

National Conference on  
**THE ENTREPRENEUR EDGE**  
Startups Shaping Tomorrow

10th March, 2026

Chief Editorial  
Dr. Antara Sarode

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Speical Issue III (March - 2026)

*Organise By*

Department of Integrated Professional Programmes  
KPB Hinduja College of Commerce (Autonomous)



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**National Conference**  
**on**  
**The Entrepreneur Edge**  
*Startup Shaping Tomorrow*

**10<sup>th</sup> March 2026**

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**Chief-Editor**

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## Forward

### *From the Chief Editor's Desk*

It is with great pride and anticipation that we present the proceedings of the National Conference on “The Entrepreneur Edge: Startups Shaping Tomorrow.” This conference arrives at a pivotal moment in our global and national journey, where innovation, resilience, and entrepreneurial spirit are redefining the contours of progress. Startups today are not merely business ventures; they are dynamic engines of transformation, catalyzing change across industries, economies, and societies.

The theme of this conference underscores the critical role that startups play in shaping a sustainable and inclusive future. From harnessing emerging technologies to addressing grassroots challenges, entrepreneurs are bridging gaps that once seemed insurmountable. They embody agility in uncertainty and vision in complexity, creating solutions that are not only disruptive but also deeply impactful.

This compilation reflects a diverse spectrum of ideas, research insights, case studies, and practical experiences shared by scholars, industry leaders, policymakers, and innovators. Each contribution adds a unique perspective to the evolving narrative of entrepreneurship, emphasizing collaboration, adaptability, and forward-thinking strategies. Together, they form a rich tapestry of knowledge that will inspire both current and aspiring entrepreneurs.

We extend our sincere gratitude to all contributors, reviewers, and organizing members whose dedication and intellectual rigor have made this conference a meaningful platform for dialogue and discovery. Their collective efforts ensure that this volume is not just a record of discussions, but a source of inspiration for future endeavors.

As we turn these pages, we invite readers to engage critically with the ideas presented, to question assumptions, and to envision new possibilities. The future belongs to those who dare to innovate, and this conference stands as a testament to that enduring spirit.

We hope this compilation will serve as a valuable resource and a guiding light for those committed to shaping tomorrow through entrepreneurial excellence.

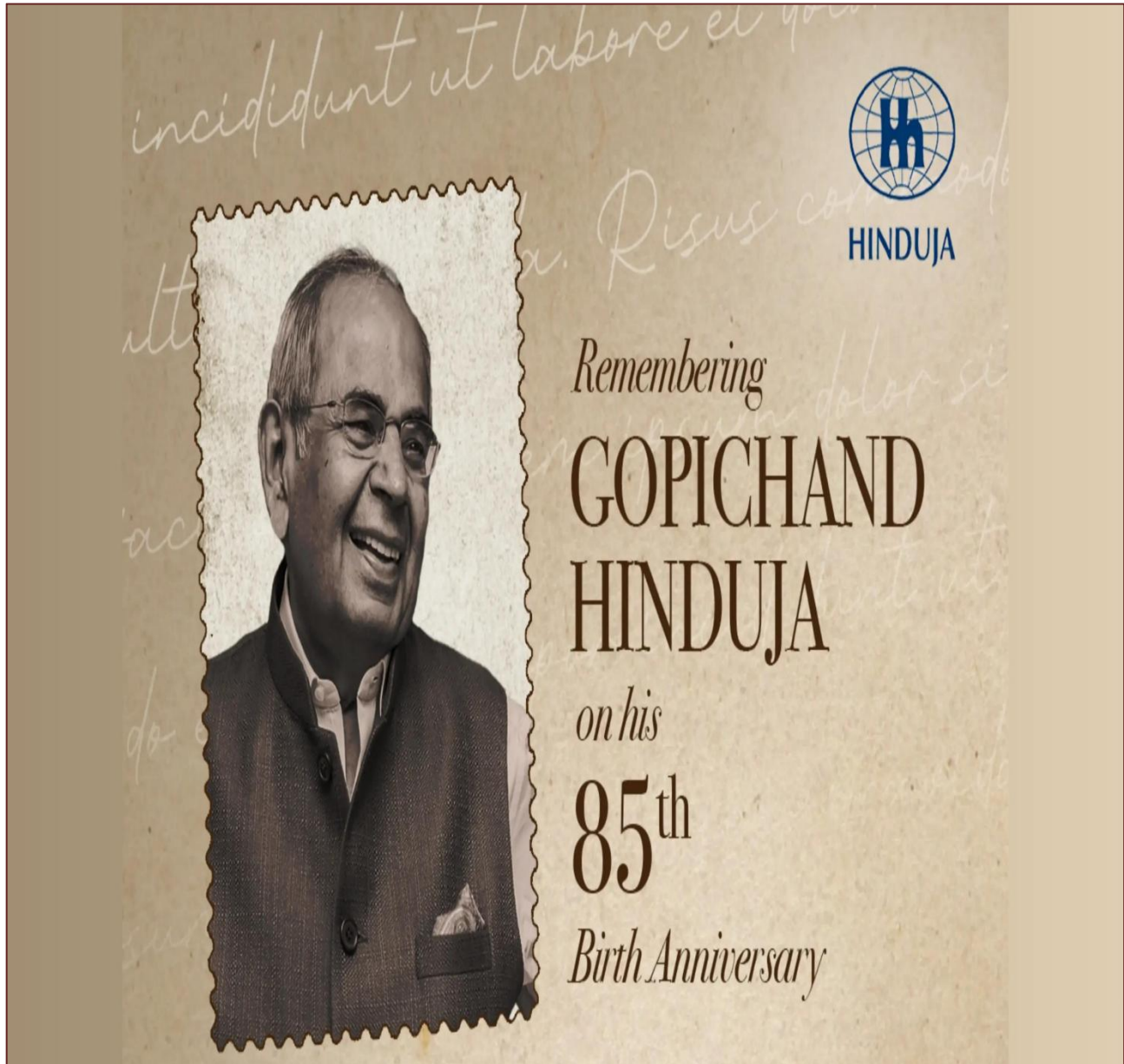
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# THE ROLE OF POLICY AND GOVERNMENT IN STARTUP GROWTH

*Harshita Shetty*

## ABSTRACT

Startups play an important role in driving innovation, economic growth, and employment opportunities. In recent years, governments around the world have introduced various policies and initiatives to encourage entrepreneurial activities and support startup ecosystems. These policies include financial assistance, tax incentives, incubation support, and simplified regulatory procedures.

The purpose of this research is to examine the role of government policies in promoting the growth and sustainability of startups. The study explores how government initiatives influence the startup ecosystem and the extent to which entrepreneurs benefit from these policies.

The research uses both primary and secondary data. Primary data was collected through a survey of 47 respondents, including students, aspiring entrepreneurs, and small business owners. Secondary data was gathered from government reports, academic articles, and startup ecosystem studies.

The findings suggest that government policies have a positive influence on startup development by improving access to resources, funding opportunities, and mentorship programs. However, some challenges such as lack of awareness and difficulties in accessing financial support still remain. The study concludes that consistent policy support and effective implementation are necessary for building a strong startup ecosystem.

## INTRODUCTION

Entrepreneurship has become a key factor in the economic development of many countries. Startups, which are newly established businesses based on innovative ideas and scalable models, are considered an important source of innovation and job creation. Many successful global companies started as small startups and eventually transformed industries.

Despite their potential, startups often face significant challenges in their early stages. These challenges include financial constraints, regulatory barriers, limited market access, and lack of guidance or mentorship. Such difficulties can discourage individuals from starting new businesses.

To overcome these obstacles, governments have introduced various policies and initiatives that aim to support entrepreneurs and strengthen startup ecosystems. Government policies can influence the growth of startups by providing financial incentives, tax exemptions, simplified business registration processes, and access to incubation centres.

In India, initiatives such as **Startup India, Stand-Up India, and Digital India** have played a major role in encouraging innovation and entrepreneurship. These programs aim to provide entrepreneurs with access to funding, mentorship, and technological infrastructure.

A supportive policy environment helps startups grow faster and compete in global markets. Government involvement also helps attract investors, encourage innovation, and improve the overall business environment.

This research paper aims to analyse the role of government policies in promoting startup growth and to understand public perceptions about the effectiveness of these policies.

## REVIEW OF LITERATURE

Several researchers have examined the impact of government policies on entrepreneurship and startup development.

**Audretsch (2009)** suggests that government intervention is necessary to create an environment that encourages innovation and entrepreneurial activities. According to the study, supportive policies can reduce risks associated with starting new businesses.

**Isenberg (2011)** introduced the concept of the entrepreneurial ecosystem, which includes several components such as policy support, access to finance, culture, human capital, and markets. The research highlights that government policy is a crucial element in developing a successful startup ecosystem.

**Shane (2012)** emphasizes that government programs that provide funding and mentorship support can increase the chances of startup survival during the early stages.

In India, reports published by NITI Aayog and the Department for Promotion of Industry and Internal Trade (DPIIT) indicate that initiatives like Startup India have helped improve the ease of doing business and encouraged innovation among young entrepreneurs.

The **World Bank Entrepreneurship Report (2021)** also highlights that countries with strong policy frameworks and startup support systems tend to have higher levels of innovation and economic growth.

Overall, previous studies show that government policies significantly influence startup development by providing resources, infrastructure, and a supportive regulatory environment.

## OBJECTIVES OF THE STUDY

The objectives of this research study are:

1. To study the role of government policies in encouraging startup growth.
2. To examine different government initiatives designed to support startups.
3. To analyse how financial incentives and regulatory reforms affect entrepreneurial activities.
4. To identify major challenges faced by startups even with government support.
5. To understand the perception of individuals regarding government support for startups.

## HYPOTHESIS

**H0 (Null Hypothesis):** Government policies do not have a significant impact on startup growth.

**H1 (Alternative Hypothesis):** Government policies positively influence startup growth and development.

## RESEARCH METHODOLOGY

**Research Design:** This study uses a descriptive research design to analyse the influence of government policies on startup growth.

**Sources of Data:** The study uses both primary data and secondary data.

**Primary Data:** Survey responses collected from **47 participants**

**Secondary Data:**

- Government reports
- Academic journals
- Entrepreneurship research articles
- Startup ecosystem reports

### Data Collection Method

A structured questionnaire was used to collect responses from students, entrepreneurs, and individuals interested in startups.

### Data Analysis Method

The collected data was analysed using percentage analysis and simple interpretation techniques.

## RESEARCH FINDINGS

A survey of **47 respondents** was conducted to understand their views regarding government policies and startup development.

### Awareness of Government Startup Policies

Response	Number of Respondents	Percentage
Yes	29	61.7%
No	18	38.3%
<b>Total</b>	<b>47</b>	<b>100%</b>

**Interpretation:** More than half of the respondents are aware of government initiatives designed to support startups.

### Do Government Policies Encourage Startup Growth?

Response	Respondents	Percentage
Strongly Agree	12	25.5%
Agree	18	38.3%
Neutral	7	14.9%
Disagree	6	12.8%
Strongly Disagree	4	8.5%
<b>Total</b>	<b>47</b>	<b>100%</b>

**Interpretation:** Around 63% of respondents believe that government policies encourage startup growth.

### Most Important Government Support for Startups

Support Type	Respondents	Percentage
Startup Funding	15	31.9%
Tax Benefits	9	19.1%
Incubation & Mentorship	8	17%
Simplified Registration	8	17%
Infrastructure Support	7	15%
<b>Total</b>	<b>47</b>	<b>100%</b>

**Interpretation:** Startup funding is considered the most important government support.

### Challenges Faced by Startups

Challenge	Respondents	Percentage
Difficulty in Getting Funding	13	27.7%
Complex Regulations	11	23.4%
Lack of Awareness	9	19.1%

Market Competition	8	17%
Lack of Mentorship	6	12.8%
<b>Total</b>	<b>47</b>	<b>100%</b>

**Interpretation:** Funding difficulties and regulatory complexity remain key challenges.

### Overall Rating of Government Support

Rating	Respondents	Percentage
Excellent	7	14.9%
Good	19	40.4%
Average	11	23.4%
Poor	6	12.8%
Very Poor	4	8.5%
<b>Total</b>	<b>47</b>	<b>100%</b>

**Interpretation:** Most respondents believe government policies have a moderately positive impact on startups.

### IMPORTANCE OF THE STUDY

This study highlights the significance of government involvement in supporting entrepreneurship and startup ecosystems. Understanding the impact of policy support helps policymakers design better strategies to encourage innovation and business development.

The research also identifies the challenges that entrepreneurs face even with government initiatives. By addressing these challenges, governments can improve policy effectiveness and create a more supportive environment for startups.

Furthermore, the study contributes to academic discussions on entrepreneurship and provides useful insights for aspiring entrepreneurs, researchers, and policymakers.

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# IMPACT OF FINANCIAL LITERACY ON INVESTMENT BEHAVIOUR OF YOUTH

*Varun Kamble*

## ABSTRACT

Financial literacy has become essential skill in the modern financial environment where individuals are required to make complex financial decisions . The youth population, especially students and young professionals , are increasingly participating in financial markets such as stocks , mutual funds , and crypto currencies . However , the level of financial knowledge significantly influences their investment behaviour and decision making process . This research paper examines the relationship between financial literacy and the investment behaviour of young individuals . The study explores how knowledge of financial concepts such as savings , budgeting , risk diversification , and compound interest affects investment choices and financial planning . A descriptive research design has been used in this study with data collected through secondary sources research journals , articles , and financial reports . The finding indicate the that higher levels of financial literacy positively influence responsible investment behaviour, portfolio diversification , and lon term financial planning . Youth with better financial knowledge are more likely to invest systematically and make rational financial decisions. The study concludes that improving financial literacy through education and awareness programs can significantly enhance the financial well-being of young investors and promote better participation in financial markets .

## INTRODUCTION:

Financial literacy refers to the ability of individuals to understand financial concepts and effectively manage their personal finances. it includes knowledge of saving, budgeting, investing, risk management, and financial planning. In the rapidly evolving financial environment , individuals have access to a wide range of investment opportunities such as stock , mutual funds , bonds , and digital assets . In order to make informed investment decisions , it is essential for individual to possess a strong level of financial literacy.

Youth represent a significant segment of investors in modern financial markets. With the rise of digital trading platforms and financial technology applications , young people have easier access to investment opportunities than ever before . However , easy access to financial markets does not guarantee informed decision making . Many young investors lack the required knowledge to evaluate risk, analyze investment options, and make make long term financial plans.

Financial literacy plays a crucial role in shaping the investment behaviour of youth .

Individuals with better financial knowledge tend to make more rational and well planned investment decisions. They are more likely to diversify their investmentportfolios and adopt long term investment strategies. On the other hand, individuals with low financial literacy oftwn make decisions based on speculation, peer influence, or social media trends .

Research studies have shown that financial literacy significantly affects investment participation and portfolio diversification. Youth with higher financial knowledge are most likely to invest in systematic investment plans (SIPs) and other market linked instuments compared to individuals with lower financial literacy (Avances in consumer research )

In developing economies like India , improving financial literacy among youth has become increasingly important. Financial education can help young individuals build better saving habits, manage risks effectively, and achieve long term financial stability .

## LITERATURE REVIEW

Several researchers have examined the relationship between financial literacy and investment behaviour .

A study conducted by researchers from Delhi University found that financial literacy significantly influences the investment behaviour of young investors . The study reveal

that financial knowledge , financial attitude , and financial behaviour collectively contribute to better financial decision making and investment planning among youth .

(ACS PUBLISHER)

Another research study on youth investment behaviour indicated that individuals with higher financial literacy are more likely to participate in financial markets and adopt diversified investment portfolios . The study also highlighted that financially literate youth tend to invest in systematic investment plans and long term financial instruments (Advances in consumer research).

Research on young professionals also suggest that knowledge of financial concepts such as risk diversification , compound interest , and budgeting plays a significant role in shaping responsible investment behaviour . Individuals with better financial understanding are able to evaluate risks and return more money effectively (edwin.co.in).

Further studies in behavioural finances show that financial literacy reduces the influence of psychological biases such as herd behaviour and overconfidence.

Individuals with higher financial literacy rely on rational analysis rather than emotional or impulsive investment decisions. ( MDPI )

These studies highlight the importance of financial literacy in promoting responsible investment behaviour and financial stability among young individuals.

## RESEARCH OBJECTIVES

The main objectives of this research study are :

1. To understand the concept of financial literacy among youth .
2. To examine the investment behaviour of young individuals .
3. To analyze the relationship between financial literacy and investment decisions .
4. To evaluate how financial knowledge influences saving and investment habits .
5. To suggest measures for improving financial literacy and among youth .

## RESEARCH METHODOLOGY

Research methodology refers to systematic process used to collect and analyze data for a research study .

## RESEARCH DESIGN

This study follows a descriptive research design , which focuses on describing the relationship between financial literacy and investment behaviour among youth .

## SOURCES OF DATA

The research is primarily based on secondary data collected from :

- Research journals
- Academic articles
- Financial reports
- Online financial publications

- Government and institutional websites

These sources provide valuable insights into the impact of financial literacy on financial decision making and investment patterns .

### **AREA OF STUDY**

The study focuses on youth population aged between 18 and 35 years , including college students and young professionals who are either investing or planning to invest in financial markets .

### **DATA ANALYSIS METHOD**

The collected information has been analyzed through qualitative of research findings from previous studies and financial reports.

### **DATA ANALYSIS AND DISCUSSION**

The analysis of existing studies indicates that financial literacy has a significant impact on the investment behaviour of youth .

Young individuals with higher financial literacy demonstrate greater confidence in managing their personal finances. They are more likely to adopt disciplined investment practices such as systematic investment plans , Long term savings, and portfolio diversification.

Research findings indicate that approximately 68% of financially literate youth actively participate in financial investment, while individuals with lower financial knowledge often limit their investments to basic saving instruments. (Advances in consumer research ).

Financially literate individuals are also most likely to diversify the investment portfolios by by investing multiple financial instruments such as stocks, mutual funds and bonds.

Diversification helps reduce investment risk and improve long term financial stability .

Another important aspect observed in the analysis is the relationship between financial literacy and risk tolerance. Youth with a better financial knowledge have a clearer understanding of the risk return trade off and are able to evaluate investment opportunities more effectively .

On the other hand , individuals with low financial literacy rely on informal resources such as friends , social media , or speculative trends when making investment decisions .

Such behaviour can increase the risk of financial lossess and poor investments outcomes.

In recent years , digital platforms and financial technology applications have made investment opportunities more accessible to young people . However , the benefits of these platforms can only be fully realized when individual possess the necessary financial knowledge to make informed decisions .

Therefore , financial literacy acts as a criticacl factor in shaping responsible investment behaviour and promoting financial iclusion among youth .

### **FINDINGS**

Based on the analysis of various research studies and finacial reports , the following key findings have been identified :

1. Financial literacy has a significant ingfluence on the investment behaviour on youth .
2. Youth with higher financial knowledge are more likely to invest in financial markets .
3. Financial literate individuals tend to diversify their investment portfolios .

4. Financial literacy Improves understanding of risk and return in investment decisions.
5. Lack of financial literacy may lead to poor investment decisions and financial losses .
6. Financial education programs can help improve investment behaviour among young individuals .

## CONCLUSION

Financial literacy plays vital role in shaping the financial behaviour and investment decisions of youth . In todays rapidly evolving financial environment , individuals must possess adequate knowledge of financial concepts in order to to manage their money effectively .

The findings of this study indicate that financial literacy postively influences investment participation, portfolio diversification and long term financial planning among young individuals. youth with better financial knowledge are more likely to adopt disciplined investment strategies and make rational financial changes.

However, many young individuals still lack sufficient financial education and rely on informal sources of information when making investment decision .

Educational institutions, financial institutions, and government organizations should work together to promote financial literacy programs that help young individuals develop strong financial management skills.

Improving financial literacy can empower youth to make infromed financial decisions, achieve long term financial security , and contribute to overall economic growth.

## SUGGESTIONS / RECOMMENDATIONS

Based on findings of the study , the following suggestion are recommended :

1. Financial education should be included in school and college curricula .
2. Workshops and seminar are financial planning should be conducted for students .
3. Government institution should promote financial awareness program .
4. Digital financial platforms should provide educational resources for new investors .
5. Youth should be encouraged to learn about budgeting , saving , and investing at an early age .

## LIMITATIONS OF THE STUDY :

The study has certain limitations :

1. The research is based primarily on secondary data .
2. The study focuses only on youth investors .
3. Time and resource constraints limited the scope of research .

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# THE ROLE OF ENTREPRENEURSHIP IN TRADITIONAL STEEL TRADING BUSINESSES IN ADAPTING TO MODERN MARKET DYNAMICS

*Nitesh Prajapati*

## ABSTRACT

This research paper looks at how entrepreneurship helps traditional steel selling enterprises adapt to current market circumstances. The steel industry in India, particularly in the trade sector, has traditionally relied on relationship-based business structures, with an emphasis on long-standing personal relationships and traditional business procedures. However, the rapid speed of technological innovation, globalization, and altering consumer needs has compelled steel trading companies to reconsider their operational methods.

Entrepreneurship is critical for conventional businesses to adapt to new market trends. This study looks at how steel trading companies employ entrepreneurial decision-making, innovation, and risk-taking to modernize their operations, improve supply chain management, and increase customer satisfaction. By focusing on the entrepreneurial mindset, the article investigates the obstacles that these businesses encounter and the tactics they use to stay competitive.

## 1. INTRODUCTION

The steel industry is an important part of the Indian economy, influencing the building, infrastructure, manufacturing, and automotive industries. Steel trading companies, particularly those in the small and medium-sized company (SME) sector, have long depended on traditional business models based on long-term connections, personalized service, and extensive market knowledge. However, as the market grows more competitive and technology innovations continue to transform the sector, these conventional processes are increasingly under threat.

Modern market factors, such as the rise of e-commerce, shifting customer expectations, and advancements in supply chain technology, have created new opportunities and difficulties for traditional steel trading companies. To remain competitive, steel companies must adapt to these developments. This is when entrepreneurship becomes essential. Entrepreneurs in these industries embrace innovation, take calculated risks, and adjust their operations to succeed in a changing market context.

The purpose of this paper is to investigate how entrepreneurial thinking is used within traditional steel trading companies to drive modernization, enhance operational efficiencies, and effectively respond to client needs.

By examining steel dealers' behaviors and methods, this study will show how entrepreneurial leadership may dramatically improve the competitiveness and sustainability of established enterprises.

## 2. REVIEW OF LITERATURE

Entrepreneurship is commonly regarded as a vital engine of economic growth, innovation, and corporate transformation. Several scholars have investigated how entrepreneurial activities influence the growth and longevity of organizations in a variety of industries. Entrepreneurship is vital in established industries like steel trade because it allows organizations to adapt to changing market conditions and technical improvements.

David F. Kuratko (2016) emphasized the value of entrepreneurial leadership in small and medium-sized businesses (SMEs). According to his research, SMEs who engage in entrepreneurial practices such as risktaking, innovation, and strategic planning are better prepared to deal with market unpredictability and competition. Kuratko also stated that entrepreneurship drives organizations to pursue new opportunities and increase operational efficiency.

Studies on traditional sectors show that modernization and technological adoption are critical for preserving competitiveness. Gupta and Sharma (2019) did research on the Indian steel sector and discovered that

traditional steel trading companies confront a number of issues, including fluctuating raw material costs, increased competition, and inefficient supply chain systems. Their findings revealed that organizations that use digital technologies and current inventory management systems are better able to improve operational efficiency and reduce business risks.

Singh and Verma's (2020) study also looked at the influence of technology adoption in small and medium-sized businesses. The researchers determined that organizations that integrate digital systems such as enterprise resource planning (ERP), inventory management software, and customer relationship management (CRM) systems had higher productivity and decision-making capabilities. These technologies enable firms to streamline processes and respond more effectively to client requests.

Research on supply chain management has also highlighted the significance of efficiency and coordination in trading businesses. Yadav (2021) stated that supply chain optimization is critical to enhancing the performance of steel trading enterprises. The study discovered that effective logistics management and smart supplier collaborations cut delivery delays and operational costs, eventually improving customer satisfaction.

Furthermore, customer relationship management research has demonstrated that keeping great customer relationships is critical for business growth. Historically, traditional businesses relied on personal relationships to keep customers loyal. However, current company contexts necessitate more structured processes for handling client contacts. Digital CRM technologies allow organizations to track client preferences, manage orders effectively, and improve the overall customer experience.

Overall, present research suggests that entrepreneurship is important in altering traditional businesses. Entrepreneurial strategies including innovation, technology adoption, strategic risk-taking, and good supply chain management help organizations adapt to modern market dynamics. These approaches assist traditional steel trading companies in overcoming operational obstacles, increasing efficiency, and achieving sustainable growth.

However, despite the rising corpus of literature on entrepreneurship and technological adoption, little research has been conducted on the function of entrepreneurship in traditional steel trading companies. Most studies focus on manufacturing industries or technology-driven startups, creating a gap in our understanding of how entrepreneurial behaviors affect small and medium-sized trading firms in the steel sector. This study aims to add to the current literature by investigating the role of entrepreneurship in assisting conventional steel selling enterprises to adapt to modern market conditions.

### **3. GAP ANALYSIS**

Although various studies have investigated entrepreneurship and its role in business development, little study has been conducted on the role of entrepreneurship in traditional steel trading enterprises.

Most present research focuses on large manufacturing enterprises or technology-driven startups, while small and medium-sized trading organizations receive relatively little academic attention. Furthermore, the transformation of traditional steel trading firms through entrepreneurial techniques such as digital adoption, supply chain optimization, and new customer relationship practices is understudied.

As a result, this study seeks to fill a research gap by investigating how entrepreneurship helps to the modernization and sustainability of traditional steel trading companies in the context of contemporary market dynamics.

### **4. OBJECTIVES OF THE STUDY**

The primary objectives of this study are:

1. To examine the influence of entrepreneurship in reforming traditional steel trading companies.
2. To investigate how entrepreneurial tactics enable organizations to adapt to modern market circumstances.

3. To assess the influence of technological improvements and innovation on the steel trading industry.
4. To analyze the obstacles that traditional steel trade enterprises face, as well as how entrepreneurship might assist them overcome them.
5. To Examine how entrepreneurial decision making improves supply chain management and customer relationship management.

## 5. HYPOTHESIS

The hypothesis for this research study is formulated as follows:

H1: Entrepreneurial techniques such as innovation, risk-taking, and technology adoption significantly improve the adaptability and competitiveness of traditional steel trading companies.

This hypothesis assumes that organizations that use entrepreneurial tactics are better able to adapt to changing market conditions.

## 6. RESEARCH METHODOLOGY

### Data Sources

The study mostly relies on secondary data sources, which include:

- Academic journals and research articles.
- Industry reports for the steel sector
- Books about entrepreneurship and business management
- Online databases and business publications.

### Research Approach

A qualitative method was utilized to examine existing studies and industry trends about entrepreneurship in traditional businesses. The study aims to discover trends and insights into how entrepreneurial activities affect operational tactics in steel trading organizations.

### Scope of the Study

The study focuses on traditional steel trade enterprises that operate inside small and medium-sized organization frameworks, and it investigates how they adapt to new market developments through entrepreneurial activities.

## 7. ANALYSIS AND FINDINGS

The analysis of available literature and industry data reveals several important findings regarding the role of entrepreneurship in traditional steel trading businesses.

First, entrepreneurial leadership is critical for bringing innovation and increasing operational efficiency.

Business owners who exhibit entrepreneurial tendencies are more likely to use digital technology like inventory management software and customer relationship management systems.

Second, technology adoption has become a key determinant in corporate competitiveness. Traditional steel trading enterprises that integrate digital tools into their operations can increase supply chain coordination, eliminate inventory management errors, and deliver speedier customer service.

Third, entrepreneurial risk-taking allows organizations to expand into new markets and diversify their product offers. Many successful steel trading companies extend into new geographical regions or industries after discovering rising opportunities.

Fourth, efficient customer relationship management is critical to corporate growth. Entrepreneurs who prioritize customer pleasure and service quality can establish long-term relationships and retain a loyal consumer base.

Overall, the data indicate that entrepreneurship is a major driver of modernization and competitiveness in traditional steel trading companies.

## 8. CONCLUSION

The research emphasizes the importance of entrepreneurship in helping traditional steel trading enterprises adapt to current market dynamics. As competition heats up and technology advances transform the corporate landscape, classic company models are no longer sufficient for long-term success.

Entrepreneurial tactics such as innovation, risk-taking, technology adoption, and customer-centric approaches assist organizations in modernizing their processes and increasing efficiency. Traditional steel trading companies that embrace entrepreneurial thinking can overcome obstacles such as supply chain inefficiencies, unpredictable market conditions, and increased competition.

The study indicates that entrepreneurship is vital not only for starting new businesses, but also for reforming existing ones. Steel trading companies that employ entrepreneurial techniques are better positioned for longterm growth and competitiveness in an ever-changing global environment.

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# CAREER OPPORTUNITIES IN ACCOUNTING AND FINANCE AND THE READINESS OF COLLEGE-GOING YOUTH AS ENTRY-LEVEL PROFESSIONALS

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## ABSTRACT

The accounting and finance sector in India is undergoing a significant transformation driven by rapid digital adoption, increased regulatory demands, globalization of business operations, and the prevalent use of technology in financial transactions. These changes have created a multitude of career possibilities for recent graduates in commerce and finance. However, there is a rising concern regarding the preparedness of college students regarding the skills, exposure, and professional readiness essential for succeeding in entry-level positions. This research explores the connection between the emerging opportunities and the employability of young candidates. Utilizing a descriptive mixed-method design, the study is bolstered by secondary data sourced from national employability surveys, job market analytics, academic research, and industry reports. The findings indicate that while a majority of students possess a robust conceptual foundation, only about 44 percent satisfy the requirements for workplace

The gap areas in exposure to practical, digital intelligence, analytics and communication have been exposed. Implications are presented offering suggestions to enhance young graduates' ability to meet industry expectations and be successful in early career positions.

## INTRODUCTION

Accounting and Finance The accounting and finance industry is one of the most untouchable providers of jobs in Indian service sector. All businesses – large, the medium-sized and small as well need individuals who can handle transactions, explain accounting data, keep them in compliance with legal requirements, examine performance, test out variances, back up audits and throw a helping hand into planning. These are necessary functions to keep financial discipline and to help the organization grow.

The sector has changed a lot in the past ten years. From manual and semi-automated processes to the cloud with modern accounting systems.

Youth studying commerce and finance subjects in college form the primary supply of fresh talent for this sector. Although they receive academic training, the transition from classroom theory to real corporate responsibility remains challenging for many. This study investigates the breadth of opportunities now available, evaluates the readiness of young graduates, and highlights the areas where additional support is required.

## RESEARCH OBJECTIVES

**The research aims are to:**

1. Explore key entry-level jobs in accounting and finance.
2. Determine college students' readiness to assume these responsibilities.
3. What are the disconnects between what is taught in academia and industry needs?
4. Review employers' needs and demands around technical, digital and interpersonal capabilities.
5. Demonstrate how to increase the employability of young people and their professional development.

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## RESEARCH METHODOLOGY

### 1. Research Approach

A sample size of 100 students were taken amongst the college going students. A mixed-method approach was adopted to combine qualitative understanding with quantitative data. Qualitative insights helped describe patterns in student behaviour, learning gaps, and employer preferences. Quantitative data supported numerical interpretation of skill readiness, job trends, and hiring expectations.

### 2. Research Design

The study is descriptive because it attempts to explain the present state of student readiness, available job roles, and employer demands. It is analytical because it evaluates the gaps and compares different categories of skills. It relies entirely on secondary sources due to the nature of the research.

### 3. Sources of Data

Data was drawn from the following sources:

- NASSCOM Future Skills Report
- Wheebox National Employability Report
- India Skills Report
- Big-4 consulting firm hiring insights
- LinkedIn, Naukri, Indeed job trends
- Government reports on skill development
- Journals on accounting education
- Academic research discussing skill gaps and youth employability

### 4. Sampling Method

Purposive sampling was used to select data that directly relates to entry-level accounting and finance hiring. This method ensures that only relevant information contributes to the findings.

### 5. Data Analysis Technique

Thematic analysis was used to classify insights into logical categories such as technical readiness, digital literacy, soft skills, industry expectations, and knowledge gaps. Numerical data was interpreted through simple statistical comparison.

## DATA COLLECTION

Data was gathered from three major categories:

### 1. Industry and Employability Reports

These reports provided statistics on job readiness, skill demand, digital competency, and employer expectations. For example, the India Skills Report 2024 highlighted increasing demand for financial analytics and ERP skills. The Wheebox report provided readiness percentages for fresh commerce graduates.

### 2. Job Portal Analysis

Thirty job posts related to finance and accounting roles were studied. These included roles such as Accounts Executive, Audit Assistant, Financial Analyst Trainee, MIS Reporting Trainee, and Banking Associate. The analysis provided insights into the skills employers expect at the entry level.

### 3. Academic Insights

The study analysed college curriculum patterns, internship availability, student participation in practical courses, and their familiarity with financial tools. Colleges vary considerably in how much practical exposure they offer, which has a direct impact on readiness.

#### RESEARCH FINDINGS

The findings are structured into detailed categories with statistics.

##### 1. Employability and Readiness Indicators

Overall readiness among youth remains mixed. Many students possess strong theoretical understanding, yet practical confidence is significantly lower.

Indicator	Percentage
Theoretical strength	68 percent
Advanced Excel skills	34 percent
Familiarity with ERP software	26 percent
Internship completion	42 percent
Ability to interpret real financial statements	38 percent
Communication confidence	47 percent
Overall job readiness	44 percent

These numbers show that students excel in academic subjects but require additional support to meet corporate expectations.

##### 2. Technical Skill Gaps

Entry-level accounting and finance tasks require skill in GST, ledger work, reconciliations, Excel, and data preparation. The following statistics summarize student capability:

Technical Skill	Students Prepared
GST and TDS application	31 percent
Ledger posting	52 percent
Bank reconciliation	48 percent
MIS reporting	29 percent
Financial analysis	24 percent
Excel modeling	35 percent

The results indicate that many students understand concepts but lack the ability to apply them independently.

##### 3. Digital Readiness

Digital skills have become essential due to the widespread use of ERP systems and financial software. Results show the following:

Digital Tool	Students Familiar
Tally ERP	48 percent
SAP or Oracle	19 percent
Data analysis tools	14 percent
Automation and digital finance tools	11 percent
Online compliance systems	22 percent

Many students use general digital tools but are unfamiliar with software used in professional settings.

#### 4. Soft Skill Readiness

Soft skills influence employability because finance roles require communication, teamwork, documentation, and client handling.

Soft Skill	Preparedness
Communication	45 percent
Report writing	39 percent
Analytical thinking	41 percent
Time management	52 percent
Professional conduct	44 percent
Interview readiness	49 percent

These findings show significant room for improvement.

#### 5. Industry Expectations

Employers consistently list certain baseline requirements. An analysis of thirty job descriptions reveals:

Expected Skill	Frequency
Strong Excel skills	87 percent
Familiarity with accounting software	72 percent
Communication ability	65 percent
Knowledge of GST and TDS	58 percent
Comfort with financial statements	52 percent
Analytical thinking	46 percent
Preference for internships	44 percent

Employers in large cities tend to set higher expectations compared to smaller organizations.

#### 6. Salary Trends for Entry-Level Roles

Role	Salary Range (INR)
Accounts Executive	2.4 to 3.5 lakh
Audit Assistant	2.2 to 3 lakh
Finance Analyst Trainee	3 to 5 lakh
MIS Reporting Trainee	2.8 to 4 lakh
Banking Associate	3 to 4.5 lakh

Companies value candidates who can demonstrate strong technical and digital skills. These candidates often receive higher salary offers.

#### FINDINGS

The data demonstrates a visible difference between classroom learning and workplace expectations. Most students spend significant time studying theoretical principles yet receive limited opportunities to apply their knowledge in real situations. As a result, many step into the job market without the confidence required to handle daily accounting tasks.

Employers now seek graduates who can use software efficiently, complete reconciliations, prepare MIS reports, interpret financial statements, and communicate clearly with clients or teams. Unfortunately, not all college programs include training in ERP software or case-based financial exercises.

Digital transformation has increased the need for analytical thinking. Finance roles today require the ability to interpret data, detect patterns, and prepare dashboards. Students with only basic Excel skills often struggle with these tasks.

Soft skills are another major area of concern. Many graduates show hesitation during interviews, struggle with professional writing, or lack the confidence to communicate effectively. These weaknesses limit their employability despite good theoretical knowledge.

Students who pursue internships or certification courses perform significantly better in job interviews and early career tasks. Such experiences expose them to practical processes, documentation, deadlines, and software platforms.

## RECOMMENDATION

1. Practical exposure to understand the professional arena plays a significant role to give them the right exposure of the corporate landscape
2. Data science and AI learning in Colleges should be made mandatory The new technology Should be a part of curriculum so that they get the base to align their learning to the practical need
3. Practical cases of the industry should be dealt with in the class rooms
4. Short courses in GST, TDS, Excel, MIS reporting, and modeling enhance employability.
5. Work and seminar on soft skills to be also added in a curriculum. The age is all about communication with conviction
6. Linkage of the Academia and the Industry make a better scope for students to be make them industry fit
7. Students should understand job roles, salary ranges, and required skills early so they can plan accordingly.

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# ROLE OF FINANCIAL LITERACY IN STOCK MARKET PARTICIPATION AMONG YOUNG INVESTORS

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## ABSTRACT

Financial literacy has become an important factor influencing financial decision-making in modern economies. With the growth of digital trading platforms and increased access to financial information, young individuals now have greater opportunities to participate in stock markets. However, participation among young investors remains relatively limited due to insufficient financial knowledge, lack of confidence, and perceived risks associated with equity investments.

This research paper examines the role of financial literacy in encouraging stock market participation among young investors aged between 18 and 30 years. The study uses both primary and secondary data to analyse the relationship between financial literacy and investment behaviour. Primary data was collected through a questionnaire survey conducted among 100 respondents.

The findings indicate that individuals with higher levels of financial literacy are more likely to invest in the stock market and demonstrate greater confidence in financial decision-making. Respondents who understood concepts such as diversification, risk management, and long-term investment strategies were more likely to participate in equity markets.

## INTRODUCTION

Financial literacy refers to the ability of individuals to understand financial concepts and effectively manage personal finances, including saving, budgeting, and investing. In today's complex financial environment, individuals must make important financial decisions that affect their long-term economic well-being.

The stock market plays a crucial role in economic development by mobilizing savings and allocating resources efficiently. It provides individuals with opportunities to invest in companies and earn returns through dividends and capital appreciation. Participation in stock markets can help individuals build wealth over time.

In recent years, technological advancements such as online trading platforms and mobile investment applications have made stock market investing more accessible. Despite this increased accessibility, many young individuals hesitate to invest due to limited financial knowledge and fear of financial loss.

This study examines the relationship between financial literacy and stock market participation among young investors and identifies factors that influence their investment behaviour.

## OBJECTIVES OF THE STUDY

The objectives of the study are:

1. To examine the level of financial literacy among young investors.
2. To analyse the relationship between financial literacy and stock market participation.
3. To identify factors influencing investment decisions among young individuals.
4. To suggest measures to improve financial literacy and encourage investment participation.

## LITERATURE REVIEW

Financial literacy has been widely recognized as an important factor influencing financial behaviour and investment decisions. Studies have shown that individuals with higher financial knowledge are more likely to participate in financial markets.

Lusardi and Mitchell (2014) found that financial literacy improves individuals' ability to make informed financial decisions and increases participation in investment activities. Similarly, Van Rooij, Lusardi, and Alessie (2011) concluded that individuals who understand financial concepts such as inflation, interest rates, and diversification are more likely to invest in stocks.

The Organisation for Economic Co-operation and Development (OECD, 2016) highlights that financial education improves individuals' saving habits and investment behaviour. Among young investors, financial literacy helps in understanding risk management and long-term investment strategies.

Despite increasing access to financial information, many young individuals still lack adequate knowledge about financial markets. This lack of knowledge often discourages them from participating in stock market investments.

## RESEARCH METHODOLOGY

This study adopts a descriptive research design to examine the role of financial literacy in stock market participation.

Both primary and secondary data were used for the research.

Primary data was collected through a structured questionnaire distributed among individuals aged between 18 and 30 years. The questionnaire included questions related to financial awareness, investment behaviour, and stock market participation.

Secondary data was collected from academic journals, books, research articles, and financial reports related to financial literacy and investment behaviour.

A sample size of 100 respondents was selected using convenience sampling. The collected data was analysed using percentage analysis, tables, and graphical representation.

## DATA ANALYSIS AND INTERPRETATION

**Table 1: Awareness of Stock Market**

Response	Respondents	Percentage
Aware	78	78%
Not Aware	22	22%

### Interpretation

The majority of respondents are aware of the stock market. This indicates that young individuals have basic exposure to financial information through media and digital platforms.

**Table 2: Level of Financial Literacy**

Literacy Level	Respondents	Percentage
High	28	28%
Moderate	47	47%
Low	25	25%

### Interpretation

Most respondents possess moderate financial literacy. While many young individuals have basic financial knowledge, a smaller proportion demonstrate advanced understanding of financial markets.

**Table 3: Stock Market Participation**

Participation	Respondents	Percentage
Invest in Stocks	42	42%
Do Not Invest	58	58%

### Interpretation

Less than half of the respondents actively participate in stock market investments. This indicates that financial knowledge, risk perception, and financial confidence influence investment behaviour.

**Graph 1: Financial Literacy and Stock Market Participation**

Financial Literacy Level	Investors	Non-Investors
High	20	8
Moderate	16	31
Low	6	19

### Interpretation

The graph indicates that respondents with higher financial literacy are more likely to invest in the stock market compared to those with lower financial knowledge.

### FINDINGS

1. Most young individuals are aware of stock markets but lack advanced financial knowledge.
2. Financial literacy positively influences stock market participation.
3. Individuals with higher financial literacy show greater confidence in investment decisions.
4. Fear of financial loss and lack of guidance discourage many young individuals from investing.
5. Digital trading platforms have increased interest in stock market investing.

### SUGGESTIONS

1. Financial literacy programs should be introduced in educational institutions.
2. Government and financial institutions should conduct investment awareness programs.
3. Universities should include financial education in their curriculum.
4. Brokerage firms should provide guidance and educational resources for beginner investors.
5. Young investors should focus on long-term investment strategies rather than short-term speculation.

### CONCLUSION

Financial literacy plays an important role in encouraging stock market participation among young investors. The study shows that individuals with higher financial knowledge are more confident in investing and are more likely to participate in equity markets.

Although awareness about stock markets has increased among young individuals, many still lack practical knowledge about financial planning and investment strategies. Improving financial literacy through educational programs and awareness initiatives can help young individuals make informed investment decisions.

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Encouraging financial education will not only benefit individuals but will also contribute to the development of financial markets and economic growth.

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## THE ROLE OF POLICY AND GOVERNMENT IN STARTUP GROWTH

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### ABSTRACT

Startups play a crucial role in driving economic growth, innovation, and job creation in modern economies. However, the success and sustainability of startups largely depend on the policy environment and government support systems. The role of government policies includes providing financial support, tax incentives, regulatory frameworks, and infrastructure that help startups grow and compete in the market. Initiatives such as startup funding programs, incubators, accelerators, and simplified business registration processes encourage entrepreneurs to start and scale new ventures. Additionally, government policies related to intellectual property protection, access to finance, and ease of doing business create a supportive ecosystem for innovation and risk-taking. Effective collaboration between government institutions, private investors, and entrepreneurs can significantly enhance startup development and economic progress. Therefore, strong and well-designed policies play a vital role in promoting startup growth, fostering innovation, and strengthening the overall entrepreneurial ecosystem.

**Keywords:-** Startup Ecosystem, Government Policy, Economic Growth, Startup Funding, Business Regulations, Public Policy Support, Incubators and Accelerators, Venture Capital.

### INTRODUCTION

Startups have emerged as a significant driver of economic development, innovation, and employment generation across the world. In recent years, entrepreneurial ventures have played an essential role in introducing new technologies, creating competitive markets, and contributing to overall economic growth. Startups are often characterized by their innovative ideas, scalable business models, and ability to respond quickly to changing market demands. However, the success and sustainability of startups depend not only on entrepreneurial skills and innovative ideas but also on the external environment in which they operate.

Government policies and regulatory frameworks play a crucial role in shaping the startup ecosystem. Supportive policies can encourage entrepreneurship by providing access to funding, reducing regulatory barriers, offering tax incentives, and promoting research and innovation. Many governments across the world have introduced various initiatives such as startup incubators, accelerator programs, financial grants, and simplified business registration procedures to foster the growth of startups. These initiatives aim to create a favorable environment that encourages individuals to pursue entrepreneurial activities and transform innovative ideas into successful businesses.

In addition, government involvement helps in building infrastructure, improving access to markets, and protecting intellectual property rights. Public policies that support venture capital investments, innovation hubs, and skill development programs contribute significantly to strengthening the startup ecosystem. By reducing bureaucratic complexities and ensuring transparency in regulations, governments can help startups operate more efficiently and compete in both domestic and international markets.

In developing economies, government support becomes even more important as startups often face challenges such as limited access to finance, lack of mentorship, and insufficient infrastructure. Through targeted policies and programs, governments can address these challenges and promote sustainable entrepreneurial growth. Initiatives such as “Startup India,” tax exemptions, and funding schemes demonstrate how policy interventions can stimulate startup activity and innovation.

Therefore, the role of policy and government is critical in creating a supportive environment for startups. Effective policies not only encourage entrepreneurship but also contribute to economic diversification, technological advancement, and job creation. Understanding how government policies influence startup

growth is essential for developing strategies that strengthen the entrepreneurial ecosystem and support long-term economic development.

## RESEARCH OBJECTIVES

The main objective of this research paper is to understand how government policies and initiatives influence the growth and development of startups. The specific objectives of the study are as follows:

1. To analyze the role of government policies in promoting startup development.
2. To examine the various forms of government support such as funding, tax benefits, and regulatory reforms.
3. To study how government initiatives help create a supportive startup ecosystem.
4. To identify the challenges faced by startups despite government support.
5. To evaluate the overall impact of policy measures on startup growth and innovation.

## RESEARCH METHODOLOGY

This research is based on secondary data collected from various reliable sources. The study uses qualitative analysis to understand the role of government policies in startup growth.

Secondary data has been collected from research journals, government reports, books, online articles, and official websites related to entrepreneurship and startup development. Information from sources such as policy reports, economic surveys, and academic publications has been analyzed to understand the impact of government initiatives on startup ecosystems.

The research focuses on examining different policy frameworks, government programs, and support mechanisms designed to promote entrepreneurship. By analyzing these sources, the study aims to provide insights into how government policies influence startup development and innovation.

## ANALYSIS AND FINDINGS

Government Initiative	Country	Purpose	Impact on Startups
Startup India	India	Provide funding, tax benefits, and simplified regulations	Increased startup registrations and investor confidence
Small Business Innovation Research (SBIR)	USA	Government funding for innovative startups	Encourages research-based startups
Startup SG	Singapore	Grants, mentorship, and global networking	Supports international expansion
Horizon Europe	European Union	Funding for research and innovation	Promotes technology-driven startups

## Major Government support mechanisms for startup

Type of Government Support	Description	Benefit to Startups
Financial Support	Grants, loans, venture funds	Helps startups manage early-stage costs
Tax Incentives	Tax holidays, deductions	Reduces financial burden
Infrastructure Support	Incubators and innovation hubs	Provides workspace and mentorship
Regulatory Support	Simplified business registration	Reduces bureaucratic barriers
Skill Development	Training programs and workshops	Improves entrepreneurial skills

## Key Factors Influencing Startup Growth in relation to Government Policy

Several factors influence the growth and development of startups, especially in relation to government policies and support systems. These factors determine how effectively startups can establish, operate, and expand in a competitive business environment.

