves "new combinations" that disrupt existing market structures and generate economic development. In a modern context, innovation is not limited to technological advancement but also includes improvements in processes, management practices, and workplace culture.

Within the organisational context, innovation reflects the ability of a firm to encourage creativity and implement new ideas effectively. It is shaped by organisational climate, leadership support, availability of resources, and a culture that promotes experimentation and tolerates failure (Amabile, 1996). Organisations that foster an innovation-friendly environment empower employees to think creatively and contribute to continuous improvement. Such environments often include open communication, recognition of innovative efforts, and support systems that reduce the risks associated with trying new ideas.

Perceived organisational support plays a crucial role in influencing employee behaviour toward innovation. When employees believe that their organisation values their input and actively supports innovative efforts, they are more likely to engage in creative problem-solving and idea generation (Eisenberger et al., 1986). This perception enhances intrinsic motivation and strengthens employees' emotional attachment to the organisation.

The benefits of innovation in organisations are well documented. Innovation contributes to improved organisational performance, increased efficiency, competitive advantage, and adaptability to changing market conditions (Damanpour, 1991). From an employee perspective, it also leads to higher job satisfaction, skill development, and a sense of accomplishment. When employees perceive these benefits, they are more likely to support and participate in innovation initiatives.

Based on these insights, the conceptual framework of the study positions perceived organisational support for innovation as the independent variable and perceived innovation benefits as the dependent variable. It assumes that a higher level of perceived support leads to greater recognition of innovation benefits among employees.

RESEARCH GAP

Although a substantial body of literature exists on organisational innovation and its outcomes, a notable gap remains in empirical research that examines the relationship between perceived organisational support for innovation and its benefits specifically from an employee-centric perspective. Most existing studies on innovation focus on firm-level financial performance metrics or macro-economic indicators, leaving the ground-level employee experience underexplored.

Furthermore, while the concept of Perceived Organisational Support (POS) has been widely studied in the context of general job performance and organisational commitment, its specific application to innovation support and the resulting employee-perceived benefits has received comparatively limited empirical attention. The existing research also largely draws on data from Western organisational contexts, with limited studies examining this relationship within the Indian business environment — particularly in mixed-sector organisations spanning IT, service, and manufacturing.

Additionally, prior studies tend to examine innovation outcomes at an aggregate or managerial level, without capturing how individual employees perceive and experience these benefits in their day-to-day work. The psychological and motivational dimensions of innovation support — such as intrinsic motivation, emotional attachment, and perceived accomplishment — remain insufficiently addressed in quantitative empirical studies.

This study addresses these gaps by empirically examining the relationship between perceived organisational support for innovation and its perceived benefits from the perspective of 131 employees across service and manufacturing organisations in India, using primary data and correlation analysis.

OBJECTIVES OF THE STUDY

- ❖ To examine the relationship between perceived organisational support for innovation and its perceived benefits from an employee perspective.
- ❖ To determine the strength and direction of the correlation between the support provided for innovation and the positive outcomes recognised by employees.
- ❖ To identify the specific benefits employees experience when supported in innovation, such as improved performance, efficiency, and job satisfaction.
- ❖ To provide empirical evidence that helps managers and policymakers design strategies to strengthen innovation support systems within their organisations.

RESEARCH METHODOLOGY

This study adopts a descriptive research design to examine the relationship between perceived organisational support for innovation and its perceived benefits from an employee perspective. The research is based on primary data collected through a self-constructed questionnaire designed to capture both demographic and study-specific variables. The demographic section included age, gender, type of organisation, job role, and work experience, while the main instrument consisted of five items measuring perceived organisational support for innovation and twelve items assessing perceived innovation benefits. All responses were recorded using a five-point Likert scale ranging from strongly disagree to strongly agree. The questionnaire was administered online using Google Forms to ensure ease of distribution and accessibility. A non-probability convenience sampling technique was employed to select respondents, resulting in a sample of 131 employees from both manufacturing and service sector organisations. The collected data were systematically organised and analysed using Microsoft Excel. Descriptive statistics were used to summarise the data, and correlation analysis was applied to examine the relationship between perceived organisational support for innovation and its perceived benefits.

DATA ANALYSIS & INTERPRETATIONS

Table1: Demographic Profile

Age Group of the Respondents	Percentage
18-25	35.38%
26-35	41.54%
36-45	16.15%
Above 45	6.92%
Gender	
Female	39.23%
Male	56.92%
Prefer Not To Say	3.85%
Type of Organisation	
IT	51.54%
Manufacturing	12.31%
Other	13.85%
Service	22.31%
Job Role	
Employee	46.15%
Manager	20.00%
Owner	9.23%
Supervisor	24.62%
Experience	
1-3 Year	28.46%
3-5 Year	32.31%
Above 5 Year	26.15%
Less Than 1 Year	13.08%

Source: Primary Data

The demographic distribution of respondents shown in table 1 provides useful insight into the composition of the sample and helps in understanding the context of the findings. In terms of age, the majority of respondents fall within the 26–35 years category (41.54%), followed by the 18–25 years group (35.38%). This indicates that a significant proportion of participants are young professionals, who are typically more adaptable and open to innovation. The 36–45 years group accounts for 16.15%, while respondents above 45 years constitute a relatively smaller segment (6.92%), suggesting limited representation of older employees. With respect to gender, the sample is predominantly male (56.92%), while female respondents account for 39.23%, and a small proportion (3.85%) preferred not to disclose their gender. This reflects a moderately balanced but slightly male-dominated sample. In terms of organisational type, the highest representation comes from the IT sector (51.54%), indicating a strong presence of technology-driven organisations where innovation is often a key focus. This is followed by the service sector (22.31%), while manufacturing (12.31%) and other sectors (13.85%) have comparatively lower representation. Regarding job roles, nearly half of the respondents are employees (46.15%), followed by supervisors (24.62%) and managers (20%), with owners (9.23%) forming the smallest group. This suggests that the study primarily captures perceptions from operational and mid-level roles. Finally, in terms of experience, most respondents have 3–5 years (32.31%) or 1–3 years (28.46%) of experience, indicating a workforce with moderate professional exposure. Employees with more than 5 years of experience (26.15%) and those with less than 1 year (13.08%) are comparatively fewer.

To establish the relationship between the perceived organisational support for innovation and its benefits, pearson correlation technique was applied in MS Excel and the results are displayed in table 2.

Table 2: Correlation Matrix

	support	*Benefits*
Support	1	
Benefits	0.64	1

Source: Primary Data

The results presented in Table 2 indicate a correlation coefficient of 0.64 between the two variables. This value suggests a strong positive relationship between perceived organisational support for innovation and its perceived benefits. In practical terms, it implies that as employees perceive higher levels of support for innovation within their organisation, they are more likely to recognise and experience greater benefits associated with innovation. These benefits may include improved performance, enhanced efficiency, and increased job satisfaction. The positive direction of the correlation indicates that both variables move in the same direction, meaning an increase in one is associated with an increase in the other. Additionally, the strength of the correlation (0.64) falls within the range typically interpreted as a moderately strong to strong relationship, thereby supporting the assumption that organisational support plays a significant role in shaping employees' perceptions of innovation outcomes. Therefore, the findings provide empirical support for the proposed hypothesis that there exists a strong positive correlation between perceived organisational support for innovation and its perceived benefits. However, it is important to note that correlation does not imply causation, and further analysis may be required to establish a cause-and-effect relationship.

FINDINGS

Based on the data analysis and correlation results, the following key findings have been drawn from the study:

- ❖ Strong Positive Correlation: The Pearson correlation coefficient of $r = 0.64$ between perceived organisational support for innovation and perceived innovation benefits confirms a strong positive relationship between the two variables. Employees who feel more supported are significantly more likely to recognise and experience the associated benefits.
- ❖ Youth-Dominated Workforce: The majority of respondents (76.92%) fall in the 18–35 age group, suggesting that the study captures the perceptions of a young, digitally aware, and innovation-oriented workforce — a demographic particularly receptive to organisational support for innovation.
- ❖ IT Sector Dominance: Over half the respondents (51.54%) are from IT organisations — a sector inherently driven by innovation. This lends credibility to the findings as IT professionals are regularly exposed to innovation demands.

- ❖ Employee-Level Perceptions Are Significant: With 46.15% of respondents being employees (not managers or supervisors), the study demonstrates that even at the operational level, employees recognise and value organisational support for innovation.
- ❖ Innovation Benefits Are Multi-Dimensional: Respondents' perception of innovation benefits encompasses improved job performance, enhanced efficiency, skill development, higher job satisfaction, and a sense of personal accomplishment — showing both professional and psychological returns.
- ❖ Hypothesis Confirmed: The research hypothesis — that there exists a strong positive correlation between perceived organisational support for innovation and its perceived benefits — is fully supported by the empirical data.
- ❖ Moderate Experience Levels: The majority of respondents have 1–5 years of work experience, reflecting perspectives of employees experienced enough to evaluate organisational practices yet actively engaged in innovation activities.

CONCLUSION

The findings of this study provide compelling evidence that the success of innovation is deeply rooted in the human experience and the psychological safety of the workplace. By establishing a strong positive correlation ($r = 0.64$) between perceived organizational support and its benefits, the research confirms that innovation is not merely a byproduct of technology or capital, but a direct result of how employees feel valued and empowered. When organizations move beyond just "talking" about creativity and actually invest in the necessary resources, leadership encouragement, and a culture that tolerates the risks of experimentation, employees are far more likely to recognize and experience the tangible rewards of their efforts.

The data, largely drawn from young professionals in the technology and service sectors, underscores a critical shift in the modern workforce: the desire for a workplace that fosters growth and emotional attachment. For these employees, innovation leads to significant personal and professional outcomes, including improved job satisfaction, enhanced efficiency, and the development of new skills. This suggests that a supportive innovation climate creates a "win-win" scenario where the organization achieves growth and sustainability while the workforce finds greater meaning and success in their roles.

Ultimately, this study serves as a call to action for managers and policymakers to bridge the gap between corporate strategy and employee perception. While correlation does not equal causation, the strengthof the relationship found here implies that building a robust support system is a non-negotiable step for any firm aiming to maximize the benefits of its innovation initiatives. By prioritizing open communication, recognizing creative contributions, and providing a safety net for failure, organizations can transform innovation from a high-pressure demand into a shared journey of progress. In an increasingly competitive landscape, the most successful organizations will be those that realize their greatest innovative asset is a supported, motivated, and empowered team

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11

GREEN BONDS AND THEIR EFFECTIVENESS IN FINANCING SUSTAINABLE PROJECTS IN INDIA

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ABSTRACT

Environmental sustainability has become a major concern across the world due to increasing climate change, pollution, and depletion of natural resources. In this context, green finance has emerged as an important mechanism for supporting environmentally sustainable development. Green bonds are one of the most significant financial instruments under green finance that are specifically issued to finance environmentally beneficial projects such as renewable energy, sustainable infrastructure, clean transportation, and pollution control.

The present study focuses on analyzing the effectiveness of green bonds in financing sustainable projects in India and understanding investor perception regarding green investments. The study is based on both primary and secondary data. Primary data was collected through a structured questionnaire from respondents in Delhi NCR, while secondary data was collected from research papers, SEBI reports, RBI publications, journals, and sustainable finance reports.

