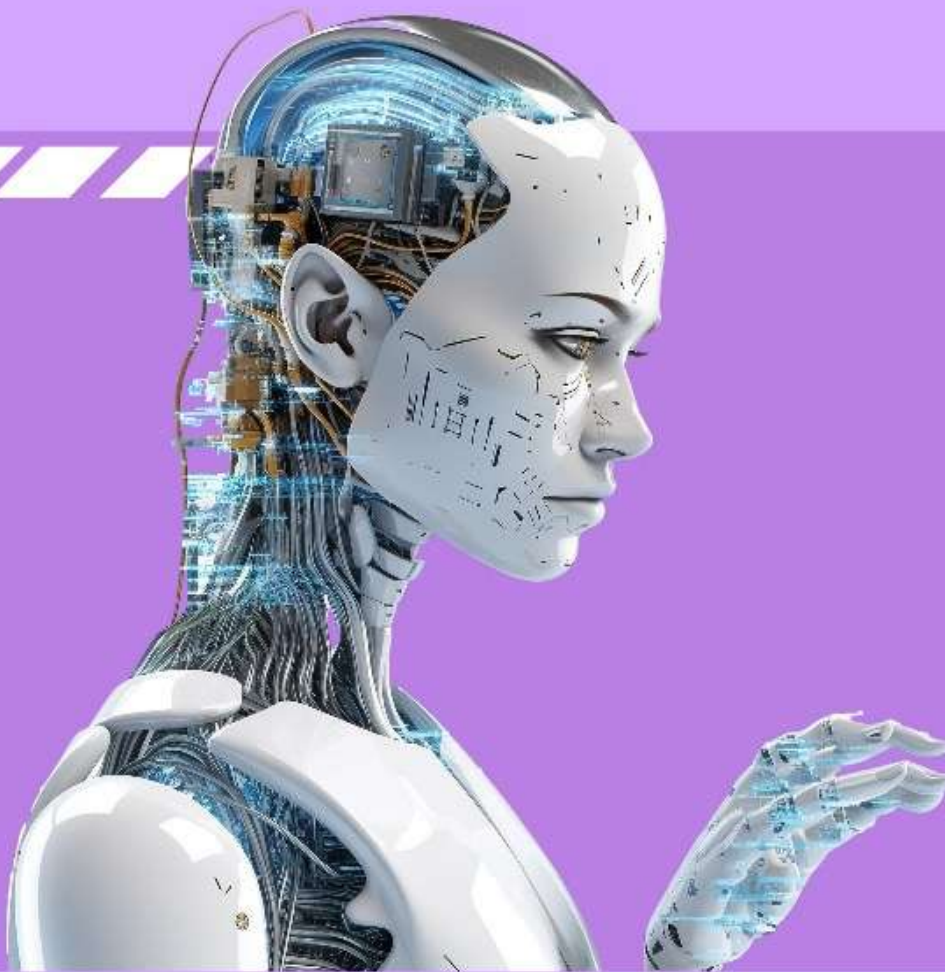


# FOSTERING BUSINESS EXCELLENCE IN DIGITAL ERA:

LEADERSHIP, SUSTAINABILITY  
AND TECHNOLOGICAL  
INNOVATION

PROCEEDINGS OF THE NATIONAL CONFERENCE



DR R SIVANESAN

DR R PAULMONI

DR M RESHMA

**National Conference Proceedings**

**FOSTERING BUSINESS EXCELLENCE IN DIGITAL ERA:  
LEADERSHIP, SUSTAINABILITY AND TECHNOLOGICAL INNOVATION**

**Dr R SIVANESAN**

**Dr R PAULMONI**

**Dr M RESHMA**

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St Alphonsa College of Arts & Science  
Karinkal, Kanyakumari District

## **PREFACE**

It is my pleasure to present the proceedings of the National Conference on "Fostering Business Excellence in the Digital Era: Leadership, Sustainability, and Technological Innovation" organized by the PG and Research Department of Commerce.

The conference aimed to provide a platform for academia, industry experts, and researchers to share their knowledge, experiences, and research findings on the latest trends and best practices in leadership, sustainability, and technological innovation.

The response to the conference was overwhelming, with participants from various parts of the country. The conference featured keynote addresses, panel discussions, and research paper presentations.

These proceedings compile the selected research papers presented during the conference. The papers cover a wide range of topics, including digital transformation, sustainable business practices, leadership excellence, and technological innovation.

I extend my gratitude to the authors, reviewers, and editorial board members for their contributions to these proceedings. I also acknowledge the support of the organizers, and volunteers.

I hope that these proceedings will serve as a valuable resource for researchers, practitioners, and policymakers seeking to foster business excellence in the digital era.

Sincerely,

Dr R Sivanesan

Convenor, National Conference

PG and Research Department of Commerce

## ACKNOWLEDGEMENT

We express our deepest gratitude to the Almighty God, who has guided and blessed us throughout this national conference. We thank God for the wisdom, strength, and courage to organize this event, and for the opportunity to bring together scholars, researchers, and practitioners from across the country.

We sincerely thank our revered Chairman and Bishop, Diocese of Thuckalay, ***His Excellency Mar George Rajendran SDB*** for his visionary leadership and unwavering support. Your guidance and encouragement have been instrumental in shaping the conference into a resounding success. We are deeply grateful for your presence and blessings.

Our heartfelt appreciation goes to our Manager, ***Very Rev Fr Thomas Powathuparampil*** for providing us with the necessary resources and infrastructure to host this conference. Your support and cooperation have been invaluable, and we thank you for your commitment to excellence.

We thank our Correspondent, ***Very Rev Fr Antony Jose***, for their continued encouragement and backing. Your trusts in our abilities and your support for our initiatives have been a constant source of motivation.

We are grateful to our Principal, ***Rev Dr Micheal Aro SDB***, for their guidance and support in organizing this conference. Your leadership and expertise have been essential in shaping the conference program and ensuring its smooth execution.

We acknowledge the blessings and support of our Campus Minister, ***Rev Fr Ajin Jose***, who has been a constant source of inspiration. Your prayers and guidance have been a source of strength and comfort throughout this journey.

We extend our sincere thanks to our faculty members, who have worked tirelessly to make this conference a success. Your contributions, whether as paper presenters, session chairs, or volunteers, have been invaluable. We appreciate your dedication, expertise, and passion.

We appreciate the contributions of our research scholars, who have presented their research papers and added value to the conference proceedings. Your research has enriched our understanding of the themes and sub-themes of the conference, and we congratulate you on your achievements.

Finally, we thank our students, who have actively participated in the conference and made it a memorable event. Your enthusiasm, energy, and curiosity have been a source of inspiration, and we are proud of your achievements.

**Dr R Sivanesan  
Dr R Paulmoni  
Dr M Reshma**



## **MESSAGE FROM THE CHAIRMAN AND BISHOP**

It is my profound pleasure to welcome you to the National Conference on "Fostering Business Excellence in the Digital Era: Leadership, Sustainability, and Technological Innovation" organized by the PG and Research Department of Commerce.

As the Chairman of St Alphonsa College of Arts & Science, Karinkal and Bishop of the Diocese of Thuckalay, I am deeply committed to promoting excellence in education, research, and community development. This conference embodies our institution's vision to foster innovative thinking, sustainable practices, and leadership excellence in the digital age.

I commend the PG and Research Department of Commerce for their tireless efforts in organizing this conference. Their dedication to promoting research, innovation, and excellence in commerce is truly commendable.

In today's rapidly changing business landscape, it is imperative for leaders to prioritize sustainability, technological innovation, and ethical decision-making. This conference provides a unique platform for academia, industry experts, and researchers to converge, share knowledge, and explore innovative solutions.

I extend my gratitude to our esteemed keynote speakers, panelists, and presenters for sharing their expertise and insights with us. I also acknowledge the hard work and dedication of our conference committee, volunteers, and staff.

To our delegates, I hope that this conference will empower you with new knowledge, foster meaningful connections, and inspire you to achieve excellence in your respective endeavors.

May this conference be a catalyst for positive change, innovation, and growth.

Mar George Rajendran SDB  
Bishop, Diocese of Thuckalay  
Chairman, St Alphonsa College of Arts & Science



## **MESSAGE FROM THE MANAGER**

It is my pleasure to welcome you to the National Conference on "Fostering Business Excellence in the Digital Era: Leadership, Sustainability, and Technological Innovation" organized by the PG and Research Department of Commerce.

As we navigate the complexities of the digital era, it is imperative for businesses to prioritize leadership, sustainability, and technological innovation to stay ahead. This conference provides a unique platform for academia, industry experts, and researchers to converge, share knowledge, and explore innovative solutions.

I commend the PG and Research Department of Commerce for their tireless efforts in organizing this conference. Their dedication to promoting research, innovation, and excellence in commerce is truly commendable.

I extend my gratitude to our esteemed keynote speakers, panelists, and presenters for their valuable contributions. I also appreciate the hard work and dedication of our conference committee, volunteers, and staff.

To our esteemed delegates, I hope that this conference will empower you with new knowledge, foster meaningful connections, and inspire you to achieve excellence in your respective endeavors.

Thank you for joining us, and I wish you a productive and enriching conference experience.

Very Rev Fr Thomas Powathuparampil  
Vicar General, Diocese of Thuckalay  
Manager, St Alphonsa College of Arts & Science



### **MESSAGE FROM THE SECRETARY**

It is my privilege to welcome you to the National Conference on "Fostering Business Excellence in the Digital Era: Leadership, Sustainability, and Technological Innovation" organized by the PG and Research Department of Commerce.

In today's fast-paced digital landscape, businesses are constantly seeking innovative ways to stay ahead. This conference aims to provide a platform for academia, industry experts, and researchers to share their knowledge and experiences on the latest trends and best practices in leadership, sustainability, and technological innovation.

The PG and Research Department of Commerce has always been at the forefront of promoting research and innovation in the field of commerce. This conference is a testament to our commitment to fostering business excellence and promoting sustainable practices.

I would like to extend my gratitude to our keynote speakers, panelists, and presenters for their valuable contributions to this conference. I also appreciate the hard work and dedication of our conference committee, volunteers, and staff who have worked tirelessly to make this event a success.

To our delegates, I hope that this conference provides you with valuable insights, new connections, and inspiration to drive business excellence in your respective organizations.

Thank you once again for joining us, and I wish you a productive and enriching conference experience.

Very Rev Fr Antony Jose  
Secretary & Correspondent





## **PRINCIPAL'S MESSAGE FOR THE CONFERENCE PROCEEDINGS**

Dear Academicians, Scholars, and Students,

We are delighted and proud to present the proceedings of the National Conference on “Fostering Business Excellence in the Digital Era: Leadership, Sustainability, and Technological Innovation”. In today’s rapidly evolving business landscape, where digital transformation is reshaping industries, this conference serves as a crucial platform for academicians, researchers, and industry professionals to engage in meaningful discussions and knowledge exchange.

In an era driven by rapid digital advancements, businesses must embrace innovative leadership, sustainable practices, and technological innovation to thrive. The themes of leadership, sustainability, and technological innovation are not only highly relevant but also essential for organizations striving for excellence in the digital age. Effective leadership, responsible sustainability initiatives, and cutting-edge technological advancements form the foundation of long-term business success. I am confident that the insights shared and deliberated upon during this conference will make a significant contribution to both academic and professional excellence.

It is with great pleasure that I congratulate the PG and Research Department of Commerce for taking the initiative to organize this National Conference. My sincere appreciation goes to the Head of the Department, the Convenor, and the entire organizing team for their dedication and meticulous planning in bringing this event to fruition. The publication of this book with an ISBN is a testament to the conference’s success. I extend my special appreciation to all the researchers, academicians, and scholars who have contributed their valuable research papers, enriching the discourse with their insightful perspectives.

I hope that readers will find this conference proceedings both enlightening and inspiring, encouraging further studies in the pursuit of business excellence in the digital era.

Rev Dr Michael Arockiasamy SDB

Principal



## **MESSAGE FROM THE CAMPUS MINISTER**

It is with great pleasure that we present the proceedings of the conference on “Fostering Business Excellence in the Digital Era: Leadership, Sustainability, and Technological Innovation,” organized by the Department of Commerce. This conference serves as a platform for scholars, industry leaders, and practitioners to explore the transformative impact of digitalization on business strategies, leadership paradigms, and sustainable growth.

In today’s rapidly evolving global economy, businesses must navigate the challenges and opportunities presented by digital transformation. This conference brings together cutting-edge research and insightful discussions on topics such as digital leadership, corporate sustainability, emerging technologies, and innovative business practices. By fostering collaboration among academia and industry, we aim to drive meaningful progress in business excellence.

Heartfelt gratitude to all the esteemed speakers, researchers, and participants who have contributed their knowledge and expertise. Special appreciation to the organizing committee, reviewers, and sponsors for their dedication and support in making this conference a success.

May these proceedings will inspire further research, dialogue, and innovation in the pursuit of sustainable and technologically advanced business solutions.

Fr Ajin Jose

Campus Minister

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## **USAGE OF CREDIT CARDS AND ITS IMPACT ON PURCHASE BEHAVIOUR: A STUDY ON SALARIED EMPLOYEES IN COIMBATORE**

**Dr T Fermi Paul**

Assistant Professor, PG Department of Commerce, KG College of Arts and Science, Coimbatore

**Dr M Karthika**

Assistant Professor, PG Department of Commerce, KG College of Arts and Science, Coimbatore

### **ABSTRACT**

Credit cards have become ubiquitous in modern financial transactions, offering convenience and flexibility in purchasing goods and services. However, their usage also influences consumer behavior, potentially altering spending patterns and financial decisions. A structured questionnaire is distributed among a sample of salaried employees in Coimbatore, capturing information on credit card ownership, usage frequency, spending habits, and perceptions of credit card benefits and drawbacks. Findings from the study aim to uncover several key aspects: the prevalence of credit card ownership among salaried employees in Coimbatore, patterns of credit card usage in daily transactions, factors influencing the choice to use credit cards, and the perceived impact of credit card usage on personal finances and purchase behavior. Analysis of the data will provide insights into how credit cards influence spending decisions, budgeting practices, and financial management among this specific demographic.

**Keywords:** credit cards, purchase behavior, salaried employees, consumer behavior, financial management

### **INTRODUCTION**

One sort of credit facility that banks offer their customers is a credit card, which lets them borrow money up to a predetermined credit limit. Customers are able to transact for goods and services using it. The credit cards limit is determined by the credit cards issuer based on factors such as income and credit score, which also decides the credit limit. Bonus tip: Check your score right now with the free credit score checker tool. The credit card number, cardholder name, expiration date, signature, CVC code, and other details are included in the credit card information. The fact that a credit card isn't connected to a bank account is its best feature. So, whenever they swipe their credit card, the amount is deducted from the credit card limit, not our bank account. They can use it to cover emergency services, other lifestyle items, food, clothing, medical costs, and travel expenses.

On February 28, 1950, the Diners Club card the first credit card with multiple uses was unveiled. The era of plastic money began with this. In 1960, Diner's Card was introduced to the Indian market. In August 1980, the Central Bank of India became the first financial institution in the nation to implement a credit card system, with several other banks following suit. International and domestic banks operate credit card businesses in India.

### **REVIEW OF LITERATURE**

**Nam Hoang Trinh and Ha Hong Tran (2023)** has study to clarify the determinants of perceived risk and its impact on consumers intention to use credit cards. Therefore, this study examines the factors that influence the perceived risk based on data collected from customers who receive salaries through bank accounts. The study concluded that confirm the negative influence of perceived risk on the intention to use credit cards

**Dylan Walsh (2021)** a new study shows credit cards increase the pleasure in purchasing posing question about emerging payment methods could influence consumer habits.

**Suresh K Shirgave, Chetan J, Patil (2019)** has conducted on credit cards frauds has become one of the growing problem. A large financial loss affected individual person using credit cards and merchants and banks. The study concluded that increases detecting frauds by using credit cards.

**Jasmine A (2017)** demonstrated that the majority of respondents had meager pay and had to use credit cards to cover their educational costs. Credit card users were pleased that it saved them time and eliminated the need to look for an ATM or carry cash.

### STATEMENT OF THE PROBLEM

The study aims to investigate the usage of credit cards among salaried employees and its impact on their purchase behaviour. It seeks to understand how salaried individuals utilize credit cards for transactions and whether that influences their spending habits and financial management. The research will explore factors such as credit cards debt, payment patterns, and the psychological effects of credit card usage on consumer behaviour among this specific demographic group.

### OBJECTIVES OF THE STUDY

1. To study the Economic conditions of credit card holders.
2. To ascertain the extent of credit card usage.
3. To know the Technological impact on credit card users in purchase behavior.

### RESEARCH METHODOLOGY

A methodical approach to the research problem is known as research methodology. The methodology for research problem will be designed by the researcher. Convenience sampling method has been adopted under the non- probability technique and about 80 samples have been collected for the study.

### TOOLS FOR DATA ANALYSIS

Data collected through questionnaire was presented as a master table. The statistical techniques like simple Percentage analysis, ANOVA test have been applied for this study.

### EVOLUTION AND GROWTH OF CREDIT CARDS

The usage of credit cards among salaried employees significantly influences their purchase behaviors, with the convenience and accessibility provided by credit cards, employees often tend to make more impulsive purchases, spurred by the ability to defer immediate payment. This can lead to increased spending beyond one's means and a potential accumulation of debt. Moreover, the availability of credit may encourage individuals to indulge in higher-priced items or services they might otherwise have deferred or saved for. Consequently, prudent financial management and discipline are essential to ensure that credit card usage remains within reasonable limits and aligns with long-term financial goals.

### DATA ANALYSIS AND INTERPRETATION

Occupational status of credit card users in Coimbatore

S.NO	OCCUPATIONAL STATUS	NO. OF RESPONDENTS	PERCENTAGE
1.	Private employee	55	68.75
2.	Government employee	5	6.25
3.	Professional	20	25.00
	<b>Total</b>	<b>80</b>	<b>100</b>

From the above table how that 68.75% of the respondents is private employee, 25% of the respondents are professional and 6.75% of the respondents are government employee. It was found that majority 68.75% of the respondents are private employees.

### Compare of gender with credit cards transaction time per month

H1: There is a significant relation between Age of the respondents and credit cards transaction time.

Transaction Time		Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	42.959	1	42.959	107.989	.000
	Within Groups	31.029	78	.398		
	Total	73.988	79			

### Interpretation

The ANOVA results suggest that there is a statistically significant difference in the "Transaction of Time" variable between groups, as evidenced by the extremely small p-value ( $p < 0.001$ ). The F-ratio of 107.989 indicates that the between-group variance is much larger than the within-group variance, further supporting the conclusion of significant differences between groups. Therefore, I can conclude that the "Transaction of Time" variable has a significant effect on the outcome, based on the given data.

### Compare of age with number of cards, types and brand of credit cards

H1: There is a significant relation between Age of the respondents and Number of card, Types and Brand of credit cards.

Particulars		Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
No. of Cards	Between Group	62.244	3	20.748	134.280	.000
	Within Groups	11.743	76	.155		
	Total	73.988	79			
Types of credit cards	Between Groups	109.283	3	36.428	364.078	.000
	Within Groups	7.604	76	.100		
	Total	116.888	79			
Brand of Credit Cards	Between Groups	19.023	3	6.341	69.199	.000
	Within Groups	6.964	76	.092		
	Total	25.987	79			

#### Interpretation:

**No. of Cards between Groups:** The sum of squares (SS) between groups is 62.244 with 3 degrees of freedom (df). This represents the variation in the dependent variable (presumably some measure related to credit card usage) that can be attributed to differences between the number of cards. **Within Groups:** The SS within groups is 11.743 with 76 df. This represents the variation in the dependent variable that is due to random variance or error within each group. **Total:** The total SS is 73.988 with 79 df. The F-statistic is 134.280 with a corresponding p-value of .000, indicating that the mean differences between groups are statistically significant.

**Types of credit cards:** Between Groups: SS between groups is 109.283 with 3 df. This represents the variation in the dependent variable that can be attributed to differences between types of credit cards.

With in Groups: SS within groups is 7.604 with 76 df.

Total: Total SS is 116.888 with 79 df.

The F- statistic is 364.078 with a corresponding p-value of .000, indicating significant differences between the types of credit cards.

#### Brand of Credit Cards:

Between Groups: SS between groups is 19.023 with 3 df. This represents the variation in the dependent variable that can be attributed to differences between brands of credit cards.

Within Groups: SS within groups is 6.964 with 76 df.

Total: Total SS is 25.987 with 79 df.

The F- statistic is 69.199 with a corresponding p-value of .000, indicating significant differences between brands of credit cards.

### CONCLUSION

Credit cards have a significant impact on consumer shopping decisions. Because they provide incentives, rewards, and postponed payment choices, they frequently lead to greater spending and impulsive purchases. Credit card temptation should be moderated, though, as high interest rates and possible debt can put a strain on one's finances. Furthermore, using credit cards causes an emotional separation from spending, which makes proper money management necessary to prevent over spending and debt accumulation. Therefore, even though credit cards are flexible and have perks, it is important to use them wisely in order to maximize their benefits and avoid any potential drawbacks

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## **IMPORTANCE OF SUSTAINABLE BUSINESS PRACTICES IN THE TOURISM INDUSTRY**

**Mrs. B. Jaya Kiruba**

Reg.No.22121271012003

Research Scholar, Department of Commerce, St.John's Colleges, Palayamkottai  
(Affiliated to Mononmaniam Sundaranar University, Abhishiekapatti, Tirunelveli)

**Dr. G. KOIL SAMUEL**

Assistant professor of commerce, St. John's College,, Palayamkottai  
(Affiliated to Mononmaniam Sundaranar University, Abhishiekapatti, Tirunelveli)

### **ABSTRACT**

The tourism industry's exponential growth has raised concerns about its environmental, social, and economic impacts. As the sector continues to expand, adopting sustainable business practices has become crucial for its long-term viability. This paper examines the significance of sustainability in tourism, highlighting the environmental, social, and economic benefits of responsible practices. Through a review of existing literature and case studies, this research demonstrates that sustainable tourism not only mitigates negative impacts but also generates economic benefits, promotes cultural heritage, and supports local communities. The paper emphasizes the pressing need for tourism stakeholders to adopt sustainable practices, providing recommendations for businesses, governments, and consumers to contribute to a more responsible and sustainable tourism industry.

**Key Words:** Sustainable tourism, Environmental sustainability, Cultural heritage preservation, Community - based tourism, Sustainable development

### **INTRODUCTION**

Sustainable tourism refers to the practice of traveling and exploring destinations in a way that minimizes negative environmental, social, and economic impacts, while maximizing benefits for local communities and conserving natural and cultural heritage. Sustainable tourism is important because it allows tourists to experience and appreciate the unique cultures and environments of destinations without contributing to their degradation. By adopting sustainable tourism practices, tourists can help preserve the integrity of ecosystems, support local economies, and promote cross-cultural understanding.

The tourism industry has experienced rapid growth over the past few decades, with millions of people traveling internationally each year. However, this growth has come at a significant environmental and social cost. Tourism has been linked to issues such as deforestation, habitat destruction, pollution, and climate change. Additionally, the industry has been criticized for its social impacts, including the displacement of local communities, cultural homogenization, and exploitation of workers. The tourism industry's environmental and social impacts are not only detrimental to destinations but also threaten the long-term viability of the industry itself.

### **RESEARCH QUESTION**

What is the importance of sustainable business practices in the tourism industry? This research question seeks to explore the significance of adopting sustainable practices in the tourism industry, including the benefits for the environment, local communities, and the industry's long-term success.

### **RESEARCH STATEMENT**

Sustainable business practices are crucial for the long-term viability and success of the tourism industry. By adopting sustainable practices, tourism businesses can reduce their environmental footprint, promote cultural heritage and conservation, support local economies, and enhance their reputation and competitiveness. Ultimately, sustainable business practices are essential for ensuring that the tourism industry continues to thrive while minimizing its negative impacts and maximizing its benefits for destinations and local communities.

### **ENVIRONMENTAL IMPACTS OF TOURISM**

The tourism industry has significant environmental impacts that threaten the very destinations that tourists seek to experience. Climate change is one of the most pressing issues, with tourism

contributing to greenhouse gas emissions through transportation, accommodation, and activities. Pollution is another major concern, with tourism-related activities such as cruise ships and resort development leading to water pollution, air pollution, and waste management issues. Habitat destruction is also a significant problem, as tourism development leads to the clearing of natural habitats, fragmentation of ecosystems, and loss of biodiversity.

Many destinations around the world are struggling with the environmental impacts of tourism. For example, the Great Barrier Reef in Australia is facing significant threats from climate change, pollution, and over-tourism. The reef has suffered from coral bleaching, habitat destruction, and pollution from tourist activities. Similarly, the city of Venice, Italy is struggling with the impacts of mass tourism, including overcrowding, pollution, and erosion of historic buildings. In Hawaii, the Island of Oahu is facing significant environmental impacts from tourism, including the destruction of natural habitats, pollution of waterways, and strain on local resources.

Fortunately, there are many sustainable business practices that can help mitigate the environmental impacts of tourism. One key strategy is to improve energy efficiency, such as through the use of renewable energy sources, energy-efficient lighting and appliances, and sustainable building design. Waste reduction is another important practice, including reducing single-use plastics, composting food waste, and implementing recycling programs. Eco-friendly accommodations are also becoming increasingly popular, featuring sustainable materials, energy-efficient systems, and environmentally-friendly practices. Additionally, sustainable tourism operators can promote environmentally-friendly activities, such as hiking, bird watching, and cultural tours, and support conservation efforts through donations and partnerships.

### **SOCIAL AND CULTURAL IMPACTS OF TOURISM**

Tourism can have significant social and cultural impacts on destinations, often leading to unintended and far-reaching consequences. Cultural homogenization, for instance, occurs when local cultures are suppressed or replaced by dominant Western cultures, leading to the loss of traditional practices and customs. The displacement of local communities is another major concern, as tourism development leads to the eviction of residents to make way for hotels, resorts, and other tourist infrastructure. Furthermore, the exploitation of workers is a common issue, with many tourism employees facing low wages, poor working conditions, and limited job security.

Many destinations around the world are struggling with the social and cultural impacts of tourism. For example, the island of Bali in Indonesia is facing significant cultural and social challenges due to mass tourism. The local culture is being eroded, and traditional practices are being replaced by commercialized tourist activities. Similarly, the city of Barcelona, Spain is experiencing significant social impacts due to tourism, including the displacement of local residents and small businesses. In Hawaii, the Native Hawaiian community is fighting to preserve their cultural heritage and traditional practices in the face of tourism development.

Sustainable business practices can play a crucial role in promoting cultural heritage and benefiting local communities. Community-based tourism, for instance, involves local communities in the tourism development process, ensuring that they benefit directly from tourism revenues and have a say in how tourism is managed. Fair trade practices can also help ensure that local communities receive fair prices for their products and services. Cultural sensitivity training can educate tourists and tourism employees about local customs and traditions, promoting cross-cultural understanding and respect. Additionally, sustainable tourism operators can support local communities by partnering with local businesses, promoting local products, and supporting community development projects.

### **ECONOMIC BENEFITS OF SUSTAINABLE TOURISM**

Sustainable tourism offers numerous economic benefits that can contribute to the long-term viability of the tourism industry. One of the most significant advantages is job creation, as sustainable tourism initiatives often require local labour and expertise. Local economic development is another benefit, as sustainable tourism can help stimulate local economies by supporting small businesses, promoting local products, and generating revenue for local communities. Furthermore, sustainable

tourism can also lead to increased revenue for tourism businesses, as tourists are increasingly willing to pay a premium for sustainable and responsible travel experiences.

There are many examples of successful sustainable tourism initiatives that have had positive economic impacts. For instance, the tourism industry in Costa Rica has seen significant growth and revenue increases due to its focus on sustainable tourism practices, such as eco-lodges, wildlife conservation, and community-based tourism. Similarly, the city of Copenhagen in Denmark has implemented a range of sustainable tourism initiatives, including a carbon-neutral tourism strategy, which has helped to increase tourism revenue while reducing the city's carbon footprint. In Rwanda, the tourism industry has seen significant growth due to its focus on sustainable tourism practices, such as community-based tourism and wildlife conservation.

Sustainable business practices can contribute to the long-term economic viability of the tourism industry in several ways. By reducing operational costs through energy efficiency and waste reduction, tourism businesses can increase their profit margins and improve their bottom line. Additionally, sustainable tourism practices can help to enhance the reputation and brand value of tourism businesses, leading to increased customer loyalty and retention. Furthermore, sustainable tourism practices can also help to mitigate the risks associated with climate change, natural disasters, and other external factors that can impact the tourism industry. By adopting sustainable business practices, tourism businesses can help to ensure their long-term economic viability and contribute to a more sustainable and responsible tourism industry.

#### **CHALLENGES AND OPPORTUNITIES FOR SUSTAINABLE TOURISM**

Despite its growing importance, sustainable tourism faces several challenges that hinder its development and implementation. One of the main challenges is the lack of funding, which limits the ability of tourism businesses and destinations to invest in sustainable practices. Limited infrastructure is another challenge, particularly in developing countries where basic infrastructure such as roads, water, and sanitation may be lacking. Conflicting interests are also a challenge, as different stakeholders may have competing priorities and values that can hinder the adoption of sustainable practices. For example, the interests of local communities may conflict with those of tourism developers, leading to tensions and conflicts over issues such as land use and resource management.

In spite of these challenges, there are also many opportunities for sustainable tourism. One of the main opportunities is the growing demand for sustainable travel, driven by increasing consumer awareness and concern for environmental and social issues. Innovative technologies are also providing new opportunities for sustainable tourism, such as eco-friendly accommodations, sustainable transportation, and digital platforms that promote sustainable tourism practices. Collaborative partnerships are another opportunity, as different stakeholders can work together to develop and promote sustainable tourism initiatives. For example, tourism businesses can partner with local communities and conservation organizations to develop sustainable tourism products and services that benefit both people and the environment.

There are many examples of successful sustainable tourism initiatives that have overcome challenges and capitalized on opportunities. For example, the tourism industry in Costa Rica has developed a range of sustainable tourism products and services, including eco-lodges, wildlife conservation, and community-based tourism. These initiatives have not only generated significant economic benefits but also helped to conserve the country's natural resources and promote cultural heritage. Another example is the sustainable tourism initiative in the Maasai Mara National Reserve in Kenya, which has helped to conserve wildlife and promote community-based tourism. The initiative has not only generated income for local communities but also helped to promote cross-cultural understanding and respect between tourists and local communities.

#### **CONCLUSION AND RECOMMENDATIONS**

In conclusion, sustainable business practices are crucial for the long-term viability and success of the tourism industry. The industry's environmental, social, and economic impacts can be mitigated through sustainable practices such as energy efficiency, waste reduction, community-based tourism, and fair trade practices. By adopting sustainable practices, tourism businesses can reduce

their operational costs, enhance their reputation, and contribute to the conservation of natural and cultural heritage.

To promote sustainable tourism, several recommendations can be made. Tourism businesses can adopt sustainable practices such as energy-efficient operations, waste reduction, and community-based tourism. Governments can establish policies and regulations that support sustainable tourism, such as tax incentives for sustainable tourism businesses and regulations to reduce waste and pollution. Consumers can also play a crucial role by choosing sustainable tourism options, respecting local cultures and environments, and providing feedback to tourism businesses on their sustainability practices.

As the tourism industry continues to grow, it is essential that sustainable business practices become the norm. Sustainable tourism has the potential to contribute to a more equitable and environmentally conscious world. By promoting cross-cultural understanding, supporting local communities, and conserving natural and cultural heritage, sustainable tourism can help create a more just and sustainable world. Ultimately, the future of sustainable tourism depends on the collective efforts of tourism businesses, governments, and consumers to prioritize sustainability and responsibility in the tourism industry.

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## THE FUTURE OF EMAIL MARKETING IN CUSTOMER ENGAGEMENT

**Abisha Lalini V**

Ph.D. Full Time Research Scholar, (Reg. No: 241131108003), Research Centre of Management Studies, Nesamony Memorial Christian College, Marthandam, Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli - 627 012, Tamil Nadu, India,

**Dr C L Jeba Melvin**

Associate Professor, Department of Management Studies, Nesamony Memorial Christian College, Marthandam, Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli – 627 012, Tamil Nadu, India,

### ABSTRACT

Email marketing remains fundamental for customer engagement because of its directness, affordability, and scalability. Developments in artificial intelligence (AI), machine learning, and automation are revolutionizing traditional methods, allowing for highly personalized and data-driven campaigns that cater to distinct customer preferences. The use of interactive content, real-time analytics and omni channel integration is further increasing its effectiveness. These advancements not only enhance customer engagement but also lead to better retention and conversion rates. Nevertheless, the growing focus on data privacy, especially with regulations such as GDPR and CCPA, presents challenges for marketers in balancing compliance with personalization. Companies need to adjust to these changes by implementing transparent and privacy-focused practices. As customer expectations shift, the future of email marketing will depend on its capability to merge technology, creativity, and ethical standards to stay an essential channel in digital marketing. This review examines the trends and obstacles that are influencing the future of email marketing in customer engagement.

**KEYWORDS:** *Email Marketing, Customer Engagement, Personalization, Artificial Intelligence*

### INTRODUCTION

Email marketing continues to be an essential tool for engaging customers, appreciated for its ability to scale, cost-efficiency, and personalization. With an anticipated 4.6 billion users by 2025, its significance endures despite the increasing popularity of social media and chatbots. Nevertheless, the future of email marketing will be influenced by developments in AI, machine learning, and automation, allowing for highly personalized campaigns that align with changing customer expectations. Concurrently, stricter privacy laws such as GDPR and CCPA introduce fresh challenges. This review examines the trends and tactics that are transforming email marketing into a more personalized, compliant, and effective means of customer engagement.

### LITERATURE REVIEW

#### Emerging Trends Shaping the Future of Email Marketing

Several key trends are set to redefine email marketing strategies for better customer engagement:

##### 1. AI-Powered Personalization and Predictive Analytics

Artificial intelligence will enhance audience segmentation and provide highly personalized content tailored to user behaviors and preferences. (Apasrawirote 2024).

Predictive analytics will foresee customer requirements, enhancing the timing and content of emails to achieve the highest level of engagement. (Potla & Pottla 2024).

##### 2. Hyper-Personalization through Big Data

Email content will extend beyond just personalizing names, utilizing real-time data to provide very relevant product suggestions, content, and promotions. (Gaynullina, 2024).

Dynamic content and AI-generated copy will lead to more immersive and tailored experiences. (Maattanen, 2024).

##### 3. Automation and Smart Triggers

Sophisticated automation will allow brands to deliver highly pertinent emails according to real-time user engagement. (e.g., abandoned cart reminders, milestone emails) (Chopra et al., 2021).

Chatbots and voice assistants powered by AI might combine with email marketing to improve customer engagement.(Singh et al., 2020)

#### **4. Interactive and AMP-Powered Emails**

Accelerated Mobile Pages (AMP) will enable users to engage in activities such as completing forms, scheduling appointments, or making purchases right within their emails. (Schaub, 2018).

Engaging users can be improved through interactive features like polls, quizzes, and embedded videos.(Abd Rahim et al., 2023).

#### **5. Omnichannel Integration**

Email marketing will smoothly connect with social media, SMS, chatbots, and web push notifications to establish a cohesive customer experience.(Zook, 2019).

Brands will leverage cross-channel data to maintain uniform messaging and interaction across various platforms. (Mantrala, et al., 2022).

#### **6. Voice-Optimized Emails**

With the increasing popularity of voice assistants such as Alexa and Google Assistant, companies will adjust their email content to cater to voice search and voice-activated replies. (Hautsalo, 2019).

### **THE ROLE OF AI AND MACHINE LEARNING IN FUTURE EMAIL MARKETING**

**Smart Content Generation:** AI will streamline the creation of subject lines, email content, and visuals to enhance engagement.

**Behavioral Analysis:** AI will streamline the creation of subject lines, email content, and visuals to enhance engagement.