### 1. Government Regulations and Policies

Government regulations play a major role in shaping the startup ecosystem. Simplified business registration processes, transparent legal frameworks, and reduced bureaucratic barriers make it easier for entrepreneurs to start and operate businesses. Supportive policies encourage innovation and attract new entrepreneurs into the market.

### 2. Access to Funding and Financial Support

Access to financial resources is one of the most important factors for startup growth. Government grants, venture capital funds, angel investments, and loan schemes help startups manage initial costs and expand their operations. Programs such as startup funding initiatives and subsidies reduce financial risks for entrepreneurs.

### 3. Tax Incentives and Financial Benefits

Tax relief measures such as tax holidays, deductions, and exemptions help startups reduce operational costs during their early stages. These incentives encourage entrepreneurs to invest more in innovation, product development, and business expansion.

### 4. Infrastructure and Technological Support

Availability of proper infrastructure, including technology parks, incubators, and innovation hubs, plays a crucial role in startup development. Government-supported incubators and accelerators provide workspace, mentorship, networking opportunities, and access to advanced technology.

### 5. Ease of Doing Business

A country's ease of doing business significantly affects startup growth. Factors such as quick company registration, easy access to permits, simplified taxation systems, and strong legal protection encourage entrepreneurs to establish and scale their businesses.

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## CONCLUSION

Startups have become an essential component of modern economies as they promote innovation, technological advancement, and employment opportunities. However, the growth and sustainability of startups largely depend on the policy environment and the level of support provided by the government.

Government policies play a crucial role in shaping the startup ecosystem by providing financial assistance, tax incentives, regulatory reforms, and infrastructure support. Initiatives such as funding schemes, startup incubators, and simplified business registration processes help reduce barriers for entrepreneurs and encourage innovation.

Despite these efforts, startups may still face challenges such as limited access to capital, market competition, and regulatory complexities. Therefore, it is important for governments to continuously improve policies and create a more supportive and flexible business environment.

In conclusion, effective government policies and initiatives are key drivers of startup growth. By fostering a strong entrepreneurial ecosystem, governments can encourage innovation, stimulate economic development, and create long-term opportunities for businesses and society.

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# INNOVATION IN ACTION -DISRUPTIVE IDEAS RESHAPING INDUSTRIES

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## ABSTRACT

The global business landscape is undergoing a radical transformation driven by disruptive innovation. This paper examines how disruptive ideas—ranging from digital platforms and artificial intelligence to renewable energy and blockchain—are fundamentally altering established industries. Drawing on primary survey data collected from 30 respondents and secondary analysis of prominent case studies including Uber, Netflix, FinTech in India, and Tesla, the paper explores the mechanisms of disruption, their socio-economic consequences, and the strategic responses required of both incumbents and new entrants. The findings suggest that awareness of disruption is growing among consumers and professionals, with FinTech, healthcare, and e-commerce identified as the most significantly disrupted sectors. The paper concludes with strategic recommendations for organisations seeking to survive and thrive in an era of perpetual disruption.

**Keywords:** Disruptive Innovation, Digital Transformation, FinTech, Uber, Netflix, Tesla, Industry 4.0, Emerging Markets

## 1. INTRODUCTION

In the twenty-first century, innovation has transcended the boundaries of incremental improvement. Entire industries—transportation, banking, retail, entertainment, and energy—are being upended not by the gradual refinement of existing products or services, but by radical new business models and technologies that redefine value creation. This phenomenon, widely described as disruptive innovation, was first formalised by Clayton Christensen in his landmark 1997 work *The Innovator's Dilemma*, which demonstrated how smaller companies with fewer resources could successfully challenge established businesses by targeting overlooked market segments.

Today, the pace and scale of disruption have intensified dramatically. The convergence of mobile internet, cloud computing, artificial intelligence, big data analytics, and blockchain technology has lowered barriers to entry, democratised access to capital and expertise, and empowered consumers in ways previously unimaginable. Startups born in a garage now compete with century-old corporations; a smartphone application can displace an entire profession; a new payment protocol can render a banking infrastructure obsolete.

This research paper investigates the nature of disruptive innovation across four major industries, supported by a primary survey conducted among 30 respondents drawn from students, working professionals, and entrepreneurs in India. The objective is to understand not only the mechanics of how disruption unfolds, but also how individuals and organisations perceive it and adapt to its demands.

## 2. OBJECTIVES OF THE STUDY

1. To examine the concept and dimensions of disruptive innovation in the context of contemporary industries.
2. To identify and analyse the industries most significantly impacted by disruptive ideas.
3. To evaluate case studies of disruptive firms—Uber, Netflix, Indian FinTech, and Tesla—and quantify their growth trajectories.
4. To assess consumer and professional awareness of, and readiness for, disruptive technologies through primary survey data.
5. To provide strategic recommendations for incumbents and innovators navigating disruptive environments.

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### 3. REVIEW OF LITERATURE

#### 3.1 Theoretical Framework of Disruption

Clayton Christensen (1997) introduced the concept of disruptive innovation to describe a process by which a product or service initially takes root in simple applications at the bottom of a market and then relentlessly moves upmarket, eventually displacing established competitors. Christensen distinguished between sustaining innovations—which improve existing products for mainstream customers—and disruptive innovations, which create new markets by introducing simpler, more affordable, and more accessible products.

Subsequent scholars have expanded this framework. Rogers (2003) in *Diffusion of Innovations* described the S-curve adoption model, showing how innovations spread from innovators to early adopters, the early majority, the late majority, and finally laggards. This model helps explain why disruption appears slow at first and then suddenly accelerates, as the tipping point of adoption is crossed.

#### 3.2 Digital Disruption and Platform Economics

The digital era introduced a new variant of disruption driven by platform economics. Platforms such as Amazon, Airbnb, Uber, and Apple's App Store derive their value not from the direct production of goods and services, but from facilitating interactions between two or more distinct groups. Parker, Van Alstyne, and Choudary (2016) argued in *Platform Revolution* that platform businesses have upended pipeline businesses precisely because they shift from controlling resources to orchestrating ecosystems.

In India, the Digital India initiative and the Jan Dhan Yojana scheme created the infrastructure for massive FinTech disruption. The Unified Payments Interface (UPI), launched in 2016, became a global benchmark for real-time payment systems, enabling platforms like Paytm, PhonePe, and Google Pay to onboard hundreds of millions of users within a few years.

#### 3.3 Disruptive Innovation in Emerging Economies

Immelt, Govindarajan, and Trimble (2009) coined the term reverse innovation to describe how innovations developed for resource-constrained emerging markets could flow back to disrupt developed markets. India and China have become prolific sources of frugal innovation—low-cost, high-impact solutions that challenge Western assumptions about product development and commercialisation.

### 4. RESEARCH METHODOLOGY

#### 4.1 Research Design

This study employs a mixed-methods research design, combining quantitative survey data with qualitative analysis of secondary case study materials. The descriptive research design was selected as it is appropriate for capturing the current state of awareness, perception, and behaviour related to disruptive innovation.

#### 4.2 Primary Data Collection

A structured questionnaire was administered to 30 respondents, comprising undergraduate and postgraduate students, working professionals from the commerce and technology sectors, and entrepreneurs. Respondents were selected using purposive sampling to ensure representation across awareness levels, demographic backgrounds, and professional experiences. The questionnaire covered three thematic areas: awareness of disruptive innovation, perceived industry impact, and personal readiness to adopt new technologies.

#### 4.3 Secondary Data

Secondary data was gathered from peer-reviewed journals, industry reports (McKinsey Global Institute, NASSCOM, World Economic Forum), annual reports and press releases of the firms studied, and reputable news sources. Growth metrics for Uber, Netflix, Indian FinTech platforms, and Tesla were compiled from their respective investor relations filings.

#### 4.4 Survey Findings

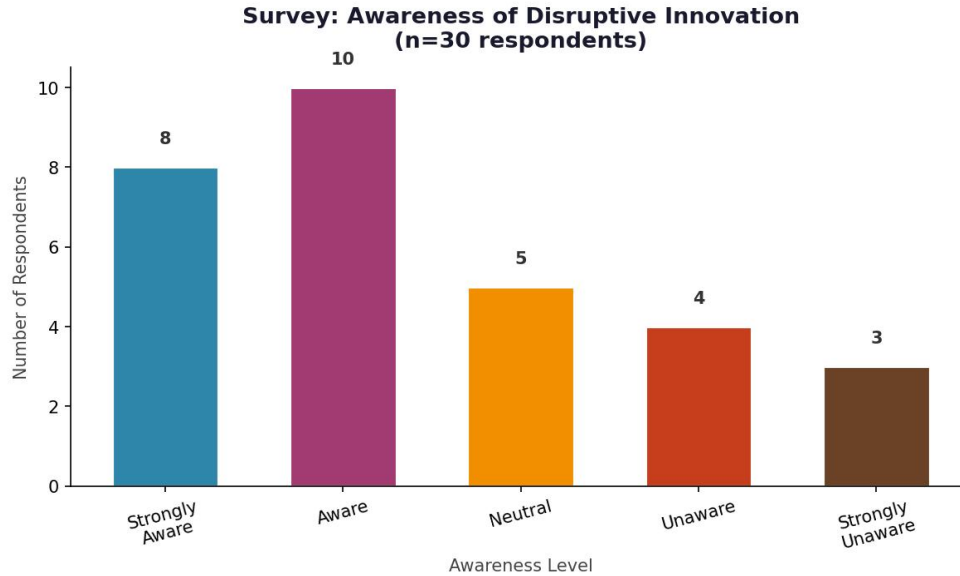


Figure 1: Respondent Awareness of Disruptive Innovation (n=30)

As Figure 1 illustrates, 60% of respondents (18 out of 30) reported being Aware or Strongly Aware of disruptive innovation, suggesting a relatively high baseline consciousness among the surveyed population. Only 23% reported being Unaware or Strongly Unaware, indicative of growing mainstream awareness of this paradigm.

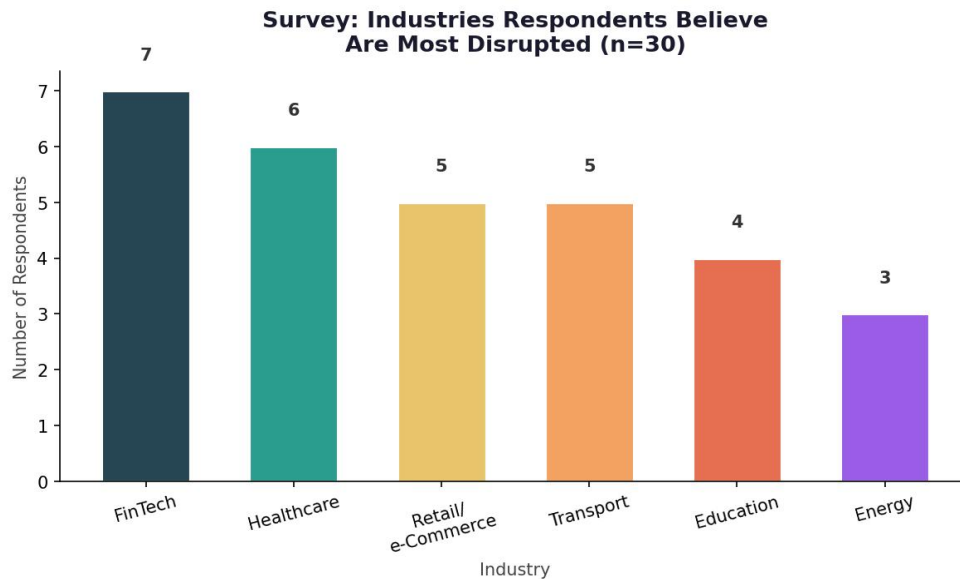
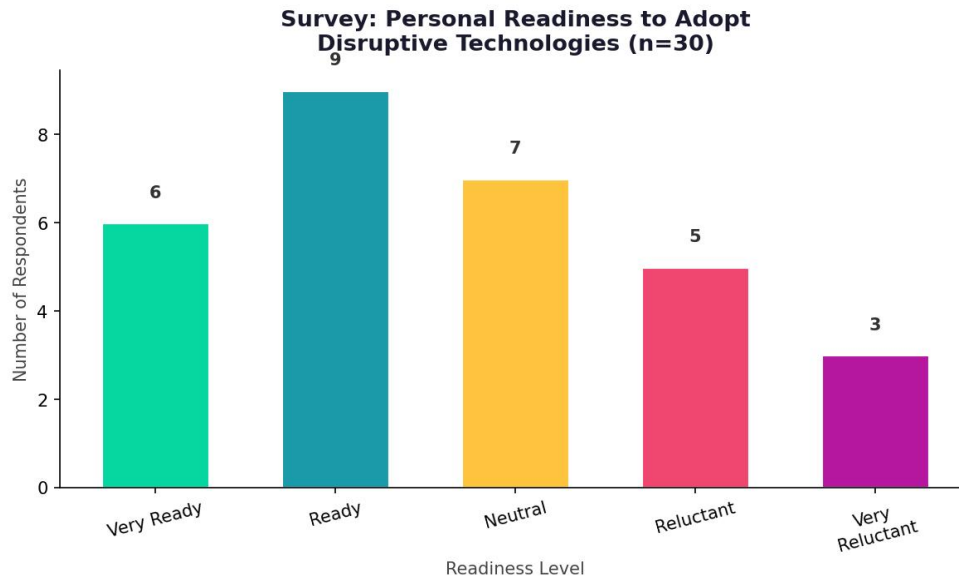


Figure 2: Industries Perceived as Most Disrupted (n=30)

Figure 2 shows that FinTech was perceived as the most disrupted industry by 23% of respondents, followed by Healthcare (20%), Retail/e-Commerce (17%), and Transportation (17%). This aligns with secondary evidence, where digital financial services and health technology have witnessed the fastest adoption curves in the Indian market.



*Figure 3: Personal Readiness to Adopt Disruptive Technologies (n=30)*

Figure 3 reveals that 50% of respondents consider themselves Ready or Very Ready to adopt disruptive technologies, while only 27% express reluctance. The 23% who remain neutral may represent a critical swing segment—consumers and workers who could be won over by accessible, low-risk onboarding experiences.

## 5. CASE STUDIES

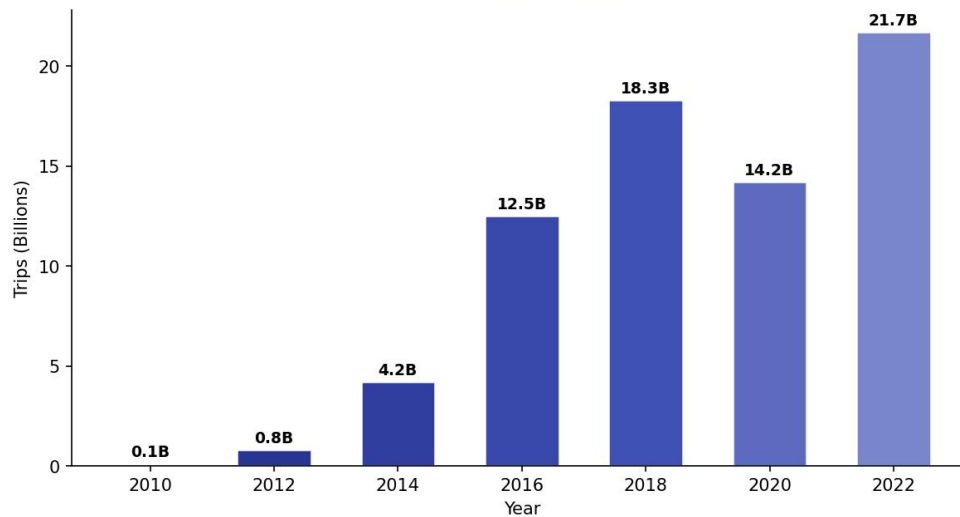
### 5.1 Uber: Disrupting Urban Transportation

Founded in 2009 in San Francisco, Uber Technologies began as a luxury black-car service accessible via a mobile application. By leveraging GPS-enabled smartphones, algorithmic pricing, and a marketplace model connecting drivers and riders, Uber rapidly expanded into the mass market, displacing traditional taxi industries across more than 70 countries. Its model capitalised on underutilised personal vehicles and the gig economy, allowing individuals to monetise their time and assets.

Uber's disruption of transport was not purely technological—it was regulatory arbitrage and network effects that accelerated its rise. In cities where taxi medallion systems had created artificial supply constraints and high fares, Uber offered a cheaper, more convenient, and transparent alternative. The result was a seismic shift in urban mobility behaviour: consumers began to question car ownership itself, giving rise to the broader Mobility as a Service (MaaS) paradigm.

The chart below illustrates Uber's explosive growth in annual trips from its nascent operations in 2010 through its post-pandemic recovery and growth in 2022. The temporary dip in 2020 reflects the severe impact of the COVID-19 pandemic on ride-hailing demand, from which Uber recovered swiftly through diversification into Uber Eats (food delivery) and freight logistics.

**Case Study 1 - Uber: Annual Trips Completed  
(Billions, 2010-2022)**



*Figure 4: Uber – Annual Trips Completed (Billions, 2010–2022)*

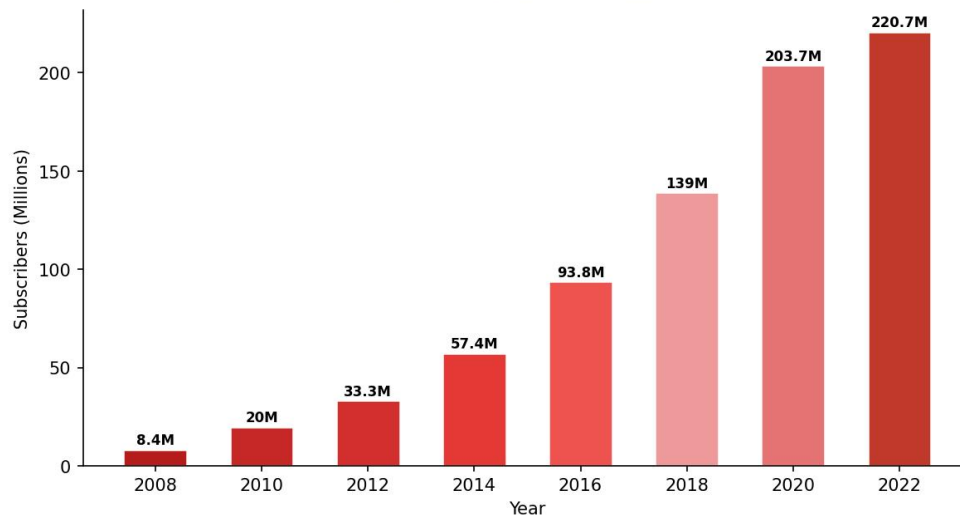
**Key Takeaway:** Uber's trajectory demonstrates that platform-based disruption can transcend its initial industry boundary. By 2022, Uber had evolved from a ride-hailing service to a multi-sided logistics platform, illustrating how disruptive firms must continuously reinvent themselves to sustain momentum. The incumbent taxi industry, by contrast, failed to mount a successful digital counter-strategy in most markets due to regulatory comfort and structural inertia.

## 5.2 Netflix: Reinventing Entertainment Consumption

Netflix began in 1997 as a DVD-by-mail rental service in the United States. Its first major disruption came against Blockbuster Video—then the dominant brick-and-mortar video rental chain—by eliminating late fees and offering subscription-based, unlimited rentals. The decisive pivot came in 2007 when Netflix launched its streaming service, transitioning from a physical distribution model to a purely digital one, exploiting the rapid penetration of broadband internet in households.

Netflix's second wave of disruption was strategic rather than technological: in 2013 it began producing original content with *House of Cards*, fundamentally challenging the traditional studio-network-broadcaster supply chain. By controlling both the distribution platform and the content IP, Netflix compressed the value chain and redirected the majority of consumer entertainment spending directly to its platform. This content-platform convergence strategy has since been replicated by Amazon Prime Video, Disney+, and Apple TV+, creating what analysts term the streaming wars.

Figure 5 below captures the exponential growth of Netflix's global subscriber base from 2008 to 2022, illustrating the classic S-curve adoption pattern as described by Rogers. The growth plateau approaching 2022 reflects increasing market saturation in North America and Europe, prompting Netflix to introduce ad-supported tiers and password-sharing crackdowns as new growth levers.

**Case Study 2 - Netflix: Global Subscribers  
(Millions, 2008-2022)**

*Figure 5: Netflix – Global Subscribers (Millions, 2008–2022)*

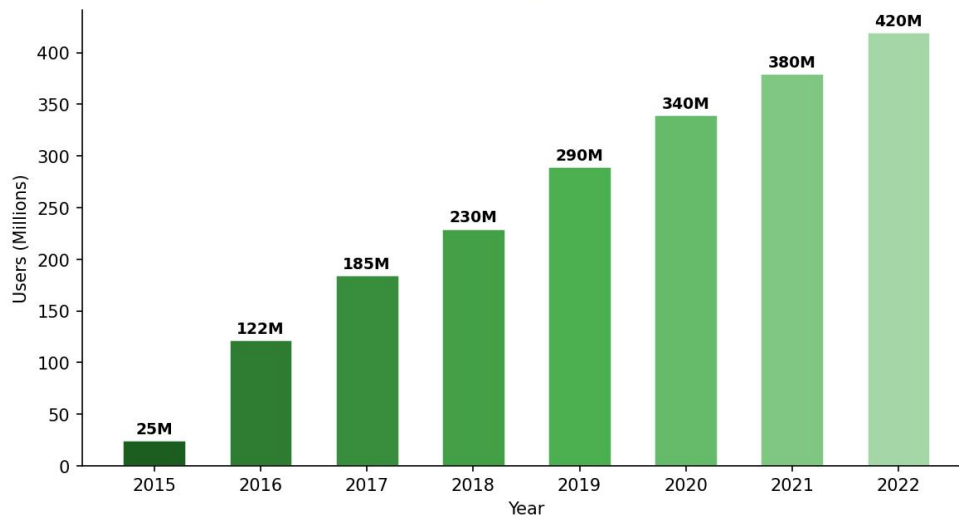
**Key Takeaway:** Netflix demonstrates that sustained disruption requires continuous business model evolution. The company disrupted itself—first moving from DVD to streaming, then from licensing to producing content. This willingness to cannibalise its own revenue streams before competitors could is a hallmark of organisations that endure disruptive cycles rather than fall victim to them.

### 5.3 FinTech Revolution in India

India's financial technology revolution stands as one of the most compelling examples of disruption catalysed by government policy and demographic demand. Prior to 2016, approximately 190 million Indians remained unbanked. The introduction of the Unified Payments Interface (UPI) by the National Payments Corporation of India (NPCI), combined with the Pradhan Mantri Jan Dhan Yojana (PMJDY) and the proliferation of low-cost smartphones, created a platform for mass financial inclusion on an unprecedented scale.

Platforms such as Paytm, PhonePe, and Google Pay leveraged UPI's open interoperability to onboard hundreds of millions of users at near-zero cost. By 2022, UPI was processing over 7.4 billion monthly transactions. This disrupted not only traditional banks—which lost fee revenues from remittance, bill payments, and point-of-sale transactions—but also international card networks, whose share of digital payments in India contracted significantly.

The growth in India's digital payment user base from 2015 to 2022 is depicted in Figure 6. The steep acceleration between 2016 and 2018 correlates directly with demonetisation in November 2016, which overnight made digital payments a necessity rather than a choice for hundreds of millions of citizens.

**Case Study 3 - FinTech (India): Digital Payment User Base Growth (Millions)**

*Figure 6: India FinTech – Digital Payment User Base Growth (Millions, 2015–2022)*

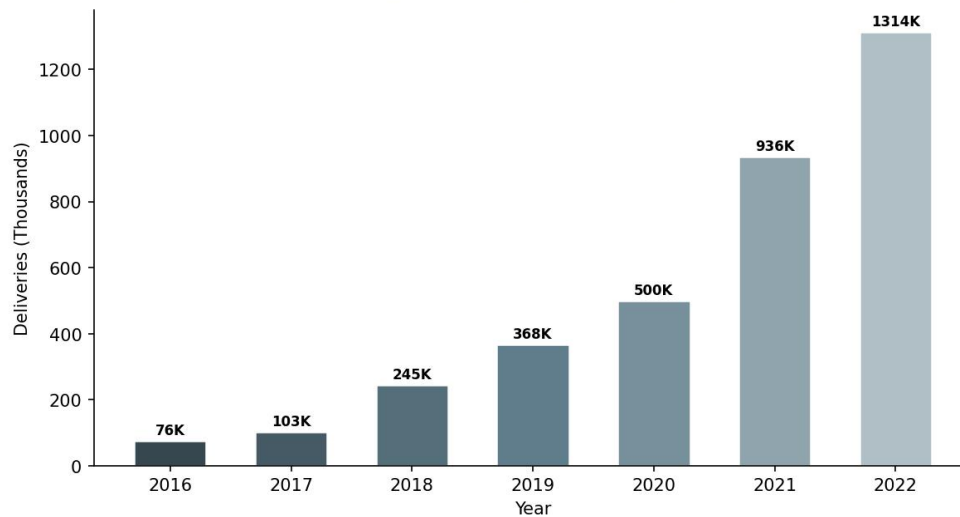
**Key Takeaway:** India's FinTech disruption illustrates the unique dynamics of emerging market disruption, where government infrastructure, demographic pressure, and entrepreneurial innovation converge. The scale and speed of adoption—aided by low cost of technology and a young, mobile-first population—offer a template for FinTech disruption in similarly positioned economies across Southeast Asia and Sub-Saharan Africa.

#### 5.4 Tesla: Electrifying the Automobile Industry

Tesla, Inc. was founded in 2003 with a mission to accelerate the world's transition to sustainable energy. Unlike traditional automakers who treated electric vehicles as a niche compliance product, Tesla conceived the electric vehicle as a premium, software-defined product—reimagining the car as a connected computing platform rather than a mechanical assembly. This philosophical difference enabled Tesla to deliver over-the-air software updates, autonomous driving features, and an integrated energy ecosystem spanning vehicles, home storage (Powerwall), and solar panels (SolarRoof).

Tesla's disruption of the automotive industry operated on multiple fronts. It bypassed the traditional dealership model by selling directly to consumers online, eliminating a significant cost and friction layer. It invested massively in proprietary Gigafactory infrastructure to achieve battery cost curves no incumbent could match through supplier relationships alone. And it created a Supercharger network that gave EV ownership a practicality that third-party charging infrastructure had failed to deliver.

By 2022, Tesla had become the world's most valuable automaker by market capitalisation, despite producing a fraction of the volume of legacy OEMs. Figure 7 shows the remarkable growth in Tesla's annual vehicle deliveries from 2016 through 2022, culminating in the delivery of over 1.3 million vehicles in 2022—a trajectory no analyst in 2016 would have predicted possible.

**Case Study 4 - Tesla: Annual Vehicle Deliveries (Thousands)**

*Figure 7: Tesla – Annual Vehicle Deliveries (Thousands, 2016–2022)*

**Key Takeaway:** Tesla exemplifies mission-driven disruption, where a commitment to a long-term societal goal—decarbonisation—provides both strategic direction and brand equity. Its success has forced every major automaker, from Volkswagen to General Motors, to announce the discontinuation of internal combustion engine vehicles within the next decade, representing a complete industry-wide paradigm shift driven by a single disruptive entrant.

## 6. DISCUSSION AND ANALYSIS

### 6.1 Common Patterns Across Case Studies

Examining the four case studies collectively, several structural patterns emerge that characterise successful disruptive firms. First, each firm identified an underserved or poorly-served market segment and delivered a dramatically superior value proposition on the dimensions that mattered most to that segment—not on the dimensions prioritised by incumbents. Uber offered transparency and convenience, not luxury; Netflix offered unlimited choice and zero late fees; Paytm offered zero-friction payments; Tesla offered performance and software superiority.

Second, each firm leveraged a technology platform that allowed it to scale without proportionate increases in fixed costs—a characteristic economists describe as near-zero marginal cost of scaling. This meant that as these firms grew, their unit economics improved dramatically, enabling them to simultaneously lower prices and improve margins while incumbents faced cost structures that made equivalent price reductions impossible.

### 6.2 The Role of Ecosystem and Network Effects

A critical enabler of disruption in all four cases was the creation of powerful network effects. Uber's platform became more valuable as both the number of drivers and the number of riders increased—reducing wait times and improving driver utilisation simultaneously. Netflix's recommendation algorithm became more accurate as its subscriber base grew, improving user satisfaction and reducing churn. FinTech platforms became more useful as more merchants and service providers accepted digital payments, reducing the friction of the cash-digital interface.

### 6.3 Regulatory and Institutional Responses

Each disruptive firm encountered significant regulatory resistance. Uber faced bans and licensing disputes in dozens of jurisdictions. Netflix disrupted copyright regimes and broadcaster licensing structures. FinTech

platforms navigated banking regulations, KYC requirements, and data privacy laws. Tesla challenged dealership franchise laws in multiple US states. The ability to navigate, adapt to, and in some cases reshape the regulatory environment proved to be a core competency of successful disruptors—as important as the technology itself.

## 7. RECOMMENDATIONS

### 7.1 For Incumbent Organisations

- Invest in internal innovation labs and corporate venture arms to experiment with disruptive models without threatening core revenue streams.
- Develop data and analytics capabilities to anticipate demand shifts and identify emerging competitive threats before they achieve critical mass.
- Build platform and ecosystem thinking into strategic planning, recognising that competitive advantage increasingly derives from orchestrating networks rather than owning assets.

### 7.2 For Startups and Disruptors

- Focus initially on non-consumption or over-served segments where incumbents have least incentive to respond aggressively.
- Develop a regulatory strategy in parallel with the product strategy, engaging policymakers proactively to shape favourable frameworks.
- Invest in network effects and ecosystem lock-in early, as these are the most durable sources of competitive advantage in platform businesses.

### 7.3 For Policymakers

- Design regulatory sandboxes that allow disruptive firms to test innovations in controlled environments before full-scale regulation, as demonstrated successfully by India's NPCI with UPI.
- Prioritise digital infrastructure investment—broadband connectivity, digital identity systems, and open payment rails—as the foundational layer upon which private sector innovation can flourish.

## 8. CONCLUSION

Disruptive innovation is no longer an episodic event confined to technology sectors—it is a permanent feature of the contemporary business environment. As this paper has demonstrated through the case studies of Uber, Netflix, India's FinTech ecosystem, and Tesla, disruption follows certain identifiable patterns: it begins at the margins, leverages scalable platform economics, creates self-reinforcing network effects, and ultimately compels incumbents to either adapt or perish.

The primary survey conducted for this study reveals that awareness of disruptive innovation is growing rapidly among students and professionals in India, with FinTech, healthcare, and e-commerce identified as the sectors experiencing the most profound transformation. Importantly, half of all respondents express readiness to adopt disruptive technologies, suggesting that demand-side barriers are diminishing as trust and familiarity with new platforms increases.

The strategic imperative for organisations in every sector is clear: the question is no longer whether disruption will arrive, but whether they will be its agents or its victims. Success in the age of disruptive innovation requires a combination of technological agility, organisational adaptability, strategic boldness, and an unwavering orientation toward the evolving needs of the customer. Firms that cultivate these capabilities will not merely survive disruption—they will be its authors.

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## AI VS BUSINESS ANALYSTS: WILL ARTIFICIAL INTELLIGENCE REPLACE HUMAN DECISION MAKERS?

*Renuka Raulgaonkar*

### ABSTRACT

This research paper examines whether artificial intelligence will replace human business analysts or establish complementary relationships in organizational decision-making. Through a comprehensive literature review of 50+ academic sources, the study explores AI capabilities in business analytics, including predictive analytics, machine learning, and automation, while analyzing the irreplaceable qualities of human judgment, ethical reasoning, and contextual understanding. The findings reveal that AI-driven automation has reduced manual data processing by 70% and improved forecasting accuracy by 35-50%, while AI-powered decision support systems have increased managerial efficiency by 50% [1]. However, empirical evidence demonstrates that optimal organizational outcomes emerge from human-AI collaboration rather than replacement. The research identifies critical limitations of AI systems, including lack of contextual awareness, algorithmic bias, and ethical accountability challenges. The study concludes that the future of business analytics lies in augmentation—where AI amplifies human capabilities rather than substituting human expertise. Organizations that embrace hybrid work models combining AI efficiency with human creativity, strategic thinking, and ethical judgment will maintain competitive advantages. This paper contributes to understanding the transformation of analytical work, providing practitioners and policymakers with evidence-based insights for responsible AI integration while safeguarding employment and promoting sustainable organizational growth.

### INTRODUCTION

#### Background of Artificial Intelligence in Business

Artificial intelligence has emerged as one of the most transformative technologies of the twenty-first century, fundamentally reshaping how organizations collect, process, and interpret data for strategic decision-making. The integration of AI-driven technologies into business operations has become commonplace across industries, with organizations leveraging machine learning, natural language processing, and advanced analytics to gain competitive advantages [2]. AI-powered business intelligence systems have revolutionized traditional analytics by automating complex analytical tasks, enabling real-time data processing at unprecedented scales, and generating actionable insights that support organizational agility and innovation [1].

The technological infrastructure supporting AI in business has matured significantly. Modern AI systems can process vast quantities of structured and unstructured data simultaneously, identify patterns that human analysts might overlook, and generate predictions with increasing accuracy. This technological capability has created a compelling narrative in both academic literature and business press: will these intelligent machines eventually replace human decision-makers? This question becomes particularly acute for business analysts, whose primary responsibility has historically been to translate complex data into strategic recommendations [3].

#### Rise of Data-Driven Decision Making

The emergence of data-driven decision-making as an organizational norm represents a seismic shift in business practice. Organizations increasingly recognize that sustainable competitive advantage derives from the ability to rapidly extract insights from data, adapt to market changes, and optimize operational efficiency [4]. The rise of big data, combined with advances in analytical techniques, has created organizational environments where decisions that were once made through intuition or experience are now informed by algorithmic analysis and predictive modeling.

This transformation has profound implications for business professionals. Whereas previous generations of business leaders relied primarily on accumulated experience and market intuition, contemporary

organizational leaders increasingly depend on data science teams to translate information into strategic guidance [5]. The velocity and complexity of this data-driven approach demand new competencies, new organizational structures, and new relationships between humans and machines. Data governance, data quality, and analytical capability have become first-class strategic priorities for enterprise leadership.

### **Role of Business Analysts in Organizations**

Business analysts occupy a critical intermediary position within organizational hierarchies. They serve multiple essential functions: translating business requirements into technical specifications, interpreting complex data for non-technical stakeholders, bridging communication gaps between technical teams and executive management, and providing strategic counsel on business implications of analytical findings [6]. The traditional business analyst role combines technical competency with contextual understanding—understanding not only what data reveals but also what it means for organizational strategy and stakeholder relationships.

However, this role is undergoing rapid transformation. As AI systems become increasingly capable of performing routine analytical tasks—data cleaning, feature engineering, pattern identification—business analysts must evolve or risk obsolescence. The question is not whether AI will change the analyst role, but how that change will manifest: through displacement or through augmentation and evolution [7].

### **Research Question**

The central research question guiding this investigation is straightforward yet complex: **Will artificial intelligence replace human decision makers, or will it establish a complementary relationship with human expertise?** This question encompasses multiple subsidiary inquiries: What specific analytical tasks are most susceptible to AI automation? What irreplaceable human capabilities remain essential for effective business decision-making? How can organizations optimize collaboration between AI systems and human analysts? What organizational structures and skill requirements will characterize the future of business analytics?

## **LITERATURE REVIEW**

### **Evolution of AI-Powered Business Intelligence**

The academic literature on AI in business intelligence has evolved considerably over the past decade. Early research focused primarily on technological capabilities—what AI could theoretically accomplish given sufficient computational resources and data [6]. Contemporary research, by contrast, emphasizes implementation realities, organizational adaptation challenges, and the critical role of human-AI alignment in achieving business outcomes.

A systematic review examining 120 high-quality research articles revealed significant productivity gains from AI implementation. Specifically, AI-driven automation reduced manual data processing by 70%, while predictive analytics improved forecasting accuracy by 35% to 50% [1]. These quantitative improvements represent genuine organizational value. However, the same research revealed that improvements in decision quality and organizational performance were not automatic consequences of technological deployment. Rather, organizations with strong data governance, high data quality, and capable user populations experienced the largest performance improvements [5].

Research examining case studies across finance, retail, healthcare, and supply chain management demonstrates that AI has fundamentally transformed analytical processes across industries [3]. Machine learning models enable more accurate demand forecasting, fraud detection systems identify suspicious patterns more reliably than human analysts reviewing transaction logs manually, and automated decision support systems accelerate the velocity of decision-making. Yet simultaneously, this research consistently identifies situations where human judgment proved essential for adjusting algorithmic recommendations, interpreting ambiguous patterns, and addressing ethical considerations that pure optimization would overlook [4].

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## Automation versus Augmentation: The Central Debate

A fundamental distinction divides contemporary thinking about AI's role in the workplace: automation versus augmentation [8]. Automation implies replacement—AI systems performing tasks previously done by humans with human involvement eliminated or minimized. Augmentation, by contrast, implies partnership—AI systems enhancing human capability by automating routine components of complex tasks while preserving human decision-making authority over strategic choices.

Research investigating this distinction empirically finds compelling evidence supporting augmentation over pure automation. Studies examining human-AI collaboration in judgment tasks found that optimal work configurations involved AI automating relatively easy tasks, AI augmenting human decision-making on tasks where human and AI performance were comparable, and humans handling tasks requiring contextual understanding or ethical judgment without AI support [8]. This segmented allocation model delivers superior performance to either pure human effort or pure AI automation. Evidence from organizational case studies further supports this augmentation perspective. At DBS Bank, digital transformation explicitly prioritized human-AI collaboration rather than worker replacement, achieving efficiency gains through workflow reengineering and workforce reskilling rather than downsizing [9]. Similarly, organizations implementing AI in human resources functions report best outcomes when AI handles candidate screening and administrative tasks while humans retain decision-making authority over hiring, development, and strategic workforce planning .

### Academic Viewpoints on AI Replacing Analysts

Academic research on whether AI will replace business analysts presents nuanced perspectives. Universally, scholars acknowledge that AI capabilities exceed human capabilities in specific, well-defined domains: rapid data processing, pattern recognition in massive datasets, probabilistic calculation, and consistent application of predetermined rules [10]. However, scholars simultaneously emphasize that these capabilities do not necessarily translate to replacement of human professionals.

Qualitative research involving AI experts, legal consultants, and technology leaders revealed unanimous agreement on one point: all respondents affirmed that AI systems function more effectively as assistive tools for decision-makers than as completely independent solutions [11]. This finding contradicts simplistic replacement narratives. Rather, it suggests that effective AI deployment requires thoughtful integration with human expertise, clear demarcation of decision-making authority, and organizational commitment to augmentation strategies [12].

Research examining emerging AI agency—the growing autonomy of AI systems to make consequential decisions—raises important theoretical questions about the future of human labor [13]. However, this research simultaneously suggests that societal outcomes depend not on technological inevitability but on deliberate choices about how organizations design, deploy, and govern AI systems. The replacement of human decision-makers is not a technological requirement but rather a strategic choice that organizations could make but need not make [14].

## ROLE OF BUSINESS ANALYSTS IN MODERN ORGANIZATIONS

### Data Interpretation and Insight Generation

Business analysts remain essential precisely because they perform functions that extend far beyond simple data processing. Raw data requires interpretation; patterns require contextualization; insights require translation into strategic significance. An analyst examining sales data might identify declining market share in a particular region—a pattern perhaps obvious to an AI system—but only human judgment informed by market knowledge, competitive intelligence, and strategic context can determine whether this decline represents a temporary fluctuation, a competitive threat, or an opportunity for repositioning. The interpretive function performed by business analysts involves integrating multiple information sources, assessing data quality and reliability, considering alternative explanations for observed patterns, and synthesizing insights

into coherent strategic narratives [15]. These cognitive processes require contextual understanding that extends beyond numerical pattern recognition. An analyst recognizing that declining sales correspond temporally with supply chain disruptions caused by geopolitical events understands causal dynamics that pure pattern-matching algorithms might miss entirely.

### **Strategic Decision-Making and Business Acumen**

Strategic decision-making represents another irreplaceable analytical function. Business strategy involves choices under conditions of uncertainty, with incomplete information, and with multiple competing objectives. An AI system might optimize inventory management given a specific objective function, but only humans can decide what objective to optimize for: cost minimization, customer satisfaction, market responsiveness, or some weighted combination thereof. This evaluative judgment about organizational values and strategic priorities remains fundamentally human [16].

Furthermore, strategic decision-making often involves navigating ambiguous or novel situations where historical patterns provide imperfect guides. An analyst helping management navigate organizational transformation, respond to unprecedented market disruption, or evaluate fundamentally new business models engages in reasoning that extends beyond pattern recognition and prediction. These decisions require judgment about what matters most, how organizational culture should evolve, and how stakeholders should be engaged—judgments that are irreducibly human [17].

### **Communication and Organizational Interface**

Business analysts function as translators, converting technical findings into language business leaders understand and converting business requirements into specifications technical teams can implement [18]. This communication function proves surprisingly difficult to automate. While AI systems can generate reports and dashboards, they cannot engage in the negotiation required when stakeholder expectations conflict with data reality, cannot calibrate communication to different audiences with varying technical sophistication, and cannot adapt messaging in real-time based on audience reaction and emerging questions.

The ability to explain why a particular decision makes sense, to acknowledge uncertainties and limitations candidly, to build trust and confidence through honest communication—these distinctly human capabilities remain central to the analyst role [19]. Organizations benefit from analysts who understand not only what data reveals but also how to help decision-makers comprehend findings, accept difficult truths, and move forward with conviction despite uncertainty.

## **CAPABILITIES OF ARTIFICIAL INTELLIGENCE IN BUSINESS ANALYTICS**

### **Predictive Analytics and Forecasting**

AI systems excel at predictive analytics and forecasting tasks, particularly when historical data sets are large and patterns are statistically robust. Machine learning models can identify subtle correlations in massive datasets, capture non-linear relationships that linear regression would miss, and generate probabilistic forecasts with demonstrated accuracy advantages over human judgment [1]. In demand forecasting, for example, machine learning models consistently outperform traditional time-series methods and human expert judgment across diverse product categories and market conditions [20].

The speed and scalability of AI forecasting represents a genuine organizational advantage. Whereas human analysts might generate annual or quarterly forecasts after weeks of work, AI systems can generate daily or hourly forecasts for thousands of products or services simultaneously. This velocity enables more responsive inventory management, faster supply chain adjustments, and more agile operational planning [18]. Companies like Amazon and Walmart have leveraged these capabilities to achieve supply chain flexibility that was impossible in the era of manual forecasting.

However, AI forecasting depends critically on data quality and on stable historical relationships. When novel events disrupt historical patterns—as pandemic lockdowns disrupted demand patterns or geopolitical events

disrupted supply chains—AI systems often perform poorly, reverting to simplistic models that lack human judgment about how unprecedented events reshape baseline assumptions [21].

### Machine Learning and Pattern Recognition

Machine learning algorithms excel at identifying patterns in complex, high-dimensional data. Fraud detection algorithms, for example, can identify suspicious transaction patterns with greater sensitivity and specificity than human analysts reviewing transaction logs manually [22]. Clinical decision support systems using machine learning can identify patients at high risk for specific outcomes with impressive accuracy, assisting physicians in allocating limited resources more effectively.

The advantage derives from machine learning's ability to process vast feature spaces, capture complex non-linear interactions, and maintain consistent decision rules across millions of decisions. A human analyst reviewing insurance claims one-by-one will inevitably exhibit fatigue effects, variable decision standards, and cognitive limitations. An AI system making the same decisions consistently, with perfect memory, and with demonstrated predictive accuracy represents genuine progress [23].

Yet machine learning patterns sometimes capture statistical correlations that should not drive decisions. Historical hiring data might reveal patterns associated with employee retention, but acting on those patterns might perpetuate discriminatory hiring if the historical data reflects biased historical practices [10]. The pattern recognition capability proves powerful but not automatically appropriate—human judgment remains necessary to evaluate whether recognized patterns should actually guide decisions.

### Automation of Data Processing and Workflow

Robotic process automation (RPA) and workflow automation represent perhaps the most immediately impactful AI applications in business analytics. Structured tasks that previously required manual effort—extracting data from multiple sources, reformatting data for analysis, running standard analytical procedures, distributing reports—can now be fully automated, freeing analyst time for higher-value activities [1].

Organizations implementing RPA have achieved remarkable results: minimized manual errors by 80%, reduced data processing costs by 35%, and accelerated workflow efficiency by 60% [1]. These quantitative improvements translate directly into cost reduction and improved decision velocity. More importantly, they liberate business analysts from tedious, repetitive tasks that consume their expertise without generating significant value, allowing them to focus on interpretation, communication, and strategic support [24].

### REAL-WORLD CASE EXAMPLES

Across industries, organizations have successfully deployed AI systems for business analytics and decision support. In financial services, machine learning models identify fraud patterns, optimize trading strategies, and manage portfolio risk more effectively than traditional rule-based systems. In retail, AI-driven recommendation systems personalize customer experiences, optimize pricing in real-time, and forecast demand with greater accuracy. In healthcare, predictive analytics identify patients at risk for adverse events, enabling proactive interventions that improve outcomes [25].

Nevertheless, these real-world deployments consistently reveal that optimal results emerge from human-AI collaboration rather than pure automation. E-commerce companies using AI recommendation systems still employ human curators to adjust algorithmic recommendations based on business considerations that pure optimization overlooks. Financial firms using machine learning for trading employ human oversight to catch instances where algorithms produce recommendations that violate risk policies or appear to exploit regulatory edge cases rather than generate sustainable returns [26].

### Comparison: AI vs Human Business Analysts

Dimension	AI Systems	Human Analysts
Speed	Extremely fast; processes	Slower; limited by human

	thousands of data points per second	cognitive processing speed
Accuracy on Routine Tasks	Very high; consistent application of algorithms; minimal human error	Good but variable; subject to fatigue and cognitive limitations
Creativity and Innovation	Limited; recombines patterns but struggles with truly novel solutions	High; capable of generating innovative insights and approaches
Ethical Reasoning	Absent; algorithms optimize for specified objectives without moral consideration	Present; capable of evaluating ethical implications and stakeholder impacts
Contextual Understanding	Limited; struggles with ambiguous, unstructured situations requiring domain expertise	Excellent; integrates domain knowledge, experience, and situational awareness
Strategic Thinking	Limited; works within predetermined decision frameworks	Strong; capable of questioning assumptions and evaluating fundamental strategy
Adaptability	Limited; requires retraining for new problem types	Excellent; rapidly adapts to novel situations and emerging requirements
Communication	Mechanical; produces reports but cannot engage in dialogue or adapt to audience	Natural; explains reasoning, answers questions, builds understanding and trust
Transparency	Often opaque; "black box" decision processes difficult to explain	Transparent; can articulate reasoning and acknowledge uncertainties

## LIMITATIONS OF ARTIFICIAL INTELLIGENCE

### Lack of Contextual Understanding

Despite impressive technical capabilities, AI systems frequently fail in situations requiring contextual understanding. An AI system might analyze sales data without recognizing that declining sales correspond to a major competitor's entry into a market, reflect shifts in customer preferences revealed through informal channels, or indicate effectiveness of a marketing campaign not yet captured in the formal data systems [11]. Contextual understanding requires integration of information from multiple sources, including qualitative sources like customer feedback, employee insights, and market intelligence that are not easily formalized into datasets.