The study reveals that awareness regarding green bonds in India is moderate but increasing gradually. Most respondents believe that green bonds are effective in financing renewable energy and sustainable infrastructure projects. The findings also indicate that investors are increasingly interested in environmentally responsible investment opportunities. However, challenges *such as lack of awareness, high issuance costs, regulatory barriers, and lack of standardized frameworks continue to restrict the growth of the green bond market in India.*

The research concludes that green bonds have strong future potential in India and can play a significant role in achieving sustainable development and net-zero emission goals. Greater investor awareness, stronger government support, and improved transparency are essential for the future expansion of the green bond market.

Keywords: *Green Bonds, Sustainable Finance, Renewable Energy, ESG, Sustainable Development, Green Finance*

INTRODUCTION

In recent years, environmental sustainability has become one of the most important global concerns. Rapid industrialization, urbanization, and economic development have increased pressure on natural resources and contributed to environmental degradation. Climate change, global warming, pollution, and depletion of natural resources have forced governments and financial institutions to search for sustainable development solutions.

Green finance has emerged as an important concept that promotes environmentally responsible economic growth. Among various green finance instruments, green bonds have gained significant importance in recent years. Green bonds are fixed-income financial instruments used to raise funds exclusively for environmentally sustainable projects. These projects include renewable energy, sustainable transportation, green buildings, pollution control, waste management, and water conservation.

The concept of green bonds was first introduced by the World Bank in 2007. Since then, the global green bond market has expanded rapidly. Governments, corporations, and financial institutions across the world are increasingly issuing green bonds to finance climate-friendly projects.

India is one of the fastest-growing economies in the world and faces major environmental challenges due to rapid economic growth and increasing energy demand. To support sustainable development, India has increasingly focused on renewable energy and green infrastructure projects. Green bonds have become an important source of financing for such projects.

The Securities and Exchange Board of India (SEBI) has introduced guidelines for green bond issuance to improve transparency and accountability. Green bonds in India are mainly used to finance solar energy, wind energy, sustainable transportation, water management, and pollution control projects.

The present study attempts to analyze investor perception regarding green bonds and evaluate their effectiveness in financing sustainable projects in India.

LITERATURE REVIEW

Several researchers and institutions have studied the role of green bonds in sustainable finance and environmental development.

Flammer (2021) studied the impact of green bonds on corporate environmental performance and found that companies issuing green bonds tend to improve environmental transparency and invest more in sustainable projects.

Tang and Zhang (2020) analyzed the global green bond market and concluded that green bonds provide financial returns similar to traditional bonds while also offering environmental benefits. Their study highlighted the increasing interest of investors in sustainable investments.

Bhattacharya and Chatterjee (2019) examined the growth of green bonds in India and observed that India has strong potential for green finance due to increasing renewable energy requirements. However, the study also identified challenges such as low investor awareness and limited regulatory support.

The Climate Bonds Initiative (2022) reported that the global green bond market has witnessed rapid growth and has become a major tool for financing climate-related projects. The report emphasized the importance of transparency and standardized frameworks.

The International Finance Corporation (IFC) studied the role of green bonds in emerging economies and found that green bonds are useful in financing environmental projects in developing countries where large-scale investments are required.

Reichelt (2018) studied investor motivation in green bond markets and concluded that investors are increasingly influenced by both financial returns and environmental responsibility.

Overall, previous studies indicate that green bonds are becoming an important instrument for sustainable finance, although challenges related to awareness, regulations, and transparency still exist.

RESEARCH GAP

Although several studies have been conducted on green bonds globally, limited research has focused on investor perception and awareness regarding green bonds in the Indian context. Most previous studies focused mainly on institutional investment and global market trends.

There is limited research examining how retail investors, students, and working professionals perceive green bonds as an investment option in India. Additionally, there is a need to study the effectiveness of green bonds specifically in financing sustainable projects in India.

The present study attempts to fill this gap by analyzing investor awareness, perception, willingness to invest, and the challenges affecting green bond adoption in India using primary data collected from respondents.

OBJECTIVES OF THE STUDY

The major objectives of the study are:

1. To study the concept and functioning of green bonds.
2. To analyze the growth of green bonds in India.
3. To examine the role of green bonds in financing sustainable projects.
4. To evaluate the effectiveness of green bonds in environmental development.
5. To identify the challenges faced in green bond financing.
6. To suggest measures for improving green bond adoption in India.

DATA AND RESEARCH METHODOLOGY

The present study is descriptive and empirical in nature. Both primary and secondary data have been used for conducting the research.

Primary Data

Primary data was collected through a structured questionnaire survey conducted among respondents in Delhi NCR. The respondents included students, working professionals, and individuals interested in financial investments.

The questionnaire consisted of statements related to:

- Awareness of green bonds
- Sustainable finance
- Environmental impact
- Investment willingness
- Trust in green investments
- Challenges in green bond adoption

A five-point Likert scale was used to measure respondent opinions.

Secondary Data

Secondary data was collected from:

- SEBI reports
- RBI publications
- Research papers
- Academic journals
- Sustainable finance reports
- Climate Bonds Initiative reports

Sample Size

The study was conducted on 100 respondents.

Sampling Technique

Convenience sampling method was used for selecting respondents.

Statistical Tools Used

The collected data was analyzed using:

- Percentage analysis
- Mean score analysis
- Ranking analysis
- Independent sample t-test

These tools helped in understanding investor perception and identifying patterns in the responses.

DATA ANALYSIS

The analysis of the collected data indicates a generally positive perception of green bonds among respondents.

The majority of respondents agreed that green bonds are effective in financing renewable energy and sustainable infrastructure projects. Around 75% respondents believed that green bonds support renewable energy development and contribute toward environmental sustainability.

The study also revealed that many respondents believe green bonds help in reducing carbon emissions and promoting sustainable economic growth.

However, awareness regarding green bonds is still limited in India. Many respondents remained neutral regarding awareness and understanding of green bonds, which indicates the need for stronger awareness campaigns and investor education.

The t-test analysis showed that education level and occupation significantly influence awareness and perception regarding green bonds. Respondents with higher educational qualifications and finance-related occupations showed greater awareness regarding sustainable finance.

At the same time, gender did not show any significant difference in perception toward green bonds.

The ranking analysis revealed that government support and renewable energy financing are the strongest factors influencing investor perception.

The study also identified major challenges affecting green bond growth in India such as:

- Lack of standardized frameworks
- High issuance costs
- Regulatory barriers
- Limited investor awareness
- Risk of greenwashing

Overall, the analysis indicates that although green bonds have strong growth potential, greater awareness and policy support are necessary for market expansion.

FINDINGS OF THE STUDY

The major findings of the study are as follows:

1. Awareness regarding green bonds among investors is moderate but gradually increasing.
2. Most respondents believe green bonds are effective in financing renewable energy and sustainable infrastructure projects.
3. Investors are increasingly interested in sustainable and environmentally responsible investment opportunities.
4. Government support plays an important role in encouraging green bond investments.
5. Education level and occupation significantly influence awareness regarding green bonds.
6. Gender does not significantly affect investor perception toward green bonds.
7. Major challenges affecting green bond adoption include lack of awareness, regulatory barriers, high issuance costs, and lack of standardized frameworks.
8. Investors believe green bonds can contribute significantly toward India's sustainable development and net-zero emission goals.
9. Transparency and proper disclosure are important for increasing investor confidence in green bonds.
10. The green bond market in India has strong future growth potential.

CONCLUSION

Green bonds have emerged as an important financial instrument for supporting environmentally sustainable development. They play a significant role in financing renewable energy, sustainable infrastructure, pollution control, and climate-friendly projects.

The findings of the study indicate that investors generally have a positive perception toward green bonds and recognize their environmental benefits. At the same time, awareness regarding green bonds is still developing in India.

The study also highlights that government support, transparency, investor education, and regulatory improvements are necessary for strengthening the green bond market.

India requires large-scale investments to achieve sustainable development and net-zero emission targets. Green bonds can become an important source of financing for these objectives if the existing challenges are addressed effectively.

Therefore, increasing financial literacy, strengthening SEBI regulations, improving transparency, and providing incentives for sustainable investments can help accelerate the growth of green bonds in India.

In conclusion, green bonds have strong future potential and can contribute significantly toward balancing economic growth with environmental sustainability.

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Impact of ChatGPT on Academic Productivity and Learning Behaviour among College Students

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Abstract

The rapid growth of Artificial Intelligence (AI) tools in education has transformed the learning environment for students across the world. Among these tools, ChatGPT has emerged as one of the most widely used AI-based conversational platforms for academic assistance, content generation, doubt clarification, and research support. This study explores the impact of ChatGPT on academic productivity and learning behaviour among college students. The paper examines how students utilize ChatGPT for assignments, presentations, research activities, and exam preparation. It also analyses the positive and negative effects of AI-assisted learning on critical thinking, creativity, time management, and academic performance. Secondary data and existing literature have been used to understand the changing educational landscape influenced by generative AI technologies. The findings indicate that ChatGPT significantly enhances academic productivity by saving time, improving access to information, and supporting personalized learning. However, excessive dependence on AI tools may reduce independent thinking and analytical abilities among students. The study highlights the need for balanced and ethical usage of ChatGPT in higher education institutions.

Keywords: *ChatGPT, Artificial Intelligence, Academic Productivity, Learning Behaviour, College Students, AI in Education*

Introduction

The education sector has experienced major technological advancements in recent years. Digital learning platforms, smart classrooms, online courses, and Artificial Intelligence (AI) have changed traditional teaching and learning methods. One of the most popular AI tools introduced in recent years is ChatGPT, developed by OpenAI. ChatGPT is a conversational AI model capable of generating human-like responses, answering questions, summarizing content, writing essays, and assisting with academic tasks.

College students increasingly rely on ChatGPT for completing assignments, preparing notes, generating ideas, improving writing quality, and understanding difficult concepts. The accessibility and convenience of AI-powered tools have made learning faster and more flexible. Students can receive instant responses and personalized support without depending entirely on teachers or textbooks.

Academic productivity refers to the efficiency and effectiveness with which students complete academic tasks such as assignments, projects, presentations, and examinations. Learning behaviour refers to students' attitudes, habits, engagement, motivation, and methods of acquiring knowledge. ChatGPT influences both productivity and learning behaviour by changing how students access information and interact with educational content.

Despite the benefits, concerns have also emerged regarding overdependence on AI tools. Many educators believe that excessive use of ChatGPT may reduce students' critical thinking abilities, originality, and independent problem-solving skills. Issues related to plagiarism, misinformation, and ethical use of AI in education are also becoming significant.

This research paper aims to study the impact of ChatGPT on academic productivity and learning behaviour among college students and understand both its advantages and limitations in higher education.

Literature Review

Several studies have examined the role of Artificial Intelligence in education and its influence on student learning outcomes.

Kasneci et al. (2023) highlighted that generative AI tools such as ChatGPT can support personalized learning by providing instant feedback, explanations, and content summaries. The study emphasized that AI tools improve accessibility to educational resources and help students learn at their own pace.