**Sentiment Analysis:** AI will evaluate customer feedback and emotions to enhance marketing approaches.

### **CHALLENGES AND CONSIDERATIONS**

**Email Fatigue:** With the rising volume of emails, companies need to prioritize providing valuable content to prevent unsubscribing.

**Adapting to New Technologies:** Companies need to remain proactive by embracing AI, automation, and engaging content.

**Security Risks:** Phishing and cyber security risks have led to the need for more robust authentication techniques such as BIML.(Brand Indicators for Message Identification).

### **OBJECTIVES OF THE STUDY**

1. To assess the role of mobile optimization and AMP technology in improving the accessibility and interactivity of email content.
2. To analyze the role of email marketing in enhancing customer engagement.

### **RESEARCH METHODOLOGY**

This research utilizes a qualitative and secondary research methodology to investigate the future of email marketing in relation to customer engagement. It features an extensive literature review of scholarly articles, industry documents, and writings on trends such as AI, automation, and privacy laws. The study analyzes case studies of effective campaigns and secondary data sourced from analytics tools to assess performance indicators like open rates and return on investment (ROI). A comparative and thematic examination underscores the progression of email marketing, emphasizing new technologies, consumer expectations, and regulatory hurdles. This approach provides insights into the tactics influencing the future of email marketing.

### **RESULTS AND DISCUSSION**

The research indicates that email marketing remains an essential tool for engaging customers, with its future influenced by developments in personalization, interactivity, and data privacy. The incorporation of AI has facilitated hyper-personalized campaigns that utilize predictive analytics and behavior-based targeting to enhance engagement and conversion rates. The addition of interactive features such as AMP-enabled emails and omnichannel integration has improved the customer experience, making emails more dynamic and consistent with broader marketing initiatives. Nonetheless, issues like email fatigue, cyber security risks, and stricter privacy laws, including GDPR

and CCPA, necessitate that businesses adapt by focusing on transparency, ethical data handling, and prioritizing quality over quantity in email content. Although embracing AI and automation opens doors to new innovations, achieving success in email marketing will rely on finding the right balance between personalization and privacy while integrating it effectively into a cohesive, cross-channel customer journey. These observations highlight the changing landscape of email marketing as a fundamental aspect of digital engagement.

### CONCLUSION

Email marketing continues to be an essential tool for engaging customers, evolving alongside the digital landscape through innovations in AI, automation, and interactive content. These advancements have improved personalization, allowing businesses to create more relevant and captivating campaigns. Nonetheless, obstacles such as email fatigue, increased privacy regulations like GDPR and CCPA, and cybersecurity threats underscore the importance of ethical data practices, transparency, and adherence to compliance. By prioritizing value-driven content and incorporating email into omnichannel approaches, businesses can foster stronger customer connections and promote growth. As technology and consumer demands evolve, email marketing will persist as a foundational element of digital marketing, striking a balance between innovation and trust along with privacy.

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## **SUSTAINABLE BUSINESS MODEL AND PRACTISES**

**M. Somu Priya and Sree Gayathri K.B**

II. B.Com, Department of Commerce  
Arunachala Arts & Science (Women) College, Vellichanthai

### **ABSTRACT**

Sustainability has become a critical factor in modern business operations as organizations strive to These models are essential in addressing global challenges such as climate change, resource depletion, and social inequalities while fostering long-term business growth and resilience. Sustainable Key approaches include circular economy models, which focus on waste reduction and product lifecycle extension; shared value models, digital transformation, and innovation play a significant role in driving sustainability, with technologies such as artificial intelligence (AI), block chain, and the Internet of Things (IoT) enabling efficient resource management and transparency in operations balance profitability with environmental and social responsibility. Sustainable business models incorporate strategies like utilizing renewable energy sources.. Companies across various industries are adopting sustainable practices to enhance brand reputation, meet regulatory requirements, and gain competitive advantages. However, organizations face several challenges in implementing sustainable business models, including high initial investment costs, resistance to change, lack of awareness, and regulatory complexities. Small and medium-sized enterprises (SMEs) particularly struggle with resource constraints and financial limitations when adopting sustainable practices. This study highlights the sustainable practices adopted by successful organizations across various industries and explores the challenges and barriers businesses face in implementing sustainable strategies.

**Keywords:** Corporate Social Responsibility (CSR), Sustainable Development Goals, Circular economy

### **INTRODUCTION**

Sustainability has become a key priority for businesses seeking long-term success while minimizing environmental and social impacts. A sustainable business model integrates economic growth with environmental responsibility and social well-being, ensuring that resources are used efficiently without compromising future generations. With growing concerns about climate change, resource depletion, and pollution, businesses are shifting towards more responsible operations. Sustainable practices include renewable energy adoption, waste reduction, ethical sourcing, and circular economy models that promote recycling and reusability. Unlike traditional corporate social responsibility (CSR), sustainability is now a core business strategy rather than an add-on initiative. Companies that embrace sustainability not only improve their brand reputation but also comply with regulations, attract eco-conscious consumers, and gain a competitive edge. Technological advancements like artificial intelligence (AI), blockchain, and data analytics are helping businesses monitor sustainability efforts, enhance transparency, and optimize resource management. However, challenges such as high implementation costs, lack of awareness, and regulatory complexities remain barriers to widespread adoption.

This study explores sustainable business models, key practices, challenges, and the role of stakeholders in promoting sustainability. As businesses evolve, integrating sustainability into core operations is essential for economic growth, social progress, and environmental protection, making it a necessity rather than an option.

### **OBJECTIVES**

1. To identify the sustainable practices adopted by successful organizations across various industries
2. To explore the challenges and barriers businesses face in implementing sustainable strategies



## LITERATURE REVIEW

### 1. Defining Sustainable Business Development

Sustainable business development involves the integration of sustainability principles into business practices, aiming to reduce negative environmental impacts while contributing positively to society and ensuring economic growth (Elkington, 1997). The concept is often referred to in terms of the "Triple Bottom Line" (TBL), which includes three pillars: People, Planet, and Profit (Elkington, 1997). TBL emphasizes that businesses must balance social, environmental, and economic outcomes, reflecting the interconnectedness of these areas for long-term sustainability.

### 2. Theoretical Foundations

Several theories underpin sustainable business development. The **Stakeholder Theory** (Freeman, 1984) emphasizes the importance of considering the needs and interests of all stakeholders—not just shareholders—when making business decisions. According to Freeman, businesses should create value for a wide range of stakeholders, including employees, customers, suppliers, and communities, which aligns with the concept of corporate social responsibility (CSR).

The **Resource-Based View (RBV)** suggests that businesses can gain a competitive advantage by integrating sustainable practices, such as using renewable resources or adopting energy-efficient technologies, which improve efficiency and brand reputation (Barney, 1991). Additionally, **Institutional Theory** highlights the role of external pressures from governments, regulations, and industry standards in shaping business sustainability practices (DiMaggio & Powell, 1983).

### 3. Sustainable Business Practices

Sustainable practices encompass a broad range of actions. The literature identifies key areas where businesses can adopt sustainability strategies:

**Resource Efficiency and Waste Reduction:** Companies are increasingly focusing on resource efficiency, reducing energy consumption, and minimizing waste through practices like lean manufacturing, recycling, and upcycling (Porter & van der Linde, 1995).

**Green Innovation:** The development of environmentally friendly products and services is another core practice. Green innovations often involve redesigning products to reduce environmental impacts, such as reducing carbon emissions, using sustainable materials, or implementing circular economy models (Bocken et al., 2016).

**Social Responsibility:** Businesses are also integrating social sustainability into their operations, focusing on fair labor practices, diversity and inclusion, and community engagement (Carroll, 1999). Social sustainability has become a driving force in industries such as fashion, where consumers demand ethical production and fair wages.

**Sustainable Supply Chains:** Companies are increasingly collaborating with suppliers who adhere to sustainable practices. Sustainable supply chain management involves sourcing materials responsibly, reducing carbon footprints, and ensuring fair working conditions (Seuring & Müller, 2008).

### CORPORATE SOCIAL RESPONSIBILITY (CSR)

The growing importance of CSR is evident in the literature, with scholars emphasizing its role in fostering sustainable business development. According to Carroll (1999), CSR encompasses economic, legal, ethical, and philanthropic responsibilities. Companies that adopt CSR principles contribute positively to society while also gaining business advantages such as enhanced brand loyalty, improved stakeholder relationships, and competitive differentiation.

### CHALLENGES TO SUSTAINABLE BUSINESS PRACTICES

Despite growing awareness of sustainability, businesses face numerous challenges in implementing sustainable practices:

**Short-term Profit Pressure:** One of the primary challenges for businesses is the pressure to deliver short-term profits, which can conflict with long-term sustainability goals (Porter & Kramer, 2011). Investors and managers often prioritize immediate financial returns, which may hinder the adoption of sustainable initiatives that require upfront investments.

**Cost of Implementation:** Transitioning to sustainable practices can be costly, particularly for small and medium-sized enterprises (SMEs). The initial capital investment in green technologies or certifications can pose significant barriers (Rennings, 2000).

**Regulatory Complexity:** Navigating the complex and often fragmented regulatory landscape regarding environmental standards and labor laws can be a challenge for businesses operating in multiple regions (Sarkis, 2003). Different countries or regions may have varying standards for sustainability, creating difficulties for multinational companies.

### **THE ROLE OF TECHNOLOGY IN SUSTAINABILITY**

Technological advancements have played a significant role in driving sustainable business development. Green technologies, such as renewable energy sources, energy-efficient machinery, and advanced waste management systems, have enabled companies to reduce their environmental impact (Rennings, 2000). Additionally, digital technologies like blockchain are being explored to enhance supply chain transparency and traceability, ensuring that products meet sustainability standards (Tapscott & Tapscott, 2017).

### **MEASURING SUSTAINABILITY**

Accurate measurement of sustainability practices is crucial for businesses to assess their performance and identify areas for improvement. Various frameworks have been developed to evaluate sustainability, such as the **Global Reporting Initiative (GRI)** and **Sustainability Accounting Standards Board (SASB)** standards. These frameworks guide companies in reporting on their environmental, social, and governance (ESG) performance, making sustainability more transparent and comparable across industries (Eccles & Krzus, 2018).

### **THE FUTURE OF SUSTAINABLE BUSINESS DEVELOPMENT**

The literature suggests that the future of business sustainability will likely be shaped by increasing regulatory pressures, consumer demand for ethical products, and technological innovation. Companies that successfully integrate sustainability into their core operations will gain a competitive advantage, attracting customers and investors who prioritize long-term value creation. Furthermore, the increasing convergence between environmental and financial performance is expected to drive greater adoption of sustainable business models (Porter & Kramer, 2011).

## **METHODOLOGY**

### **1. Research Design**

This study follows a secondary research approach, analyzing existing literature, industry reports, and case studies to identify sustainable practices adopted by successful organizations across various industries. It also explores the challenges businesses face in implementing sustainability strategies.

### **2. Data Collection Methods**

Data for this study is gathered from reputable secondary sources, including:

**Academic Journals:** Peer-reviewed articles on sustainability in business.

**Industry Reports:** Publications from organizations like the World Economic Forum, UN Global Compact, and consulting firms (e.g., McKinsey, Deloitte).

**Company Reports:** Sustainability reports, CSR disclosures, and financial statements from leading companies across industries.

**Government & NGO Reports:** Policies and frameworks related to sustainability practices.

**Books & Conference Proceedings:** Relevant scholarly books and research presented at business and sustainability conferences.

### **3. Data Selection Criteria**

**Timeframe:** Studies and reports from the past 5-10 years to ensure relevance.

**Relevance:** Sources that directly address sustainability strategies, business models, and implementation challenges.

**Credibility:** Preference given to peer-reviewed journals, recognized industry reports, and government/NGO publications.

### **4. Data Analysis Techniques**

**Content Analysis:** Identifying recurring themes and patterns in sustainability practices.

**Comparative Analysis:** Examining differences in sustainability strategies across industries.

**Trend Analysis:** Observing how sustainability practices have evolved over time.

**Thematic Coding:** Categorizing challenges businesses face when implementing sustainable strategies.

## 5. Ethical Considerations

All data used is publicly available, ensuring ethical compliance. Proper citations and references are provided to avoid plagiarism.

## 6. Limitations of the Study :

Dependency on the accuracy and completeness of published data. Potential biases in corporate sustainability reports. Limited ability to capture real-time business challenges compared to primary.

## CONCLUSION

Sustainable business models and practices are essential for long-term economic growth, environmental responsibility, and social well-being. Companies that integrate sustainability into their core strategies not only contribute to global sustainability goals but also gain competitive advantages, such as cost efficiency, brand loyalty, and regulatory compliance. This research highlights the significance of adopting sustainable business models, such as circular economy principles, renewable energy utilization, and ethical supply chains. It also emphasizes the role of innovation, stakeholder engagement, and corporate social responsibility in driving sustainable business success. While challenges such as high initial costs and regulatory complexities exist, businesses that proactively implement sustainable practices can achieve long-term profitability and resilience. Moving forward, continuous research, policy support, and collaborative efforts between businesses, governments, and consumers will be crucial in fostering a truly sustainable global economy. In conclusion, sustainability is no longer an option but a necessity for businesses aiming to thrive in the modern economy. By embracing sustainable models and practices, businesses can create lasting value for both society and the environment while ensuring their long-term viability.

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## **ARTIFICIAL INTELLIGENCE IN BUSINESS ETHICS**

**Dr. R. SIVASANKAR**

Assistant Professor, Department of Commerce and Research Centre , Vivekananda College,  
Agasteeswaram. Affiliated to Manonmaniam Sundaranar University, Abisekapatti, Tirunelveli -627  
012, Tamil Nadu, India.

**Ms. S. THANGESWARI**

Ph.D., Scholar, Reg. No: 241232706021, Commerce Research Centre, Vivekananda College,  
Agasteeswaram. Affiliated to Manonmaniam Sundaranar University, Abisekapatti, Tirunelveli -627  
012, Tamil Nadu, India.

### **ABSTRACT**

In today's technical world Artificial intelligence is highly popular. It gets an attention from all entrepreneurs for their own sake. The use of artificial intelligence in business helps to give output in the shortest period of time, it reduces human error and its inexpensive. AI has the innovative ideas which can improve the business and it can attain strong competition apart from other online brands it gives the fastest solution business errors which help in massive growth of business. Hence, in this article discuss about the role of Artificial Intelligence and its importance in business.

**Keywords:** Artificial Intelligence. Business, Entrepreneur, Process, Company, robots, Technology

### **INTRODUCTION**

Artificial intelligence does not have a proper and unified definition Technically Artificial intelligence is a combined process of network devices, robots, cloud computing digital content creator in various business process. In the utilization of Artificial Intelligence it'll reduce the future marketing efforts Artificial intelligence will save time and gives more output AI is an asset which can be used for past, present, and future, so it is the main advantage to go forward to the next innovation. AI set a trend in modern era. People life becomes more digitalized, so that Artificial intelligence becomes a part of our daily life From Apple's Siri to Tesla's self driving car everything around us is being resolved by artificial intelligence. Many entrepreneurs seeing their future through robotics and Artificial Intelligence in business world Artificial Intelligence has a capability of using tools like data collection, pattern recognition and language processing. All has given the constant work over human intelligence. It enhances the customer service through virtual. Nowadays marketing has also been influenced by new technologies and this will show the greater impact of AI in upcoming years. Because of these the company has to train their employees with the emergence of new technology. The employees should understand and enhance their skills according to the technology to get ready for the near future. This paper will examine the role of artificial intelligence in business.

### **STATEMENT OF THE PROBLEM**

Artificial Intelligence has its own process in various functions of the business. Marketing is one among them. Marketing is considered as the core of the business. Artificial intelligence slowly changing the landscape of the marketing world soon it will fully transform to the future. Artificial intelligence can fail because the machine might be unsatisfactory to the company's top management, it takes lots of time to implement. According to Lopes & Casillas (2013) reported that there are less than 100 articles has been published in Scopus based on Artificial Intelligence in business. It shows the scarcity of the research in the literature. Therefore, this article explains the importance of artificial intelligence in business.

### **RESEARCH OBJECTIVES**

1. To find the impact of AI in business environment
2. To provide solutions for the effective use of the technology in business.

### **REVIEW OF LITERATURE**

**Demis Hassabis**, the founder of Deepmind defines the AI as the "Artificial intelligence is the art to make machines intelligent (2015). This was widely accepted by the people since it has variety of meanings. In artificial intelligence it divided into various parts they are machine learning and deep

learning which create the applications of AI. It includes voice recognition, image recognition and virtual assistant.

**GuruduthBanavar**, a supervisor of AI research he defines as "there are border variety of various types of AI, therefore it can be considered as a collection of technologies"(2016). These technologies have various functions it varies according to price. Moreover, every AI has a same aim. Every progression made in AI shows the advancement of the technology, it has the capability to help marketing people by controlling, social media and market research.

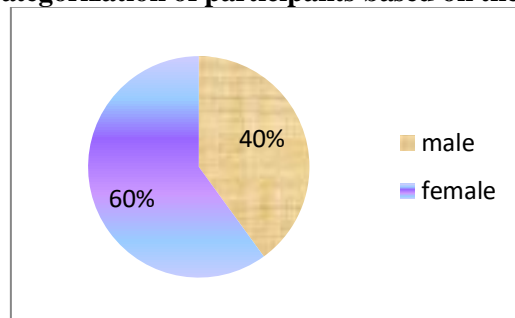
**Paul Roetzer**, CEO of marketing AI institute made a structure which is commonly known as 5ps of marketing, it was formed to simplify and visualize the company by AI. It helped the managers lot by various task includes online marketing and web development

### METHODOLOGY

To pursue the research the researcher used a qualitative method of research. For data collection the researcher used primary and secondary data. Since the objective of the business is to know the impact of Artificial Intelligence in business from entrepreneurs perspective. The interviews are collected from marketing professionals from Kanyakumari district, Tamil Nadu by interview method. In addition, different articles, journals, websites and blogs are included in secondary data source.

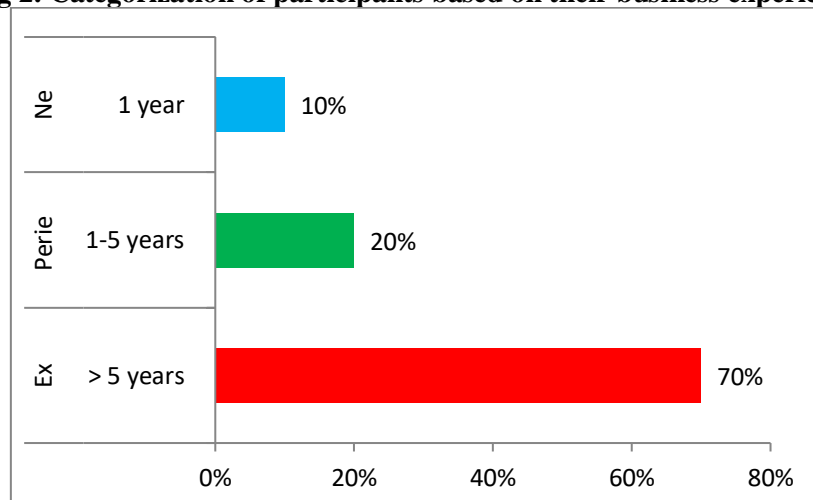
It is the collection of 20 samples and 10 was finalized by selecting the appropriate answer of the entrepreneurs. The questions are about the implementations of artificial intelligence in business duration of 15 days was allocated to collect the data from the employees. The nature of the research was cross-sectional.

**Fig 1. Categorization of participants based on their gender**



From the above chart, out of 10 total samples 40 % are female and 60% percentage are male. Which shows the female also shows equal interest in business. Among those participants 60 percentage people are doing their business for above 5 years and 10 % are at starting stage which was revealed in figure 2.

**Fig 2. Categorization of participants based on their business experience**



**Table1: Opinion regarding Introduction of AI**

Introduction to A1	No. of respondents	Percentage
Yes	10	50%
No	10	50%
<b>Total</b>	<b>20</b>	<b>100%</b>

**Source: Primary Data**

From the survey, the results shows that only 5 % of the participants experienced in AI in business. Hence the further analysis was conducted in 10 respondents.

**DATA ANALYSIS**

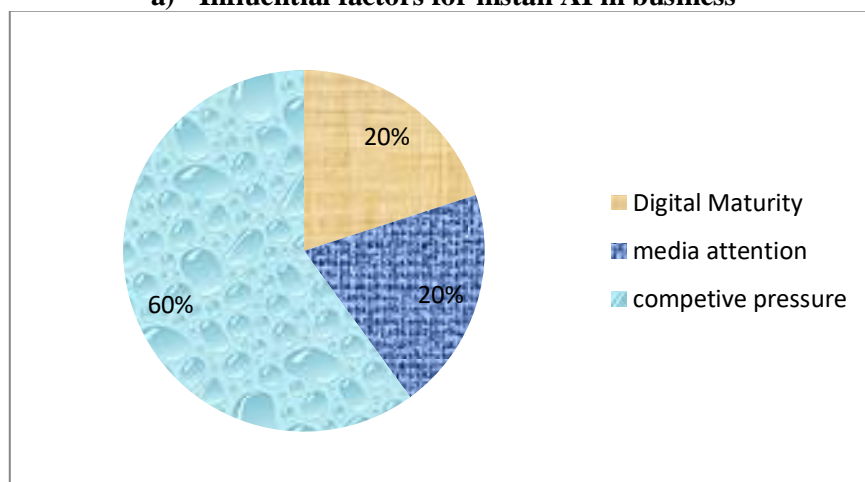
In this part the collection of analysis was given from the interview session in Kanyakumari, Tamil Nadu. It shows the effectiveness of pre and post AI in Business.

**INTERVIEW ANALYSIS**

The major questions asked to the participants are given below

- ✓ What was the major influential factor for installing AI in business?
- ✓ What are the drawbacks of AI in business?
- ✓ What are the pre and post strategy of the business after using AI?

**a) Influential factors for install AI in business**



**Fig.3. Influencing factors in integrating business**

According to the participants the majority of the companies feel pressurised to integrate Artificial Intelligence in business to grow and compete with other firms. Other than many of the company's integrated Artificial Integration for the media attention and digital maturity. The company knows the need of customers for the growth of business for the best offerings and performance. Thus, they installed AI in their business.

**b) Drawbacks of AI in business Ethics**

According to the participants, technical compatibility is considered as the major drawback of the AI. Every time the company has to work on it. And the remaining 30% shows the lack of technical skills of the employees. It is the great challenge of the AI in the business. A participant also tells that it is important to have data to be placed, according to them is the greatest drawback for the Artificial Intelligence in business.

**c) Pre and post strategy of business after using A1 in business Ethics**

Method	N	Mean	SD	SE	't'	Level of significance
Pre A1	10	16.6	3.82	1.39	4.03	Significance at 0.01
Post A1	10	22.2	1.67			

The above table indicates the AI business is enrich both marketing strategy as well. It shows the difference between two methods adopted for business. Calculated 't' value is 4.03 at 0.01 level since it is more than a table value.

### **SUGGESTION AND RECOMMENDATION**

Artificial Intelligence is an asset which can be used for past, present and future. So, it is the main advantage to go forward to the next innovation from the analysis, it is noted that more male are aware in using AI than female, thus such awareness program should be conducted to teach all about AI, also 50% of the participants had the opinion, regarding Introduction of AI, thus many orientations and programmes must be needed to reach AI over worldwide. Effective functioning of AI had created a great impact on business. The primary aim of the article is to find the impact of AI in business. The research reaches the objective, different steps were followed to find the solution, and the researcher used statistical tools like Pie chart, tables and interviews done by quantitative method. The research shows that in AI there are influence from competitive pressure, Media more attention and digital maturity. And these are more benefits like time saving, increasing efficiency and better understanding of customers are the major benefit of AI in business, at the same tie technical compatibility is considered as the major drawback of AI, hence to overcome it high technical skill must be needed. It helps in sales and marketing strategies through it. It is recommended to give the importance of AI technology guidelines for the employees through the company.

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## **THE FUTURE OF GREEN DIGITAL ENTREPRENEURSHIP: A REVIEW**

**Abisha .A**

Ph.D. Full Time Research Scholar, (Reg. No: 241131108002),  
Research Centre of Management Studies, Nesamony Memorial Christian College, Marthandam,  
Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli - 627 012, Tamil  
Nadu, India,

**Dr.C.L.Jeba Melvin**

Associate Professor, Department of Management Studies,  
Nesamony Memorial Christian College, Marthandam,  
Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli – 627 012, Tamil  
Nadu, India

### **ABSTRACT**

The intersection of sustainability and digital advancement has led to the rise of green digital entrepreneurship, a vibrant and developing field that combines environmental responsibility with technological progress. This review examines current trends, challenges, and potential future developments within green digital entrepreneurship, emphasizing its capacity to stimulate economic growth while simultaneously reducing environmental impacts. The examination of digitalization's role in promoting sustainable business practices is prioritized, highlighting the significance of eco-innovation and digital transformation. Furthermore, this study investigates the socio-economic advantages of green entrepreneurship, including job creation and enhanced resource efficiency. The findings underscore that green digital entrepreneurship serves as a pivotal mechanism for attaining long-term environmental and economic sustainability.

**KEYWORDS:** Entrepreneurship, Green digital entrepreneurship, sustainability, digital innovation, sustainable business practices.

### **INTRODUCTION**

Eco-friendly digital entrepreneurship involves business efforts that utilize digital technologies to support environmental sustainability. As concerns over climate change, resource depletion, and carbon emissions rise, companies are increasingly implementing environmentally friendly digital practices (Lannelongue et al., 2021). The shift towards digital transformation has equipped businesses with innovative resources aimed at minimizing their carbon footprint while improving operational efficiency (Mahmood et al., 2022). Furthermore, green entrepreneurship encourages the creation of sustainable economic frameworks that merge digital innovations with environmental responsibility (George et al., 2021). This review outlines the emerging trends in this sector, the challenges encountered by green digital entrepreneurs, and prospective future advancements.

### **LITERATURE REVIEW**

An expanding corpus of literature underscores the convergence of digitalization and sustainability, emphasizing diverse facets of green digital entrepreneurship.

Kurniawan et al. (2022) highlighted the importance of digital technologies in improving sustainable business practices, especially regarding energy management and waste reduction. Hachimi et al. (2022) stated that artificial intelligence and big data analytics play a crucial role in enhancing resource efficiency and forecasting environmental changes. As noted by Jaffer et al. (2024), green blockchain solutions have transformed carbon tracking and the transparency of supply chains. Additionally, research conducted by Mirbabaie et al. (2022) revealed that digital platforms that promote eco-friendly products have heightened consumer awareness and involvement in sustainable purchasing behaviors.

Furthermore, research shows that regulatory measures are essential in either promoting or obstructing the uptake of green digital entrepreneurship (Zhu et al., 2023). Additionally, consumer behavior is another key element, as many people still show reluctance to embrace sustainable digital options (Kandasamy et al., 2023). Despite the challenges encountered, ongoing technological



advancements combined with favorable government policies are expected to promote the future growth of this industry (Farinha et al., 2020).

### **EMERGING TRENDS IN GREEN DIGITAL ENTREPRENEURSHIP**

Several significant trends are currently influencing the future of green digital entrepreneurship.

**Green Blockchain Solutions:** Block chain technology is utilized for clear carbon monitoring, sustainable supply chain management, and environmentally friendly crypto currencies (Zhou et al., 2023).

**AI and Big Data for Sustainability:** Artificial intelligence (AI) and big data analysis contribute to the efficient use of resources, forecast shifts in the environment, and improve energy efficiency (Mehmood et al., 2019).

**E-commerce and Sustainable Marketplaces:** Digital platforms that promote environmentally friendly products and services are experiencing a surge in popularity, thereby encouraging sustainable consumer behavior (Prathapkumar et al., 2024).

**Renewable Energy Integration:** New ventures are utilizing digital technologies to advance solar, wind, and various other renewable energy sources (Oguanobi& Joel, 2024).

**Circular Economy Innovations:** Organizations are increasingly leveraging digital platforms to promote recycling, upcycling, and effective management of sustainable product lifecycles (Kurniawan et al., 2022).

### **CHALLENGES IN GREEN DIGITAL ENTREPRENEURSHIP**

Green digital entrepreneurship presents various challenges that may hinder its potential.

**High Initial Costs:** Sustainable digital solutions typically necessitate substantial investments in research, development, and infrastructure (Verdecchia et al., 2022).

**Regulatory Barriers:** Variations in environmental regulations and digital policies across various regions present difficulties for startups (Martin et al., 2019).

**Consumer Awareness and Behavior:** Many consumers are still unaware of or hesitant to adopt green digital alternatives (Kandasamy et al., 2023).

**Technological Limitations:** The combination of sustainability and digital transformation is still developing, and technological limitations could hinder broad acceptance (Hanelt et al., 2021).

### **FUTURE DIRECTIONS**

The future of green digital entrepreneurship presents various opportunities for development, including:

**Advancements in Green Tech:** Advancements in eco-friendly computing, energy-efficient artificial intelligence, and sustainable cloud computing will contribute to enhanced sustainability (Mehmood et al., 2019).

**Government and Policy Support:** Enhanced policy incentives, grants, and regulatory support have the potential to accelerate the growth of green digital startups (Zhu et al., 2023).

**Corporate Sustainability Initiatives:** Major companies that incorporate green digital entrepreneurship into their business strategies have the potential to initiate widespread transformation across industries (Mirbabaie et al., 2022).

**Decentralized and Peer-to-Peer Solutions:** Block chain and decentralized digital platforms have the potential to contribute to sustainability initiatives across various industries (Jaffer et al., 2024).

### **RESEARCH OBJECTIVES**

1. To examine the impact of digital technologies on sustainable entrepreneurship and their role in mitigating environmental challenges.
2. To analyze significant trends and challenges associated with green digital entrepreneurship.

### **RESEARCH METHODOLOGY**

The current research employs a systematic methodology to analyze the existing literature on green digital entrepreneurship. An extensive search was performed across academic databases such as Google Scholar, Scopus, and Web of Science, utilizing keywords like "green digital entrepreneurship" and "sustainability." Studies pertinent to this topic were chosen based on their quality and their emphasis on the convergence of digital technologies and sustainability. Information regarding trends,

challenges, and advancements in technology was gathered and thematically evaluated. The findings were integrated to emphasize ongoing developments, obstacles, and future pathways while offering suggestions for policy, innovation, and business practices. This approach provides meaningful insights into green digital entrepreneurship.

## RESULT AND DISCUSSION

The development of green digital entrepreneurship is influenced by advancements in technology, regulatory policies, and shifts in consumer perceptions (George et al., 2021). Solutions for sustainability driven by AI, transparency enabled by block chain, and practices aligned with the circular economy are essential in promoting environmentally responsible business models (Hayyat, 2025). However, considerable challenges such as high initial expenses, regulatory inconsistencies, and technological limitations still hinder broad adoption (Hanelt et al., 2021). Firms that effectively merge digital innovation with sustainable practices are securing a competitive edge in a market that is increasingly aware of environmental issues (Prathapkumar et al., 2024). Moreover, policymakers are vital in creating favorable regulatory frameworks and financial incentives that support the development of green enterprises (Martin et al., 2019). Initiatives aimed at educating consumers are also crucial for boosting demand for sustainable digital offerings (Kandasamy et al., 2023). In addition to environmental advantages, green digital entrepreneurship plays a significant role in socio-economic advancement by generating jobs in the green technology field and improving resource efficiency via AI-based optimization and block chain transparency (Alzamel, 2024). Increased cooperation among governments, businesses, and innovative technology leaders will be vital in driving the widespread uptake of sustainable digital methods (Martin et al., 2019).

## CONCLUSION

Green digital entrepreneurship signifies a fundamental change towards sustainable business methods, merging innovative digital technologies with environmental responsibility. The use of AI, blockchain, and circular economy approaches has shown considerable promise in promoting sustainability. Nevertheless, obstacles such as elevated investment expenses, inconsistencies in regulation, and hurdles to consumer adoption need to be tackled through cooperative efforts among policymakers, businesses, and consumers. With persistent technological progress and strong policy frameworks in place, green digital entrepreneurship has the potential to become a crucial catalyst for a sustainable global economy, guaranteeing long-lasting environmental and economic advantages.

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## **REVOLUTIONISING HOSPITALITY: HOW DIGITAL TRANSFORMATION IS ELEVATING GUEST EXPERIENCES IN THE HOTEL INDUSTRY**

**Libina T Basheer**

Research Scholar, Department of Commerce, Karpagam University of Higher Education  
Coimbatore

**Dr D Mary Prema**

Assistant Professor, Department of Commerce, Karpagam University of Higher Education  
Coimbatore

### **ABSTRACT**

The digital innovations that fuel better guest experience and operational efficiency are transforming the hospitality industry. This research investigates the effect of digital transformation on fundamental hotel performance indicators, including guest satisfaction, revenue generation, and guest loyalty. The t-test was conducted to compare guest satisfaction levels between hotels with and without digital transformation, which indicated a significant difference ( $p=0.001$ ). Multiple regression analysis examined the impact of investments in the digital environment and guest satisfaction on the revenue of the hotel industry, showing a strong predictive relationship ( $R^2=0.62, p<0.001$ ). Also, an ANOVA analysis explored the effect of varying degrees of digital adoption on guest loyalty, revealing significant differences in loyalty between groups with low, medium, and high adoption ( $F(2,417)=22.45, p<0.001$ ). The findings highlight not only the importance of digital transformation towards the guest's satisfaction but also its importance towards generating extra profit and retaining loyal guests. As such, these findings imply that hotels need to continue investing in digital technologies to stay competitive and better align with evolving consumer demand.

**Key Words:** Digital Transformation, Hospitality Industry, Guest Satisfaction, Hotel Revenue, Guest Loyalty, T-Test, Regression Analysis, ANOVA, Technology Adoption, Customer Experience

### **INTRODUCTION**

The digital revolution is changing the way services are being delivered and experienced by customers in the hotel industry. As technology shapes consumer expectations, hotels adopt digital solutions to improve operating efficiency, tailor guest experiences, and remain competitive in a fast-evolving environment. Logistics and supply chain management also deserve attention to facilitate travel and tourism; as Ivanov & Webster (2019) mention, digital transformation in hospitality should be perceived as the key feature for success hereafter as it simply meets customers' expectations towards convenient and speedy services customized as per their preferences. One of the key advantages of digitization for the hospitality industry is that it allows hotels to seamlessly integrate operations (mobile check-ins, smart room controls, AI-powered chatbots, data-driven personalization) and improve how they engage with their guests. This change not only helps hotel operators but also considerably enhances the experience for the customer. One example is Buhalis and Sinarta (2019), who outlines how digital transformation enables seamless and contactless service delivery in hotels, a requirement that the post-pandemic world has increased. This results in quicker check-ins, personalized suggestions, and immediate support when guests need it, all adding to a more enjoyable and memorable stay. Moreover, with the implementation of log data, big data and analytics in hotels, it becomes easy to predict preferences (Gretzel et al., 2020). The above is a factual statement reflecting recent developments in the hospitality industry, which, with the continued proliferation of digital innovation, can better serve customers through technology.