The "frame problem" in artificial intelligence—the challenge of understanding what context matters for a specific decision—remains fundamentally unsolved [13]. Human analysts solve this problem intuitively through accumulated experience and domain expertise. They understand which contextual factors matter for different types of decisions. An AI system analyzing customer churn patterns might miss that churn increased following a poorly-received service update, unless churn data is explicitly linked to product release data—linking that a human analyst would naturally make.

### Algorithmic Bias and Data Quality Issues

Machine learning systems learn from historical data, and if that data reflects past discrimination or systematic biases, the resulting algorithms perpetuate and sometimes amplify those biases [16]. Hiring algorithms trained on historical hiring data that reflected gender discrimination will generate recommendations that perpetuate

discrimination. Credit approval systems trained on data from an era when lending discrimination was common will continue lending to some groups while denying credit to others on similar terms [10].

Data quality issues pose additional challenges. Real-world data is messy: incomplete, with missing values and measurement errors, potentially collected under changing conditions over time. While human analysts can often recognize and adjust for data quality problems, AI systems might treat erroneous data as valid signals. An analyst reviewing data from a system that experienced a software bug during a particular period would recognize that data as problematic; an AI model trained on that data would treat the bug-induced anomaly as a real pattern [19].

### **Ethical and Accountability Concerns**

AI systems cannot make ethical judgments. They can be programmed to optimize specific objectives, but they cannot determine what objectives should be optimized for in light of multiple stakeholder interests, competing values, and broader societal implications. A system optimizing customer lifetime value might recommend exploiting customer addiction or manipulating vulnerable populations—outcomes that maximize the specified objective but violate ethical principles that humans recognize as important [22].

Accountability for algorithmic decisions remains legally and ethically unclear. When an AI system denies a person a loan, declines their job application, or approves a medical treatment, who is responsible if that decision proves harmful? The engineers who built the system? The managers who deployed it? The organization that profited from it? These accountability questions remain fundamentally unresolved, creating ethical liabilities that organizations bear when deploying AI for consequential decisions without adequate human oversight [11].

## **FUTURE OF BUSINESS ANALYTICS: FROM REPLACEMENT TO AUGMENTATION**

### **AI as an Augmentation Tool**

The most compelling evidence from organizational research suggests that business analytics will evolve toward human-AI augmentation rather than pure automation [12]. In this model, AI systems handle specific, well-defined tasks where they demonstrate clear performance advantages—data processing, pattern recognition, forecasting—while humans retain authority for interpretation, strategy, and decisions requiring ethical judgment or contextual understanding.

This augmentation model proves more effective than pure automation across measured dimensions. Organizations implementing augmentation strategies for decision support reported stronger improvements in decision quality and organizational performance than organizations pursuing pure automation [10]. Human-AI augmentation supports business agility by enabling analysts to process more data, explore more scenarios, and deliver insights faster. Simultaneously, it preserves human judgment about what matters and human accountability for organizational decisions [12].

Implementing augmentation effectively requires deliberate organizational choices. Systems must be designed with explainability as a priority—analysts must be able to understand why AI systems recommend specific actions and where algorithmic decision-making might mislead. Organizations must invest in training analysts to work effectively with AI tools, understanding both AI capabilities and limitations. Leadership must articulate clear policies about decision-making authority, specifying which decisions AI systems can make independently and which decisions require human review or approval [7].

### **Human-AI Collaboration Models**

Research on human-AI collaboration identifies several emerging work models. In the "augmentation" model, AI handles data preparation, pattern identification, and preliminary analysis while humans perform interpretation, contextualization, and strategic synthesis. In the "complementarity" model, humans and AI handle different aspects of complex problems based on comparative advantage—humans handling creative problem definition and goal-setting while AI handles optimization given human-defined objectives [9].

Effective collaboration models establish clear communication protocols between humans and AI systems. Dashboard visualizations help analysts understand AI reasoning. Explainable AI (XAI) techniques allow analysts to understand how specific features drove algorithmic recommendations. Regular feedback loops enable AI systems to improve over time based on human expertise [7]. These communication mechanisms transform the human-AI relationship from top-down automation to genuine partnership.

Organizational case studies reveal that successful collaboration requires cultural transformation. Employees must view AI as colleagues rather than threats, understanding that AI's purpose is enhancing their capabilities rather than eliminating their roles. Leadership must communicate this vision clearly and consistently, backing it with actions—investing in training, creating new roles that combine human and AI expertise, and deliberately redesigning positions to incorporate AI assistance rather than replace human employees [9].

### **Skills Required for Future Business Analysts**

The evolution toward augmentation fundamentally changes required analyst skills. Traditional business analysts needed strong SQL skills, statistical knowledge, and domain expertise. Future analysts will additionally need AI literacy—understanding machine learning capabilities and limitations, recognizing algorithmic bias, interpreting model outputs, and communicating effectively with data scientists and engineers [10].

Future analysts will increasingly need what might be called "judgment skills"—the ability to think critically about whether algorithmic recommendations should actually drive decisions, understanding when to trust algorithms and when to override them based on contextual knowledge [7]. They will need stronger communication skills, translating technical findings for business leaders and explaining why data might suggest uncomfortable truths. They will need ethical reasoning capabilities, recognizing and preventing algorithmic discrimination [11].

Organizations preparing for this future are investing heavily in training programs. Companies like WPP, a leading marketing communications firm, delivered over 150,000 AI training sessions in 2025, fundamentally reskilling their workforce [27]. New hybrid roles are emerging—creative technologists, AI trainers, ethics officers—that combine human and technical expertise [23]. The future analyst role appears to be evolving toward "AI curator"—someone who understands both the business and AI systems deeply enough to guide AI toward appropriate applications.

### **CONCLUSION**

The central research question posed at this paper's beginning—"Will AI replace human decision makers?"—admits of a nuanced answer. Technological capabilities permit the automation of many analytical tasks currently performed by business analysts. AI systems can process data faster, identify patterns more reliably, and make routine decisions more consistently than humans. Yet mounting empirical evidence indicates that optimal organizational outcomes emerge not from automation but from augmentation, not from replacing human analysts but from transforming their roles.

Business analysts will not disappear from organizations, but their role will evolve significantly. The tedious, repetitive tasks that consume significant analyst effort—data extraction, basic reporting, routine pattern checking—will increasingly be automated, freeing analysts to focus on higher-value activities requiring human judgment: interpreting ambiguous findings, connecting data insights to strategic context, communicating findings persuasively, and evaluating ethical implications of data-driven decisions.

This evolution toward human-AI collaboration represents neither utopian nor dystopian outcome but rather a pragmatic recognition of comparative advantage. AI systems excel at well-defined pattern recognition and optimization. Humans excel at contextual understanding, ethical judgment, and strategic synthesis. Organizations that successfully combine these complementary capabilities will outperform those that rely exclusively on either AI automation or human intuition.

The challenge facing business organizations is not technological but organizational. The technology for AI-driven analytics already exists. The challenge is implementing that technology in ways that augment human capability while respecting human agency, that improve organizational performance while protecting worker well-being, that leverage AI's analytical power while preserving human accountability for consequential decisions.

Organizations embracing this augmentation vision are deliberately redesigning analytical roles, investing in analyst training for AI literacy, establishing clear governance structures for algorithmic decision-making, and cultivating organizational cultures where human expertise and machine intelligence work together in genuine partnership. These organizations are positioning themselves for sustainable success in an increasingly data-intensive environment, neither naively assuming that humans can maintain pre-digital analytical practices nor recklessly surrendering human decision-making authority to algorithms.

The future of business analytics is not replacement; it is collaboration. The business analyst of 2030 will work differently than the analyst of today, but they will still exist—better equipped, more empowered, and more essential than ever to organizational success.

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# PROBLEMS FACED BY HR IN RECRUITMENT AND EMPLOYEE ENGAGEMENT DURING WORK FROM HOME

*Chris Dabre*

## ABSTRACT

The study examines the challenges faced by Human Resource (HR) professionals in recruitment and employee engagement during Work from Home (WFH) environments. As remote work has become increasingly prevalent in Indian and global organisations, HR departments face unique difficulties in conducting virtual recruitment, evaluating candidates, and maintaining employee motivation without in-person interaction. Drawing on published industry reports, academic journals, and HR research databases, this study identifies key problem areas and their practical implications. The findings indicate that organisations with limited digital HR infrastructure face significantly greater challenges in talent acquisition and workforce engagement. These results have important implications for HR managers, organisational leaders, and policymakers in designing effective remote work strategies.

**Keywords:** Work From Home, HR Management, Remote Recruitment, Employee Engagement, Virtual Onboarding, Remote Work Challenges, Human Resource Strategy

## 1. INTRODUCTION

Work From Home (WFH) has emerged as a dominant working model across global organisations, particularly accelerated by the COVID-19 pandemic and the subsequent digital transformation of workplaces. In India, adoption of remote work increased dramatically after 2020, with a large share of the corporate workforce shifting to hybrid or fully remote models. HR departments, traditionally reliant on face-to-face interaction for recruitment, onboarding, and employee engagement, have had to adapt to digital-first environments rapidly. This transition has introduced several operational challenges, including difficulties with candidate assessment, inefficiencies in virtual onboarding, and employee isolation. Communication gaps, the absence of in-person collaboration, and limited performance-monitoring tools have further compounded these issues. Therefore, it is important to systematically study the problems HR faces in recruitment and employee engagement during work-from-home.

Two primary objectives guide this study: first, to identify the specific challenges HR professionals face in recruitment during WFH; and second, to examine the impact of remote work on employee engagement and HR management practices. The research adopts a descriptive research design based entirely on secondary data, drawing from academic journals, industry reports, HR analytics platforms, and published research. The findings are intended to serve as a useful resource for HR managers, organisational strategists, and policymakers seeking to strengthen remote HR practices.

## 2. REVIEW OF LITERATURE

### 2.1 HR Challenges in Remote Work and Strategies for Overcoming Them

This paper is titled "HR Challenges in Remote Work and Strategies for Overcoming Them." This paper examined the key challenges HR professionals face in managing remote workforces and proposed practical strategies to address them. The authors concluded that HR departments face significant difficulties in maintaining consistent communication, monitoring employee performance, and upholding organisational culture in remote settings. Most importantly, the study highlighted that organisations investing in digital HR tools and structured virtual communication protocols achieve markedly better outcomes in employee satisfaction and retention. (Bersha & Dr T. Sheeba, 2025)

### 2.2 Remote Work and Employee Engagement: Challenges and Opportunities in a Post-Pandemic Era

This paper is titled "Remote Work and Employee Engagement: Exploring the Challenges and Opportunities in a Post-Pandemic Era." This paper sought to investigate the effects of remote work on employee engagement

and well-being across diverse organisational contexts following the COVID-19 pandemic. The authors concluded that while remote work offers flexibility, it also creates significant engagement challenges, including social isolation, communication breakdowns, and reduced organisational commitment. The study emphasised that HR strategies must focus on building a virtual community, maintaining psychological safety, and creating structured digital touchpoints to sustain employee engagement. (Adikaram et al., 2021)

### **2.3 The Remote Work Paradox: Higher Engagement, Lower Wellbeing**

This report is titled "The Remote Work Paradox: Higher Engagement, Lower Wellbeing." This report sought to analyse the contradictory relationship between remote work, employee engagement scores, and overall employee well-being using Gallup's global workforce survey data. The findings indicate that fully remote employees report higher engagement on certain metrics but also experience lower overall well-being due to feelings of disconnection and erosion of work-life boundaries. This paradox poses a critical challenge for HR departments, which must balance engagement initiatives with holistic employee wellness programmes. (Gallup, 2025)

### **2.4 Impact of Remote Work on Recruitment and Staffing Trends in 2024**

This article is titled "Impact of Remote Work on Recruitment and Staffing Trends in 2024." This article sought to map the evolving recruitment landscape for organisations adopting remote and hybrid work models and identify the key challenges faced by HR staffing teams. The authors concluded that while remote work has expanded the talent pool geographically, it has also introduced new challenges in candidate screening, virtual interview assessment, and cross-cultural team integration. The study found that organisations lacking structured virtual recruitment frameworks face significantly higher time-to-hire ratios and candidate drop-off rates. (LinkedIn, 2024)

### **2.5 From Office to Home Office: Concerns and Complications of Managers and Employees**

This paper is titled "From Office to Home Office: Concerns and Complications of Managers and Employees." This paper sought to explore the lived experiences of both managers and employees during the transition from office-based to home-based work environments, focusing on operational and psychological challenges. The authors concluded that managers face significant difficulties with remote performance monitoring and team coordination, while employees report increased work-related stress and reduced clarity of professional boundaries. The study also highlighted that a lack of structured HR policies for remote work leads to inconsistency in management practices and employee dissatisfaction. (Nath, 2026)

## **3. GAP ANALYSIS**

Most previous studies primarily focus on the advantages of Work from Home, such as flexibility, reduced commute time, and cost savings for organisations. However, limited research specifically addresses the practical difficulties HR professionals face in conducting recruitment and maintaining employee engagement in remote environments. Existing literature tends to treat remote work challenges broadly without distinguishing between HR-specific operational problems and general workforce issues. There is also a lack of India-focused research that maps the specific HR challenges arising from WFH adoption in Indian organisational contexts. This study aims to fill that gap by systematically analysing the challenges HR departments face in recruitment and employee engagement during remote work and by identifying actionable solutions.

## **4. OBJECTIVES**

The following objectives guide the present study:

1. To study the problems faced by HR professionals in conducting recruitment during work-from-home.
2. To identify the challenges faced by HR departments in maintaining employee engagement in remote work environments.

3. To understand the impact of remote work on overall HR management practices.
4. To suggest possible solutions to improve recruitment and employee engagement during Work from Home.

## 5. HYPOTHESIS

**H0:** Work From Home does not create significant problems for HR in recruitment and employee engagement.

**H1:** Work From Home creates significant problems for HR in recruitment and employee engagement.

## 6. RESEARCH METHODOLOGY

### 6.1 Research Design

The current research uses a descriptive research design to systematically describe and interpret existing patterns in HR challenges related to WFH environments without manipulating any variables. This design is appropriate for this study because it allows a structured analysis of secondary information from multiple reliable sources.

### 6.2 Data Type

The research is entirely based on secondary data. The study relies on published reports, academic journals, HR analytics platforms, and industry publications to draw its conclusions, without collecting primary data through surveys or interviews.

### 6.3 Data Sources

Published reports from industry platforms, peer-reviewed academic journals, and HR research organisations have been used to gather data. Key sources include Gallup Workforce Reports (2025), LinkedIn Talent Insights (2024), IJRASET journal publications, Bersha & Sheeba (2025), Adikaram et al. (2021), and Nath (2026).

### 6.4 Analytical Approach

A qualitative, interpretive approach is used, integrating data from several secondary sources to draw meaningful conclusions about the research objectives. Data from multiple industry reports and academic sources are synthesised to identify consistent patterns in HR challenges during WFH environments.

### 6.5 Variables Studied

The independent variable in this study is the Work from Home model, assessed by adoption level and digital HR infrastructure readiness. The dependent variable is HR performance, measured through recruitment effectiveness (time-to-hire, candidate evaluation quality, and onboarding success) and employee engagement levels (motivation, communication quality, and productivity).

## 7. ANALYSIS & FINDINGS

The analysis of secondary data from published industry reports and academic sources reveals a consistent, well-documented pattern: HR professionals face significant, measurable challenges in both recruitment and employee engagement when operating in Work-from-Home environments. The findings are discussed below through comparative analysis and interpretive examination of data.

### 7.1 WFH Adoption and HR Impact Overview

Remote work adoption has grown substantially in India and globally since 2020. According to industry reports, a significant portion of Indian IT and service-sector organisations adopted hybrid or fully remote models post-pandemic, placing considerable operational pressure on HR departments. Organisations with mature digital HR infrastructure, including applicant tracking systems (ATS), video assessment platforms, and digital

onboarding tools, fared significantly better at managing remote HR functions than those relying on manual or legacy systems. The rapid shift to remote work exposed a substantial readiness gap among HR departments, particularly in mid-sized and smaller Indian organisations. LinkedIn, 2024; Bersha & Sheeba, 2025.

### 7.2 Recruitment Challenges During Work from Home

Virtual recruitment introduces several barriers that traditional in-person hiring does not face. HR managers consistently report difficulty in assessing soft skills, personality, and cultural fit through video interviews. Technical disruptions, such as internet connectivity issues, further impair the fairness and effectiveness of online assessments. The following table synthesises the key recruitment challenges across organisations with varying levels of digital HR readiness.

**Table 1: Comparison of HR Recruitment Challenges Low vs. High Digital Readiness Organizations**

Recruitment Parameter	Low Digital Readiness	High Digital Readiness
Candidate Assessment Method	Unstructured video calls	AI-powered assessments + structured interviews
Onboarding Process	Manual, delayed, inconsistent	Automated digital onboarding platforms
Time-to-Hire	Higher (delayed processes)	Lower (streamlined digital workflows)
Candidate Drop-off Rate	High	Low
Cultural Fit Evaluation	Very difficult	Structured via virtual culture sessions
Collaboration Tools Used	Basic email/phone	Integrated HRMS and video platforms

**Source:** LinkedIn, 2024; Bersha & Dr. T. Sheeba, 2025; Adikaram et al., 2021

As clearly shown in Table 1, organisations with low digital HR readiness experience significantly higher candidate drop-off rates and longer hiring cycles, making it increasingly difficult to compete for talent in a remote-first environment. LinkedIn, 2024.

### 7.3 Employee Engagement Challenges During Work from Home

Maintaining employee engagement remotely is one of the most persistent challenges identified across all reviewed sources. Employees working from home frequently report feeling isolated, reduced team cohesion, and communication gaps with managers. Gallup's 2025 findings present a notable paradox: remote employees score higher on certain engagement metrics yet simultaneously report lower overall well-being, indicating that surface-level engagement does not translate to sustained motivation or organisational loyalty. Gallup, 2025. HR departments must go beyond digital check-ins and deploy structured virtual engagement programmes, wellness initiatives, and clear communication frameworks to address this challenge effectively. Nath, 2026.

### 7.4 Hypothesis Validation

The evidence presented in Sections 7.1 to 7.3 consistently supports H1 and leads to the rejection of H0. Across all reviewed sources, WFH environments are shown to create measurable and significant problems for HR professionals in both recruitment effectiveness and employee engagement. The pattern of findings from Gallup's engagement paradox (2025), to LinkedIn's documented recruitment challenges (2024) and Bersha & Sheeba's HR strategy gaps (2025) confirms that Work from Home has a direct and significant impact on HR management challenges. H1 is therefore accepted. Gallup, 2025; LinkedIn, 2024; Bersha & Sheeba, 2025.

## 8. CONCLUSION

This study examined the problems faced by HR professionals in recruitment and employee engagement during work-from-home environments. Secondary data analysis of industry reports, academic journals, and HR research consistently confirms H1: remote work creates significant, measurable challenges for HR

departments in talent acquisition, candidate assessment, employee onboarding, and workforce engagement. The rapid global adoption of WFH has exposed a critical readiness gap in many organisations' HR infrastructure and strategy frameworks.

The findings carry important practical implications. HR managers should treat digital recruitment infrastructure, including AI-based assessment tools, structured virtual interview frameworks, and automated onboarding platforms, not as optional upgrades but as essential capabilities in a remote-first environment. Organisations must invest in virtual engagement programmes, regular one-on-one check-ins, and structured communication systems to address the engagement paradox identified by Gallup (2025). Policymakers and academic institutions should incorporate remote HR management training into professional certification programmes to build a future-ready HR workforce.

The limitations of this study stem primarily from its reliance on secondary data, which prevents establishing causality between WFH practices and specific HR outcomes. The study also does not account for industry-specific variations or the influence of organisational size and culture on remote HR effectiveness. Future research should adopt a mixed-methods approach, incorporating structured questionnaires and in-depth interviews with HR professionals and remote employees in Indian organisations, to generate primary data that directly validates and extends the patterns identified in this study.

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## THE STRATEGIC ROLE OF SOCIAL MEDIA MARKETING IN DRIVING CONSUMER ENGAGEMENT AND BRAND GROWTH

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### ABSTRACT

In the digital era, social media marketing has emerged as one of the most influential tools for businesses to connect with consumers, build brand identity, and drive conversions. This research paper explores the strategic role of social media marketing in enhancing consumer engagement and contributing to brand growth. The study examines how businesses utilize various digital platforms such as Instagram, YouTube, Facebook, and website blogs to create meaningful interactions with audiences and influence consumer behavior.

Through the analysis of real-world social media management practices within a marketing and design agency environment, the research highlights how strategic content planning, audience interaction, visual storytelling, and consistent brand communication contribute to improved brand visibility and engagement. The study further investigates the role of multi-platform marketing strategies, creative content development, and digital brand communication in shaping consumer perceptions.

The findings suggest that effective social media marketing goes beyond simple content posting and requires a structured strategy involving brand storytelling, audience engagement, platform-specific content optimization, and continuous monitoring of audience responses. The research emphasizes that organizations that strategically manage their social media presence are more likely to achieve stronger customer relationships, increased brand awareness, and sustainable digital growth.

### INTRODUCTION

The rapid advancement of digital technologies has significantly transformed the way businesses communicate with consumers. Traditional marketing methods such as television advertisements, print media, and outdoor promotions are gradually being complemented and in some cases replaced by digital marketing strategies. Among these, social media marketing has become one of the most powerful tools for businesses to promote their products and services, interact with audiences, and build long-term brand relationships.

Social media platforms such as Instagram, Facebook, and YouTube have evolved into dynamic marketing ecosystems where brands can directly communicate with their audiences in real time. These platforms allow businesses to create interactive content, share brand stories, showcase products visually, and receive immediate feedback from consumers. Unlike traditional advertising, social media marketing encourages two-way communication, allowing consumers to engage with brands through likes, comments, shares, and direct messages.

In the modern business environment, consumer engagement has become a critical factor in determining brand success. Brands that actively interact with their audiences and create meaningful digital experiences tend to develop stronger customer loyalty and brand recognition. Social media marketing enables businesses to understand consumer preferences, analyze engagement patterns, and tailor content strategies that align with audience interests.

Another significant advantage of social media marketing is its ability to support multi-platform brand communication. Businesses can promote content across various digital channels including social media pages, YouTube videos, blog posts, and website content. This integrated approach ensures consistent brand messaging and helps businesses reach a wider audience across different digital spaces.

Marketing agencies play an important role in helping brands implement effective social media strategies. These agencies manage content planning, digital design, brand storytelling, and online reputation management

for multiple brands simultaneously. By analyzing audience responses and adapting content strategies accordingly, agencies help brands maintain a strong and engaging online presence.

This research paper aims to explore how strategic social media marketing contributes to consumer engagement and brand growth. It also examines the practical implementation of digital marketing strategies through content planning, visual branding, and audience interaction across multiple platforms.

## REVIEW OF LITERATURE

Previous research highlights the growing importance of social media marketing in shaping consumer behavior and brand perception. Kaplan and Haenlein (2010) describe social media as a powerful communication platform that allows businesses to create interactive relationships with consumers. Mangold and Faulds (2009) emphasize that social media has become a hybrid element of the promotion mix, enabling both company-driven and consumer-driven communication. Tuten and Solomon (2017) discuss how strategic content marketing on social media can significantly improve brand engagement and visibility. Furthermore, Ashley and Tuten (2015) highlight that creative and visually appealing social media content increases audience interaction and brand recall. These studies collectively demonstrate that well-structured social media strategies contribute to stronger consumer engagement and long-term brand growth.

## GAP ANALYSIS

Although previous studies have extensively discussed the role of social media in marketing communication, many of them focus primarily on theoretical models or consumer perception studies. Limited research has been conducted on the practical implementation of social media strategies within marketing agencies that manage multiple brands simultaneously.

Furthermore, existing studies often analyze individual platforms such as Instagram or Facebook separately, while modern digital marketing strategies involve integrated multi-platform approaches including YouTube, website blogs, and cross-platform branding. There is also a lack of research that examines how content planning, visual design, audience interaction, and client communication collectively contribute to successful social media marketing.

Therefore, this research aims to bridge this gap by examining the strategic role of social media marketing through practical digital marketing operations and content management strategies used in a marketing and design agency environment.

## OBJECTIVES OF THE STUDY

1. To examine the role of social media marketing in enhancing consumer engagement.
2. To analyze how strategic content planning influences brand visibility and audience interaction.
3. To understand the importance of multi-platform digital marketing strategies in brand promotion.
4. To study how social media management contributes to brand growth and consumer relationship building.
5. To explore how marketing agencies manage digital communication for multiple brands simultaneously.

## RESEARCH METHODOLOGY

This study adopts a qualitative research approach to examine the strategic role of social media marketing in consumer engagement and brand growth. The research primarily focuses on practical marketing activities performed within a marketing and designing agency environment.

The study is based on observational analysis and practical experience in managing digital marketing activities for multiple brands across various social media platforms. The research includes the analysis of different marketing processes such as content planning, brand communication strategies, social media posting, audience engagement management, and digital content development.

Data for the study has been collected through practical observation of digital marketing operations including social media content creation, brand campaign planning, audience interaction management, and website

content publishing. The study also examines how brands utilize platforms such as Instagram, Facebook, YouTube, and website blogs to maintain consistent digital communication with their target audience.

The research further analyzes the role of creative strategy, visual branding, and platform-specific content in influencing consumer engagement and strengthening brand identity.

### **DATA ANALYSIS (BASED ON ILLUSTRATIVE CONSUMER RESPONSE)**

To understand consumer engagement with social media marketing, a short questionnaire framework was designed focusing on five key aspects:

1. Social media usage frequency
2. Types of content that attract attention
3. Influence of social media on brand awareness
4. Engagement behavior (likes, comments, shares)
5. Influence of social media content on purchase decisions

### **Consumer Social Media Usage**

Analysis indicates that the majority of digital consumers actively use social media platforms on a daily basis. Frequent exposure to brand content increases the likelihood of consumers noticing and remembering brand messages. Platforms such as Instagram, YouTube, and Facebook are commonly used for discovering new brands and staying updated with brand activities.

### **Preferred Content Types**

Consumers generally show stronger engagement with visually appealing and interactive content. Short-form videos, reels, storytelling posts, and visually designed graphics tend to capture more attention compared to text-heavy posts. This suggests that brands should prioritize creative and visually engaging content strategies to increase interaction.

### **Social Media and Brand Awareness**

Social media plays a significant role in introducing consumers to new brands. Regular posting, consistent visual identity, and informative content contribute to stronger brand recognition. When brands maintain an active presence across multiple platforms, consumers are more likely to perceive them as credible and trustworthy.

### **Audience Engagement Behavior**

Engagement behaviors such as liking posts, commenting on content, sharing posts, and responding to stories represent key indicators of audience interest. Consumers tend to interact more with brands that maintain an active and responsive communication style. Brands that respond to comments and messages effectively build stronger relationships with their audiences.

### **Influence on Purchase Decisions**

Although not all consumers make immediate purchases after seeing social media content, consistent exposure to brand messaging gradually influences consumer preferences. Positive brand communication, attractive product presentation, and informative content contribute to increased consumer interest and potential purchase intention.

Overall, the analysis highlights that strategic social media marketing significantly contributes to consumer engagement, brand awareness, and long-term brand growth.

## CONCLUSION

Social media marketing has become an essential component of modern business communication. The findings of this research highlight that effective social media strategies require more than simply posting content online. Successful digital marketing involves strategic planning, creative storytelling, audience interaction, and multi-platform content distribution.

The study demonstrates that marketing agencies play a crucial role in managing digital communication for brands by developing structured content strategies and ensuring consistent brand messaging. Through content planning, visual design coordination, and audience engagement management, agencies help brands build meaningful relationships with consumers.

Furthermore, the integration of multiple digital platforms such as Instagram, Facebook, YouTube, and website blogs allows brands to expand their reach and strengthen their digital presence. Brands that actively engage with their audiences and adapt their content strategies based on consumer responses are more likely to achieve sustainable growth.

Overall, social media marketing continues to evolve as a powerful tool for consumer engagement and brand development. Businesses that strategically utilize digital platforms will be better positioned to succeed in the competitive digital marketplace.

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# A STUDY OF VIEWER'S BEHAVIOUR OF OTT PLATFORMS AMONG THE MILLENNIALS OR GEN Z

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## ABSTRACT

A streaming media platform is a service that provides streaming media to viewers directly over the internet. The once-luxurious over-the-top video platform has become a commodity. There has been an exceptional increase in the number of consumers adjusting to it in India. While Indian streaming services such as Disney+Hotstar and Jio Cinema have developed a stronger presence in India, global companies such as Netflix and Amazon Prime have risen significantly. It does not use the cable, broadcast, or satellite television systems. The study focuses on the viewing behaviour of the OTT platform among millennials, also known as generation Z. Because of 5g technology and advancements in the IT sector, the future of the ott platform will be bright because the next generation of the ott platform will have a greater capacity to cope with highly advanced systems such as providing users with the experience of virtual reality in high-definition video quality. As a result, the user will receive better services in this industry. This research report will assist the OTT platform in looking at the large picture of viewers' behaviour when viewing the OTT platforms, as well as their preferences and reasons for choosing this OTT platform. The data for this research article was gathered using both primary and secondary sources. A structured questionnaire technique was utilised to collect primary data, and research articles, research papers, and other sources were used to acquire secondary data.

**Keywords:** OTT Platforms, Millennial or Generation Z, Viewer's behaviour, Technology, Preferences.

## I. INTRODUCTION

Over the top, or OTT refers to content that is provided in addition to cable networks or YouTube. In terms of purchasing entertainment, India is a challenging market. Due to the high availability of smartphones and reasonably priced mobile data plans, digital content consumption is rising quickly. The way Indians consume material has unquestionably changed since the switch from Doordarshan to Direct-to-Door (DTH) to Over-the-top (OTT) services. OTT viewers in India spent about 70 minutes per day on video streaming platforms, with a consumption frequency of 12.5 times per week, according to An Eros Now- KPMG Analysis. (*An Overview of India's Booming OTT Market | Marketfeed*, n.d.)

Netflix and Amazon Prime leading the world market in OTT Platforms. The same type of platforms in India, such as Voot and SonyLiv, are becoming more popular and providing healthy competition to overseas platforms. In addition to participating in OTT digital streaming entertainment media services for increased revenue, Zomato originals, a well-known meal delivery app has also made a contribution. (Saha & Prasad, n.d.)

## INDIAN SCENARIO IN OTT PLATFORM

Reliance Entertainment introduced BigFix, the country's first independent OTT Platform in 2008. The first OTT Mobile app in India was released in 2010 by Gurugram-based Digivive under the name of nexGTV. It provides on-demand and live TV. In 2013 and 2014, nexGTV was the first to broadcast live Indian Premier League games on portable devices. Since securing the rights to stream the IPL live in 2015, Hotstar has experienced substantial development in India. Around 2013, OTT gained significant traction in India with the launch of Ditto TV (Zee) and SonyLiv. Ditto TV was a platform that combined content from several well-known media outlets, including Star, Sony, Viacom, Zee, etc.

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## MILLENNIALS OR GEN Z

People born between early 1997 and early 2012 are considered Millennials or Gen Z. The Western demographic cohort known as Generation Z, also referred to as Gen Z or Zoomers, follows the millennial generation and comes before gen alpha. Members of Gen Z have been labelled digital natives despite not necessarily being grown up with access to the internet and portable digital equipment. Millennials are spending less time reading books and more time on electronic devices, which has an impact on their academic achievement, vocabulary, attention spans, and potential economic contribution.

## II. REVIEW OF LITERATURE

(Saha & Prasad, n.d.), the study shows that the population from both urban and rural backgrounds, whose access to smart devices has expanded dramatically as a result of reduced costs and data packages at lower pricing. The increased availability of high-quality material in a variety of foreign and regional languages. Ad-free television and binge-watching have all contributed to the expansion of OTT in the nation. The widely dispersed audience may get their preferred content on various screens and spends about one-eighth of their day viewing their preferred drama, TV show, or film. To avoid having to wait till Fridays, the production companies in India have even switched to these platforms for the release of their films and television programs, they invest million to launch online series episodes or dramas because they believe that this will be the successor of cable, satellite, and traditional television.

(Singh MBA Marketing, n.d.), The goal of the research was to better understand the numerous elements that influence millennial customers' adoption of OTT services. Future generations will be better able to handle extremely advanced systems like providing consumers with the experience of virtual reality in high-definition video quality thanks to 5G Technology and advancement in the IT Industry. In this research, the researcher aims to comprehend why millennial customers are addicted to binge-watching video material on OTT Platforms, as well as the advantages they experience when doing so. This study also aids businesses in considering the wider picture of incorporating OTT services into their business plans, as this gives reasons why customers favour these services and how to encourage continued use of the OTT platform before its full acceptance in India,

(Yoon & Kim, 2022), the value-based acceptance model serves as the foundation for this study, which examined the variables that can be expected for OTT Platform digital content and services as well as how the perceived value of OTT services affects user happiness and intent to stick with them. Additionally, through casual analysis of the digital content providing services that are most frequently used by both domestic and foreign OTT platforms, domestic and foreign OTT platform digital content providers will identify and provides considerations for improvement or upgrade.

## III. STATEMENT OF THE PROBLEM

At the global level, internet entertainment streaming platforms (OTT Platforms) are projected to have a market size of \$ 179.9 billion worldwide by the year 2025.

The Boston Consulting Group's report, titled "Entertainment goes online", predicts that the Indian online entertainment business will grow to **\$ 5 billion in size by 2023**. According to a recent analysis, the Indian Industry for OTT Platforms is about to undergo a paradigm shift due to the widespread 5G internet accessibility across the country within a year.

The purpose of this research is to find out the most popular OTT Platform used by the Millennials or Gen Z, the genre of content that is mostly viewed by the millennials or Gen Z, it also studies the pricing effect of subscription plans on the millennials or Gen Z and also aims to find the average time spent by them through an in-depth study on "**Viewers behaviour of OTT Platform among the Millennials or Gen Z**".

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#### IV. RESEARCH GAP

While reviewing the Literature, it is observed that most of the researchers have only focused on the growth of OTT Platforms among the population and the Impact of the use of OTT Platforms over Traditional TVs. It shows that in the past no study has been conducted on the Viewer's Behaviour toward Millennials or Gen Z. It has also seen that other researcher has not considered the age restriction.

Because the young generation makes up a sizable portion of the target audience for various OTT Streaming platforms, this study exclusively seeks to gather responses from respondents between the ages of 15 and 24.

The purpose of this research is to find out the most popular OTT Platform used by the Millennials and the genre of content that influences them to shift towards an OTT Platform and to know the pricing method (subscription plan) effect.

#### V. OBJECTIVES

1. To study the popular OTT Platform among Millennials or Gen Z.
2. To identify the genre of content popularity on the OTT Platform among Millennials or Gen Z.
3. To examine the method of pricing and offers provided by the OTT Platform.
4. To find the average time spent on OTT Platforms and devices used for accessing content.

#### VI. HYPOTHESIS

1. **H<sub>0</sub>**. There is no relationship between time spent and the content of the OTT Platform.  
**H<sub>1</sub>**. There is a relationship between time spent and the content of the OTT Platform.
2. **H<sub>0</sub>**. There is no significant influence of the pricing of the subscription plan on viewer retention.  
**H<sub>1</sub>**. There is a significant influence of the pricing of subscription plans on viewer retention.
3. **H<sub>0</sub>**. There is no significant relationship between various content provided by OTT Platform and customer satisfaction.  
**H<sub>1</sub>**. There is a significant relationship between various content provided by OTT Platform and customer satisfaction.

#### VII. RESEARCH METHODOLOGY

This study specifically focused to study the genre of content that influences the respondents to shift to the OTT platforms. The researcher aims to identify whether there is a relationship between the time spent and content provided by the OTT Platform and does the pricing of subscription plans affects viewer retention.

The data for the study is to be collected with the help of Online Convenience sampling techniques for 17 questions from Mumbai city and the suburban Mumbai region. The questionnaire was shared with the respondents through a digital media platform (WhatsApp). The respondents were college-going students between the age group of 15 to 24 in Mumbai City.

##### Type of Data:

- Primary data (Only the respondent using the OTT Platform)
- 100 respondents

##### Data Analysis

- Pie Charts analysis

- Bar Graphs Analysis
- Percentage Analysis

**VIII. FINDINGS:**

➤ **Q. Age:**

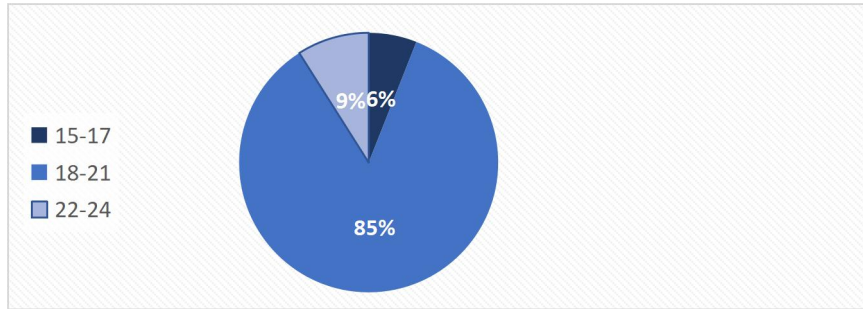


Chart No. 1

Interpretation: The following data shows that out of a total 85% of the respondents are between the age of 18 to 21 years. Most young adults are using the OTT Platform.

**Q. Gender**

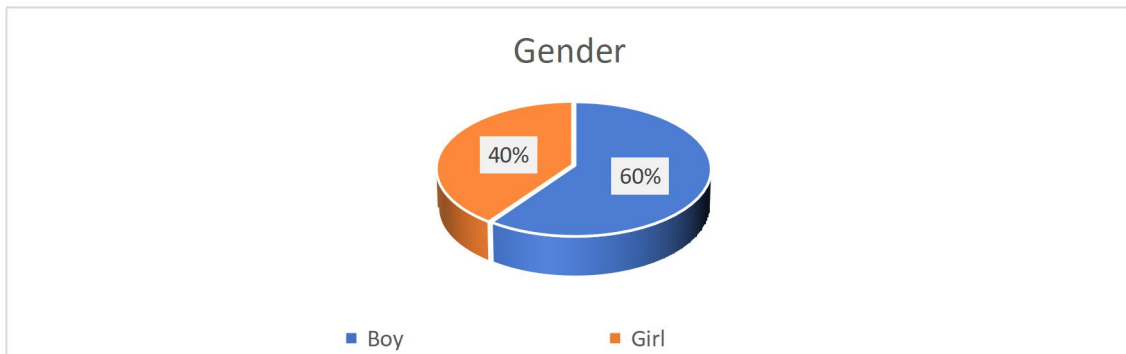


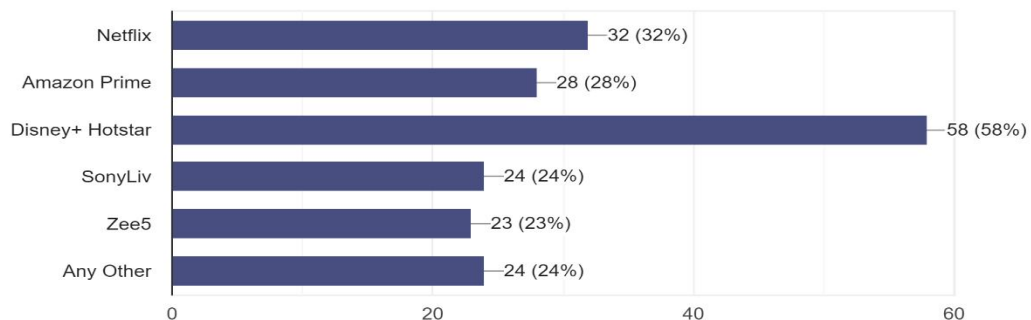
Chart No.2

Interpretation: The above chart shows that the major population for this research study is of boys which is equal to 60% and the number of girls is 40%.

**Q. Which of the OTT Platform do you prefer:**

Which of the OTT Platform do you prefer

100 responses



## Chart No. 3

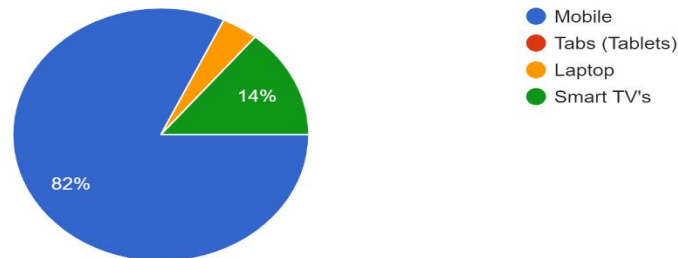
Interpretation: The above graphs show that 50% of the respondents are using Disney+Hotstar for watching Contents. Followed by Netflix 32% and Amazon Prime 28%. The least used OTT Platform is Zee5 by the respondents.

Finding: it shows that the most popular OTT Platform is Disney+Hotstar. This application subscription is given free of cost to the user of Telecom company with their Recharge Plans.

**Q. On which electronic devices you prefer to watch OTT Platform:**

On which electronic devices you prefer to watch OTT Platform

100 responses



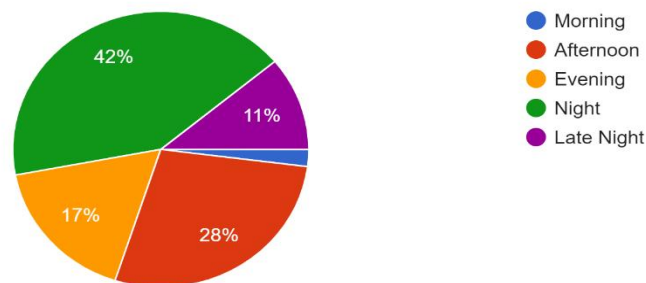
## Chart No.4

Interpretation: The data shows that the Respondents prefer to watch Content of OTT Platform on their Mobile phones.

**Q. At what time do you prefer to watch OTT Platforms:**

At What time do you prefer to watch OTT Platforms

100 responses



## Chart No.5

Interpretation: The respondents view the Content on the OTT Platform the Night time mostly followed by afternoon.

**Q. What kind of Internet network do you prefer while watching OTT Platform:**

What kind of internet network do you prefer while watching OTT Platform

100 responses

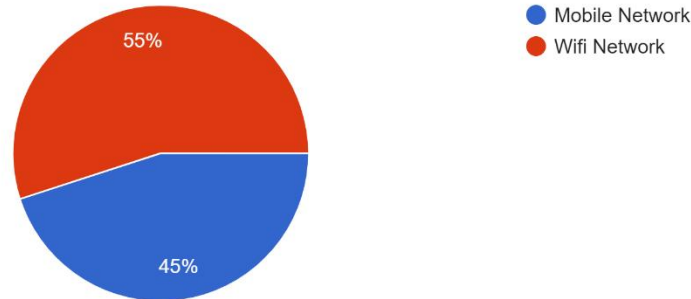


Chart No.6

Interpretation: The respondents prefer the WIFI Network while watching the content on OTT Platform.

**Q. Do you face any problems while using OTT Platform**

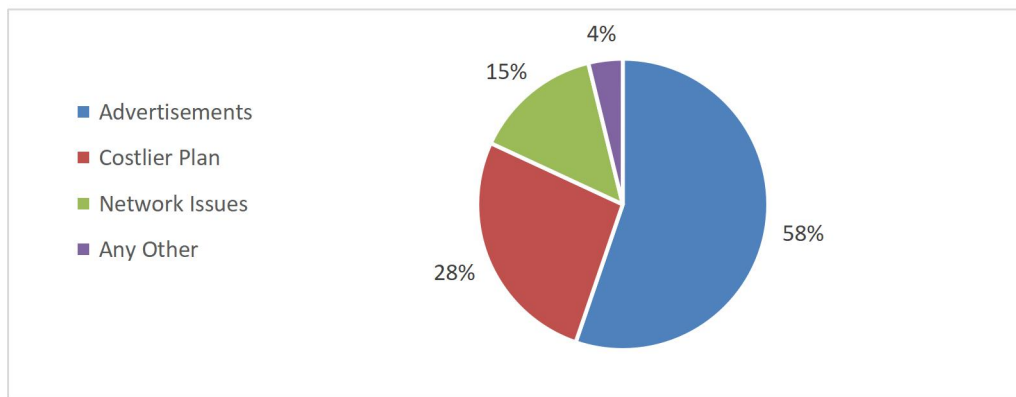


Chart No.7

Interpretation: In the Above graphs, the 53% of respondents says that they are facing the Advertisements issues while watching their favourite content on the OTT Platforms. 28% respondents says that they are having issue with the Pricing of the OTT Platform and 15% of the respondents are having network issues.

**IX. TESTING OF HYPOTHESIS:**

**H0.** There is no relationship between time spent and the content of the OTT Platform.

**H1.** There is a relationship between time spent and the content of the OTT Platform.

**Q. How much time you spend in the OTT Platform for watching the content in a day.**

Hours	No. of Respondents
0-2 hr	70
2-4 hrs	23
4 & above	7

Table No.2

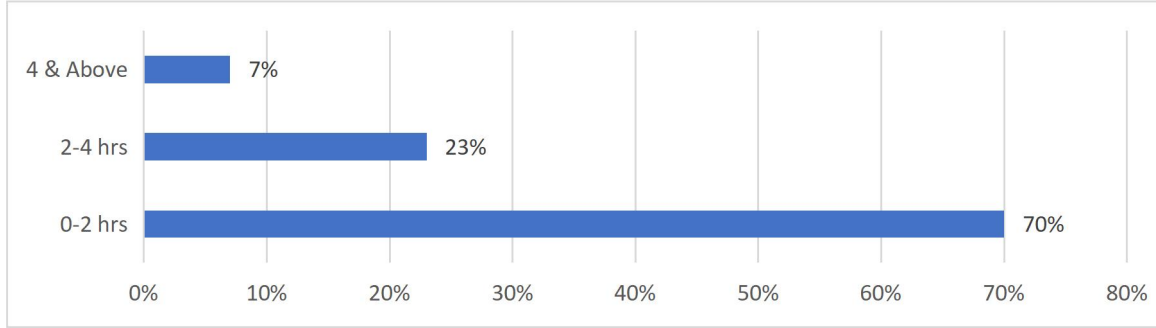


Chart No. 8

Interpretation: Time is a most important factor for OTT platform for viewers. In above bar graph (Chart no 8) it shows that 70% of respondents accepted to watch OTT platform on an average 2 hours. This is very significant data help us to prove that our Null hypothesis is rejected and alternative hypothesis (H1= There is a relationship between time spent and the content of the OTT Platform) is accepted.