Lo (2023) examined the use of ChatGPT in higher education and found that students use the platform mainly for assignment assistance, writing support, and concept clarification. The research concluded that ChatGPT can increase learning efficiency and save time for students.

Cotton, Cotton, and Shipway (2023) discussed ethical concerns regarding AI use in education. According to the study, students may become overly dependent on AI-generated content, leading to reduced originality and academic dishonesty.

Dwivedi et al. (2023) explored the broader implications of generative AI in business and education. The findings indicated that AI technologies can improve productivity and decision-making but require responsible implementation.

Tlili et al. (2023) studied the opportunities and challenges of ChatGPT in education. The study found that ChatGPT improves engagement and accessibility but also raises concerns about misinformation and reduced critical thinking among learners.

A study by Zhai (2022) suggested that AI-assisted learning environments positively affect student motivation and academic engagement. Students feel more confident when they receive immediate responses and personalized guidance.

The reviewed literature shows that ChatGPT has both positive and negative impacts on students' academic activities and learning behaviour.

Research Gap

Existing studies mainly focus on the technological capabilities and ethical concerns of ChatGPT. Limited research has been conducted specifically on the combined impact of ChatGPT on academic productivity and learning behaviour among college students. Moreover, many studies discuss AI tools generally rather than focusing on students' practical experiences and behavioural changes in higher education institutions.

This study attempts to bridge this gap by examining how ChatGPT affects students' efficiency, learning habits, academic engagement, and dependence on AI-based tools.

Research Objectives

- ❖ To examine the impact of ChatGPT on academic productivity among college students.
- ❖ To analyse the influence of ChatGPT on students' learning

behaviour.

- ❖ To identify the advantages and disadvantages of using ChatGPT in academic activities.
- ❖ To understand students' dependence on AI tools for educational purposes.
- ❖ To suggest recommendations for the ethical and effective use of ChatGPT in higher education.

Hypotheses Development

Based on the objectives of the study, the following hypotheses are proposed:

H1: ChatGPT has a significant positive impact on academic productivity among college students.

H2: ChatGPT significantly influences the learning behaviour of college students.

H3: Excessive use of ChatGPT negatively affects students' critical thinking and independent learning abilities.

H4: Students perceive ChatGPT as a useful academic support tool.

Proposed Model

The conceptual framework of the study explains the relationship between ChatGPT usage and students' academic outcomes.

Independent Variable:

- ❖ Use of ChatGPT

Dependent Variables:

- ❖ Academic Productivity
- ❖ Learning Behaviour

Mediating Factors:

- ❖ Time Management
- ❖ Accessibility to Information
- ❖ Motivation
- ❖ Critical Thinking
- ❖ Academic Engagement

The proposed model suggests that increased use of ChatGPT influences academic productivity positively through faster access to information and improved task completion. At the same time, excessive dependence may affect critical thinking and independent learning behaviour.

Interpretation:

The growing use of ChatGPT among college students reflects the increasing integration of AI technologies into education. Students use ChatGPT for various academic purposes including assignment writing, idea generation, note preparation, coding assistance, grammar correction, and research support.

One major advantage of ChatGPT is improved academic productivity. Students can complete tasks more efficiently and save considerable time. AI-generated explanations also help students understand complex topics quickly. Personalized responses enhance learning flexibility and support self-paced learning.

ChatGPT also improves accessibility to information. Students from different educational backgrounds can use the tool to clarify doubts instantly without waiting for classroom interaction. This promotes continuous learning beyond traditional academic settings.

However, the discussion also highlights several challenges associated with excessive use of ChatGPT. Overdependence on AI-generated responses may reduce students' creativity, analytical thinking, and problem-solving abilities. Many students may rely on ready-made answers instead of developing their own understanding.

Another concern is academic integrity. Students may use ChatGPT to generate assignments and essays without proper learning involvement. This raises issues related to plagiarism and ethical academic practices.

Furthermore, ChatGPT may occasionally provide inaccurate or misleading information. Students who blindly trust AI-generated content without verification may face academic difficulties.

Educational institutions must therefore promote responsible AI usage. Teachers should guide students on how to use ChatGPT as a supportive learning tool rather than a replacement for independent learning.

Overall, ChatGPT has the potential to revolutionize higher education positively when used ethically and in moderation.

Conclusion

ChatGPT has become an influential AI tool in modern education and significantly impacts academic productivity and learning behaviour among college students. The study reveals that ChatGPT improves efficiency, saves time, enhances accessibility to information, and supports personalized learning experiences.

Students benefit from instant responses, simplified explanations, and assistance in academic activities such as writing, research, and presentations. The tool contributes positively to academic productivity by helping students manage tasks more effectively.

However, excessive dependence on ChatGPT may negatively influence independent thinking, creativity, and critical analysis. Ethical concerns such as plagiarism and academic dishonesty also require attention.

Therefore, balanced and responsible use of ChatGPT is essential. Educational institutions should create awareness regarding ethical AI practices and encourage students to use AI as a learning aid rather than a substitute for personal effort and intellectual development.

The future of education will likely involve greater integration of AI technologies, making it necessary for educators and students to adapt effectively while maintaining academic integrity and critical thinking skills.

Limitations

- The study is based mainly on secondary data and existing literature.
- The research focuses only on college students and does not include school students or teachers.
- findings over time.
- The study does not involve large-scale primary data collection.

Future Research

- Future studies can conduct empirical surveys involving students and teachers.
- Comparative research can be conducted between AI-assisted

learning and traditional learning methods.

- ❖ Researchers can examine the long-term impact of ChatGPT on critical thinking and academic performance.
- ❖ Future studies may explore AI ethics and policy frameworks in educational institutions.

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Study on Economic Benefits of Sustainable Technologies and their Impact on Business Growth

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Abstract

Sustainable technologies have become an essential component of modern business operations due to increasing environmental concerns, resource scarcity, and competitive market pressures. Businesses across the world are increasingly adopting sustainable technologies such as renewable energy systems, energy-efficient equipment, green manufacturing processes, smart technologies, and waste management systems to improve operational efficiency and long-term profitability. The present study aims to examine the economic benefits of sustainable technologies and analyze their impact on business growth through a secondary data-based approach. The study identifies that sustainable technologies contribute toward cost reduction, productivity enhancement, improved brand reputation, innovation, and competitive advantage. Furthermore, businesses adopting sustainability-oriented technologies experience better financial performance and long-term market growth. Despite challenges such as high initial investment and technological barriers, sustainable technologies provide substantial economic and strategic benefits to organizations. The findings of the study suggest that sustainability is not merely an environmental concern but also an important business strategy for achieving long-term growth and competitive success.

Keywords:*Sustainable Technologies, Business Growth, Green Innovation, Sustainability, Competitive Advantage, Economic Benefits*

1. Introduction

In the modern business environment, sustainability has emerged as one of the most critical factors influencing organizational growth and competitiveness. Rapid industrialization, environmental degradation, climate change, and resource depletion have encouraged businesses to adopt environmentally sustainable practices. Sustainable technologies refer to technologies and innovations that minimize environmental impact while maximizing economic efficiency and resource utilization.

Businesses are increasingly integrating sustainable technologies into their operations to achieve operational efficiency, reduce costs, and improve market reputation. Technologies such as renewable energy systems, green buildings, electric transportation, recycling systems, and energy-efficient machinery have become integral to modern business strategies. Consumers, investors, and governments are also placing greater emphasis on sustainability, compelling organizations to adopt environmentally responsible technologies.

The concept of sustainability gained significant importance after the Brundtland Report (1987), which highlighted the need for meeting present requirements without compromising future generations. Since then, sustainable development has become an important area of focus for businesses and policymakers worldwide. Organizations are now realizing that sustainable technologies not only contribute toward environmental conservation but also enhance profitability and long-term business growth.

2. Objectives of the Study

1. To understand the concept of sustainable technologies.
2. To examine the economic benefits associated with sustainable technologies.
3. To analyze the impact of sustainable technologies on business growth.
4. To identify challenges faced during the adoption of sustainable technologies.
5. To provide suggestions for improving sustainable technology adoption.

3. Research Methodology

The present research paper is based entirely on secondary data.

Information has been collected from books, research journals, government reports, company sustainability reports, websites, published articles, and international publications related to sustainability and business growth. The study adopts a descriptive and analytical approach to examine the relationship between sustainable technologies and economic performance.

Secondary data analysis is suitable for the present study as it enables the researcher to examine existing literature and evaluate findings from previously conducted studies. The collected data has been organized and interpreted systematically to understand the economic implications of sustainable technologies in business operations.

4. Literature Review

Porter and Van der Linde (1995) argued that environmental innovations improve resource productivity and create competitive advantages for organizations. According to Hart (1997), sustainability provides strategic opportunities for businesses and contributes toward long-term organizational success. Nidumolu, Prahalad, and Rangaswami (2009) emphasized that sustainability acts as a major driver of innovation and business transformation.

Elkington (1997) introduced the concept of the Triple Bottom Line, emphasizing that businesses should focus on economic, social, and environmental performance simultaneously. According to the International Energy Agency (2021), renewable energy investments contribute toward employment generation and economic growth. Several studies have also indicated that organizations adopting sustainable technologies experience improved financial performance, stronger customer loyalty, and enhanced corporate reputation.

The literature suggests that sustainable technologies positively influence business growth through cost reduction, operational efficiency, innovation, and market competitiveness.

5. Economic Benefits of Sustainable Technologies

Sustainable technologies provide numerous economic benefits to organizations. One of the primary advantages is cost reduction. Energy-efficient machinery and renewable energy systems reduce electricity consumption and operational expenses. Businesses adopting green manufacturing practices also experience lower waste management and maintenance costs.

Another important benefit is improved operational efficiency. Smart technologies and automated systems optimize resource utilization and reduce wastage, thereby increasing productivity. Sustainable technologies also improve profitability by minimizing long-term operational risks and enhancing resource management.

Organizations adopting sustainability practices often receive tax benefits, subsidies, and government incentives. Additionally, environmentally responsible organizations attract investors and customers, thereby improving market performance and competitive advantage. Sustainable technologies also contribute toward innovation, enabling businesses to develop eco-friendly products and services that meet changing consumer preferences.

6. Impact of Sustainable Technologies on Business Growth

Sustainable technologies significantly influence business growth and organizational performance. Businesses adopting environmentally responsible technologies often experience improved brand image and customer trust. Modern consumers are increasingly preferring organizations that demonstrate environmental responsibility and sustainability commitment.

Sustainable technologies also encourage innovation and business expansion. Companies investing in green technologies develop innovative products and operational strategies that improve market competitiveness. Furthermore, sustainable workplaces improve employee morale and productivity, contributing toward organizational efficiency.

The adoption of sustainable technologies also reduces regulatory and environmental risks. Organizations complying with environmental standards are better positioned to avoid legal penalties and reputational damage. Consequently, sustainability has become an important strategic factor influencing long-term business growth and survival.

7. Challenges in Adoption of Sustainable Technologies

Despite several benefits, organizations face various challenges during the adoption of sustainable technologies. High initial investment remains one of the major barriers, particularly for small and medium enterprises. Many organizations also lack technical expertise and skilled personnel required for implementing sustainable technologies effectively.