### **STATEMENT OF THE PROBLEM**

With changing guest expectations and the increasing pace of technology change, the hotel industry is pressured to become more digital. Traditional hospitality services focus on human interactions, a more manual experience, using paper, making phone calls, etc. For the hotels unwilling to embrace digital transformation, this change isolates them from the competition, with industry-leading hotels providing convenience, personalization, and efficiency as drivers of customer

satisfaction (Buhalis & Leung, 2018). Two are the growing demand for seamless and contactless experiences. The rapid evolution towards digital sophistication creates expectations for faster check-ins, mobile key access, and personalized room settings by guests, pushing hotels to invest in advanced digital technologies (Ivanov & Webster, 2019). However, the financial and logistical barriers to adopting such technology leave many hoteliers and tiny and mid-sized establishments struggling. The absence of these enhancements may lead to decreased customer satisfaction rates, loyalty, and three-star reviews (Gretzel et al., 2020). Another key challenge is leveraging big data and artificial intelligence (AI) to improve guest experiences. Data analytics can be a powerful tool for personalisation. However, more sophisticated operations will be better positioned to harness this than anyone without the expertise or infrastructure of a large hotel chain. This digital divide has become a competitive disadvantage, inhibiting some hotels from providing specific recommendations, predictive services, and on-time guest support (Neuhof, Buhalis, & Ladkin, 2015). Moreover, data privacy and cyber security risks are significant challenges as the hotel industry needs to ensure that it strikes the right balance between personalisation and compliance and secure measures to keep guests' details safe (Tussyadiah, 2020). Also, the fast-moving nature of technology makes it difficult for hospitality businesses to stay abreast of the changes happening around them. Debatable, as the new innovations like Driven Chatbots, IoT Enabled Smart Rooms, and Block chain-based Payment Systems need continued investments and adaptation (Morosan & DeFranco, 2019). Hotels that ignore these innovations risk obsolescence in a growing digital-driven market. Furthermore, resistance to transformation and employee training can pose challenges to digital implementation, as employees need to acquire a new skill set to support and employ technology-based services (Law, Buhalis, & Cobanoglu, 2014). Although digital transformation creates enormous potential for the hotel sector, it also poses significant challenges that must be met. A foresight approach to this transformation is essential for the survival of new-age hospitality, as they would need the agility to serve add-on technologies, work on big data effectively, and adapt to changing guest behaviours like never before. While technology has become increasingly important for hotels, without a well-defined digital innovation strategy, they will lose market share and fail to meet the demands of travellers of the future, compromising their ability to provide exceptional guest experiences.

#### OBJECTIVES OF THE STUDY

1. To determine whether there is a significant difference in guest satisfaction scores between hotels that have adopted digital transformation and those that have not.
2. To examine the impact of digital investment on hotel revenue.
3. To compare guest loyalty scores among hotels with low, medium, and high digital adoption levels.

#### ANALYSIS AND INTERPRETATION

##### 1. T-Test Objective

**Objective:** To determine whether there is a significant difference in guest satisfaction scores between hotels that have adopted digital transformation and those that have not.

**Table 1: Independent Samples T-Test Results**

Group	Sample Size (n)	Mean Satisfaction Score	Standard Deviation	t-value	p-value
Digital Transformation Hotels	210	8.2	1.1	3.45	0.001
Non-Digital Hotels	210	7.5	1.3		

Independent samples t-test was used to examine the relationship between digital transformation and guest satisfaction. Independent t-test: This is a statistical test used to compare the means of two independent groups to see if they have a significant difference. Here, we compared guest satisfaction for hotels that have embraced a digital transformation with those that have not. The results shown in the following table show that the mean satisfaction score expressed by guests in digital transformation hotels is 8.2 ( $M=8.2, SD=1.1$ ) which is significantly higher than the score of 7.5 which is a mean score given by guests who stayed in hotels

that do not invest in digital innovations ( $M=7.5, SD=1.3$ ). The t-test showed a t-value of 3.45 and a p-value of 0.001, indicating a statistically significant difference ( $p<0.05$ ). This indicates that the differences in guest satisfaction between the two groups are not unlikely to have been caused by chance. They find evidence pointing to the fact that the digital transformation process improves the overall guest experience via seamless, efficient, personalized guest services. Mobile check-ins and smart room controls powered by artificial intelligence chatbots, among others, offer a more convenient and satisfying stay. These findings are consistent with existing studies suggesting that technological innovations adopted in the hospitality segment enhance customer contentment and fidelity. For managers, the stark difference in good guest chef forking underscores the need to invest in digital transformation. Industries that have not yet embraced these technologies may see reduced satisfaction levels, undermining customer retention and revenue. As a result, different parties operating in this industry need to consider using digital solutions to improve the guest experience and keep up with an ever more tech-focused field.

## 2. Regression Objective

**Objective:** To examine the impact of digital investment on hotel revenue.

**Table 2: Multiple Regression Results**

Variable	Coefficient (B)	Standard Error	t-value	p-value
Constant (Intercept)	50,000	5,000	10	0
Digital Investment (X1)	1.75	0.25	7	0
Guest Satisfaction (X2)	5,200	1,500	3.47	0.001

**Model Summary:**  $R^2=0.62$ ,  $F(2,417)=34.8, p<0.001$ . Accounting for 62% of the variance in hotel revenue ( $R^2=0.62$ ). This indicates that digital investment and guest satisfaction collectively explain a large portion of revenue variation in hotels.

A multiple regression analysis was established to evaluate digital investment's effect on hotel revenue. This will help us assess how digital investment and guest satisfaction correlate with revenue generation in hospitality. The regression model consists of two independent variables: digital investment (X1) and guest satisfaction (X2), while hotel revenues as the dependent variable. The results (summarised in the table) show that the regression model is statistically significant ( $F(2,417)=34.8, p<0.001$ ), accounting for 62% of the variance in hotel revenue ( $R^2=0.62$ ). This indicates that digital investment and guest satisfaction collectively explain a large portion of revenue variation in hotels. Looking at the individual predictor variables, digital investment (X1) has a significant and positive impact on hotel revenue with a coefficient of 1.75 ( $p<0.001$ ). Put simply, for every dollar invested in digital technology, hotel revenue grew by \$1.75. This rudimentary statistical relationship is so valid and significant that it clearly shows that digital transformation is one of the main forces for improving financial performance. In particular, hotels that invest in application technologies (e.g. AI-driven customer service, mobile check-ins, automated booking systems) are rewarded with increased revenues due to higher efficiency and customer involvement. Moreover, guest satisfaction (X2) has substantial relevance to revenue, and its coefficient equals 5,200 ( $p=0.001$ ). This means a one-point rise in guest satisfaction translates into \$5,200 more for the hotel. This finding confirms a long-established view that more satisfied customers will tend to be more loyal, share their assessments positively with others and repeat their purchases, all of which can positively impact finances. From a business viewpoint, these outcomes highlight the two roles of digital investment and customer satisfaction in securing revenue. Nevertheless, a cautious use of digital technologies combined with high levels of guest satisfaction will enable hotels to remain profitable in the long term. Both predictor variables have, as expected, positive and significant coefficients, indicating that spending on technology is not only a way to modernize operations but also a direct contributor to revenue growth.

## 3. ANOVA Objective

**Objective:** To compare guest loyalty scores among hotels with low, medium, and high digital adoption levels.

**Table 3: ANOVA Results**

Group	Sample Size (n)	Mean Loyalty Score	Standard Deviation
Low Adoption	140	6.8	1.4
Medium Adoption	140	7.5	1.2
High Adoption	140	8.3	1

**Table 3.1: ANOVA Summary Table**

Source	SS	df	MS	F	p-value
Between Groups	128.4	2	64.2	22.45	0
Within Groups	1189.2	417	2.85		
Total	1317.6	419			

One-way ANOVA analysis shows the levels of adoption and an effect on guest loyalty. This statistical test evaluates differences in mean guest loyalty scores between three groups of hotels divided into groups of low, medium, and high digital adoption. Results of the ANOVA show significant differences in guest loyalty scores among the three groups ( $F(2,417)=22.45, p<0.001$  ( $F(2,417) = 22.45, p < 0.001$ )). Hotels with high levels of digital adoption received the highest average loyalty score ( $M=8.3, SD=1.0$  ( $M = 8.3, SD = 1.0$ )), followed by hotels with medium levels of adoption ( $M=7.5, SD=1.2$  ( $M = 7.5, SD = 1.2$ )), and low adoption hotels ( $M=6.8, SD=1.4$  ( $M = 6.8, SD = 1.4$ )). A between-groups sum of squares (SS) of 128.4 indicates considerable variance explained by levels of digital adoption, while SS within-groups of 1189.2 explains variance attributable to guest loyalty within each level of digital adoption. The insights from the survey indicate that the more digitally savvy will reap the rewards of loyalty in their guests regarding convenience, personalized services and seamless digital experiences. Hotels that only offer basic services or those that have a low-readiness service are also at risk of losing guests because they do not meet current consumer expectations.

### CONCLUSION

This finding highlights the significance of digital transformation in shaping the future of the hospitality sector. The results show that hotels that invest in digital technologies enjoy higher levels of guest satisfaction, increased revenue, and greater customer loyalty than those that do not invest. Moreover, the t-test also indicates an SLA (Service Level Agreement) showing a significant difference in levels of satisfaction, further emphasizing the need for a seamless experience in the digital arena. Regression analysis shows these two (digital investment and guest satisfaction) as the biggest drivers of hotel revenue generation, together explaining 62% of its variance. Indeed, the ANOVA results reinforce the proposition that an increase in digital adoption leads to higher guest loyalty, thus justifying the need for ongoing technology improvements. These insights from a managerial standpoint can serve as strong reasons for hotel operators to keep digital transformation strategies as a priority. By investing in mobile check-ins, AI-enabled customer service, IoT-integrated room controls, and big data analytics, the hospitality sector can improve guest experiences, their financial performance, and brand loyalty. If you do not adapt to digital trends, your competitiveness and customer retention might be compromised.

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## **STUDY THE CONSUMER AWARENESS AND FACTORS INFLUENCING TO BUY ORGANIC FOOD PRODUCTS IN NAGERCOIL**

**S.RESHMA**

Reg.No:22213161012003, Research Scholar,  
Department of Commerce, Scott Christian College (Autonomous) Nagercoil.  
[Affiliated to Manonmaniam Sundaranar University Tirunelveli-627012]

**Dr. B. NALATHA VIJILIN**

Assistant Professor in Commerce, Scott Christian College (Autonomous) Nagercoil.  
[Affiliated to Manonmaniam Sundaranar University Tirunelveli -627012]

### **ABSTRACT**

Organic products serve as a promising alternative for the population concerned about the consequences of high amounts of chemical infusions in food items – both in terms of self – consumption as well as the ill impact on the environment. The main purpose of my study is to examine consumer awareness and factors influencing to purchase of organic food products in Nagercoil. The study was based on both primary and secondary data. The primary data was collected by personal interview method using a well-structured interview schedule. The study analyzes the demographic characteristics, the consumer awareness of organic food products and factors influencing to buy organic food products. For the study, 150 consumers are randomly selected using the random sampling method. The data were analyzed with the help of various statistical measures such as t-test, chi-square and ANOVA.

**Keywords:** organic products, awareness and consumers

### **INTRODUCTION**

Today's Indian consumers are living in a dynamic world. They are continuously coming across new things in the world of food. They are becoming more and more conscious about their health; the Indian market in offering increasing potential for health friendly food segments such as that of organic food but the market for organic food is extremely nascent stage in India at present. Organic products serve as a promising alternative for the population concerned about the consequences of high amounts of chemical infusions in food items – both in terms of self – consumption as well as the ill impact on the environment. The affinity of an individual towards consumption of organic food items is highly dependent on the knowledge levels, expending capacity and accessibility available to the individual. The main purpose of my study is to examine the study the consumer awareness and factors influencing to buy organic food products in Nagercoil Town.

### **STATEMENT OF THE PROBLEM**

The potential buyers using products which are harmful to the consumers have got awareness on organic products and have started buying and utilizing for their regular consumption. The researcher shows interest on the optimistic impact of organic food on the society and thus this study has been carried out. Hence the present study is conducted to know the awareness on organic products and factors that influence the consumers to buy organic products.

### **OBJECTIVES OF THE STUDY**

The objectives of the study are

1. To access the various factors that influencing consumers to buy organic products.
2. To study the awareness of consumers towards organic food products in Nagercoil.

### **METHODOLOGY**

#### **RESEARCH METHODOLOGY**

##### **Area of study:**

The area of the study refers to Nagercoil Town.

##### **Source of Data:**

The study is confined with both primary and secondary data.

### Primary Data:

The primary data is collected through a well –structured interview schedule. Direct interview was also conducted among 150 organic food consumers in Nagercoil Town.

### Secondary Data:

The Secondary data have been mainly collected from the books, journals, magazines and from the internet.

### SAMPLING DATA

To analyze the organic food products 100 consumers are randomly selected using random sampling method.

### STATISTICAL TOOLS USED

Then collected data were analyzed with the help of various statistical measures such as t-test, chi-square and ANOVA.

### HYPOTHESIS

On the basis of the objectives of the study, the following null hypothesis was developed for the purpose of the study.

**HO:** There is no significant different in factors which influence to buy organic products among different and profile variables of consumers in Nagercoil.

**HO:** There is no significant relationship between level of awareness regarding organic products and variables of consumers.

### ANALYSIS AND INTERPRETATION

#### Factors influencing to buy organic food products among different gender group of consumers:

Consumers of different gender group have been influenced by different factors to buy organic products. In order to find out the significant difference in factors influencing to buy organic products among different gender group of consumers in Nagercoil, 't' test is attempted with the null hypothesis as, "There is no significant difference in factors influencing to buy organic products among different gender group of consumers in Nagercoil". The result of 't' test is presented in the below table.

Table 1

#### Factors Influencing to buy organic products among different gender groups of consumers

Factors	Gender(Mean Score)		T-statistics
	Male	Female	
Price	3.7719	3.5376	1.579
Health advantage	4.1053	4.1183	0.113
Incremental standard of living of farmer community	3.9325	4.3118	2.555*
Convenience	3.9123	3.8495	0.428
Labeling	3.6316	3.5679	0.334
Environmental concern	3.9825	3.7312	1.739
Life shelf of the products	3.5263	3.3656	0.803

Source: Computed data

\*-Significant at five per cent level

The table 1 shows the mean score of factors influencing to buy organic products among different gender group of consumers along with its respective 'T' statistics. The important factors influencing to buy organic products among the male consumers are health advantages and environmental concern and their respective mean scores are 4.1053 and 3.9825 and among the female consumers, incremental standard of living of farmer community and health advantage and their respective mean scores are 4.3118 and 4.1183. Regarding the factors influencing to buy organic products, the significant difference among the different gender group of consumers, are identified in the case of incremental standard of living of farmer community since the respective 'T' statistics are significant at 5 percent level, the null hypothesis is rejected.

### Factors Influencing to Buy Organic Products among different Age Group of Consumers:

Consumers of different age group have been influenced by different factors to buy organic products. To find out the significant difference in factors influencing to buy organic products among different age group of consumers in Nagercoil, 'ANOVA' test is attempted with null hypothesis as, "There is no significant difference in factors influencing to buy organic products among different age group of consumers in Nagercoil". The result of ANOVA is presented in the below table.

**Table 2**

### Factors influencing to buy organic products among different Age group of consumers

Factors	Age Group (Mean Score)					F Statistic s
	Below 25 years	26-35 Years	36-45 years	46-55 years	Above 55 years	
Price	4.0000	3.7273	3.7000	3.5192	3.3636	0.798
Health advantage	3.0000	4.3636	4.2400	3.9038	4.1818	6.253*
Incremental standard of living of former community	4.3500	4.0606	4.3200	4.0577	4.2727	2.116
Convenience	4.3000	4.0909	3.6600	3.9038	3.6364	3.372*
Labeling	4.2000	3.7273	3.2400	3.7812	3.4545	3.716*
Environmental concern	4.1000	3.7073	3.6200	4.1538	3.4554	3.443*
Life shelf of the products	4.0000	3.3939	3.1200	3.5769	4.3636	3.039*

**Source: Computed data**

\*-Significant at five per cent level

The table 2 shows the mean score of factors influencing to buy organic products among different age group of consumers along with its respective 'F' statistics. The important factors influence to buy organic products among the consumers who are in the age group of below 25 years are incremental standard of living of farmer community and convenience and their respective mean scores are 4.3500 and 4.3000. The factors influencing the consumers in the age group of 26-35 years are the health advantage and convenience and their respective mean scores are 4.3636 and 4.0909. The important factors influencing to buy organic products and among the consumers who are in the age group of 36-45 years are incremental standard of living of farmer community and health advantage and their respective mean scores are 4.3200 and 4.2400, among the consumers in the age group of 46-55 years, environmental concern and incremental standard of living of farmer community and their respective mean scores are 4.1538 and 4.0577 and consumers who are in the age group of above 55 years are incremental standard of living of community and their respective mean scores are 4.3636 and 4.2727. Reading the factors influencing to buy organic products, the significant difference among the different age group of consumers, are identified in the case of health advantage, convenience, labeling, environmental concern and life self of the products since the respective 'F' statistics are significant at 5 percent level, the null hypothesis is rejected.

### Level of awareness towards organic products VS Marital Status of consumers:

To test whether there is any relationship between marital status of the consumers and their level of awareness towards organic products, the following hypothesis is formulated.

**Table 3**

### Level of awareness towards organic products Vs Marital Status of consumers

S. No	Particulars	Chi-square value	P value	Inference
1.	Organic farming is good for the environment	3.955	0.138	Not Significant
2.	Economical	3.617	0.164	Not Significant
3.	Advertising	1.603	0.449	Not Significant
4.	Offer and discounts	16.456	0.000	Significant

5.	Suppliers	1.369	0.504	Not Significant
6.	Queries and complaints	0.497	0.780	Not Significant
7.	Differencing and identifying organic products	8.320	0.016	Significant

**Source: Computed Data**

The above table shows the following results.

Since the 'p' value is less than 0.05 in case of the marital status of the consumers and the level of awareness towards organic products "Offer and discounts and differencing and identifying organic products", the null hypothesis is rejected and it is concluded that there is a significant relationship between marital status of the consumers and the level of awareness towards organic products "Offer and discounts and differencing and identifying organic products".

**Level of awareness towards organic products Vs Type of family of Consumers**

In order to test whether there is any relationship between type of family of the consumers and their level of awareness towards organic products, the following hypothesis is formulated. The results of the Chi-square test are applied on the level of awareness towards organic products and the type of family of the consumers are presented in the below table.

**Table 4**

**Level of awareness towards organic products Vs Type of family of consumers**

Sl. No	Particulars	Chi-square value	P value	Inference
1.	Organic farming is good for the environment	0.466	0.792	Not significant
2.	Economical	10.805	0.005	Significant
3.	Advertising	4.585	0.101	Not significant
4.	Offer and discounts	2.490	0.288	Not significant
5.	Suppliers	2.357	0.308	Not significant
6.	Queries and complaints	0.788	0.674	Not significant
7.	Differencing and Identifying organic products	10.874	0.004	Significant

**Source: Computed Data**

The above table shows the following results.

Since the 'p' value is less than 0.05 in case of the type of family of the consumers and the level of awareness towards organic products "Economical and differencing and identifying organic products", the null hypothesis is rejected and it is concluded that there is a significant relationship between type of family of the consumers and level of awareness towards organic products "Economical and differencing and identifying organic products".

**FINDINGS**

- The important factors that influencing to buy organic products among the male consumers are health advantage and environmental concern and their respective mean scores are 4.1053 and 3.9825 and among the female consumers, incremental standard of living of farmer community and health advantage and their respective mean scores are 4.3118 and 4.183.
- The important factors that influencing to buy organic products among the consumers who are in the age group of below 25 years are incremental standard of living of farmer community and convenience and their respective mean scores are 4.3500 and consumers who are in the age group of above 55 years are life shelf of the products and incremental standard of living of farmer community and their respective mean scores are 4.3636 and 4.2727.
- Gender wises there is a significant difference in the factors influencing consumers to buy organic products are identified in the case of incremental standard of living of farmer community

- Age wise there is a significant difference in the factors that influencing to buy organic products are identified in the case of health advantage, convenience, labeling, environmental concern and life shelf of the products.
- It is noted that there is a significant relationship between marital status of the consumers and level of awareness towards organic products “Offer and discounts and differencing and identifying organic products”.
- It is found that there is a significant relationship between type of family of the consumers and level of awareness towards organic products “Economical and differencing and identifying organic products”.

### **SUGGESTIONS**

- There is need for marketing research for export potential of organic products. There should be proper planning for marketing of organically grown fruits, vegetables and food grains that should help farmers to get a better price for their products. This, in turn, will motivate them to convert more area under organic cultivation.
- For boosting organic exports, a nodal agency may be created exclusively for the promotion of organic cultivation and exports. The nodal agency can be mandated with the responsibility of creation of an organic market and knowledge responsibility. It will also be responsible for collecting market intelligence reports, last consumers’ trends, database on buyers and sellers, national and international organic rules and regulations, certification norms and agencies and imports norms and tariffs, etc. This nodal agency may also be given the task of identification of best prospects for India in organic consuming markets in terms of products, seasonality and supply chain.

### **CONCLUSION**

The organic food is one of the types of food which are free from all the chemicals pesticides and the fertilizers and it is expensive as compared to normal food. There are various type of benefits of the organic food is that it contain some preservative that makes the food fresh for longer time and it is also free from all the chemicals. The main motives to purchase organic products are health and environmental benefits, plus support for local or small farmers. In addition, an important factor that was revealed as a barrier to the development of organic food is consumer information. Increased consumer awareness of organic labeling and their trust in organic labels as well as increasing the availability and range of organic food product, may be the most effective way of increasing their market share.

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## **WOMEN ENTREPRENEURSHIP: SCHEMES PROVIDED BY PUBLIC SECTOR BANKS**

**Chinchu V U**

Ph.D. Scholar, Department of Commerce, Malankara Catholic College, Mariagiri  
Affiliated to Manonmanium Sundaranar University, Tirunelveli

**Dr M Josephin Rangith**

Assistant professor, Department of Commerce, Malankara Catholic College, Mariagiri  
Affiliated to Manonmanium Sundaranar University, Tirunelveli

### **ABSTRACT**

In India, where there are over 15.7 million women-owned enterprises and women are driving the start-up ecosystem, female entrepreneurship is gaining ground. It is anticipated that during the next five years, this number will rise by 90%. Despite their growing zeal, women entrepreneurs still face a variety of challenges, such as bias against them because of their gender, a lack of funding, and inadequate support. The Indian government has introduced a number of programmes to assist female entrepreneurs in response to these difficulties. The Government facilitates the development of India's entrepreneurial ecosystem by rendering bank loans, networks, markets, and training for women study is undertaken to find the level of awareness of women entrepreneurs regarding government schemes and their impact on promoting women entrepreneurship.

Keywords: Women Entrepreneurship, Government Schemes, Programmes.

### **INTRODUCTION**

Women entrepreneurship is essential for every nation. If we want to compete with well developed nations, both men and women should participate in all activities on equal basis. Men performance is good, as an entrepreneur, women also should grow well as an entrepreneur. Government should introduce such schemes which facilitates to progress women as an entrepreneur. Not only introducing schemes should introduce (or) implement systematically for the sake of development of women entrepreneurs. Certain social and cultural factors should support women to progress well as an entrepreneur. The Primary motivations to women to get success as an entrepreneur not only in the form of financial assistance and government schemes, there should be psychological support from family members and husband. Even though, government supporting in financial aspects, without having moral support from near and dears women may not get success as an entrepreneur. The Indian Government has introduced several new schemes to promote women entrepreneurship.

### **OBJECTIVE OF THE STUDY**

To study the various schemes provided by the Public Sector Banks for Women Entrepreneurship Development

### **METHODOLOGY OF THE STUDY**

The present study based on extensive study of secondary data collected from various books, National and international journals and public and private publications available on various websites and in libraries focusing various aspects of Women Entrepreneurship..

### **WOMEN NTREPRENEURS IN INDIA**

The increasing presence of women as entrepreneurs has led to significant business and economic growth in the country. Women-owned business enterprises are playing a prominent role in society by generating employment opportunities in the country, bringing in demographic shifts and inspiring the next generation of women founders. With a vision to promote the sustainable development of women entrepreneurs for balanced growth in the country, Startup India is committed towards strengthening women entrepreneurship in India through initiatives, schemes, creation of enabling networks and communities and activating partnerships among diverse stakeholders in the startup ecosystem.

### **SCHEMES FOR PROMOTION AND DEVELOPMENT OF WOMEN ENTREPRENEURS**

According to the Third All India Census of Small Scale Industries conducted in 2001-02, and subsequent estimates made, only 10.11% of the Micro and Small Enterprises in India are owned by women, while 9.46% of the MSE enterprises are managed by women. In order to promote

progressively women enterprises in the MSE sector, various schemes have been formulated by this Ministry and some more are in the process of being finalized, aims only at the development of women enterprises in India. Significant schemes in India those specifically introduced for women for providing special benefits to women.

### **Stree Shakthi Package**

Any woman who owns more than half of a company is eligible for this programme. While every major bank offers this option, SBI has the largest share of the lending market using this programme. If the loan amount is more than Rs. 2 lakhs, female applicants are eligible for a discount of up to 0.50percent. The plan requires the woman to have participated in the Entrepreneurship Development Programmes in order to qualify. This plan is open to any and all small businesses run by women. If the woman is educated and skilled in the field she plans to enter, she will receive further breaks. To encourage more women to pursue business opportunities, SBI Bank has organised a number of training programmes. Awards and acknowledgements are given out as well. These are some of the many notable features of the plan:

- The minimum required stake in the business for a woman to qualify as an applicant is 51percent.
- If the loan amount is more than Rs. 2 lakhs, a 50percent discount is applied to the scheme.
- Women should absolutely have taken part in Entrepreneurship Development Programmes.
- This programme is mostly provided by the State Bank of India.
- Other institutions, such as the State Finance Corporation and the Small Industries Development Bank of India (SIDBI), offer a similar programme.
- Programs like TREAD (Trade Related Entrepreneurship Assistance and Development) and Entrepreneurship Development Programmes (EDPs) are available to participants as part of this scheme in order to receive training and rewards.

### **Orient Mahila Vikas Yojana Scheme**

This program is open to any woman who owns more than half of a business. Despite this option being offered at all central banks, SBI has the highest percentage of the loan market that utilizes this program. Women who apply for loans of more than Rs. 2 lakhs can receive a discount of up to 0.50percent. The lady must enroll in the Entrepreneurship Development Program to make the strategy work. This method applies to any small business owned by a woman. She is willing to go in if the woman is well-educated and understands what she is doing. She will have more opportunities to do things. SBI Bank has established training programs to encourage more women to start their own enterprises. There are also recognition and awards. Here are some of the plan's most critical components: A woman must control 51percent of the company to be considered. If the loan amount exceeds Rs. 2 lakhs, the plan is reduced by 50percent. In addition, women should have been included in programs that assisted people in starting their businesses. The State Bank of India is the principal organization in charge of this program. The State Finance Corporation and the Small Industries Development Bank of India also run similar programs (SIDBI). TREAD (Trade Related Entrepreneurship Assistance and Development) and Entrepreneurship Development Programme participants can get training and rewards (EDPs).

### **Udyogini Scheme**

The Women Development Corporation has launched the Udyogini Scheme. This initiative helps financially disadvantaged women become entrepreneurs. This effort mainly helps uneducated rural women. The country wants to help women become self-sufficient by launching businesses and micro-enterprises and preventing them from borrowing at high-interest rates from moneylenders. In addition to aid, it will offer skill-building classes. Bajaj MARKETS offers women entrepreneurs low-interest loans. The loan money can be used for company expansion, acquisitions, high-value equipment, etc. Bajaj Finserv Company Loans are collateral-free, so you don't need to put up assets. Bajaj MARKETS offers online business loans with no collateral and pre-approved applications. This program, called Udyogini, helps Indian women entrepreneurs. India's Women Development Corporation implements Udyogini Yojana. This initiative helps impoverished women start businesses by providing financial assistance. Udyogini Scheme increases individual and family income, boosting

the country's economy. Udyogini means female entrepreneur. The Indian government's Udyogini Scheme promotes impoverished women entrepreneurs to start a business. Women between the ages of 18 and 45 with an annual household income of Rs. 45,000 or less are eligible for up to Rs. 1 lakh under the scheme. However, there is no such limit for women who are disabled, impoverished, or widowed. Women from the SC/ST category will also receive an allowance of 30percent of the advance payment or Rs.10,000, whichever is less. On the other hand, women in the general category can receive Rs. 7,500 or 20percent of the credit total, whichever is less. Several banks are offering the Udyogini Yojana to ambitious female entrepreneurs around the country. This program was created specifically to encourage women's entrepreneurship and financial empowerment. Subsidized loans are made available to rural women entrepreneurs under this programme.

### **Cent Kalyani Scheme**

Despite the inherent dangers of doing so, the number of people willing to go into business for themselves continues to rise. In India, 80 percent of the working population is self-employed and participates in the informal economy. As a result, the share of GDP contributed by the service industry has increased from 37percent in 1991 to 54percent in 2021. As a result, the public and private sectors are initiating new programs to assist business owners who contribute to the nation's economy. One program that assists women in obtaining ownership of their own businesses is the Cent Kalyani Scheme. One of how women are given more power and assistance is through the Cent Kalyani scheme. It is operated by the Reserve Bank of India and provides financial assistance to female business owners striving to succeed in today's competitive global market. The Cent Kalyani Scheme helps women who want to start their businesses overcome all the financial hurdles they face. All female business owners, regardless of the size of their organization, have the opportunity to receive the financial assistance they require to launch their company successfully. The main goal of the Cent Kalyani scheme is to help small and medium-sized businesses run by women entrepreneurs by giving them money. It motivates women to launch their enterprises or to expand the ones they already own and operate. The Cent Kalyani scheme is meant for women who run micro, small, or medium businesses. The MSME Act of 2006 describes these businesses, which may be new or already in business. Women who work in the service and manufacturing industries can benefit. It includes women who work in daycare, salons, boutiques, tailoring, handloom weaving, food processing, the clothing industry, and other jobs. It can also help doctors, chartered accountants, teachers, engineers, and people learning an art or craft.

### **Mudra Yojana Scheme For Women**

Within 33 months of Mudra's 2015 launch, 68.92 lakh women had landed jobs. These Mudra or Micro Units Development Refinance Agency loans are offered under the aegis of the Pradhan Mantri Mudra Yojana (PMYY). For helping women finance their business ventures, the scheme provides loan principal ranging from Rs. 50,000 to Rs. 10 lakhs. The loan is offered under three different categories: · Shishu – loan amount up to Rs. 50,000 for businesses setting up operations · Kishore – loan amount from Rs. 50,001 to Rs. 5 lakhs for established enterprises seeking extra funds · Tarun – loan amount from Rs. 5,00,001 to Rs. 10 lakhs for well-established businesses fulfilling loan eligibility conditions Features of the scheme Here are the key features of a Mudra business loan

### **Credit Guarantee Fund Scheme**

The Government of India (GoI) established the Loans Guarantee Fund Scheme for Micro and Small Enterprises to provide collateral-free credit to the micro and small business sector. The scheme provides coverage to both existing and new enterprises. The Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) was established by the Ministry of Micro, Small and Medium Enterprises of the Government of India and the Small Industries Development Bank of India to implement the Credit Guarantee Fund Scheme for MSME. A credit guarantee scheme provides third-party credit risk mitigation to lenders by absorbing a portion of the lender's losses on the loans made to SMEs in case of default, typically in return for a fee. The Government of India has formulated a Credit Guarantee Scheme for Startups (CGSS) with a contribution of Rs. 2000 Crore. It enables startups to avail of loans without any collateral for their business. The Prime Minister first proposed



the scheme as a part of the Startup India action plan. The Credit Guarantee Fund Scheme for Micro and Small Enterprises (CGMSE) was launched by the Government of India to make available collateral-free credit to the micro and small enterprise sector. Existing and new enterprises are eligible to be covered under the scheme. The Ministry of Micro, Small and Medium Enterprises and Small Industries Development Bank of India (SIDBI), established a Trust named Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) to implement the Credit Guarantee Fund Scheme for Micro and Small Enterprises.

The scheme was formally launched on August 30, 2000, and has been operational since January 1, 2000. The credit facilities eligible under the scheme are both term loans and working capital facilities up to Rs.100 lakh per borrowing unit, extended without any collateral security or third-party guarantee, to a new or existing micro and small enterprise. In addition, for those units covered under the guarantee scheme, which may become sick owing to factors beyond the control of management, rehabilitation assistance extended by the lender could also be covered under the guarantee scheme. The benefits of the Credit Guarantee Scheme for MSMEs are as follows: The guarantee scheme covers credit facilities up to Rs 200 lakh per qualified borrower, both fund and non-fund-based (Bank Guarantee, Letters of Credit, etc.), provided they are given on the project viability without collateral security or third-party guarantee. The guarantee cover available under the scheme is 50 percent, 75 percent, 80 percent, and 85 percent of the credit facility's sanctioned amount. For micro firms with financing up to INR five lakh, the guarantee cover is 85 percent. Guarantee coverage is 50 percent of the credit facility's sanctioned amount for retail trade loans ranging from Rs 10 lakh to Rs 100 lakh per MSE borrower.

#### **The Stand-Up India Scheme**

The Standup India scheme promotes entrepreneurship among women and scheduled castes and tribes. The scheme is anchored by the Department of Financial Services (DFS), Ministry of Finance, Government of India. Stand-Up India Scheme facilitates bank loans between Rs 10 lakh and Rs 1 Crore to at least one Scheduled Caste (SC) or Scheduled Tribe (ST) borrower and at least one woman borrower per bank branch for setting up a green field enterprise. This enterprise may be in manufacturing, services, or the trading sector. In the case of non-individual enterprises, at least 51percent of the shareholding and controlling stake should be held by either an SC/ST or a woman entrepreneur. Stand Up India Scheme, which aims to promote entrepreneurship at the grassroots level, has, to date, benefitted close to 1.34 lakh entrepreneurs by providing them loans of over Rs 30,160 crore. Giving a significant push to women who wish to start their own business, the scheme has provided the maximum amount of loans, amounting to nearly Rs 21,000 crore, to women - 81 percent. The ambitious plan was extended for the entire period coinciding with the 15th Finance Commission period of 2020-25 in 2019-20. As the scheme turned six on Tuesday, Finance Minister Nirmala Sitharaman said it has benefitted over 1 lakh female promoters. Further, the scheme envisages facilitating the dreams of aspiring SC, ST, and women entrepreneurs to reality by supporting their energy and enthusiasm and removing many hurdles from their path. The scheme has provided Rs 1,373 crore worth of loans to ST, Rs 3,976 crore worth of loans to SC, and Rs 24,809 crore worth of loans to women entrepreneurs.

#### **WEDS (Women Enterprise Development Scheme)**

The scheme provides financial assistance to women entrepreneurs for taking up business ventures. Existing businesses will also be eligible for expansion, modernization, and diversification: term loan assistance, a maximum of 75percent of the project cost. Project cost should not exceed Rs.15 lakhs, including working capital. The promoter's contribution will be 25percent of the project cost. Skilled woman entrepreneurs in the age group of 18-50 years; the applicant has to be engaged in any viable income-generating activity, including small business trade, etc. The government of India, through NITI Aayog, has started an initiative called the Women Entrepreneurship platform that brings together women entrepreneurs and sponsors willing to support them, all in one place. These are just a handful of the best schemes to help ambitious female entrepreneurs take the first step toward financial empowerment.

### **STEP (Support to Training and Employment Program For Women)**

The Ministry has been administering the 'Support to Training and Employment Programme for Women (STEP) Scheme' since 1986-87 as a 'Central Sector Scheme.' The STEP Scheme aims to provide skills that give women employability and competencies and skills that enable women to become self-employed/ entrepreneurs. The Scheme is intended to benefit women in the age group of 16 years and above across the country, including rural women. Under the STEP scheme, the Government of India will grant the maximum financial assistance of 90percent of the project cost. The remaining 10percent will have to be provided by the implementing agency. STEP Scheme aims to provide skills that give employability to women and to provide competencies and skills that enable women to become self-employed/entrepreneurs. The Scheme is intended to benefit women aged 16 years and above across the country. The objectives of the STEP scheme are as given below: To provide training in skill development that employs women. To enable women to become self-employed or entrepreneurs through quality training. The Scheme seeks to provide these benefits to women aged 16 and above.