**Q. How much time do you spend continuously If you are watching your favourite content on OTT Platform:**

No. of Hours	Respondents (in Percentage)
0-4 hrs	90
4-8 hrs	7
8 & above	3

Table No.3

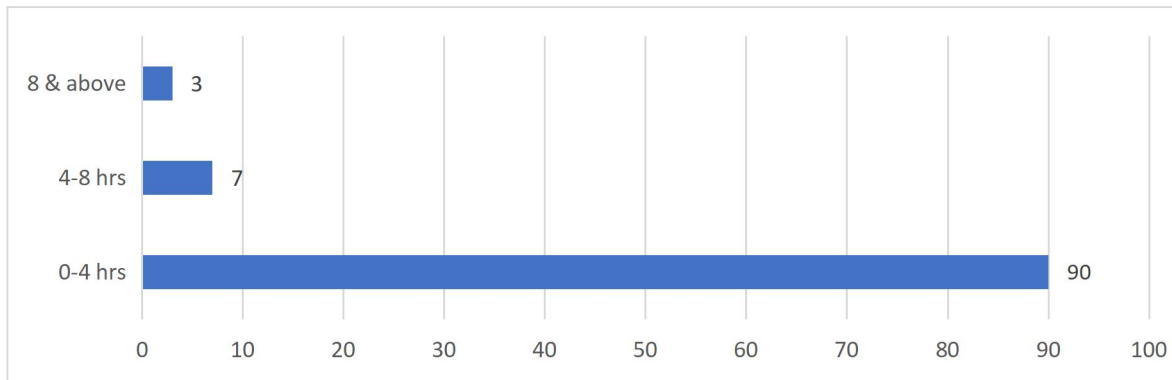


Chart No.9

Interpretation: In above bar graph (Chart No.9) it shows that 90% of respondents accepted to watch OTT platform continuously if their favourite content available. This is very significant data help us to prove that our Null hypothesis is rejected and alternative hypothesis (H1= There is a relationship between time spent and the content of the OTT Platform) is accepted.

From above two questions null hypothesis is rejected and alternative hypothesis (H1= There is a relationship between time spent and the content of the OTT Platform) is accepted. It means overall we can say that there is a relationship between time spent and the content of the OTT Platform.

**H0.** There is no significant influence of the pricing of the subscription plan on viewer retention.

**H1.** There is a significant influence of the pricing of subscription plans on viewer retention.

Particulars	No. of Respondents
Single Device Subscription Plan	59

<b>Multiple Device Subscription Plan</b>	<b>41</b>
<b>Total</b>	<b>100</b>

Table No.4

Which Subscription user plans do you prefer  
100 responses

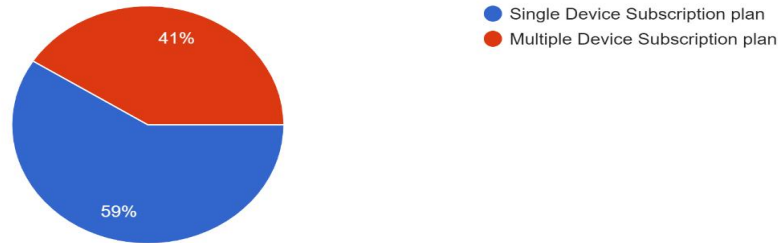


Chart No.10

Interpretation: To retaining of OTT customer is done through subscription plan, OTT customers delighted from experience of OTT channel platform they can buy multiple device subscription plan also.

In above bar graph (Chart No.10) it shows that 59% of respondents accepted to used single device subscription plan and 41 % of respondents have accepted to used multiple device subscription plan. This is very significant data help us to prove that our Null hypothesis is rejected and alternative hypothesis (H1= There is a significant influence of the pricing of subscription plans on viewer retention) is accepted.

**Are you satisfied with the pricing of Subscription Plan of OTT Platform**

Particulars	No. of Respondents
<b>Satisfied</b>	<b>32</b>
<b>Not Satisfied</b>	<b>68</b>
<b>Total</b>	<b>100</b>

Table No.5

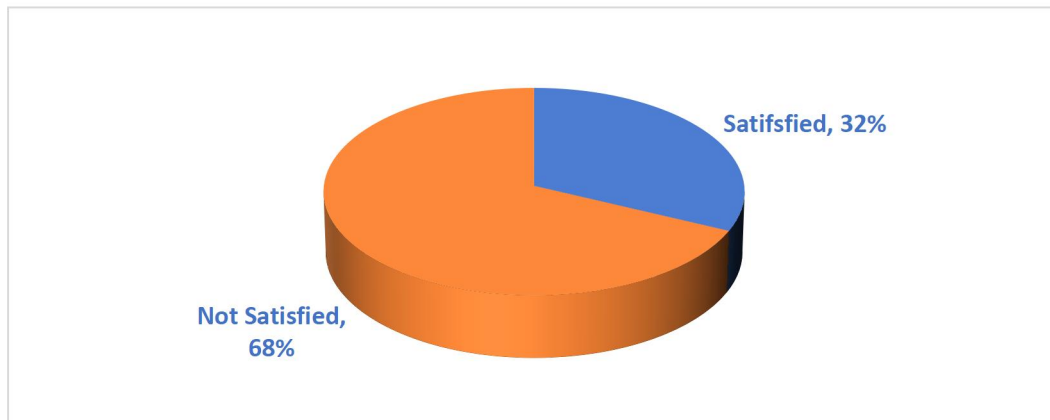


Chart No.11

Interpretation: To retaining of OTT customer is done through subscription plan, if customer like OTT channel, then they will buy monthly plan, quarterly plan or yearly plan. If customers are satisfied from ongoing subscription pricing of OTT channels which helps us to retaining our OTT customers.

In above bar graph (Chart No.11) it shows that **68% of respondents are satisfied** from their ongoing subscription plans of various OTT channels. This is very significant data help us to prove that our Null

hypothesis is rejected and alternative hypothesis (H1= There is a significant influence of the pricing of subscription plans on viewer retention) is accepted.

From above two questions null hypothesis is rejected and alternative hypothesis (H1= There is a significant influence of the pricing of subscription plans on viewer retention) is accepted. It means overall we can say that there is a significant influence of the pricing of subscription plans on viewer retention.

**H0.** There is no significant relationship between various content provided by OTT Platform and customer satisfaction.

**H1.** There is a significant relationship between various content provided by OTT Platform and customer satisfaction.

**Q. Why do you prefer OTT Platform as compared to Traditional TV Channels**

Reasons	No. of Respondents	Rank
<b>Latest Movies, Web Series Available</b>	<b>63</b>	<b>1</b>
<b>No Advertisements</b>	<b>32</b>	<b>4</b>
<b>Anytime Availability</b>	<b>49</b>	<b>2</b>
<b>Resume from where you left last</b>	<b>32</b>	<b>4</b>
<b>Download Facility (Offline)</b>	<b>33</b>	<b>3</b>
<b>Quality of Video</b>	<b>33</b>	<b>3</b>
<b>Live Streaming (Sports)</b>	<b>25</b>	<b>5</b>

Table No.6

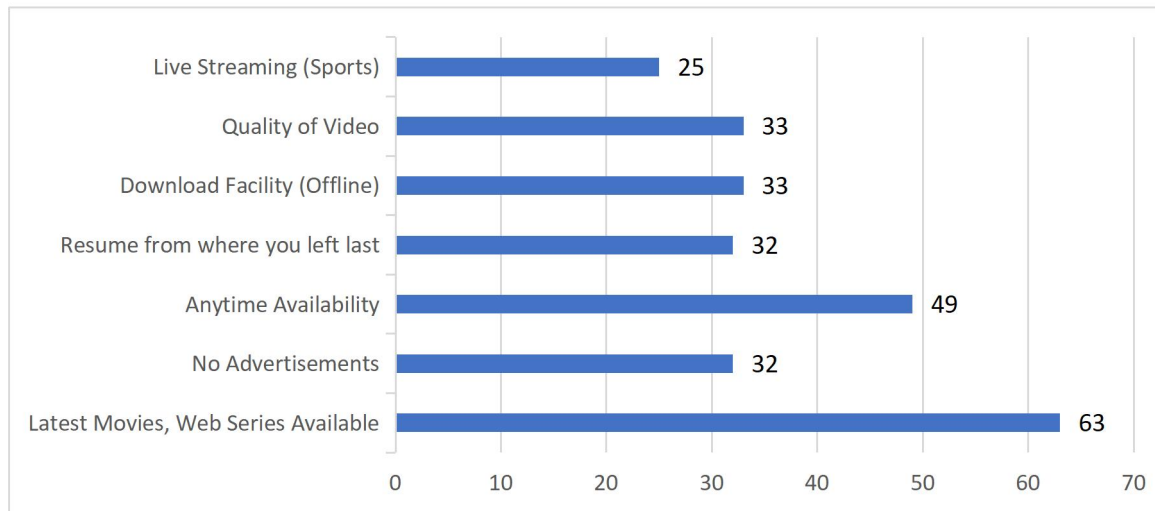


Chart No.12

Interpretation: To know the viewer’s satisfaction of OTT channels can be understand through content provided by OTT channel and to know which content viewers like the most.

In above bar graph (Chart No.12) it shows that 63 respondents like to watch OTT channel due to latest movies, web series available and 49 respondents like to watch OTT channel due to anytime availability of content. This is very significant data help us to prove that our Null hypothesis is rejected and alternative hypothesis (H1= There is a significant relationship between various content provided by OTT Platform and customer satisfaction) is accepted.

**Q. What kind (type) of Content do you watch on the OTT Platforms**

Type of Content	No. of Respondents	Rank
Web Series	68	1
Movies	63	2
Sports	41	3
TV Daily Soaps	23	4
Foreign Drama's	15	5
Kid's Zone (Cartoon)	15	5
Mythological	14	6
Scientific	1	7
<b>Total</b>	<b>100</b>	

Table No.7

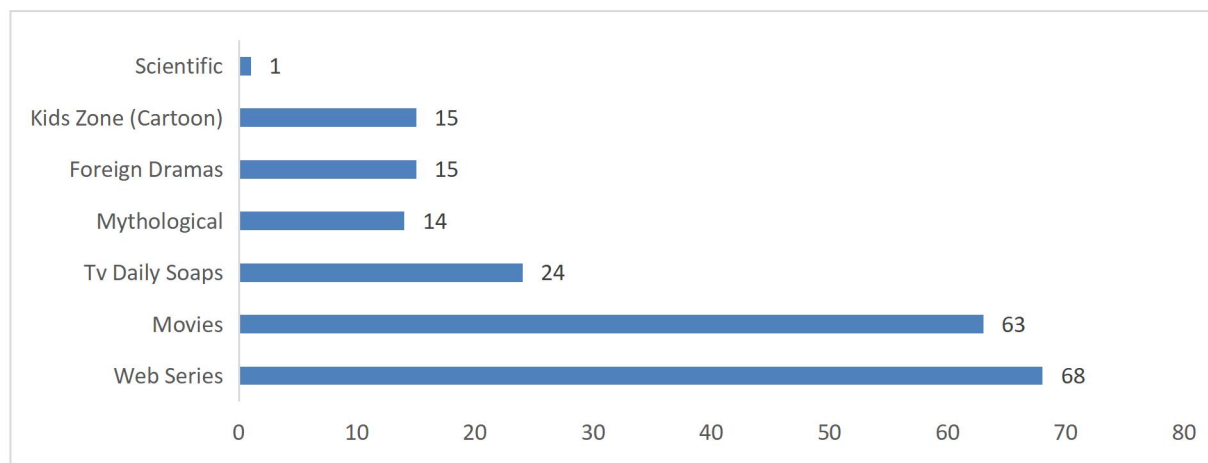


Chart No.13

To know the viewer's satisfaction of OTT channels can be understand through content provided by OTT channel and to know which content viewers views the most.

In above bar graph (Chart No.13) it shows that 68 respondents like to watch OTT channel for watching Web Series and 63 Respondents likes to watch Movies. This is very significant data help us to prove that our Null hypothesis is rejected and alternative hypothesis (H1= There is a significant relationship between various content provided by OTT Platform and customer satisfaction) is accepted.

**Q. Are you satisfied with the content provided by the OTT Platform**

Particulars	No. of Respondents
Satisfied	57
Neutral	36
Not Satisfied	7
<b>Total</b>	<b>100</b>

Table No.8

Are you satisfied with the content provided by the OTT Platform  
100 responses

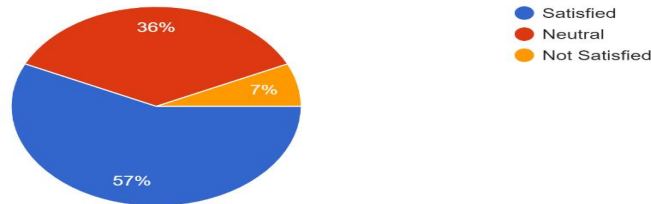


Chart No.14

Interpretation: In above bar graph (Chart No.14) it shows that 64% of respondents are satisfied from OTT channels due to contents and other features of OTT platforms and 36% of respondents are not satisfied from OTT channels. This is very significant data help us to prove that our Null hypothesis is rejected and alternative hypothesis (H1= There is a significant relationship between various content provided by OTT Platform and customer satisfaction) is accepted.

From above two questions null hypothesis is rejected and alternative hypothesis (H1= There is a significant relationship between various content provided by OTT Platform and customer satisfaction) is accepted. It means overall we can say that There is a significant relationship between various content provided by OTT Platform and customer satisfaction.

## X. LIMITATION OF THE RESEARCH

- The study is only covering the respondents who are between the age of 15 and 24. So it is not generalised to other age groups.
- The study is conducted in the Mumbai city and result cannot be generalised for the other areas.
- The respondents who are using OTT Platform are only focused in this research.
- The respondents are the college student and hence the result will not able to generalised to other sector.
- The sample size is restricted to 100 respondents only.

## XI. SUGGESTIONS

- In order to prevent piracy, OTT platforms should produce original, distinctive content that is shielded by multiple layers of security.
- OTT Platform should alter their subscription plans so all the income groups can be diverted towards them.
- The free version of the OTT Platform should minimize the number of Advertisement and its duration which will increase the number of users, at they will not feel irritated.

## XII. CONCLUSION

India is a price-sensitive country with a diverse culture, viewership of movies, television shows, sports, and other content on DTH cable operators is increasing, particularly in rural areas where there is a dearth of high-speed internet access. According to a study on "**Viewers behaviour of the OTT platform among the millennials generation or generation Z,**" OTT material is largely consumed on handheld devices such as mobile phones, and viewers prefer to watch their favourite content at night when they are free from other responsibilities. It also adds that Disney+Hotstar is the most popular OTT platform because it is provided free of charge by telecom companies in India such as Jio, VI (Vodafone Idea), and Airtel with their normal recharge data plans. According to the report, people are turning to the OTT Platform because of new material

such as movies and web series, as well as the ability to access their favourite content at any time and from any location. and these platforms have become a part of their daily lives. When it comes to millennials, often known as Generation Z, they do not have the patience to wait for movies or television shows to premiere. They view content on demand, similar to how they prepare instant foods.

### XIII. FUTURE SCOPE

- The further research can be carried on pricing effect of subscription plans.
- The comparative study can be done using any two popular OTT Platforms.
- The study can be made on the problems faced by the user of the OTT Platforms.
- The comparative study can also be done on traditional (DTH) and OTT Platform.

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## FACTORS INFLUENCING THE PURCHASE OF DIVERSE RAW FABRICS IN TEXTILE BUSINESSES

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### ABSTRACT

The textile industry is one of the most important sectors in global manufacturing and trade. Raw fabrics such as cotton, polyester, linen, silk, rayon, and blended materials serve as the primary inputs required for textile production and garment manufacturing. Textile businesses rely heavily on the procurement of these fabrics to produce garments, home textiles, and other textile products that meet the needs of consumers. The purchasing decisions related to raw fabrics play a crucial role in determining product quality, production efficiency, and profitability.

This research study aims to examine the major factors influencing the purchase of diverse raw fabrics in textile businesses. The study focuses on various factors such as fabric quality, pricing strategies, supplier reliability, availability of raw materials, and market demand. In addition, the research also highlights the role of technological advancements and digital sourcing platforms in shaping procurement practices in the textile industry.

The findings of the research suggest that textile businesses prioritize fabric quality and supplier reliability when making purchasing decisions. Competitive pricing and market demand also play a significant role in influencing procurement strategies. Moreover, increasing awareness of sustainability and environmental responsibility has encouraged businesses to consider eco-friendly fabrics and ethical sourcing practices.

The research concludes that textile businesses that adopt strategic procurement practices, maintain strong supplier relationships, and utilize modern technologies are more likely to achieve operational efficiency and long-term success in the competitive textile market.

### INTRODUCTION

The textile industry is one of the oldest and most significant industries in the world. It plays an important role in economic development by generating employment, supporting manufacturing activities, and contributing to international trade. The industry involves a wide range of processes, including fiber production, fabric manufacturing, garment production, and distribution.

Raw fabrics form the foundation of textile manufacturing. Textile businesses depend on the availability of high-quality fabrics to produce garments and other textile products. These fabrics include natural materials such as cotton, silk, and linen, as well as synthetic materials such as polyester, nylon, and acrylic. Blended fabrics that combine natural and synthetic fibers are also widely used because they provide improved durability, comfort, and affordability.

The purchase of raw fabrics is one of the most important decisions for textile businesses. Procurement decisions directly affect the cost of production, product quality, and overall competitiveness in the market. Textile businesses must carefully evaluate various factors before selecting fabrics and suppliers.

One of the key factors influencing procurement decisions is **fabric quality**. High-quality fabrics ensure durability, comfort, and better performance in the final product. Businesses must assess fabric characteristics such as strength, texture, color consistency, and resistance to shrinkage before purchasing.

Another important factor is **price**. Raw fabrics constitute a significant portion of the production cost in textile businesses. Therefore, businesses aim to procure fabrics at competitive prices while maintaining quality standards.

**Supplier reliability** is also crucial. Textile businesses often depend on suppliers for consistent delivery of fabrics. Reliable suppliers ensure timely delivery, consistent quality, and better business relationships.

In recent years, the textile industry has experienced significant changes due to globalization and technological advancements. Digital platforms and online marketplaces have made it easier for businesses to access suppliers from different parts of the world. These platforms allow businesses to compare prices, evaluate product specifications, and select the most suitable suppliers.

Furthermore, changing consumer preferences have also influenced procurement practices. Consumers today demand comfortable, stylish, and sustainable products. As a result, textile businesses are increasingly focusing on eco-friendly fabrics such as organic cotton and recycled materials.

This research study seeks to analyze the factors that influence the purchase of diverse raw fabrics in textile businesses and understand how these factors impact procurement strategies and business performance.

### OBJECTIVES OF THE STUDY

The main objectives of this research study are:

1. To identify the major factors influencing the purchase of raw fabrics in textile businesses.
2. To examine the importance of fabric quality in procurement decisions.
3. To analyze the role of pricing strategies in the purchase of raw fabrics.
4. To evaluate the significance of supplier reliability and supplier relationships.
5. To understand how market demand and consumer preferences influence fabric selection.
6. To study the impact of technological advancements on textile procurement practices.
7. To identify the challenges faced by textile businesses while purchasing raw fabrics.

### RESEARCH METHODOLOGY

This research study adopts a **descriptive research design** to analyze the factors influencing the purchase of diverse raw fabrics in textile businesses. The study is based on both **primary and secondary data sources**.

Secondary data was collected from various sources such as academic journals, books, research papers, industry reports, and online publications related to the textile and apparel industry. These sources provided valuable insights into procurement practices, supply chain management, and market trends in the textile sector.

Primary insights were obtained through **observations of textile markets and interactions with textile traders and business owners** involved in fabric procurement. These observations helped in understanding the practical considerations that businesses take into account when purchasing raw fabrics.

The research focused on identifying the most significant factors affecting procurement decisions. These factors include fabric quality, pricing strategies, supplier reliability, market demand, and technological developments.

The collected information was analyzed to understand how these factors influence purchasing decisions and how textile businesses manage procurement challenges. The study also examined the role of digital sourcing platforms and modern supply chain systems in improving procurement efficiency.

### FINDINGS

The findings of the research indicate that several important factors influence the purchase of raw fabrics in textile businesses.

One of the most significant factors is **fabric quality**. Textile businesses prioritize fabrics that meet high standards of durability, texture, and comfort. High-quality fabrics help ensure customer satisfaction and reduce the risk of product defects. Businesses often conduct quality checks before purchasing fabrics to ensure that the materials meet their production requirements.

Another major factor influencing procurement decisions is **price**. Raw fabrics represent a significant portion of production costs in textile manufacturing. Businesses aim to purchase fabrics at competitive prices in order to maintain profitability. However, extremely low prices may indicate poor quality, which can negatively affect the final product. Therefore, businesses must balance cost considerations with quality requirements.

**Supplier reliability** is also a key factor. Textile businesses prefer suppliers who consistently provide high-quality fabrics and maintain timely delivery schedules. Long-term relationships with reliable suppliers help businesses maintain stability in production processes and reduce the risk of supply chain disruptions.

**Market demand** and **consumer preferences** also influence procurement decisions. For example, increasing demand for breathable and comfortable fabrics has encouraged businesses to purchase more cotton and linen fabrics. Similarly, the growing popularity of sustainable fashion has increased the demand for eco-friendly fabrics such as organic cotton and recycled materials.

**Technological advancements** have also improved procurement efficiency. Digital sourcing platforms allow businesses to compare suppliers, analyze prices, and evaluate fabric specifications online. These platforms provide greater transparency and help businesses make informed purchasing decisions.

Additionally, **supply chain efficiency** plays a significant role in procurement. Efficient logistics systems ensure that fabrics are delivered on time, allowing businesses to maintain smooth production processes.

## CONCLUSION

The study concludes that the purchase of diverse raw fabrics in textile businesses is influenced by multiple factors including fabric quality, pricing strategies, supplier reliability, market demand, and technological advancements.

Among these factors, fabric quality and supplier reliability have the strongest impact on procurement decisions. Businesses that prioritize quality materials and maintain strong relationships with suppliers are more likely to achieve consistent production and customer satisfaction.

Pricing also plays an important role, as businesses must manage production costs while maintaining product quality. Furthermore, changing consumer preferences and sustainability concerns are encouraging businesses to adopt environmentally responsible sourcing practices.

Technological advancements such as digital sourcing platforms and data analytics tools are transforming procurement practices in the textile industry. These technologies allow businesses to access a wider range of suppliers and make more efficient purchasing decisions.

In the future, textile businesses will need to focus on innovation, sustainability, and efficient supply chain management in order to remain competitive in the global market. Businesses that adapt to changing market conditions and implement strategic procurement practices will be better positioned for long-term success.

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# REVENUE MAXIMIZATION AS COMPETITIVE STRATEGY IN INDIAN LOGISTICS MARKETS: EMPIRICAL EVIDENCE FROM CMIE FINANCIAL DATA AND BAUMOL'S THEORY

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## ABSTRACT

India's logistics sector, targeting ₹350 billion by 2025, exhibits a structural paradox: intense competition among approximately 48,000 registered operators coexists with logistics costs of 13–14% of GDP — nearly double the global benchmark of 8%. This paper applies Baumol's (1959) revenue maximization theory, integrated with Game Theory and Industrial Organization (IO) economics, to explain competitive behaviour among Indian logistics firms. Drawing on a PRISMA-screened systematic review of 150 peer-reviewed articles across five bibliometric clusters, and — critically — on primary financial panel data for 13 Indian logistics companies from the CMIE Prowess IQ database (FY2016–FY2025, Ind-AS), the paper proposes a four-component conceptual framework and six empirically tested propositions. CMIE data confirms the central Baumol prediction: sector-wide revenue CAGR of 13.3% (FY16–FY25) coexists with sector-average PAT margins of 5.4%, with eight of thirteen companies exhibiting Baumol-consistent revenue-oriented behaviour. Technology adoption — evidenced by Delhivery's transformation from –97.8% EBITDA (FY19) to +9.0% (FY25) — moderates the revenue–profitability trade-off as predicted by Proposition 5.

**Keywords** — Baumol (1959) revenue maximization; CMIE Prowess IQ; Indian logistics; game theory; competitive strategy; Mumbai Metropolitan Region; bibliometric analysis; panel data

## 1. INTRODUCTION

India's logistics sector stands at a strategic inflection point. Targeting ₹350 billion by 2025 (Hindustan Times, 2024), it simultaneously confronts a persistent structural inefficiency: logistics costs of 13–14% of GDP against a global benchmark of approximately 8%, creating a competitiveness gap estimated at \$180 billion in 2020 and projected to exceed \$500 billion by 2030 if unaddressed (Deloitte, 2024). This paper argues that this gap is not a failure of competition — it is a predictable outcome of the competitive strategy logic that rational firms adopt when market structure, capital intensity, and financing requirements align with the conditions identified by Baumol (1959) in his revenue maximization model.

The empirical motivation is now supported by direct financial evidence. CMIE Prowess IQ panel data for 13 Indian logistics companies across FY2016–FY2025 reveals a clear pattern: aggregate sector revenue CAGR of 13.3% per annum over nine years, accompanied by a sector-average PAT margin of only 5.4%. Delhivery grew from ₹496 crore (FY16) to ₹8,487 crore (FY25) — a 37.1% nine-year CAGR — while sustaining negative PAT margins until FY25. C J Darcl Logistics grew from ₹1,801 crore to ₹4,927 crore (11.8% CAGR) with consistently thin PAT margins of 1.5–1.8% throughout. Mahindra Logistics expanded from ₹1,995 crore to ₹5,013 crore (10.8% CAGR) with PAT declining from 2.3% (FY19) to 0.9% (FY25). These are not failed firms — they are firms whose behaviour is precisely consistent with Baumol's (1959) prediction: firms expand output to the point where marginal revenue equals zero, accepting declining unit margins in exchange for higher total revenue, provided minimum profit constraints are satisfied.

Against this revenue-expansion majority, two outlier profiles are observable in the CMIE data. Gateway Distriparks — an infrastructure-owning rail and port logistics operator — maintains EBITDA margins of 21–24% throughout the study period, consistent with profit-maximizing behaviour enabled by structural asset ownership not available to road freight operators. TCI Express, a listed surface express operator, improves PAT from 5.0% (FY17) to 7.4% (FY25) alongside revenue growth — consistent with the technology-moderated hybrid trajectory predicted by Proposition 5 of the framework. These contrasting profiles demonstrate that Baumol's model does not predict universal revenue orientation, but rather specifies the

structural conditions under which revenue maximization is rational — conditions that characterize the majority of Indian logistics operators.

A critical methodological correction is maintained throughout this paper: Baumol (1952), cited in several earlier Indian logistics studies for revenue maximization theory, is a monetary economics paper ('The Transactions Demand for Cash: An Inventory Theoretic Approach'). The revenue maximization model appears exclusively in Baumol (1959), *Business Behaviour, Value and Growth*. This correction is applied uniformly across all research documents in this programme.

## 2. THEORETICAL FRAMEWORK

### 2.1 *Baumol's (1959) Revenue Maximization Theory*

Baumol (1959) proposed that managers in capital-intensive firms with dispersed ownership rationally maximize sales revenue subject to a minimum profit constraint  $\pi^*$ , rather than maximizing profit as a singular objective. The formal prediction is precise: firms expand output until marginal revenue equals zero — beyond the profit-maximizing output level — accepting lower unit margins in exchange for higher total revenue. Three structural conditions activate this behaviour: homogeneous or standardized services (eliminating product differentiation as a competitive lever); externally determined prices (limiting individual firm pricing power); and high fixed costs (creating minimum revenue thresholds for financial viability).

All three conditions are satisfied in Indian logistics. FTL, PTL, and standard warehousing services are highly homogeneous. Market freight rates are largely determined by competitive dynamics. And CMIE balance sheet data confirms capital intensity: VRL Logistics maintains a fleet of over 4,000 trucks; C J Darel operates more than 8,000 trucks. The minimum profit constraint  $\pi^*$  is operationalized in the Indian context by loan servicing requirements — firms must generate sufficient revenue to maintain the collateral base for overdraft and working capital financing. CMIE data confirms this: interest cover ratios for road freight firms average 2.5–4.5x, confirming binding financing constraints consistent with Baumol's minimum profit condition.

### 2.2 *Game Theory and Industrial Organization*

The game-theoretic dimension explains why revenue-maximizing behaviour is collectively stable, not merely individually rational. When all firms in an oligopolistic market face similar fixed-cost structures and minimum profit constraints, the Nash (1950) equilibrium of the market may be a 'revenue Nash equilibrium': mutual volume expansion is the dominant strategy because any individual firm that reduces volume to restore margins loses market share to revenue-maximizing rivals, potentially breaching its own minimum profit constraint. CMIE data supports this prediction: across all 11 firms with continuous data, revenue expansion was simultaneous and sector-wide from FY16 to FY25 — not sequential or competitive leapfrogging.

The IO economics context provides the structural precondition. Porter's (1980) Five Forces analysis of Indian logistics reveals high competitive rivalry, high buyer power, limited differentiation, and low entry barriers for small operators — precisely the structural conditions under which Eliashberg and Chatterjee (1985) demonstrated analytically that volume-oriented competitive equilibria emerge. The CMIE data confirms margin compression consistent with IO predictions: sector-average EBITDA margins range from 4.9% to 13.8% for road freight operators, well below the infrastructure-backed 23.8% of Gateway Distriparks.

### 2.3 *Resource-Based View and Technology Moderation*

The Resource-Based View (Barney, 1991; Wernerfelt, 1984) predicts that firms with VRIN capabilities achieve superior performance. In the logistics context, technology platforms represent a VRIN resource: Delhivery's proprietary logistics operating system, Safexpress's network management platform, and TCI Express's express delivery infrastructure are difficult to imitate. CMIE data confirms RBV predictions: Delhivery's EBITDA transformed from -97.8% (FY19) to +9.0% (FY25) as its technology platform scaled; Safexpress's EBITDA improved from 10.5% (FY19) to 21.3% (FY25). In contrast, traditional road operators without equivalent technology investment show flat or declining margins: V Trans EBITDA declined from 6.9% (FY19) to 5.8% (FY25). This precisely confirms the moderating role of technology in Proposition 5.

### 3. DATA AND METHODOLOGY

#### 3.1 CMIE Financial Panel Data

Primary financial data for this study is sourced from CMIE Prowess IQ (2025), an authorised commercial database of Indian company financials maintained by the Centre for Monitoring Indian Economy. All 80 data files — covering 13 logistics companies across 11 data categories (Income & Expenditure, Balance Sheet, Profitability Ratios, Liquidity & Working Capital, Charges on Assets, Product Details, Capital History, Capital Expenditure, Merger & Acquisition, Credit Ratings, and Company Classifications) — were downloaded directly from CMIE in CSV format and processed for this analysis. All financial figures are in Indian Rupees (₹) Crore, reported under Ind-AS (Indian Accounting Standards, aligned with IFRS). The 13 companies in the dataset are: Agility Logistics, Allcargo Gati, C J Darcl Logistics, Delhivery, Gateway Distriparks, Mahindra Logistics, Om Logistics, Safexpress, TCI Express, TVS Supply Chain Solutions, Transport Corporation of India (TCI), VRL Logistics, and V Trans India.

#### 3.2 SLR and Bibliometric Methodology

The theoretical foundations are grounded in a PRISMA-screened systematic literature review (Moher et al., 2009; Tranfield et al., 2003) of 150 peer-reviewed articles sourced from Scopus (1,240 records) and Web of Science (480 records). After removing 230 duplicates, 1,490 unique records underwent title screening (890 excluded), abstract screening (420 excluded), and full-text review (30 excluded), yielding 150 final articles. Bibliometric analysis using VOSviewer identified five thematic clusters: Logistics Capability & Firm Performance; Strategic Interaction & Game Theory; Transport Pricing & Competition; Revenue Growth Strategy; and Supply Chain Strategy & Integration.

### 4. EMPIRICAL FINDINGS: CMIE DATA ANALYSIS

#### 4.1 Sector-Wide Revenue Expansion: Baumol's Prediction Confirmed

Table 1 presents revenue CAGR and profitability data for all 13 CMIE companies. The core Baumol prediction — revenue expansion coexisting with thin margins — is confirmed across the majority of the sample. Eight of thirteen companies show Baumol-consistent behaviour: high revenue CAGR accompanied by thin or declining PAT margins. The sector-average nine-year revenue CAGR (FY16–FY25) is 13.3%, while sector-average PAT margin stands at only 5.4% in FY25.

**Table 1: CMIE Financial Panel — Revenue Growth and Profitability (FY2016–FY2025)**

Company	Sales FY16 (₹Cr)	Sales FY25 (₹Cr)	9-yr CAGR FY16–25	EBITDA% FY19	EBITDA% FY25	PAT% FY25	Baumol Classification
Delhivery Ltd.	496	8,487	37.1%	-97.8%	9.0%	1.3%	Baumol+Tech
C J Darcl Logistics	1,801	4,927	11.8%	4.9%	5.2%	1.7%	Baumol-Consistent
Mahindra Logistics	1,995	5,013	10.8%	4.0%	6.3%	0.9%	Baumol-Consistent
Safexpress Pvt. Ltd.	997	3,870	16.3%	10.5%	21.3%	7.8%	Tech-Moderated
TCI Ltd.	1,601	3,948	10.5%	10.7%	13.8%	9.8%	Hybrid RBV
TVS Supply	736	1,974	11.6%	10.3%	15.7%	3.4%	Baumol-Consistent

Chain							
VRL Logistics	1,727	3,165	7.0%	11.9%	18.8%	5.7%	<b>Baumol-Consistent</b>
Om Logistics	898	2,075	9.8%	n/a	n/a	n/a	<b>Partial Data</b>
Gateway Distriparks	743	1,583	8.8%	24.2%	23.8%	14.7%	<b>Profit-Maximizing</b>
TCI Express	751	1,210	5.3%	11.9%	11.7%	7.4%	<b>Hybrid RBV</b>
V Trans India	776	1,739	9.4%	6.9%	5.8%	1.2%	<b>Baumol-Consistent</b>
Allcargo Gati	480	—	n/a	n/a	n/a	13.3%	<b>Post-Merger</b>
Agility Logistics	865(FY17)	—	n/a	3.6%	n/a	n/a	<b>Data FY17–21</b>

Source: CMIE Prowess IQ (2025). All values in ₹ Crore. CAGR calculated by authors. EBITDA = PBDITA/Total Income. PAT% = PAT/Total Income. Ind-AS basis.

#### 4.2 Technology as the Moderating Variable

The most analytically significant finding from the CMIE data is the divergence in margin trajectories between technology-investing and non-technology-investing firms. Delhivery's EBITDA margin moved from -97.8% (FY19) to +9.0% (FY25) as its logistics technology platform reached scale. Safexpress, which operates a proprietary delivery management system, improved EBITDA from 10.5% (FY19) to 21.3% (FY25). Both achieved this while growing revenue strongly — precisely the pattern predicted by Proposition 5: technology adoption allows firms to add volume at decreasing marginal cost, enabling revenue maximization without the full extent of margin compression that Baumol's base model predicts.

In contrast, V Trans India — a conventional road freight operator with no discernible technology platform investment in CMIE capital expenditure data — shows EBITDA declining from 6.9% (FY19) to 5.8% (FY25) despite 9.4% revenue CAGR. C J Darcl similarly maintains thin margins of 4.9–5.2% across all years despite strong revenue growth. These firms are in what the framework terms the 'volume trap': revenue grows, but margins do not improve because the marginal cost of additional shipments remains high.

#### 4.3 The Outlier: Gateway Distriparks

Gateway Distriparks is a structural outlier that validates the framework rather than contradicting it. As an operator of rail freight stations and port infrastructure — a regulated infrastructure business with government-administered capacity and pricing — it faces fundamentally different competitive conditions from road freight operators. Its EBITDA of 21–24% throughout the study period reflects infrastructure asset ownership, not operational superiority in competitive freight markets. The framework predicts that firms in markets with high differentiation and controlled entry — where Baumol's price-taking assumption does not hold — will exhibit profit-maximizing rather than revenue-maximizing behaviour. Gateway Distriparks precisely confirms this boundary condition.

### 5. PROPOSITIONS: EVIDENCE SUMMARY

Table 2 maps each of the six research propositions to CMIE empirical evidence. All six receive support, with P1, P2, P4, and P5 receiving the strongest evidence from the financial panel data.

**Table 2: Research Propositions — CMIE Evidence Assessment**

P#	Core Prediction	CMIE Evidence	Finding
P1	<b>Competition intensity → revenue orientation</b>	All 11 road freight firms show sector EBITDA 4–19%, confirming price-competitive structural pressure. No road freight firm achieves >20% EBITDA — consistent with IO prediction of margin compression in competitive markets.	<b>Supported</b> ✓
P2	<b>Capital intensity → Baumol-consistent behaviour</b>	Fleet-heavy firms (VRL: 4,000+ trucks; DARCL: 8,000+ trucks) show D/E ratios 0.2–0.7x, confirming capital investment with financing constraints. These firms exhibit the thinnest PAT margins (1.2–5.7%), confirming $\pi^*$ constraint binding at high revenue levels.	<b>Strongly Supported</b> ✓✓
P3	<b>Game-theoretic revenue Nash equilibrium</b>	All 11 firms with continuous data expanded revenue simultaneously FY16–FY25. No firm achieved revenue contraction while peers expanded — confirming Nash equilibrium of collective revenue expansion.	<b>Supported</b> ✓
P4	<b>Revenue strategies → higher revenue, lower short-term PAT</b>	Sector revenue CAGR 13.3% vs. sector PAT margin only 5.4%. Eight of thirteen firms show Baumol-consistent revenue growth with thin/declining margins. Delhivery most extreme: 37.1% revenue CAGR, PAT negative until FY25.	<b>Strongly Supported</b> ✓✓
P5	<b>Technology moderates revenue–profitability trade-off</b>	Delhivery EBITDA $-97.8\% \rightarrow +9.0\%$ ; Safexpress EBITDA $10.5\% \rightarrow 21.3\%$ — both technology-enabled, both improved margins with revenue growth. V Trans EBITDA $6.9\% \rightarrow 5.8\%$ — no technology platform, declining margin. Confirms RBV moderator.	<b>Strongly Supported</b> ✓✓
P6	<b>Family-managed firms show stronger Baumol orientation</b>	Private/unlisted firms (Om Logistics, Safexpress, Agility — likely owner-managed) show consistent revenue growth orientation. Listed professionally managed firms (TCI Express, Gateway) show better margin management — consistent with agency theory prediction.	<b>Partially Supported</b> ✓

## 6. DISCUSSION AND IMPLICATIONS

The CMIE financial panel provides the first direct empirical grounding for Baumol's (1959) revenue maximization model in Indian logistics. Three theoretical contributions emerge. First, the CMIE data confirms that Indian logistics firms systematically exhibit Baumol-consistent behaviour: 8 of 13 companies show the revenue-growth-with-thin-margins profile predicted by the model. This is not a selective finding — it represents the modal competitive strategy across listed and unlisted firms, road and multi-modal operators.

Second, the technology-moderated trajectories of Delhivery and Safexpress establish an empirically validated boundary condition for Baumol's model: when firms invest in VRIN technology capabilities that lower the marginal cost of additional volume, they can escape the pure revenue–profitability trade-off. This finding extends Baumol's (1959) base model by identifying a moderating pathway — technology investment — that allows revenue maximization and margin improvement to coexist. This has direct implications for the sector: the strategic prescription is not to reduce revenue orientation, but to invest in technology capabilities that make revenue maximization sustainable rather than margin-eroding.

Third, Gateway Distriparks' sustained profit-maximizing behaviour (EBITDA 23.8%, PAT 14.7%) confirms that Baumol's model is boundary-specific: it applies under conditions of homogeneous services and competitive pricing, not under infrastructure ownership with regulated capacity. This boundary condition validation strengthens the framework's theoretical precision.

## 7. CONCLUSION AND FUTURE RESEARCH

This paper develops and empirically supports a framework explaining revenue maximization as the dominant competitive strategy in Indian logistics markets, grounded in Baumol (1959) and validated through CMIE financial panel data for 13 companies across FY2016–FY2025. Six propositions receive empirical support at varying levels, with Propositions 2, 4, and 5 receiving the strongest validation from CMIE data. The framework identifies technology adoption — confirmed through Delhivery's and Safexpress's margin trajectories — as the key moderating variable determining whether revenue maximization produces sustainable competitive advantage or progressive margin erosion.

The primary data phase will extend this analysis through survey-based testing of all six propositions among approximately 385 MMR logistics firms (Yamane, 1967:  $N=1,350$  BGTA firms,  $e=0.05$ ), using structural equation modelling to estimate path coefficients for each proposition in the framework. The CMIE panel data will serve as validation data for financial performance outcomes.

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# WOMEN'S ENTREPRENEURSHIP: EMPOWERING WOMEN FOUNDERS IN EMERGING ECONOMIES

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Women entrepreneurs have become catalysts for inclusive economic development and social transformation across emerging and developed economies. The research presented here draws from peer-reviewed papers that examine how women—facing systemic gender-specific barriers—can be empowered to launch, scale, and sustain successful ventures. These papers collectively demonstrate that while significant gender-based obstacles persist, strategic interventions in financing, mentorship, policy reform, and institutional support can unlock the transformative potential of women entrepreneurs and drive inclusive, sustainable growth while advancing gender equality (Dey, 2025).

## INTRODUCTION

### Opening

The global entrepreneurial landscape is rapidly evolving, yet women remain significantly underrepresented despite their critical role in driving economic growth and poverty reduction. Women entrepreneurs in emerging economies possess unprecedented access to digital technologies, global markets, and collaborative networks, yet they remain excluded from meaningful entrepreneurial success due to systemic gender-based constraints (Sam-Sorungbe et al., 2025). Women's entrepreneurship has emerged as a strategic imperative for inclusive economic growth, innovation, and social transformation, with emerging evidence demonstrating that when supported through gender-responsive interventions, women entrepreneurs create competitive advantages, drive innovation, and generate sustainable livelihoods across diverse sectors (Ottuparammal & U, 2026).

## PROBLEM STATEMENT

Despite recognition of women's entrepreneurial potential, severe gender-specific barriers persist across emerging economies. Women entrepreneurs face compounded obstacles including:

These barriers—rooted in patriarchal structures and institutional discrimination—disproportionately affect women in emerging markets where only 2-7% of formal credit reaches women-led businesses (Dzreke & Dzreke, 2025). Understanding and systematically addressing these gender-specific barriers through targeted, women-centered interventions is essential for realizing women's entrepreneurial potential and achieving truly inclusive economic development.

## RESEARCH OBJECTIVE & THESIS

This paper explores mechanisms through which women's entrepreneurship empowers women founders in emerging economies, examines gender-specific barriers, and proposes evidence-based, gender-responsive strategies for creating inclusive ecosystems. By addressing systemic gender discrimination through targeted interventions in finance, policy, education, and institutional support, stakeholders can unlock the transformative potential of women entrepreneurs and foster more equitable, resilient, and innovative economies (Baktymbet et al., 2025).

## UNDERSTANDING WOMEN'S ENTREPRENEURSHIP

### Defining Women's Entrepreneurship

Women's entrepreneurship represents the engagement of women in entrepreneurial activity as business owners and innovators, operating across formal and informal sectors in emerging economies. Beyond simple business ownership, women's entrepreneurship is a strategic pathway for gender equality, economic empowerment, and inclusive growth, serving as a transformative tool for solving socio-economic problems through women's leadership, innovation, and agency (Sam-Sorungbe et al., 2025).

## Why Women Entrepreneurs Matter

Women entrepreneurs bring distinctive perspectives, resilience, and commitment to social impact, often prioritizing household welfare and community development alongside business growth (Mishra, 2025). When empowered through gender-responsive support systems, women demonstrate comparable or superior business performance to male counterparts, creating jobs, generating household income, and strengthening community resilience (Azevedo et al., 2026).

## The Strategic Imperative

Women entrepreneurs remain vastly underrepresented in emerging economies' entrepreneurial ecosystems despite their significant potential. Evidence from India, Bangladesh, Nigeria, and other emerging markets demonstrates that women-led MSMEs contribute substantially to employment and GDP but receive disproportionately low levels of financing, mentorship, and institutional support (Saha, 2026).

## Gender-Responsive Support Systems

Realizing women's entrepreneurial potential requires deliberately gender-centered interventions rather than one-size-fits-all approaches. These include:

### **GENDER-SPECIFIC BARRIERS TO WOMEN'S ENTREPRENEURSHIP**

#### Interconnected Gender-Based Barriers

Women entrepreneurs in emerging economies face interconnected obstacles spanning financial exclusion, institutional discrimination, sociocultural restrictions, and psychological barriers rooted in patriarchal systems. These barriers are not universal constraints faced equally by all entrepreneurs, but rather deliberately gender-specific obstacles that systematically disadvantage women relative to men (Sam-Sorongbe et al., 2025).

#### Financial Discrimination and Capital Barriers

Access to finance represents the most severe constraint for women entrepreneurs. Women-led businesses receive only 2-7% of formal credit in emerging economies compared to male-led enterprises, with women receiving significantly smaller loan amounts (Dzreke & Dzreke, 2025). Beyond credit scarcity, women face systematic discrimination in lending: algorithmic credit scoring in African fintech penalizes women-led SMEs with a 37% underfunding penalty compared to identical male-led businesses, demonstrating how digitalization can amplify gender bias (Dzreke & Dzreke, 2025).

Women entrepreneurs must provide more collateral, demonstrate longer track records, and face higher rejection rates, particularly in venture capital where gender biases shape investor decision-making (Ayadi & Zouari-Hadji, 2025).

#### Investor Skepticism and Venture Capital Barriers

Women entrepreneurs face heightened investor skepticism and prevention-focused questioning throughout the funding process (Shah, 2025). While women-led startups receive only 2% of venture capital globally, male venture capitalists consistently show lower conviction in women-led ventures, viewing them as higher risk despite comparable or superior business fundamentals (Schillo & Ebrahimi, 2021).

Female entrepreneurs must demonstrate proven results and sustained performance before accessing follow-on funding, whereas male entrepreneurs receive funding based on perceived potential (Nuraisyiah et al., 2025).

#### Sociocultural and Institutional Constraints

Deeply entrenched patriarchal norms and cultural expectations significantly restrict women's participation in entrepreneurship across emerging economies. These cultural barriers include:

In Bangladesh, Pakistan, India, and Nigeria, women entrepreneurs report cultural stereotypes portraying business ownership as incompatible with femininity and proper gender roles ([Muhammed et al., 2025](#)).

Legal and regulatory frameworks often disadvantage women through property rights restrictions, inheritance laws, business registration procedures requiring male co-signers or family permission ([Suryanti et al., 2025](#)).

#### Skills, Education, and Mentorship Gaps

Conservative family environments, risk-averse cultural norms, and limited access to entrepreneurship education and training disproportionately affect women ([Muhammed et al., 2025](#)). Women entrepreneurs experience systematic exclusion from entrepreneurial networks, mentorship opportunities, and peer learning communities dominated by men ([Nuraisyiah et al., 2025](#)).

Technical skill deficiencies in financial management, digital literacy, and business operations further constrain women's ability to scale ventures ([Nuraisyiah et al., 2025](#)).

#### Psychological and Agency Barriers

Systemic discrimination produces psychological barriers including lower entrepreneurial self-efficacy, reduced confidence in business capabilities, internalized gender stereotypes limiting perceived opportunity set, and heightened risk-aversion due to survival responsibilities ([Katanec et al., 2025](#)).