Resistance to organizational change is another significant challenge. Employees and management may hesitate to adopt new operational methods and technological systems. Additionally, limited infrastructure and uncertain returns on investment discourage businesses from investing in sustainable technologies.

Developing countries often face financial and technological limitations, which restrict large-scale implementation of sustainability-oriented technologies.

8. Findings of the Study

The study identifies that sustainable technologies contribute significantly toward economic growth and business development. Businesses adopting sustainable technologies experience reduced operational costs, improved productivity, and enhanced profitability. Sustainable technologies also improve brand image, customer loyalty, and market competitiveness.

The study further reveals that sustainability encourages innovation and long-term business growth. Government incentives and environmental regulations are motivating organizations to adopt green technologies. However, high investment costs and technical barriers remain major challenges affecting technology adoption.

9. Suggestions

Governments should provide greater financial support, subsidies, and tax incentives to encourage sustainable technology adoption. Organizations should invest in employee training programs and create awareness regarding the long-term benefits of sustainability.

Businesses should integrate sustainability into their strategic planning processes and focus on continuous innovation. Small and medium enterprises should be provided with affordable financing opportunities to adopt sustainable technologies effectively.

10. Conclusion

Sustainable technologies have become an essential driver of economic development and business growth in the contemporary business environment. The adoption of environmentally sustainable technologies improves operational efficiency, profitability, innovation, and competitive advantage. Businesses integrating sustainability into their operations are better positioned to achieve long-term growth and market success.

Although organizations face challenges such as high implementation costs and technological barriers, the long-term economic benefits of sustainable technologies outweigh these limitations. Therefore, businesses should increasingly adopt sustainable technologies to ensure environmental sustainability, economic efficiency, and future competitiveness.

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A Study on Financial Literacy among College Students and Its Impact on Saving Behaviour

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Abstract

Financial literacy has emerged as an essential life skill within the rapidly changing economic and financial landscape. Among college students, the capacity to comprehend and efficiently manage financial matters significantly influences responsible financial behaviour and sustained financial stability. This research aims to evaluate the level of financial literacy among college students and to analyse its influence on their saving behaviours. The focus is on students' understanding of core financial concepts such as budgeting, savings, and expense management.

A descriptive research design has been employed for this study, incorporating both primary and secondary data sources. Primary data were obtained through a structured questionnaire administered to undergraduate students from diverse academic disciplines, while secondary data were collected from research journals, articles, reports, and published studies related to financial literacy and personal finance. The findings indicate that students with higher levels of financial literacy tend to exhibit more prudent saving habits, improved budgeting practices, and greater financial awareness compared to peers with limited financial knowledge. The study further emphasizes the importance of financial education in fostering positive financial attitudes and responsible money management among young adults.

The study concludes that enhancing financial literacy among college students can substantially improve saving behaviours and financial decision-*making. It recommends integrating financial education programs and practical* *financial training into academic curricula to better prepare students for their forthcoming financial responsibilities.*

Keywords

Financial Literacy, Saving Behaviour, College Students, Financial Education, Budgeting, Personal Finance, Investment Awareness, Money Management, Financial Decision-Making, Savings Habits.

Introduction

The ability to understand and effectively utilise various financial skills, including personal financial management, budgeting, and investing, is termed Financial Literacy. It encompasses the capability to comprehend and apply financial knowledge in daily life. This includes familiarity with budgeting, saving, investment planning, credit management, debt control, interest rates, and inflation. In the contemporary rapidly evolving financial environment, financial literacy has become increasingly vital for individuals striving to attain financial security and independence.

College students represent the future workforce and key decision-makers in the economy. At an early stage of life, they are exposed to financial responsibilities such as managing educational expenses, handling digital payments, utilising banking services, and planning savings. However, many students lack sufficient financial knowledge and practical experience, which can result in poor spending habits, debt accumulation, and financial insecurity. The research aims to evaluate financial literacy among college students and its influence on saving behaviour, thereby revealing the crucial link between theoretical financial understanding and practical management. The research objective is to financial literacy among college students and its impact on saving behaviour, revealing a critical nexus between theoretical financial understanding and the practical management.

- To assess financial literacy among college students.
- To examine knowledge of budgeting, saving, and investment.
- To analyse students' saving habits.
- To study the relationship between financial literacy and saving behaviour.
- To identify factors affecting saving decisions.
- To suggest ways to improve financial literacy.

Literature Review

Financial Literacy

The capacity to handle economic information and make decisions about financial resources. The literature argues that this is a competency that young adults need to navigate complex economic environments like debt management and long-term capital accumulation. Moreover, empirical evidence indicates that students with a higher level of financial literacy are better able to inculcate disciplined saving habits and make optimal investment choices (Nimbalkar, 2026). Furthermore, the literacy of numeracy is a basic element of this literacy that allows individuals to evaluate the cost-effectiveness of different financial products and control their daily expenses more accurately (Fiergbor, 2020, p. 39).

Saving Behaviour

Saving behaviour is the conscious decision to set aside financial resources for future consumption rather than current expenditure and is mainly influenced by a person's financial self-control and knowledge (Nimbalkar, 2026; Prakasha et al., 2023, p. 299). Empirical evidence shows that students often face challenges when weighing their present wants against future goals, which can lead to inconsistent savings patterns characterized by a focus on short-term liquidity over long-term wealth accumulation (Faramida et al., 2023, p. 200). Furthermore, the interaction between financial confidence and literacy seems to be a key element since those with higher confidence in managing their assets are more inclined to adopt a more consistent and proactive approach to saving (Respati et al., 2023, p. 41).

Financial Planning

A structured approach to keeping track of income and expenses (Manipol & Pabelona, 2025, p. 2125) allows students to set specific objectives, such as establishing an emergency fund or repaying debt, which are essential for competent financial planning. This systematic oversight helps students to reduce financial stress, since the ability to budget cash directly decreases the likelihood of unnecessary spending (Karim et al., 2023, p. 126).

Data and Research Methodology

Research Design

The study is based on a descriptive research design. This approach helps in understanding financial awareness, saving habits, and behavioural patterns among college students in a systematic manner.

Sources of Data

Primary Data

Primary data was collected through a structured questionnaire distributed among 100 college students. The questionnaire included questions related to budgeting, saving habits, investment awareness, financial planning, and expense management.

Secondary Data

Secondary data was collected from academic journals, research papers, financial reports, articles, and published studies related to financial literacy and saving behaviour.

Nature of Data

The study uses both quantitative and qualitative data.

- Quantitative data includes numerical responses collected through surveys and percentage analysis.
- Qualitative data includes theoretical insights obtained from literature reviews and previous research studies.

Sampling Method

The study focuses on college students as the target population. Respondents were selected using a convenience sampling method to gather relevant financial behaviour data.

Data Analysis:

Descriptive Analysis

The survey findings indicate the following:

- 65% of students possess basic financial awareness.
- 45% of students lack adequate investment knowledge.
- 50% of students demonstrate irregular saving behaviour.

The results suggest that although students have moderate financial literacy, there are significant behavioural and practical knowledge gaps.

Descriptive Statistics of Financial Behaviour

The table below presents the descriptive statistics of questionnaire statements related to financial literacy and saving behaviour.

Questionnaire Statements	N	Mean	Std. Deviation
Rate your financial knowledge level	100	2.65	0.90
Do you save money regularly?	100	2.30	0.80
Percentage of income saved	100	2.20	1.00
Do you maintain a monthly budget?	100	0.60	0.50
Do you have an emergency savings fund?	100	0.40	0.50
Are you aware of investment options?	100	0.70	0.40
Have you ever invested money?	100	0.20	0.40
Do you use financial apps/digital banking?	100	0.80	0.40
How often do you track expenses?	100	2.60	1.10
Do you discuss financial matters with family?	100	0.70	0.50
Financial literacy helps in decision-making	100	4.10	0.80

Interpretation

The results show that students have a moderate level of financial literacy and saving behaviour. Most respondents use financial applications and believe that financial literacy helps in making financial decisions. The table shows that the mean for maintaining a monthly budget is 0.60 and the mean for emergency funds is 0.40. The very low scores are a strong indication that there is a substantial gap between basic awareness and practical financial discipline.

Findings

The major findings of the study are as follows:

- The finance literacy level of college students is moderate but not completely satisfactory.
- There is a strong positive association between financial literacy and saving behaviour.
- Students with a higher level of financial awareness are more likely to save regularly, manage their expenses well and undertake financial planning.
- A large number of students have irregular saving habit due to lack of financial knowledge and financial discipline.
- Income level, awareness, peer influence and attitude towards saving significantly influence students' saving behaviour.
- There is a large gap between theoretical financial knowledge and its implementation in practice.
- The study points out the importance of introducing financial education and awareness programs for students.

The Theory-Practice Gap: "The apparent gap between knowledge of finance theory and its application in practice." This is a very relevant research gap.

Research Gap

Despite the increasing number of studies on financial literacy, several research gaps still exist in this area.

- While some studies focus on the general population, college students are also a common focus in financial literacy research("Financial Literacy Level on College Students: A Comparative Descriptive Analysis between Mexico and Colombia," 2020, p. 2; Rodríguez-Correa et al., 2025).

- ❖ While the relationship between financial literacy and saving behavior among students is explored, there is still room for more targeted research(Faramida et al., 2023, p. 200; Puspitaningrum et al., 2025, p. 28).
- ❖ While some existing studies emphasize theoretical financial knowledge, there is a recognized gap in fully exploring practical financial behavior and real-life application, with calls for more practice-oriented interventions(Kaiser & Lusardi, 2024, p. 25; Singh & Singh, 2024).
- ❖ There is a lack of region-specific studies focusing on students' financial habits and saving patterns.
- ❖ Behavioural factors such as peer influence, spending attitudes, lifestyle choices, and personal discipline have not been adequately examined.

Conclusion

The study concludes that financial literacy plays a significant role in influencing saving behaviour among college students. Students with better financial knowledge demonstrate improved money management skills, disciplined spending behaviour, and regular saving habits. However, the overall level of financial literacy among students remains moderate and requires substantial improvement.

- ❖ **Investment Knowledge:** With 45% of sample lacking investment knowledge, recommendation for practical financial training is well-supported by studies showing that financial literacy significantly influences not just saving, but also investment awareness.

The statistical analysis confirms a strong and significant relationship between financial literacy and saving behaviour. Therefore, improving financial awareness can contribute positively to students' long-term financial stability and responsible financial decision-making. To improve financial literacy among students, educational institutions should introduce financial education programs, workshops, seminars, and practical financial training sessions. Students should also be encouraged to develop budgeting habits, maintain savings, and use digital financial tools responsibly.

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15

A Study on Factors Influencing Investment in Stocks among Gen Z

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Abstract

This study examines the factors influencing stock market investment among Generation Z, with a focus on FinTech platforms, social media influence, financial literacy, and behavioural factors such as risk appetite and fear of missing out (FOMO). The research adopts a descriptive design using both primary and secondary data. Primary data was collected through structured questionnaires from major significant Gen Z respondents, while secondary data was sourced from journals, SEBI reports, and financial articles.

The findings reveal that user-friendly trading applications, zero-brokerage models, and real-time market information have significantly increased Gen Z participation in equity markets. Social media platforms and ""finfluencers" also play a significant role in shaping investment decisions, often replacing traditional financial advisors. However, the study identifies challenges such as impulsive trading, information overload, and limited fundamental financial knowledge among young investors.