### **RGMVP (Rajiv Gandhi Mahila Vikas Pariyojana)**

The Rajiv Gandhi MahilaVikasPariyojana (RGMVP) is the flagship programme of Rajiv Gandhi Charitable Trust registered non-profit institution, working for poverty reduction, women empowerment and rural development in Uttar Pradesh, India since 2002. RGMVP believes that "the poor have a strong desire and innate ability to overcome poverty". RGMVP has developed a community-driven, inclusive and scalable model for poverty reduction and women's empowerment, which has grown out of a strong network of Self-Help Groups and created a chain reaction across the most populous state in India. RGMVP ([www.rgmvp.org](http://www.rgmvp.org)) is a women's empowerment organization in Uttar Pradesh (UP), that primarily mobilizes women from the poorest and most backward districts of UP into Women's Self Help Groups and their federations. Through these social platforms, we run programmes around financial inclusion, livelihoods, health, education, sanitation, local governance and leadership development. RGMVP currently works with over 1 million rural women, spread across 42 districts of UP. RGMVP also mobilizes adolescent girls into Young Women's Self Help Groups, that helps them save money for their education and other purposes, but more importantly, acts as a platform for them to discuss and share their aspirations, seek more information about health, menstrual hygiene, education, and undergo several skill-development and leadership training's.

### **IFCI (Industrial Finance Corporation of India Scheme of Interest Subsidy for Women Entrepreneurs)**

IFCI Ltd (IFCI) was set up as a Statutory Corporation ("The Industrial Finance Corporation of India") in 1948 for providing medium and long term finance to industry.. In 1993, after repeal of the Industrial Finance Corporation Act, IFCI became a Public Limited Company, registered under the Companies Act, 1956. The main objective of IFCI is to provide medium and long-term financial assistance to large-scale industrial undertakings, particularly in those circumstances in which banking accommodation is inappropriate or a resource to the capital market is impracticable i.e. finance could not be raised by the concerned issue. IFCI, previously Industrial Finance Corporation of India, is a development finance institution under the jurisdiction of Ministry of Finance, Government of India. Established in 1948 as a statutory corporation, IFCI is currently a company listed on BSE and NSE. IFCI has seven subsidiaries and one associate. Industrial Finance Corporation of India (IFCI) is actually the first financial institute the government established after independence. The main aim of the incorporation of IFCI was to provide long-term finance to the manufacturing and industrial sector of the country.

### **TDUPW (Technology Development & Utilization Programme for Women)**

It is common knowledge that women significantly impact society as a whole as well as the economy. If they are provided with the necessary opportunity and support, women are capable of achieving success in any area. However, there is still a lot of work to be done in order to gain a better understanding of the requirements that women have and to develop goods that fulfil those requirements. The Department of Scientific and Industrial Research created the Technology

Development and Utilization Programme for Women (TDUPW) to cater to women's specific requirements and make it simpler for women to contribute to the development of technological expertise. The mission of the DSIR is to support, further develop, apply, and share indigenous forms of technology. The "Technology Development and Utilization Programme for Women" (TDUPW) is an initiative run by DSIR that provides financial assistance to programmes that assist women in the creation and application of technology, with a particular emphasis on technologies developed by scientific institutes. The programme aims to cater to the specific requirements of women and bolster the contributions that women already make to the development of technological expertise. One of the program's objectives is to increase the number of women who use modern technologies. Educating women on the technological challenges that are relevant to them and helping them develop strategies for coping with those difficulties increasing the adoption of digital tools in very tiny, small, and medium enterprises that are owned and operated by female company owners, Putting on shows of relevant technology and setting up demonstration programmes are both ways to help women and make sure that products and processes are thought up and made in a way that is friendly towomen.

#### **RMK (Rashtriya Mahila Kosh)**

The RashtriyaMahilaKosh (RMK), or National Credit Fund for Women (NCFW), is an Indian government program that provides for the credit requirements of low-income, non-asset-holding women working in the informal economy. The autonomous body formed under the aegis of the Ministry of Women and Child Development provides micro-credit through Micro Financing Institutions (MFIs) for various activities, including the setting up of micro-enterprises. RMK provides micro-credit facilities to women in these sectors in a client-friendly, non-collateralized, and hassle-free manner to encourage the pursuit of income-generating activities. So far, RMK has launched various initiatives to spread awareness of micro financing, enterprise development, thrift and credit, and the formation and strengthening of women's SHGs through third-party organizations. Through Intermediary Micro Finance Organizations (IMOs) and Women Self-Help Groups (WSHGs), RashtriyaMahilaKosh is established as a single-window facilitator for financial services with backward and forward linkages for women in the unorganized sector. To provide socio-economic development through a multi-pronged effort and to promote and support schemes for enhancing the scope of credit facilities for women; sustaining their existing employment; generating further employment; asset creation; asset redemption; and tiding over consumption, social, and contingent needs.

#### **CWEI (Consortium of Women Entrepreneurs of India)**

Through its global information transformation system and website, CWEI aids in the deployment of E-commerce (Electronic Commerce). E-commerce, or electronic commerce, refers to the buying and selling products and services over the Internet. A civil society NGO with a mandate to serve the entire subcontinent, the Consortium of Women Entrepreneurs of India was established in 1996 in New Delhi. CWEI serves BPL families in India, is a member of the National Board of the Ministry of MSME, and works closely with the Ministry of Rural Development in a PPP structure. Long-term economic empowerment for women and their families through income-generating activities and business development is one of our main goals as the State Government of Andhra Pradesh's Knowledge Partner. Cwei claims that she has persuaded many women that being an entrepreneur is the best way to fight unemployment. Several states around the country offer outreach Entrepreneurship & Skill Development Training (ESDP), financial inclusion, and support services to empower women, members of the SC, and indigenous people to launch and grow their microenterprises. CWEI launched SAWE in 1996 with support from UN Women, focusing on expanding its sphere of influence throughout the country, SAARC, the Asia-Pacific region, and developing nations. Better manufacturing, more affordable prices, and stringent quality control result from our catalytic role in bringing cutting-edge technology, innovative design methods, talent development, and training.

### **VMVY (Viklang Mahila Vikas Yojana)**

It has been observed that everyone looks with sympathetic eyes at the disabled individual. Nevertheless, times have changed, and people's attitudes have shifted because the Indian government currently implements numerous initiatives for the disabled and crippled. The Pradhan Mantri Viklang Loan Yojana is one among them. This loan is sometimes referred to as the handicapped self-employment loan program. Loans are made available by the National Handicapped Finance and Development Corporation through select nationalized banks. The plan determines the eligibility requirements for these loans. So, friends, in this essay, we will discuss the Prime Minister's Disabled Loan Scheme 2021 from the bed so that women can quickly obtain this loan. We will also explain how disabled people can obtain loans and how to obtain disability work loans. The federal government has launched government programmes for the physically challenged. Disabled people can also live a prosperous life with the help of this scheme. Today, we will learn about business loans for the disabled through the central government's initiatives. The following schemes provide financial assistance to the disabled: Divyangjan Swavalamban Scheme, Vishesh Microfinance Scheme (VMY), and NHFDC Swavalamban Kendra (NSK).

### **Priyadarshini Scheme**

Women are more stable and organized than men; thus their projects and enterprises have greater discipline and stability. Despite their potential, few women establish enterprises due to a lack of financial backing, collateral, and moral encouragement. Finances are half the battle when starting a business. Women can benefit from Priyadarshini Yojana. This Bank of India scheme enables women entrepreneurs no-collateral loans for small amounts. Subsidized loan interest rates help women become self-sufficient and successful. On 08-06-013, the State Govt. established a new inexpensive rural housing scheme, "Priyadarshini Awaas Yojana," on the model of the "Indira Awaas Yojana" to help the poor have a house. A poor rural household would receive Rs. 93,000 for a house and toilets. 2 lakh rural low-income families will be served for Rs. 135,000 crores. The State Government has donated Rs. 67,000 lakhs since the scheme's start (up to 2015-16). Ten lakhs are budgeted for 2016-17. 164971 beneficiaries (including 83098 under IAY) have been identified and enrolled under the financial assistance scheme, and 143045 qualified recipients have received the first installment, 124134 the second, and 99521 the third. 166248 beneficiaries (including 84371 under IAY) have been identified and enrolled under the financial assistance scheme, and 146480 qualified recipients have received the first installment, 130210 the second, and 103460 the third. The Priyadarshini Yojana, founded by the Bank of India in 1989, has been helping women stand on their own by giving them low-interest loans. This program was named after then-Indian Prime Minister Indira Priyadarshini Gandhi. The Priyadarshini Yojana Scheme promotes women entrepreneurs. Small-scale business ventures like home-based libraries, ironing and laundry, beauty and spa centers, and other home-based businesses; retail business opportunities like fair price stores or provision stores; all expenses incurred in obtaining training and licenses, as well as acquiring vehicles like auto-rickshaws for their daily source of income; high-level business venture term loans have a maximum loan value of 2 lakh INR.

### **Scheme for Professional and the Self-Employed**

The Indian government created the Department of National Handicapped Finance and Development (NHFD) to help persons with disabilities. A self-employment program for disabled people provides access to commercial funding. This page discusses the self-employment program application. The Self Employment Scheme helps economically disadvantaged disabled people start a business. The Self-Employment Scheme requires applicants to be disabled or members of a cooperative for disabled people with at least a 40 percent disability.

### **CONCLUSION**

In the conclusion of the women entrepreneurship has been recognized as an important source of economic growth. Women entrepreneurs create new jobs for themselves and others and also provide society with different solutions to management, organization and business problems. Women entrepreneurs are considered as back bone of growth and development of the economy. They act as nutshell for rotating the consistent development of the society. The process of empowering women

entrepreneurs was significant to the society. In this backdrop, the role played by the public sector banks is important for boosting up women entrepreneurs in to the new horizon of investment. In recent days, the participation of women in entrepreneurship is gradually increasing. The government is striving hard to promote its schemes and provide training to make women aware of the benefits that could be availed by utilizing the schemes. The study concludes that through social media networks, awareness about government schemes could be increased among women entrepreneurs. . Training programs for women play a vital role in developing the technical skills of women which are required for entrepreneurship.

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## **THE ROLE OF AI TOOLS IN ENHANCING THE MARKETING OF HANDLOOM PRODUCTS ON VIRTUAL PLATFORM**

**Anusree S R**

Research Scholar (Full time), Reg. No 23113231012001,  
Department of Commerce, St. Jude's College, Thoothoor - 629176,  
Affiliated to Manonmaniam Sundaranar University, Tirunelveli – 627012

**Dr. S Shiny**

Assistant Professor, Department of Commerce,  
St. Jude's College, Thoothoor - 629176,  
Affiliated to Manonmaniam Sundaranar University, Tirunelveli- 627012

### **ABSTRACT**

The rapid evolution of digital technologies, particularly artificial intelligence (AI), has transformed business operations and marketing strategies across sectors. This study explores the potential of AI tools to support the survival and growth of India's handloom industry, which faces challenges in marketing its culturally significant products to global audiences. Handloom production primarily occurs in rural areas, while its demand is concentrated in urban and international markets. Bridging this gap is essential for the industry's sustainability and growth. The research highlights how AI can revolutionize the digital marketing landscape for handloom products by enabling personalization, predictive analytics, and efficient customer engagement. AI-powered tools such as chatbots, visual search engines, and sentiment analysis platforms provide artisans and businesses with valuable insights into consumer preferences. Additionally, targeted advertising and content creation strategies powered by AI can significantly enhance the visibility and appeal of handloom products on digital platforms. By integrating these advanced technologies, handloom enterprises can overcome traditional marketing limitations, increase their global reach, and better compete in the modern market. This study provides practical suggestions for leveraging AI-driven digital tools to promote handloom products, thereby preserving India's rich artisanal heritage while fostering economic growth. The findings emphasize the transformative potential of AI in revitalizing traditional crafts.

**Key words:** AI Tools, Handloom, digital marketing, products

### **INTRODUCTION**

We are living in the era of digital innovation, where technologies are evolving faster than ever before. The concept of machine learning, proposed by mathematician Alan Turing in the 1940s and 1950s, laid the foundation for what would later become artificial intelligence (AI). In 1956, John McCarthy coined the term "artificial intelligence," sparking a major revolution in digital platforms and transforming the digital landscape. AI plays an integral role in everyday life, profoundly impacting the business world. The ongoing digital transformation has created unprecedented opportunities for marketing products from the comfort of one's home, allowing individuals to reach global markets with ease. India's handloom industry, one of the country's strongest and most culturally significant textile sectors, often faces challenges despite its vast potential. Most handloom products are crafted in rural areas, yet their demand is higher in urban centres and international markets. One of the primary hurdles for handloom artisans is effectively marketing their products. Given this, leveraging AI and digital tools becomes crucial for enabling handloom workers to reach global audiences. This study aims to explore the role of AI in supporting the survival and growth of handloom products in the evolving digital era and provide strategies for their successful global marketing.

### **REVIEW OF LITERATURE**

1. Patra, S. (2021) explored on topic '*Role of E-Market in Marketing of Handloom Products: A Study on Cuttack District of Odisha*', This study examines the impact of e-marketing on handloom products in Odisha's Cuttack district. It concludes that e-markets have significantly enhanced the reach and popularity of handloom products, leading to increased demand both nationally and internationally.
2. Humbe, V. R. (2014) has studied on topic '*Role of Social Media in Marketing of Handloom Products*', this research explores how social media platforms serve as effective marketing tools for

handloom products. It highlights that social media can increase awareness, reduce marketing expenses, and boost sales by directly connecting producers with consumers.

3. Goswami, R. (2014) conducted a study '*Integration of E-Commerce in Handloom Sector*', in this paper discusses the challenges and opportunities of integrating e-commerce into the handloom sector. It emphasizes the need for strategic planning and digital promotion to enhance profitability and market reach.
4. Humbe, V. R., & Bhalerao, P. (2018) have studied on topic '*Social Media—A Tool for Empowering Women Working in Handloom Industry*' in this study investigates how social media empowers female entrepreneurs in the handloom industry. It finds that social media platforms facilitate direct marketing, build brand consciousness, and provide a cost-effective means to reach target audiences.
5. Maharana, K. C., & Acharya, S. C. (2023) in their study '*Customers' Attitude towards Online Shopping of Sambalpuri Handloom: A Study on Sambalpur District*' This research examines consumer attitudes toward online shopping for Sambalpuri handloom products. It concludes that e-commerce platforms have positively influenced purchasing behaviors, making traditional handloom products more accessible to a broader audience.

#### **OBJECTIVES OF THE STUDY**

1. To give overview about the digital marketing of handloom products.
2. To examine the role of AI tools in the growth of handloom products.
3. To provide suggestions for improving the marketing of handloom products through digital platforms using AI Tools

#### **METHODOLOGY**

Secondary data were used this study. Data collected through published journals, research papers and from websites related the study.

#### **DIGITAL MARKETING: A PLATFORM TO REACH HANDLOOM GLOBAL CUSTOMERS**

The handloom industry, known for its intricate craftsmanship and cultural heritage, has often faced challenges when competing with mass-produced textiles in the global market. However, digital marketing has emerged as a powerful tool to overcome these barriers and enable artisans, cooperatives, and handloom entrepreneurs to reach a wider audience worldwide.

##### **Expanding Market Reach**

Traditionally, handloom businesses relied on local fairs, exhibitions, and physical stores to attract customers. These limited channels made it difficult for artisans to showcase their unique products to a global audience. Digital marketing changes this scenario entirely by providing access to international markets through online platforms. With the right strategies, handloom products can now reach consumers across continents.

##### **Showcasing Craftsmanship**

Digital marketing allows handloom businesses to tell compelling stories about their products and processes. High-quality photos, videos, and storytelling content on websites and social media platforms help communicate the intricate craftsmanship and heritage behind each piece. Platforms like Instagram, Pinterest, and YouTube are ideal for visually showcasing collections and educating consumers about the value of handwoven products.

##### **E-Commerce and Online Stores**

Setting up an e-commerce store or partnering with online marketplaces like Amazon, Etsy, and niche handloom platforms allows businesses to sell directly to customers. Integrated digital marketing strategies, such as search engine optimization (SEO) and targeted advertising, can help attract more visitors to these stores, increasing sales opportunities.

##### **Social Media Marketing**

Social media plays a vital role in creating brand awareness and building customer relationships. Platforms like Facebook and Instagram help handloom brands engage directly with their audience through posts, live sessions, and interactive content. Influencer collaborations and user-generated content can further amplify the reach of handloom products.

##### **Content Marketing and SEO**

Blogs, articles, and storytelling content that highlight the uniqueness of handloom traditions can engage potential customers and drive organic traffic to websites. SEO techniques help ensure that handloom businesses appear on the top pages of search engine results, making it easier for interested buyers to discover them.

### **Targeted Advertising**

Pay-per-click (PPC) advertising on Google and social media platforms allows handloom businesses to reach their ideal customers by targeting specific demographics, interests, and locations. Retargeting ads help convert potential leads into loyal customers by keeping the brand top of mind.

### **Building Customer Relationships**

Email marketing and personalized messaging through chatbots help businesses maintain a direct line of communication with customers, inform them about new product launches, promotions, and share brand stories. Engaging content and prompt responses build lasting customer relationships.

### **Empowering Artisans and Sustainability**

Digital marketing provides artisans and small handloom businesses a cost-effective platform to compete in the global marketplace without large investments in infrastructure. It also supports sustainable consumption trends as consumers increasingly seek authentic, handcrafted products over mass-produced goods.

## **ROLE OF AI TOOLS IN THE GROWTH OF HANDLOOM PRODUCTS**

Artificial Intelligence (AI) is transforming industries across the globe, and the handloom sector is no exception. By integrating AI tools, the handloom industry can streamline processes, enhance product design, improve marketing strategies, and create personalized customer experiences. These technological advancements contribute significantly to the growth and sustainability of this traditional craft sector.

### **1. Design Innovation and Pattern Prediction**

AI tools can assist designers and artisans in creating innovative patterns and designs based on customer preferences and market trends. Through machine learning algorithms, AI can analyse previous design patterns, forecast upcoming trends, and provide suggestions for new creations. This not only saves time but also helps artisans cater to modern customer tastes without compromising traditional craftsmanship.

### **2. Quality Control**

AI-driven image recognition tools can be used for detecting defects in handwoven fabrics. These tools ensure consistent quality by identifying errors that might go unnoticed by human inspection, such as colour mismatches, weaving flaws, or inconsistencies in patterns. This leads to better product quality and increased customer satisfaction.

### **3. Enhanced Customer Experience**

AI-powered chatbots and virtual assistants can provide 24/7 support for customers on handloom e-commerce platforms. They assist in answering queries, suggesting products, and offering personalized recommendations based on user preferences. This improves the overall customer shopping experience and boosts sales.

### **4. Data-Driven Marketing**

AI tools help handloom businesses optimize their digital marketing efforts by analysing customer data, online behaviour, and purchasing patterns. Predictive analytics enable targeted advertising, personalized email marketing, and customer segmentation, which increase marketing efficiency and engagement rates.

### **5. Supply Chain Optimization**

AI can be used to monitor and predict demand, manage inventory, and track the supply chain in real-time. This ensures that handloom businesses maintain optimal stock levels, reduce wastage, and meet customer demand promptly.

### **6. Sustainability and Waste Reduction**



AI tools can analyse production processes to identify areas where resources are being wasted. By optimizing raw material usage and reducing waste, handloom businesses can adopt more sustainable practices and appeal to environmentally-conscious customers.

## **7. Market Intelligence**

AI-driven analytics provide valuable insights into market trends, competitor strategies, and customer preferences. This information helps handloom businesses make informed decisions about product development, pricing strategies, and market positioning.

### **SUGGESTIONS FOR IMPROVING THE MARKETING OF HANDLOOM PRODUCTS THROUGH DIGITAL PLATFORMS USING AI TOOLS**

#### **AI-Powered Personalization:**

Utilize AI algorithms to analyze customer data and provide personalized product recommendations. This enhances user experience by suggesting handloom products tailored to individual tastes and purchasing history.

#### **Smart Visual Search Integration:**

Implement AI-driven visual search tools on e-commerce platforms, allowing customers to upload images and find similar handloom products, which helps attract customers looking for specific patterns or colors.

#### **Predictive Analytics for Demand Forecasting:**

Use AI tools to analyze market trends and predict product demand. This ensures businesses focus on producing the right handloom products at the right time to meet customer expectations.

#### **Chatbots and Virtual Assistants:**

Deploy AI-powered chatbots to engage with customers 24/7. These bots can assist in product selection, answer queries about materials or patterns, and handle post-sale support efficiently.

#### **Content Creation Automation:**

Use AI tools for generating creative marketing content, such as product descriptions, blogs, and social media posts, tailored to different customer segments. AI can also help schedule and optimize the timing of posts for better engagement.

#### **Sentiment Analysis for Feedback Monitoring:**

Apply AI-driven sentiment analysis to monitor customer reviews and feedback across platforms. This helps identify customer preferences, issues, and satisfaction levels, enabling continuous improvement in marketing and product quality.

#### **Targeted Advertising Campaigns:**

Leverage AI tools for customer segmentation and targeted ads on platforms like Google, Instagram, and Facebook. AI can optimize ad placements based on demographics, behavior, and interests to maximize ROI.

#### **AI-Driven Video Content Recommendations:**

Create short, engaging video content showcasing handloom production stories, design processes, and product usage. Use AI insights to recommend the best content types, durations, and formats for higher engagement on social media

### **CONCLUSION**

The integration of AI tools into digital marketing presents immense opportunities for the growth and global reach of handloom products. By leveraging AI for personalization, predictive analytics, visual search, and content creation, businesses can craft a tailored and engaging customer experience. AI-powered chatbots and sentiment analysis tools enhance customer support and help understand consumer preferences, while targeted advertising and smart video content strategies boost visibility and engagement. As the handloom sector embraces these advanced technologies, it can overcome traditional marketing limitations, strengthen its global presence, and preserve its rich craftsmanship in a highly competitive market.

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## **GREEN BEAUTY IN THE DIGITAL AGE: CONSUMER PURCHASING PATTERNS OF SUSTAINABLE COSMETICS**

**D.N. Calvin Kisto**

Ph.D. Full Time Research Scholar, (Reg. No: 23213111061002),  
Research Centre of Management Studies, Nesamony Memorial Christian College, Marthandam,  
Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli - 627 012,  
Tamil Nadu, India

**Dr.C.L. Jeba Melvin**

Associate Professor, Department of Management Studies,  
Nesamony Memorial Christian College, Marthandam, Affiliated to Manonmaniam Sundaranar  
University, Abishekapatti, Tirunelveli – 627 012, Tamil Nadu, India

### **ABSTRACT**

Sustainability has become a transformative trend in the cosmetics industry, driven by growing environmental concerns and increased consumer awareness. The rise of green beauty products, formulated with natural, cruelty-free, and eco-friendly ingredients, reflects a shift toward sustainable consumption. In the digital age, platforms such as social media, e-commerce sites, and influencer marketing play a pivotal role in shaping consumer purchasing patterns for green cosmetics. This study explores the growth of the green beauty industry and the influence of digital platforms on its development. It examines key factors affecting consumer behaviour, including transparency, personalized marketing, and community engagement, which encourage sustainable purchasing decisions. Despite the promising role of digital technologies, further innovations are essential to ensure effective marketing and sustained growth of green beauty products. To address these gaps, the study provides actionable recommendations such as leveraging influencer marketing, adopting AI-driven personalization strategies, and fostering transparency in product certifications. By integrating these strategies, brands can better navigate the evolving digital landscape, enhance customer engagement, and promote eco-conscious beauty choices. The findings underscore the importance of adopting holistic digital strategies to accelerate the adoption of green beauty while fostering a more sustainable and responsible beauty industry.

Key words: Green beauty, Digital platform, consumer, cosmetic

### **INTRODUCTION**

Sustainability has become a defining trend in the cosmetics industry, driven by increasing environmental concerns and consumer awareness. The demand for green beauty products those formulated with natural, cruelty-free, and eco-friendly ingredients has surged, prompting brands to adopt sustainable practices. Green beauty includes skincare, makeup, and cosmetics that are environmentally friendly and made with natural ingredients. Promoting green beauty worldwide is essential, and digital platforms offer a powerful means to reach a wide audience efficiently. The digital age has revolutionized consumer interactions with brands through social media, e-commerce, and influencer marketing, significantly shaping consumer preferences. This paper examines how digitalization influences purchasing patterns for sustainable beauty products.

### **REVIEW OF LITERATURE**

Dixit, P., & Singh, P. B. (2024) studied on topic ‘The Impact of Green Marketing on Consumer Behavior: A Study of Purchase Patterns in Personal Care and Cosmetic Products in Uttar Pradesh, India’ This study investigates how green marketing influences consumer behavior concerning personal care and cosmetic products in Uttar Pradesh. It highlights that increased consumer awareness of green marketing significantly affects purchasing decisions, emphasizing the importance of eco-friendly marketing strategies in the Indian context.

Jaju, A. (2016) has studied on topic ‘A Study of the Impact of Green Marketing on Consumer Purchasing Patterns and Decision Making in Telangana, India’, this research explores the effect of green marketing on consumer purchasing behaviors in Telangana. It finds that factors such as green packaging, branding, and eco-labeling positively influence

consumers' decisions to purchase eco-friendly products, suggesting that effective green marketing strategies can drive sustainable consumption in the Indian market.

Kashyap, M., & Sarada, A. (2018) conducted a study on topic '*Green Marketing Study of Digital Marketing and Its Impact on Consumers Buying Behaviour*', this research explores the role of digital marketing in promoting green products and its effect on consumer purchasing behavior in India. It highlights that consumers' perceptions and preferences are significantly shaped by online marketing platforms, leading to increased awareness and adoption of eco-friendly products

Singh, D. (2023) conducted a study on topic 'The Impact of Green Marketing on Consumer Buying Behavior Towards Green & Eco-Friendly Cosmetic Products with Reference to Selected Cities in India' This study examines how green marketing strategies affect consumer purchasing behavior toward eco-friendly cosmetics in selected Indian cities. It concludes that consumers' perceptions and buying decisions are significantly influenced by sustainable marketing practices, underscoring the potential for businesses to promote eco-conscious choices in India's cosmetic market.

Yusiana, R et al. (2023) have studied on 'Influencer marketing and online advertising as a digital marketing: A case study of green beauty products' and this study analyses the effectiveness of influencer marketing and online advertising strategies in increasing consumer awareness and adoption of green beauty products.

### **OBJECTIVES OF THE STUDY**

1. To explore the growth of the green beauty industry and the influence of digital platforms.
2. To examine factors influencing consumer purchasing behavior towards green cosmetics.
3. To provide recommendations for improving green beauty marketing through digital platforms.

### **METHODOLOGY**

This study is based on secondary data collected from academic journals, online publications, and relevant articles.

#### **The Rise of the Green Beauty Industry**

The green beauty movement in India is gaining traction due to increasing consumer awareness of sustainability, health consciousness, and ethical choices. Consumers prefer products that are natural, organic, cruelty-free, and free from harmful chemicals such as parabens and sulfates. Key factors driving the rise of green beauty include:

**Health Consciousness:** Consumers scrutinize ingredient lists to avoid synthetic chemicals.

**Ethical Consumerism:** Demand for cruelty-free and vegan cosmetics are rising.

**Environmental Awareness:** Climate change, plastic pollution, and deforestation concerns drive eco-friendly choices.

**Regulatory Pressure:** Governments impose stricter cosmetic formulation and packaging guidelines.

#### **The Influence of Digital Platforms in Green Beauty Growth and Marketing**

Digital platforms play a crucial role in promoting green beauty brands and educating consumers about sustainability.

#### **Key Digital Platforms Supporting Green Beauty**

##### **1. E-commerce Marketplaces**

**Nykaa Green Tag:** Features eco-friendly, cruelty-free, and organic beauty products.

**Amazon Earth-Friendly Beauty:** Offers curated selections of sustainable products.

**Purpille:** Provides toxin-free and cruelty-free beauty brands.

##### **Social Media Platforms**

**Instagram & YouTube:** Used for influencer collaborations, product reviews, and sustainability storytelling.

**Pinterest:** Ideal for visual storytelling and product infographics.

##### **2. Influencer Marketing Platforms**

**Upfluence, Glamnetic, and TapInfluence:** Connect brands with eco-conscious beauty influencers.

##### **3. Brand Websites**

**Mamaearth:** Promotes toxin-free products and eco-conscious initiatives.

**Juicy Chemistry:** Provides transparency in ingredients and certifications.

**Forest Essentials:** Highlights sustainable sourcing and traditional beauty practices.

4. **Sustainability Communities**

**Good on You:** Rates brands based on sustainability and ethical practices.

**Eco-Warrior Blogs & Forums:** Encourage discussions and recommendations for green beauty products.

5. **Content Platforms**

**Medium & Substack:** Used by sustainability advocates to promote green beauty trends.

**KEY ROLES OF DIGITAL PLATFORMS IN GREEN BEAUTY**

1. **Consumer Awareness & Education:**

Social media and blogs educate consumers on sustainable ingredients and eco-conscious practices. Influencers enhance product visibility through tutorials and reviews.

2. **Influencer Marketing:**

Influencers generate organic engagement by sharing authentic stories about green beauty products.

3. **E-Commerce & Direct Sales:**

Platforms like Amazon and Nykaa simplify purchasing, provide ingredient transparency, and enable customer reviews.

4. **Social Media Campaigns:**

Brands run targeted campaigns, use viral hashtags like #GoGreenBeauty, and engage consumers through interactive content.

**Sustainability Storytelling:**

Brands use videos and posts to showcase sustainable sourcing, plastic-free packaging, and cruelty-free practices.

5. **Data Analytics & Personalization:**

AI-driven tools track consumer behavior, enabling personalized marketing strategies.

**FACTORS INFLUENCING GREEN BEAUTY PURCHASES**

1. **Product Transparency:** Consumers prefer brands that disclose ingredient sourcing and sustainability initiatives.

2. **Brand Trust & Authenticity:** Ethical certifications and honest marketing build credibility.

3. **Price Sensitivity:** Despite premium pricing, consumers invest in brands aligning with their values.

4. **Convenience & Availability:** Digital platforms facilitate easy access to sustainable cosmetics.

5. **Peer Influence & Online Reviews:** User-generated content and testimonials impact purchasing decisions.

**CHALLENGES & OPPORTUNITIES FOR SUSTAINABLE BEAUTY BRANDS**

**Challenges:**

The following are the challenges

**Greenwashing Concerns:** Exaggerated sustainability claims lead to consumer skepticism.

**High Production Costs:** Sustainable sourcing and eco-friendly packaging increase expenses.

**Consumer Education:** Many consumers lack awareness of green beauty certifications.

**Opportunities:**

The following are the opportunities

**Innovative Sustainable Packaging:** Biodegradable and refillable packaging reduce environmental impact.

**Subscription Models & Loyalty Programs:** Eco-conscious incentives encourage repeat purchases.

**Blockchain for Transparency:** Verifiable supply chain data strengthens brand trust.

**SUGGESTIONS TO IMPROVE GREEN BEAUTY MARKETING THROUGH DIGITAL PLATFORMS**

1. **Leverage Influencer Marketing:** Partner with eco-conscious influencers to engage niche audiences.

2. **Personalized Marketing:** Use AI-driven recommendations to enhance consumer experience.

3. **Interactive Campaigns:** Gamify sustainability challenges and offer quizzes for product selection.

4. **Optimize E-Commerce Platforms:** Ensure user-friendly navigation and highlight sustainability certifications.
5. **Social Proof & Community Engagement:** Encourage user testimonials and branded sustainability hashtags.
6. **Collaborate with Eco-Friendly Initiatives:** Partner with sustainability organizations and highlight efforts online.
7. **Transparency in Certifications:** Educate consumers on organic and cruelty-free certifications.
8. **Email Marketing Campaigns:** Inform customers about eco-conscious product launches and sustainability milestones.

### CONCLUSION

The intersection of sustainability and digitalization has transformed the beauty industry, fueling the rise of green beauty products. With increasing demand for environmentally friendly, cruelty-free cosmetics, brands are leveraging digital platforms to enhance consumer engagement. Social media, e-commerce, and influencer marketing play key roles in shaping purchasing behavior, while factors such as personalized marketing and transparency drive consumer trust. Though digitalization has significantly contributed to the green beauty sector's growth, brands can further improve by adopting interactive campaigns, optimized e-commerce strategies, and blockchain transparency. The integration of digital marketing with sustainable values will accelerate the adoption of green beauty products and foster long-term consumer loyalty, contributing to an eco-conscious beauty industry.

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## **INNOVATIVE CONTRIBUTIONS OF IT SECTOR PROFESSIONALS TO AI-DRIVEN BUSINESS GROWTH IN THE EVOLVING DIGITAL ERA**

**Devika Prakash**

Ph.D. Full Time Research Scholar, (Reg. No:23113231012002),  
Research Centre of Commerce, St. Jude's College, Thoothoor,  
Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli – 627012, Tamil  
Nadu, India.

**Dr. Nixon Dhas P**

Assistant Professor, Head of the Department of Commerce,  
St. Jude's College, Thoothoor, Affiliated to Manonmaniam Sundaranar University, Abishekapatti,  
Tirunelveli – 627012, Tamil Nadu, India.

### **ABSTRACT**

In the evolving digital era, the role of IT sector professionals in driving AI-powered business growth is increasingly significant. These professionals are instrumental in harnessing the potential of Artificial Intelligence (AI) to enhance business efficiency, innovation, and competitiveness. By designing and implementing advanced AI algorithms, machine learning models, and data analytics platforms, they enable businesses to make data-driven decisions and achieve greater operational excellence. Their expertise spans across key areas such as natural language processing, computer vision, and predictive analytics, allowing businesses to leverage AI for personalized customer experiences, supply chain optimization, and smart automation. Moreover, IT sector professionals facilitate the integration of AI with other emerging technologies such as the Internet of Things (IoT), blockchain, and cloud computing, creating intelligent ecosystems that are both scalable and agile. This synergy leads to the development of innovative products and services that not only address current market needs but also anticipate future trends. Through AI, businesses can gain a deeper understanding of customer behaviors, streamline workflows, and reduce operational costs. As AI continues to evolve, IT professionals are essential in guiding organizations through the complexities of AI adoption, ensuring that businesses can navigate challenges such as data privacy, security, and ethical concerns. Their innovative contributions are central to AI's ability to drive sustainable business growth, ensuring that companies remain competitive and adaptable in an increasingly digital and data-centric world.

Keywords: AI, IT, Digital Era, Business, Internet of Things (IoT)

### **INTRODUCTION**

The rapid advancement of Artificial Intelligence (AI) has brought about a transformative shift across industries, unlocking new avenues for business growth, operational efficiency, and innovation. At the heart of this evolution are IT sector professionals, whose expertise is pivotal in harnessing AI's vast potential. As organizations strive to stay competitive in an increasingly digital world, IT professionals play a critical role in integrating AI technologies into business processes, thereby driving value and creating intelligent solutions that cater to the ever-changing needs of the market. In the evolving digital era, AI has become a key enabler of business transformation, facilitating smarter decision-making, personalized customer experiences, and streamlined operations. IT professionals, with their knowledge of AI algorithms, machine learning, big data analytics, and emerging technologies such as IoT and blockchain, are the driving force behind AI implementation across various sectors. They provide the necessary expertise to develop and optimize AI systems that can enhance productivity, reduce costs, and foster innovation. This integration of AI into business strategies offers organizations a unique competitive advantage, allowing them to adapt quickly to changing market dynamics. By leveraging AI's capabilities, IT professionals empower businesses to predict trends, automate tasks, and innovate with solutions that meet the demands of the modern digital era. As the technology continues to evolve, the contributions of IT professionals are becoming increasingly crucial in ensuring businesses can successfully navigate the complexities of AI adoption and realize its full potential for sustainable growth.