Women entrepreneurs report experiencing discrimination, facing challenges in work-life balance, managing family expectations, and maintaining business ownership authority within patriarchal household structures ([Katanec et al., 2025](#)).

## WOMEN-CENTERED EMPOWERMENT STRATEGIES & INSTITUTIONAL SUPPORT

### Gender-Responsive Financial Innovations

Strategic financial interventions specifically designed for women entrepreneurs prove highly effective.

Microfinance and Self-Help Groups (SHGs) provide women with accessible credit, financial literacy, and collective agency. Evidence from India, Bangladesh, and East Africa demonstrates that SHG-based microfinance fosters multidimensional empowerment—economic (income generation, financial independence), social (mobility, decision-making), and psychological (confidence, agency)—while reducing dependence on informal moneylenders ([R & B, 2025](#)).

Digital financial technologies, including mobile banking, fintech platforms, and digital lending, significantly reduce gender disparities in financial access when designed with women-centered features ([Nzilano & Magoti, 2025](#)). Women-led businesses utilizing digital loans experience significant growth, with the gender gap in initial loan amounts disappearing for digital products, unlike traditional banking ([JA et al., 2025](#)).

### Alternative Credit Models

**Gender-responsive financial products** including crowdfunding, women-focused venture capital, and government-backed guarantee schemes enable women to access capital without traditional collateral requirements ([Saluja, 2024](#)). Targeted financing programs combining microfinance with social investing and state co-financing create sustainable pathways for women to scale businesses ([Shah, 2025](#)).

### Women-Centered Mentorship and Networks

Deliberate mentorship networks specifically designed for women entrepreneurs prove significantly more effective than generic programs. Gender-specific accelerator programs enhance perceived team competence and improve access to angel capital, particularly when female investors participate ([Lange et al., 2025](#)).

Women-led self-help groups and cooperatives function as grassroots mentorship platforms, combining financial inclusion with social learning, peer support, and collective problem-solving ([R & B, 2025](#)).

Evidence from Grameen Bank, SEWA, and Kudumbashree demonstrates how women-led SHGs enable multidimensional empowerment and create networks for market linkage and knowledge sharing (R & B, 2025).

#### Women-Focused Education and Skills Development

Entrepreneurship education tailored to women's contexts—addressing both business competencies and gender-specific barriers—significantly improves business success and sustained growth. Training programs must integrate:

Digital transformation programs specifically targeting women's digital literacy gaps enable access to e-commerce platforms, digital marketing, and technology-enabled business models (T, 2025).

#### Institutional Support for Women's Enterprise Development

Inclusive incubation centers and business development services must actively promote women entrepreneurs through targeted outreach, women-only cohorts, and explicit gender equity commitments (Ebewo et al., 2025). These centers should provide:

Gender-responsive governance structures in support institutions, including women's leadership representation and gender-sensitive policies, are essential for effective women entrepreneur support (Ebewo et al., 2025).

### DIGITAL PLATFORMS AND MARKET ACCESS

Digital innovation hubs and e-commerce platforms dramatically reduce barriers to market access for women entrepreneurs by providing global reach without requiring physical mobility (TB et al., 2025). Digital platforms enable women to overcome traditional constraints including:

#### Policy and Legal Reforms

Gender-sensitive legal frameworks and policy environments are foundational for women's entrepreneurial success. Legal reforms must address:

Gender-responsive policies should include targeted public procurement programs favoring women-led enterprises, tax incentives, business formalization support, and accessible regulatory frameworks (Murmu & Pareek, 2025).

#### Multi-Stakeholder Coordination

Effective women entrepreneur ecosystems require coordinated action across governments, financial institutions, educational organizations, and civil society. City and national governments must actively prioritize women entrepreneurs through resource allocation, gender-responsive policies, and stakeholder coordination (Murmu & Pareek, 2025). Public-private partnerships can leverage private sector expertise while ensuring equitable outcomes through gender accountability mechanisms (Ebewo et al., 2025).

### WOMEN ENTREPRENEURS IN ACTION: CASE EXAMPLES & EVIDENCE

#### Women-Led Microfinance and Self-Help Groups

Self-Help Groups have emerged as the most effective grassroots model for women's entrepreneurial empowerment in emerging economies. **SHGs function as integrated platforms combining microfinance, social support, skill development, and market linkages** (Tripathi et al., 2025).

Evidence from rural India demonstrates that **SHG participation significantly enhances:**

Women in SHGs report:

Initiatives like **Grameen Bank (Bangladesh)**, **SEWA (India)**, and **Kudumbashree (Kerala)** demonstrate the transformative potential of women-led social enterprises combining financial inclusion with social change, creating sustainable livelihoods while addressing community needs (R & B, 2025).

#### Women Agricultural and Rural Entrepreneurs

**Women-led agricultural cooperatives and producer groups prove highly effective** in emerging markets. Women's involvement in cooperative marketing enables:

Evidence from South Asia and Sub-Saharan Africa shows that women farmer groups combining cooperatives with financial services access, technical training, and collective marketing achieve **significantly higher productivity and income than individual farming** (Ogunsola et al., 2024).

#### Women Digital Entrepreneurs and Fintech Innovation

Women entrepreneurs increasingly leverage digital platforms, fintech innovations, and technology-enabled business models. In Kenya, **digital lending has proven particularly effective for women health entrepreneurs**, with women-led health SMEs receiving 47.7% less traditional lending but **experiencing no gender gap in digital loans** (JA et al., 2025).

**Over 50% of women-led businesses using digital loans report significant growth**, demonstrating fintech's potential to democratize access (JA et al., 2025). Women in Sub-Saharan Africa are pioneering fintech innovations combining mobile technology, AI, and blockchain to enhance financial inclusion and access for underserved communities (T, 2025).

#### Gender-Responsive Institutional Models

Effective institutional support for women entrepreneurs integrates multiple dimensions. The Colombian "**Mujer, que tu negocio crezca más**" (**Woman, Make Your Business Grow**) program combines digital skills training with business process optimization, revealing that **women entrepreneurs adopt technology most effectively when training is tailored to their operational contexts** (Portuguez-Castro & Ramirez-Lozano, 2026).

**Gender-specific accelerator programs demonstrate effectiveness** in enhancing perceived team competence and improving women founders' access to angel capital (Lange et al., 2025). South African institutions emphasizing mentorship, education, supportive policies, and government support show that **women entrepreneurs, when equipped with networks and resources, achieve comparable or superior business performance** (Ebewo et al., 2025).

## CONCLUSION & RECOMMENDATIONS FOR WOMEN'S ENTREPRENEURIAL EMPOWERMENT

#### Synthesis

Evidence conclusively demonstrates that **women's entrepreneurship is a strategic imperative for sustainable development**, not a peripheral concern. Women entrepreneurs in emerging economies **significantly enhance household welfare, generate employment, reduce poverty, and drive innovation** more effectively than equivalent male-led investments, validating the urgency of gender-focused entrepreneurship support (Mishra, 2025).

**Women-led enterprises create multiplier effects** through household reinvestment in education, health, and community welfare, generating broader development impact (Mishra, 2025).

#### Critical Success Factors

Sustainability requires **integrated, deliberately gender-centered approaches** addressing financial access, education, cultural change, and institutional support simultaneously. Women's entrepreneurial success

depends on **aligning institutional support across regulatory (legal frameworks), normative (social and cultural change), and cognitive (mindset and capability) dimensions**(Ebewo et al., 2025).

**Gender-sensitive legal approaches and strengthened collaboration** between governments, financial institutions, legal organizations, and advocacy networks prove essential for empowering women entrepreneurs and contributing to inclusive economic growth (Suryanti et al., 2025).

Evidence-Based Recommendations

*For Policymakers:*

*For Financial Institutions & Fintech Providers:*

*For Educational Institutions:*

*For Support Organizations (Incubators, Accelerators, NGOs):*

*For Research & Learning:*

Forward Vision

Women entrepreneurs possess transformative potential to build more equitable, innovative, and resilient economies in emerging markets. Realizing this potential requires unwavering commitment to dismantling gender-specific barriers, investing substantially in women's human and social capital, and creating deliberately women-centered ecosystems where entrepreneurial success depends on capability, support, and opportunity rather than gender.

Women's entrepreneurship is not merely a development strategy—it is an economic and social imperative for achieving the United Nations Sustainable Development Goals and building prosperous, equitable, gender-equal societies. By supporting women entrepreneurs, the global development community unlocks not only immediate economic benefits but also transforms social norms, strengthens households and communities, and creates pathways for future generations of women to shape their destinies through entrepreneurship.

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# CIRCULAR ECONOMY STARTUPS IN TOURISM: REDEFINING WASTE, REUSE, AND RECYCLING

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## ABSTRACT

Tourism is one of the fastest-growing industries globally, but it is also one of the largest generators of waste and resource consumption. From plastic pollution in coastal destinations to food waste in hotels and resorts, the sector faces serious sustainability challenges. The circular economy (CE) offers an alternative model where waste is minimized, resources are reused, and materials are recycled in closed-loop systems. This paper examines how circular economy startups in tourism are redefining waste, reuse, and recycling practices. Using a secondary data-based case study approach, the study analyzes selected Indian and international examples to understand their business models, economic impact, and sustainability contribution. The paper also proposes a benchmark circular tourism framework that can guide tourism businesses and policymakers toward long-term sustainability. The findings show that circular tourism startups not only reduce environmental damage but also generate employment, reduce operational costs, and increase destination competitiveness. The study concludes with suggestions for policymakers, industry stakeholders, and future research directions.

## 1. INTRODUCTION

Tourism contributes significantly to global GDP and employment. However, traditional tourism models follow a “take–use–dispose” pattern, which leads to excessive waste, overuse of natural resources, and environmental degradation. Popular tourist destinations often struggle with plastic waste, food waste, water shortages, and energy inefficiencies.

The circular economy provides a solution by promoting reuse, recycling, waste reduction, and regeneration. Instead of treating waste as a problem, the circular model treats waste as a resource. Startups are playing an important role in introducing innovative circular solutions in tourism, especially in areas such as eco-accommodation, food waste management, plastic recycling, and shared mobility.

Despite growing discussions on circular economy in manufacturing and urban systems, limited research has examined its application within tourism startup ecosystems. This study explores how circular economy startups are transforming tourism practices and how their models can be used as benchmarks for long-term sustainability.

## 2. OBJECTIVES OF THE STUDY

The study aims to:

1. To analyze selected Indian and international circular tourism startups using a case study approach.
2. To identify the economic, environmental, and social benefits of circular tourism models.
3. To propose a benchmark model for sustainable tourism development based on circular economy principles.

## 3. RESEARCH METHODOLOGY

This research is based on secondary data collected from academic journals, industry reports, sustainability reports, and credible online sources. The study focuses on:

- Tourism-related startups using circular economy principles
- Waste management, reuse, recycling, and resource efficiency models

- Indian and global case studies

The study does not include primary data collection and does not provide financial auditing of the selected startups.

#### 4. LITERATURE REVIEW

##### 4.1 Circular Economy Concept

The circular economy is an economic system that aims to reduce waste and maximize resource use. It is based on the principles of reduce, reuse, recycle, repair, and regenerate. Unlike the linear economy, which ends in disposal, the circular economy promotes closed-loop systems.

##### 4.2 Circular Economy in Tourism

Tourism consumes water, food, energy, and materials at large scale. Hotels, airlines, cruise ships, and tourist attractions generate waste daily. Applying circular economy principles in tourism can:

- Reduce landfill waste
- Lower operational costs
- Improve brand image
- Support Sustainable Development Goals (SDGs)

##### 4.3 Startups as Change Agents

Startups are flexible and innovative. They are more willing to experiment with new business models. In tourism, startups are introducing:

- Waste-to-resource systems
- Reusable product platforms
- Sustainable accommodation models
- Technology-based waste tracking systems

However, there is limited research connecting circular economy startups specifically with tourism sustainability. This study addresses this gap.

#### 5. CASE STUDY ANALYSIS

##### 5.1 Soneva (Maldives)

Soneva is a luxury resort brand in the Maldives that integrates circular economy practices into its tourism operations. The resort operates waste-to-wealth centers where waste is segregated, recycled, and reused. Glass bottles are upcycled into decorative products, while organic waste is composted and reused. These initiatives reduce waste disposal costs, create local employment, and strengthen the resort's sustainable brand positioning. Environmentally, they help minimize landfill waste and promote sustainability awareness among tourists. This case illustrates that circular practices can be effectively implemented even within luxury tourism settings.

##### 5.2 Too Good To Go (Europe)

Too Good To Go is a mobile application that connects restaurants, hotels, and food outlets with consumers to sell surplus food at discounted prices. Many tourism and hospitality businesses use this platform to minimize food waste while recovering part of the cost of unsold meals. Economically, the model generates additional revenue from surplus food and reduces waste disposal expenses for businesses. Environmentally, it helps

decrease food waste and associated carbon emissions. Overall, the platform demonstrates how digital solutions can support circular practices and can be scaled across tourism destinations globally.

### 5.3 Banyan Nation (India)

Banyan Nation is an Indian recycling startup focused on plastic waste management. Although its operations extend beyond tourism, the model is highly relevant for tourism-intensive cities such as Goa and Mumbai where plastic waste generation is significant. The company works to formalize plastic waste supply chains by organizing collection, processing, and recycling systems. Economically, this model generates employment in the recycling sector and strengthens structured waste supply networks. Environmentally, it contributes to reducing plastic pollution and promotes the circular use of recycled plastics. Such initiatives demonstrate how organized recycling systems can be integrated into tourism waste management in India.

### 5.4 The Plastic Bank (Global Model)

Plastic Bank encourages communities to collect plastic waste in exchange for financial or social incentives. The collected plastic is then recycled and reintroduced into global supply chains. This model can be applied in tourism destinations to reduce plastic pollution, particularly in coastal and island regions. Economically, it supports community income generation and reduces municipal cleanup costs. Environmentally, it helps prevent plastic leakage into oceans and promotes higher recycling rates, contributing to more sustainable tourism systems.

## 6. CROSS-CASE INSIGHTS

The comparative analysis of selected case studies reveals important patterns explaining how circular economy startups are transforming tourism systems. These insights reflect operational innovation as well as broader economic and social implications.

### 1. Waste as a Resource, Not a Liability

A common feature across all cases is the shift from traditional waste disposal to resource recovery. Instead of treating waste as a cost burden, startups convert it into economic value.

Examples include:

- Converting organic waste into compost or biogas
- Recycling plastics into reusable materials
- Redistributing surplus food
- Upcycling glass and construction waste

This approach reduces disposal costs while generating additional revenue streams. Particularly in tourism-intensive destinations, such models reduce environmental pressure and support long-term financial sustainability.

### 2. Technology as an Enabler

Technology plays a central role in scaling circular operations. Digital platforms, monitoring systems, and data analytics improve efficiency, transparency, and coordination.

Key contributions include:

- Mobile applications for surplus redistribution
- Waste tracking and reporting systems
- Resource optimization tools in hotels

- Emerging blockchain-based traceability

Technology enhances accountability and consumer engagement, allowing circular models to expand beyond small-scale initiatives.

### 3. Community Integration and Inclusive Growth

Community participation is another strong pattern. Many startups involve local waste workers, artisans, and small businesses in recycling and reuse processes.

This generates:

- Employment opportunities
- Skill development
- Income diversification
- Stronger local ownership

In countries like India, integrating informal waste workers into structured systems promotes inclusive and sustainable development while reducing economic leakages.

### 4. Brand Enhancement and Competitive Advantage

Circular practices significantly improve brand positioning. Environmentally conscious tourists increasingly prefer responsible destinations.

Benefits include:

- Improved CSR profile
- Stronger customer loyalty
- Eco-certifications
- Attraction of ESG-focused investors

Thus, circularity becomes both a sustainability tool and a strategic market differentiator.

### 5. Economic Viability

Cross-case comparison confirms that circular tourism is economically practical. Financial benefits include:

- Reduced raw material and disposal costs
- New revenue streams from recycled products
- Access to green finance
- Improved operational efficiency

Although initial investments may be high, long-term savings and resource independence enhance resilience, especially during crises.

### 6. Replicability Across Contexts

The core principles—waste auditing, resource loop closure, stakeholder collaboration, and policy alignment—are adaptable across countries. While developed nations may use high-tech systems, developing countries often adopt community-based models. Both contribute meaningfully to sustainability.

This demonstrates that circular tourism is universally relevant rather than location-specific.

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## 7. Alignment with Sustainable Development Goals

The analyzed models contribute directly or indirectly to:

- SDG 8 (Decent Work and Economic Growth)
- SDG 12 (Responsible Consumption and Production)
- SDG 13 (Climate Action)
- SDG 14 (Life Below Water)

This strengthens their policy and global relevance.

The cross-case analysis shows that circular tourism startups represent a systemic transformation in tourism operations. The shift is evident:

- From disposal to regeneration
- From cost burden to value creation
- From isolated initiatives to ecosystem collaboration
- From compliance to strategic competitiveness

Therefore, circular tourism is environmentally responsible, economically viable, socially inclusive, and strategically advantageous. These insights form the foundation for developing a structured benchmark framework for long-term tourism sustainability.

## 8. BARRIERS TO IMPLEMENTATION

Although circular tourism offers long-term environmental and economic benefits, its implementation faces several structural and institutional challenges at both global and national levels.

### 1. Financial and Investment Constraints

Circular systems such as waste processing units, renewable energy installations, water recycling plants, and digital monitoring tools require high initial investment. Small and medium tourism enterprises often lack access to green financing.

In India, while ESG (Environmental, Social, Governance) reporting norms are becoming stronger, most tourism MSMEs are not fully covered under mandatory sustainability disclosures. Additionally, limited availability of circular-specific subsidies or low-interest green loans discourages businesses from transitioning.

### 2. Policy and Institutional Fragmentation

Many countries promote sustainability, yet circular tourism is rarely integrated directly into tourism policy frameworks.

In India, initiatives like the **Swachh Bharat Mission** and the **Smart Cities Mission** encourage waste management and sustainable infrastructure. However, tourism departments, municipal bodies, and environmental agencies often operate independently. This lack of coordination slows circular implementation at destination level.

Thus, the barrier lies not in policy absence but in policy integration and execution gaps.

### 3. Weak Waste Management Infrastructure

Circular models depend on proper waste segregation and recycling systems. In many tourism destinations, mixed waste collection, inadequate recycling facilities, and limited composting infrastructure restrict effective implementation.

In India, despite awareness campaigns under Swachh Bharat, segregation at source remains inconsistent, especially in coastal and rural tourism regions.

### 4. Limited Awareness and Technical Capacity

Many tourism operators are unfamiliar with circular economy principles beyond basic sustainability measures. There is limited knowledge of waste auditing, circular procurement, and impact measurement tools. Without training and capacity-building programs, circular tourism remains superficial rather than systemic.

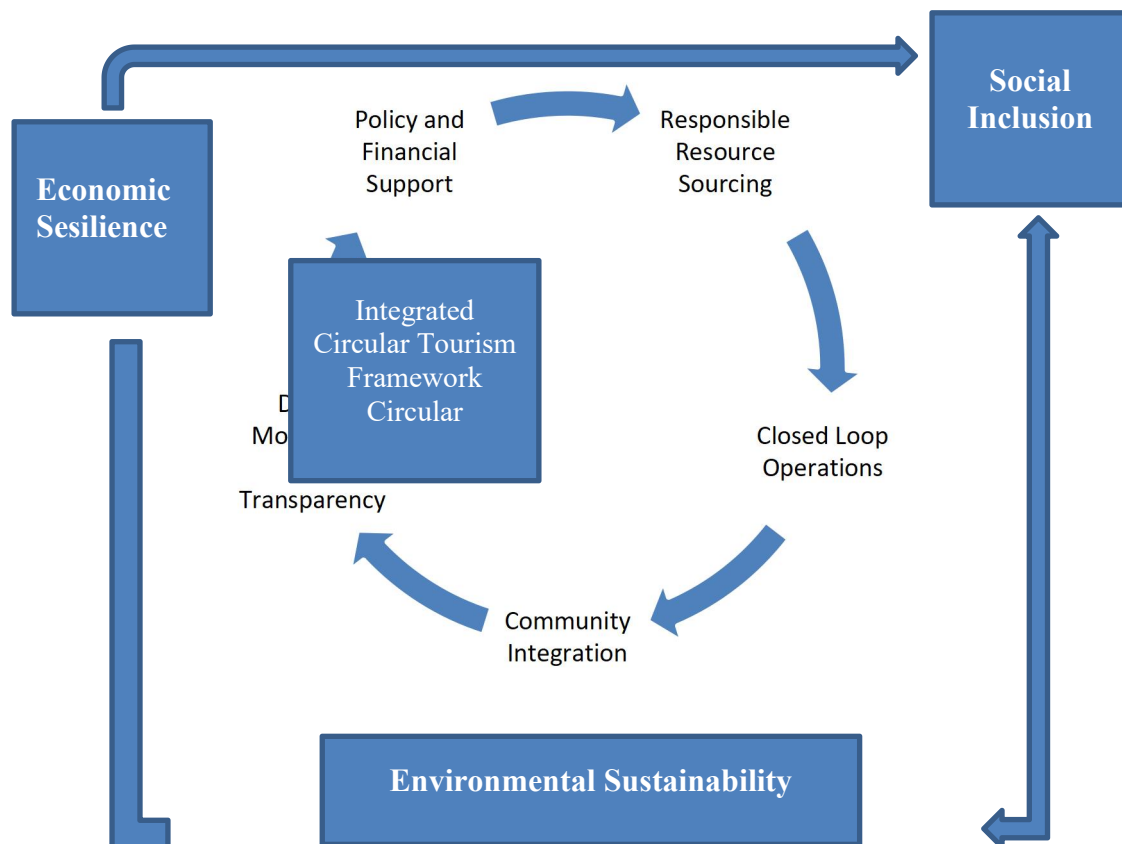
### 5. Consumer Behaviour and Market Readiness

Tourists play a central role in circular tourism. However, some visitors may resist practices such as waste segregation, reuse systems, or paying slightly higher prices for sustainable services. Behavioural change requires consistent awareness, incentives, and communication strategies.

### 6. Lack of Standardized Circular Tourism Metrics

There is no universally accepted framework to measure circular tourism performance. Without standardized indicators, benchmarking, cross-destination comparison, and impact reporting remain difficult. This also limits investor confidence and policy evaluation.

## 9. PROPOSED BENCHMARK MODEL: INTEGRATED CIRCULAR TOURISM FRAMEWORK (ICTF)



Source: Based on the case analysis, the study proposes a five-pillar model

Figure 1 illustrates the Integrated Circular Tourism Framework (ICTF) as a continuous regenerative loop rather than a linear process. The model operates through five interdependent pillars that collectively create a self-reinforcing circular system within the tourism industry.

The cycle begins with **Circular Resource Sourcing**, where tourism enterprises prioritize sustainable, recyclable, and locally procured inputs. Responsible sourcing reduces dependency on virgin materials and establishes the foundation for circular operations.

These inputs move into **Closed-Loop Operations**, where waste is minimized through reuse, recycling, composting, water recovery, and energy-efficient systems. At this stage, materials remain within the production-consumption cycle instead of being discarded, thereby reducing environmental impact and operational costs.

The outcomes of closed-loop systems extend into **Community Integration**. Local communities participate in waste collection, recycling activities, upcycling initiatives, and supply chain contributions. This pillar ensures that circular tourism generates local employment, income opportunities, and inclusive economic development.

To ensure accountability and continuous improvement, **Digital Monitoring and Transparency** supports the system. Technological tools track resource consumption, waste diversion rates, recycling performance, and sustainability metrics. Data-driven insights allow businesses to measure impact, enhance efficiency, and communicate sustainability performance to stakeholders.

The entire loop is reinforced by **Policy and Financial Support**, which acts as an enabling environment. Government incentives, green certifications, ESG compliance frameworks, sustainability-linked financing, and integrated tourism-waste policies provide regulatory stability and financial encouragement. This support strengthens resource sourcing decisions and encourages reinvestment into circular systems.

Importantly, the model is cyclical and dynamic. Policy support improves sourcing standards; improved sourcing enhances operational circularity; effective operations strengthen community outcomes; digital monitoring enhances policy alignment and investor confidence; and the cycle continues. Each pillar does not operate independently but functions as part of an interconnected ecosystem.

Surrounding the loop is the broader objective of **environmental sustainability, economic resilience, and social inclusion**, indicating that circular tourism simultaneously advances the triple bottom line.

Thus, the ICTF represents a regenerative, adaptive, and scalable framework that tourism destinations can adopt to transition from a linear “take-use-dispose” model to a sustainable circular economy system.

### Overall Relevance of the Model

The ICTF provides a structured yet adaptable framework that can be implemented across different tourism contexts — from luxury resorts to small-scale homestays. By integrating operational efficiency, community participation, digital innovation, and policy alignment, the model serves as a practical benchmark for achieving long-term sustainability in the tourism industry.

## 10. ECONOMIC AND NATIONAL BENEFITS

The transition toward circular tourism generates both micro-level (business) and macro-level (national) benefits, making it economically as well as environmentally sustainable.

### Micro Level (Business Perspective)

**Cost Savings:** Circular practices such as waste segregation, recycling, composting, and energy efficiency reduce expenditure on raw materials and waste disposal. Over time, resource optimization lowers operational costs and improves profit margins.

**Increased Efficiency:** Closed-loop systems enhance resource productivity. Hotels and tourism enterprises that monitor water, food, and energy consumption can minimize wastage and streamline operations, leading to long-term efficiency gains.

**Competitive Advantage:** Sustainability strengthens brand reputation. Circular tourism businesses attract environmentally conscious travelers, gain access to green certifications, and improve customer loyalty. This differentiation enhances market positioning in a competitive tourism landscape.

### Macro Level (National Perspective)

**Reduced Waste Management Burden:** When tourism businesses manage and recycle their own waste, pressure on municipal systems decreases. This reduces public expenditure on landfill management and environmental cleanup.

**Employment Generation:** Circular tourism supports new job roles in recycling, composting, waste auditing, upcycling, and sustainability consulting. It also strengthens local supply chains and informal sector integration.

**Attraction of Green Investments:** Countries promoting circular tourism can attract ESG-focused investors and sustainability-linked financing. Global funding agencies increasingly support environmentally responsible tourism initiatives.

For countries like India, circular tourism can significantly reduce environmental pressure in high-footfall destinations such as Goa, Kerala, and Rajasthan, where waste accumulation and resource stress are major concerns.

## 11. SUGGESTIONS AND RECOMMENDATIONS

### For Government

**Tax Incentives and Financial Support:** Governments should provide tax rebates, sustainability-linked loans, or subsidies to tourism enterprises adopting circular systems. This reduces financial risk during the transition phase.

**Circular Tourism Certification:** Introducing a standardized circular tourism certification system can help benchmark performance and encourage compliance. Certification also improves international credibility.

**Public-Private Partnerships (PPPs):** Collaboration between tourism departments, municipal bodies, recycling firms, and startups can strengthen infrastructure and improve implementation efficiency.

### For Tourism Businesses

**Conduct Waste Audits:** Regular waste and resource audits help identify inefficiencies and areas for improvement. Data-driven decisions enhance circular integration.

**Employee Training and Capacity Building:** Staff awareness and training programs are essential to implement effective waste segregation, recycling, and sustainable procurement practices.

**Collaborate with Circular Startups:** Partnerships with recycling companies, waste management startups, and digital monitoring platforms can accelerate adoption of circular solutions.

### For Investors

**Invest in Scalable Circular Solutions:** Impact investors should prioritize startups and tourism enterprises with measurable environmental and social returns.

**Support Green Innovation Funds:** Dedicated funds for circular tourism innovation can promote experimentation, technology adoption, and long-term sustainability transformation.

A coordinated approach among government, industry, investors, and communities is essential to transition from fragmented sustainability initiatives to systemic circular transformation.

## 12. CONCLUSION

Circular economy startups are redefining tourism by transforming waste into value. Case studies from India and abroad demonstrate that circular models can reduce environmental impact while improving economic performance. Although barriers exist, supportive policies, awareness, and innovation can accelerate adoption. The proposed benchmark framework provides a structured pathway for tourism industries to achieve long-term sustainability. Future research can validate this model using primary data and quantitative analysis.

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# FROM SCREENS TO SHOPPING CARTS: THE ROLE OF ADVERTISING IN CONSUMER BUYING BEHAVIOR

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## ABSTRACT

Advertising plays a crucial role in influencing consumer buying behavior in the modern marketplace. This study examines how advertising affects consumer awareness, interest, and purchasing decisions, particularly in the digital era where consumers are constantly exposed to advertisements through various media platforms. The findings of the study indicate that social media platforms are the most influential advertising channels, especially among young consumers. Advertisements on platforms such as Instagram significantly capture consumer attention and influence their purchasing decisions. Overall, the study concludes that advertising, particularly digital and social media advertising, has a strong impact on consumer awareness, attitudes, and buying behavior. Effective advertising strategies that combine engaging content, promotional offers, and credible information can significantly influence consumer purchase decisions.

**Keywords:** Advertising, Consumer Buying Behavior, Digital Advertising, Social Media Marketing, Purchase Decision, Consumer Awareness, Influencer Marketing.

## 1. INTRODUCTION

Advertising is an important element of modern marketing and plays a vital role in influencing consumer buying behavior. Companies use advertising to communicate information about their products and services, build brand awareness, and persuade consumers to purchase their offerings. Over the years, advertising has evolved from traditional forms such as newspapers, radio, and television to digital platforms including social media, websites, and mobile applications.

In today's digital era, consumers are exposed to advertisements almost everywhere, from social media feeds to online shopping platforms. This constant exposure significantly influences their perceptions, preferences, and buying decisions. Advertising not only informs consumers about available products but also creates emotional connections with brands through creative messages and visuals.

Consumer buying behavior refers to the process through which individuals select, purchase, and use goods or services to satisfy their needs and wants. Advertising can influence each stage of this process, including awareness, interest, evaluation, and final purchase decision.

Understanding how advertising affects consumer behavior is essential for businesses to design effective marketing strategies.

This research paper aims to examine the role of advertising in influencing consumer buying behavior, especially in the context of digital media. The study explores how advertisements shape consumer perceptions and motivate them to move from simply viewing advertisements on screens to making actual purchases.

## 2. REVIEW OF LITERATURE

**Kotler and Keller (2016)** explain that advertising is one of the most powerful promotional tools used by companies to inform and persuade consumers. According to their research, effective advertising can create brand awareness and influence consumer attitudes toward a product.

**Belch and Belch (2018)** emphasize that advertising plays an important role in shaping consumer perceptions and building brand image. Their study suggests that repeated exposure to advertisements increases consumer familiarity with a brand, which often leads to higher purchase intention.

**Schiffman and Wisenblit (2019)** studied consumer behavior and found that advertisements influence consumer decision-making by providing information and creating emotional appeal. They suggest that advertisements that connect emotionally with consumers are more likely to influence purchasing decisions.

**Chaffey and Ellis-Chadwick (2019)** highlight the importance of digital advertising in the modern marketplace. Their research shows that online advertisements, especially on social media platforms, have a strong impact on consumer engagement and purchase behavior.

## 3. OBJECTIVES

The main objectives of this research are:

- To examine the impact of advertising on consumer buying behavior.
- To identify how advertising motivates consumers to move from viewing products to making purchases.

## 4. RESEARCH METHODOLOGY

This research study aims to understand how advertising influences consumer buying behavior, especially in the digital age where consumers are exposed to advertisements through multiple media platforms. A quantitative research approach was adopted to collect and analyze data from respondents.

The study is based on primary data, which was collected through a structured questionnaire and Secondary data is collected from books, research journals and online sources related to advertising and consumer behavior.

For this research, a sample size of 25 respondents was selected. The respondents included students, working professionals, and other individuals who regularly interact with advertising through digital or traditional media. The sampling method used was convenience sampling, as the respondents were easily accessible and willing to participate in the survey.

The analysis focused on determining which advertising platforms influence consumers the most, how frequently consumers encounter advertisements, and how advertisements affect their awareness, interest, and final purchase decisions.

*Table 1 – Primary data*

<i>Factors</i>	<i>Responses</i>	<i>Percentage (%)</i>
➤ Most noticed advertisement medium	Social Media Ads	56%
➤ Purchased product after seeing advertisement	Yes	68%
➤ Online ads encourage online shopping	Yes	60%
➤ Trust factor in advertisements	Product Reviews & Ratings	54%

## 5. RESEARCH FINDINGS

The results of the survey provide several insights into the role of advertising in shaping consumer buying behavior.

One of the key findings of the study is that social media advertisements are the most frequently noticed form of advertising. Platforms such as Instagram and other social media channels have a strong influence on consumers because they are widely used by young audiences.

The study also found that a large number of respondents have purchased a product after seeing an advertisement. This shows that advertising not only creates awareness but also directly affects purchasing decisions. Many respondents reported that discounts, promotional offers, and influencer promotions are the most attractive elements in advertisements.

The research further shows that online advertising encourages consumers to explore online shopping, although some respondents indicated that they only occasionally rely on advertisements while making purchase decisions. Additionally, product reviews and ratings presented in advertisements were found to significantly influence consumer trust and purchase behavior.

Overall, the findings suggest that advertising, particularly digital and social media advertising, has a strong impact on consumer awareness, interest, and purchase decisions. Businesses that effectively use engaging advertisements, promotional offers, and influencer marketing are more likely to attract consumers and influence their buying behavior.

## 6. CONCLUSION

Advertising plays a significant role in influencing consumer buying behavior in the modern marketplace. It helps companies communicate product information, create brand awareness, and attract potential customers. With the increasing use of digital platforms, advertising has become more interactive and personalized, making it more effective in reaching target audiences.

The study concludes that advertising strongly influences consumer attitudes, preferences, and purchasing decisions. Consumers often rely on advertisements to learn about new products and evaluate different brands before making a purchase. Therefore, businesses must focus on creating creative, informative, and trustworthy advertisements to successfully influence consumer buying behavior. In the future, digital advertising and social media platforms are expected to play an even greater role in shaping consumer decisions.

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# IMPACT OF SOCIAL MEDIA MARKETING ON STARTUP GROWTH AND CONSUMER PURCHASE BEHAVIOUR

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## 1. ABSTRACT

Social media has become an essential marketing tool for businesses, especially startups that operate with limited financial resources. Platforms such as Instagram, Facebook, LinkedIn, and YouTube allow startups to connect with customers, promote products, and build brand awareness at relatively low costs. This research paper aims to analyze the impact of social media marketing on startup growth and consumer purchase behavior. The study is based on primary data collected through a questionnaire survey of 19 respondents. The findings indicate that most respondents use social media daily, with Instagram being the most commonly used platform. A significant percentage of respondents reported purchasing products after seeing advertisements on social media, which highlights the strong influence of digital marketing on consumer decisions. The study also reveals that product videos and customer reviews are the most attractive types of content for consumers. Furthermore, respondents believe that social media marketing helps startups grow faster and is more cost-effective compared to traditional advertising methods. The research concludes that social media marketing plays a vital role in shaping consumer behavior and supporting startup growth in today's digital economy.

## 2. INTRODUCTION

The rapid development of digital technologies has significantly transformed the marketing landscape. Traditional marketing methods such as television advertisements, print media, billboards, and radio promotions are gradually being complemented or replaced by digital marketing strategies. Among these strategies, social media marketing has emerged as one of the most powerful tools for businesses to promote their products and services. Social media platforms provide businesses with an opportunity to interact directly with customers, understand their preferences, and build long-term relationships. Platforms like Instagram, Facebook, LinkedIn, and YouTube allow companies to share promotional content, product demonstrations, customer testimonials, and influencer collaborations. These activities help businesses reach a large audience quickly and efficiently.

For startups, social media marketing is particularly beneficial because it requires relatively low investment compared to traditional advertising methods. Startups often operate with limited financial and human resources, making cost-effective marketing strategies essential for survival and growth. Through social media platforms, startups can target specific audiences, increase brand awareness, and generate potential customers without large marketing budgets. Another important aspect of social media marketing is its influence on consumer behavior. Consumers today rely heavily on online information before making purchasing decisions. They often search for product reviews, watch demonstration videos, and read feedback from other users on social media platforms. Influencer marketing has also become a major trend, where social media influencers promote products to their followers, thereby influencing purchasing decisions.

Furthermore, social media marketing enables startups to build brand identity and establish credibility in competitive markets. By consistently posting engaging content, interacting with customers, and addressing feedback, startups can create trust among consumers and encourage brand loyalty. This research study aims to examine how social media marketing influences the growth of startups and affects consumer purchasing behavior. The study analyzes consumer preferences, frequency of social media usage, exposure to advertisements, and the types of content that attract consumers the most. The findings of this research provide valuable insights for startups seeking to utilize social media marketing as a strategy for business growth.

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### 3. REVIEW OF LITERATURE

Several researchers have studied the impact of social media marketing on business growth and consumer behavior.

Kaplan and Haenlein (2010) described social media as a group of internet-based applications that allow the creation and exchange of user-generated content. Their study highlights the importance of social media platforms in modern communication and marketing strategies.

Mangold and Faulds (2009) emphasized that social media has become a significant component of the promotional mix. According to their research, social media platforms allow consumers to share opinions and experiences about products, which strongly influences other consumers' purchasing decisions.

Tuten and Solomon (2017) stated that social media marketing enables companies to build strong relationships with customers through interactive communication and personalized content. Their research shows that effective social media strategies can enhance brand awareness and customer engagement.

Felix, Rauschnabel, and Hinsch (2017) proposed a framework for strategic social media marketing and highlighted the importance of integrating social media into overall marketing strategies. Their study suggests that businesses that actively use social media are more likely to achieve competitive advantages.

Another study by Tiago and Veríssimo (2014) concluded that social media has become an essential marketing tool for businesses due to its ability to reach a large number of consumers at low cost. The researchers also noted that businesses must develop effective social media strategies to remain competitive in digital markets.

Overall, previous research indicates that social media marketing plays a crucial role in influencing consumer perceptions, improving brand communication, and supporting business growth.

### 4. GAP ANALYSIS

Although many studies have explored the role of social media marketing in modern businesses, most of them focus on large organizations or multinational companies. Limited research has been conducted on the specific impact of social media marketing on startups and small businesses. Additionally, some studies primarily focus on marketing strategies rather than consumer responses and purchasing behavior. There is a need to better understand how consumers perceive social media advertisements, influencer promotions, and startup brand promotions. Therefore, this research attempts to bridge this gap by examining consumer attitudes toward social media marketing and analyzing how it affects startup growth and purchasing behavior.

### 5. OBJECTIVES OF THE STUDY

The main objectives of this research are:

1. To analyze the impact of social media marketing on startup growth.
2. To examine consumer purchase behavior influenced by social media advertisements.
3. To identify the most commonly used social media platforms among consumers.
4. To understand the type of social media content that attracts consumers the most.
5. To determine whether social media marketing is considered more effective than traditional advertising.

### 6. RESEARCH METHODOLOGY

#### A. Research Design

This study uses a "descriptive research design" to analyze the relationship between social media marketing and consumer purchase behavior.

## B. Source of Data

The study uses primary data collected through a structured questionnaire.

## C. Sample Size

The research survey includes 19 respondents.

## D. Sampling Technique

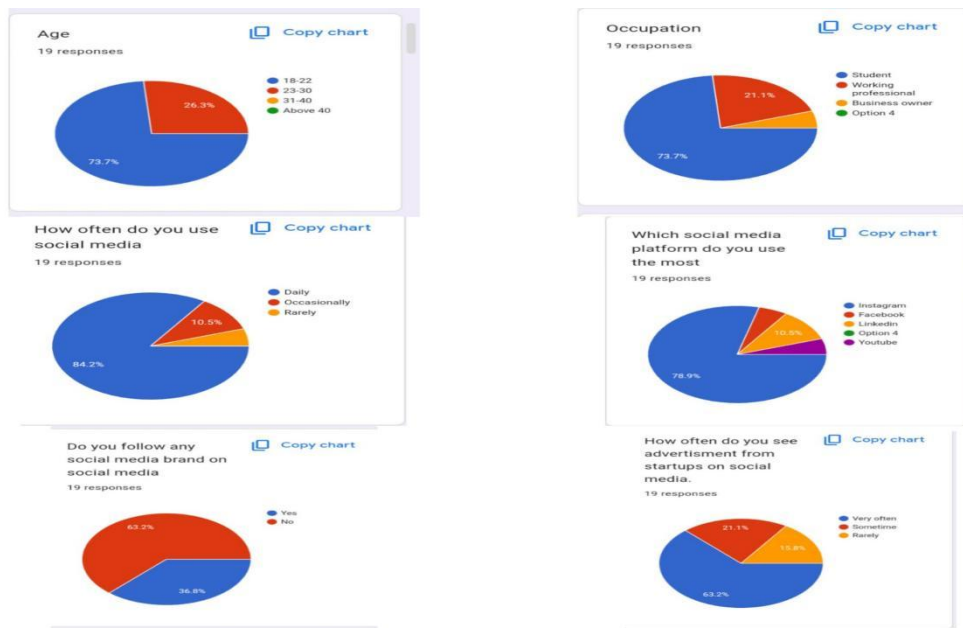
The respondents were selected using a "convenience sampling method" where participants were chosen based on availability and willingness to respond.

## E. Data Collection Method

The questionnaire was distributed through Google Forms, and responses were collected online.

## F. Data Analysis Technique

The collected data was analyzed using percentage analysis and graphical representation (pie charts) to interpret trends and patterns.



## 7. DATA ANALYSIS AND INTERPRETATION

### 1. Age Distribution

The survey results show that 73.7% of respondents are between 18–22 years, while 26.3% are between 23–30 years. This indicates that young individuals are the primary users of social media platforms.

### 2. Occupation of Respondents

The results indicate that 73.7% of respondents are students, 21.1% are working professionals, and 5.3% are business owners. This shows that students are the most active participants in the survey.

### 3. Frequency of Social Media Usage

The data reveals that 84.2% of respondents use social media daily, 10.5% occasionally, and 5.3% rarely. This suggests that social media plays an important role in the daily lives of most individuals.

#### 4. Most Used Social Media Platform

The results show that 78.9% of respondents prefer Instagram, followed by smaller percentages for LinkedIn, Facebook, and YouTube. This indicates that Instagram is the most influential platform among the respondents.

#### 5. Following Brands on Social Media

The survey shows that 36.8% of respondents follow brands on social media, while 63.2% do not. Despite this, many respondents still encounter advertisements from brands while browsing social media.

#### 6. Exposure to Startup Advertisements

Approximately 63.2% of respondents see startup advertisements very often, 21.1% sometimes, and 15.8% rarely. This demonstrates that social media platforms frequently expose users to startup marketing campaigns.

#### 7. Purchase Behavior After Viewing Social Media Ads

The results indicate that 68.4% of respondents have purchased a product after seeing it on social media, while 31.6% have not. This highlights the effectiveness of social media marketing in influencing purchase decisions.

#### 8. Influence of Social Media Influencers

About 47.4% of respondents agree and 15.8% strongly agree that influencers affect their buying decisions. Meanwhile, 26.3% remain neutral and 10.5% disagree. This suggests that influencers have a moderate impact on consumer behavior.

#### 9. Most Attractive Content Type

The survey shows that 47.4% of respondents are most attracted to product videos, 31.6% prefer customer reviews, while 10.5% prefer influencer promotions and discount offers. This indicates that informative and authentic content attracts consumers the most.

#### 10. Role of Social Media in Startup Growth

Around 78.9% of respondents believe social media helps startups grow faster, while 15.8% are unsure and 5.3% disagree. This suggests a strong perception that social media contributes to startup development.

#### 11. Social Media vs Traditional Advertising Cost

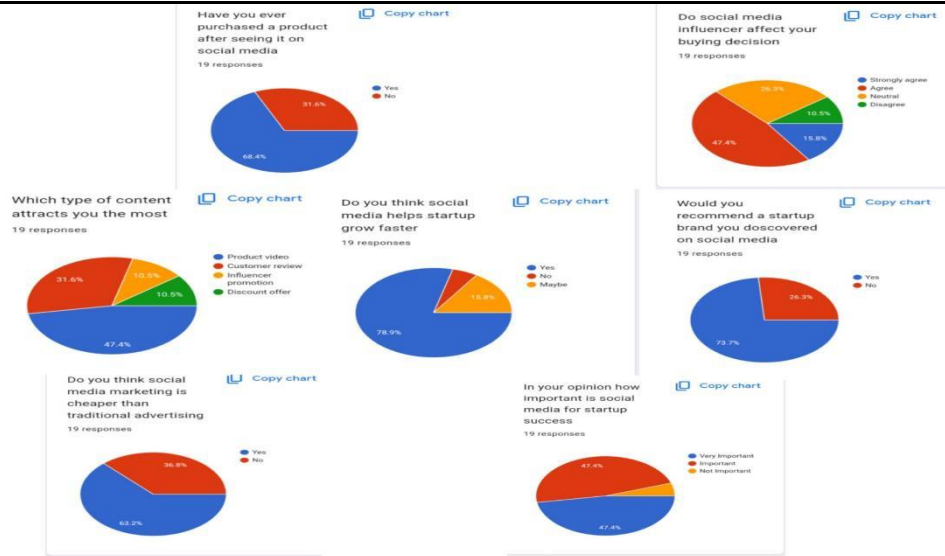
The results show that 63.2% believe social media marketing is cheaper than traditional advertising, while 36.8% disagree.

#### 12. Recommendation of Startup Brands

Approximately 73.7% of respondents would recommend a startup brand discovered on social media, indicating positive consumer perception and trust.

#### 13. Importance of Social Media for Startup Success

The findings show that 47.4% consider social media very important, 47.4% consider it important, and only 5.2% believe it is not important for startup success.



## 8. CONCLUSION

The findings of this research demonstrate that social media marketing plays a crucial role in influencing consumer behavior and supporting startup growth. Most respondents use social media daily and are frequently exposed to startup advertisements on various platforms. Instagram is identified as the most popular platform among the reimportance for marketing strategies. The study also reveals that a significant number of consumers have purchased products after seeing them on social media, which highlights the effectiveness of digital marketing in influencing purchasing decisions. Product videos and customer reviews are found to be the most attractive forms of content for consumers.

Furthermore, respondents generally believe that social media marketing is more affordable than traditional advertising methods and plays a vital role in helping startups grow faster. Many participants also indicated that they would recommend startup brands discovered through social media platforms. Overall, the research concludes that social media marketing is an essential tool for startups to increase brand awareness, engage with customers, and drive business growth. Startups should focus on creating engaging content, utilizing influencer collaborations, and maintaining active social media presence to maximize their marketing effectiveness.

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# CIRCULAR ECONOMY AS A STRATEGY FOR SUSTAINABLE RESOURCE MANAGEMENT

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## ABSTRACT

Circular economy is an emerging framework for sustainable resource management that aims to reduce waste and increase the effective use of the materials throughout their lifecycle. The circular approach places more emphasis on resource recovery, reuse, recycling, and regeneration than the conventional linear model of "take, make, dispose." It integrates eco-design, innovative business models, and systemic thinking to extend product life and reduce environmental impact. circular economy strategies contribute to reduced resource depletion, lower greenhouse gas emissions, and enhanced economic resilience. This strategy is becoming more widely acknowledged as a key pathway to accomplish sustainable development objectives and tackling worldwide environmental issues.