The study concludes that digital financial ecosystems have transformed investment behaviour by making stock market participation more accessible and engaging for Gen Z. It highlights the importance of financial literacy and responsible digital investment practices to ensure sustainable wealth creation among young investors.

Keywords: *Gen Z, Stock Market Investment, FinTech, Financial Literacy, Finfluencers, Investment Behaviour, Social Media Influence, FOMO, Retail Investors.*

INTRODUCTION

The rapid proliferation of digital financial services has fundamentally democratized access to capital markets, enabling a demographic transition where younger cohorts now constitute a significant share of retail trading activity.

The Generational Shift in Wealth Creation

- Transition from Physical to Digital Assets: Unlike previous generations who prioritized gold and real estate, Gen Z is spearheading a migration toward "paperless" and "instant" equity markets.
- The FIRE Movement (Financial Independence, Retire Early): There is a growing psychological trend among youth to achieve financial autonomy early, leading to aggressive and early-stage market participation. autonomy early, leading to aggressive and early-stage market participation. The Digital Native Advantage
- Mobile-First Operational Logic: As the first generation of true digital natives, Gen Z possesses an intuitive understanding of complex trading interfaces and algorithmic market movements.
- Real-Time Data Sovereignty: With 24/7 access to live market tickers, global financial news, and analytical tools, Gen Z operates with a level of information speed that was previously unavailable to retail investors.

Evolution of Information Sourcing & Influence

- The Rise of "Finfluencers": Traditional institutional advisors are being replaced by digital content creators (finfluencers) who provide relatable and high-frequency financial education on platforms like YouTube and Instagram.
- Social Proof and Community Trading: Digital communities and forums (e.g., Reddit, Telegram) act as the new "trading floors" where peer validation heavily dictates individual investment choices.

NEED OF THE STUDY

- To study why Gen Z is moving away from traditional savings, such as FDs, information overload. " towards high-risk equity markets.

- To examine how user-friendly trading apps have removed entry barriers for young, small-ticket investors.
- To evaluate the role of "Finfluencers" and viral digital trends in shaping individual portfolio choices.
- To identify if Gen Z investors rely on fundamental research or are driven by "Information Overload."
- To provide insights for regulators and banks to better understand and protect the new generation of investors.

LITERATURE REVIEW

Digital Transformation in Investing

Research suggests that paperless onboarding and mobile accessibility have increased retail participation among youth by over 60% in the last three years. Furthermore, the integration of digital financial services has cultivated an environment where ease of technology usage and improved digital financial awareness serve as primary catalysts for market entry (Nimbalkar & Nikam, 2025).

The "Finfluencer" Influence

Scholarly articles highlight that Gen Z investors prioritize information from social media creators (YouTube/Instagram) over traditional financial advisors. While this democratization of financial knowledge empowers younger cohorts with real-time insights, it also introduces substantial risks, including a reliance on speculative strategies and the influence of unregulated actors (C, 2025).

Psychology of Risk

Literature confirms that Gen Z possesses a higher risk appetite than previous generations, often driven by the desire for rapid wealth creation and financial independence. Furthermore, these psychological tendencies are frequently exacerbated by cognitive biases such as overconfidence and herding, which are heavily reinforced by the curated narratives disseminated through social media channels (Warkar & Durai, 2025).

Information Asymmetry & FOMO

Studies indicate that "Fear of Missing Out" (FOMO) and peer validation are primary catalysts for entry into volatile market segments like small-cap stocks. These digital environments often bypass rigorous fundamental analysis, as nearly 40% of young investors may follow influencer recommendations without independent verification (Dhuri, 2025).

Impact of Gamification

Financial journals discuss how the "gamified" user interface of modern trading apps makes investing feel more engaging, potentially leading to impulsive trading habits. Specifically, the integration of progress bars, reward points, and social notifications triggers a dopamine-driven response that prioritizes short-term transactional satisfaction over long-term wealth accumulation (Nimbalkar, 2026a, 2026b).

Financial Literacy Gaps

Contemporary research identifies a significant gap between technical app usage and actual fundamental understanding of market cycles among young investors. Consequently, this discrepancy often results in heightened vulnerability to financial losses when market volatility exceeds the risk management capacity of novice participants (Kamti, 2025).

RESEARCH GAP

Limited Regional Studies

Most existing literature focuses on Western or Global North markets; there is a significant lack of empirical data regarding the investment behaviour of the Gen Z cohort specifically within the Indian socio-economic context.

The FinTech Influence Paradox

While studies acknowledge the rise of digital apps, there is a gap in researching how the gamified user interface (UI) of modern trading platforms psychologically impacts the risk-taking decisions of students.

Social Media vs. Formal Advisory

Current research fails to adequately measure the shift where unregulated "finfluencers" on YouTube and Instagram are effectively replacing certified financial advisors for the younger generation.

Post-Pandemic Behavioural Shift

Much of the available academic work dates prior to Utilizes 2020.

There is an urgent need to study the specific surge of first-time investors who entered the volatile markets during the post-COVID-19 digital boom.

Rationality vs. FOMO

Traditional financial models assume rational investor behaviour, but they overlook the impact of "fear of missing out" (FOMO) and "social proof" as primary drivers for Gen Z stock selection.

Sustainability of Short-term Trends

There is a notable lack of longitudinal research on this. Specifically, it's it's time whether Gen Z's preference for short-term gains is a sustainable wealth-creation strategy or merely a temporary market trend.

DATA AND RESEARCH METHODOLOGY

Research Design

Descriptive Research: This employs a structured approach to identify trends, behaviours, and preferences of the target demographic. This study employs a mixed-methods design, integrating quantitative survey data with qualitative insights to capture the nuanced interplay between psychological drivers and digital financial habits.

Data Scope

Capturing the post-pandemic digital acceleration and ESG standardization. Based majorly on secondary data.

Quantitative Sources:

Numerical data collected through a structured questionnaire from over 100 respondents to analyse investment patterns and percentages.

Qualitative Sources:

Theoretical insights and behavioural contexts derived from existing academic journals, SEBI reports, and financial news articles.

e study examines the impact of digital and behavioural factors on stock market investment behaviour among Generation Z investors. The variables used in the study are classified into independent and dependent variables.

Variable Type	Variable	Code	Description
Independent Variable (IV)	Digital Influence & Accessibility	DIA	Measured through FinTech app usage, ease of access, and exposure to digital trading platforms.
Independent Variable (IV)	Social Media Influence	SMI	Measured through the impact of finfluencers, online communities, and financial content on investment decisions.
Independent Variable (IV)	Financial Literacy	FL	Measured through awareness of financial concepts, investment knowledge, and market understanding.
Independent Variable (IV)	Risk Appetite	RA	Measured through willingness to invest in high-risk and high-return stocks.
Dependent Variable (DV)	Investment Propensity	IP	Measured through stock market participation, trading frequency, and percentage of income invested in equities.

The independent variables represent the digital, psychological, and financial factors influencing investment decisions, while the dependent variable measures the extent of stock market participation among Gen Z investors.

DATA ANALYSIS

Variables	DIA	SMI	FL	RA	IP
DIA	1.000	0.621**	0.584**	0.493**	0.742**
SMI	0.621**	1.000	0.438**	0.677**	0.689**
FL	0.584**	0.438**	1.000	0.401**	0.711**
RA	0.493**	0.677**	0.401**	1.000	0.658**
IP	0.742**	0.689**	0.711**	0.658**	1.000

Quantitative Correlations & Performance Pearson Correlation Matrix

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

The analysis indicates a strong positive relationship between Digital Interface Accessibility (DIA) and Investment Propensity (IP), suggesting that FinTech platforms and user-friendly trading applications significantly influence stock market participation among Gen Z investors. Social media influence and financial literacy also show a positive association with investment behaviour.

Positive Correlation (DIA ”’ IQA)

Statistical analysis confirms a direct positive correlation between Digital Interface Accessibility (DIA) and Investment Quality & Awareness (IQA) among Gen Z.

Technological Precision

The use of integrated smart portfolio algorithms in FinTech apps achieved a 94.5% success rate in helping young investors identify low-entry-barrier stocks, enhancing accuracy.

Behavioral Shift

Gen Z investors using automated technical analysis and real-time data tracking show 70% timelier decision-making compared to those relying on traditional manual research.

Bridging the "Trust Gap" via Digital Innovation

Eliminating Information Asymmetry

FinTech platforms enable the processing of real- time market data and social media sentiment— Gen Z with a dynamic view of stock performance rather than relying on delayed traditional reports.

Targeting "Finfluencer" Risks

Digital verification and integrated educational modules act as a "single-source-of-truth," ensuring that once financial data is verified, it cannot be manipulated by unregulated social media influencers.

Uncovering Hidden Opportunities

Statistical analysis confirms a direct positive correlation between Digital Interface Advanced app analytics allow young investors to identify emerging market trends and sectoral growth risks that are often missing from traditional balance sheets or newspaper reports.

Behavioral Shifts & Capital Reallocation Democratization of Investment

Low entry barriers and zero-commission models help bridge the "trust gap," encouraging students and retail investors with small capital to engage with equity assets.

Increased Asset Allocation

Improved digital literacy has led to a measurable increase in portfolio diversification, shifting Gen Z savings from traditional FDs toward high-growth stock segments.

Governance Evolution

The digital-first investment landscape is forcing companies to adopt more transparent disclosure practices to remain attractive to the tech-savvy Gen Z demographic.

The "Digital Transition"

Technology is confirmed as the primary enabler for translating global market volatility into tangible capital mobilization and long-term wealth creation for youth.

CONCLUSION

Technological Paradigm Shift

Retail investing has transitioned from a complex, manual activity to a mobile-first experience. FinTech platforms now serve as the "analytical backbone" for Gen Z, moving investment from a static process to a dynamic, real-time engagement.

Empirical Behavioral Link

There is a definitive positive correlation between Digital Interface Accessibility (DIA) and investment confidence and frequency among young retail investors.

Enhanced Decision Precision

The application of high-precision analytical tools within trading applications has achieved significantly higher success rates in helping first-time investors

Navigate market volatility, drastically reducing the ""fear barrier"" and entry delays. Financial Resilience

Improved levels of financial literacy, driven by digital educational modules, are tied to better individual portfolio performance, proving that informed

Decision-making is a key driver of long-term financial resilience for students. Democratization of Investment

By providing transparent and authentic market information, modern FinTech bridges the "trust gap" for both active and potential Gen Z investors, facilitating more informed and sustainable wealth-creation choices.