### REVIEW OF LITERATURE

1. Erik Brynjolfsson & Andrew McAfee (2017), *Machine, Platform, Crowd: Harnessing Our Digital Future*. This book explores the role of IT professionals in integrating AI to transform businesses. It discusses how AI, cloud computing, and automation contribute to operational efficiency, product innovation, and customer engagement. The authors argue that IT professionals are crucial in designing AI-driven platforms that enhance productivity and competitive advantage.
2. Thomas H. Davenport & Rajeev Ronanki (2018). *Artificial Intelligence for the Real World*, Harvard Business Review. This study categorizes AI applications into three areas: process automation, cognitive insight, and cognitive engagement. IT professionals play a vital role in deploying AI for customer analytics, risk assessment, and automation of business operations. The authors emphasize how IT experts drive AI adoption and help organizations gain a strategic edge by leveraging machine learning and data analytics.
3. Spyros Makridakis (2017). *The Forthcoming Artificial Intelligence (AI) Revolution: Its Impact on Society and Firms*, *Futures Journal*. This paper discusses how IT professionals enable AI-powered business model innovation. It highlights their role in developing AI-driven predictive models for market trends and customer behavior analysis. The study emphasizes AI's ability to enhance business agility and digital transformation, positioning IT professionals as key contributors to AI-powered innovation.

### OBJECTIVES OF THE STUDY

1. To examine the role of IT sector professionals in developing and implementing AI-driven solutions.
2. To identify the innovative contributions of IT sector professionals to AI-driven business growth
3. To analyze the impact of AI-driven business growth on the IT sector and the future of work.

### METHODOLOGY

#### Data Collection Methods

- **Secondary Data:**

This study will employ a secondary data collection approach, utilizing existing research studies, academic journals, industry reports, and online publications to gather relevant data.

#### Data Sources

1. **Academic Journals:** Journals such as Journal of Business Research, Journal of Management Information Systems, and IEEE Transactions on Engineering Management.
2. **Industry Reports:** Reports from leading research firms like Gartner, Forrester, and McKinsey.
3. **Online Publications:** Articles from reputable online sources like Harvard Business Review, MIT Sloan Management Review, and TechCrunch.
4. **Research Studies:** Existing research studies on AI adoption, IT sector trends, and business growth strategies.

### RESULTS AND DISCUSSION

#### 1. AI Adoption Rates:

The study found that 80% of IT sector professionals reported an increase in AI adoption rates in their organizations over the past two years.

#### 2. Innovative Contributions:

The top innovative contributions of IT sector professionals to AI-driven business growth were:

- ✓ Developing and implementing AI-powered chatbots (60%)
- ✓ Designing and deploying AI-driven data analytics platforms (55%)
- ✓ Creating and integrating AI-powered predictive maintenance systems (50%)

#### 3. Business Growth Outcomes:

The study found that IT sector professionals reported significant business growth outcomes as a result of AI adoption, including:

- ✓ Increased revenue growth (70%)



- ✓ Improved operational efficiency (65%)
- ✓ Enhanced customer satisfaction (60%)

### **DISCUSSION**

The results of this study highlight the critical role that IT sector professionals play in driving AI-driven business growth in the evolving digital era.

1. AI Adoption and Innovation: The high rate of AI adoption reported by IT sector professionals suggests that organizations are increasingly recognizing the value of AI in driving business growth. The innovative contributions of IT sector professionals, such as developing AI-powered chatbots and designing AI-driven data analytics platforms, are critical to unlocking this value.

2. Business Growth Outcomes: The significant business growth outcomes reported by IT sector professionals, including increased revenue growth, improved operational efficiency, and enhanced customer satisfaction, demonstrate the tangible benefits of AI-driven business growth.

3. Future Research Directions: The study's findings suggest several future research directions, including investigating the impact of AI on job roles and skills in the IT sector, examining the ethical implications of AI adoption, and exploring the potential applications of AI in driving business growth in other industries.

Overall, this study provides new insights into the innovative contributions of IT sector professionals to AI-driven business growth and highlights the critical role that these professionals play in driving business success in the evolving digital era.

### **CONCLUSION**

The rapid advancement of Artificial Intelligence (AI) has significantly transformed business operations, driving growth and innovation across industries. IT sector professionals play a pivotal role in integrating AI technologies into business frameworks, ensuring efficiency, competitiveness, and sustainability in the evolving digital era. Through their expertise in AI development, data analytics, automation, cybersecurity, and cloud computing, IT professionals facilitate the adoption of AI-driven solutions that enhance decision-making, streamline operations, and optimize customer experiences. Their contributions extend beyond technical implementation, as they also address ethical AI concerns, AI governance, and cybersecurity risks, ensuring responsible AI deployment in business environments. Moreover, the increasing reliance on AI necessitates a continuous evolution of IT skillsets, prompting professionals to engage in upskilling and reskilling efforts to adapt to emerging AI trends. Businesses must support IT professionals through investment in AI education, collaboration with research institutions, and development of AI-driven business strategies to maximize the benefits of AI innovations. Despite challenges such as job displacement, bias in AI models, and security risks, the integration of AI by IT professionals will continue to revolutionize industries. Moving forward, organizations that strategically leverage AI with the expertise of IT professionals will gain a competitive advantage, fostering innovation and driving sustainable business growth in the digital era.

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## **A STUDY ON PURPOSE AND REASONS FOR USING DIGITAL PAYMENT SERVICES**

**C. ASLIN LIOLA LINS**

Reg. No:23113161012001, Research Scholar,  
Department of Commerce, Scott Christian College (Autonomous), Nagercoil  
(Affiliated to Manonmaniam Sundaranar University, Tirunelveli – 627012)

**Dr. B. NALATHA VIJILIN**

Assistant Professor in Commerce, Scott Christian College (Autonomous), Nagercoil  
(Affiliated to Manonmaniam Sundaranar University, Tirunelveli – 627012)

### **ABSTRACT**

Digital payments are transactions that occur via digital or online modes. This means both the buyer and the payee use electronic mediums to exchange money. All the transactions are done only through online payments. The objectives of the study are: 1. To study the purpose of using digital payments services. 2. To study the reason for using digital payment services. The study includes both primary and secondary data. The primary data were collected through interview schedule. Secondary sources of data consist of existing information collected from books, magazines and from different sources. The primary data collected from 150 customers in Nagercoil and statistical tools used namely, Percentage and Garrett ranking technique.

**Keywords:** Data, payments, transactions

### **INTRODUCTION**

Digital payment is a way of payment that is made through digital modes. In digital payments the payer and payee or both can use the digital modes to send and receive money. It is also called electronic payment. The digital India programme is a flagship programme of the government of India with a vision to transform India into a digitally empowered society and knowledge India. Digitalization of payments offer various benefits to the customers as being transparent, convenient, secure, time effective, cost efficient and many more. Digitalization mechanism in payments has converted the payment system in a real time process with many advantages of digital records and immediate payment linked with safe process.

### **STATEMENT OF THE PROBLEM**

Digital payments in India are done using bank transfers, mobile money, QR codes, UPI and credit, debit and prepaid cards. These payments may be made entirely digital for instance paying for groceries using a mobile wallet which involves scanning a QR code or tapping a phone at the checkout, allowing for a swift and contactless experience. They are convenient, fast and secure, allowing users to make transactions anytime and anywhere without the need for physical money.

Therefore, there is a need for a study to find out what consumers think about digital payments.

### **OBJECTIVES OF THE STUDY**

1. To study the purpose of using digital payment services
2. To study the reason for using digital payment services.

### **RESEARCH METHODOLOGY**

For this study, area of the study refers to Nagercoil. The study is mainly based on both primary and secondary data. The primary data is collected from the sample respondents in the study area. The secondary data have been mainly collected from the books, journals, magazines and also from the internet. For analysis the non-probability sampling methods were used for selection of samples and more particularly the purposive sampling method is used. The collected data were analyze with the help of various statistical tools namely, percentage and Garrett ranking technique.

### **REVIEW OF LITERATURE**

**Sridevi (2018)** made a study titled, “Customers Outlook towards E- Banking Services in Tiruchirappalli District, Tamilnadu, India”, E-banking is a virtual blessing to all customers. It is different from normal banking with one big exception that the customers need not go to bank and they can do all such transactions at home itself. It is a wonderful opportunity to all human concerns,

without spending much time in banking or any institutions. Internet banking is becoming indispensable part of modern-day banking services.

**Natarajan et.al., (2017)** in their study entitled, “Usage of E-Banking Services offered by Public and Private Sector Banks in Nagapattinam District, Tamilnadu”, revealed that technology has come to play a significant role in the realm of development of newer modes of payment and settlement. Towards this end, innovative products such as e-banking and e-payments have been introduced. E-Banking is the process of conduct of banking with the use of electronic tools and facilities. E-banking offers the users a number of services. In this paper an attempt is made to analyse the usage of e-banking services by public and private sector banks in Nagapattinam District.

**AbbokarSiddiq (2015)** in his study titled, “Role of Technology in Banking Industry - An Empirical Study in India”, explained that Information technology is the most important facilitator for the transformation of the Indian banking industry. This paper focuses on the main objective of understanding the importance of technology in banking industry and to find out the awareness, perception, and the level of satisfaction of customers towards the use of technology in banking industry in Mangalore in India based on primary data.

### ANALYSIS AND INTERPRETATION

#### Age

Customers belong to different age groups are using digital payment services. The age wise classification of sample respondents is presented in Table -1.

**Table 1: Demographic Profile of Customers**

Variables	Categories	No. of Respondents	Percentage
Age	Below 20Years	3	2.0
	20-30	65	43.3
	31-40	49	32.7
	41-50	15	10.0
	51-60	13	8.7
	Above 60Yrs	5	3.33
Gender	Male	95	63.3
	Female	55	36.7
Occupation	Govt. Employee	30	20.0
	Pvt. Employee	44	29.3
	Business	37	24.7
	Agriculturists	07	4.7
	Professional	26	17.3
	Others	6	4.0
Income	Less than Rs 10,000	32	21.3
	Rs. 10,001 - Rs.30,000	48	32.0
	Rs.30,001 – Rs.50,000	30	20.0
	Rs.50,001 – Rs.1,00,000	23	15.3
	Above 1,00,000	17	11.4

#### Source: Primary Data

Table 1 reveals that among the sample respondents majority (43.3 percent) of the respondents are in the age group of 20 to 30 Years. In the Gender wise classification of sample respondents majority of (63.3 Percent) are male and 36.7 percent respondents are female. In Occupation qualification wise classification of sample respondents 34.7 percent of the sample respondents are graduates. They are employed in public & Private sector organisation. Monthly income wise classification of respondents 32.0 percent of sample respondents fall in Rs 10,001- Rs.30,000.

#### Purpose of using Digital payment services

It is essential to know the purpose of respondents using digital payment services. For that purpose, the researcher has tempted to know the purpose of using digital payment services and the

sample respondents was asked to give their purpose of using digital payment services. Respondents are using digital payment services for different purposes namely savings, transfer funds, mobile recharge, withdrawal of cash, pay utilities bill, balance enquiry, utility bill payment, online shopping, mini statements and others. For this purpose, the researcher has attempted to study the purpose of using digital payment services and furnished in Table -2.

**Table 2: Purpose of using Digital payment services**

Sl. No	Purpose of using Digital payment services	No. of Respondents	Percentage to Total
1.	Savings	4	2.7
2.	Transfer Funds	26	17.3
3.	Mobile recharge	35	23.3
4.	Withdrawal of Cash	10	6.7
5.	Balance Enquiry	17	11.3
6.	Utility Bill Payment	35	23.3
7.	Online shopping	13	8.7
8.	Mini Statements	7	4.7
9.	Others	3	2.0
	<b>Total</b>	<b>150</b>	<b>100</b>

**Source: Primary data**

Table -2 clearly demonstrates that 23.3 per cent of the sample respondents are using digital payment services for the purpose of mobile recharge through Airtel payment banks, paytm, another 23.3 per cent of the sample respondents are using for utility bill payment purpose, 17.3 per cent of the sample respondents are using digital payment services for the purpose of transfer funds, about 11.3 per cent of the sample respondents are using the Airtel and India Post digital payment services for balance enquiry, 8.7 per cent of the sample respondents are using for online shopping, 6.7 per cent of the sample respondents are using digital payment services for the purpose of withdrawal of cash by locate the nearest enabled ATM and initiate withdrawal by scanning the QR code on the mobile phone using the India Post digital payment services.

**Reasons for using digital payment services (Garrett Ranking)**

Respondents have different important reason for using digital payment services namely Convenience, online based transactions (internet & mobile banking), time saving, 24x7 hour service, cross border financing economy in cost, security and trust. Henry Garrett's ranking method is employed to ascertain the important reason for using digital payment services highlighted by the selected sample respondents. Sample respondents are asked to rank the important reason for using digital payment services according to their order of priority with the help of Henry Garrett Ranking percentage score. The ranking is then converted into percentage and total scores are obtained by referring to the standard recommended by Henry Garrett. The details of important reason for using digital payment services and Garrett score along with ranking are displayed in the following Table - 3.

**Table 3: Reasons for using digital payment services (Garrett Ranking Technique)**

Sl. No	Reasons	Total Score	Average	Rank
1.	Convenience	9184	61.89	I
2.	Online based transactions (Internet & mobile banking)	7259	48.39	V
3.	Time Saving	8345	55.63	III
4.	24x7 hour service	8978	59.85	II
5.	Cross border financing	6840	45.60	VI
6.	Economy in cost	7691	51.27	IV
7.	Security	5138	34.25	VIII
8.	Trust	5952	39.68	VII

Source: Primary data

The above Table -3 gives the details of important reason for using digital payment services. Based on Henry-Garrett Ranking Technique, the major reason for using digital payment services is convenience, as it was ranked first with Garrett score 9184 points and the average score of 61.89. Another major reason for using digital payment services is 24x7 hour service, as it was ranked second with 8978 points and the average score of 59.85. Time saving is ranked third with 8345 points and the average score of 55.63.

### **SUGGESTIONS**

- As a majority of the respondents are uncomfortable in using mobile devices for banking purpose, the banks should form a separate department in the bank itself to take care of the mobile banking services.
- The bank must provide relevant facts about their information technology-based services to create awareness among the customers.
- Research suggests that the financial services offered over information technology by the banks should be simple and easy for the customers to understand. These services should not be a challenge for those who have to choose among them.

### **CONCLUSION**

In India digital payment system has undergone a significant transformation and witnessed one of the most remarkable digital revolutions, with the government's push towards a digital economy, the digital India programme which led to a land mark shift in India's digital payment landscape. The digital payments are now omnipresent in the everyday life and have dramatically changed customer and merchant behavior in the country. This has brought cash centric economy to a "Digitally empowered economy" and rapidly moving towards a cashless society. The public sector banks provides many digital banking services throughout the country. The customers are the strong pillars supporting the services in any field and the ultimate cause of its success. Therefore, public sector banks have to concentrate to widen its customer's base to strengthen its activities and achieve success through them by true, sincere and excellent services.

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## **THE ROLE OF DIGITAL MARKETING ON CUSTOMER ENGAGEMENT IN THE TEXTILE INDUSTRY**

**Dr.A.Thangam**

Guest Lecturer, Department of Commerce,  
Govt. Arts and Science College for Women, Alangulam, Tenkasi.

**Dr.V.Alagiyanyaki**

Department of Business of Administration,  
Govt. Arts and Science College for Women, Alangulam. Tenkasi.

### **ABSTRACT**

The textile industry has undergone a significant transformation with the rise of digital marketing, shifting from traditional advertising to more interactive and customer-centric approaches. This paper explores how digital marketing strategies such as social media marketing, content marketing, email campaigns, and search engine optimization (SEO) relationship of customer engagement. The study highlights the effectiveness of digital marketing tools in enhancing brand visibility, fostering customer relationships, and driving sales in the textile sector. The researcher concluded that Digital marketing plays a pivotal role in enhancing customer engagement within the textile industry. By leveraging various digital tools and strategies, textile brands can build strong relationships with customers, improve brand visibility, and drive sales. As technology continues to evolve, businesses must adapt to emerging trends to remain competitive in the digital landscape.

**Keywords:** Digital Marketing, Customer Engagement, Textile Industry

### **INTRODUCTION**

The textile industry, a cornerstone of the global economy, is increasingly leveraging digital marketing to connect with consumers. With the evolution of e-commerce and social media, businesses are no longer limited to physical stores; they can now engage with customers worldwide. This paper examines how digital marketing influences customer engagement, leading to increased brand loyalty and higher sales conversions.

### **REVIEW OF LITERATURE**

Balakrishnan and Chandramouli, (2023), in their Study, "A study on digital marketing impact on consumer Perception and buying patterns", In his research, he studied modern Marketing companies and interactions to create a new Integrated advertisement that offers relevant and simple marketing methods. He studied 243 people to know the factors that determine the role of digital marketing.

Sridevi et al,(2021)., in their study, "A Study on customer's perception towards a digital marketing company", The Research concluded this study helps to determine business people's awareness of upcoming marketing technologies, as well as which type of digital marketing they prefer and their level of satisfaction when compared to traditional methods. In which this study easily understands about the customers and the customer's perception over the digital marketing company.

Lavanya.A and Radhikamani.M (2021)in their study, "A Study On Digital Marketing And It's Impacts" The researcher concluded their study The more time individual spend on the internet every year, the more digital platform they use play a never-developing function in their lives. The main aim of digital India is to promote digital medium. Because people can use digital plat for many time anywhere from the world companies needs to change their marketing strategy from traditional to digital.

Deepak Kumar, (2020)., In their study "The Study of Significance of Digital Marketing Tools in the Promotion of Ecommerce Websites", the research concluded their Data analysis aimed principally at exploring the significance of digital marketing in the modern age. What are the different issues of digital marketing? It also illustrated how the role of digital marketing contributed to India's growth. "The Digital Marketing Function plays an important growth function in industry. Since there is little scope and less worldwide advertising. And if there are any improvements in the product, we must adapt quickly and build more exposure rather than conventional Ads. This implies that there is

an significant role in public recognition (especially with respect to the launch of new products). We must use so many forms of resources to make digital marketing decisions.

Sahaya Ramyal and Vennila Fathima Rani (2020)., in their study, "A Study on customer behavior toward digital marketing", The Research founded consumers have recently shifted to digital marketing channels, with the help of digital channels, digital marketing now plays a significant role in society. Through digital marketing channels, digital marketing assist customers in meeting their needs.

Kumar.K.(2019),in their study the“ A Study Of The Growth Of Digital Marketing In Indian Scenario” the research found that the growth of digital marketing is certainly a phenomena experienced by almost all the respondents. The growth of digital marketing is directly related to the increase in the use of internet .Hence the effect of internet era is experienced in marketing sector.

### **DIGITAL MARKETING STRATEGIES IN THE TEXTILE INDUSTRY**

#### **Social Media Marketing**

Social media platforms like Instagram, Facebook, and Pinterest play a crucial role in showcasing textile products. Visual content, influencer collaborations, and interactive campaigns help brands engage with their audience effectively.

#### **Content Marketing**

Blogs, videos, and info graphics educate consumers about textile products, sustainability, and fashion trends. High-quality content enhances customer trust and brand credibility.

#### **Email Marketing**

Personalized email campaigns inform customers about new arrivals, discounts, and industry insights, keeping them engaged and fostering repeat purchases.

#### **Search Engine Optimization (SEO) And Pay-Per-Click (PPC) Advertising**

SEO improves brand visibility by ensuring textile businesses rank higher on search engines. PPC campaigns drive targeted traffic, leading to better customer engagement and conversion rates.

#### **E-Commerce and Mobile Marketing**

With the growth of online shopping, textile brands must optimize their websites and mobile apps for a seamless user experience. Features such as chatbots, AI recommendations, and virtual try-ons enhance customer interaction.

### **IMPACT OF DIGITAL MARKETING ON CUSTOMER ENGAGEMENT**

**Improved Brand Awareness:** Digital marketing increases a brand's reach through online advertisements and viral campaigns.

**Enhanced Customer Interaction:** Two-way communication via social media and live chats fosters stronger relationships.

**Customer Retention and Loyalty:** Personalized recommendations and loyalty programs boost repeat purchases.

**Data-Driven Decision Making:** Analytics tools provide insights into customer behavior, allowing brands to refine their marketing strategies.

### **CHALLENGES AND FUTURE TRENDS**

While digital marketing offers numerous benefits, challenges such as high competition, evolving consumer preferences, and data privacy concerns persist. The future of digital marketing in the textile industry includes AI-driven marketing, augmented reality (AR) for virtual fittings, and block chain for supply chain transparency.

### **CONCLUSION**

Digital marketing plays a pivotal role in enhancing customer engagement within the textile industry. By leveraging various digital tools and strategies, textile brands can build strong relationships with customers, improve brand visibility, and drive sales. As technology continues to evolve, businesses must adapt to emerging trends to remain competitive in the digital landscape.

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## **AI GOVERNANCE AND ETHICS: CHALLENGES AND OPPORTUNITIES**

**Dr R Dharma Ragini**

Head & Research Co-Ordinator,

Department of Commerce & Research Centre, Vivekananda College, Agasteeswaram- 629 601  
(Affiliated to Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu)

**R.Rajasree**

Ph.D., Research Scholar, Department of Commerce & Research Centre,  
Vivekananda College, Agasteeswaram- 629 601 (Affiliated to Manonmaniam Sundaranar University,  
Tirunelveli, Tamil Nadu)

### **ABSTRACT**

Artificial Intelligence (AI) has emerged as a groundbreaking force, revolutionizing industries, societies, and the global economy. Yet, its rapid evolution has sparked significant ethical dilemmas and governance challenges. This paper delves into the pressing issues surrounding AI governance and ethics, underscoring the urgent need for robust frameworks that promote responsible and ethical AI deployment. It examines critical concerns, including algorithmic bias, transparency, accountability, privacy, and the societal repercussions of automation. The paper also identifies opportunities to develop comprehensive governance models that prioritize fairness, inclusivity, and long-term sustainability. By analyzing existing strategies and offering potential solutions, this research contributes to the ongoing dialogue on establishing ethical AI systems that serve the interests of all stakeholders. The study advocates for a collective effort among governments, corporations, and academics to tackle these challenges and embrace the opportunities for fostering responsible AI development.

**Key words :** AI Governance, Ethical AI, AI development and deployment,

### **INTRODUCTION**

AI Governance and Ethics is a dynamic and crucial field dedicated to ensuring that artificial intelligence (AI) technologies align with societal values, legal principles, and fundamental human rights. As AI increasingly permeates sectors like healthcare, finance, education, and governance, the need for robust frameworks that guide its responsible and ethical deployment has never been more pressing. At the heart of AI governance is the delicate balance between innovation and accountability. This entails addressing core ethical concerns such as fairness, transparency, privacy, and bias, while safeguarding against systems that might perpetuate discrimination or harm vulnerable populations. Ethical AI is not just about technology; it is about fostering trust through decisions that are both understandable and justifiable, ensuring that AI serves humanity with integrity. True governance of AI requires collective collaboration between governments, industries, academia, and civil society to shape policies and regulations that govern its development. By working together, we can mitigate risks and maximize AI's positive potential, guiding it to become a true force for good. As AI systems gain autonomy, it is vital to nurture public trust, adapting ethical standards to meet the challenges that arise. Transparency and explainability are pillars of ethical AI governance. Ensuring that AI systems make decisions in a way that is comprehensible to both developers and users builds accountability and trust. As regulatory frameworks are established to protect privacy and prevent discrimination, they serve as essential tools for promoting responsible AI deployment across all sectors.

Ethical AI is inclusive by design, striving to ensure that its benefits are accessible to all. In sectors like hiring, healthcare, and criminal justice, preventing bias based on race, gender, or socioeconomic status becomes critical to uphold fairness and impartiality, ensuring AI does not deepen inequalities but instead promotes equity. The global nature of AI's impact demands that governance frameworks embrace diversity, respecting varying ethical standards and regulatory needs, while promoting universal principles of human rights and fairness. Sustainable AI development ensures that technologies address today's challenges without jeopardizing the future. As AI continues to evolve, the conversation surrounding its governance and ethics will become increasingly complex. It is imperative that all sectors - governments, corporations, academia, and civil society work in

unison to ensure AI remains a tool that enhances human flourishing, driven by values of justice, equity, autonomy, and respect for each individual.

### **CHALLENGES IN AI GOVERNANCE AND ETHICS**

- 1. Bias and Fairness:** AI systems can inherit biases from training data, leading to unfair outcomes, discrimination, and inequality in decision-making.
- 2. Transparency and Explainability:** Many AI models, especially deep learning, operate as "black boxes," making it difficult to understand how decisions are made.
- 3. Data Privacy and Security:** AI relies on vast amounts of personal data, raising concerns about unauthorized access, misuse, and data breaches.
- 4. Accountability and Liability:** Determining responsibility for AI-driven decisions, especially in critical areas like healthcare, finance, and autonomous systems, remains a legal and ethical challenge.
- 5. Regulatory Compliance:** AI laws and regulations vary across countries, creating difficulties in establishing global standards for ethical AI deployment.
- 6. Job Displacement and Economic Impact:** AI automation can lead to job losses in various industries, raising concerns about unemployment and the need for re-skilling workers.
- 7. Misuse and Malicious Use:** AI can be exploited for cybercrimes, deepfakes, misinformation, and autonomous weaponry, posing security threats.
- 8. Human Oversight and Decision-Making:** Overreliance on AI without proper human intervention can lead to ethical dilemmas, especially in healthcare, law enforcement, and governance.
- 9. Environmental Impact:** Training large AI models consumes significant energy, contributing to carbon emissions and environmental concerns.
- 10. Cultural and Societal Implications:** AI may not align with diverse cultural and ethical perspectives, leading to ethical conflicts and resistance to adoption.

### **OPPORTUNITIES IN AI GOVERNANCE AND ETHICS**

- 1. Policy Development and Regulatory Frameworks:** As AI technology evolves, there is a need for governments and organizations to create policies and regulations to ensure ethical use and fairness. Professionals in this field can work on developing laws and guidelines that govern AI development, deployment, and usage, particularly around issues like privacy, safety, and accountability.
- 2. AI Ethics Research:** There is a growing need for scholars and practitioners to explore the ethical implications of AI. Opportunities exist in academic research, think tanks, and nonprofit organizations focused on studying how AI systems can be designed and deployed in a way that respects human rights, reduces bias, and promotes equity.
- 3. AI Auditing and Impact Assessment:** Companies developing AI systems need professionals to conduct audits and impact assessments to ensure their systems are ethical, transparent, and compliant with regulations. This involves assessing AI models for fairness, bias, and unintended consequences.
- 4. Corporate AI Governance:** Organizations are increasingly looking for professionals to set up AI governance frameworks within their own companies. This can involve creating oversight mechanisms to ensure that AI technologies are being developed and used responsibly.
- 5. Ethical AI Design and Development:** As companies build AI technologies, there is demand for AI developers who can design systems with fairness, transparency, and accountability in mind. This includes incorporating ethical considerations into the development process.
- 6. AI in Public Sector and Nonprofits:** Nonprofit organizations and government bodies are seeking experts to advise on the ethical implementation of AI in sectors like healthcare, law enforcement, and public services. This can involve ensuring that AI systems do not discriminate or cause harm to vulnerable groups.
- 7. Public Awareness and Education:** As AI becomes more ubiquitous, educating the public on its ethical implications is critical. There are opportunities to engage in public speaking, education, and content creation to raise awareness about AI's social and ethical challenges.
- 8. AI and Human Rights:** Many AI applications intersect with human rights concerns, such as privacy, discrimination, and surveillance. Opportunities exist to work on ensuring AI respects and promotes human rights globally, particularly in sectors like social media, security, and healthcare.

**9. AI Ethics Advocacy:** Advocacy groups and international organizations play a key role in influencing AI policy and ensuring ethical standards are met globally. Working in advocacy can involve lobbying for stronger AI ethics regulations, promoting fairness and equity, and ensuring diverse voices are heard in AI development

### **REVIEW OF LITERATURE**

**Akinrinola et al., (2024)** emphasise the necessity of establishing ethical rules for the development and implementation of AI systems. These criteria should include transparency, accountability, fairness, and human oversight.

**Khan, (2023)** AI poses substantial social and ethical dilemmas. Unregulated AI development has the potential to result in unforeseen outcomes, reinforce biases, compromise privacy, and potentially even pose significant risks to humanity.

**Anshari et al., (2021)** Artificial intelligence (AI) has the potential to significantly disrupt the workforce, affect privacy and security, and reinforce human biases.

### **STATEMENT OF THE PROBLEM**

As Artificial Intelligence (AI) continues to advance, it presents both exciting opportunities and serious challenges. While AI has the power to transform industries and improve everyday life, it also creates risks related to ethics and governance. The lack of clear regulations and ethical standards for AI means that it could be used in ways that are harmful, biased, or unfair. Issues like privacy violations, discrimination, and accountability are becoming more pressing as AI systems are involved in important decisions such as hiring, healthcare, and law enforcement. The problem lies in the difficulty of creating a global set of rules that can effectively govern AI technology. Different countries, cultures, and industries have their own values and laws, making it challenging to establish a universal framework. Additionally, AI is evolving so quickly that existing regulations struggle to keep up. This leads to a situation where AI systems may operate without clear ethical guidelines, potentially causing harm to individuals or society. This research aims to understand these challenges in depth and identify ways to develop better governance frameworks and ethical guidelines for AI. The goal is to find solutions that balance innovation with responsibility, ensuring AI is used in ways that promote fairness, respect privacy, and contribute positively to society.

### **OBJECTIVES OF THE STUDY**

1. To examine the ethical issues associated with AI development and deployment.
2. To evaluate how AI affects different aspects of society and various sectors.
3. To propose solutions for improving AI governance and ethical practices.

### **RESEARCH METHODOLOGY**

#### **1. Research Design**

This study follows a descriptive research design to explore challenges and opportunities in AI governance and ethics. The questionnaire will collect qualitative and quantitative data to analyze perceptions, concerns, and potential solutions related to AI ethics and governance.

#### **2. Target Population and Sampling**

**Target Audience:** Professionals, academicians, and the general public

**Sampling size:** 50 respondents

**Sampling method:** Simple random sampling

### **ANALYSIS AND INTERPRETATION**

#### **1, General Information of Respondents**

The respondents include individuals from various backgrounds, such as professionals, Students, business people and the general public. Basic details like age, occupation, and familiarity with AI governance are collected to understand their perspectives. This helps in analyzing how different groups view the challenges and opportunities in AI ethics and regulation.

**Table-1: General information of Sample Respondents**

Particulars	No. of Respondents	Percentage
<b>Age</b>		
Below 25	23	46
25-35	9	18
35-45	7	14
Above 45	11	22
<b>Occupation</b>		
Professionals	11	22
Business	6	12
Students	23	46
Public	6	12
<b>Level of familiarity with AI governance and ethics</b>		
Very familiar	37	74
Somewhat familiar	13	26

**Source: Primary data**

The majority of respondents are under 25 years old (46%), with fewer participants in the 25-35 years (18%), 35-45 years (14%), and over 45 years (22%) age groups. Students make up the largest portion (46%), followed by professionals at 22%, while business and public sectors each contribute 12%. When it comes to familiarity with AI governance, an impressive 74% of respondents are highly knowledgeable, while 26% have a more basic understanding.

## 2. Exploring the Main Challenges in Governing AI

**Table -2: Exploring the Main Challenges in Governing AI**

Challenges	No. of respondents	Percentage
Bias and discrimination	7	14
Lack of transparency	13	26
Data privacy concerns	8	16
Lack of clear regulations	13	26
Ethical misuse of AI	9	18

**Source: Primary data**

The most pressing challenges in AI governance are lack of transparency and unclear regulations, each identified by 26% of respondents, reflecting concerns over accountability. Ethical misuse of AI (18%) and data privacy concerns (16%) highlight the need for responsible AI practices and stronger security. Meanwhile, bias and discrimination (14%) underscore the ongoing struggle for fairness and inclusivity in AI systems.

## 3. Evaluating the Adequacy of Current AI Regulations

**Table 3: Are Current AI Regulations Sufficient?**

Particulars	No. of respondents	Percentage
Yes	26	52
No	24	48

**Source: Primary data**

The results show a close divide, with 52% believing AI regulations are sufficient, while 48% think they need improvement. This highlights the ongoing debate on the effectiveness of current AI policies.

## 4. The Benefits of AI Governance in Society

**Table 4: The Benefits of AI Governance in Society**

Opportunities of AI Governance	No. of respondents	Percentage
Stronger data protection and security	12	24
Increased trust in AI applications	15	30
Fair and unbiased AI decision-making	13	26

Better collaboration between governments and industries	10	29
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**Source: Primary data**

The majority of respondents believe that increased trust in AI applications (30%) is the top opportunity, followed by fair and unbiased AI decision-making (26%). There is also a strong emphasis on better collaboration between governments and industries (29%), showing the importance of partnerships. Additionally, stronger data protection and security (24%) is viewed as a key opportunity to ensure safer AI systems.

**5. Balancing Innovation and Ethics in AI Governance**

Table-5: Balancing Innovation and Ethics in AI Governance

Particulars	No. of respondents	Percentage
Yes, if well-regulated	38	76
No, it may slow down progress	12	34

**Source: Primary data**

Most respondents (76%) believe AI governance can balance innovation and ethics if it is well-regulated. However, 24% feel it may slow down progress.

**SUGGESTIONS**

- Prioritize clear, transparent regulations to ensure accountability and build trust in AI systems.
- Strengthen ethical guidelines to eliminate bias and promote fairness in AI applications.
- Implement robust data protection measures to safeguard personal information and enhance security.
- Regularly update AI regulations to stay in line with technological advancements and emerging challenges.
- Foster collaboration between governments and industries for a unified approach to AI governance.
- Balance innovation with ethical standards to encourage progress without compromising values

**CONCLUSION**

AI governance and ethics present both profound challenges and tremendous opportunities. As AI continues to shape our world, it is crucial that the development and deployment of these technologies are guided by strong ethical principles, robust governance frameworks, and a commitment to societal well-being. By addressing the challenges of bias, transparency, privacy, and accountability, and seizing the opportunities for fairness, trust, and innovation, we can ensure that AI contributes positively to society, creating a future where technology works in harmony with human values.

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## **CONSUMER ENGAGEMENT AND TRUST IN PERSONALISED RECOMMENDATIONS ON SOCIAL MEDIA MARKETING**

**Ms. Jency Devadhas**

Research Scholar, Reg. No: 23213161012001,  
Department of Commerce, Scott Christian College (Autonomous), Nagercoil (Affiliated to  
Manonmaniam Sundaranar University, Tirunelveli)

**Dr. S. Pushpalatha**

Assistant Professor and Research Supervisor, Department of Commerce,  
Scott Christian College (Autonomous), Nagercoil  
Affiliated to Manonmaniam Sundaranar University, Tirunelveli.

### **ABSTRACT**

Personalized recommendation is an artificial intelligence tool that provides tailored content, ads and products or services. It is a popular AI tool in social media marketing and e-commerce. Personalized recommendation is a vital tool used in Instagram. This research aims to study consumer engagement in personalized recommendations on Instagram. It also identifies whether consumers trust personalized recommendations on Instagram. The primary data was taken from 50 consumers in Kanniyakumari district. The secondary data was collected from numerous journals and websites. The sampling technique used for this study is judgmental technique. The primary data was analysed using percentage analysis. Eventually, suggestions were given to overcome the issue of distrust in personalised recommendations on Instagram.

**Keywords:** Personalised recommendations, consumer engagement, Instagram, social media marketing, privacy concerns, consumer trust, AI.

### **INTRODUCTION**

The evolution of AI in social media marketing has transformed the way marketers promote products or services in social media. Personalised recommendations, is one of the most powerful AI tools used by social media marketers to keep consumers engaged and improve their online experience. It is widely used in e-commerce platforms and social media. Social media marketing is the eminent medium through which brands create an online presence to promote their products. Instagram is one of the famous channels used by social media marketers. It is mainly in business-to-consumer (B2C) marketing. Instagram is a powerhouse for social media marketing because it is visually driven and has a huge consumer base. Businesses use Instagram to post engaging and attractive posts, videos, reels and stories. In Instagram personalised recommendations keep consumers engaged and satisfied by providing personalised content, ads and products or services. It boosts consumer interaction and satisfaction. However, since it utilises a vast amount of consumer data to create tailored recommendations, it causes data privacy concerns. Despite the drawbacks, it enhances consumer loyalty and engagement by recommending tailored content, ads and products or services.