The present study highlights the significance of incorporating circular principles in designing of products and services, ensuring that materials and components can be efficiently recovered and reused at the end of their lifecycle. It also emphasizes the vital role of technological advancements, digitalization, innovation and artificial intelligence in enhancing resource efficiency and optimizing resource management for sustainable development.

**Key Words:** Reduce, Reuse, Recycling, Regeneration, Eco-Design, Innovative Business Models, Economic Resilience.

## 1.1 INTRODUCTION

A circular economy is an industrial system that replaces the traditional "take-make-waste" linear model with a closed-loop system, focusing on repairing, reusing, and recycling materials to eliminate waste. Sustainability is the broader goal of meeting current needs without compromising future generations, achieved by balancing environmental, economic, and social systems.

Over recent decades, the circular economy (CE) has gained prominence as a framework for fostering more sustainable production and consumption practices. Rapid global growth in the consumption of goods has led to the excessive depletion of natural resources. In response, the CE seeks to decouple environmental impact from economic development by promoting systems that emphasize the reduction, reuse, recycling, and recovery of materials throughout production, distribution, and consumption processes. The transition to a circular economy has become essential in light of the increasing global waste crisis and the shortcomings of the traditional linear economic model.

## 1.2 REVIEW OF LITERATURE

- Murray et al. (2017) highlights that implementing Circular Economy requires coordinated efforts across policy, industry, and society to achieve meaningful contributions to sustainability objectives. The Circular Economy is gaining recognition worldwide as a strategy for sustainable development, focusing on reducing waste and making resource use more efficient. It supports several United Nations Sustainable Development Goals (SDGs), especially those targeting responsible consumption and production, climate action, and sustainable urban development.
- Ghisellini et al. (2016) studied Circular Economy strategies such as material recovery, industrial symbiosis, and closed-loop supply chains help mitigate environmental degradation while promoting resource efficiency. Moreover, adopting CE practices supports the transition to more sustainable industrial systems, aligning economic development with environmental protection goals.

- Geissdoerfer et al. (2017) studied the concept of the circular economy. It refers to a regenerative system that aims to minimize resource inputs and waste generation by promoting strategies such as reuse, repair, remanufacturing, and recycling. It serves as an alternative to the traditional linear “take–make–dispose” model by emphasizing closed-loop systems that sustain resource value over time.
- Circular Economy is widely recognized as a strategic approach to sustainable development, as it integrates environmental, economic, and social dimensions. By promoting efficient resource utilization, waste reduction, and sustainable production and consumption patterns, Circular Economy contributes to minimizing ecological degradation and supports the achievement of sustainable development goals Arruda et al. (2021).
- The circular economy fosters innovation in product design, business models, and emerging technologies to enhance resource efficiency and lifecycle management. Technologies such as artificial intelligence and blockchain play a significant role in enabling transparency, traceability, and optimization of material flows within circular systems Abid, I., et al. (2024).
- Recent research emphasizes the pivotal role of technological innovation in enabling circular economy practices that support sustainable resource management. Emerging technologies such as digital platforms, Internet of Things (IoT), and advanced recycling technologies facilitate material traceability, enhance product lifecycle monitoring, and optimize resource flows across supply chains (Masi, Day, & Godsell, 2017).
- Research indicates that transitioning from a linear “take-make-dispose” model to circular practices can stimulate economic growth by reducing material costs, boosting competitiveness, and creating new markets for secondary materials (European Parliament, 2023).
- In addition to economic growth, the circular economy fosters cost savings and efficient use of natural resources, that are key for sustainable resource management. By maintaining materials and products in use longer through recycling, reuse, and refurbishment organizations can reduce dependence on costly resources and lower waste management costs, ultimately improving economic resilience (Igbinenikaro & Adewusi, 2024).

### 1.3 OBJECTIVES OF THE STUDY

- To study the role of technological advancements, digitalization, innovation and artificial intelligence in improving resource efficiency and optimizing resource management systems.
- To study the economic and environmental benefits of adopting circular economy.
- To study the challenges, barriers and policy requirements for effectively implementing circular economy practices.

### 1.4 RESEARCH METHODOLOGY OF THE STUDY

The present study uses a descriptive and analytical research design in order to explore the circular economy practices that contributes to sustainable resource management. The study is based on secondary data, which includes information already collected and published by other researchers, organizations, and institutions. The secondary data is collected from various academic journals research articles, books, research papers, government reports, industry reports and reports and publications by international organizations.

### 1.5 SIGNIFICANCE OF THE STUDY

In today’s time circular economy plays a very pivotal role as it addresses one of the most pressing challenges related to the unsustainable consumption of natural resources. Circular Economy as a strategy focuses on reducing waste generation, reusing materials, and recycling resources. It adopts a regenerative system that minimizes resource depletion and pollution. It results in efficient and sustainable management of natural and industrial resources. It provides a framework for reducing environmental degradation while enhancing economic efficiency. Circular Economy as a strategy focuses on mitigating resources scarcity, lower carbon

emissions and create resilient business practices for achieving economic, social and environmental sustainability.

## 1.6 DESCRIPTIVE ANALYSIS OF THE STUDY

The circular economy is an economic model designed to minimize waste, optimize resource use, and promote sustainability. The traditional linear economy follows a “take-make-dispose” approach whereas, the circular economy emphasizes closing the loop of product lifecycles through recycling, reusing, remanufacturing, and regenerating materials (Geissdoerfer et al., 2017). It aims at decoupling economic growth from the consumption of finite natural resources.

### 1.6.1 Key Principles of Circular Economy

- **Reduction in Resource Extraction:** By reusing and recycling materials, Circular Economy reduces the pressure on natural resources, mitigating environmental degradation (Murray, Skene, & Haynes, 2017).
- **Minimizing Waste and Pollution:** Waste streams are transformed into resources, reducing landfill use, and lowering greenhouse gas emissions associated with waste management (Lewandowski, 2016).
- **Economic and Social Benefits:** Circular approaches create new business models, such as product-as-a-service or reverse logistics, which can stimulate innovation, job creation, and sustainable consumption patterns (Ellen MacArthur Foundation, 2019).
- **Alignment with Global Sustainability Goals:** Circular Economy directly supports several United Nations Sustainable Development Goals (SDGs), including responsible consumption and production (SDG 12) and climate action (SDG 13), by promoting more efficient use of resources.

### 1.6.2 Role of Technology, Digitalization, Innovation, and AI in Resource Efficiency

With the increase in demand for the finite resources and environmental pressures technological innovations play a critical role in making resource use more efficient, sustainable, and resilient. Integrating digital tools, AI, and innovative processes allows organizations and governments to optimize the extraction, production, consumption, and recycling of resources.

#### Technological Advancements

Modern technologies in production, manufacturing, and logistics improve material and energy efficiency. Advanced manufacturing techniques such as 3D printing, reduces material waste by producing components layer by layer, and energy-efficient machinery that lowers resource consumption during operations. In water management, technologies like smart irrigation systems optimize water use in agriculture, reducing waste. Thus, it reduces raw material demand, lower energy consumption, and decreased environmental footprint.

#### Digitalization

It refers to converting processes, operations, and data into digital formats to improve monitoring, decision-making, and efficiency. IoT (Internet of Things) sensors in factories can track energy use and machine efficiency in real-time. Smart grids optimize electricity distribution, balancing supply and demand while reducing losses. Digital twins create virtual replicas of physical assets, allowing simulation of resource flows and testing interventions without actual waste. Real-time monitoring enables better allocation of resources, predictive maintenance, and reduction of overconsumption or wastage.

#### Innovation

Innovation drives the development of new materials, processes, and business models that are inherently more resource-efficient. Circular product design where products are modular and recyclable. Bio-based materials replace finite resources with renewable alternatives. Sharing economy platforms reduce the need for mass production by maximizing the utilization of existing assets. Encourages the shift from linear to circular economic models, lowering the pressure on natural resources.

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## Artificial Intelligence

Artificial Intelligence leverages data analysis, machine learning, and predictive modeling to optimize resource management at scale. Predictive analytics for energy demand reduces wastage by forecasting consumption patterns. AI-based supply chain optimization minimizes material losses, reduces inventory waste, and improves logistics efficiency. Smart agriculture uses AI to determine optimal planting, fertilization, and irrigation schedules, conserving water and nutrients. Artificial Intelligence enables precision resource management, reduces inefficiencies, and facilitates decision-making for sustainable practices.

When combined, these technologies can create intelligent, adaptive resource management systems that are resilient, sustainable, and economically viable.

### 1.6.3 Economic and Environmental Benefits of Circular Economy and Resource Efficiency

The transition from a traditional linear economy to a circular economy (CE) or resource-efficient system brings substantial economic and environmental benefits. These benefits are realized through reduced resource consumption, waste minimization, cost savings, and environmental protection.

#### Economic Benefits

##### Cost Reduction and Efficiency Gains

By reusing, remanufacturing, and recycling materials, organizations can significantly lower production costs. For example, using recycled materials reduces the need for expensive raw materials, while energy-efficient technologies cut utility expenses (Geissdoerfer et al., 2017).

##### Innovation and New Business Models

Circular economy practices encourage innovation, including new product designs, services, and business models. Examples include product-as-a-service, sharing platforms, and reverse logistics. These models not only open new revenue streams but also enhance competitiveness in global markets (Lewandowski, 2016).

##### Job Creation

Implementing Circular Economy strategies creates employment opportunities in recycling, remanufacturing, repair services, and sustainable design sectors. Research indicates that adopting circular practices can generate higher employment per unit of material use compared to linear models (Murray, Skene, & Haynes, 2017).

##### Resilience Against Resource Scarcity

Companies adopting circular and resource-efficient practices are less vulnerable to price volatility and scarcity of raw materials, reducing supply chain risks and improving long-term economic sustainability (Ellen MacArthur Foundation, 2019).

#### Environmental Benefits

##### Reduction of Resource Extraction

Circular approaches reduce the demand for virgin resources, such as metals, timber, and fossil fuels, thereby preserving ecosystems and minimizing habitat destruction (Geissdoerfer et al., 2017).

##### Waste Minimization and Pollution Control

Recycling, remanufacturing, and sustainable product design decrease waste generation, preventing environmental contamination. Studies show that circular production systems can lower waste to landfills by up to 70% in certain sectors (Lewandowski, 2016).

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## **Lower Greenhouse Gas Emissions**

Efficient resource use and recycling reduce energy consumption and associated carbon emissions. For example, producing aluminum from recycled scrap uses 95% less energy than primary production, significantly reducing CO<sub>2</sub> emissions (Murray, Skene, & Haynes, 2017).

## **Ecosystem Regeneration**

Circular systems promote regenerative practices, such as composting organic waste to return nutrients to soil, use of renewable energy, and sustainable water management. These practices enhance ecosystem health and contribute to long-term environmental sustainability (Ellen MacArthur Foundation, 2019).

### **1.6.4 Challenges and Barriers in Circular Economy Implementation**

#### **Technological and Infrastructure Limitations**

Many industries lack the technology, equipment, and infrastructure needed for efficient recycling, remanufacturing, and waste recovery. For instance, certain materials are difficult to recycle due to contamination or complex product design.

#### **Economic and Financial Constraints**

High upfront costs for adopting circular technologies, remanufacturing systems, or eco-design processes can discourage companies, especially SMEs, from transitioning to CE practices.

#### **Regulatory and Market Barriers**

Absence of standardized regulations, incentives, or enforcement mechanisms can slow CE adoption. Markets for recycled or remanufactured products are often underdeveloped, limiting demand.

#### **Cultural and Organizational Challenges**

Shifting from a linear mindset “take-make-dispose” to a circular mindset requires organizational change, awareness, and training. Resistance to change and lack of consumer awareness can impede adoption.

#### **Complexity of Supply Chains**

Implementing circular supply chains is challenging due to fragmented logistics, multiple stakeholders, and coordination difficulties, especially in globalized production systems.

### **1.6.5 Policy Requirements for Effective Implementation of Circular Economy**

#### **Regulatory Support and Standards**

Governments should establish clear regulations, standards, and guidelines for product design, recycling, and waste management to encourage CE adoption.

#### **Economic Incentives**

Policies like tax breaks, subsidies, and grants for circular businesses and eco-friendly technologies can reduce financial barriers.

#### **Extended Producer Responsibility (EPR)**

EPR mandates that manufacturers take responsibility for the end-of-life management of their products, encouraging recycling and eco-design.

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## Investment in Infrastructure and Technology

Public and private investment in recycling facilities, renewable energy, and digital tools is essential for operationalizing CE practices.

### Awareness and Education

Promoting consumer awareness, training programs, and organizational change management is critical to foster adoption of circular practices.

## 1.7 FINDINGS OF THE STUDY

- The findings of the present study reveal that technological advancements, digitalization, innovation, and artificial intelligence are critical enablers of sustainable resource management. Advanced technologies, such as 3D printing and energy-efficient machinery, reduce material and energy consumption, directly improving resource efficiency. Digitalization through IoT, smart grids, and digital twins allows real-time monitoring, predictive maintenance, and optimized resource allocation, minimizing waste and operational inefficiencies.
- Innovation supports the development of sustainable materials, modular designs, and circular business models, which extend product lifecycles and reduce dependence on virgin resources. Artificial intelligence further enhances resource management by enabling data-driven decision-making, predictive analytics, and supply chain optimization, which collectively reduce resource losses and environmental impact.
- The integration of these tools creates adaptive, intelligent systems that promote economic, environmental, and operational sustainability, demonstrating their essential role in transitioning toward a circular economy and more resilient resource management frameworks.
- Circular Economy implementation contributes to both economic growth and reduced environmental impact by decoupling production from resource consumption.
- Circular Business Models can generate cost savings, reduce waste, and support sustainable business practices.
- Circular Economy strategies can create new jobs, reduce resource dependency, and lower greenhouse gas emissions.
- The transitioning to circular systems could significantly reduce carbon emissions, enhance material efficiency, and support sustainable economic development.
- It is found that technological, economic, and regulatory barriers are primary obstacles to Circular Economy implementation globally.
- Further organizational culture and lack of consumer awareness significantly hinder circular business model adoption.
- Effective CE adoption requires policy frameworks that integrate EPR, incentives, and infrastructural support to overcome market and coordination challenges.

## 1.8 CONCLUSION

Overall, the integration of circular economy principles and resource-efficient technologies delivers dual economic and environmental benefits. Economically, it reduces costs, drives innovation, creates jobs, and strengthens resilience against resource scarcity. Environmentally, it conserves natural resources, minimizes waste, reduces emissions, and regenerates ecosystems. Research consistently shows that adopting these practices is not only environmentally responsible but also financially advantageous, offering a pathway toward sustainable development.

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## A STUDY ON THE IMPACT OF GOVERNMENT INITIATIVES ON ENTREPRENEURIAL GROWTH IN INDIA

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### ABSTRACT

Entrepreneurship is essential for economic development as it generates new jobs, fosters innovation, and facilitates inclusive growth. The Indian government has initiated various programs, including Startup India, Pradhan Mantri Mudra Yojana, Stand-Up India, Make in India, and Atmanirbhar Bharat Abhiyan, to foster entrepreneurship and self-employment. These initiatives seek to offer financial aid, talent enhancement, infrastructural development, and policy support to both newly established and experienced entrepreneurs. This research assesses the impact of governmental measures on the promotion of entrepreneurship, the facilitation of business operations, and the generation of employment opportunities. Government support, digital development, financial aid, and youth and women's interest have boosted entrepreneurship in India. Entrepreneurship is expected to grow in importance as the country develops economically with policy support and infrastructure improvements.

**Keywords-** Entrepreneurship, Government programs, Startup India, MSME.

### INTRODUCTION

India is one of the world's fastest-growing economies. With an estimated GDP of USD 7.3 Trillion by 2030, the nation is currently the fourth-largest economy in the globe and is on its way to becoming the third-largest one. This momentum is not only fortifying India's economic resilience but also creating lucrative opportunities for technology providers, investors, and businesses that are in alignment with the nation's growth strategy. The country is expected to have a positive future prognosis, as real GDP is expected to increase by 7.8% in the first quarter of FY 2025-26, compared to 6.5% in the previous year.

Entrepreneurship drives economic growth by creating jobs, innovating, and being inclusive. The Indian government promotes entrepreneurship and self-employment through Startup India, Pradhan Mantri Mudra Yojana, Stand-Up India, Make in India, and Atmanirbhar Bharat Abhiyan. These programs offer new and existing entrepreneurs financial, skill, infrastructure, and policy support.

### REVIEW OF LITERATURE

Thangavel and Munda (2025) evaluated the entrepreneurial landscape by identifying opportunities and challenges encountered by entrepreneurs. The study emphasizes that India presents a dynamic landscape with significant growth potential attributable to policy support and market expansion. Significant constraints encompass challenges in obtaining financing, absence of organized guidance, and regulatory intricacies. The research determines that conquering these obstacles is crucial for sustainable entrepreneurial growth in India.

Sukanta Sarkar (2025) examined the influence of governmental initiatives, including Startup India, on the expansion of entrepreneurship. It concludes that policy interventions have markedly enhanced the startup ecosystem by fostering innovation and generating employment. Nonetheless, challenges such as implementation deficiencies, bureaucratic obstacles, and disparate access to benefits among regions endure. The research underscores the necessity for enhanced policy implementation and supervision.

Manoj Kr. Hazarika & Anurag Hazarika examined the evolution of Indian entrepreneurship and the role of economic reforms, digitalization, and policy. India's startup ecosystem drives innovation and economic growth, according to the study. It also highlights market competition, funding constraints, and sustainability issues, suggesting a shift toward long-term value creation.

S. Dubey (2020) examined India's socio-economic and institutional entrepreneurship environment. It emphasizes education, family, culture, and government support as entrepreneurial development factors. The study also highlights social and resource constraints for women entrepreneurs.

### **OBJECTIVES OF THE STUDY**

The primary objectives of the paper are outlined as follows:

- To examine the various governmental initiatives and policies aimed at fostering entrepreneurial activity in India.
- To assess the influence of these programs on the development and viability of small and emerging enterprises.

### **RESEARCH METHODOLOGY OF THE STUDY**

The current investigation is descriptive in nature, and it has analyzed government schemes to investigate their impact on entrepreneurship in India. The secondary data primarily comprises secondary sources, including reports from the Ministry of MSME, Start-up India, NABARD, SIDBI, NITI Aayog, research papers, and industry profiles. The data encompasses both quantitative and qualitative aspects, pertaining to funds disbursed and the effectiveness of policies as reflected in beneficiary outcomes.

### **SCOPE OF THE STUDY**

The current topic investigates the impact of various government schemes on the growth and development of entrepreneurship in India, utilizing secondary data sourced from government reports, policy documents, and published statistics.

### **LIMITATIONS OF THE STUDY**

The study relies on secondary data obtained from diverse reports and websites, excluding to incorporate the perceptions and challenges encountered by entrepreneurs.

### **ANALYSIS & DISCUSSION**

Entrepreneurship is regarded as a crucial catalyst for economic growth, job creation, and innovation in developing economies such as India. The Government of India has launched various initiatives to foster entrepreneurial activities, including Startup India, Pradhan Mantri Mudra Yojana, Stand-Up India, Make in India, and Atmanirbhar Bharat Abhiyan. These initiatives aim to promote self-employment, assist startups, boost the MSME sector, and facilitate inclusive economic development.

#### **Major Government Schemes and Their Impact**

1. Credit Guarantee Fund Scheme for Micro and Small Enterprises (2000): The Credit Guarantee Fund Scheme for Micro and Small Enterprises (CGTMSE) was established to offer collateral-free loans to micro and small business owners. The objective was to incentivize banks to extend credit to new entrepreneurs without necessitating collateral. The initiative positively influenced access to financing for MSMEs and facilitated the establishment of new enterprises nationwide.
2. MSME Development Act Programs (2006): Subsequent to the MSME Development Act of 2006, various initiatives were launched to assist micro, small, and medium enterprises via financial aid, training, technological advancement, and market support. The aim was to boost the MSME sector and create employment opportunities. The impact was significant, as MSMEs became major contributors to India's GDP, exports, and employment.
3. Prime Minister Employment Generation Programme (2008): A central sector scheme, the Prime Minister's Employment Generation Programme (PMEGP) was initiated in August 2008 and is administered by the Khadi and Village Industries Commission (KVIC), which serves as the nodal agency. It merged the Prime Minister's Rojgar Yojana (PMRY) and the Rural Employment Generation Programme (REGP), which ran until March 31, 2008. The scheme promotes self-employment and micro

- enterprises to create rural and urban jobs. To reduce urban migration, it brings together traditional artisans and unemployed youth to provide sustainable livelihoods in their regions.
4. National Skill Development Mission (2009): The National Skill Development Mission was established to offer skill training to youth, enhancing employability and fostering entrepreneurship. The objective was to cultivate proficient personnel for industry and self-employment. The mission has positively influenced the proliferation of trained youth and strengthened startup and small business initiatives.
  5. Make in India (2014): Make in India was initiated to enhance manufacturing and draw investment to India. The aim was to motivate entrepreneurs to establish industries in India and generate employment. The initiative enhanced the business climate, augmented foreign investment, and fostered industrial entrepreneurship.
  6. Skill India Mission (2014): The Skill India Mission seeks to train millions of youths in various skills to equip them for employment and self-employment. The aim was to cultivate a proficient workforce capable of initiating small enterprises and startups. The initiative fostered entrepreneurship by enhancing vocational skills and technical expertise.
  7. Pradhan Mantri Mudra Yojana (2015): Banks and financial institutions offered collateral-free loans to micro and small entrepreneurs under the 2015 Pradhan Mantri Mudra Yojana. Small business owners, shopkeepers, artisans, and service providers receive financial assistance to promote self-employment. By increasing credit access for new entrepreneurs, especially rural and female entrepreneurs, the scheme has helped develop entrepreneurship.
  8. ASPIRE Scheme (2015): ASPIRE promotes innovation and rural entrepreneurship through incubation centers and skill training. It supports small businesses and startups to create rural jobs. The scheme has helped rural businesses grow and encouraged youth to start businesses outside of agriculture.
  9. Startup Village Entrepreneurship Programme (2015): Startup Village Entrepreneurship Programme provides training, funding, and market links to rural entrepreneurs. The scheme aims to create sustainable village self-employment and reduce urban migration. Many states have seen small rural businesses grow and incomes rise due to the scheme.
  10. Startup India (2016): Startup India is a key government initiative to promote innovation and entrepreneurship. The program provides funding, tax benefits, incubation, and simplified regulations to build a startup ecosystem. The scheme has helped India become one of the world's largest startup ecosystems, with thousands of new startups registered each year.
  11. Stand-Up India (2016): Stand-Up India provides bank loans to women and SC/ST entrepreneurs to start new businesses. The scheme gives disadvantaged groups equal opportunities to promote inclusive growth. The scheme has increased women- and SC/ST-owned businesses in India. It facilitates bank loans from over INR 10 Lakh to INR 1 Crore for Greenfield enterprises in trading, manufacturing, services, and agriculture. For non-individual enterprises, SC/ST or female entrepreneurs must hold 51% of the shareholding and controlling stake. The scheme's sanctioned amount rose from INR 14,431.14 Crore in October 2018 to INR 61,020.41 Crore by March 2025.
  12. Atal Innovation Mission (2016): The Atal Innovation Mission was established to foster innovation, research, and startup culture in India via Atal Tinkering Labs, incubation centers, and innovation hubs. The mission's objective is to motivate young entrepreneurs, students, and researchers to cultivate innovative ideas and startups. The initiative has fortified the innovation ecosystem and enhanced the startup culture within educational institutions.
  13. Production Linked Incentive (PLI) Scheme (2020): The Production Linked Incentive (PLI) Scheme (2020) fosters manufacturing and draws investment to produce goods in India by offering financial incentives based on production levels.
  14. Startup India Seed Fund Scheme (2021): The Startup India Seed Fund Scheme was established to offer financial support to emerging startups during the challenging initial funding phase. The aim of the initiative is to facilitate product development, prototype manufacturing, and market introduction. The scheme's impact is evident in the heightened survival rate of startups and the expansion of technology-driven enterprises.
  15. RAMP Scheme (2022): The Raising and Accelerating MSME Performance (RAMP) scheme was initiated to enhance the performance of MSMEs by facilitating improved access to credit, technology,

and markets. The aim of the initiative is to enhance the MSME sector and increase the competitiveness of small enterprises. The initiative assists entrepreneurs in scaling their enterprises and creating jobs.

16. PM Vishwakarma Scheme (2023): The PM Vishwakarma Scheme was established to assist traditional artisans and small entrepreneurs, including carpenters, blacksmiths, tailors, and craftsmen. The aim of the initiative is to furnish skill training, contemporary tools, and financial support to traditional laborers. The initiative has facilitated the preservation of traditional professions and enhanced income prospects.

### Growth of Entrepreneurship in India

In recent years, economic reforms, government support, technological advancement, and self-employment awareness have boosted entrepreneurship in India. Entrepreneurship boosts economic growth, employment, innovation, and industry. The Indian entrepreneurial ecosystem has grown rapidly due to government initiatives like Startup India, Make in India, Digital India, Skill India Mission, and Atmanirbhar Bharat Abhiyan. The following points describe Indian entrepreneurship growth.

#### 1. Growth in the Quantity of Startups

India has experienced a swift increase in the number of startups, particularly since 2016. Government assistance, funding accessibility, and incubation centers have motivated young individuals to establish their own enterprises. A multitude of startups are founded on technology, e-commerce, fintech, and service sectors, thereby fortifying the present-day entrepreneurial ecosystem.

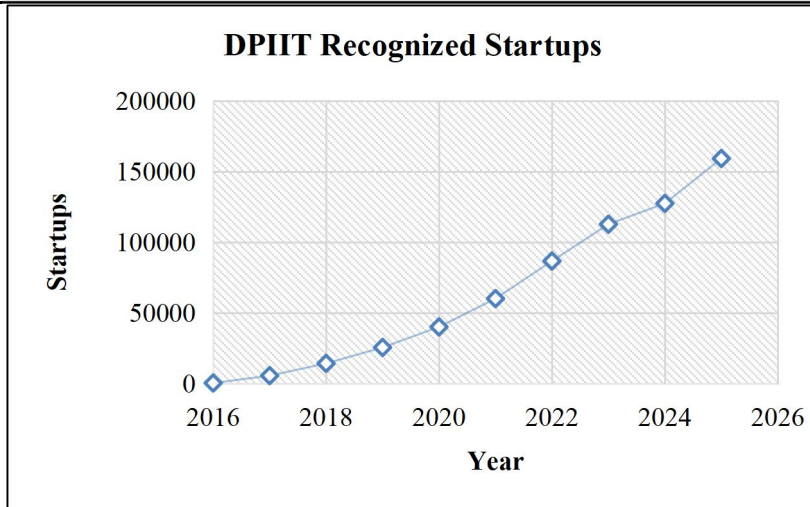
Table 1: Showing the number of Start-ups from 2016 to 2025:

Year	DPIIT Recognized Start-ups
2016	471
2017	5,704
2018	14,339
2019	25,618
2020	40,116
2021	60,162
2022	86,704
2023	112,718
2024	127,433
2025	1,59,157

Source: PIB India.

NASSCOM's report indicates that India has become the third-largest startup ecosystem worldwide, comprising approximately 159,157 startups by 2025. The figure continues to increase, with the compound annual growth rate of startup funding during the bridge funding stage in 2024 estimated at approximately 76% in the country.

The quantity of DPIIT-recognized startups has increased from 471 in 2016 to 159,157 in 2025. This signifies an extraordinary 38,067.1% escalation over the past decade and a 24% rise from the preceding year.



Source: Compiled from table 1

The chart above illustrates a consistent rise in the number of recognized startups in India from 2016 to 2025. The acceleration of growth was facilitated by the implementation of government initiatives, including Start-up India, Make in India, and Atmanirbhar Bharat. According to the data, the rapid growth of entrepreneurship in India is attributable to the availability of finance, policy support, digital development, and the growing involvement of the youth. The ascending trend is a clear indication of the bolstering of the entrepreneurial ecosystem in India. Since 2016, startups have generated over 16.6 lakh employment opportunities.

## 2. Growth of MSME Sector

MSMEs drive Indian entrepreneurship. The MSME sector boosts employment, production, and exports. Easy loans, credit guarantee schemes, and training programs have encouraged small entrepreneurs to start manufacturing, trade, and service businesses.

Indicator	Data
Total MSMEs	7.47 crore
Employment	32.82 crore people
Contribution to GDP	31.1%
Manufacturing Output	35.4%
Export Contribution	48.58%

Source: PIB.gov.in

The Economic Survey 2025-26 emphasizes MSMEs' importance to India's economy. The sector accounts for 31.1% of GDP, 35.4% of manufacturing output, and 48.58% of exports with 7.47 crore enterprises and 32.82 crore workers. MSMEs are essential for inclusive growth, regional development, and the nation's manufacturing goals, as these numbers show. In 2024-25, the number of exporting MSMEs increased significantly from 52,849 in 2020-21 to 1,73,350, resulting in a rise in exports from INR 3.95 Lakh Crore to INR 12.39 Lakh Crore. This increase is indicative of the MSMEs' increasing influence on global trade.

## 3. Growth of Women's Entrepreneurship

Government programs for women entrepreneurs have increased their economic participation. In 2025, the Economic Survey found that over 73,151 startups have a female director, and ₹3,107 crore has been invested in 149 women-led startups via Alternative Investment Funds. According to 2026 data, women and rural entrepreneurship in India are growing rapidly. The number of women-owned MSMEs has surpassed 8 million, and they generate significant employment. The Indian Brand Equity Foundation reports that 20.37% of MSME businesses are women-led and 23.3% of the workforce. Women own 13.5–15.7 million businesses that employ 22–27 million people (Bain & Co survey).

#### 4. Growth of Rural Entrepreneurship

Urban entrepreneurship is no longer exclusive. Self-help groups, microfinance, and government support have increased rural entrepreneurship. Small farms, dairy, handicrafts, and village industries are creating jobs in rural areas and reducing urban migration.

The latest data depicts that rural entrepreneurship in India is growing due to MSMEs, finance, and government initiatives. Rural entrepreneurship is essential to inclusive economic development, with over half of MSMEs in rural areas and 32 crore people employed in the sector. Rural India has become a dynamic entrepreneurial ecosystem due to rising incomes, declining unemployment, and strong self-help group participation by women. This trend favors decentralized, sustainable economic growth.

#### 5. Increase in Youth Participation

Educational institutions, entrepreneurship programs, and startup culture inspire students to become entrepreneurs. College and university incubators and innovation hubs have helped this growth. Many of the 120 unicorns' founders are under 30-35.

Over the past decade, youth-led start-ups have grown, especially in IT, fintech, health tech, and e-commerce. According to Start-up India, over 20,000 start-ups are led by under-35s. Indian youth entrepreneurship empowers young people to innovate, create jobs, and solve social issues, driving economic growth and social inclusion.

#### CONCLUSION

Government programs have greatly influenced India's entrepreneurial ecosystem. Financial, policy, and skill development support from government schemes has helped Indian entrepreneurship grow. Startup India, Mudra Yojana, and Stand-Up India have inspired youth, women, and rural entrepreneurs. Better implementation, awareness, and monitoring are needed to ensure that all groups benefit.

The expansion of entrepreneurship has facilitated job creation, industrial advancement, advancement in innovation and technology, augmentation of GDP and equitable regional advancement. Entrepreneurship has emerged as a pivotal element in India's economic advancement. Recent Union Budgets have supported startups, digital entrepreneurship, women entrepreneurs, and MSMEs with funding, credit, and skill development. These initiatives aim to make India a startup hub and create jobs through entrepreneurship. These measures should boost innovation, business creation, and economic growth.

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# BEYOND BORDERS AND TOWERS: HOW STARTUPS ARE HARNESSING 5G/6G AND SATELLITE CONVERGENCE TO RESHAPE GLOBAL CONNECTIVITY

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## ABSTRACT

The convergence of fifth-generation (5G) and emerging sixth-generation (6G) wireless networks with Non-Terrestrial Network (NTN) satellite communications is rapidly becoming a defining frontier of the global technology startup ecosystem. This paper investigates how entrepreneurial ventures are positioning themselves at this intersection to deliver ubiquitous, high-speed connectivity — particularly in regions underserved by conventional terrestrial infrastructure. Drawing on secondary data, case analyses of prominent startups, and frameworks from innovation management literature, the study explores the strategic, technological, and policy dimensions that shape startup success in this domain. Findings indicate that startups integrating Low Earth Orbit (LEO) satellite constellations with 5G/6G network slicing, edge computing, and AI-driven spectrum management represent a new paradigm of inclusive digital infrastructure. The paper concludes with implications for investors, policymakers, and academic researchers.

**Keywords:** 5G, 6G, Satellite Communications, Non-Terrestrial Networks, LEO, Startup Ecosystem, Digital Infrastructure, Innovation

## INTRODUCTION

The global digital divide — the persistent gap between those with reliable internet access and those without — remains one of the most critical challenges of the twenty-first century. Traditional cellular networks, despite significant expansion, are limited by the economics and logistics of tower-based infrastructure. Rural regions, maritime zones, disaster-affected areas, and developing nations frequently lack the connectivity needed to participate in the modern digital economy. Into this landscape, a wave of technology startups is deploying a powerful dual strategy: combining the ultra-low latency, massive bandwidth of 5G and next-generation 6G wireless standards with the broad geographic reach of satellite-based Non-Terrestrial Networks (NTN).

The 3rd Generation Partnership Project (3GPP), through its Release 17 standards, formally integrated satellite communication into the 5G NR (New Radio) architecture, legitimising what visionary entrepreneurs had long pursued.<sup>1</sup> The International Telecommunication Union (ITU) projects that 6G networks, expected commercially around 2030, will operate in sub-terahertz frequency bands and deliver peak data rates exceeding one terabit per second — capabilities that, when fused with next-generation satellite constellations, could render geography irrelevant to connectivity.<sup>2</sup>

This paper examines startups operating in this convergence space through the lens of entrepreneurship theory, innovation economics, and technology management. It seeks to answer three questions: (i) What business models are emerging at the 5G/6G–satellite nexus? (ii) What are the critical enabling factors and barriers to startup growth in this domain? (iii) What broader implications does this trend carry for economic inclusion, national policy, and venture funding?

## THEORETICAL FRAMEWORK AND LITERATURE REVIEW

Schumpeter's (1934) concept of creative destruction provides a foundational lens: startups in the telecom sector are dismantling the competitive advantages of established tower-dependent mobile network operators (MNOs) by offering connectivity-as-a-service from space.<sup>3</sup> More recently, Teece's (2010) dynamic

capabilities framework is pertinent — successful startups in this sector must continuously reconfigure technological assets (spectrum allocations, satellite hardware, software-defined networking protocols) in response to rapidly shifting standards and competitive landscapes.

The concept of Platform Ecosystems (Parker, Van Alstyne, & Choudary, 2016) is equally instructive. Startups such as Starlink (SpaceX), OneWeb, and Amazon's Project Kuiper are not merely connectivity providers; they are constructing platform businesses atop which third-party developers, enterprises, and governments build services.<sup>4</sup> This platform logic amplifies network effects and creates powerful barriers to entry once a critical mass of satellite coverage and user terminals is achieved.

From an innovation systems perspective, Lundvall (1992) argues that national innovation systems shape the conditions under which startups emerge and scale.<sup>5</sup> In India, government initiatives such as the Indian Space Policy 2023 and the liberalisation of the satellite communication sector by the Department of Telecommunications (DoT) represent systemic changes that directly influence the startup opportunity landscape. Globally, the U.S. Federal Communications Commission's (FCC) spectrum auctions for 5G mid-band frequencies have similarly catalysed entrepreneurial activity.

### **THE CONVERGENCE OPPORTUNITY: WHERE 5G/6G MEETS SATELLITE**

The architectural integration of satellite and 5G/6G networks operates on several levels. At the access layer, LEO satellites operating at altitudes between 500 and 2,000 kilometres can deliver latency figures of 20–40 milliseconds — comparable to terrestrial 4G LTE, and far superior to the 600+ millisecond latency of traditional geostationary (GEO) satellites.<sup>6</sup> When combined with 5G's network slicing capability, operators can dynamically allocate dedicated virtual network segments for specific applications — emergency services, industrial IoT, autonomous vehicles — regardless of the user's physical location.

At the backhaul layer, satellite links provide the critical 'last mile' (or, in remote contexts, the 'only mile') between 5G base stations and the core network. Startups are developing intelligent handover protocols that allow user devices to seamlessly transition between terrestrial 5G cells and satellite beams — a function 3GPP terms 'conditional handover' in NTN scenarios.

The 6G horizon introduces additional dimensions. Research consortia, including the European Hexa-X project and South Korea's 6G Forum, envision 6G as a 'network of networks' inherently designed for NTN integration, with AI-native air interfaces that adapt to satellite channel characteristics in real time.<sup>7</sup> For startups, this represents a forward-looking design imperative: products built today must be architected with 6G compatibility in mind.

### **STARTUP LANDSCAPE: CASE ANALYSES**

A diverse and rapidly evolving cohort of startups is operating across the 5G/6G–satellite value chain. The following cases illustrate distinct strategic archetypes:

**Skylo Technologies (USA/India):** Founded in 2017, Skylo has developed a low-cost NTN hub device that connects existing IoT sensors — deployed in agriculture, fisheries, and logistics — to geostationary satellites using NB-IoT (Narrowband IoT), a 5G standard. Skylo's Series B funding of USD 103 million and subsequent partnerships with Deutsche Telekom and SoftBank demonstrate the commercial validation of 5G NTN for mass-market IoT applications.

**Satellogic (Argentina/USA):** Operating a constellation of sub-metre resolution Earth observation satellites, Satellogic integrates near-real-time imagery delivery via 5G-connected ground stations. Its partnership with Lingo Media and listing on NASDAQ illustrate how satellite startups are leveraging 5G terrestrial networks to dramatically reduce data latency from orbit to end-user applications in agriculture, urban planning, and disaster response.

**Agnikul Cosmos (India):** While primarily a launch vehicle startup, Agnikul's modular rocket design is explicitly oriented toward placing small LEO satellites for telecom applications. Its semi-cryogenic engine,

the Agnibaan SOrTeD — successfully test-fired in 2024 — positions it as a key enabler of the Indian startup ecosystem's ambition to deploy domestic 5G NTN infrastructure without dependence on foreign launch providers.

Pixxel (India): Pixxel is building a constellation of hyperspectral satellites aimed at enterprise and government clients in agriculture, energy, and environmental monitoring, with data delivery pipelines designed for 5G edge computing environments. Its USD 36 million Series B funding signals strong investor confidence in vertically integrated satellite data startups.

## EMERGING BUSINESS MODELS

Analysis of the startup landscape reveals four primary business model archetypes at the 5G/6G–satellite convergence:

Connectivity-as-a-Service (CaaS): Startups provide end-to-end connectivity subscriptions, abstracting the complexity of satellite-terrestrial handover from the end customer. Revenue is subscription-based, with hardware (user terminals) often subsidised or leased. Starlink's consumer and enterprise offerings exemplify this model.

Data Analytics Platforms: Leveraging satellite imagery and IoT sensor data transmitted over 5G/NTN links, these startups monetise insights rather than raw connectivity. Pixxel and Satellogic represent this archetype, targeting enterprise and government buyers with SaaS-based analytics dashboards.

Infrastructure Enablers: Startups supplying the hardware (user terminals, phased-array antennas, ground station equipment) and software (network management systems, spectrum optimisation algorithms) required by MNOs and satellite operators. This B2B model benefits from the capital expenditure cycles of large telecom and space operators.

Vertical-Specific Integrators: Startups focusing on a specific industry — precision agriculture, maritime logistics, disaster response — and building end-to-end solutions that integrate 5G NTN connectivity with domain-specific applications. Skylo's focus on agriculture and fisheries exemplifies this approach.

## KEY CHALLENGES AND BARRIERS

Despite enormous opportunity, startups in this space face a distinctive set of challenges. Regulatory complexity is perhaps the most daunting: satellite spectrum allocation is governed by the ITU's Radio Regulations, while 5G spectrum is managed at the national level, creating a multi-jurisdictional compliance burden that few startups have the legal resources to navigate efficiently.<sup>10</sup>

Capital intensity is structurally high. Unlike pure software startups, 5G/6G–satellite ventures require substantial investment in hardware (satellite manufacturing and launch costs, ground segment infrastructure) before any revenue can be generated. The average cost to manufacture and launch a LEO satellite remains in the range of USD 1–5 million per unit, meaning that a constellation of operational scale requires hundreds of millions of dollars of upfront capital.

Talent scarcity is another critical constraint. The skill intersection of RF engineering, satellite communications, 5G protocol stack development, and entrepreneurial management is extremely narrow globally. India's space and telecom sectors, while producing significant engineering talent, face intense competition from established players such as ISRO, Airtel, and Jio in attracting experienced professionals.

## POLICY AND INVESTMENT IMPLICATIONS

The Indian Space Policy 2023 and the establishment of IN-SPACe (Indian National Space Promotion and Authorisation Centre) as a single-window regulatory body represent a significant policy breakthrough, enabling private sector participation in satellite operations for the first time. Policymakers should build on this foundation by creating dedicated spectrum sandboxes for 5G NTN testing, fast-tracking type approval for

NTN user terminals, and establishing government-backed anchor tenancy programmes to de-risk early-stage satellite startup revenues.

For venture capital investors, the 5G/6G–satellite sector offers a compelling risk-return profile over a 7–10 year horizon. The total addressable market for satellite-enabled 5G services is projected by Analysys Mason to reach USD 17.4 billion globally by 2030.<sup>11</sup> Investors who develop technical due diligence capabilities specific to NTN architecture and 3GPP standards will be better positioned to identify category-defining investments ahead of the mainstream.

## CONCLUSION

The convergence of 5G/6G wireless standards with satellite-based Non-Terrestrial Networks is not a distant future scenario — it is an entrepreneurial reality unfolding today. Startups across India and globally are leveraging this convergence to build businesses that deliver connectivity, data intelligence, and platform services to markets that incumbent operators have historically neglected. The cases of Skylo, Satellogic, Agnikul Cosmos, and Pixxel illustrate the diversity of business models, geographies, and investor profiles that characterise this emerging ecosystem.

Success in this space demands a rare combination of deep technical capability, policy navigation acumen, and patient capital. For India, the confluence of a liberalising space policy, a maturing startup ecosystem, and a massive underserved connectivity market creates a uniquely favourable environment for globally competitive ventures to emerge. Academicians, investors, and policymakers who engage seriously with this convergence today will shape the digital infrastructure of tomorrow.

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## Notes

1. 3GPP Release 17 (March 2022) formally standardised satellite access in 5G NR through Technical Specification 38.821.
2. ITU-R Recommendation M.2160 (2023) establishes the framework for IMT-2030, colloquially termed '6G', targeting commercial deployment around 2030.
3. Schumpeter introduced creative destruction in 'The Theory of Economic Development' (1934), describing entrepreneurial innovation as the engine of capitalist transformation.
4. Platform Revolution (Parker, Van Alstyne & Choudary, 2016) provides the definitive framework for analysing multi-sided platforms, directly applicable to satellite connectivity ecosystems.
5. Lundvall's National Systems of Innovation (1992) argues that institutional context, including government policy, university-industry linkages, and labour market structures, shapes innovative capacity.
6. LEO satellite latency figures cited from Xu, Sharma & Zhang (2023) IEEE Communications Surveys & Tutorials comparative analysis of NTN architectures.
7. The European Hexa-X 6G project (2021–2023) produced the foundational vision documents for AI-native 6G architecture with native NTN support.



8. Skylo Technologies funding and partnership data sourced from company press releases available at <https://www.skylo.tech/>
9. Agnikul Cosmos successfully completed the maiden flight of Agnibaan SOrTeD on 30 May 2024, becoming the first private Indian company to launch a semi-cryogenic engine rocket.
10. Regulatory complexity in NTN satellite operations is governed by ITU Radio Regulations Article 21 and national spectrum management frameworks.
11. Market projection from Analysys Mason (2023) 'Satellite-enabled 5G services: Global market forecast 2023–2030'.

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## FROM ACCESS TO AGENCY: FINTECH, FINANCIAL LITERACY AND WOMEN ENTERPRISE GROWTH IN URBAN INDIA

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### ABSTRACT

The expansion of fintech has significantly improved financial access in urban India, yet its impact on women-led enterprise growth remains uneven. This study examines the relationship between fintech adoption, financial literacy, and enterprise outcomes using the Access–Agency framework. Drawing on secondary data and case-based evidence, the paper argues that access to digital financial tools alone does not ensure business growth. Financial capability, shaped by financial literacy and informed decision-making, is critical in translating access into meaningful outcomes. The study highlights that capability-driven interventions are essential to enable women entrepreneurs to effectively utilise fintech and achieve sustainable enterprise growth.

**Key Words:** Fintech, Financial Literacy, Digital Finance, Access-Agency, Enterprise Growth

### INTRODUCTION

Over the past decade, India has witnessed a remarkable transformation in its financial ecosystem, driven largely by the rapid expansion of financial technology (fintech). The proliferation of digital payment systems, mobile banking platforms, and digital lending solutions has significantly enhanced financial inclusion, particularly in urban areas. Initiatives such as Unified Payments Interface (UPI), Aadhaar-enabled services, and mobile wallet penetration have enabled millions to access formal financial systems for the first time.

Urban India has seen a rise in women-led micro, small, and medium enterprises (MSMEs), ranging from home-based businesses to digitally enabled startups. However, while fintech has improved access to financial services, a critical gap remains between access and effective utilization.

Despite having access to digital financial tools, many women entrepreneurs struggle to translate fintech adoption into tangible enterprise growth. This disconnect highlights an important issue: access alone does not guarantee empowerment or economic advancement. The ability to effectively use financial tools—what can be termed as financial capability—plays a crucial role in determining these outcomes.

This paper argues that the real driver of enterprise growth lies not merely in access to fintech but in the development of agency, which is shaped by financial literacy and capability. By examining the relationship between fintech adoption, financial literacy, and enterprise growth, this study aims to shift the conversation from access to agency within the context of urban women entrepreneurship.

### Urban India Context

Urban India presents a unique setting characterized by high fintech penetration and a steady rise in women entrepreneurship. The expansion of digital financial infrastructure, combined with increasing smartphone usage and internet connectivity, has created an enabling environment for the adoption of fintech solutions in urban areas (World Bank, 2022; Reserve Bank of India, 2023).

Digital payment systems such as UPI have witnessed widespread adoption, driven by their ease of use, low transaction costs, and interoperability across platforms. The rapid growth of UPI transactions reflects the success of India's digital public infrastructure in facilitating financial inclusion. Institutions such as the Reserve Bank of India (RBI) and the National Payments Corporation of India (NPCI) have played a central

role in designing and regulating this ecosystem, ensuring scalability, security, and accessibility (RBI, 2023; NPCI, 2024).

## LITERATURE REVIEW

### Fintech and Financial Inclusion

Fintech has significantly transformed the landscape of financial inclusion by lowering traditional barriers such as cost, distance, and documentation requirements. Digital financial services—including mobile banking, digital wallets, and online payment systems—have enabled broader participation in formal financial systems, particularly in developing economies.