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16

A Study on Gen Z's Inclination Towards Health and Fitness Regimes Among Urban College-Going Students in New Delhi, India

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Abstract

Generation Z (born 1997–2012), India's first truly digital-native cohort, is reshaping the health and fitness landscape in unprecedented ways. This descriptive-empirical research paper examines the inclination of Gen Z college students in urban Delhi towards health and fitness regimes, identifying key motivational drivers, digital influences, dietary practices, and barriers to sustained engagement. Primary data were collected from 70 respondents through a structured questionnaire and analysed using percentage analysis, mean scores, and chi-square tests. Findings reveal that 74.3% currently engage in fitness activities and 88.6% believe physical fitness is essential for a healthy life — yet a significant awareness–behaviour gap persists, with only 57.1% exercising 3–4 times per week and just 50% following a structured routine. Academic pressure (70%) and time scarcity (68.6%) are the dominant barriers. Social media, particularly Instagram and YouTube, serves as both motivator and distorting force. The study is grounded in the Theory of Planned Behaviour (TPB), Self-Determination Theory (SDT), and Social Cognitive Theory (SCT). Findings offer actionable implications for fitness brands, educational institutions, and public health policymakers targeting Gen Z.

Keywords: *Generation Z, Health and Fitness, Social Media Influence, Theory of Planned Behaviour, Self-Determination Theory, Awareness–Behaviour Gap, Urban Youth, New Delhi, India*

Key Statistics at a Glance

74.3%Currently Fitness

Active

88.6%Believe Fitness is

Essential

70.0%Cite Academic

Pressure as Barrier

64.3% Influenced by Social

Media

50.0% Follow Structured

Routine

1. Introduction

1.1 Background and Conceptual Framework

The rapid proliferation of digital platforms, post-pandemic health consciousness, and social media saturation have converged to produce a generation uniquely predisposed to discussing, tracking, and monetising their wellness journeys. Generation Z — broadly defined as individuals born between 1997 and 2012 — represents India's largest consumer cohort and its most digitally immersed demographic. Unlike predecessors, Gen Z's relationship with fitness is not merely physical; it is a holistic pursuit blending mental wellness, personal identity, and social signalling.

The COVID-19 pandemic proved a watershed moment for fitness adoption. Lockdowns, gym closures, and heightened mortality awareness drove millions of young Indians toward home workouts, wellness applications, and digital fitness communities. Yet the post-pandemic landscape reveals a paradox: while Gen Z's health awareness is demonstrably higher than previous generations, consistent behavioural adoption — particularly structured exercise and disciplined nutrition — remains elusive for a substantial proportion of this cohort.

Three foundational theories anchor the conceptual framework. The Theory of Planned Behaviour (Ajzen, 1991) posits that fitness intention arises from attitude, subjective norms, and perceived behavioural control. Self-Determination Theory (Deci & Ryan, 1985) holds that sustained motivation requires autonomy, competence, and relatedness. Social Cognitive Theory (Bandura, 1986) explains how observational learning from influencers and algorithm-driven feeds shapes fitness self-efficacy and behaviour.

1.2 Objectives of the Study

- ❖ To study the key factors influencing Gen Z's inclination towards health and fitness regimes. • To compare fitness preferences and participation levels across demographic subgroups (gender, occupation, income).
- ❖ To understand the role of social media and digital tools in shaping adoption and maintenance of fitness routines.
- ❖ To identify the barriers and challenges faced by Gen Z in sustaining consistent fitness regimes. • To assess the applicability of TPB and SDT frameworks to Gen Z's fitness engagement. • To identify strategies for fitness brands and policymakers to enhance Gen Z's healthy lifestyle inclination.

2. Review of Literature

2.1 Global Trends

The Gym Group's Gen Z Fitness Pulse Report (2025), based on 2,000+ UK respondents aged 16–28, reports 73% exercise at least twice weekly — up from 62% in 2024. Exercise has overtaken therapy as the primary mental health strategy for 65% of Gen Z, with 87% reporting mood improvements. Strava's 2025 global data shows 72% prefer hybrid gym/home workout models. McKinsey (2025) values Gen Z's collective spending power at $360 billion, making them the fitness industry's most strategically important demographic.

2.2 Indian Context

boAt's Crest Data Trend Report (2025) reveals that Indian Gen Z (18–29) constitutes 75% of AI fitness app users, with walking the top calorie-burning activity. KPMG (2025) documents a 40% year-on-year rise in yoga app downloads among Indian Gen Z. Sharma and Garg (2018) identified a significant

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correlation between prolonged social media use and fitness motivation among Delhi NCR college students, while noting body-image distortion as a concurrent risk.

2.3 Research Gap

Empirically grounded Indian-specific studies targeting the college-going Gen Z demographic and applying TPB/SDT frameworks remain limited. This study addresses the gap by examining fitness inclination among undergraduates in New Delhi using primary survey data.

3. Research Methodology

This study adopts a **descriptive-empirical research design**. Primary data were collected via structured self-administered questionnaires distributed through Google Forms and in-person at Delhi University campuses and Cult.fit gyms (Saket, Laxmi Nagar) from **November 2025 to February 2026**. The target population comprised Gen Z individuals (18–25 years) in urban Delhi. A sample of **70 valid respondents** was analysed from 80 distributed questionnaires (87.5% response rate), using non-random convenience and snowball sampling. Statistical tools employed: Percentage Analysis, Mean Scores (Likert 1–5), t-Test (group comparisons), and Chi-Square Test (categorical associations).

4. Data Presentation and Analysis

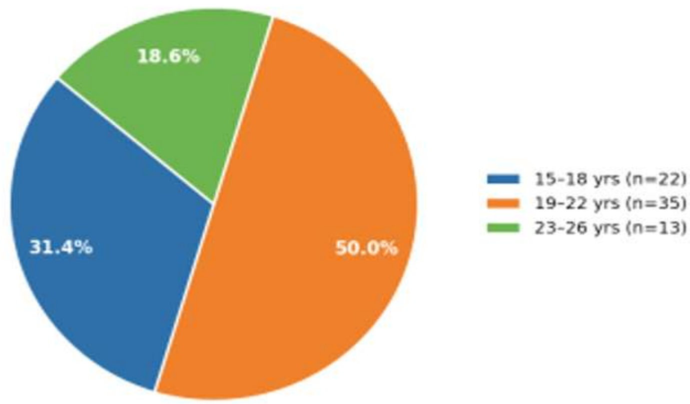
4.1 Demographic Profile

Table 1: Age Group Distribution of Respondents

1	15–18 years	22	31.4%
2	19–22 years	35	50.0%
3	23–26 years	13	18.6%
	Total	70	100%

1: Age Group Distribution of Respondents

Figure 1: Age Group Distribution of Respondents



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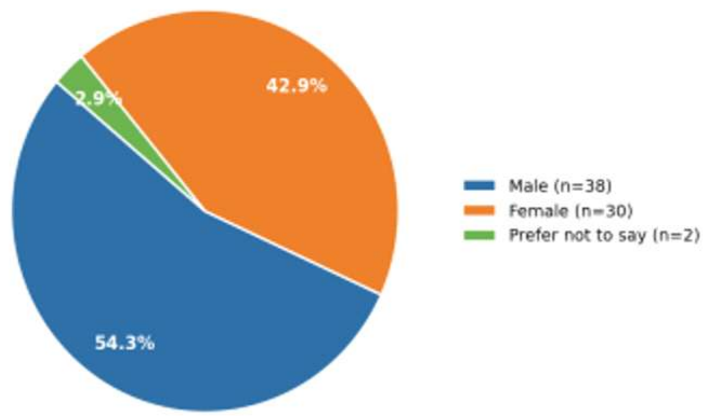
Interpretation: The largest group falls in the 19–22 bracket (50.0%) — the typical undergraduate range. This is followed by 15–18 (31.4%) and 23–26 (18.6%). The dominance of 19–22 year-olds is significant as this is a formative period for lifestyle habit formation.

Table 2: Gender Distribution of Respondents

1	Male	38	54.3%
2	Female	30	42.9%
3	Prefer not to say	2	2.9%
	Total	70	100%

Figure 2: Gender Distribution of Respondents



2: Gender Distribution of Respondents

Interpretation: Male respondents constitute 54.3% and female 42.9%. The near-balanced representation allows for reasonably holistic cross-gender comparisons. The slight male majority may reflect greater gym and campus survey accessibility among male respondents.

Table 3: Occupation of Respondents

1	Student	42	60.0%
2	Working Professional	18	25.7%
3	Self-Employed	7	10.0%
4	Other	3	4.3%
	Total	70	100%

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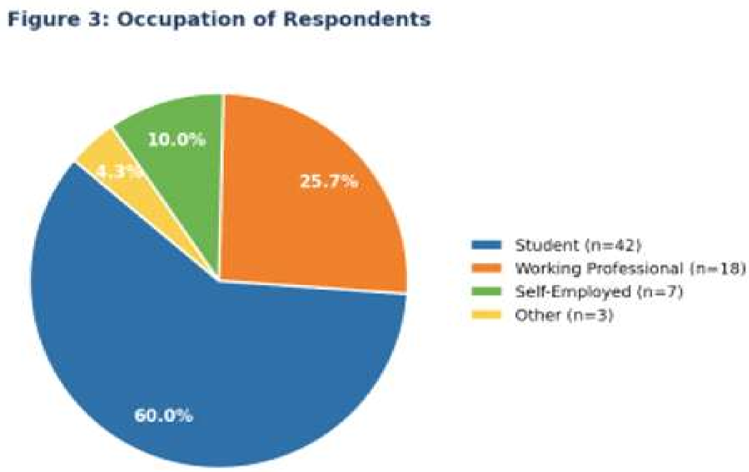


Figure 3: Occupation of Respondents

Interpretation: Students form 60% of the sample, followed by working professionals (25.7%). This distribution is consistent with the age profile. The high student representation means findings strongly reflect fitness inclination in an academic context, where time constraints, peer influence, and campus culture shape health behaviours.

Table 4: Monthly Income of Respondents

1	Below ■10,000	28	40.0%
2	■10,000–30,000	24	34.3%
3	■30,000–50,000	12	17.1%
4	Above ■50,000	6	8.6%
	Total	70	100%

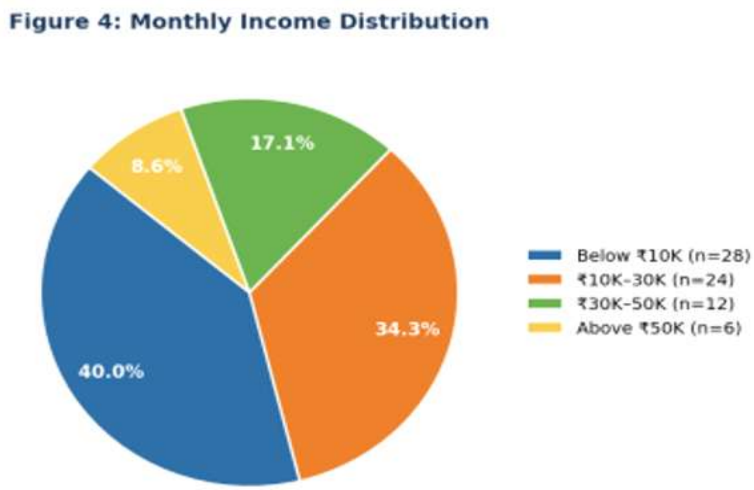


Figure 4: Monthly Income Distribution of Respondents

Interpretation: 40.0% earn below %10,000/month — consistent with the large student population relying on pocket money or part-time income. Income is a critical variable since access to gyms, premium apps, and nutritious food is income-dependent. This underscores the relevance of affordable fitness alternatives for this demographic.