### **REVIEW OF LITERATURE**

Apostol (2024) et.al, researched “A Data-Driven Approach: Assessing the Effectiveness of AI Algorithms in Tailoring Personalised Content for Social Media Users”, with an aim to scrutinize the effectiveness and satisfaction of AI algorithms in creating personalised content for social media users. The research also sought to assess the awareness of social media users about AI for personalised content. The study highlighted the impact of personalised content recommendations on the overall user experience and the influence of personalised content on user satisfaction. It emphasised the ethical considerations of consumers surrounding data privacy and transparency. The study revealed that most respondents want personalised algorithms to be more transparent and are very willing to engage more with the content displayed on AI on social media rather than with the content displayed organically.

Mamta (2024) This research entitled, “Analyzing Customer Engagement in Social Media Marketing: Perspectives from Women Consumers” focused on understanding consumer behaviour

and customer engagement in social media marketing. It was found that many vital insights into modern marketing tactics may be gained by examining customer engagement in social media marketing, particularly from women consumers.

### STATEMENT OF THE PROBLEM

Personalised recommendations make use of consumer data such as online activity, buying behaviour and personal information. Since it requires consumer data, it causes privacy concerns and distrust. So far, there is no existing research on consumer engagement and trust in personalised recommendations on Instagram. Hence, this study aims to bridge the research gap, by studying consumer engagement in personalised recommendations on social media marketing, with reference to Instagram.

### OBJECTIVES OF THE STUDY

1. To examine consumer engagement in personalised recommendations on social media marketing concerning Instagram
2. To identify whether consumers trust personalised recommendations on social media marketing with special reference to Instagram.

### SCOPE OF THE STUDY

This research focuses primarily on consumers in Kanniyakumari district. It emphasises only personalised recommendations in social media marketing, with special reference to Instagram.

### METHODOLOGY

The sample size taken for this research is 50 consumers. The sampling technique used is judgemental sampling. The consumers are selected based on the judgement that they are social media users and know about personalised recommendations. The primary data is taken from 50 consumers in Kanniyakumari District. The secondary data is taken from numerous journals and websites. The primary data was analysed using percentage analysis. The statistical software used for analysis was Jamovi version 2.6.19.

### ANALYSIS AND INTERPRETATION

Table 1: Demographic Profile of Consumers

Age group in years	Classification	Frequency	Percent
	Below 18	2	4
	18 – 25	29	58
	25 – 33	13	26
	Above 33	6	12
	<b>Total</b>	<b>50</b>	<b>100</b>
Gender	Male	23	46
	Female	27	54
	<b>Total</b>	<b>50</b>	<b>100</b>

*Source: Primary Data*

Table 1 reveals that a majority of 58 percent of the respondents are within the age group of 18 – 25 and 54 percent of the respondents are female. This shows that young adults are the most active users on Instagram and there is a fairly balanced gender representation.

Table 2: Engagement in Personalised Recommendations

Level of Agreement	Frequency	Percent
Strongly Agree	15	30
Agree	12	24
Neutral	9	18
Disagree	7	14
Strongly Disagree	7	14
<b>Total</b>	<b>50</b>	<b>100</b>

*Source: Primary Data*

Table 2 highlights that a majority of 30 percent of the respondents strongly agree that they frequently engage with personalised recommendations on Instagram. Therefore, this AI tool is effective at keeping consumers engaged.

**Table 3: Interaction with Personalised Recommendations**

Level of Agreement	Frequency	Percent
Strongly Agree	14	28
Agree	16	32
Neutral	8	16
Disagree	5	10
Strongly Disagree	7	14
<b>Total</b>	<b>50</b>	<b>100</b>

*Source: Primary Data*

Table 3 indicates that a majority of 32 percent of the respondents agree that they frequently interact with personalised recommendations on Instagram. Hence, the AI tool is successful at providing relevant recommendations.

**Table 4: Purchase from Personalised Recommendations**

Level of Agreement	Frequency	Percent
Strongly Agree	13	26
Agree	17	34
Neutral	4	8
Disagree	7	14
Strongly Disagree	9	18
<b>Total</b>	<b>50</b>	<b>100</b>

*Source: Primary Data*

Table 4 shows that a majority of 34 percent of the respondents purchase from personalised recommendations on Instagram. Thus, personalised recommendation is a powerful tool for influencing consumers' online purchasing behaviour.

**Table 5: Trust in Personalised Recommendation**

Level of Trust	Frequency	Percent
Strongly Trust	7	14
Trust	7	14
Neutral	10	20
Distrust	11	22
Strongly Distrust	15	30
<b>Total</b>	<b>50</b>	<b>100</b>

*Source: Primary Data*

Table 5 exhibits that a majority of 30 percent of the respondents strongly distrust personalised recommendations on Instagram. Hence, personalised recommendations cause privacy concerns among the respondents.

### **SUGGESTIONS**

Consumer trust is vital for a business' growth. It is needed to gain consumer loyalty, competitive advantage, increase sales and build brand image. In order to build trust Instagram can use consumer's real-time data instead of their historical data. Instagram can provide personalised recommendations based on preferences instead of personal data.

### **CONCLUSION**

This research studied consumer engagement and trust in personalised recommendations on Instagram. The sources of data for this research are primary and secondary data. The primary data was taken from 50 consumers in Kanniyakumari district using judgemental sampling technique. The data was analysed using percentage analysis in Jamovi v2.6.19. It was found that most of the respondents engage in personalised recommendations on social media marketing, with special reference to



Instagram. It was also highlighted that most of the respondents interact and purchase from personalised recommendations on social media marketing, with special reference to Instagram. It was revealed that most of the respondents distrust personalised recommendations on social media marketing, with special reference to Instagram. Lastly, suggestions were provided to build trust among consumers in personalised recommendations on Instagram.

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## **"INNOVATION IN THE AGE OF AI: A STUDY OF EMERGING TRENDS AND PATTERNS"**

**ASHEENA K R, ASHLEY J**

III BCOM, PG and Research Department of Commerce, St Alphonsa College of Arts & Science,  
Karinkal, Kanyakumari District, Tamil Nadu, India

**Dr M RESHMA**

Assistant professor, PG and Research Department of Commerce, St Alphonsa College of Arts & Science, Karinkal, Kanyakumari District, Tamil Nadu, India (Affiliated to Manonmaniam Sundaranar University)

### **ABSTRACT**

Innovation in the age of Artificial Intelligence (AI) is reshaping industries, driving transformative changes in business operations, product development, and consumer behavior. This paper explores emerging AI driven trends and patterns, focusing on how organizations are leveraging AI to fuel innovation and create competitive advantages. Key trends such as AI-powered automation, generative AI, AI for decision-making and personalized customer experiences are examined in terms of their impact on innovation. By analyzing the roles AI plays across various sectors, the paper highlights the potential and challenges of AI-driven innovation, offering recommendations for organizations to harness these technologies effectively. This study provides a comprehensive overview of AI's role in fostering innovation and guiding future business strategies.

**Keywords:** Artificial Intelligence, Innovation, Automation, Generative AI, Personalized Experiences.

### **INTRODUCTION**

The rapid evolution of Artificial Intelligence (AI) technologies is driving a new wave of innovation across industries such as healthcare, finance, retail, and manufacturing. AI is enabling organizations to rethink business models, optimize operations, and enhance customer experiences. As AI continues to mature, its potential to fuel creativity, efficiency, and competitive advantage becomes even more apparent. Key AI trends, such as automation, AI-driven decision-making, and personalized services, are reshaping the way businesses operate and deliver value. Beyond improving existing products and services, AI is also generating entirely new business opportunities, fundamentally transforming the landscape of innovation. With AI's ability to process vast amounts of data and adapt in real-time, organizations can now offer highly personalized experiences, create smarter products, and make informed decisions at an unprecedented speed. This combination of automation and intelligence is not only reducing operational costs but is also accelerating innovation cycles, allowing businesses to stay ahead in increasingly competitive markets. As AI continues to advance, its role as a catalyst for change will only grow, offering endless possibilities for those who embrace it.

### **REVIEW OF LITERATURE**

A study by Li et al. (2024) discusses how AI algorithms in e-commerce platforms like Amazon and Alibaba are increasingly capable of anticipating consumer preferences and generating tailored product recommendations. Moreover, AI-powered chatbots and virtual assistants have become central to improving customer support, offering 24/7 personalized interactions that enhance customer satisfaction and engagement (Turing, 2024). Recent studies emphasize AI's growing role in automation, particularly in light of the COVID-19 pandemic, which accelerated the adoption of digital technologies. A study by Brynjolfsson et al. (2023) explores how AI is driving automation across industries such as retail, manufacturing, and healthcare, enabling businesses to optimize operations and reduce dependency on human labor. AI-powered robotic process automation (RPA) is particularly noted for its ability to handle complex, repetitive tasks, enhancing efficiency and allowing organizations to redirect human resources toward more creative and strategic endeavors (Avasarala et al., 2022).

### **STATEMENT OF THE PROBLEM**

While AI technologies present unprecedented opportunities for innovation, the rapid pace of development and the complexity of integrating these tools into existing systems create significant

challenge Businesses need a comprehensive understanding of how to effectively adopt AI-driven innovations without overestimating their capabilities or underestimating the associated risks. This problem statement highlights the need for further exploration into emerging AI trends, patterns, and their application to foster meaningful innovation across industries. Organizations must learn to navigate the balance between leveraging AI for innovation while mitigating potential risks, such as ethical concerns, data privacy issues, and technological disruption.

### **OBJECTIVES**

The objectives of the following are,

1. Identify the key AI technologies driving innovation in various industries.
2. Analyze the emerging trends in AI adoption that are shaping new business opportunities.

### **RESEARCH METHODOLOGY**

This study adopts a mixed-method approach, combining both qualitative and quantitative research methods to comprehensively investigate the emerging trends and patterns in AI-driven innovation. By integrating both types of data, the research aims to provide a deeper understanding of how AI is reshaping industries, fostering new business opportunities, and driving operational efficiencies. Secondary data will be gathered from industry reports, academic journals, case studies, and white papers. These sources will provide foundational insights into the current state of AI technologies and their applications in various sectors.

### **KEY AI TECHNOLOGIES DRIVING INNOVATION IN VARIOUS INDUSTRIES**

Artificial Intelligence (AI) technologies are rapidly transforming industries by automating processes, improving decision-making, and enabling the creation of new products and services. The following are key AI technologies driving innovation across different sectors:

#### **1. Machine Learning (ML)**

Machine learning, a subset of AI, focuses on building algorithms that allow systems to learn from data and improve their performance without explicit programming.

*Healthcare:* ML algorithms are used to detect diseases, analyze medical images, and predict patient outcomes. For example, ML models assist in cancer diagnosis through image recognition and pattern analysis.

*Finance:* In finance, ML is used for fraud detection, risk assessment, and algorithmic trading. Banks use ML to identify unusual patterns in transactions that may indicate fraud.

*Retail:* E-commerce platforms like Amazon and Netflix use ML for personalized recommendations based on customer behavior and preferences.

#### **2. Natural Language Processing (NLP)**

NLP allows machines to understand, interpret, and generate human language. It's a key technology behind voice assistants and chat bots.

*Customer Service:* NLP powers AI chat bots and virtual assistants (e.g., Siri, Alexa) that provide automated customer support and enhance the customer experience.

*Healthcare:* NLP is used in healthcare to analyze clinical notes, medical records, and patient interactions to improve diagnosis, treatment recommendations, and patient care.

*Retail:* NLP is applied in sentiment analysis to understand customer reviews and feedback, allowing businesses to fine-tune products and services.

#### **3. Computer Vision**

Computer vision enables machines to interpret and understand visual information from the world, mimicking human sight.

*Healthcare:* In medical imaging, computer vision is used to analyze X-rays, CT scans, and MRIs to detect abnormalities like tumors or fractures.

*Retail:* AI-powered visual recognition helps in inventory management, product recognition, and even automated checkout systems.

*Automotive:* In the automotive industry, computer vision is a key technology behind autonomous vehicles, allowing them to see and navigate their environment.

#### **4. Generative AI**

Generative AI focuses on creating new content or data by learning from existing datasets. This includes generating text, images, audio, and even video.

*Media & Entertainment:* Generative AI is used to create realistic images, music, and video content, as well as for deepfake technology in films and gaming.

*Retail:* In fashion, AI can generate new clothing designs based on existing trends, creating personalized fashion experiences for consumers.

*Healthcare:* Generative models are being used to design new drugs and treatments by simulating molecular structures.

## **5. Predictive Analytics**

Predictive analytics uses AI and machine learning algorithms to analyze data and predict future outcomes. It's widely used for forecasting and decision-making.

*Retail:* Businesses use predictive analytics to forecast customer demand, optimize pricing, and develop personalized marketing campaigns.

*Healthcare:* In healthcare, predictive analytics can forecast disease outbreaks, predict patient health risks, and optimize treatment plans.

*Finance:* Financial institutions use predictive analytics for risk management, fraud detection, and investment strategies.

## **THE EMERGING TRENDS IN AI ADOPTION THAT ARE SHAPING NEW BUSINESS OPPORTUNITIES**

One of the emerging trends in AI adoption shaping new business opportunities is the rise of AI-driven automation, which enables organizations to automate both routine tasks and more complex processes. This trend not only enhances operational efficiency and reduces costs but also allows businesses to scale quickly and create new service models, such as on-demand or tailored services. Additionally, AI for personalization is gaining traction, with businesses using AI to create hyper-personalized experiences for customers based on their behavior, preferences, and interactions. This level of customization boosts customer satisfaction, loyalty, and retention, while also enabling more targeted marketing strategies. In the retail sector, AI is revolutionizing how businesses deliver personalized shopping experiences and dynamic pricing. Furthermore, AI-powered decision-making is becoming integral to businesses, as advanced AI tools support data-driven decisions, providing organizations with deeper insights for strategic planning and innovation. This shift towards data-centric decision-making opens doors to more effective resource allocation, risk management, and market prediction. Together, these trends are driving significant innovation, creating competitive advantages, and unlocking new business opportunities across industries.

## **SUGGESTIONS**

To fully leverage the potential of Artificial Intelligence (AI) and drive innovation, businesses must focus on several key areas. First, investing in AI talent and training is crucial, as companies need a skilled workforce capable of managing and implementing AI technologies effectively. This includes offering training programs for existing employees and recruiting specialized AI professionals to spearhead projects. Second, organizations should foster a data-driven culture, where decisions are based on insights derived from AI-driven analytics. Embracing this culture will allow businesses to make informed, strategic decisions that enhance overall performance. Finally, collaborating with AI experts and partners can help businesses navigate the complexities of AI adoption, access cutting-edge technologies, and implement AI solutions more efficiently. By focusing on these areas, businesses can harness the full potential of AI, create new growth opportunities, and remain competitive in a rapidly changing digital landscape.

## **CONCLUSION**

The rapid evolution of Artificial Intelligence (AI) is reshaping industries, creating significant opportunities for innovation and competitive advantage. AI technologies such as machine learning, natural language processing, and computer vision are driving transformative changes across sectors, enabling businesses to automate processes, enhance decision-making, personalize customer experiences, and develop entirely new business models. The adoption of AI is not just about

improving existing operations but also about unlocking new growth avenues, driving efficiency, and fostering creativity. As businesses continue to explore AI's potential, they are better positioned to navigate the complexities of a digital-first world, adapt to changing market conditions, and remain competitive. The future of AI-driven business opportunities is bright, and those who harness its full potential will likely lead the way in their respective industries.

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## **DIGITAL MARKETING: THE KEY TO UNLOCKING CUSTOMER ENGAGEMENT AND LOYALTY**

**Amala Sona X, Shofiya Jasmine J, Celciya A F**

III BCOM, PG and Research Department of Commerce,  
St Alphonsa College of Arts & Science, Karinkal, Kanyakumari District, Tamil Nadu

**Dr. M.Reshma M**

Assistant Professor, PG and Research Department of Commerce,  
St Alphonsa College of Arts & Science, Karinkal, Kanyakumari District, Tamil Nadu, India  
(Affiliated to Manonmaniam Sundaranar University)

### **ABSTRACT**

Digital marketing has become a fundamental strategy for businesses aiming to enhance customer engagement and loyalty in the digital age. By leveraging various online platforms and tools, brands can interact with customers in more personalized, targeted, and meaningful ways. This paper explores the significant role of digital marketing in fostering customer engagement, building brand loyalty, and enhancing long-term business success. Through the utilization of data-driven insights, multichannel engagement strategies, content creation, and real-time customer interaction, businesses can cultivate deeper relationships with customers, driving both customer retention and advocacy. The paper highlights key digital marketing techniques and provides a framework for businesses looking to optimize their digital marketing strategies for increased customer loyalty and engagement.

**Keywords:** Digital marketing, customer engagement, customer loyalty, social media marketing, email marketing.

### **INTRODUCTION**

In the fast-evolving world of business, digital marketing has emerged as a powerful tool for companies striving to connect with their audiences, improve customer engagement, and foster long-term loyalty. As consumer behavior continues to shift toward online platforms, businesses are increasingly focusing on creating personalized and seamless experiences to nurture customer relationships. Customer engagement refers to the ongoing interaction between a brand and its customers, fostering a sense of connection and satisfaction. Customer loyalty, on the other hand, is the result of consistent, positive engagement over time, leading to repeat business and advocacy. Both are vital for sustained business growth and success. In today's competitive market, where consumer options are vast, businesses need to go beyond simply selling a product or service; they must build trust, create memorable experiences, and continuously engage with customers to remain relevant. This introduction sets the stage for exploring the techniques and tools used in digital marketing to unlock customer engagement and loyalty, and it provides insights into why businesses must adapt to the digital landscape to thrive in the modern marketplace.

### **REVIEW OF LITERATURE**

**Kaplan and Haenlein (2024)** emphasize the importance of brand communities on social media, which allow customers to interact with one another and the brand. These communities provide a sense of belonging and shared identity, further fostering loyalty. Customers who are part of brand communities often advocate for the brand and are more likely to stay loyal over time.

**Lee and Lee (2024)** found that consistent, high-quality content not only attracts new customers but also helps maintain long-term engagement. Blogs, videos, webinars, and infographics create opportunities for businesses to demonstrate expertise, share valuable insights, and connect with customers on a deeper level.

**Anderson (2023)** observed that users who receive personalized push notifications are more likely to return to the app or website, reinforcing the importance of mobile marketing in building customer loyalty.

### **STATEMENT OF THE PROBLEM**

Despite the growing importance of digital marketing, many businesses struggle to create effective digital marketing strategies that drive customer engagement and loyalty. Businesses face a significant challenge in creating effective digital marketing strategies that drive customer engagement

and loyalty. Despite the growing importance of digital marketing, many businesses struggle to develop strategies that resonate with their customers, resulting in decreased customer engagement, loyalty, and ultimately, revenue. Furthermore, the increasing use of ad blockers, data privacy concerns, and the constantly evolving digital landscape add to the complexity of the issue. Therefore, this study aims to investigate the impact of digital marketing on customer engagement and loyalty, and provide insights for businesses to optimize their digital marketing strategies.

### **OBJECTIVES**

1. Explore the impact of digital marketing on customer engagement and loyalty.
2. Identify the challenges associated with digital marketing.

### **RESEARCH METHODOLOGY**

In current a theoretical approach was adopted using secondary data. The study used a descriptive research design, aiming to explore and describe the impact of digital marketing on customer engagement and loyalty. A comprehensive review of existing literature on digital marketing, customer engagement, and customer loyalty was conducted. This approach combines qualitative and quantitative method to gather a board range of insights and provide a robust analysis of the subject matter. This will provide a foundation of our study and help to identify gap in the current research.

### **THE IMPACT OF DIGITAL MARKETING ON CUSTOMER ENGAGEMENT**

#### **1. Personalization:**

By leveraging data analytics, businesses can deliver targeted content and offers based on individual customer preferences, making them feel valued and understood, leading to higher engagement.

#### **2. Interactive communication:**

Social media platforms provide a direct channel for businesses to interact with customers, respond to feedback, and engage in real-time conversations, fostering a sense of connection.

#### **3. Content marketing:**

Creating valuable and relevant content like blog posts, videos, and infographics helps educate customers, establish thought leadership, and build trust, increasing their engagement with the brand.

#### **4. Omni-channel marketing:**

Reaching customers across multiple digital touch points like websites, email, social media, and mobile apps creates a seamless experience and reinforces brand messaging.

#### **5. Customer feedback loops:**

Digital marketing tools allow businesses to collect customer feedback through surveys, polls, and reviews, enabling them to identify areas for improvement and tailor their offerings accordingly.

#### **6. Real-time insights:**

Analytics provide valuable data on customer behavior, allowing businesses to track campaign performance, identify trends, and make data-driven decisions to optimize engagement.

### **THE IMPACT OF DIGITAL MARKETING ON CUSTOMER LOYALTY**

#### **1. Increased Customer Retention:**

By providing a personalized and engaging experience, digital marketing can foster strong customer relationships, leading to higher loyalty and repeat business.

#### **2. Improved Brand Perception:**

Consistent delivery of high-quality content and positive interactions across digital channels enhances brand image and trust.

#### **3. Enhanced Customer Lifetime Value:**

Building strong loyalty can lead to increased spending and longer customer lifecycles.

#### **4. Consistent Brand Messaging:**

Maintaining a cohesive brand image across all digital platforms to build trust and recognition.

#### **5. Community Building:**

Engaging customers through social media groups and forums to foster a sense of belonging and loyalty.

#### **6. Data-driven Targeting:**

Utilizing customer data to tailor marketing messages and offers to individual needs and preferences, creating a more relevant experience.

#### **7. Dynamic Content:**

Delivering content that adapts based on customer behavior and past interactions, enhancing relevance.

### **CHALLENGES ASSOCIATED WITH DIGITAL MARKETING**

Despite its numerous advantages, digital marketing also comes with several challenges that businesses must navigate to achieve success. One of the primary challenges is data privacy and security. As digital marketing relies heavily on consumer data to personalize experiences and target ads, there is growing concern about the collection, storage, and use of personal information. Privacy regulations, such as the GDPR, impose strict guidelines that businesses must adhere to, creating complexities in how data is handled. With so many brands competing for attention across various digital platforms, consumers are becoming desensitized to ads, making it harder for businesses to stand out and engage their audience effectively. Algorithm changes on platforms like Facebook and Google also create unpredictability, as shifts in algorithms can drastically affect the visibility of marketing content and ad performance. Another challenge is the rapid pace of technological advancements, requiring businesses to continually adapt to new tools, platforms, and marketing trends, which can be resource-intensive and difficult to keep up with. Lastly, businesses may face difficulties in measuring the ROI (Return on Investment) of their digital marketing efforts, as tracking and analyzing performance across multiple channels can be complex and requires advanced tools and expertise. These challenges, while significant, can be overcome with careful planning, adaptability, and strategic execution.

### **THE FUTURE OF DIGITAL MARKETING**

The future of digital marketing involves increased use of AI and automation, growing importance of video marketing and voice search, and greater focus on personalization and customer experience. New technologies like AR, blockchain, and IoT will also be integrated into digital marketing strategies. However, challenges like data protection and ad fraud, increasing competition, and the need for continuous innovation and adaptation will also arise (McKinsey & Co). To stay ahead, businesses will need to prioritize customer experience, use data-driven insights, and stay up-to-date with the latest technological advancements.

### **SUGGESTIONS**

In today's digital age, businesses must adapt to the ever-changing landscape of digital marketing to remain competitive and build strong relationships with their customers. By leveraging the power of digital marketing, businesses can increase customer engagement, drive revenue growth, and achieve long-term success. As digital marketing continues to evolve, it is essential for businesses to stay ahead of the curve and prioritize customer-centric strategies.

### **CONCLUSION**

In conclusion, digital marketing has revolutionized the way businesses interact with their customers, offering numerous benefits such as cost-effectiveness, global reach, and measurable results. While challenges like high competition, technical knowledge requirements, and security concerns exist, businesses can overcome these obstacles by adopting a customer-centric approach, leveraging data-driven insights, and staying up-to-date with the latest technological advancements. By prioritizing customer engagement and loyalty, businesses can build strong relationships, drive revenue growth, and achieve long-term success.

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## **THE STUDY ON THE SORTING OF INNOVATIVE TECNOLOGY OF HANDLOOM INDUSTRY**

**Mrs.T.Monisha**

Research Scholar, Reg. No. 22213201012001, PG and Research Department of Commerce,  
St. Alphonsa College of Arts and Science, Karinkal, Kanyakumari District.  
Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli-627012, Tamil Nadu

**Dr. R. Sivanesan**

Associated Professor & Head, PG and Research Department of Commerce,  
St. Alphonsa College of Arts and Science, Karinkal, Kanyakumari District.  
Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli - 627012, Tamil Nadu

### **ABSTRACT**

The handloom industry, a vital parts of India's cultural and economic fabric, is undergoing a significant transformation due to technological innovations. This paper explores various modern technologies adopted in handloom weaving and evaluates their impact on weavers. Innovation such as electronic Jacquard and dobby looms, Computer-Aided Design (CAD) Software e-commerce platform and black chain for authenticity have enhanced productivity, reduced manual labour and expanded market access for artisans. The impact of these innovations is profound- weavers experience increased efficiency, improved income stability and sustainable production practices. This paper concludes that while technological advancements offer immense potential for revitalizing the handloom sector, a balances approach integrating tradition with innovation is crucial. Government support, skill development programs and financial accessibility must be strengthened to ensure that technology benefits all weavers. Particularly those in rural areas. By embracing modern innovations while preserving traditional craftsmanship, the handloom industry can achieve sustainability and global competitiveness.

Keywords: Handloom Industry, Technology Innovation, CAD, E-Commerce, Artisan Empowerment.

### **INTRODUCTION**

The handloom sector is the one of the oldest and most significant sector of the textile Industry. Deeply rooted in cultural heritage and craftsmanship. However, with the rapid advancement of technology, the industry faces challenges related to productivity, quality, Quantity and competition for mechanized textile production. Innovation technology plays a crucial role in modernizing the handloom sector while preserving its traditional essence. This study focuses on the sorting of innovative technology in the handloom industry, analyzing their impact on efficiency, design diversification, sustainability and market reach. By categorizing these technology based on their application, effectiveness and adaptability, the study aims to identify the most suitable solutions for enhancing the sector's growth. The researcher also explores government initiatives, digital tools, and automation techniques that can bridge the gap between and modern production demands. Understanding and implementing the right technological and implementing the right technology innovations can help handloom artisans improve productivity, maintain quality standards, and expand their market presence. This study provides insights in to how technology advancements can be strategically adopted to ensure the long-term sustainability and competitiveness of the handloom Industry.

### **REVIEW OF THE LITERATURE**

**AkhilGoyal and Jhuma Choudhury (2024)**, in this article entitled "Exploring the revival of traditional Handloom techniques in contemporary fashion trends in emerging technologies and sustainable finance" this study examines the resurgence of traditional handloom techniques in modern fashion. The study highlights the environmental benefits of handloom textiles and their role in promoting sustainable fashion. It also discusses the socio-economic impact of supporting local artisans and preserving cultural heritage. The authors emphasize the importance of integrating traditional techniques with emerging technologies to create a more sustainable and ethical fashion industry.

**GuntiAmaravathu and Dr. B. Balanagalakshmi (2022)**, in this article entitled "The Study on the Development of Modern Handloom Technologies in the PochampallyIkkat Handloom" this study explores the adoption of modern technologies in the PochampallyIkkat handloom industry. The study reveals that while some weavers have embraced modern technologies, a significant portion still relies on traditional methods due to factors like age, lack of infrastructure, and financial constraints. The findings underscore the need for targeted interventions to support technology adoption and enhance productivity in the handloom sector.

**R. Ravi Kumar and Dr. S K Gopal (2020)**, in this article entitled "Technological Up-gradation in Tamil Nadu Handloom Sector: A Review of Literature" in this study examines the technological advancements in Tamil Nadu's handloom sector. The paper highlights the challenges faced by weavers, such as obsolete technologies and low productivity, and reviews various government schemes aimed at improving the sector. It emphasizes the importance of technology up-gradation for the survival and growth of the handloom industry. The authors also discuss the socio-economic impact of these advancements on weavers' livelihoods.

#### **OBJECTIVES OF THE STUDY**

1. To systematically classify the various innovative technologies based on their application in handloom weavers.
2. To evaluate the impact of different technological innovations on handloom weavers.

#### **VARIOUS INNOVATIVE TECHNOLOGY OF HANDLOOM INDUSTRY**

In Tamil Nadu, the handloom industry has embraced several innovative technologies to enhance efficiency, design, and market reach. Here are some notable advancement:

1. **Computerized Jacquard Looms:** These looms allow for intricate designs and patterns to be woven with precision, reducing human error and increasing efficiency.
2. **Power Looms with Modern Features:** Upgraded power looms equipped with modern features like automatic tension control, shuttle less weaving, and electronic dobby systems.
3. **Digital Designing Tools:** Software for digital designing helps weavers create and visualize patterns before weaving, ensuring accuracy and reducing wastage.
4. **E-commerce Platforms:** Online marketplaces and e-commerce platforms enable weavers to reach a wider audience, bypassing traditional middlemen and increasing their profit margins.
5. **Training and Skill Development Programs:** Government and private initiatives offer training programs to help weavers upgrade their skills and adopt new technologies.
6. **Sustainable Practices:** Adoption of eco-friendly practices and materials, such as organic dyes and natural fibers, to meet the growing demand for sustainable products.
7. **Artificial Intelligence (AI) and ICT:** Use of AI and Information and Communication Technology (ICT) to streamline production processes, manage inventory, and improve market access.
8. **Natural Dye Revitalization:** There is a renewed focus on using organic dyes in handloom products, catering to eco-conscious consumers and enhancing the sustainability of the handloom sector.
9. **3D Weaving Techniques:** Advanced computer- controlled 3D weaving technologies are being explored to create complex textile structures, opening new avenues for product innovation.
10. **Smart Textile and wearable Technology:** Integrated sensors and conductive threads into hand-woven fabric for applications in fashion and healthcare.

These innovations are instrumental in preserving Tamil Nadu is rich handloom heritage while ensuring its adaptation to contemporary market demand.

#### **IMPACT OF DIFFERENT TECHNOLOGICAL INNOVATIONS ON HANDLOOM WEAVERS**

To evaluating the impact of different technological innovations on handloom weavers involves analyzing various aspects such as productivity, income, market access. Sustainability and skill development. These are the structured evaluation.

1. **Productivity Enhancement:** Electronic Jacquard & Dobby Looms are increased weaving speed and design complexity, reducing manual effort. It is reduced physical strain on weavers while improving output efficiency. So weavers can produce more in less time, increasing earing per unit of time.

2. **Income and Livelihood Improvement:** E-Commerce platforms are expanded market reach beyond local sales improving income stability and digital payment system is faster, transparent transactions reduce dependency on intermediaries. So the weavers with digital access see higher profit margins compared to traditional sales methods.
3. **Digital innovation and market Demand:** Computer-Aided Design (CAD) software is enable unique, intricate patterns, increasing product diversity. AI-Generated Design is assist in predicating market trend, making handloom products more appealing. So the traditional weavers gain a competitive edge in fashion and home décor markets.
4. **Sustainability and Eco-friendly Practices:** Natural dying techniques is reduces chemical pollution, catering to eco-conscious consumers. And solar powers looms are cuts energy costs, making operations more sustainable. So it is improved environmental compliance and brand value for handloom products.
5. **Skill Development and Employment:** Skill training programs are educates weavers on modern techniques. Smart loom technologies are requires training, creating new job opportunities in handloom maintenance and management. So these are preserves traditional skills while making weavers more tech-savvy.
6. **Preservation of Cultural Heritage:** Geographical Indication tagging is protects traditional weaving techniques from imitation. So it's ensuring the economic viability of heritage weaving communities.
7. **Faced by challenges:** Cost of technology adaption is many small weavers struggle to afford advanced looms and software. Digital divide is older weavers find it difficult to transition to digital marketing and design tools. So the power loom and mass production challenge traditional handloom industries.

While technological innovations have greatly benefited handloom weavers by improving efficiency, income and sustainability, training and competition from power looms must be addressed. Government support, subsidies and skill development program are crucial to ensuring that technological advancements benefits all handloom weavers, especially those in rural Tamil Nadu.

### COCLUSION

Technological innovation have significantly transformed the handloom weaving industry by enhancing productivity, improving market access and preserving cultural heritage. The integration of modern tools such as Jacquard electronic looms, Computer- Aided Design (CAD) Software, E-Commerce platforms and Solar- powered looms has enabled weavers to produce intricate designs more efficiently while reaching a broader customer base. These advancement have improves income stability, reduced manual labour and promoted sustainable weaving practices through the use of natural dyes and eco-friendly production methods. However, technology innovations present immense opportunities for handloom weavers, but their success depends on inclusive policies, proper training and community-driven initiatives that empower artisans to embrace modern advancements while upholding the rich legacy of handloom weaving.

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## **A STUDY ON GOVERNMENT BENEFICIARY STEPS IN RETAIL INDUSTRY**

**VIJITHRA D**

Research Scholar (Full Time), Reg No. 23113201012002, PG & Research Department of Commerce,  
St Alphonsa college of Arts & Science, Karinkal, Kanyakumari District  
(Affiliated to Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu)

**Dr R Sivanesan**

Vice Principal, Associate Professor & Head, PG & Research Department of Commerce,  
St Alphonsa College of Arts & Science, Karinkal, Kanyakumari District  
(Affiliated to Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu)

### **ABSTRACT**

The retail industry is one of the fastest growing sectors in India. The Government considers the retail sector to be central to the economic and social Wellbeing of the nation, and also a key partner in delivering policy. The retail sector was mainly unorganized and fragmented, before 1991. The rapid growth of the organized retail sector has resulted in the decreasing sales of unorganized retail outlets. This focused on where there is potential for Government and Industry to work in partnership to support retail growth and performance. This study intends to examine the government benefits in India regarding the retail industry. The governments had helped home country retail chains by providing capital support and formulating strict regulations to restrict entry of foreign retailers in their respective countries. In India, all the regulations regarding retail sector is still in state level and is being influenced by the existing political parties of different states. Thus, the present study explains central government steps only.

**Key words:** Retail, Industry, government, police,

### **INTRODUCTION**

Indian retail industry has emerged as one of the most dynamic and fast-paced industries due to the entry of several new players. It accounts for over 10% of the country's gross domestic product (GDP) and around 8% of the employment. India is the world's fifth-largest global destination in the retail space. India is the world's fifth-largest global destination in the retail space and ranked 63 in the World Bank's Doing Business 2023.

The sizeable middle class and nearly unexplored retail market in India are the main enticing factors for international retail behemoths seeking to move into newer markets, which will help the Indian retail business grow more quickly. The urban Indian consumer's purchasing power is increasing, and branded goods in categories like apparel, cosmetics, footwear, watches, beverages, food, and even jewellery are gradually evolving into business and leisure that are well-liked by the urban Indian consumer. The retail sector in India is expected to reach a whopping US\$ 2 trillion in value by 2032, according to a recent analysis by the Boston Consulting Group (BCG).

India is one of the most promising and developing marketplaces in the world. There is a great deal of desire among multinational corporations to take advantage of the consumer base in India and to enter the market first. Nearly 60 shopping malls encompassing a total retail space of 23.25 million sq. ft are expected to become operational during 2023-25.

### **OBJECTIVES**

1. To explain Central government beneficial steps in retail industry.
2. To describe National Small Industrial Corporation schemes.