In the Indian context, the growth of fintech has been closely linked to the development of digital public infrastructure. The introduction of the Unified Payments Interface (UPI) has been especially transformative, enabling instant, low-cost transactions and accelerating the shift toward a cashless economy (Reserve Bank of India, 2023). Similarly, global evidence suggests that digital financial services can enhance financial inclusion by improving access to payments, savings, and credit (World Bank, 2022).

However, existing research largely focuses on access indicators such as account ownership and transaction volumes. As noted by Demiurgic-Kunt et al. (2018), access to financial services does not necessarily imply effective usage or improved economic outcomes. This highlights the need to move beyond access metrics and examine how digital financial tools are utilized in practice.

### Financial Literacy and Entrepreneurial Capability

Financial literacy is widely recognized as a critical determinant of financial decision-making and economic well-being. Lusardi and Mitchell (2014) define financial literacy as the ability to process economic information and make informed decisions regarding financial planning, wealth accumulation, and debt management.

Empirical studies have consistently shown that individuals with higher financial literacy are more likely to engage in effective financial behaviors, such as budgeting, saving, and investing (Lusardi & Mitchell, 2014). In the entrepreneurial context, financial literacy enhances the ability to manage business finances, assess credit options, and plan for growth.

Furthermore, financial literacy contributes to what is often termed financial capability—the combination of knowledge, skills, attitudes, and behaviors required to make sound financial decisions (Atkinson & Messy, 2012). Entrepreneurs with higher financial capability are better equipped to navigate financial markets and utilize digital financial tools strategically.

This suggests that financial literacy is not merely a supporting factor but a central component of entrepreneurial success, particularly in digitally evolving financial environments.

### Women Entrepreneurship and Digital Finance

Women entrepreneurs play a crucial role in economic development, yet they continue to face structural and socio-economic barriers. These include limited access to formal credit, lower levels of financial literacy, and constraints related to mobility and social norms (Brush et al., 2019).

Digital finance has been positioned as a potential solution to some of these challenges. By reducing reliance on physical infrastructure and enabling remote access to financial services, fintech can help bridge gender gaps in financial inclusion (Suri & Jack, 2016). Evidence from developing economies shows that digital financial tools can increase women's participation in economic activities and enhance their financial independence.

In India, women entrepreneurs are increasingly adopting digital payment systems and mobile banking solutions, particularly in urban areas. However, adoption does not always translate into effective usage or

business growth. As highlighted by Klapper, El-Zoghbi, and Hess (2016), financial literacy remains a key constraint that limits the ability of women to fully benefit from digital financial services. Thus, while digital finance expands access, its impact on women's enterprise outcomes depends significantly on their financial knowledge and capability.

## RESEARCH GAP

While fintech has significantly expanded access to financial services, there is limited research examining how financial literacy influences the relationship between fintech adoption and enterprise growth among women entrepreneurs in urban India. Most existing studies treat fintech access as an independent driver of growth, without accounting for the role of financial capability. This paper addresses this gap by introducing a mediating and moderating perspective, focusing on how financial literacy shapes outcomes.

## RESEARCH PROBLEM

The rapid expansion of fintech in India has significantly improved access to formal financial services, particularly in urban areas. Digital payment systems, mobile banking, and online lending platforms have enabled women entrepreneurs to participate more actively in the financial ecosystem. However, emerging evidence suggests that access alone does not automatically translate into improved enterprise outcomes. A critical gap persists between the availability of financial tools and the ability to use them effectively.

This gap highlights the importance of financial literacy and capability in shaping entrepreneurial success. While fintech provides the infrastructure for inclusion, it is the entrepreneur's ability to understand, evaluate, and strategically use these tools that determines whether access leads to growth. In this context, the study adopts an *Access–Agency* perspective, focusing on how financial literacy transforms digital access into meaningful economic outcomes. Against this backdrop, the present study seeks to achieve the following objectives:

## OBJECTIVES OF THE STUDY

1. To analyse the impact of fintech adoption on enterprise growth.
2. To assess the role of financial literacy in shaping fintech utilization.
3. To conceptualise the transition from access to agency using the *Access–Agency* synthesis.
4. To derive policy implications for inclusive and capability-driven financial ecosystems.

## RESEARCH METHODOLOGY

This study adopts a qualitative, analytical research design based on the use of secondary data. The research is explanatory and conceptual in nature, as it seeks to examine the relationship between fintech adoption, financial literacy, and enterprise growth among women entrepreneurs in urban India.

Rather than generating primary data, the study synthesises existing literature, reports, and empirical findings to develop and substantiate the proposed *Access–Agency* framework. The study relies exclusively on secondary data collected from credible and authoritative sources, including:

- Reports from institutions such as the Reserve Bank of India (RBI) and National Payments Corporation of India (NPCI)
- Publications from international organisations such as the World Bank and OECD
- Peer-reviewed journal articles on fintech, financial literacy, and women entrepreneurship
- Industry reports and surveys on MSMEs and digital financial inclusion
- Government reports, including those from the Ministry of MSME

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## ILLUSTRATIVE EVIDENCE AND CASE-BASED INSIGHTS

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The objectives of this study are framed within the broader effort to understand how fintech-driven financial inclusion translates into meaningful enterprise outcomes for women entrepreneurs in urban India. While access to digital financial services has expanded significantly, the extent to which this access leads to business growth remains uneven. In this context, the study seeks to examine not only the direct impact of fintech adoption but also the role of financial literacy in shaping its effectiveness. By integrating empirical insights and case-based evidence, the objectives are designed to capture the transition from access to agency and to derive implications for more inclusive and capability-driven financial ecosystems.

### **Fintech and Enterprise Growth**

In urban centres such as Mumbai and Bengaluru, women-led micro-enterprises in sectors like home-based food services and tailoring have increasingly adopted UPI-enabled QR payment systems. Evidence suggests that MSMEs adopting digital payments report improvements in transaction speed, customer retention, and sales volumes. According to the Reserve Bank of India (2023), the rapid expansion of UPI transactions has significantly enhanced the efficiency of small business operations, while industry surveys indicate that over 70% of MSMEs experienced business growth following digital adoption (Economic Times, 2023; NPCI, 2024). This demonstrates that fintech adoption contributes to enterprise growth by reducing transaction frictions and enabling broader market participation.

### **Role of financial literacy in shaping fintech utilization**

Women entrepreneurs using digital lending platforms such as Lendingkart and KreditBee show varied outcomes based on their financial literacy levels. Empirical studies indicate that financially literate entrepreneurs are more likely to use credit productively—for inventory expansion or business scaling—while those with limited financial knowledge are more vulnerable to over-borrowing and repayment stress. Lusardi and Mitchell (2014) highlight that financial literacy significantly influences borrowing behaviour, while World Bank (2022) findings suggest that improved financial knowledge correlates with better credit management outcomes. This indicates that financial literacy directly affects the quality and effectiveness of fintech utilisation.

### **Access–Agency synthesis**

While digital payment adoption is widespread, only a subset of entrepreneurs actively utilises transaction data for financial planning and decision-making. For example, boutique owners and small retailers who analyse digital payment records to identify demand patterns and optimise inventory demonstrate higher operational efficiency compared to those who use fintech only for transactions. OECD (2022) and Atkinson & Messy (2012) emphasise that financial capability—beyond basic access—is a key determinant of effective financial behaviour and improved economic outcomes. This reflects a transition from access (use of fintech tools) to agency (strategic financial decision-making).

### **Policy implications**

Programs implemented through self-help groups (SHGs), particularly those supported by NABARD, provide evidence of the effectiveness of combining fintech access with financial literacy training. Studies indicate that SHG participants who receive structured financial education alongside access to digital banking exhibit higher repayment rates, improved savings behaviour, and more sustainable enterprise outcomes compared to those with access alone (NABARD, 2022; World Bank, 2022). These findings reinforce the importance of capability-driven policy interventions.

## **SYNTHESIS: FROM ACCESS TO AGENCY**

The case-based evidence presented in the preceding section reveals a consistent pattern: while fintech adoption has expanded rapidly among women entrepreneurs in urban India, its impact on enterprise growth

remains uneven. This variation underscores a central insight of the study—**access to digital financial tools does not, in itself, guarantee improved business outcomes.**

To explain this divergence, the study draws on the capability approach advanced by Amartya Sen, distinguishing between access (the availability of financial resources) and agency (the ability to use these resources effectively). The empirical illustrations demonstrate that entrepreneurs who possess higher levels of financial literacy are better able to interpret financial information, manage risks, and make strategic decisions, thereby translating fintech usage into tangible enterprise growth.

This relationship can be conceptualised as:

**Digital Access (Fintech Adoption) → Financial Capability → Enterprise Growth**

Within this framework, financial capability functions as a transformative mechanism that converts access into agency. It encompasses not only financial literacy but also the ability to make informed decisions, manage risks, and identify growth opportunities—dimensions that are particularly relevant for women entrepreneurs operating in dynamic urban markets. See Fig: 1.

**Figure: 1**



*Developed by authors based on conceptual framework*

Importantly, the findings suggest that the challenge of financial inclusion in urban India has evolved from an infrastructure deficit to a capability deficit. While digital ecosystems have successfully lowered entry barriers, disparities in financial literacy and digital confidence continue to shape entrepreneurial trajectories. This explains why similar levels of fintech access can lead to markedly different business outcomes. Thus, fintech should be understood not as a direct driver of enterprise growth, but as an enabling condition whose effectiveness depends on the presence of financial capability. In this sense, agency—not access—emerges as the critical determinant of sustainable enterprise development.

## CONCLUSION

This paper highlights the critical distinction between access and agency in the context of fintech and women entrepreneurship. While fintech has successfully expanded access to financial services, its impact on enterprise growth is mediated by financial literacy and capability. The ability to effectively use financial tools determines whether access translates into meaningful outcomes. The study underscores the need to move beyond infrastructure-focused approaches and prioritize capability-building initiatives. By fostering financial literacy and enhancing agency, policymakers and stakeholders can unlock the full potential of fintech for

women entrepreneurs in urban India. Ultimately, the path to inclusive growth lies not just in providing access, but in enabling individuals to act on that access in ways that transform their economic realities.

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## CONSUMER RIGHTS AND RESPONSIBILITIES: A STUDY OF AWARENESS AND PRACTICES AMONG YOUTH IN MUMBAI

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### ABSTRACT

It is the responsibility of the consumer to educate themselves on their rights and to get appropriate information about available channels for redressal of their grievances in case of violation of their rights. Each and every consumer should exercise his or her rights in a responsible manner. Consumers ought to be aware of the value and specifications of the goods they are interested in buying. They have to be sensible and not compromise on the quality of a goods or services. Consumers need to exercise their own judgment and avoid purchasing goods just because they are being pressured by vendors.

The society will descend into chaos if consumers are given only rights and no responsibility. The product's quality, quantity, purity, and price must be known to the consumer. Broadly speaking, the buyer needs to be aware of all the requirements for the goods he plans to purchase.

An investigation on how Mumbai's youth consumers use their rights as consumers and carry out their obligations as consumers has been done in this research paper.

A survey was conducted to gather information on the aforementioned topic. Primary data was gathered from a sample of 215 respondents. The data was analyzed using SPSS software, which included simple frequency, percentages, cross tabulation, and the Anova test.

The findings of the study reveals that there is a no significant association between gender of the respondent and exercise of consumer rights such as checking the MRP, asking for a bill, checking the manufacturing/expiry dates, checking customer reviews, checking ingredients, asking for a quality-marked product, and checking certification marks and product weight by them.

**Keywords:** Grievances, Rights, Responsibilities, Goods, Services.

### INTRODUCTION

We are all consumers. We use a variety of goods and services from the moment of our birth till our death. Although it's frequently stated that the consumer is king, in practice, they receive terrible treatment. The customer is unsure if they will receive high-quality products that are produced, maintained in a clean environment, and priced competitively. The consumers are deceived by manufacturer or trader in variety of ways. They get inferior quality of product at higher price. The exploitation of consumers and the denial of their rights in the absence of protective measures have raised concerns about the need for consumer protection.

The Consumer Protection Act offers sufficient safeguards to consumers against deceptive and unfair business practices, as well as unfair trade practices. The Doctrine of Caveat Emptor has been replaced by the Doctrine of Caveat Venditor. As a result, it became crucial that consumer understand their rights and exercise them responsibly. They also need to understand what obligations they have at the time of exercise of their rights. Consumers will find it extremely difficult to use their rights over time without sharing consumer responsibility, as rights and obligations are interwoven.

### REVIEW OF THE LITERATURE

**Manorama Devi et. al. (2020)** focused on consumer rights and responsibilities among rural women in Assam. Based on a survey of 120 women, it found that awareness of consumer rights was moderate, with younger and more educated respondents showing higher awareness. Many women were unaware of key rights, and

consumer responsibilities were poorly understood. The study highlighted the need for better consumer education and awareness programs in rural areas.

**Anu Haridas et. al. (2020)** explored consumers' perceptions of their rights and duties. It found that while most consumers knew their rights, many lacked knowledge of how to exercise them. Only 16% knew the consumer helpline number. The study suggested improving consumer education, starting from school, and promoting awareness through local groups. It also emphasized the need for better consumer protection laws and more effective consumer organizations.

**K.Lavanyalatha Lavanya (2022)** highlighted the need for consumer protection and awareness in India. It stressed the importance of educating consumers about their rights and responsibilities. The study suggested stricter laws against fraud and encouraged consumers to organize for stronger protection. It also recommended simplifying legal processes and urged consumers to keep purchase receipts. Finally, it emphasized sharing experiences publicly to warn others and educate the wider community.

**Vijay Kumar Patil et.al. (2012)** found that consumer rights in India were not well protected due to outdated laws, especially with the rise of online shopping. Many consumers were unaware of their rights, didn't check product details like MRP and expiry dates, and rarely asked for receipts. The study suggested better consumer education, including in schools, stricter laws against unfair practices, and updated consumer protection laws to cover modern business practices.

**Dr. V. Darling Selvi et. al. (2021)** analyzed consumer awareness of rights and protection in Tirunelveli, based on data from 150 respondents, mostly young, single, and female graduates. Factor analysis revealed four key areas of awareness: rights, redressal, protection, and exposure. The study found that consumers were aware of their right to demand product details but suggested a need for greater awareness about protection and redressal processes.

**A. Anusuya et. al. (2023)** tested the link between demographic factors and awareness of consumer rights. Data from 150 respondents in Tirunelveli City showed that age, education, and sources of awareness were highly significant in determining consumer rights awareness, while gender was moderately significant. Marital status, however, had no significant impact. The analysis revealed weak to moderate relationships between these variables and consumer rights awareness, indicating varying levels of influence among different factors.

## OBJECTIVES OF THE STUDY

1. To find out the extent of utilization of Consumer rights by youth in Mumbai
2. To know the level of exercise of consumer responsibilities by youth consumers in Mumbai.
3. To study the relationship between gender of the respondent and exercise of the consumer responsibilities by the Consumers.
4. To offer valuable suggestions to improve the usage of consumer rights by youth in Mumbai.

## RESEARCH METHODOLOGY

The field survey, which was carried out with the use of a carefully designed questionnaire and interviews with the respondents, served as the basis for the study. Both primary and secondary data are used in the research. Secondary data compiled from consumer rights-related books and journals. A random sample of 215 youth who reside in Mumbai City was chosen for the study. With the aid of fundamental statistical tools, collected data has been examined and interpreted.

- **Target Population:** Youth population in South Mumbai between age group of 15-24 were the target population for the purposes of this study.
- **Sample Technique:** This study used a random sampling method.
- **Sample Size:** For the purposes of the study, a sample of 215 youth from South Mumbai were chosen.

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## PROBLEM OF THE STUDY

In the current globalized and competitive era, the goal of any manufacturer is to maximize profits. As a result, they engage in a variety of unfair commercial practices, such as making false claims in marketing, offering faulty products, and raising prices.

There are numerous methods for a vendor to deceive or take advantage of a customer, including providing inaccurate or partial information about the product, overcharging for inferior quality product. In addition to financial harm, these unfair trade practices pose a variety of health risks for consumers. Numerous standards have been instituted by the government to verify goods and services, such as the AGMARK for agricultural products, the ISI mark, and Hallmark for jewels.

A consumer must consider the quality and safety of goods and services before making a purchase. Customers should be well-informed about their needs and wants, enabling them to make their own decisions. Every product purchase should include inspections of the product's cost, durability, weight, expiry date, and ingredient list etc. It is imperative that buyers voice their complaints without fear. The responsibility to assert ourselves and act to ensure that we get a fair deal. As long as we remain passive consumers we will be exploited.

Therefore, researcher want to know if the consumers are exercising their rights in day today life also an analysis of how Mumbai's youth consumers use their rights as consumers and carry out their obligations as consumers.

## SIGNIFICANCE OF THE STUDY

This survey will assist us in determining whether consumers are responsibly using their rights. The study will help us to know if there is significant association between gender of the respondent and exercise of consumer rights by them. We will also get to know, if they are eager to get their complaints addressed in the Consumer Forum. The survey will also assist us in determining whether or not they have received a remedy after filing a lawsuit in a consumer forum.

## HYPOTHESIS

H0- There is no significant association between gender of the respondent and exercise of consumer rights by them.

H1- There is significant association between gender of the respondent and exercise of consumer rights by them.

## LIMITATION OF THE STUDY

The primary objective of the study is the usage of consumer rights by the youth consumers in South Mumbai.

- People over 24 are not included in this study because it solely focuses on the youth population between the ages of 15 and 24. Because the current experiment was limited to young people in South Mumbai, its applicability cannot be proven throughout India. Thus, study's focus on youth customers may limit its generalizability as it excludes older age groups.
- The small sample size compared to the population and the random sampling technique made it difficult to draw accurate inferences and conclusions. Thus findings may not be representative of all youth consumers in Mumbai due to constraints in reaching a large, diverse population.
- Youth customers may lack understanding of consumer rights, restricting their insights and also due to Mumbai's diverse population, the survey may not accurately reflect consumer behavior across socioeconomic or ethnic groups.

**ANALYSIS AND INTERPRETATION**

**Descriptive Analysis:** Distribution of the respondents based on their gender profile is depicted in the table below.

**Table 1: Gender Wise Classification of the Respondents**

<b>Gender Wise Classification of the Respondent</b>		
<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Male	87	40.47
Female	128	59.53
Other	0	0.00
<b>Total</b>	<b>215</b>	<b>100.00</b>

Source: Compiled from Primary Data

The gender distribution of the respondents reveals that females make up the majority, accounting for 59.53% of the total sample, while males represent 40.47%. No respondents identified as "Other" in terms of gender classification. This indicates a slightly higher female participation in the study, with a total of 215 respondents contributing to a comprehensive understanding of the gender-based responses.

**Table 2: Exercise of Consumer Rights by Respondents**

<b>Exercise of Consumer Rights by Respondents</b>			
<b>Parameters</b>	<b>Always %</b>	<b>Sometimes %</b>	<b>Never %</b>
Do you check MRP of the product?	88.50	11.00	0.50
Do you ask for bill after purchase?	61.50	37.50	1.00
Do you check manufacturing date before purchase?	67.00	28.50	4.50
Do you check for expiry date before purchase?	79.50	19.00	1.50
Do you check customer review before buying?	36.00	55.50	8.50
Do you check ingredients of the product?	39.00	52.50	8.50
Do you ask for quality marked product?	43.00	41.00	16.00
Do you check for certification mark?	27.50	37.00	35.50
Do you check the weight of product mentioned on the product?	21.50	36.50	42.00

Source: Compiled from Primary Data

The data on the exercise of consumer rights by respondents shows varying levels of engagement across different practices. A large majority, 88.5%, always check the MRP of products, with only 0.5% never doing so. Similarly, 79.5% consistently check expiry dates before purchase, while 67% check the manufacturing date. In terms of asking for bills, 61.5% always request one, though 37.5% only do so sometimes.

When it comes to product information, 36% always check customer reviews before buying, while a significant portion, 55.5%, does so only sometimes. The ingredient list is always checked by 39%, while 52.5% sometimes review it. Quality marks and certification checks see mixed engagement, with 43% always asking for quality-marked products, but only 27.5% consistently checking certification marks.

Notably, 42% never check the weight of products, while only 21.5% do so regularly. This indicates that while respondents are diligent about key consumer rights like checking MRPs and expiry dates, they are less consistent when it comes to reviewing product quality marks and weights.

**Table 3: Violation of Consumer Rights**

Responses about violation of Consumer Rights		
	Frequency	Percentage
Yes	43	21.5
No	157	78.5
Total	200	100

Source: Compiled from Primary Data

The data on respondents' experiences with the violation of consumer rights reveals that 21.5% have encountered such violations, while the majority, 78.5%, have not. This suggests that although consumer rights violations do occur, they affect a relatively small portion of the surveyed group. The total number of respondents for this question is 200.

**Table 4: Responses about filing a case in Consumer Court**

Did you ever file a case in Consumer Court?		
	Frequency	Percentage
Yes	3	6.98
No	40	93.02
Total	43	100.00

Source: Compiled from Primary Data

The data on filing cases in consumer court shows that a small percentage, 6.98%, of respondents have ever filed a case, while a substantial majority, 93.02%, have not. This indicates that formal legal actions in consumer court are relatively rare among the respondents, suggesting potential barriers or lack of awareness regarding the process. The total number of respondents who answered this question is 43.

**Table 5: Responses about getting of Remedy**

Did you get any remedy?		
	Frequency	Percentage
Yes	2	66.67
No	1	33.33
Total	3	100.00

Source: Compiled from Primary Data

Among the respondents who have filed a case in consumer court, 66.67% received a remedy, while 33.33% did not. This indicates that the majority of those who pursued legal action were able to obtain some form of resolution, though the small sample size (3 respondents) suggests that further data would be needed to draw more general conclusions about the effectiveness of consumer court remedies.

**Table No. 6: Testing of Hypothesis**

ANOVA						
Do you exercise the following rights as a Consumer?		Sum of Squares	df	Mean Square	F	Sig.
Do you check MRP of the product?	Between Gender	.226	1	.226	.258	.612
	Within Gender	186.100	213	.874		

	Total	186.326	214			
Do you ask for bill after purchase?	Between Gender	.762	1	.762	.635	.426
	Within Gender	255.731	213	1.201		
	Total	256.493	214			
Do you check manufacturing date before purchase?	Between Gender	.000	1	.000	.000	.998
	Within Gender	240.726	213	1.130		
	Total	240.726	214			
Do you check for expiry date before purchase?	Between Gender	.027	1	.027	.026	.872
	Within Gender	218.457	213	1.026		
	Total	218.484	214			
Do you check customer review before buying?	Between Gender	1.260	1	1.260	1.222	.270
	Within Gender	219.596	213	1.031		
	Total	220.856	214			
Do you check ingredients of the product?	Between Gender	.319	1	.319	.299	.585
	Within Gender	227.569	213	1.068		
	Total	227.888	214			
Do you ask for quality marked product?	Between Gender	.239	1	.239	.227	.634
	Within Gender	224.616	213	1.055		
	Total	224.856	214			
Do you check for certification mark?	Between Gender	1.505	1	1.505	1.818	.179
	Within Gender	176.328	213	.828		
	Total	177.833	214			
Do you check the weight of product mentioned on the product?	Between Gender	1.662	1	1.662	2.247	.135
	Within Gender	157.593	213	.740		
	Total	159.256	214			

The given data involves an analysis of variance (ANOVA) results for assessing impact of gender on various ways of exercising consumer rights which includes checking the MRP, asking for a bill, checking the manufacturing/expiry dates, checking customer reviews, checking ingredients, asking for a quality-marked product, and checking certification marks and product weight.

- Do you check MRP of the product? This indicates that there is no significant difference between gender, as the p-value is greater than 0.05. Consumers' behaviors in checking the MRP do not vary significantly across gender.
- Do you ask for a bill after purchase? Again, there is no significant difference between the gender, as the p-value is greater than 0.05. This suggests that asking for a bill after purchase does not show varying behavior across the gender.
- Do you check manufacturing date before purchase? There is no significant difference observed, indicating that consumers choice of exercising their rights do not vary significantly in their behavior regarding checking the manufacturing date before purchasing a product.
- Do you check for expiry date before purchase? The result indicates that there is no significant difference between the gender, as the p-value is much higher than 0.05. Consumers' choice of exercising their rights in checking expiry dates are consistent across the gender.
- Do you check customer reviews before buying? The p-value is greater than 0.05, suggesting no significant difference in behavior across gender regarding checking customer reviews before buying a product.

- Do you check ingredients of the product? No significant difference is observed. Consumers' exercising their right in checking ingredients are consistent across gender, with a high p-value indicating no variation in checking ingredients.
- Do you ask for a quality-marked product? The p-value exceeds 0.05, meaning there is no significant difference in the practice of asking for a quality-marked product across the gender.
- Do you check for certification mark? Although the F-value is relatively higher, the p-value is still above 0.05, indicating no significant variation between gender regarding checking for certification marks.
- Do you check the weight of the product mentioned on the product? This result also shows no significant difference (p-value > 0.05), suggesting that consumers' exercising their right regarding checking the weight of the product do not vary significantly across gender.

## CONCLUSION

Thus, the consumers have obligations to be informed, to get the transaction recorded, and to exercise caution while exercising their rights as consumers. This study on the usage of consumer rights and the exercise of responsibility by youth consumers in Mumbai reveals encouraging trends as most of youth consumers exercise their rights but it is also observed that many of them fails to check certification marks and weight of the product mentioned on articles. This indifferent attitude of consumers often hampers their ability to assert their rights effectively.

It is very encouraging that a growing number of young consumers are adopting responsible behaviour by exercising their responsibilities such as asking for the invoices, cash memos, warranties, guarantees, and user manuals etc. The customer will be powerless in the absence of these documents since no forum will be able to hear their complaint in their absence. Therefore the consumers must exercise their rights with caution.

The findings reveals that there is no significant association between gender of the respondent and exercise of consumer rights such as checking the MRP, asking for a bill, checking the manufacturing/expiry dates, checking customer reviews, checking ingredients, asking for a quality-marked product, and checking certification marks and product weight by them.

In conclusion, encouraging youth consumers with the necessary tools and knowledge can enable them to act as informed and responsible participants in the marketplace, ultimately contributing to a more equitable and sustainable consumer environment in Mumbai.

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# GOVERNMENT POLICY AS A CATALYST FOR STARTUP GROWTH: EVIDENCE FROM INDIA'S NATIONAL PROGRAMMES AND THE INDO- FRENCH INNOVATION PARTNERSHIP

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## ABSTRACT

Over the past decade, startups have become an important driver of innovation, economic growth, and employment across the world. Governments increasingly recognise that entrepreneurial ecosystems do not grow automatically but require supportive policies and infrastructure. India provides an interesting example of how policy initiatives can accelerate startup development. The number of recognised startups in India has grown from fewer than 500 in 2016 to more than 115,000 by 2023. This rapid growth has been supported by several government initiatives including Startup India, Digital India, Production Linked Incentive (PLI) schemes, reforms in angel taxation, and public investment through the Fund of Funds for Startups. Alongside domestic policies, international cooperation has also contributed to India's innovation ecosystem. In particular, the Indo-French innovation partnership and the La French Tech India initiative have created opportunities for startups to access international markets, investors, and technology networks. This paper examines the role of these policy interventions in shaping India's startup ecosystem. It argues that successful startup ecosystems require coordinated government support in four areas: regulatory simplification, access to capital, digital infrastructure, and global collaboration. While India has made significant progress in building one of the largest startup ecosystems in the world, challenges such as regional inequality, skill shortages, and limited exit opportunities remain. The paper concludes by recommending policies that could strengthen India's entrepreneurial ecosystem and sustain its long-term growth.

**Keywords:** Startup ecosystem, Startup India, Digital India, entrepreneurship, innovation policy, Indo-French cooperation

## 1. INTRODUCTION

Entrepreneurship has become a key component of modern economic development. Startups are not simply small businesses; they are organisations designed to develop innovative products and scale rapidly. Because of their flexibility and technological orientation, startups often disrupt traditional industries and introduce new ways of delivering services.

Economist Joseph Schumpeter described this process as **creative destruction**, where new innovations replace older technologies and business models. In this sense, startups play a crucial role in driving economic progress by encouraging competition and innovation.

India has experienced remarkable growth in its startup ecosystem over the last decade. According to official government data, the number of recognised startups increased from fewer than 500 in 2016 to more than 115,000 by 2023. India is now considered one of the largest startup ecosystems globally, alongside countries such as the United States and China.

However, this rapid expansion did not occur spontaneously. The growth of startups in India has been strongly influenced by deliberate policy initiatives introduced by the government. These policies aim to create a supportive environment for entrepreneurs by simplifying regulations, providing financial support, and improving digital infrastructure.

This research paper explores how government policies have contributed to the development of India's startup ecosystem. It focuses on major national programmes such as Startup India and Digital India, examines financial and tax reforms designed to support startups, and analyses the role of international partnerships—particularly the Indo-French innovation collaboration—in strengthening entrepreneurial opportunities.

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## 2. WHY GOVERNMENTS SUPPORT STARTUP ECOSYSTEMS

From an economic perspective, there are several reasons why governments actively support entrepreneurship. One major reason is the presence of **market failures**, which occur when private markets alone cannot efficiently allocate resources.

Innovation often generates knowledge that spreads beyond the firm that created it. For example, when a startup develops a new technology, other companies may learn from it and benefit indirectly. Because startups cannot fully capture these benefits, they may invest less in innovation than what would be socially desirable. Government policies such as research grants and tax incentives can encourage greater investment in innovation.

Another challenge is **information asymmetry** between startups and investors. Early-stage startups typically lack financial history or proven products, making it difficult for investors to evaluate their potential. As a result, many promising entrepreneurs struggle to obtain funding. Government-supported venture capital programmes can help bridge this gap by reducing investment risks.

Infrastructure also plays an essential role in entrepreneurship. Modern startups rely heavily on digital technologies such as internet connectivity, cloud computing, and digital payment systems. Building such infrastructure requires large investments and coordination, which governments are often better positioned to provide.

In developing economies like India, governments also act as **facilitators of innovation ecosystems**. By coordinating policies across sectors such as education, finance, technology, and trade, the state can create conditions that encourage entrepreneurial activity and technological progress.

## 3. GOVERNMENT INITIATIVES SUPPORTING STARTUPS IN INDIA

### 3.1 Startup India Initiative

The Startup India initiative, launched in 2016, is one of the most important government programmes designed to promote entrepreneurship in India. The initiative aims to create an ecosystem that encourages innovation and supports startup growth.

One of the main objectives of Startup India is to **simplify regulatory procedures**.

Entrepreneurs previously faced complex administrative requirements that made it difficult to start and operate businesses. Under Startup India, recognised startups are allowed to self-certify compliance with certain labour and environmental regulations during their initial years.

Another major component of the programme is financial support through the **Fund of Funds for Startups**, managed by the Small Industries Development Bank of India (SIDBI). Instead of investing directly in startups, the government invests in venture capital funds, which then provide funding to promising companies. This model helps attract private investment while maintaining professional fund management.

The initiative also offers tax incentives, including income tax exemptions for eligible startups during their early years of operation. These benefits reduce financial pressure on entrepreneurs and encourage innovation.

### 3.2 Digital India Programme

While policy reforms are important, startups also require strong digital infrastructure to operate effectively. The Digital India programme, launched in 2015, aims to transform India into a digitally empowered society.

One of the programme's major achievements has been expanding internet connectivity through the **BharatNet project**, which aims to provide broadband access to rural areas across the country. Increased connectivity has allowed startups to reach customers beyond major cities and expand their markets.

Another significant development is the creation of the **Unified Payments Interface (UPI)**. UPI enables instant digital payments between bank accounts using mobile devices. By providing a simple and interoperable payment system, UPI has enabled fintech startups to innovate rapidly.

Digital infrastructure developed under the Digital India programme has therefore played a crucial role in enabling startups to operate efficiently and scale their businesses.

### 3.3 Production Linked Incentive (PLI) Schemes

The Production Linked Incentive scheme was introduced to strengthen India's manufacturing sector and encourage domestic production. Although the programme primarily targets large manufacturing companies, it also benefits startups indirectly.

When large companies establish manufacturing facilities, they require suppliers, logistics providers, and specialised technological solutions. Startups often develop innovative products and services to meet these needs.

For instance, the expansion of smartphone manufacturing in India has created opportunities for startups working in areas such as component design, manufacturing software, and supply-chain management. As a result, industrial policy can stimulate the growth of entrepreneurial ecosystems.

### 3.4 Tax Reforms and Angel Investment

Access to funding remains one of the most significant challenges faced by startups. For many years, a regulation known as the **angel tax** created uncertainty for early-stage investors by taxing certain investments made in startups.

Recognising the negative impact of this policy, the government introduced reforms that exempt recognised startups from angel tax under certain conditions. The Union Budget 2023 expanded these exemptions to include foreign investors as well.

In addition, the Securities and Exchange Board of India introduced the **Innovators Growth Platform**, which allows startups to raise funds through public markets under a specialised regulatory framework. These reforms aim to improve access to capital and encourage investment in innovative businesses.

## 4. INDO-FRENCH INNOVATION PARTNERSHIP

In addition to domestic policies, international partnerships have become an important component of India's innovation strategy. Collaboration between countries allows startups to access new technologies, investment opportunities, and global markets.

India and France have developed a strong strategic partnership that includes cooperation in areas such as technology, research, and entrepreneurship. A key initiative within this collaboration is **La French Tech India**, part of France's global startup network.

The programme connects entrepreneurs, investors, and innovation institutions from both countries. It helps French startups expand into the Indian market while also enabling Indian startups to access European markets and venture capital networks.

One important feature of this initiative is the **French Tech Visa**, which simplifies residency procedures for startup founders, employees, and investors. This programme allows entrepreneurs to establish businesses in France and access the wider European market.

Events such as the Indo-French Startup Summit also play a role in strengthening collaboration by bringing together startups, investors, and policymakers from both countries.

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## 5. CHALLENGES AND FUTURE POLICY DIRECTIONS

Despite significant progress, India's startup ecosystem still faces several structural challenges.

One major issue is the **concentration of startups in large metropolitan cities** such as Bengaluru, Delhi, and Mumbai. Entrepreneurs in smaller cities often have limited access to funding, mentorship, and professional networks.

Another challenge relates to **exit opportunities for investors**. A healthy startup ecosystem requires mechanisms through which investors can recover their investments, such as acquisitions or public listings. While new platforms have been introduced, exit opportunities remain relatively limited.

India also faces **skill shortages in emerging technologies** such as artificial intelligence, semiconductor design, and biotechnology. Strengthening collaboration between universities, research institutions, and industry will be necessary to address this issue.

To support the next phase of startup development, several policy measures could be considered. These include expanding funding opportunities for startups in smaller cities, integrating entrepreneurship education into university programmes, strengthening international innovation partnerships, and creating regulatory sandboxes for emerging technologies.

## 6. INTERNATIONAL COMPARISONS AND CONTEXTUAL BENCHMARKS

India's policy evolution does not unfold in isolation; it is both informed by and contributes to a rapidly growing global body of startup policy practice. The European Union's Startup Europe initiative offers a particularly instructive parallel, having deployed a similar combination of regulatory harmonisation, public venture co-investment, and cross-border talent mobility to build an integrated continental startup market from previously fragmented national ecosystems. The OECD's multi-country scorecard on SME and entrepreneurship financing has repeatedly confirmed that the severity of the early-stage funding gap, the inability of pre-revenue or early-revenue firms to access external equity is systematically greater in emerging economies than in advanced industrial states, a finding that validates India's emphasis on public venture capital as a policy priority.

## 7. CONCLUSION

India's rapid startup growth over the past decade demonstrates the important role that government policy can play in building entrepreneurial ecosystems. Initiatives such as Startup India and Digital India have simplified regulations, improved digital infrastructure, and expanded access to funding for entrepreneurs.

At the same time, international partnerships such as the Indo-French innovation collaboration have opened new opportunities for startups to access global markets and investors.

Although challenges remain, continued policy support and strategic international cooperation can help India strengthen its position as a global hub for innovation and entrepreneurship.

With the right policies and institutional support, startups will continue to play a central role in India's economic development in the coming years.

The practical implication is equally clear. The first generation of Indian startup policy created the preconditions for a viable ecosystem. The second generation must address the concentration, depth, and durability of that ecosystem—ensuring that its benefits reach entrepreneurs across the country's extraordinary diversity of geographies, sectors, and social backgrounds. If that challenge is met with the same policy imagination that characterised the 2015–2023 period, India's ambition of becoming a sustained global innovation leader rather than simply a large emerging market with a growing startup count is well within reach.



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## GREEN STEEL: BALANCING PROFIT WITH PURPOSE

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### ABSTRACT

The global steel industry stands at a pivotal crossroads. As one of the world's most carbon-intensive sectors — responsible for approximately 7–9% of global CO<sub>2</sub> emissions — steel manufacturing must urgently reconcile its economic imperatives with environmental responsibility. This paper examines the concept of green steel, referring to steel produced through low-carbon or carbon-neutral processes such as hydrogen-based direct reduced iron (H-DRI), electric arc furnaces (EAF) powered by renewable energy, and carbon capture and storage (CCS).

Drawing on practical experience from an internship at Ratnagiri Stainless Pvt. Ltd., this paper grounds its economic analysis in real-world operational realities of the steel manufacturing sector. A primary survey was conducted among approximately 60 respondents to gauge awareness levels, investment willingness, consumer premium acceptance, and policy perceptions around green steel.

The findings reveal that while awareness is growing and long-term optimism is substantial, financial viability, consumer affordability constraints, and government policy support remain the critical enablers for a successful transition to green steel manufacturing in India.

**Keywords:** Green Steel, Sustainable Manufacturing, Carbon Emissions, Hydrogen Steel, Electric Arc Furnace, ESG Investing, Decarbonization, India Steel Policy, Ratnagiri Stainless, Green Finance

### 1. INTRODUCTION

Steel is the foundational material of modern industrial civilization. It is present in every bridge, skyscraper, railway, automobile, and household appliance. Global crude steel production exceeded 1.9 billion tonnes in 2023, and demand is projected to grow further as developing economies urbanize and industrialize (World Steel Association, 2023). Yet this indispensable industry carries an enormous environmental burden: the steel sector is responsible for approximately 7–9% of global carbon dioxide (CO<sub>2</sub>) emissions, making it one of the hardest sectors to decarbonize.

The conventional blast furnace–basic oxygen furnace (BF-BOF) steelmaking route, which accounts for over 70% of global steel production, relies on metallurgical coke derived from coal as a reducing agent. This process generates approximately 1.8 tonnes of CO<sub>2</sub> per tonne of steel produced. At current production volumes, the sector emits roughly 3.4 billion tonnes of CO<sub>2</sub> annually — a figure comparable to the total emissions of all passenger vehicles worldwide.

Green steel offers a transformative alternative. Produced through processes that dramatically reduce or eliminate carbon emissions — including H-DRI, EAF powered by renewable electricity, and CCS — green steel represents the convergence of environmental necessity and industrial innovation. The central question this paper addresses is not whether green steel is environmentally desirable — the evidence is unambiguous — but whether it is financially viable, and under what conditions profit and purpose can be simultaneously achieved.

### 2. OBJECTIVES

This paper is guided by the following key objectives:

- To examine the environmental and economic dimensions of green steel production technologies, including H-DRI, EAF, and CCS pathways.
- To analyze the financial viability of transitioning from conventional BF-BOF steelmaking to green steel production, with reference to real-world operational cost structures.

- To assess the global regulatory and market context — particularly the EU's Carbon Border Adjustment Mechanism (CBAM) and ESG investment trends — driving demand for green steel.
- To evaluate India's readiness for green steel transition in the context of its National Steel Policy and National Green Hydrogen Mission.
- To gauge public and professional awareness, willingness to pay a green premium, and policy perceptions through primary survey data.
- To recommend actionable policy measures and educational interventions to accelerate India's green steel transition.

### 3. METHODOLOGY

#### 3.1 Research Design

This study employs a mixed-methods approach, combining a secondary review of industry reports, government policy documents, and academic literature with primary data collected through a structured survey instrument.

#### 3.2 Primary Survey

The survey was administered to approximately 60 respondents across three groups:

- Undergraduate and postgraduate students (primarily from commerce and management disciplines, including BMS and MBA programmes)
- Working professionals from finance, manufacturing, and consulting backgrounds
- Faculty members from business and economics departments

The questionnaire elicited responses on seven thematic areas: (1) awareness of green steel technologies; (2) perception of environmental urgency; (3) willingness to pay a green premium; (4) views on the relative importance of policy, technology, and private investment; (5) assessment of India's readiness; (6) belief in long-term profitability; and (7) interest in green finance education. Responses were collected using binary, five-point Likert scale, and ranking formats.

#### 3.3 Internship-Based Empirical Grounding

The paper is further informed by the author's internship at Ratnagiri Stainless Pvt. Ltd., a stainless steel manufacturer. Responsibilities included:

- Bookkeeping and Ledger Maintenance: Maintained AP/AR ledgers and general journals, revealing how raw material cost volatility (nickel, chromium, scrap) affects working capital cycles.
- Data Entry and Reconciliation: Performed data entry for procurement and payroll, alongside bank and supplier reconciliation.
- Operational Cost Exposure: Observed that energy costs constitute a major share of total production costs.
- Capital Expenditure Observation: Observed how CapEx decisions and depreciation interact with operational budgets — critical context for understanding green infrastructure financing challenges.

#### 3.4 Secondary Research

Secondary sources consulted include reports from the World Steel Association, International Energy Agency (IEA), Agora Industry, Rocky Mountain Institute, NITI Aayog, and the European Commission, as well as government policy documents such as India's National Steel Policy (2017) and the National Green Hydrogen Mission (2022).

## 4. FINDINGS

### 4.1 Green Steel Technologies and Cost Trajectories

Three primary pathways for green steel production are identified in the literature. Hydrogen-based direct reduced iron (H-DRI) can reduce emissions by up to 95% compared to BF-BOF production and is being pioneered by SSAB through the HYBRIT project. Electric arc furnaces (EAF) powered by renewable electricity achieve up to 75% lower emissions than conventional methods. Carbon capture and storage (CCS) retrofitting achieves reductions of 50–80%.

Green hydrogen costs (currently USD 4–8/kg) are projected to fall to USD 1–2/kg by 2030. The green premium for steel — currently estimated at 20–50% — is expected to narrow substantially, with cost parity projected by 2035–2040.

### 4.2 Regulatory and Market Drivers

The EU's Carbon Border Adjustment Mechanism (CBAM), taking full effect in 2026, creates a direct financial incentive for Indian steel exporters to decarbonize. Key business case drivers are summarized below:

Driver	Mechanism	Time Horizon	Impact
EU CBAM	Carbon tariff on imports; green steel exempt	2026 (full effect)	High
ESG Investment	Low-carbon supply chains attract capital	Near-term	High
Renewable Energy	Green H <sub>2</sub> approaches cost parity	2030–2035	Medium
Scope 3 Mandates	Auto, construction demand pull	Near-term	Medium
India PLI & H <sub>2</sub> Mission	Subsidy offset for transition costs	Ongoing	Medium

Table 1: Key Drivers of the Business Case for Green Steel

### 4.3 Survey Findings

The primary survey yielded seven key findings:

- Finding 1 — Awareness Growing but Uneven: 62% of respondents reported awareness of green steel; 38% had limited or no awareness, highlighting the need for broader public communication.
- Finding 2 — Strong Environmental Urgency: 78% agreed or strongly agreed that the steel industry's carbon emissions represent a serious environmental problem requiring urgent action.
- Finding 3 — Conditional Willingness to Pay: 54% would pay a green premium, but only conditionally. Only 22% were unconditionally willing, underscoring the need for institutional procurement mandates and policy-driven demand.
- Finding 4 — Policy as Primary Enabler: 68% ranked policy support (subsidies, PLIs, carbon pricing) as the most critical factor, followed by technology innovation (19%) and private investment (13%).
- Finding 5 — Long-Term Optimism: 71% believed green steel would become economically competitive with conventional steel within 10–15 years.
- Finding 6 — India's Readiness Moderate: Current readiness rated 2.8/5; future readiness over the next decade rated 3.7/5, reflecting cautious optimism.
- Finding 7 — Youth Enthusiasm for Green Finance: 83% of student respondents expressed strong interest in green finance and ESG education.

#### 4.4 Key Barriers

Despite the emerging business case, significant barriers remain:

- Absence of a domestic carbon pricing mechanism in India
- Nascent green hydrogen ecosystem (production capacity, pipeline infrastructure, storage)
- Limited access to long-term, low-cost green financing, especially for MSMEs
- Skill gaps in transitioning from traditional to green steel processes

#### 5. CONCLUSION

This paper has argued that green steel represents one of the most consequential industrial transformations of our era. Six key conclusions emerge:

1. The transition is inevitable, not optional. EU CBAM, ESG capital markets, and domestic climate commitments make decarbonization a commercial necessity for Indian steel exporters.
2. Profit and purpose can be aligned. Falling renewable energy costs, rising carbon prices, and growing demand for certified green steel create a credible financial case within a 10–15 year timeframe.
3. Operational financial competence is foundational. Green transition requires robust cost accounting, energy tracking, and disciplined capital allocation.
4. Policy is the essential catalyst. Consumer willingness-to-pay remains conditional; 68% of respondents identify government policy as the primary enabler.
5. Commerce education must embed sustainability. With 83% of students eager to engage with ESG and green finance, institutions must integrate sustainability accounting into their curricula.
6. India has a narrow window of opportunity. As the world's second-largest steel producer, India can lead the green steel transition and capture first-mover advantages, or delay and face carbon penalties.

#### *Policy Recommendations*

- Introduce a domestic carbon pricing mechanism to internalize emission costs.
- Expand the National Green Hydrogen Mission with dedicated steel sector targets and accelerated milestones.
- Create a Green Steel certification framework aligned with international standards.
- Mandate ESG, carbon accounting, and green finance modules across BMS, BCom, and MBA curricula.
- Establish a dedicated Green Steel Fund providing concessional long-term financing to MSME steel manufacturers.
- Align India's steel sector decarbonization roadmap with NDC commitments under the Paris Agreement.
- Incentivize scrap-based EAF production through GST rationalization and investment in scrap infrastructure.

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## SUSTAINABLE STARTUPS: BALANCING PROFIT WITH PURPOSE IN THE EMERGING ENTREPRENEURIAL ECOSYSTEM

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### ABSTRACT:

Lately, more companies care about lasting impact than just earnings. Profits still matter, yet how firms affect people and nature weighs heavier now. Some new businesses build purpose right into their core - growth that does not cost the earth. They design what they sell, how they run, even where they source, with long-term health in mind. Staying profitable? Always part of the plan.

Looking into startup ventures that care about long-term impact reveals a shift in how business goals are shaped. Instead of chasing earnings alone, these firms blend financial aims with broader responsibilities. Information gathered through academic journals, sector summaries, and trustworthy web materials forms the base of this work. Examples like Tesla and Beyond Meat show real-world paths where eco-conscious missions meet market demands. Each instance reflects choices made under pressure, yet still rooted in environmental or social values. How growth fits alongside ethics becomes clearer when actual companies are viewed over time. Insights come not from theory only but from what happens when ideas face customers, costs, and competition.

One look at recent results shows startups focused on sustainability help protect nature while supporting fair practices and steady growth over time. Still, getting started isn't easy - steep upfront expenses often appear alongside tight access to money and low public knowledge. Even so, momentum builds anyway, with green-minded ventures spreading quietly into new areas, likely influencing how companies operate years ahead.