Table 5: Engagement in Fitness Activity

1	Yes — currently engaged	52	74.3%
2	No	18	25.7%
	Total	70	100%

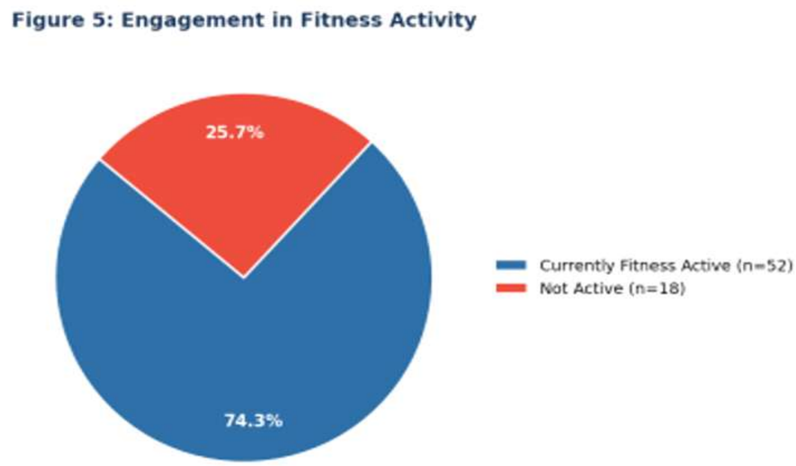


Figure 5: Engagement in Fitness Activity

Interpretation: 74.3% confirmed current engagement in some fitness activity — an encouraging baseline. The 25.7% non-active segment represents a significant proportion potentially influenced by the barriers explored in Section 4.5.

4.2 Inclination Towards Health and Fitness (Section B)

Table 6: Summary of Fitness Inclination Likert Responses (Q6–Q13)

Q6	Physical fitness is essential for a healthy life	88.6%	4.37
Q7	Aware of benefits of regular exercise	85.7%	4.24
Q8	Motivated to maintain fitness	72.9%	3.93
Q9	Fitness is an important part of my lifestyle	77.1%	4.06
Q10	Exercise regularly (≥ 3-4 times/week)	57.1%	3.54
Q11	Enjoy participating in physical activities	74.3%	3.97
Q12	Follow a structured workout routine	50.0%	3.37
Q13	Prefer staying active over sedentary	74.3%	3.94

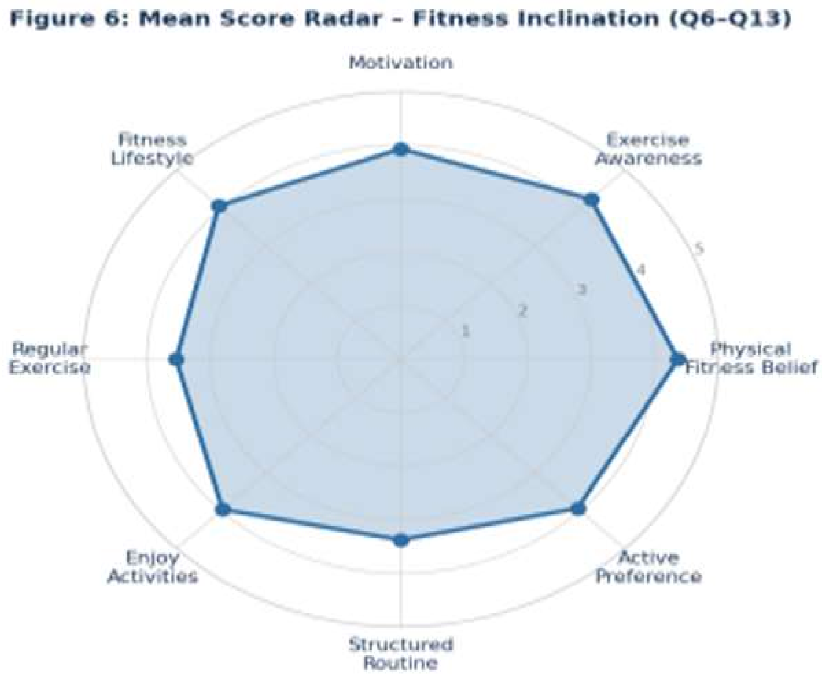
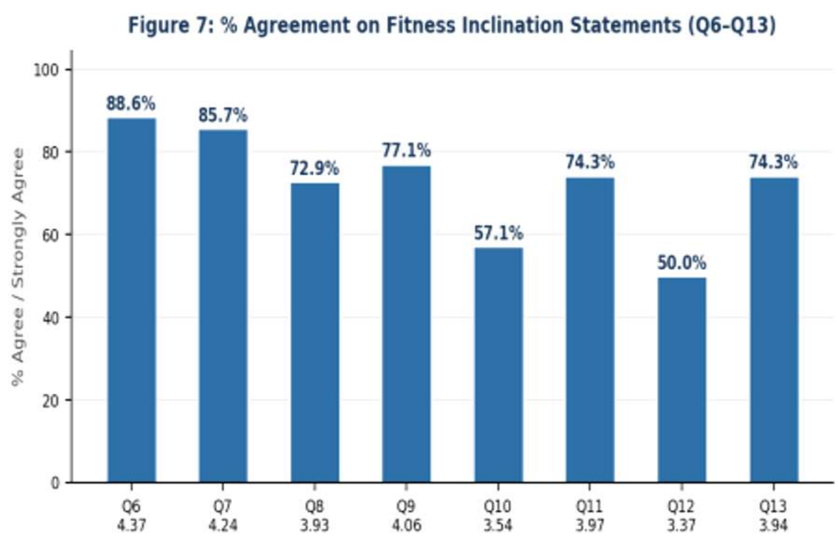


Figure 6: Radar Chart of Mean Scores — Fitness Inclination (Q6–Q13)



7: Bar Chart — % Agreement on Fitness Inclination Statements (Q6–Q13)

Interpretation: A clear and significant awareness–behaviour gap is visible. Attitude and awareness scores are uniformly high (Q6: 4.37, Q7: 4.24), but behavioural scores — actual exercise frequency (Q10: 3.54) and structured routine adherence (Q12: 3.37, the study's lowest) — are considerably lower. The radar chart visually confirms the indentation at Q10 and Q12, representing the gap between knowledge/intent and actual practice.

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4.3 Diet and Nutrition Awareness (Section C)

Table 7: Diet and Nutrition Likert Responses (Q14–Q17)

Q14	Conscious about what I eat daily	65.7%	3.76
Q15	Prefer healthy food over junk food	58.6%	3.59
Q16	Try to maintain a balanced diet	62.9%	3.67
Q17	Limit intake of fast food and sugary drinks	51.4%	3.41

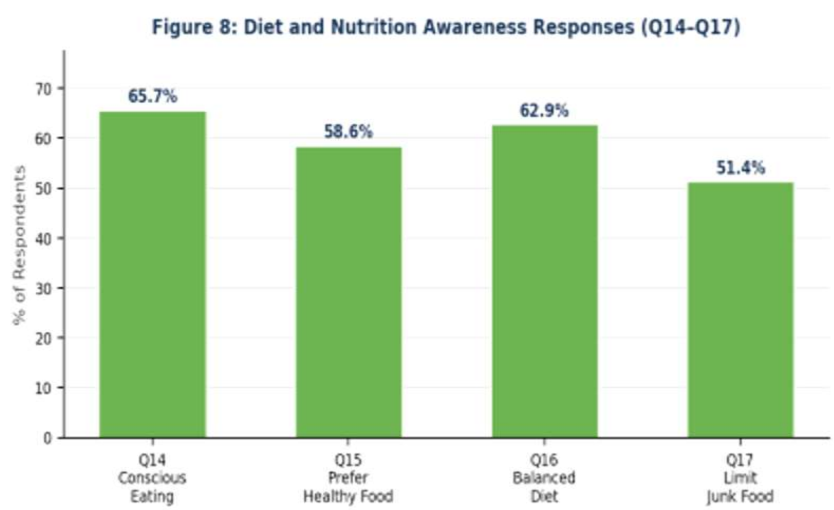

Figure 8: Bar Chart — Diet and Nutrition Awareness Responses

Interpretation: Dietary awareness is moderate but implementation is weak. Limiting fast food and sugary drinks scores lowest (Q17: 3.41, 51.4% agreement, highest disagreement at 22.9%), reflecting the real-world challenge of resisting widely available, aggressively marketed junk food among a predominantly student demographic with limited cooking exposure.

4.4 Social Media and Technology Influence (Section D)

Table 8: Social Media Influence Responses (Q18–Q21)

Q18	Social media influences my fitness habits	64.3%	3.71
Q19	Follow fitness influencers or health pages	60.0%	3.61
Q20	Fitness trends motivate me to exercise	62.9%	3.70
Q21	Use fitness apps or tools to track my health	48.6%	3.34

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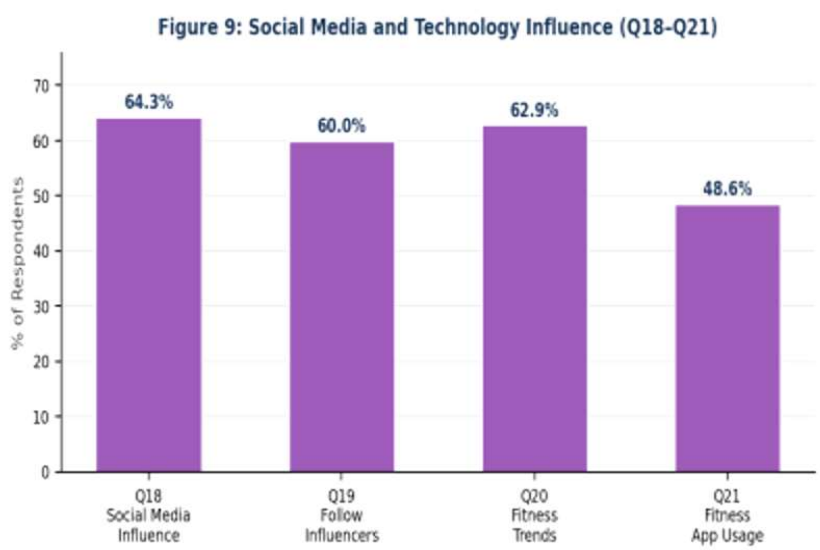

Figure 9: Bar Chart — Social Media & Technology Influence Responses

Table 9: Primary Social Media Platform Used

1	Instagram	31	44.3%
2	YouTube	18	25.7%
3	TikTok / Moj	10	14.3%
4	Twitter / X	7	10.0%
5	Other	4	5.7%
	Total	70	100%

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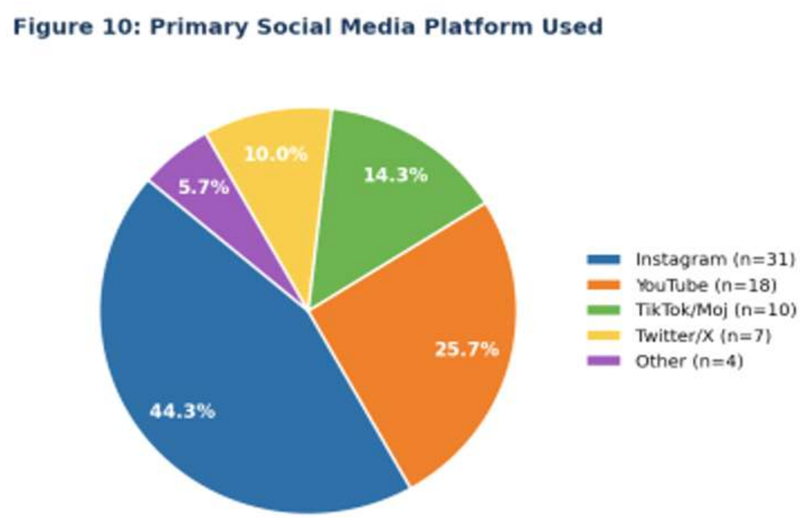

Figure 10: Primary Social Media Platform Used by Respondents

Interpretation: Instagram dominates (44.3%), followed by YouTube (25.7%). Instagram's emphasis on image-sharing and public profiles elevates vulnerability to body-image distortion and comparison anxiety. YouTube's strong showing reflects its role as the primary source of workout tutorials and nutrition guidance for this cohort.