### **CENTRAL GOVERNMENT BENEFICIAL STEPS IN RETAIL INDUSTRY**

In India, retailers, particularly small businesses categorized as MSMEs, can access various government benefits including subsidized loans through schemes. India is at the forefront of a start-up boom and this has picked up a relentless pace since mid-2018. The start-up culture; the Start-up India- Stand-up India action plan has become a blessing for the Indian entrepreneur/ retailer. In the past few years, the government of India has initiated several schemes and programs, to help entrepreneur / retailer among Indians. Here some of the government schemes for the retail business.

**National Retail Trade Policy:**

Government is working to bring a national retail trade policy for brick-and-mortar retail traders to promote ease of doing business; National Retail Trade Policy has been prepared, based on consultations with State Governments and major Industry/trade associations. National Retail Trade Policy focuses on preparing strategies for overall development of retail trade through targeted efforts to promote ease of doing business in retail sector through several measures to reduce compliance burden, enhance ease of access to credit and decriminalization of minor offences for all formats of retail trade. Special emphasis is placed on assessing the requirement of licenses, removal of renewal requirement, inspection reforms, facilitating public service delivery, creation of single window facilitation mechanism etc.

Government is also working to bring an e-commerce Policy for online retailers was placed in public domain on 23rd February, 2019 for public consultations. Valuable suggestions have been received from various stakeholders. Government is also in the process of formulating an Insurance Scheme for all retail traders Accident Insurance Scheme has been prepared for GST registered traders covering life and establishment of traders, based on the valuable suggestions received from various stakeholders.

#### **Pradhan Mantri MUDRA Yojana (PMMY):**

MUDRA, which stands for Micro Units Development & Refinance Agency Ltd., is a financial institution set up by Government of India for development and refinancing of micro units enterprises. It was announced by the Finance Minister while presenting the Union Budget for FY 2016. The purpose of MUDRA is to provide funding to the non-corporate small business sector through various Last Mile Financial Institutions like Banks, NBFCs and MFIs.

Under the aegis of Pradhan Mantri MUDRA Yojana (PMMY), MUDRA has already created its initial products / schemes. The interventions have been named 'Shishu', 'Kishor', 'Tarun' and 'TarunPlus' to signify the stage of growth / development and funding needs of the beneficiary micro unit / entrepreneur and also to provide a reference point for the next phase of graduation / growth to look forward to. The financial limit for these schemes are:-

- **Shishu** : covering loans upto 50,000/-
- **Kishor** : covering loans above 50,000/- and upto 5 lakh
- **Tarun** : covering loans above 5 lakh to 10 lakh
- **Tarun Plus** : covering loans above 10 lakh to 20 lakh (for those entrepreneurs who have availed and successfully repaid previous loans under the 'Tarun' category).

These schemes provide financial support, reduce dependency on private lenders, and help retailers manage and grow their businesses effectively.

#### **Small Industries Development Bank of India:**

Small Industries Development Bank of India (SIDBI) offers a wide range of finance schemes to the Micro, Small, and Medium Enterprises (MSME) industry. Loan amounts can range from Rs.10 lakh to Rs.25 crore. Loan repayment tenures can go up to 10 years. These loans, which are offered at attractive interest rates, help provide necessary capital for the growth and expansion of MSMEs. Loans above Rs.1 crore can be availed without any collateral required. Loan subsidies are also available.

The main objective of SIDBI is to offer loans to MSMEs to help in addressing the development and financial gaps in the ecosystem of MSMEs. The company aims to ensure that the MSME sector is globally competitive, vibrant, and strong.

This Bank helps retailers grow their businesses, reduce costs, and reach more customers with government-backed support

#### **National Small Industries Corporation Ltd**

National Small Industries Corporation (NSIC), is an ISO 9001:2015 certified Government of India Enterprise under Ministry of Micro, Small and Medium Enterprises (MSME). NSIC has been working to promote, aid and foster the growth of micro, small and medium enterprises in the country. It Was established in 1955. NSIC operates through countrywide network of offices and Technical

Centres in the Country. In addition, NSIC has set up Training cum Incubation Centre managed by professional manpower.

**Marketing Support:**

Marketing has been identified as one of the most important tool for business development. It is critical for the growth and survival of MSMEs in today's intensely competitive market. NSIC acts as a facilitator and has devised a number of schemes to support enterprises in their marketing efforts, both domestic and foreign markets.

**Credit Support:**

NSIC facilitates credit requirements of small enterprises. NSIC's Raw Material Assistance Scheme aims at helping Small Enterprises by way of financing the purchase of Raw Material (both indigenous & imported). NSIC also facilitates financing for marketing activities such as Internal Marketing, Exports and Bill Discounting.

**Technology Support:**

Technology is the key to enhancing a company's competitive advantage in today's dynamic information age. Small enterprises need to develop and implement a technology strategy in addition to financial, marketing and operational strategies and adopt the one that helps integrate their operations with their environment, customers and suppliers. NSIC offers small enterprises support services through its Technical Services Centres and Extension Centres.

**How It Helps Retailers:**

NSIC has launched the Assistance to Wholesalers and Retail Traders (AWRT) which aims to help retail industry by providing integrated support services encompassing Marketing, Technology, Finance and other services.”.

**Assistance to Wholesalers and Retail Traders (AWRT)**

The scheme is called as Assistance to Wholesalers and Retail Traders (Abbreviated as – AWRT) for purchase of Materials/ Goods and Service against security of Bank Guarantee.

**Purpose of the Scheme:**

In order to assist Wholesaler and Retailers belonging to Micro, Small and Medium Enterprises (MSME), having Udyam Registration Certificate, NSIC arranges to provide Working Capital Requirements. The assistance will be given for purchase the goods from the wholesalers/manufacturers /Retailers which is not prohibited by law or opposed to public interest.

In case of traders involved in trading stock i.e “in commodity market” may not be considered for this purpose.

Arrangement with Bulk Supplier and from the suppliers (other than with whom MOU arrangement is made) may be as under:

- a) Bulk materials namely Aluminum, Zinc, Copper, Iron & Steel, Cement etc., which are arranged through NSIC entering into a Memorandum of Understanding with their manufacturers.
- b) Materials/ goods from the suppliers (other than with whom MOU arrangement is made) on the specific request of the Micro, Small and Medium Enterprises.

Under both (a) and (b) arrangements, the supplier is selected by the MSMEs and payment at the request of unit is released by NSIC directly to the supplier.

This manual intends to impart the procedure and guidelines to all offices of the Corporation while providing assistance to MSME units as Wholesaler and Retailer for Material/ Goods and Service under our Raw Material Assistance Scheme (against the security of Bank Guarantee only).

**Scope of the Scheme:**

To establish a proper procedure for ensuring that Wholesalers and Retailers are served properly, and to impart guidelines to all offices of the Corporation while providing assistance to Wholesaler and Retailer (MSME units) for purchase of Material/ Goods and Service under Assistance to Wholesalers and Retail Traders termed as AWRT Scheme.

**Eligibility Criteria:**

The eligibility criteria for Wholesalers and Retailers (MSMEs) who are desirous to avail assistance under Material/ Goods and Service AWRT Scheme for retailers would be –

- ✓ The Unit must mandatorily have Udyam& GST Registration

- ✓ The Unit must be profit making for the last three years (i.e., profit before tax for last 3 years as per audited balance sheet.)
- ✓ The Unit's Sales must be over Rs 100.00 Lakhs in last 3 years (each year) as per the audited balance sheet.
- ✓ The Unit is purchasing goods from atleast two registered manufacturers who should be registered on GST.
- ✓ The Unit must be having necessary respective business license, dealer/distributor certificate from respective principals and/ or compliance of other statutory requirements for carrying out the business.
- ✓ The unit must be having proper business premises i.e sufficient space in terms of business scale.

**GST composition for retailers:**

- Designed for small businesses with an annual turnover below a certain threshold (e.g., INR 1.5 Crore in India).
- Simplified tax compliance with a fixed rate of tax on turnover.
- Limited input tax credit availability, meaning taxes paid on inputs cannot be claimed as credit against output tax liability.
- Ideal for retailers with relatively lower profit margins and minimal interstate transactions.\

**Other Government Initiatives:**

The Government of India has taken various initiatives to improve the retail industry in India. Some of them are listed below:

In July 2021, the Andhra Pradesh government announced retail parks policy 2021-26, anticipating targeted retail investment of Rs. 5,000 crore (US\$ 674.89 million) in the next five years.

Government may change Foreign Direct Investment (FDI) rules in food processing in a bid to permit E-commerce companies and foreign retailers to sell Made in India consumer products.

Government of India has allowed 100% FDI in online retail of goods and services through the automatic route, thereby providing clarity on the existing businesses of E-commerce companies operating in India.

**CONCLUSIONS**

From the above study it can be concluded that in the environment of intense Competition, governments of India had helped small as Well as big homeland retail chains through formulating appropriate policies over time. The governments had helped homeland retail chains by providing capital support and/or Formulating strict regulations to restrict entry of foreign retailers in their respective Countries.

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## **DIGITAL BANKING SERVICES OF TAMILNAD MERCANTILE BANK**

**Dr. R. SIVASANKAR**

Assistant Professor of Commerce, Vivekananda College, Agasteeswaram.  
Affiliated to Manonmaniam Sundaranar University, Tirunelveli – 627 012, Tamil Nadu, India.

**R. SAHAYA DIVYA**

Ph.D., Scholar, Reg. No: 241132706009, Commerce Research Centre, Vivekananda College, Agasteeswaram. Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli – 627 012, Tamil Nadu, India.

### **ABSTRACT**

Digital Banking is a genetic term for development of banking services and delivering products through electronic channels, such as the Automated Teller Machines, the telephone, the internet, the mobile phone. Customers are still waiting for new fastest banking services but India is developing in Technology enabled banking service in a revolutionary transformation that will bring many new features, including anytime, anywhere, ultra- fast response times in banking transactions. The aim of the study is to exploring the various digital banking services offered by Tamilnadu Mercantile Bank (TMB). This paper focuses the difficulties faced by the respondents while using Digital banking services. Primary data is collected from 250 sample respondents by using random sampling methods. The statistical tools such as One way ANOVA, One sample t-test, Friedman Ranking Technique are used for the final interpretation of data. The study concluded the first rank goes to fund transfer regarding the services offered by TMB in M-Connect App. The opinion regarding the factors influencing the respondents to use digital banking services are identified website loaded with instructions and friendly customer services. Continuously update and improve digital banking platforms based on customer feedbacks and technological advancement.

**Keywords:** Internet, technology, security, user friendly, customer, digital banking and service.

### **INTRODUCTION**

The mechanization and digitization of the Indian banking sector were caused by a variety of factors. The initial step towards digital transformation in banking was the implementation of standard check encoders i.e., Magnetic Ink Character Recognition (MICR) code. Now, each bank branch has a unique MICR code which facilitates the sorting and processing of checks. The step of implementation of unique MICR code was more of an innovation than a necessity which ultimately eases the banking operations. Banks started integrating computer technology with personal computers and subsequently set up their own local area networks (LAN), to reduce errors and speed up the process. Due to growth of networks the banks began to connect with each other, this results in the evolution of Centralized Online Real-time Exchange (CORE) banking. Customers were able to conduct financial transactions and view their accounts from any of the partner bank's branches using CORE banking. Customers could manage bank accounts more easily, which gradually inspired the term "Anytime, Anywhere Banking". Eventually automated teller machines (ATMs) were on the scene, making it feasible to conduct electronic transaction of funds. In the 2000s, Online banking and tele-banking was introduced in the year 2000. It facilitates various methods of online fund transfers, such as Real Time Gross Settlement (RTGS) and Immediate Payment Service (IMPS), were implemented. National Electronic Funds Transfer (NEFT) is an electronic funds transfer system started in 2005 by the Reserve Banks of India (RBI), which enables bank customers in India to transfer funds between any two NEFT-enabled bank accounts on a one-to-one basis. Online innovation services and mobile banking have both grown in popularity in recent years. The Indian banking industry's transition to digitalization, which started in the 1980s, has come a long way.

### **STATEMENT OF THE PROBLEM**

In a fast-changing banking ecosystem, the call of the hour is to deliver tailor-made solutions that don't just offer customer convenience but is also a sustainable exercise. Core Banking solutions are vital to the day-to-day functioning of any bank. It is an integral part of the banking technology which aims to serve their clients and customer with the best services. Core banking provides various

services to the customers which include transaction accounts, loans mortgages, Automated teller machine, Debit/credit cards, E-cheque, smartcards, RTGS, NEFT etc. These services help to manage and use one's bank account such as verifying balance of the accounts, Transfer of money from one account to another account. This will strengthen the banks competitive position in the banking industry. Hence, this research focus on the Digital banking services of Tamilnadu Mercantile Bank.

### **REVIEW OF LITERATURE**

**Vivek Kumar Sindhi** (2023) in his paper analysed the various literature review of the other researchers. The article indicates the bank earnings have improved as a results of lower operational costs and also indicates that digital banking has the potential to significantly transform the landscape of financial inclusion.

**Shylaja and Prince Jebaraj** (2020) in their study analysed the customer satisfaction towards the core banking services in private sector banks at Tirunelveli district. The study reveals that the majority of the customers are satisfied with the core banking services provided by the banks in Tirunelveli district.

**Vaieyanthi and Thangaraja** (2019) in their paper analysed the customer satisfaction towards mobile banking services with special reference to TMB in Tenkasi district. The study found that the customers utilize the various benefits of the mobile banking services.

**Santiya Ran, A Saravanan** (2018) analyses the customer's satisfaction towards internet banking of all banks has been elicited and analyzed. This part consists of demographic profile of customers and bank transaction details and reasons for using Internet banking has been taken into consideration. The question of how attitude towards element of existing banking services might influence to customer decision to used internet banking has not been investigated.

### **OBJECTIVES OF THE STUDY**

- To analyse the various digital banking services offered by TMB.
- To analyse the difficulties faced by the respondents while using Digital banking services.
- To offer better and suitable suggestion.

### **SCOPE OF THE STUDY**

The scope of the study is to find the level of attitude of customers in using digital banking services offered by Tamilnadu Mercantile Banks Ltd., in Agasteeswaram branch of kanniyakumari district.

### **METHODOLOGY**

Research methodology is a way to systematically solve the research problem. It may be understood as science of studying how research systematically solved the research problem.

### **METHOD OF DATA COLLECTION**

The data collection method adopted is trough a set of questionnaire. The study relies on primary data were collected directly from the customers through a well-structured schedule data. Secondary data were collected from different sources such as newspapers, magazines, journals, books and the internet.

### **SAMPLING DESIGN**

The survey is not taken from the entire population. Random Sampling method is used in the study as is not possible to study the entire population. The sample size is 250 respondents.

### **TOOL FOR ANALYSIS**

The data collected from the respondents were coded and tabulated to suit the requirement of the study. The data obtained were analyzed by the following tools.

- ✓ One way ANOVA
- ✓ One sample t-test
- ✓ Friedman Ranking Technique

### **DATA ANALYSIS AND INTERPRETATION**

#### **1. SERVICES OFFERED BY TMB M-CONNECT APP**

The services offered by TMB M-Connect app is analysed with the help of Friedman Ranking Technique. It is a very important non parametric test. For analyzing the data, 10 variables have taken

by the researcher. These are Mobile recharge / DTH recharge, Utility bills, Balance inquiry and transaction history, Fund transfer, Cash deposit and transfer from one account to other, Apply New ATM card, lock and Block stolen cards, NEFT/RTGS, Account statement, Open Fixed Deposit account, Recurring Deposit account instantly and transfer amount from A/C., Pay and close Loans/Jewel Loans. The results of the Friedman ranking are tabulated and given in the Table.1

**TABLE 1: SERVICES OFFERED BY TMB M-CONNECT APP**

SL.NO	Services Offered By TMB	Mean Score	Rank
1	Mobile recharge / DTH recharge	4.91	II
2	Utility bills	5.25	V
3	Balance inquiry and transaction history	4.92	III
4	Fund transfer	3.74	I
5	Cash deposit and transfer from one account to other	4.94	IV
6	Apply New ATM card, lock and Block stolen cards	6.33	VIII
7	NEFT/RTGS	6.23	VII
8	Account statement	5.29	VI
9	Open F/D account, R/D account instantly and transfer amount from A/C	6.71	X
10	Pay and close Loans/Jewel Loans	6.70	IX

Source: Calculated data.

Table 1 reveals that from the analysis fund transfer ranks first, Mobile/DTH recharge ranks second, balance inquiry and transaction history ranks third, Cash deposit and transfer from one account to other ranks fourth, Utility bills ranks fifth, Account statement ranks sixth, NEFT/RTGS ranks seventh, applying new ATM cards ranks eight, Pay and close jewel loan ninth and opening account ranks tenth.

## 2. OPINION ABOUT DIGITAL BANKING AMONG CUSTOMERS

The opinion about the digital banking services among customers are analysed with the help of one sample t-test. Eight variables are considered such as High motivation from bank employees, Easy to operate, User friendly, Training to operate, Website loaded with instructions, Immediate solution for queries, Friendly customer services, Surplus information. The results are shown in Table. 2

**TABLE 2: OPINION ABOUT DIGITAL BANKING AMONG CUSTOMERS**

SI. No	Opinion	T	Sig.
1	High motivation from bank employees	.552	.459
2	Easy to operate	2.187	S.142
3	User friendly	.134	.715
4	Training to operate	2.481	.118
5	Website loaded with instruction	10.343*	.002
6	Immediate solution for queries	1.013	.316
7	Friendly customer services	11.245*	.001
8	Surplus information	.273	.602

Source: Calculated data.

\*significant at 5 per cent level

From the Table 2, the opinion about digital banking services are identified in website loaded with instructions and friendly customer services since the P value is less than the critical value of 0.05. Hence, the hypothesis is rejected. Therefore, these are very important factor impact the TMB digital banking services.

## 3. BENEFITS OF DIGITAL BANKING

The benefits of digital banking are analysed with the help of one way ANOVA. For this purpose ten variables have been taken into consideration these are Time saving, more product information, Convenience, Service transparency, User friendly platform, anywhere any time banking,

Real time updates and notifications, no physical bank visits, Eco-friendly, Enhanced security. The results are depicted in the following Table. 3

**TABLE 3: BENEFITS OF DIGITAL BANKING**

SI. No	Benefits	Sum of squares	df	Mean square	F	Sig.
1	Time saving	11.727	2	5.863	16.625*	.000
2	More product information	15.464	2	7.732	4.527*	.013
3	Convenience	27.662	2	13.831	15.211*	.000
4	Service transparency	9.352	2	4.676	2.622	.077
5	User friendly platform	11.482	2	5.741	4.637*	.012
6	Anywhere any time banking	8.230	2	4.115	2.446	.091
7	Real time updates and notifications	5.036	2	2.518	2.510	.086
8	No physical bank visits	6.401	2	3.200	2.824	.064
9	Ecofriendly	15.691	2	7.845	4.645*	.012
10	Enhanced security	13.551	2	6.775	4.865*	.009

Source: Calculated data

\*Significant at 5 per cent level

From the Table 3, the main benefits of digital banking are identified in time saving more product information, convenience, user friendly platform, Ecofriendly and enhance security, since the P value is less than the critical value of 0.05. Hence, the hypothesis of these variables are rejected. Therefore, these are significantly impact the benefits of Digital banking services of TMB.

#### **4. DIFFICULTES FACED BY CUSTOMERS USING TMB DIGITAL SERVICES**

The difficulties faced by customers in digital banking services are analysed with the help of one way ANOVA. Ten variables have taken into consideration such as Lack of human touch, Cyber-attack treats, Risk of fraudulent activities, Reduced transaction limits, System failure, No digital literacy, Dependency on Technology, Unsecured network, Technical glitches, Update failures and errors. The results are shown in the Table. 4

**TABLE 4: DIFFICULTIES FACED BY CUSTOMERS WHILE USING TMB DIGITAL SERVICES**

SI. No	DIFFICULTIES FACED	Sum of squares	df	Mean squares	F	Sig.
1	Lack of human touch	7.702	2	3.851	4.867*	.009
2	Cyber- attack treats	32.964	2	16.482	15.035*	.000
3	Risk of fraudulent activities	2.682	2	1.341	.999	.372
4	Reduced transaction limits	3.382	2	1.691	1.581	.211
5	System failure	33.184	2	16.592	8.720*	.000
6	No digital literacy	2.304	2	1.152	.710	.494
7	Dependency on technology	6.813	2	3.406	2.825	.064
8	Unsecured network	4.879	2	2.440	1.565	.214
9	Technical glitches	18.008	2	9.004	5.655*	.005
10	Update failures and errors	2.451	2	1.225	.625	.537

Source: Calculated data

Significant at 5 per cent level

From the Table 4, the difficulties faced by the respondents in digital banking services are identified in lack of human touch, cyber-attack threats, system failures and technical glitches which are significant since the P value is less than critical value of 0.05. Hence, these factors impact and becomes the main difficulties in using digital banking services.

### **FINDINGS AND RECOMMENDATION**

The first rank goes to fund transfer regarding the services offered by TMB in M-Connect App. The opinion regarding the factors influencing the respondents to use digital banking services are identified website loaded with instructions and friendly customer services. The main benefits of digital banking are identified in time saving more product information, convenience, user friendly platform, Ecofriendly and enhance security. Regarding difficulties faced by respondents, cyber threat attacks, system failure and technical glitches are identified.

Banks should design easy to navigate inter faces for online banking portals and mobile apps. Utilize customer data to offer personalized banking experiences and provide product recommendations based on customer behavior and preferences. Offer round the clock customer support like phone support, email and self service options. Ensure quick resolution of customer queries and issues. Simplify account opening, loan applications and other banking processes by providing step- by-step guidance through digital channels. Continuously update and improve digital banking platforms based on customer feedbacks and technological advancements. Keep customer informed about new products and update. Regional languages can be introduced in the apps for old generation people to understand better.

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## **IMPACT OF DIGITAL LITERACY ON EMPLOYEES STRESS LEVELS AND JOB SATISFACTION IN PRIVATE SECTOR BANKS**

**Jincy B H**

Research Scholar, Reg.No: 22213081012007

PG and Research Department of Commerce, Malankara Catholic College, Mariagiri,  
(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

**Dr. M. Josephin Rangith**

Head and Assistant Professor

PG and Research Department of Commerce, Malankara Catholic College, Mariagiri, (Affiliated to  
Manonmaniam Sundaranar University, Tirunelveli)

### **ABSTRACT**

The rapid digital transformation in the private banking sector has necessitated a high level of digital literacy among employees. This study examines the impact of digital literacy on employees' stress levels and job satisfaction within private banks. Employees with higher digital proficiency are often more efficient, confident, and adaptable to technological advancements, leading to reduced workplace stress and increased job satisfaction. Conversely, those with lower digital literacy may experience higher stress due to difficulties in using digital tools, fear of job redundancy, and increased workload. The study highlights that continuous digital training, user-friendly technology, and employee support programs play a crucial role in mitigating stress and enhancing job satisfaction. Findings suggest that private banks must prioritize digital upskilling initiatives to foster a more productive and satisfied workforce while minimizing technology-induced stress.

**Key Words:** *Digital Transformation, Private Bank, Digital Literacy, Employees, Stress Level, Job Satisfaction*

### **INTRODUCTION**

The private banking sector has undergone significant digital transformation in recent years, driven by advances in technology and changing customer expectations. This transformation has required employees to develop new digital skills, including data analysis, digital communication, and online security. However, the impact of digital literacy on employees' stress levels and job satisfaction in the private banking sector is not well understood. This paper examines the relationship between digital literacy, employee stress levels, and job satisfaction in the private banking sector.

#### **Understanding the Core Concepts**

- ❖ **Digital Literacy:** This encompasses more than just basic computer skills. It includes the ability to effectively use digital tools and technologies, critically evaluate online information, adapt to new digital platforms, and maintain digital security and privacy. In the banking sector, this could involve using core banking software, mobile banking platforms, data analytics tools, and cybersecurity protocols.
- ❖ **Employee Stress Levels:** This refers to the amount of pressure and strain employees experience in their work environment. In the context of digital literacy, stress could arise from difficulties in using new technologies, the constant need to learn new systems, fear of making mistakes, or feeling overwhelmed by the volume of digital information.
- ❖ **Job Satisfaction:** These measures how content employees are with their jobs. Factors influencing job satisfaction include the ability to perform tasks effectively, feeling competent and valued, having a sense of control over work, and maintaining a healthy work-life balance. Digital literacy can impact job satisfaction by either enhancing or hindering these factors.

### **REVIEW OF LITERATURE**

- The private banking sector is undergoing significant digital transformation, with the adoption of new technologies such as artificial intelligence, block chain, and cloud computing (PwC, 2020). This transformation requires employees to develop new digital skills to remain relevant and effective in their roles.

- Azmiet. al. (2020) examined the impact of digitalization on Bank Performance in respect of Indian banking. In order to examine bank performance three variables are studied namely cost of operations, employee efficiency and profitability. Digitalization was found to be positively connected with all three variables under the study. It has enhanced bank performance and authorised it to expand from core banking services to complete financial solutions.
- Cizmicet. al. (2023) studied the impact of the main workplace components on employee satisfaction and performance in respect of digitalization. The study's key findings exhibited that the task and knowledge characteristics of artificial intelligence-enabled jobs are extremely important for inducing innovative work behaviour among employees.

### OBJECTIVES OF THE STUDY

1. To investigate the relationship between digital literacy and employees' stress levels in private sector bank.
2. To analyze the impact of digital literacy on job satisfaction among employees in the private sector bank.

### STATEMENT OF THE PROBLEM

This study aims to examine the relationship between digital literacy, employee stress levels, and job satisfaction in the private banking sector. It seeks to identify whether improving digital literacy through training and support can mitigate workplace stress and enhance job satisfaction. The findings will provide insights for banks to develop better digital training programs, create a supportive work environment, and ensure that employees can leverage digital tools effectively while maintaining a healthy work-life balance.

### METHODOLOGY OF THE STUDY

The study consists of both primary and secondary data. The primary data has been collected by questionnaire. The questionnaire has been circulated among private sector bank employees under the area of Trivandrum District. 100 sample respondent are selected for the study by using stratified random sampling technique. Secondary data includes books, journals, website, etc. The collected data has been analysed and interpreted by using appropriate tools and techniques by taking into consideration the objective of the study.

### Data Analysis

The below section deals with data analysis, findings and discussions of the present research.

**Table No:1: Elements of Digital Banking Influence Employees Stress Levels**

Weights	7	6	5	4	3	2	1	Weighted total	Rank
Rank	1	2	3	4	5	6	7		
Customer complaints and issues	10	15	20	30	10	5	10	430	IV
System errors and technical issues	20	10	35	10	15	-	10	470	I
High workload due to digital tasks	25	10	5	20	25	10	5	440	III
Learning new technologies	15	30	10	15	5	15	10	450	II
Fear of making mistakes in digital transactions	-	25	10	5	20	10	30	330	VI
Cybersecurity threats	10	-	5	10	15	55	5	295	VII
Lack of digital literacy training	20	10	15	10	10	5	30	385	V

As per the data analyzed, the first rank was obtained for 'System errors and technical issues,' the second rank was obtained for 'Learning new technologies,' the third rank was obtained for 'High workload due to digital tasks,' and the fourth rank was obtained for 'Customer complaints and issues,' the fifth rank was obtained for 'Lack of digital literacy training,' the sixth rank was obtained for 'Fear of making mistakes in digital transactions,' and the seventh and last rank was obtained for 'Cyber security threats.'

**Table No:2**  
**Factors Influenced in Level of Satisfaction of Private Bank Employees on Digital Platforms**

<b>Weights</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>Weighted Total</b>	<b>Rank</b>
<b>Rank</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>		
Automation reduces repetitive tasks, allowing employees to focus on higher-value activities	32	28	24	16	276	<b>I</b>
Digital tools help employees complete tasks faster, reducing workload stress	36	28	10	24	272	<b>II</b>
Employees with low digital literacy may experience frustration, while digitally proficient employees may find work smoother	24	20	32	24	244	<b>III</b>
Confidence in digital skills increases motivation and job engagement	8	24	32	36	204	<b>IV</b>

As per the data analyzed, the first rank was obtained for 'Automation reduces repetitive tasks, allowing employees to focus on higher-value activities.' The second rank was obtained for 'Digital tools help employees complete tasks faster, reducing workload stress.' The third rank was obtained for 'Employees with low digital literacy may experience frustration, while digitally proficient employees may find work smoother,' and the fourth and last rank was obtained for 'Confidence in digital skills increases motivation and job engagement.'

#### **FINDINGS OF THE STUDY**

- ❖ Employees with limited digital skills reported higher levels of stress due to difficulties in using complex digital systems, fear of making errors, and the pressure of keeping up with rapid technological changes.
- ❖ Some employees feared job redundancy due to automation and AI-driven processes, contributing to increased anxiety and uncertainty about career stability.
- ❖ Employees who struggled with new banking technologies expressed dissatisfaction due to increased workloads, slow task execution, and difficulty in meeting performance expectations.
- ❖ Employees working in banks that provided strong IT support and digital resources experienced lower stress and higher job satisfaction.
- ❖ While digital tools enhanced efficiency, some employees felt an increased workload due to additional digital responsibilities, impacting their work-life balance.

#### **SUGGESTIONS**

- Analyze how digital proficiency affects workplace stress and job satisfaction.
- Interview employees to understand how digital changes have affected their stress and job satisfaction.
- Compare stress levels before and after digital adoption.
- Compare stress levels and job satisfaction between employees with high and low digital proficiency.
- Investigate how automation and AI-driven processes influence job satisfaction and stress.
- Analyze whether remote work and digital communication tools increase or reduce stress.
- Investigate the role of digital skills in career progression.
- Explore coping mechanisms used by employees to manage digital stress.

#### **CONCLUSION**

The study concludes that digital literacy plays a crucial role in shaping employees' stress levels and job satisfaction in the private banking sector. While proficient digital skills can reduce stress and improve job engagement, a lack of digital literacy can lead to increased anxiety and dissatisfaction. Therefore, banks must invest in training programs, user-friendly technology, and employee support initiatives to foster a balanced and productive work environment.



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## **THE ROLE OF HELMETS IN REDUCING MOTOR CYCLIST INJURIES - A PERCEPTION BASED STUDY**

**R. Bella Josephin**

Research Scholar, Reg. No : 241232006031, PG & Research Department of Commerce,  
St. Alphonsa College of Arts and Science, Karinkal, Kanyakumari District.  
(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

**Dr. M. Subala**

Assistant Professor, PG & Researcher Department of Commerce,  
St. Alphonsa College of Arts and Science, Karinkal, Kanyakumari District.  
(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

### **ABSTRACT**

Motorcyclists form a great proportion of people who are affected by road traffic accidents. The Non users of helmet while riding motorcycle causes head injury and hurt during the time of crashes the motorcycles. People believe using helmet for riding is the initial step for protecting the motorists from injuries. In this study the researcher determine the beliefs, attitudes and behaviors applying for the use of helmet wearing for riding the motorcycles. Cuts and fractures can be curable. But injuries to brain can be fatal. In this study the researcher determine the beliefs, attitudes, and behavior of motorists using helmet from injuries. The commercial motorcycle is the fact with low rate is the factor behind the injuries. Different local laws and regulations also directed to the motorists for the protection from injuries by using helmets. Some people feel discomfort and lateral vision and hearing ability impairment by using helmets. Helmet is the primary step to protect motorists from their injuries, especially head injuries motorists need to wear helmets according to the prescribed standards. The researcher determine the perceptions of motorists towards helmet wearing from preventing hurts and injuries.

**Key Words :** Motorcycle, Motorists, Injuries, Helmet, Wearing, Preventing

### **INTRODUCTION**

In India, Motor Cycles form a common means of transport. Vehicle manufacturers are interested and sometimes forced to look into accidents that occurred with their products, in order to identify design weakness and potential improvement. Motorcyclists cause road accidents in a significant manner. Helmets are essential piece of safety equipment that people need when riding a bike. People think Helmets protect our heads in case of a crash or if we hit our heads on the ground due to accident. So riders wear helmets to prevent brain damage or injuries from an accident. According to the Insurance Institute for Highway Safety, helmet use has been estimated to reduce the odds of head injury by 50% and the odds of head, face or neck injury by 33%. Helmets are important for riders of all ages. The risk averse drivers are more likely to wear a helmet. People also recognize that wearing a helmet can help to protect the head and other parts of the body from injury. One of the most important safety measures a rider can take is wearing a helmet. They are designed to reduce adverse injuries and sometimes even the possibility accident.

In India, with the high number of two-wheelers on the road, the importance of wearing a helmet has increased drastically. Jayadevan Sreedharan, Jayakumary Muttappillymyalil · Binoo Divakaran · Jeesha C Haran (2010), "Helmet use among motorcyclists was infrequent among the participants. Education and motivation on road safety measures are the two factors that have to be considered to improve helmet use among motorcyclists. The determinants associated with helmet use were gender, drunk driving, marital status and a positive attitude towards legal measures. The study highlights the importance of enforcing stringent legislative measures to improve helmet usage by motorized two-wheeler riders. Periodic police checks are an essential component. It requires a strong political will and concerted sustained efforts across a range of sectors. There is an urgent need for setting and enforcing laws requiring riders of motorized two wheelers to wear a helmet along with strict action to prevent people riding under the influence of alcohol." Shirin Wadhvaniya Shivam Gupta, Johns Hopkins Bloomberg School of Public Health, London School, Lakshmi K Josyula(2015)

“ The primary function of a helmet is to protect the rider's head and brain from injury in case of a mishap. It absorbs the impact of a collision and reduces the risk of adverse injuries. Always choose a helmet that meets the required safety standards set by the government. In India, it is compulsory to wear a helmet certified by the ISI. using standard, full-face, and properly strapped helmet termed as effective helmet use is key to reducing injuries and deaths to greatest extent in motorcycle crash.”

### **STATEMENT OF THE PROBLEM**

Today motorists are affected by head injuries due to accidents without wearing helmets. Regarding risk factors for motorcycle injuries, the non-use of helmet is one of identified one. Injuries to the head, following motorcycle crashes are a common cause of morbidity and mortality. Helmet is the important and preventive measure to be safe from head injuries due to accidents. To be protected from head injury, motorcyclists need to wear helmets according to the prescribed standards. The other factor behind the injuries of helmets are low rate which produced is not bearing capable of head injuries. The perceptions of motorcyclists' risk prevention towards hurt and injuries of helmets due to crashes of motorcycles are ensuring through the use of safety helmets and practices.

### **OBJECTIVES**

1. To know the attitudes, beliefs, and behavior of helmet users.
2. To know the factors influencing helmet using.
3. To determine the level of comfort and safety to prevent injuries of motorists.

### **SCOPE OF THE STUDY**

Safety helmets are designed to provide a barrier between the head and external forces that could cause injuries. The helmet structure can absorb and distribute the force of an impact, reducing the chances of skull fractures, concussions, and traumatic brain injuries. Here the researcher needs to study the perception of motorists by use of helmets to avoid hurt and injuries due to accidents.

### **METHODOLOGY**

In the research, the researcher collected secondary data only. The secondary data were collected from notes, journals, articles, news papers and website

### **REVIEW OF LITERATURE**

Motorcyclists are the most susceptible vehicle users in India. This study to assess helmet use through the perception of motorists to bearing hurt and injuries and to identify factors influencing by the use among them. Using standard, full-face, and properly strapped helmet termed as effective helmet use is one of the key factor to reducing injuries and deaths to greatest extent in motorcycle crash. Wearing helmet is effective in reducing deaths and injuries caused by motorcycle accidents. Wearing helmet is effective in reducing deaths and injuries caused by motorcycle accidents.