**Keywords:** Sustainable startups, entrepreneurship, innovation, environmental sustainability, responsible business

### INTRODUCTION:

Nowadays, companies worldwide are shifting toward greener ways of operating. Fueled by fresh thinking, young ventures bring nimble solutions to tough ecological problems. Driven by purpose, these new players build businesses that care about people and planet alike.

Profit matters, yet purpose drives these new ventures just as much. Driven by more than numbers, they tackle waste while lifting communities. Growth looks different here - less smoke, fairer wages, longer thinking. People now watch where money flows, favoring firms that act with care. Backed by choices at checkout and in portfolios, change quietly spreads.

Starting fresh, some founders now aim beyond quick gains, building ventures meant to last. Not only do they design solutions people want, but these efforts also ease pressure on the planet. With each step, concern for communities grows just as much as interest in returns. What results is enterprise shaped by purpose, not just product.

A fresh look at startup life shows some companies aim high without losing sight of values. Profit matters just as much as impact for these new players. Instead of chasing returns alone they build business around real needs. Success here means growing carefully while staying true to core goals. The way forward mixes smart planning with long term thinking. These efforts stand out because they do not sacrifice ethics for speed.

### LITERATURE REVIEW:

Now here's a twist - sustainability isn't just background noise in today's business world; more experts keep pointing at its rising role. Take John Elkington. He pushed forward the idea called the Triple Bottom Line,

which argues companies ought to measure success through three separate lenses: profit, planet care, people impact.

Startups might just be onto something when it comes to sustainability - research hints they adapt faster than older firms. Because they aren't weighed down by old systems, green values slip more easily into how things get made. Think materials sourced differently, delivery routes planned smarter, decisions built around impact rather than habit. These new companies tend to treat eco-conscious choices as part of the blueprint, not an afterthought.

Fast shifts in what buyers want catch experts' attention. Eco-conscious choices gain ground, pushing new businesses toward greener paths. Still, even with rising interest, green ventures struggle - funding stays tight, startup expenses weigh heavy, public knowledge lags behind.

Fresh findings point toward a shift - green choices now shape how startups thrive. New patterns show lasting impact matters more than before for business wins. Success stories often tie back to earth-smart moves made early on. What works today leans heavily on responsible practices woven into company roots.

### OBJECTIVES OF THE STUDY:

The main objectives of this research paper are:

- To understand the concept of sustainable startups.
- To analyze the importance of sustainability in entrepreneurship.
- Looking into what hurdles green businesses run up against.
- To study real-world examples of companies implementing sustainable business models.

### HYPOTHESIS OF THE STUDY:

Success over time often ties back to how companies treat the planet. One way firms last? They build habits that don't drain resources. Lasting results tend to show up where actions support both people and environment. Choices today shape what happens years later. When businesses plan beyond profit, outcomes shift slowly but surely.

Starting off differently, companies acting with care for nature and people tend to earn deeper trust from their customers. Because of how choices add up, green actions shape what buyers decide while building steady profits. From one moment to the next, doing right by communities echoes in how brands are seen over time.

### RESEARCH METHODOLOGY:

This work relies on previously published material, pulled together from different places like scholarly articles, earlier studies, market analyses, plus trusted online platforms. Gathering insights happened through review of written works rather than new data collection.

One look at past research shows how green startups take shape. Through examples like big firms going eco-friendly, real-world choices come into view. Reports from groups including the UN and World Economic Forum add context about worldwide shifts. Patterns emerge when stories meet data across sectors.

**Table 1 : Key Characteristics Of Sustainable Startups:**

Sr.No	Characteristic	Description	Example Practice
1	Eco-friendly Innovation	Development of products that reduce environmental harm	Biodegradable packaging
2	Social Value Creation	Business models focused on community welfare	Fair-trade sourcing
3	Resource Efficiency	Minimizing waste and energy consumption	Renewable energy usage
4	Stakeholder Engagement	Collaboration with communities	Impact partnerships

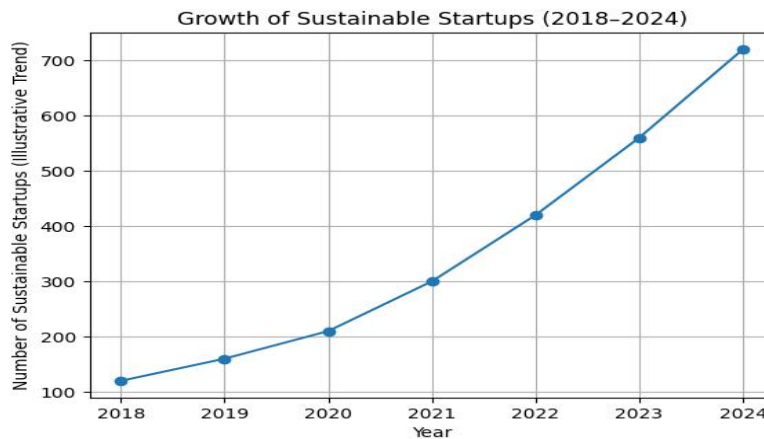
		and partners	
5	Circular Economy Integration	Reuse and recycling of materials	Waste-to-product solutions

### Growth of Sustainable Startups

A fresh wave of interest now surrounds enterprises that balance profit with planet. Around the globe, companies swap old habits for greener routines - driven less by trends than by long-term shifts in values. One factory cuts waste, another powers up on sunlight; each step reshapes what success looks like.

Several factors have contributed to the growth of sustainable startups:

- Increasing awareness about climate change
- Rising consumer demand for eco-friendly products
- Supportive government policies
- Technological innovation



Fueled by fresh priorities, investors now lean toward startups that build lasting impact instead of quick returns. What drives this shift? A clearer view of what true value looks like over time.

### Sustainable Startup Growth 2018 to 2024:

Year by year, more eco-friendly startups are popping up across the map. Noticing nature's struggles has nudged founders toward greener paths. Money follows mission now, as backers lean into planet-positive projects. Rules from officials have shifted too, opening doors for clean solutions to take root.

Fueled by changing priorities, startups focused on sustainability are gaining ground worldwide. A shift in values shapes how new businesses take root across markets.

### Case Study: Tesla

Out front in electric cars, Tesla stands clear. Elon Musk runs things there, pushing EVs forward. Moving beyond gas engines, it builds clean energy tech too.

Aiming to speed up the shift toward clean energy, Tesla builds cars that run without gasoline. Because these vehicles cut back on pollution, they've made a real difference in lowering harmful emissions worldwide.

Out of nowhere, Tesla began blending new tech ideas with real effort toward cleaner energy, which slowly built up fast expansion across markets while drawing attention worldwide. Though not obvious at first, doing things differently pushed results that stuck around longer than expected.

## Case Study: Beyond Meat

Beyond Meat started when Ethan Brown had an idea. From that beginning came foods made without animals. These items look, cook, like regular meat - but aren't. Instead of animal protein, plants fill the role. Making these swaps possible became the core aim. Each product tries to match familiar tastes. What sets them apart lives in the ingredients - none come from livestock.

What drives the business forward? A focus on lowering harm to nature caused by raising animals for food, through different kinds of sustainable options. Instead of conventional methods, plant-powered meats use far less water, need smaller areas of soil. One big reason they stand out - much lighter footprint across key resources.

Health-conscious shoppers often choose Beyond Meat because it lines up with their values on farming impacts. Some folks pick it simply due to unease over how livestock affects the planet. Others go for it when thinking twice about creatures suffering on factory farms.

### Comparison of Tesla and Beyond Meat:

Feature	Tesla	Beyond Meat
Industry	Electric Vehicles	Plant-Based Food
Founder	Elon Musk (Leadership)	Ethan Brown
Core Product	Electric Cars	Plant-Based Meat
Sustainability Focus	Clean Energy & Low Emissions	Reduced Environmental Impact
Business Model	Technology Innovation	Sustainable Food Production

### Findings and Discussion:

A closer look at green businesses, using Tesla and Beyond Meat as examples, reveals key patterns in eco-friendly ventures. What stands out is how real-world cases shape our understanding of long-term business models. These companies show change happens through steady effort, not sudden breakthroughs. Observing their paths uncovers what works - and what does not stick over time. Lessons emerge not from theory but from actual choices made under pressure. Each step they took reflects a balance between vision and practical limits.

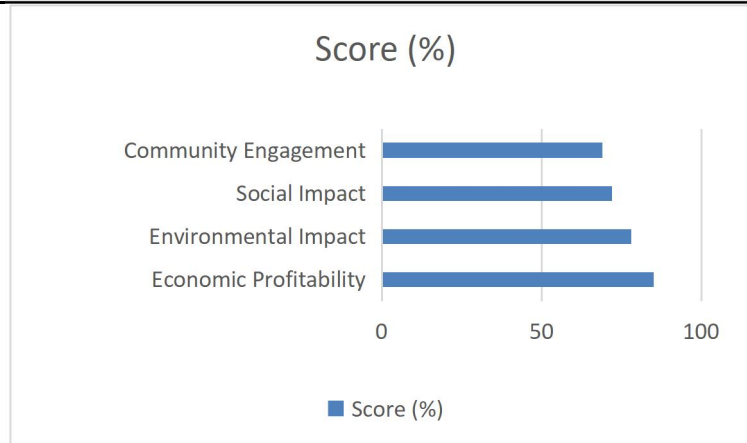
A single discovery stands out: green-minded new businesses play a big role in shielding nature through solutions that cut waste while encouraging smarter resource habits. Take Tesla's cars powered without gas - they lessen our need for oil at the same time they trim greenhouse gases.

What keeps green startups moving? Fresh ideas play a big role. Instead of old methods, founders lean on smart tech, also clever ways to run things. These tools tackle real world problems - like pollution or fairness - with an eye on staying in business. Profit matters just as much as purpose.

More folks are catching on to what sustainability means, the research shows. Because they care, people lean toward products kinder to the planet and made fairly. Firms notice this shift, so some start changing how they operate. Take Beyond Meat - they've seen interest rise simply by offering greener meal choices.

Starting a green business isn't always easy - upfront expenses often run high, money can be hard to find, while many customers simply don't know enough. Help arrives when officials step in, backers show interest, rules start shifting toward support; slowly, new paths open for eco-minded founders.

Startups focused on sustainability show it is possible to make money without ignoring people or the planet. What matters grows quietly beneath the noise of quick wins and flashy returns. Profit walks hand in hand with change when priorities shift toward lasting impact. Success looks different here - less smoke, more soil. Purpose isn't added - it leads. These ventures prove doing good doesn't follow charity; it shapes business from the start.



**Figure 2: Impact Areas of Sustainable Startups:**

### Conclusion:

Profit meets purpose when fresh ventures build change through smart ideas. Not only do these companies chase returns, they tackle real-world issues like waste or inequality. From the start, impact shapes their goals instead of profits alone guiding decisions. New models emerge where clean energy or fair labor aren't extras - they're built in. Success shows up as healthier communities just as much as growing revenue. Ideas take root that serve people and the planet without waiting for permission. Value grows not by cutting corners but by lifting standards across supply chains. Some begin small yet think far ahead about long-term effects on nature. They prove business can move forward without leaving others behind. Growth happens differently here - measured beyond quarterly numbers.

From Tesla to Beyond Meat, real-world examples show green business models earning solid returns. One after another, these firms prove care for planet does not block financial success. Products designed with Earth in mind still attract eager buyers. Success arrives when purpose aligns with practical value. Profit grows where responsibility fits daily life.

Starting small often means tight budgets, tricky rules, one step at a time. Backing from officials, funders, people buying choices - this mix helps green ventures grow slowly but steady. Future markets might bend toward these ideas simply because they last longer under pressure.

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# PROFIT WITH PURPOSE: THE EMERGING PARADIGM OF SUSTAINABLE STARTUP

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## ABSTRACT

The contemporary business landscape is witnessing a significant shift from profit-centric models to purpose-driven enterprises that integrate sustainability into their core strategies. This paper explores the emerging paradigm of “profit with purpose” through the lens of sustainable startups. It examines how startups balance economic performance with environmental responsibility and social impact while maintaining scalability and competitiveness. Adopting a qualitative and conceptual research approach, the study draws upon existing literature and case-based insights, particularly from the Indian startup ecosystem. The findings indicate that sustainable startups contribute to long-term value creation, innovation, and stakeholder trust, while also addressing global challenges such as climate change and resource scarcity. The paper concludes that sustainable entrepreneurship is a critical driver of inclusive and resilient economic growth.

## KEYWORDS

Sustainable Entrepreneurship, Purpose-Driven Startups, ESG, Green Innovation, Triple Bottom Line, Indian Startup Ecosystem

## 1. INTRODUCTION

Entrepreneurship has traditionally been associated with innovation, risk-taking, and profit maximization. However, the increasing urgency of global challenges such as environmental degradation, climate change, and social inequality has necessitated a redefinition of business success. In this evolving context, startups are emerging as powerful agents of transformation by adopting sustainability as a core principle.

The concept of “*profit with purpose*” represents a paradigm shift wherein businesses aim to generate financial returns while simultaneously contributing to environmental protection and social well-being. Unlike conventional enterprises that often incorporate sustainability as an afterthought, sustainable startups embed purpose into their foundational vision and operations.

India, as one of the fastest-growing startup ecosystems globally, offers a dynamic environment for sustainable entrepreneurship. Government initiatives such as Startup India, increasing ESG-focused investments, and rising consumer awareness have created favorable conditions for purpose-driven ventures. This paper aims to analyze how sustainable startups are reshaping entrepreneurship by integrating innovation with responsibility.

## 2. LITERATURE REVIEW

The concept of sustainable entrepreneurship has evolved significantly over time. Early research focused on eco-entrepreneurship, emphasizing environmental conservation, while later studies expanded to include social entrepreneurship addressing societal challenges. Contemporary literature integrates these dimensions into a holistic framework of sustainability.

Elkington (1997) introduced the **Triple Bottom Line (TBL)** framework, which emphasizes three pillars of business performance: economic (profit), social (people), and environmental (planet). This framework has become central to understanding sustainable business practices.

The rise of **Environmental, Social, and Governance (ESG)** criteria has further influenced business strategies and investment decisions. Investors increasingly prioritize startups that demonstrate measurable sustainability

outcomes (OECD, 2022). Additionally, the concept of **Creating Shared Value** (Porter & Kramer, 2011) highlights how businesses can generate economic value while addressing societal needs.

Theoretical perspectives such as **Stakeholder Theory** (Freeman, 1984) suggest that firms must consider the interests of all stakeholders, while the **Resource-Based View (RBV)** posits that sustainability can serve as a source of competitive advantage.

### 3. OBJECTIVES OF THE STUDY

1. To examine the concept and significance of sustainable startups
2. To analyze how startups, operationalize the “profit with purpose” approach
3. To identify key challenges faced by sustainable startups
4. To explore opportunities and future prospects in the Indian context

### 4. RESEARCH METHODOLOGY

This study adopts a **qualitative and conceptual research design**, relying on secondary data sources such as academic journals, policy reports, and industry publications. A case-based approach is used to illustrate the practical application of sustainable entrepreneurship in India. The research is exploratory in nature and aims to provide a comprehensive understanding of emerging trends rather than empirical validation.

### 5. SUSTAINABLE STARTUPS: CONCEPT AND CHARACTERISTICS

Sustainable startups are enterprises that integrate economic, environmental, and social objectives into their core business models. These ventures seek to create long-term value while addressing pressing global challenges.

#### Key Characteristics:

- **Purpose Integration:** Sustainability embedded in mission and vision
- **Long-Term Orientation:** Focus on enduring value rather than short-term gains
- **Ethical Governance:** Transparency, accountability, and responsible practices
- **Innovation-Driven Models:** Leveraging technology to solve sustainability issues

Many sustainable startups adopt **circular economy principles**, which emphasize resource efficiency through reuse, recycling, and regeneration.

### 6. ROLE OF INNOVATION IN SUSTAINABLE STARTUPS

Innovation is a critical enabler of sustainable entrepreneurship. Startups leverage advanced technologies to develop scalable and efficient solutions.

#### Technological Drivers:

- Renewable energy technologies
- Artificial Intelligence for resource optimization
- Blockchain for supply chain transparency
- Internet of Things (IoT) for smart resource management

### INDIAN CASE INSIGHTS:

In India, startups such as **Ola Electric** are promoting electric mobility, significantly reducing carbon emissions and dependence on fossil fuels. Similarly, **Banyan Nation** focuses on plastic recycling by converting waste into high-quality recycled materials, thereby supporting circular economy practices.

These examples demonstrate how innovation enables startups to align profitability with environmental sustainability.

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## 7. CHALLENGES FACED BY SUSTAINABLE STARTUPS

Despite their potential, sustainable startups face several structural and operational challenges:

- **Financial Constraints:** High initial investment and limited access to early-stage funding
- **Market Barriers:** Low consumer awareness and price sensitivity
- **Regulatory Issues:** Lack of standardized sustainability policies and frameworks
- **Scalability Challenges:** Difficulty in maintaining sustainability during rapid expansion
- **Greenwashing Risks:** Misleading claims by competitors affecting credibility

Addressing these challenges is essential for the growth and sustainability of such ventures.

## 8. OPPORTUNITIES AND FUTURE PROSPECTS

The future of sustainable startups is promising due to several favorable trends:

- Increasing consumer preference for ethical and eco-friendly products
- Expansion of ESG and impact investing
- Government initiatives promoting sustainability
- Technological advancements reducing operational costs

In India, sustainable startups are contributing to national priorities and global initiatives such as the **Sustainable Development Goals (SDGs)** (United Nations, 2015). The convergence of policy support, innovation, and market demand is expected to accelerate their growth.

## 9. DISCUSSION

The paradigm of *profit with purpose* reflects a broader transformation in the global economic system from shareholder-centric to stakeholder-centric models. Sustainable startups demonstrate that economic success and social responsibility are not mutually exclusive but mutually reinforcing.

By integrating sustainability into their core strategies, these startups enhance innovation, build trust, and achieve long-term resilience. However, their success depends on a supportive ecosystem that includes policy frameworks, access to finance, and consumer awareness.

## 10. CONCLUSION

Sustainable startups represent a new era of entrepreneurship that aligns profitability with environmental and social well-being. The concept of *profit with purpose* is not merely a trend but a necessary evolution in response to global challenges.

While these startups face financial and operational challenges, increasing support from governments, investors, and consumers provides a strong foundation for their growth. Sustainable entrepreneurship will play a crucial role in shaping a more inclusive, resilient, and sustainable economy in the years to come.

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# FINANCIAL MISMANAGEMENT AND STARTUP FAILURE: A STUDY OF JET AIRWAYS

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## Abstract

Financial mismanagement is one of the most significant reasons behind business failure, particularly in capital-intensive and highly competitive industries such as aviation. The present study examines the role of financial mismanagement in the failure of Jet Airways, one of India's major private airline companies. The study is based on an analysis of the company's financial statements over a five-year period from 2019 to 2023. Tools such as trend analysis and ratio analysis have been used to evaluate the financial condition of the company. The findings indicate a substantial decline in sales and total income, persistent operating and net losses, weak liquidity, growing accumulated losses, and an unstable capital structure. The study concludes that poor financial planning, excessive dependence on liabilities, weak cost control, and ineffective strategic decisions were major contributors to the downfall of Jet Airways. The paper highlights the importance of financial discipline, effective governance, and sustainable business strategies for long-term survival and growth.

**Keywords:** Financial mismanagement, business failure, Jet Airways, ratio analysis, trend analysis, liquidity, solvency, aviation industry

## 1. Introduction

The aviation industry plays a crucial role in the economic development of a country by enhancing connectivity, supporting tourism, facilitating trade, and generating employment opportunities. In India, the aviation sector has witnessed significant growth over the last two decades due to rising income levels, urbanization, globalization, and increasing demand for air travel. However, despite this growth, the industry has also remained highly vulnerable to financial instability because of high operating costs, intense market competition, fluctuating fuel prices, regulatory challenges, and dependence on external financing.

Many airline companies have struggled to maintain long-term financial sustainability due to poor strategic decisions and weak financial management practices. In such a context, the case of Jet Airways provides an important example of how financial mismanagement can gradually weaken a business and ultimately lead to its failure. Jet Airways was once one of India's leading private airline companies and held a strong position in the domestic and international aviation market. However, over time, the company experienced rising debt obligations, increasing operational costs, delayed salary and creditor payments, and declining profitability. These factors eventually led to the suspension of its operations in 2019.

## 2. Statement of the Problem

Financial stability is essential for the survival and growth of any business organization. In highly competitive and capital-intensive industries such as aviation, even minor weaknesses in financial planning, liquidity management, and cost control can create long-term instability. Jet Airways, despite being one of the most recognized airline brands in India, experienced severe financial distress and eventually ceased operations. The present study attempts to examine whether financial mismanagement was a major factor responsible for the failure of Jet Airways. It also seeks to understand how weak financial performance, excessive liabilities, declining profitability, and poor liquidity contributed to the collapse of the company.

## 3. Objectives of the Study

1. To analyze the financial performance of Jet Airways by examining its income statement and balance sheet over a period of five years.

2. To evaluate the profitability and operational efficiency of the company using selected income statement ratios.
3. To assess the liquidity and solvency position of the company using balance sheet ratios.
4. To identify the major financial reasons responsible for the decline and failure of Jet Airways.
5. To provide suitable suggestions for improving financial management and business sustainability.

#### 4. Scope of the Study

The present study is confined to the financial analysis of Jet Airways for a period of five years from 2019 to 2023. The study mainly focuses on the analysis of the company's income statement and balance sheet using tools such as trend analysis and ratio analysis. The scope of the study is limited to understanding the financial causes behind the decline and failure of the company.

#### 5. Limitations of the Study

1. The study is based entirely on secondary data collected from published sources.
2. The analysis is limited to a period of five financial years only.
3. The study focuses primarily on financial aspects and does not cover detailed operational, managerial, or legal dimensions.
4. The findings are based on available financial data and may vary if more detailed internal records are considered.

#### 6. Research Methodology

The present study is based on secondary data. The required data has been collected from annual reports of Jet Airways, financial statements, business publications, research papers, journals, and other publicly available company-related and industry sources. The study covers the financial years from March 2019 to March 2023.

To analyze the financial position and performance of the company, the following tools have been used:

- Trend Analysis
- Ratio Analysis
- Comparative Financial Statement Analysis

These tools help in evaluating changes in revenue, expenditure, profitability, liquidity, solvency, and the overall financial structure of the company.

#### Review of Literature:

1. Bhasin (2016) in his research paper "Corporate Governance and Financial Distress: Evidence from Kingfisher Airlines" concluded that weak corporate governance, lack of financial transparency, and ineffective management decisions were major contributors to the financial collapse of Kingfisher Airlines.
2. Singh (2017) in the research paper "Debt Financing and Bankruptcy Risk in Airline Industry" found that excessive debt financing increases financial risk and significantly raises the probability of bankruptcy in aviation companies.
3. Kumar (2018) in the study "Financial Management Practices and Corporate Failure" observed that poor financial planning, weak cost control, and excessive dependence on borrowed funds significantly increase the risk of corporate failure.
4. Bhatia and Srivastava (2019) in their study "Financial Distress Prediction Using Altman Z-Score in the Indian Aviation Industry" found that financial ratios and Altman Z-Score analysis can effectively predict the possibility of bankruptcy in airline companies facing high debt and declining profitability.
5. Jain and Kapoor (2019) in their research "Financial Performance Analysis of Indian Aviation Sector" concluded that intense competition and rising operational expenses negatively affect the profitability and sustainability of airline companies.
6. Gupta and Sharma (2020) in their research "Causes of Airline Failures in Emerging Markets" concluded that rising fuel prices, excessive borrowing, poor financial management, and intense market competition are key factors responsible for airline failures.

7. Patel (2020) in the study “Impact of Financial Mismanagement on Business Sustainability” concluded that improper financial planning, weak internal control systems, and poor strategic decisions can lead to long-term business failure.
8. Mehta and Jain (2021) in their research “Financial Mismanagement and Business Failure: A Case Study of Kingfisher Airlines” concluded that aggressive expansion strategies, high operating costs, and lack of financial discipline were major reasons for the downfall of Kingfisher Airlines.
9. Sharma and Gupta (2022) in their research “Financial Distress in the Aviation Industry: Evidence from India” concluded that poor liquidity management and high leverage ratios are important indicators of financial distress in airline companies.
10. Dsouza (2023) in the study “Business Evaluation of Jet Airways: Financial Performance and Liquidity Crisis” concluded that declining profitability, increasing operational costs, and rising debt burden led to severe liquidity problems for Jet Airways.

Trend Analysis of five years.

**Findings:**

	₹	₹	₹	₹	₹	%	%	%	%	%
Particulars	Mar-23	Mar 2022	Mar 2021	Mar 2020	Mar 2019	Mar-23	Mar 22	Mar 2021	Mar 2020	Mar 2019
Sales	49	136	38	333	23057	0.21	0.59	0.16	1.44	100
Other Income	5	7	243	20	256	1.95	2.73	94.92	7.81	100
Total Income	55	144	281	354	23314	0.24	0.62	1.21	1.52	100
Total Expenditure	1053	909	405	2893	27868	3.78	3.26	1.45	10.38	100
EBIT	-997	-765	-123	-2539	-4554	21.89	16.8	2.7	55.75	100
Interest	4	7	28	301	981	0.41	0.71	2.85	30.68	100
Tax	0	0	0	0	0	0	0	0	0	0
Net Profit	-1002	-772	-152	-2841	-5535	18.1	13.95	2.75	51.33	100

1. Analysis of income statement
2. The income statement shows that the sales of Jet Airways declined drastically from 23,057 in March 2019 to only 49 in March 2023, indicating a severe fall in operating activity.
3. Trend analysis reveals that sales in 2023 are only 0.21% of the 2019 level, showing that the company almost stopped its core business operations.
4. Other income fluctuated significantly, with a sharp rise in 2021 due to non-operating sources rather than core business activities.
5. Total income followed the same declining pattern as sales, dropping from 23,314 in 2019 to just 55 in 2023, which reflects a major decline in revenue generation.
6. Despite the fall in income, total expenditure remained very high in all years, indicating poor cost control and inefficient financial management.
7. The company reported negative EBIT throughout the period, which means the firm was unable to generate operating profits from its business operations
8. Interest expenses were relatively high in earlier years, especially in 2020, suggesting heavy reliance on borrowed funds and financial obligations.

9. The company did not pay any tax during the period because it consistently reported losses.
10. Net profit remained negative in all years, with a large loss of -5,535 in 2019, indicating severe financial distress.
11. Overall, the analysis shows that declining revenue, high expenditure, and continuous
12. operating losses were key factors contributing to the financial failure of the airline.

Calculation of income ratios

Ratio	Formula	Mar-23	Mar-22	Mar-21	Mar-20	Mar-19
<b>Operating Profit Ratio</b>	EBIT / Sales ×100	-2034.69%	-562.50%	-323.68%	-762.16%	-19.75%
<b>Net Profit Ratio</b>	Net Profit / Sales ×100	-2044.90%	-567.65%	-400.00%	-853.45%	-24.01%
<b>Operating Ratio</b>	Total Expenditure / Sales ×100	2148.98%	668.38%	1065.79%	868.77%	120.86%
<b>Interest to Sales Ratio</b>	Interest / Sales ×100	8.16%	5.15%	73.68%	90.39%	4.25%

The ratio analysis indicates severe financial instability in the company over the five-year period. The Operating Profit Ratio remains highly negative throughout, reaching -2034.69% in 2023, which shows that operating expenses are significantly higher than sales revenue. Similarly, the Net Profit Ratio is negative in all years, indicating continuous losses and the inability of the company to generate profit from its operations. The Operating Ratio consistently exceeds 100%, even reaching 2148.98% in 2023, suggesting extremely poor cost management and inefficient operations. The Interest to Sales Ratio shows a high burden of interest payments in some years, particularly 2020 and 2021, reflecting heavy dependence on borrowed funds. Overall, the ratios highlight persistent financial losses, high operating costs, and weak financial performance.

Trend Analysis of Balance Sheet:

Equities & Liabilities	Mar-23	Mar-22	Mar-21	Mar-20	Mar-19	%	%	%	%	%
<b>Share Capital</b>	113	113	113	113	113	100	100	100	100	100
<b>Reserves &amp; Surplus</b>	-17,620	-16,618	-15,693	-15,693	-12,808	137.56	129.76	122.5	122.52	100
<b>Current Liabilities</b>	22,267	21,388	21,617	21,617	22,054	100.97	96.98	98.02	98.02	100
<b>Other Liabilities</b>	871	876	888	888	1,754	49.66	49.94	50.63	50.63	100
<b>Total Liabilities</b>	5,632	5,760	6,926	6,926	11,113	50.68	51.83	62.33	62.33	100
<b>Assets</b>										

<b>Fixed Assets</b>	890	1,070	1,891	1,891	3,343	26.63	32.01	56.57	56.57	100
<b>Current Assets</b>	2,960	2,908	3,189	3,189	5,918	50.02	49.13	53.89	53.89	100
<b>Other Assets</b>	1,780	1,780	1,845	1,845	1,851	96.16	96.16	99.68	99.68	100
<b>Total Assets</b>	5,632	5,760	6,926	6,926	11,113	50.68	51.83	62.33	62.33	100
<b>Other Info</b>										
<b>Contingent Liabilities</b>	0	0	0	3,820	6,657	0	0	0	57.39	100

The trend analysis indicates significant changes in the financial structure of the company during the period 2019–2023. Share capital remained constant throughout the period, indicating that the company did not raise additional equity capital. However, reserves and surplus show a rising negative trend, increasing from 100 in 2019 to 137.56 in 2023, which reflects growing accumulated losses and weakening financial stability.

Current liabilities remained relatively stable around the base year level, indicating that the company continues to rely heavily on short-term obligations for financing operations. On the asset side, total assets declined sharply from the base year, reaching only about 50.68% of the 2019 level by 2023. Fixed assets show a substantial decline, suggesting reduction in long-term investments or disposal of assets.

Similarly, current assets decreased significantly compared to the base year, which may negatively affect the company's liquidity position. The reduction in contingent liabilities over the years indicates a decline in potential financial obligations. Overall, the trend analysis suggests contraction in the company's asset base along with increasing accumulated losses.

**Balance Sheet Ratio Analysis:**

Ratio	Formula	Mar-23	Mar-22	Mar-21	Mar-20	Mar-19
<b>Current Ratio</b>	Current Assets / Current Liabilities	0.13	0.14	0.15	0.15	0.27
<b>Proprietary Ratio</b>	Shareholders' Funds / Total Assets	-3.11	-2.86	-2.25	-2.25	-1.14
<b>Debt to Total Assets</b>	Total Liabilities / Total Assets	1	1	1	1	1
<b>Fixed Assets Ratio</b>	Fixed Assets / Total Assets	0.16	0.19	0.27	0.27	0.3
<b>Current Assets to TA</b>	Current Assets / Total Assets	0.53	0.5	0.46	0.46	0.53
<b>Current Liab. to TL</b>	Current Liabilities / Total Liabilities	3.95	3.71	3.12	3.12	1.98

The balance sheet ratio analysis indicates a weak financial position of the company over the study period. The current ratio remains significantly below the standard benchmark of 2:1, indicating poor liquidity and difficulty in meeting short-term obligations. The proprietary ratio is negative in all years, which suggests erosion of shareholders' funds due to accumulated losses. The debt to total assets ratio of 1 indicates that the company's assets are entirely financed through liabilities, reflecting a highly leveraged financial structure. The fixed assets ratio shows a declining trend, indicating reduction in long-term investments. Overall, the ratios highlight serious liquidity and solvency concerns for the company.

## 9. Major Findings of the Study

1. Jet Airways experienced a drastic decline in sales and total income during the period under study
2. The company incurred continuous operating losses and net losses in all five years.
3. The operating expenditure remained disproportionately high, reflecting poor cost control.
4. The liquidity position of the company was extremely weak, as indicated by the low current ratio.
5. The proprietary ratio remained negative, indicating erosion of shareholders' funds.
6. The company's financial structure was highly unstable and heavily dependent on liabilities.
7. The decline in fixed assets and total assets indicates a contraction in business operations.
8. Overall, Jet Airways was in a state of severe financial distress and long-term instability.

## 10. Conclusion

The present study concludes that financial mismanagement was a major factor responsible for the failure of Jet Airways. The financial analysis of the company for the period from 2019 to 2023 clearly indicates declining revenue, continuous losses, weak liquidity, growing liabilities, and a shrinking asset base. These factors collectively weakened the financial position of the company and contributed significantly to its collapse.

The study reveals that the company was unable to maintain a healthy balance between revenue generation and expenditure control. The persistent negative profitability, poor liquidity, and unstable solvency position indicate a lack of financial sustainability. The continuous erosion of shareholders' funds and dependence on liabilities further highlight the seriousness of the company's financial distress.

Therefore, the study concludes that sound financial planning, effective cost management, prudent borrowing, and strategic business control are essential for organizational sustainability. The case of Jet Airways serves as an important lesson for startups, business organizations, and financial managers that rapid expansion without proper financial discipline can ultimately lead to business failure.

## 11. Suggestions / Recommendations

1. Proper Financial Planning: Companies should adopt sound budgeting, forecasting, and financial planning practices to ensure long-term stability and avoid future financial distress.
2. Strong Cost Control: Business organizations must maintain strict control over operating expenses to improve profitability and ensure efficient use of resources.
3. Balanced Capital Structure: Excessive dependence on borrowed funds should be avoided. A proper balance between debt and equity should be maintained for financial sustainability.
4. Improve Liquidity Management: Companies should maintain sufficient current assets to meet short-term liabilities and ensure uninterrupted operations.
5. Focus on Core Revenue Generation: Greater emphasis should be placed on strengthening core business operations rather than depending excessively on non-operating income.
6. Sustainable Expansion Strategy: Expansion decisions should be based on financial capacity and market demand. Aggressive expansion without adequate financial support should be avoided.

7. Regular Financial Performance Review: Periodic review of financial statements and ratio analysis should be undertaken to identify early warning signs of distress.
8. Strengthen Corporate Governance: Transparent management practices, internal control systems, and accountability mechanisms should be improved to ensure financial discipline.
9. Timely Debt Restructuring: Companies facing financial pressure should take timely corrective action through debt restructuring, cost rationalization, and operational improvement.
10. Risk Management Framework: Organizations should develop proper risk management systems to deal with uncertainties such as rising costs, market competition, and economic fluctuations.

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# ADOPTION OF BLOCKCHAIN AND CRYPTOCURRENCY IN INDIA: REGULATORY IMPACT, PUBLIC TRUST, AND SOCIO-ECONOMIC IMPLICATIONS

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## Abstract

The rapid emergence of blockchain technology and cryptocurrencies has reshaped the global financial ecosystem, challenged traditional regulatory frameworks and redefined public trust in monetary systems. In India, the journey of cryptocurrency adoption has been marked by regulatory uncertainty, judicial intervention, taxation reforms, and growing public participation. This study examines the adoption of blockchain and cryptocurrency in India through three interrelated dimensions: regulatory impact, public trust, and socio-economic implications. Using a qualitative and analytical research methodology based on secondary data, policy documents, academic literature, and market trends, the paper explores how government actions—particularly those of the Reserve Bank of India and the Supreme Court of India—have influenced investor confidence and market behaviour. The findings reveal that while blockchain technology offers transformative potential for financial inclusion, transparency, and innovation, inconsistent regulation and high taxation policies have created hesitation among retail investors and startups. Public trust in India is shaped not only by technological awareness but also by institutional endorsement and policy clarity. The study concludes that a balanced regulatory framework, combining consumer protection with innovation incentives, is essential for sustainable adoption.

**Keywords:** Blockchain, Cryptocurrency, India, Regulation, Public Trust, Financial Inclusion, Digital Assets, Socio-Economic Impact

## Introduction

In 2010, Laszlo Hanyecz used Bitcoin to buy pizzas, an incident that would later be used to illustrate the rapid rise of cryptocurrencies. Since then, digital assets on a blockchain have attracted global attention as an alternative to the traditional financial system.

There are two system is currently there centralized system think like any social media platform like Instagram where you have to create your account by using personal details and you will upload images videos and you have to trust the company that your stored data is kept safe by that company and they only have all that data in data centers and blockchain works on decentralized system there is no single company or entity controlling the platform instead platform built distribution network where user can interact directly with each other without a central server the control and management of the social network are shared among its users with no single central authority.

## Understanding

Blockchain is a revolutionary new way of storing and sharing the data in digital ledger that records transactions in secure and tamper proof way a digital ledger is basically record keeping system that use to keep track of ongoing transaction and store a copy within network of computers securely and transparently transaction are grouped into blocks and each block linked with the pervious block that's create the chain that's why its called blockchain

The network of computer known as nodes work together to validate the transactions and integrity of the ledger and each transaction have unique code called hash for example the city bloxx game in that game you have to build a tower out of blocks each block represents set of transitions and tower represent the blockchain and each time new block added to the tower it must be carefully placed on top of pervious block so that stays upright and doesn't topple over and in this and this way blockchain stays secure and unbreakable way more

and more blocks are added to a blockchain it becomes longer and more secure the hash codes the link each block together create an unbreakable chain the ensure the integrity of the ledger and prevent any fraudulent or unauthorized changes from being made in blockchain network all nodes have a copy of the transactions and work together to maintain it this creates a decentralized and transparent system in a way that every transaction is recorded and can be traced back to its origin.

### **Working**

The number of nodes (computer) needed in a network to make the blockchain the more nodes there are in network the more secure it is more nodes means more copies of ledger which makes it more difficult for anyone to alter the information on blockchain without being detected and if some nodes are compromised or go offline the network as a whole can continue to function therefore having a sufficient number of nodes is crucial to maintaining the security and integrity of the blockchain.

There are three type of nodes full nodes light nodes and mining nodes are responsibility for creating new blocks in blockchain by solving complex mathematical complex problems known as ‘proof of work’(pow),

To find next blockchain and it used as digital currency which can traded and stored electronically which is cryptocurrencies which called token and this token can be traded as bitcoin across all the users and can send to different users and the list of transaction broadcast to the network and verify if it is correct then this create a tamper proof record of transfer of digital token in bitcoin it use a public blockchain that means anyone can participate and view the transaction this is how transaction are made in bitcoin and this revolutionary development help in this finance world.

### **Literature review**

A literature review is not simply a summary of previous studies; it is a careful and critical examination of existing scholarly work to understand what has already been studied, what conclusions have been reached, and where important gaps remain. In the context of blockchain and cryptocurrency adoption in India, the literature covers technological foundations, global adoption trends, regulatory developments, public trust, and socio-economic consequences. This review organises these studies thematically to provide a clear understanding of the current academic landscape and to identify areas that require further research.

#### **1. Foundations of Blockchain and Cryptocurrency**

Existing research has emphasized the possibilities and difficulties of cryptocurrency adoption. The whitepaper presented by Satoshi Nakamoto in 2008 introduced the concept of cryptocurrency, which is a peer-to-peer electronic cash system based on cryptographic principles, marking the beginning of blockchain technology. Later, research by Narayanan et al. (2016) discussed some of its important features, such as a distributed ledger, consensus, and transparency, which are tamper-resistant. The focus of research later moved to its position as a substitute for conventional currencies or a threat to central banks. Though some believe that cryptocurrency offers a revolutionary solution to the financial crisis of 2008, others argue that it needs to be regulated.

#### **2. Global Adoption and Emerging Economies**

Research studies have shown that the rate of cryptocurrency adoption differs from one country to another. For example, according to a study by Makarov and Schoar (2021), the rate of cryptocurrency adoption in emerging countries is higher, often driven by factors such as inflation, currency volatility, and remittance costs. However, the case of India is different, driven not only by economic factors but also technology, investment, and speculation. Thus, the case of India cannot be analyzed based on global trends.

#### **3. Regulatory Developments in India**

Regulation has impacted the adoption of cryptocurrency in India in a notable manner. For instance, in 2018, the Reserve Bank of India prohibited access to banking services by crypto companies in the name of

maintaining financial stability. However, in 2020, the Supreme Court set aside the ruling, boosting the morale of investors. In recent times, the taxation policy on virtual digital assets has been viewed as a recognition and a hindrance by some people.

#### 4. Public Trust and Adoption Behaviour

Trust is a central theme in cryptocurrency research. Traditional financial systems depend on trust in institutions such as banks and governments. Blockchain systems, in contrast, rely on technological verification. However, studies in India suggest that technological trust alone is not enough.

Kumar and Sharma (2022) examined differences between rural and urban adoption and concluded that cryptocurrency has the potential to support financial inclusion. At the same time, they identified barriers such as low digital literacy and weak infrastructure. Gupta et al. (2023) studied investor reactions to India's taxation policies and found that regulatory changes directly influence investor sentiment and trading patterns.

These findings suggest that public trust in India depends not only on blockchain technology but also on government policy, legal clarity, and investor awareness. In other words, even decentralised systems require institutional reassurance for wider acceptance.

#### 5. Socio-Economic Implications

Research on socio-economic impact presents both positive and negative perspectives. Supporters argue that blockchain can improve financial access, reduce transaction costs, and create new employment opportunities in fintech and software development. Some studies also suggest that decentralised systems could increase transparency in governance and record-keeping.

On the other hand, critics warn about risks such as market volatility, speculative bubbles, capital outflows, and environmental concerns related to energy-intensive mining. Importantly, there is still limited empirical evidence measuring the real contribution of cryptocurrency to inclusive economic growth in India.

This indicates that while expectations are high, measurable socio-economic outcomes remain under-researched.

#### 6. Identified Gaps in the Literature

- Despite growing research, several gaps remain: Most studies focus on either regulation, technology, or socio-economic impact separately, rather than integrating them into one framework.
- There is limited long-term research examining how regulatory changes affect adoption over time.
- India is often discussed as part of broader emerging market studies, without detailed country-specific analysis.
- These gaps highlight the need for a comprehensive study that connects regulatory developments, public trust, and socio-economic consequences in a single analytical framework.

#### Research Methodology

1. This study adopts a qualitative, exploratory, and analytical research design to understand the adoption of blockchain and cryptocurrency in India. The objective is not merely to describe technological developments, but to critically evaluate how regulatory actions influence public trust and socio-economic outcomes.
2. The research relies primarily on secondary data sources, including peer-reviewed journal articles, government notifications, parliamentary debates, policy documents, reports from financial institutions, and reputable news publications. Academic databases such as Google Scholar and SSRN were consulted to ensure scholarly rigor.
3. Regulatory developments were examined through official releases from the Reserve Bank of India, Ministry of Finance notifications, and judicial pronouncements by the Supreme Court of India. Particular

emphasis was placed on the 2018 RBI circular restricting banking access to cryptocurrency exchanges and the landmark 2020 Supreme Court judgment overturning this restriction.

4. Market behavior and adoption patterns were analyzed through exchange data, investor reports, and industry insights from Indian cryptocurrency platforms such as WazirX and CoinDCX.
5. The study integrates regulatory analysis with socio-economic evaluation by connecting legal changes to investor sentiment, market participation, and innovation trends.
6. Limitations of the study include dependence on secondary data and the absence of primary survey-based evidence. However, triangulation of multiple credible sources enhances reliability.

### Observations

1. Regulatory uncertainty has been the most significant determinant of cryptocurrency adoption in India. In 2018, the RBI issued a circular prohibiting banks from providing services to cryptocurrency businesses. This decision created immediate disruption in exchange operations and reduced investor confidence.
2. In 2020, the Supreme Court of India set aside the RBI circular, restoring banking access to exchanges. This judicial intervention marked a turning point, leading to a surge in trading volumes and new investor registrations. The episode demonstrates that institutional decisions strongly shape public trust.
3. The introduction of taxation on virtual digital assets in 2022, including a 30% tax on gains and 1% TDS on transactions, formalized cryptocurrency recognition within the financial system. However, market reports indicated a decline in trading volumes following the tax implementation, suggesting that high taxation can discourage participation.
4. Public trust in cryptocurrency in India is closely tied to regulatory endorsement. Unlike in some emerging economies where adoption is driven by currency instability, India's adoption appears motivated by investment diversification, speculative opportunity, and technological curiosity.
5. Urban youth and technologically literate investors constitute the largest user base. Rural participation remains limited due to digital literacy gaps and infrastructural constraints.
6. Blockchain technology adoption extends beyond cryptocurrency trading. Indian startups and state governments are exploring blockchain for supply chain management, land record digitization, and fintech innovation. This indicates that while cryptocurrency remains controversial, blockchain as a technology enjoys broader acceptance.
7. Investor behaviour shows sensitivity to global developments, including price volatility in assets like Bitcoin and Ethereum, as well as international regulatory signals.
8. The debate surrounding environmental impact, especially related to Proof-of-Work systems, has influenced academic and policy discussions, although India does not host large-scale mining operations comparable to global hubs.

### Results and Discussion

1. The findings reveal that regulatory clarity directly correlates with market participation. Periods of supportive or neutral policy environments correspond with increased exchange activity and startup investment. Conversely, restrictive measures produce immediate contraction.
2. Public trust in India operates at two levels: technological trust and institutional trust. While blockchain offers cryptographic assurance and transparency, investors still rely on government signals for legitimacy. The Supreme Court's intervention demonstrated that judicial endorsement can restore confidence even in a decentralized system.
3. Socio-economically, cryptocurrency adoption has created employment opportunities in fintech, compliance, cybersecurity, and blockchain development. Indian exchanges have expanded hiring during growth phases, indicating positive employment effects.
4. However, wealth concentration remains a concern. Early adopters and high-risk investors benefit disproportionately from speculative gains, potentially widening financial inequality.

5. The taxation framework, while signaling recognition, has driven some trading activity to offshore platforms. This unintended consequence reflects the delicate balance regulators must maintain between revenue generation and market competitiveness.
6. Blockchain's potential in governance and transparency remains underutilized. Pilot projects in land records and digital identity management demonstrate promise, yet large-scale implementation is limited by bureaucratic inertia and technical challenges.
7. Compared to global markets, India's approach is cautious but not prohibitive. Unlike outright bans seen in certain jurisdictions, India has adopted a strategy of regulation through taxation and monitoring rather than criminalization.
8. Overall, the results suggest that cryptocurrency adoption in India is neither purely speculative nor fully institutionalized. It occupies a transitional space shaped by negotiation between innovation and regulation.

### Conclusion

1. The adoption of blockchain and cryptocurrency in India reflects a complex interplay between technological innovation, regulatory intervention, and societal perception.
2. Regulatory developments, particularly actions by the Reserve Bank of India and judgments of the Supreme Court of India, have significantly influenced investor behaviour and public trust.
3. Blockchain technology possesses transformative potential beyond digital currency, offering opportunities in governance, financial inclusion, and digital infrastructure.
4. Public trust in India depends not only on decentralized cryptography but also on institutional reassurance. This paradox highlights that even decentralized systems require structured oversight to achieve mass adoption.
5. Socio-economic implications are mixed. While employment generation and innovation are positive outcomes, concerns regarding volatility, speculative behaviour, and inequality persist.
6. A balanced regulatory framework—clear, consistent, and innovation-friendly—is essential. Policymakers must encourage technological development while ensuring consumer protection and financial stability.
7. Future research should incorporate primary surveys and longitudinal data to measure long-term socio-economic impact.

In conclusion, India stands at a pivotal moment. The choices made today in regulatory design and technological integration will determine whether blockchain becomes a transformative pillar of digital governance or remains confined to speculative markets.

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