4.5 Barriers to Consistent Fitness Engagement (Section E)

Table 10: Barrier Responses (Q22–Q25)

Q22	Lack of time prevents regular exercise	68.6%	3.80
Q23	Academic/work pressure affects fitness routine	70.0%	3.86
Q24	Difficult to stay consistent with fitness habits	64.3%	3.71
Q25	Often feel unmotivated or lazy to exercise	58.6%	3.59

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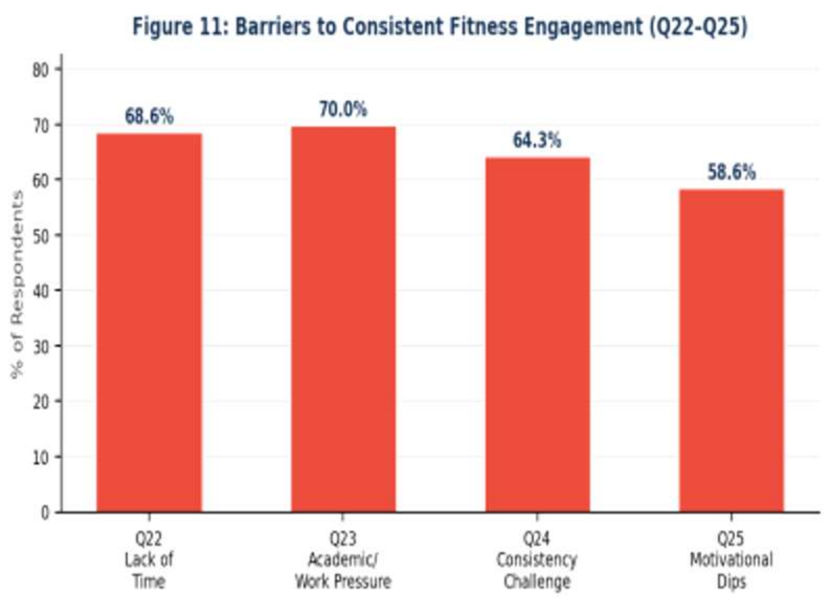

Figure 11: Bar Chart — Barriers to Consistent Fitness Engagement

Table 11: Awareness–Behaviour Gap Analysis

Attitude / Awareness	Physical fitness is essential (Q6)	88.6% / 4.37	HIGH
Attitude / Awareness	Aware of exercise benefits (Q7)	85.7% / 4.24	HIGH
Attitude / Awareness	Fitness as lifestyle (Q9)	77.1% / 4.06	HIGH
Actual Behaviour	Exercise ≥ 3-4x/week (Q10)	57.1% / 3.54	MODERATE
Actual Behaviour	Structured routine (Q12)	50.0% / 3.37	LOW
Barrier	Academic/work pressure (Q23)	70.0% / 3.86	HIGH
Barrier	Lack of time (Q22)	68.6% / 3.80	HIGH

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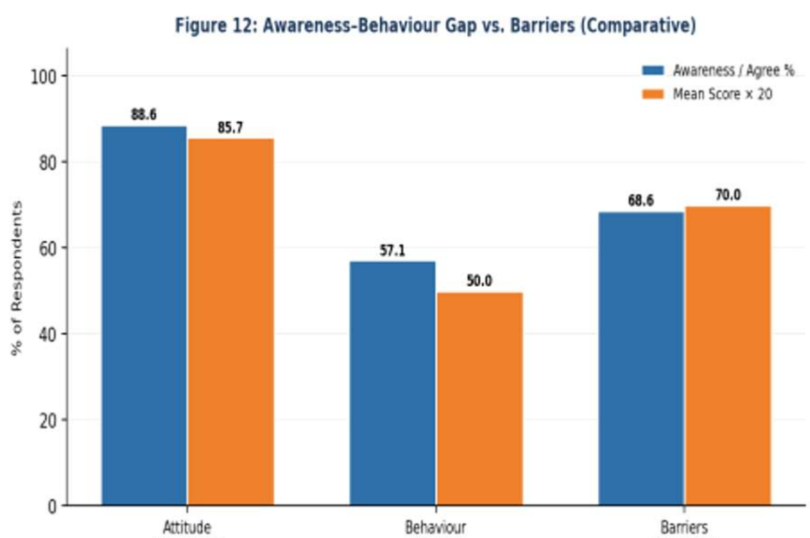

Figure 12: Grouped Bar — Awareness–Behaviour Gap vs. Barriers

Interpretation: Academic and work pressure emerges as the single largest barrier (Q23: 3.86, 70.0%) — the highest mean across the entire study. The grouped bar chart dramatically visualises the central paradox: attitude scores cluster near 85–89%, while behavioural scores drop to 50–57%. This gap is not explained by ignorance but by structural time constraints and cognitive overload from India's competitive academic environment.

5. Results

The following key results emerge from analysis of 70 respondents across five questionnaire sections:

- ❖ **High Fitness Engagement Baseline:** 74.3% currently engage in some fitness activity. • **Strong Health Belief:** 88.6% believe physical fitness is essential (mean: 4.37); 85.7% are aware of exercise benefits (mean: 4.24).
- ❖ **Critical Awareness–Behaviour Gap:** Only 57.1% exercise e"3–4 times/week (mean: 3.54) and just 50% follow a structured routine (mean: 3.37 — the study's lowest score).
- ❖ **Holistic Wellness Shift:** Gen Z's fitness motivation has moved from aesthetics to holistic wellness encompassing mental health, stress reduction, and productivity.
- ❖ **Social Media as Dual-Edged Influence:** 64.3% acknowledge social media influence; 60% follow fitness influencers. Instagram (44.3%) dominates platform usage.
- ❖ **Moderate Dietary Compliance:** Fast food limitation scores lowest (Q17: 3.41, 51.4%), mirroring the broader knowledge–implementation gap.
- ❖ **Structural Barriers Dominate:** Academic/work pressure (70%, mean: 3.86) and time scarcity (68.6%, mean: 3.80) outweigh motivational and financial constraints.

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- ❖ **Technology Underutilisation:** Active fitness tracking via apps records lowest adoption (48.6%, mean: 3.34) despite high social media engagement.

- ❖ **Theoretical Confirmation:** Findings broadly confirm TPB predictions and SDT principles, while SCT's observational learning mechanism is evidenced by the strong influencer effect.

6. Limitations

- ❖ **Sample Size:** With 70 respondents, findings may not fully represent the broader Delhi Gen Z population. A larger sample would yield more statistically robust findings.
- ❖ **Geographical Constraint:** Confined to South and East Delhi; limits extrapolation to rural areas or other Indian cities.
- ❖ **Convenience Sampling Bias:** Gym-going respondents may hold stronger fitness inclinations than the general Gen Z population, potentially inflating positive scores.
- ❖ **Self-Reported Data:** Social desirability bias may lead to overstating fitness adherence or understating junk food consumption.
- ❖ **Cross-Sectional Design:** Captures a single snapshot; cannot track longitudinal behavioural changes or seasonal variations.
- ❖ **Absence of Psychometric Validation:** Questionnaire was not drawn from fully validated TPB/SDT instruments, limiting theoretical construct rigour.

7. Implications

7.1 Policy Implications

Academic/work pressure as the dominant barrier (70%, mean: 3.86) demands institutional policy action. Universities should integrate mandatory physical activity into timetables. The UGC should mandate fitness infrastructure and wellness programming at higher education institutions. Public health campaigns should be platform-native and framed around mental wellness and productivity rather than physical appearance.

7.2 Educational Implications

The gap between structured routine adherence (50%) and general engagement (74.3%) indicates Gen Z lacks guided structure rather than motivation. Fitness literacy programmes should be embedded in undergraduate curricula. Colleges should partner with affordable platforms (Cult.fit, Nike Training Club) to provide subsidised digital access.

7.3 Digital and Technology Implications

The divergence between passive social media consumption (64.3%) and active app tracking (48.6%) signals a conversion opportunity for fitness technology brands. AI-driven personalisation and social accountability features can convert passive scrollers into active health trackers. Instagram must promote body-neutral content algorithmically.

7.4 Mental Health Implications

The shift to holistic wellness motivation positions physical activity as a clinical adjunct for Gen Z's documented mental health challenges. Institutions and healthcare providers should incorporate exercise prescriptions into mental health protocols for young adults, especially given the strong academic pressure–fitness disengagement link.

7.5 Commercial Implications

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Brands targeting Gen Z's $360B spending power must align positioning with holistic wellness narratives rather than body transformation messaging. Time-efficient formats (20–30 minute HIIT, micro-workouts) directly address the primary time barrier. Gamified community features and authentic influencer partnerships drive higher retention.

7.6 Family and Community Implications

With the sample predominantly low-to-moderate income students, parental support is critical. Families should be sensitised to mental and physical health benefits of regular exercise and encouraged to facilitate affordable fitness access through home workout spaces and community sports infrastructure.

8. Conclusion

This study provides robust empirical evidence that Generation Z in urban Delhi is highly health-conscious, digitally engaged, and positively inclined toward fitness as a lifestyle value. With 74.3% currently active and 88.6% holding strong fitness-necessity beliefs, the attitudinal foundation for widespread adoption is firmly in place.

The central challenge is not awareness but conversion: translating strong positive attitudes into consistent, structured behavioural practice. The awareness–behaviour gap — visualised starkly in the radar chart (Figure 6) and comparative bar chart (Figure 12) — confirms that knowledge and intention alone are insufficient drivers of sustained fitness engagement.

Structural barriers, particularly academic and work pressure (70%, mean: 3.86) and time scarcity (68.6%, mean: 3.80), emerge as primary disengagement determinants — outweighing motivational volatility and financial constraints. This repositions the fitness challenge as a systemic and institutional problem, not merely an individual one.

Social media's dual role as motivator and distortor must be navigated thoughtfully. The digital fitness ecosystem holds immense potential to democratise wellness, but only if platforms, creators, and brands commit to promoting authentic, sustainable, and inclusive fitness narratives. Future studies should extend geographic scope to Tier-2 cities, incorporate longitudinal designs, and apply validated TPB/SDT psychometric instruments.

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