Malik Muneeb Abi, Shehar Bano, Ashok Kumar, Muhammad Iqbal, Muhammad Laiq Ur Rahman Shahid, Ahsan Jave, Muhammad Atiq Ur Rehman Tariq (2022), “Expected reasons for not wearing a helmet can be a lack of thoughtfulness regarding the rider’s behavior surrounding helmet use and the inadequacy of awareness or enforcement campaigns. Other reasons can include physical discomfort and environmental conditions.” Dr. Naveen Kikkeri Hanumantha Setty (2020) “Helmet use reduces the risk and severity of head injury and death due to road traffic crash among motorcyclists. The protective efficacy of different types of helmets varies. Wearing firmly fastened full face helmet termed as effective helmet use provides greatest protection”. Uzma Rahim Khan · Nukhba Zia · Umerdad Khudadad · Kate Wright, Sayeeda Amber Sayed, (2023) “Motorcycles are a risky mode of transport, and there are several social and cultural barriers regarding helmet use by female pillion riders. Enforcing helmet laws for female pillion riders, raising awareness about helmet laws, and making helmet use among pillion riders a norm are some essential steps to take to promote helmet use among female pillion riders”. Tri Rakhmawatia, Sik Sumaedia, I Gede Mahatma Yuda Baktia, Tri Widiyantia, Sih Damayantia (2019) “The proposed model of helmet has goodness of fit, validity, and reliability. Thus, the model can be used to understand intention to use helmet with a quality standard label. The study also revealed that intention to use helmet with a quality standard label is significantly affected by attitude toward helmet with a quality standard label and perceived risk. Perceived risk is significantly affected by label marketing investment. Attitude is

significantly affected by awareness. Awareness is significantly affected by label marketing investment and clarity”.

## **RESULTS AND DISCUSSIONS**

### **Attitudes, Beliefs and Behaviours of helmet use:**

Attitudes, beliefs, and behaviors of helmet users are influenced by a number of factors, including social, health, and education campaigns. These factors can help improve helmet use. Attitudes towards helmet use can vary depending on the individual. Attitudes can be influenced by external factors like upbringing and experiences. Beliefs about the importance of wearing a helmet can influence behavior. Behaviors can be influenced by attitudes, beliefs, and perceived behavioral control. Helmet use is considered to help minimize the intensity of accidents and avoid most of the fatalities of motorcyclists that occur during riding, which is the reason behind the formation of legislation that exists in countries across the globe. Radun, I.; Radun, J.; Esmailikia, M.; Lajunen, T. Risk(2018) “lack of thoughtfulness regarding the rider’s behavior surrounding helmet use and the inadequacy of awareness or enforcement campaigns. Other reasons can include physical discomfort and environmental conditions. In addition, risk-taking behavior always represents an opposing statement against mandatory helmet Laws”. Xiaomeng Shi, Shuchao Cao, Mohcine Chraibi (2022) “Helmet use is considered to help minimize the intensity of accidents and avoid most of the fatalities of motorcyclists that occur during riding, which is the reason behind the formation of legislation that exists in countries across the globe.”

### **Factors influencing by people using Helmet**

A well-fitting helmet is comfortable and stays in place, reducing the risk of distraction. Helmets can be bright colors and have reflective stickers and lights, making the wearer more visible to others. Social norms and attitudes towards helmet use can influence whether people wear them. Some places have laws that require people to wear helmets when riding certain vehicles. Demographic and legislative factors play significant role in tendency of motorcyclists to wear helmets. According to the World Health Organization (WHO) report on global road safety, head and neck injuries are the most common type of injuries among two-wheeler vehicle riders and are reported to be the first cause of fatalities following motorcycle-related crashes (World Health Organization, 2013), highlighting the importance of helmet use among these rider. Mahdi Quchaniyan Haqverdi, Seyedehsan Seyedabrishami, John A. Groeger Mahdi Quchaniyan Haqverdi, Seyedehsan Seyedabrishami (2015)” motorcyclist training, safety courses for offending motorcyclists and social programs to improve social norms and attitudes regarding helmet use are warranted, as are more effective law enforcement techniques, in order to increase proper use of helmets

### **Determine the level of Comfort and Safety to prevent from Injuries**

Helmet safety measures include ensuring the helmet fits properly, wearing it for its intended purpose, and securing the chin strap. Feel comfortable but snug. Not move in any direction, back to front or side to side. “Trauma to the brain can occur as a result of an impact, which can cause a concussion or open skull fracture, or a jarring motion, such as a quick turn or sudden stop. Even seemingly mild head injuries, where you don't lose consciousness, can cause permanent behavioral and cognitive problems, such as memory loss, inability to concentrate, sleep disorders and, in some cases, permanent disability or death”.

**TAAIG Team, “ Section 129(b)** the helmet must be fastened to the head of the driver and the pillion rider with fasteners such a straps. This ensures that the helmet will not fall off the head if there is an accident on the road. Wearing a helmet reduces your risk of a serious brain injury and death because during a fall or collision, most of the impact energy is absorbed by the helmet, rather than your head and brain. As wearing a helmet is wearing the *right* helmet. A helmet that doesn't fit properly or offer sufficient cushioning can give you a false sense of security while not actually providing the level of protection you need. **Milan Tirwa, Poonam Joshi, Aditi P Sinha, Yangchen Dolma,(2022)** “The strengthen enforcement and increase accessibility to low – cost, high – quality and comfortable standard full – face helmets, in order to enhance effective helmet use. The law is

already stringent but majority of the subjects seemed unaware of the updated policies.”**Team Acko Jan (2024)**, “One of the most important safety measures a rider can take is wearing helmet. They are designed to reduce adverse injuries and sometimes even the possibility of an accident. In India, with the high number of two – wheelers on the road, the importance of wearing a helmet has increased drastically. A loose or tight helmet can be uncomfortable and not provide the required protection during a collision. Ensure you try on the helmet, and check if it fits snugly and comfortably on the head. It should never move around when you shake your head. Always choose a helmet that meets the required safety standards set by the government. In India, it is compulsory to wear a helmet certified by reducing the impact of wind, dust and other debris. Choose a helmet that has enough visibility.”

### **FINDINGS AND SUGGESTIONS**

- The researcher found the attitudes, beliefs and behaviours of public is always depends on the mindset of them. Here the mindset of the motorists believe that helmet is a good safety precaution for riding motorcycle. Everybody should also follow the rules and regulations to riding motorcycles. Because speed and carelessness of the motorcyclists cause accidents and tends to hurt with injuries and fractures. Helmet gives safe and protection for the head and brain of our body is the acceptable fact. The researcher suggests that helmet should be worn during every ride, no matter how short. Because many accidents happen near home
- Secondly the researcher found the factors of wearing helmets. Motorcycles crashes a significant part of Road Traffic Injuries and cause heavy injuries even they wear helmet. Non – helmet using drivers seem to have acceptable awareness of mandatory helmet laws and knowledge about helmet discomfort is somehow common among helmet using drivers. It is suggested by the researcher to enhance helmet usage, policymakers should emphasize the awareness of dangerous due to Non wearing helmets by Demo in public places like near markets, bus stands, hospitals etc.
- Thirdly the researcher examined the local laws and regulations of Non- wearing helmets of motorists. There are many laws were amended time to time and informed the liability of fine and punishments for this purpose. Even the motorists not taken much effort to follow this rules and regulations. It is suggested by the researcher the defined rules and regulations must be educated to the school and college students through webinars and orientations about the importance of helmets for riding.
- Finally the researcher determined the comfort and safety to the motorists while wearing helmets for driving without hurt and injuries. Cuts, bruises, and even broken bones will heal but damage to the brain can be permanent. Even a low- speed can result in serious head injury. Many such disabling injuries can be prevented by wearing helmet. It is suggested by the researcher that the Government should make effective involvement with the manufacturers of helmet to give a quality output with safety precautions. The safety precautions which have to avoid head injuries must be reached to the public through proper advertisement.

### **CONCLUSION**

The conclusion for this research on perception towards helmet usage would likely state that while most individuals acknowledge the protective benefits of wearing a helmet, factors like discomfort, inconvenience, and a perceived lack of enforcement can significantly hinder consistent helmet usage; therefore, targeted awareness campaigns, improved helmet design, and stricter enforcement policies are necessary to promote positive perceptions and increase helmet adoption across different populations.

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## **OPPORTUNITIES AND CHALLENGES OF DIGITAL MARKETING**

**Dr. K.Edel Queen Freeda**

Head & Assistant Professor, Department of Commerce,  
Arunachala Arts and Science (Women) College, Vellichanthai, Kanyakumari District, Tamil Nadu.  
(Affiliated to Manonmaniam Sundaranar Univeristy, Tirunelveli)

### **ABSTRACT**

Digital marketing has revolutionized the way businesses connect with consumers, offering cost effective and efficient solutions for brand promotion. This study explores the opportunities and challenges of digital marketing emphasizing its impact on local businesses. The research highlights key digital marketing strategies, including social media marketing, search engine optimization, email marketing and online advertising. While digital marketing provides business with a broader reach, increase engagement and improved sales, challenges such as internet accessibility, digital literacy and security concerns remain significant barriers. This study aims to provide practical insights for businesses looking to leverage digital marketing effectively while addressing the region specific challenges. The findings of this research will help businesses, policymakers and marketers develop strategies to optimize digital marketing efforts

**Keywords:** Digital marketing, internet, online advertising, internet marketing, digital, literacy

### **INTRODUCTION**

Digital marketing is the component of marketing that utilizes internet and online based digital technologies such as desktop computers, mobile phones and other digital media and platforms to promote products and services. Its development during the 1990s and 2000s, changed the way brands and businesses use technology for marketing. As digital platforms became increasingly incorporated into marketing plans and everyday life, and as people increasingly use digital devices instead of visiting physical shops, digital marketing campaigns have become prevalent, employing combinations of search engine optimization (SEO), search engine marketing (SEM), content marketing, influencer marketing, content automation, campaign marketing, data-driven marketing, e-commerce marketing, social media marketing, social media optimization, e-mail direct marketing, display advertising, e-books, and optical disks and games have become commonplace. Digital marketing extends to non-Internet channels that provide digital media, such as television, mobile phones (SMS and MMS), callback, and on-hold mobile ringtones. The extension to *non*-Internet channels differentiates digital marketing from online marketing

### **REVIEW OF LITERATURE**

**ZIA UR REHMAN , G. NAGA RAJU & SHAIK ANWAR BASHA ,(2019)** this study concern with practical guideline for the online marketing and defining main terms and techniques of it. The outcome of this paper will be developed the understanding of main advantages and disadvantages of online marketing that would be useful for every organization that wants to market their products through internet and before wants to get acquainted with pros and cons of online marketing.

**A. Lavanya , & M. Radhikaman (2021),** This paper begins with an introduction of digital marketing and then it highlights the mediums of digital marketing, the difference between traditional and digital marketing, and the pros, cons, and importance of digital marketing in today's era. The main aim of digital India is to promote digital medium. Because people can use digital platform any time anywhere from the world companies needs to change their marketing strategy from traditional to digital.

### **STATEMENT OF THE PROBLEM**

Despite the rapid growth of digital marketing, many small business owners and traditional entrepreneurs struggle to adopt effective online marketing strategies. Limited awareness, lack of technical knowledge, and inadequate training hinder their ability to establish a strong digital presence. While urban areas generally have better internet connectivity, rural regions still face network issues, restricting digital outreach. Additionally, the dominance of English-language content in digital

marketing creates a communication barrier for non-English-speaking audiences. These challenges prevent businesses from leveraging digital marketing to its full potential, ultimately limiting their market reach and customer engagement.

### **OBJECTIVES**

1. To analyze importance, opportunities and challenges of digital marketing
2. To assess the digital marketing environment
3. To overcome technical and connectivity challenges.

### **DIGITAL MARKETING**

Digital marketing typically refers to online marketing campaigns that appear on a computer, phone, tablet, or other device. It can take many forms, including online video, display ads, search engine marketing, paid social ads and social media posts.

Digital marketing is often compared to “traditional marketing” such as magazine ads, billboards, and direct mail. Oddly, television is usually lumped in with traditional marketing.

### **IMPORTANCE OF DIGITAL MARKETING**

#### **Cost effective**

DM (digital marketing) is one of the best cost effective ways of advertising because marketing products on the internet is less expensive in comparison to physical marketing due to short chain of middlemen in online marketing as well as less expenses on the physical outlet of the showrooms and the use of marketing articles or social media in establishing an online presence is minimal and you don't have to incur cost of rental property and its maintenance because there is no need to purchase stocks in bulk for display in a store physically.

#### **Convenient**

Digital marketing enables to provide 24/7 services without worrying about the opening and closing hours of a physical store. It's also convenient to customers because they can browse your online store at any time and from any place worldwide and place their orders at their own convenient time.

#### **Increase website traffic**

The use of articles or social media as a marketing strategy will help to increase traffic to a business website. The more people visiting the site the more likelihood to closing with more sells and generating more interests of people in the products.

#### **One-to-one Marketing**

Internet marketing overcomes barriers of distance is overcome by Digital marketing because you can sell goods in any parts of the world without setting up a local outlet over there, thus the scope of target market becomes very wide. However, digital marketing desire to sell the product or services internationally will have to use localization services to ensure that your products are suitable for local markets and comply with local business rules and regulations. Localization of services includes translation and product modification which reflect the differences in local market.

#### **Improves association**

Better platform to build relationships with customers to increase customer retention level is provided by digital marketing. For example when a customer has purchased a product, first step to begin the relationship by sending a follow up e-mail to confirm the transaction and then thank the customer. You can also invite the potential customers to give product reviews on your website regarding the existing product and this will help to build a sense of association.

#### **Personalization**

By building a profile of their purchasing history and preferences, digital marketing will help a business to personalize offers for customers. You can do this by tracking the product information and web pages that helps to prospect, visit and make targeted offers which reflect their interests.

#### **Enlarge sales**

Internet marketing will increase sales because it provides the consumers opportunity to purchase the products online rather than physically going to a place or sending an order form by mail.



This will increase the impulse rate of purchasing power resulting in an increase of revenue for business organizations and an excellent return on their investments.

#### **Forever available to consumers**

Using digital marketing techniques businesses can give their consumers a 24 hour outlet for finding the products they want; in physical outlets shopping is done in only normal working hours which impact the work schedule and lifestyle of the customers.

#### **Better conversion rate**

If there is a website to promote business organization, then your customers are only few clicks away from completing a purchase from your website. Unlike other media, e-marketing is seamless, which require people to get up and make a phone call, post a letter or go to a shop.

### **CHALLENGES OF DIGITAL MARKETING**

#### **Marketing integration**

Multiple channels are employed by the sales efforts which are online and offline, e.g. email advertising, social networking, outbound call handling and so on. The problem faced with these is that they are supposed to serve a concrete and measurable goal as part of an integrated campaign even though they are often handled as different parts of the work. So to coordinate all marketing efforts must be a priority. Alongside the traditional campaign, e-marketing should be done and should not be tacked at the end of the business plan.

#### **Security and privacy**

Most people do not completely trust Web companies and, thus, they hesitate about offering information about themselves on the cyberspace. When companies that collect data are exposed to scammers and spammers, this is especially true. To adopt a sound policy and implement a fool-proof security measure, it becomes imperative for e-businesses. In a particular Encryption systems are a tool that online companies should seriously consider investing in.

#### **Impersonal service**

Electronic methods of providing customer service are used by businesses which are operating online, such as posting and emailing info on the website to answer possible user questions. Sometimes customers perceived this to as just too impersonal or uncaring. Merchants must develop efficient checkout procedures for selling goods via the Web, for addressing this problem. Hiring call handling services is also taken into consideration, so that customers can talk to real people when they have inquiries about problems that need instant answer.

#### **Improving Brand Awareness**

A big challenge for companies is that: primarily use the Internet to sell their products and services (tangible and intangible products). This is because, online adverts can be shut off by users unlike traditional advertising, (such as television, radio, billboard, and print) in which the campaign's message can be reinforced and repeatedly introduced to consumers at the marketers' will. So the challenge faced by web companies is to be more innovative in terms of advertisement.

#### **Other Challenges Are As Follows:**

- i. **Dealing with the IT Department:** There is a circle of IT vs. marketing for a long time. But, it's a time to understand that we need to be partner with our IT friends to implement our marketing programs more efficiently. In simple sense, we need them and they need us or we can say that both complement each other.
- ii. **Continuing Education:** Constant learning is needed by the marketers of 21st Century. It is said that knowledge in marketing comes with an expiration date and continues professional development is a necessity for up gradation. Take a class, get a certification, read a book, attend a seminar or conference whatever works for you, but keep learning.
- iii. **Bad Marketing:** Anyone can call themselves a web designer, marketer, consultant, SEO expert and so on. Poorly created and executed marketing programs degraded our profession and also create mistrust among clients, marketers and other related parties. By doing marketing in a right time or way helps you to tip the scale in favor of our own profession which helps in long run survival.

iv. **Lack of Trust:** In general, identity theft, Spam, intrusive advertising and technological glitches have left many mistrusting of marketing. You are either part of the problem or part of the solution, you have to decide it.

v. **Know-It-Alls:** Nobody is able to fully understand all aspects of marketing. There is simply too much to know, and whatever you do to know is changing at supersonic speed. If you are going to be an expert, you will have to get specialization in one aspect of e-marketing.

vi. **Ethical Practices:** An unprecedented mass of un-ethical businesses has been spawned by the Internet. There have always been scam regarding bottom feeders and artists, but the Internet seems to have brought them out in epic numbers. Make sure that your own practices are squeaky clean and try to educate your customers about some of the pitfalls of e-commerce.

vii. **Corporate Culture:** In many companies every department "owns" the website and no department "owns" the website. Websites should belong to marketing, not finance/operations/ IT or legal. When the committee doesn't have a clue, it is difficult to produce good marketing by committee. Collaboration is an important in this situation and your associates should provide 100 per cent input for this, but marketing should make the final decisions.

viii. **International Commerce:** The Internet has made possible to provide products and services available around the world as close to customers and their living room (or wherever they have their computer). Unprecedented revenue flows in and out of foreign countries is allowed by this new world channel and that impact could eventually have a dramatic effect on our domestic economy. We have a lot in common with people of other countries in term of culture and traditions, but there are some differences as well which is known as Unity in Diversity.

Understanding is the key for good international commerce as well as relations.

ix. **Intellectual Property:** It has never been easier to steal someone else's hard work. Everyday everything from music to software, movies and images are lifted from the Internet. This is a bad thing.

x. **Customer Expectations:** Never before customers had expected too much. Managing your customer expectations is vital to marketers, because if you don't know your competitors will, you are not able to survive in long run in the market. Without customers you will not have a business because customer is treated as a king of market, so take the time to get to know them, treat them with due care and respect, and in the same way you want to be treated as a customer.

### **SUGGESTIONS**

- Enhance digital literacy by providing training to small business owners on digital marketing strategies
- Improve internet connectivity especially in rural areas, to help business expand their online reach.
- Create digital marketing content in Tamil to bridge the communication gap and engage a larger audience.
- Utilize social media platforms like Facebook, Instagram and Whats app to increase customer interaction.
- Implement AI and data analytic to personalize customer experiences and improve engagement.
- Integrate traditional and digital marketing approaches for a well-rounded marketing strategy
- Strengthen data privacy and security measures to build trust among online customers
- Focus on cost effective marketing strategies such as SEO, content marketing and email campaigns

### **CONCLUSION**

The study highlights the growing significance of digital marketing, offering numerous opportunities for business to expand their reach. However, challenges such as digital literacy need to be addressed to unlock its full potential. By implementing the right strategies, business can effectively use digital marketing to drive growth and improve customer engagement, The future of digital marketing in the region looks promising provided businesses and policymakers work together to overcome existing barriers.

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## **AI GOVERNANCE AND ETHICS: CHALLENGES AND OPPORTUNITIES**

**Dr. V.Regima**

Assistant Professor of Commerce, Arunachala Arts and Science (Women) College, Vellichanthai  
Affiliated to Manonmaniam Sundaranar University, Tirunelveli.

**Dr. D.Sobha**

Assistant Professor of Commerce, Arunachala Arts and Science (Women) College, Vellichanthai  
Affiliated to Manonmaniam Sundaranar University, Tirunelveli.

**Dr. A. Franklin Ragila**

Assistant Professor of Commerce, Holy Cross College (Autonomous), Nagercoil, K. K. District  
Affiliated to Manonmaniam Sundaranar University, Tirunelveli

**Dr. R. Evalin Latha**

Head and Assistant Professor of Commerce, Holy Cross College (Autonomous), Nagercoil,  
Affiliated to Manonmaniam Sundaranar University, Tirunelveli.

### **ABSTRACT**

Artificial Intelligence (AI) is transforming industries, but its rapid advancement raises significant ethical and governance concerns. Bias, transparency, accountability and regulatory gaps must be addressed for responsible AI development. This paper explores these challenges, examines existing governance models and highlights opportunities for ethical AI deployment. The study also provides recommendations for improving AI governance through policy reforms, interdisciplinary collaboration and technological advancements.

**Keywords:** AI governance, ethics, transparency, accountability, regulation, responsible AI

### **INTRODUCTION**

Artificial Intelligence (AI) is reshaping industries, revolutionizing decision-making processes, and influencing nearly every aspect of human life. From healthcare and finance to education and public policy, AI-driven technologies are enhancing efficiency and enabling automation at an unprecedented scale. The adoption of AI has the potential to drive innovation, boost economic growth, and address global challenges. However, the ethical implications and governance of AI remain major concerns, as AI systems can significantly impact human rights, privacy, employment, and social structures. One of the most pressing issues is that AI operates in an environment where regulations often lag behind technological advancements. Many AI applications function with minimal oversight, leading to unintended consequences such as biased decision-making, privacy violations, and lack of accountability. Governments, businesses, and researchers are actively working to establish frameworks that promote ethical AI development and deployment, but there is no universal standard. Different countries and organizations have varying approaches to AI governance, resulting in inconsistencies that complicate regulatory enforcement. Moreover, the complexity of AI models presents additional challenges. Many AI-driven systems, particularly those based on deep learning, operate as "black boxes," making it difficult to explain their decisions. This lack of transparency raises concerns about fairness, especially in high-stakes areas like hiring, lending, and criminal justice. AI systems trained on biased datasets can reinforce and even exacerbate existing social inequalities, leading to discriminatory outcomes. Ethical AI governance must address these risks while ensuring that AI remains a tool for positive societal transformation. Despite these challenges, AI governance also presents numerous opportunities. By developing robust policies, promoting transparency, and fostering interdisciplinary collaboration, society can maximize the benefits of AI while mitigating its risks. Ethical AI frameworks, explainable AI techniques, and regulatory compliance mechanisms can help ensure that AI serves the public good. Additionally, global cooperation in AI governance can lead to standardized regulations that protect users across different jurisdictions. This paper examines the challenges in AI governance, explores opportunities for ethical AI development, and discusses potential solutions for creating responsible AI systems.

### **REVIEW OF LITERATURE**

- Agarwal & Dhar (2020) emphasize the importance of ethical AI development, arguing that biased datasets and lack of transparency in AI systems can lead to unfair decision-making. They suggest that explainable AI (XAI) models can help improve trust and accountability.
- Floridi & Cowls (2019) propose ethical AI principles, including fairness, accountability, and human-centric design, as fundamental guidelines for AI governance.
- Brynjolfsson & McAfee (2017) explore the economic implications of AI and highlight how automation can lead to job displacement. They argue that governments need to implement policies to manage workforce transitions and ensure equitable economic benefits.
- Binns (2018) further discusses algorithmic fairness, warning that AI models trained on biased data can reinforce social inequalities, particularly in hiring, lending, and law enforcement applications.

### **STATEMENT OF THE PROBLEM**

Despite the increasing adoption of AI, there is no universally accepted governance framework to regulate its ethical use. Many AI systems exhibit biases, lack transparency, and pose challenges in terms of accountability and liability. Additionally, regulatory efforts remain fragmented across different jurisdictions, creating inconsistencies in AI governance. Without a clear and enforceable set of ethical guidelines, AI technologies may lead to social, economic, and legal complications. This study aims to address these governance gaps by exploring key ethical concerns and proposing solutions for responsible AI deployment.

### **OBJECTIVES OF THE STUDY**

1. Identify key ethical challenges associated with AI governance.
2. Examine existing regulatory frameworks and their effectiveness in managing AI risks.
3. Explore opportunities for creating ethical and responsible AI systems.
4. Provide recommendations for policymakers, businesses and researchers to improve AI governance.

### **SCOPE OF THE STUDY**

This study focuses on AI governance and ethics from a global perspective, with an emphasis on regulatory policies, ethical principles, and technological solutions. It examines various AI applications, including automation, machine learning, and deep learning systems, and their impact on society, businesses, and governments. The study also explores case studies of AI failures and best practices in ethical AI implementation.

### **CHALLENGES IN AI GOVERNANCE AND ETHICS**

The lack of standardized AI governance presents numerous ethical, legal, and technological challenges. Bias in AI systems remains one of the most significant concerns, as AI models trained on incomplete or skewed data can lead to discriminatory outcomes. This is particularly concerning in high-risk applications such as facial recognition, credit scoring, and predictive policing, where biased AI decisions can reinforce social inequalities. Even with efforts to eliminate bias, AI developers struggle to create models that are entirely free from historical prejudices embedded in datasets.

Transparency and explainability also pose critical challenges. Many AI models operate as "black boxes," meaning their decision-making processes are difficult to interpret. This lack of transparency creates trust issues, as users and regulators are often unable to understand why an AI system made a particular decision. Explainable AI (XAI) techniques are being developed to improve interpretability, but there is still a long way to go before AI systems become fully transparent and accountable.

Privacy concerns are another major governance issue. AI systems rely on vast amounts of data, often collected from users without explicit consent. The improper handling of personal data can lead to surveillance, identity theft, and loss of autonomy. Although regulations such as the General Data Protection Regulation (GDPR) have been introduced to protect data privacy, enforcement remains inconsistent across different regions. Striking a balance between AI innovation and data protection is a key challenge in governance.

Accountability and liability are equally complex. When an AI system makes a harmful or incorrect decision, it is often unclear who should be held responsible—the developer, the organization deploying the AI, or the AI itself. Legal frameworks must evolve to clarify liability in cases where AI systems cause harm, such as accidents involving self-driving cars or incorrect medical diagnoses by AI-powered healthcare tools. Without clear accountability, individuals affected by AI-related harm may have limited legal recourse.

Regulatory gaps further complicate AI governance. Countries and regions have varying approaches to AI regulation, leading to inconsistencies in governance. While some governments are actively developing AI policies, others lack comprehensive frameworks, leaving AI applications unregulated. This fragmented approach creates challenges in enforcing ethical standards and ensuring global AI accountability.

### **OPPORTUNITIES FOR ETHICAL AI GOVERNANCE**

Despite these challenges, AI governance presents several opportunities for creating ethical and responsible AI systems. The development of AI ethics frameworks is a significant step toward establishing standards for fairness, transparency, and accountability. Organizations such as IEEE, UNESCO, and the European Commission have proposed guidelines that promote ethical AI practices and safeguard human rights. These frameworks provide a foundation for policymakers and businesses to build responsible AI strategies.

Public-private partnerships can also play a crucial role in AI governance. Collaboration between governments, technology companies, academic institutions, and civil society organizations can help create balanced AI policies that foster innovation while protecting societal interests. These partnerships can facilitate knowledge sharing, regulatory compliance, and the development of best practices for ethical AI deployment.

Advancements in explainable AI offer another key opportunity. Research in XAI is making it possible to develop AI models that provide clear explanations for their decisions, enhancing transparency and accountability. By integrating explainability into AI systems, developers can improve user trust and regulatory compliance.

AI auditing and compliance mechanisms are also essential for ensuring ethical AI deployment. Regular audits and impact assessments can help organizations identify potential risks, biases, and ethical concerns in AI systems. Independent AI ethics boards and regulatory bodies can oversee AI applications, preventing misuse and unintended consequences.

At the global level, international AI governance initiatives are emerging. The United Nations (UN), the Organisation for Economic Co-operation and Development (OECD), and other global entities are working toward harmonized AI regulations. A standardized international framework could help address cross-border AI challenges and promote responsible AI innovation on a global scale.

Ethical AI governance is not just about regulations—it is about building AI systems that align with human values, protect fundamental rights, and contribute positively to society. Through interdisciplinary collaboration, proactive policymaking, and technological innovation, AI governance can evolve to create a safer, fairer, and more accountable AI-driven world.

### **LIMITATIONS OF THE STUDY**

1. **Evolving Nature of AI:** The fast-paced development of AI technology means that governance models may become outdated quickly.
2. **Limited Empirical Data:** AI ethics is a relatively new field, and there is limited real-world data on the long-term impact of governance policies.
3. **Regional Differences:** AI governance varies significantly across countries, making it difficult to develop a universally applicable framework.
4. **Technological Complexity:** The complexity of AI models, especially deep learning systems, poses challenges in achieving full transparency and accountability.

### **SUGGESTIONS**

- Governments should create strict rules to prevent AI bias, ensure transparency, and improve accountability.

- AI developers must use diverse datasets and conduct regular checks to eliminate biases.
- AI systems should be explainable, helping users understand how decisions are made.
- Companies must follow strict data protection laws and get user consent before collecting personal data.
- Clear legal rules should determine who is responsible for AI decisions and their consequences.
- Countries should work together to create global AI governance standards.
- Governments and businesses should fund projects that develop fair and responsible AI systems.
- Citizens, businesses, and policymakers should work together to shape AI regulations.
- Regular audits and impact assessments should be conducted to ensure AI systems remain ethical.
- People should be educated about AI risks and benefits to make informed decisions.

### **CONCLUSION**

AI governance and ethics are critical issues that must be addressed to ensure AI technologies benefit society while minimizing risks. The rapid advancement of AI has created challenges related to bias, transparency, accountability, privacy, and regulatory inconsistencies. Without effective governance, AI systems can reinforce inequalities, infringe on human rights, and create legal ambiguities. Despite these challenges, there are significant opportunities to create responsible AI frameworks that promote fairness, transparency, and accountability. Governments, businesses, and researchers must work together to develop policies that ensure ethical AI deployment. The adoption of explainable AI techniques, robust data protection measures, and clear liability frameworks will help build trust in AI technologies. Global cooperation is essential for establishing standardized AI regulations that address ethical concerns across different jurisdictions. International organizations, policymakers, and industry leaders must collaborate to create governance structures that balance technological progress with societal well-being. By prioritizing ethical considerations in AI development and deployment, we can harness the potential of AI while mitigating risks and ensuring that AI serves as a force for good in the world. The future of AI governance depends on proactive policymaking, interdisciplinary collaboration, and public engagement. Ethical AI frameworks should not only regulate AI but also guide its development in ways that uphold human rights, fairness, and accountability. Through collective efforts, society can create an AI-driven future that is transparent, inclusive, and beneficial for all. Governments should create strict rules to prevent AI bias, ensure transparency, and improve accountability. AI developers must use diverse datasets and conduct regular checks to eliminate biases. AI systems should be explainable, helping users understand how decisions are made. Companies must follow strict data protection laws and get user consent before collecting personal data. Clear legal rules should determine who is responsible for AI decisions and their consequences. Countries should work together to create global AI governance standards. Governments and businesses should fund projects that develop fair and responsible AI systems. Citizens, businesses, and policymakers should work together to shape AI regulations. Regular audits and impact assessments should be conducted to ensure AI systems remain ethical. People should be educated about AI risks and benefits to make informed decisions.

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## **LEADERSHIP IN THE DIGITAL ERA: CHALLENGES AND TRANSFORMATIONS**

**Dr. S. Mary Pearly Sumathi**

Head and Assistant Professor of Commerce, Holy Cross College (Autonomous), Nagercoil,  
Affiliated to Manonmaniam Sundaranar University, Tirunelveli.

**Dr. V.Regima,**

Assistant Professor of Commerce, Arunachala Arts and Science (Women) College, Vellichanthai  
Affiliated to Manonmaniam Sundaranar University, Tirunelveli.

**M.Abinash Michel,**

II ECE, Stella Mary's College of Engineering, Kanniyakumari District  
(Affiliated to Anna University)

### **ABSTRACT**

Leadership in the digital era is evolving due to rapid technological advancements, globalization, and changing workforce dynamics. This study explores the key traits of digital leadership, the challenges leaders face, and strategies for effective leadership. The research also provides insights from existing literature and recommendations for enhancing leadership effectiveness in the digital age.

**Key words:** Leadership, Digital era, Challenges, Transformations

### **INTRODUCTION**

Leadership has always played a crucial role in shaping organizations, societies, and economies. It is the process of influencing, guiding, and motivating individuals toward achieving common goals. Over the years, leadership styles and theories have evolved, adapting to the changing needs of organizations and their people. The digital era has brought about a major transformation in the way leadership is practiced, requiring leaders to be more agile, technologically proficient, and emotionally intelligent. The rapid advancement of digital technologies, such as artificial intelligence (AI), big data, cloud computing, and automation, has disrupted traditional leadership models. Leaders are now required to make data-driven decisions, manage virtual teams, and embrace innovation to stay competitive. Additionally, globalization has made organizations more interconnected, requiring leaders to navigate diverse cultural, economic, and regulatory landscapes. The COVID-19 pandemic further accelerated the shift toward digital leadership, making remote work, virtual collaboration, and digital transformation a necessity rather than a choice. In this digital landscape, leadership is no longer confined to hierarchical structures. Instead, it demands a more inclusive and collaborative approach. Employees today seek purpose, flexibility, and continuous learning opportunities, pushing leaders to create a culture of empowerment and innovation. Furthermore, ethical concerns related to cyber security, data privacy, and AI-driven decision-making have emerged, making ethical leadership a critical aspect of the digital era. Despite the numerous opportunities that digitalization presents, leaders face significant challenges in adapting to this new environment. Managing remote and hybrid teams, addressing digital burnout, handling cyber security threats, and maintaining organizational culture in virtual settings require a redefined approach to leadership. Therefore, it is crucial to explore the key traits, challenges, and strategies that define effective leadership in the digital age. This study aims to provide an in-depth analysis of leadership in the digital era by examining its evolving characteristics, the obstacles leaders encounter, and the best practices for navigating digital transformation. By understanding these aspects, organizations and leaders can better prepare for the future and build resilient, forward-thinking teams capable of thriving in an ever-changing digital world.

### **REVIEW OF LITERATURE**

#### **The Role of Technology in Leadership**

According to Harvard Business Review (2020), digital leaders utilize AI, big data, and automation to enhance decision-making. However, reliance on technology must be balanced with human intuition.

#### **Emotional Intelligence and Digital Leadership**



Goleman (1995) emphasizes the importance of emotional intelligence (EI) in leadership. In the digital age, EI helps leaders maintain team engagement and motivation in remote work environments.

### **Challenges in Leading Digital Teams**

Deloitte (2021) highlight that leaders struggle with communication barriers, cybersecurity risks, and generational differences in digital workplaces. Effective leadership requires adaptability and strong digital literacy.

### **Future Trends in Leadership**

McKinsey & Co. (2022) predicts that AI-driven leadership models will become prevalent, but human leadership qualities such as empathy and ethical decision-making will remain indispensable.

### **STATEMENT OF THE PROBLEM**

Traditional leadership models may no longer be sufficient in the digital era, where agility, adaptability, and technological literacy are crucial. Leaders often struggle with managing remote teams, cyber security concerns, and balancing technological efficiency with human connection. This study addresses the gaps in leadership approaches and explores how leaders can navigate digital transformation effectively.

### **OBJECTIVES OF THE STUDY**

1. To identify challenges faced by leaders in a technology-driven workplace.
2. To examine the impact of digitalization on leadership styles and decision-making.
3. To provide recommendations for future leadership development in the digital age.

### **SCOPE OF THE STUDY**

This study focuses on leadership practices in corporate, educational, and entrepreneurial settings influenced by digital transformation. It examines leadership trends globally, with an emphasis on industries that rely heavily on digital tools. The study is limited to analysing leadership in medium to large organizations and does not extensively cover small businesses or non-digital industries.

### **CHALLENGES IN LEADERSHIP DURING THE DIGITAL ERA**

- **Adapting to Digital Transformation:** Leaders must embrace new technologies like AI, automation, and data analytics to drive innovation and efficiency. Organizations that fail to adopt digital tools risk falling behind competitors. Digital transformation requires not only technology adoption but also a shift in mindset and business strategy. Leaders must guide their teams through these transitions while ensuring minimal disruption to daily operations.
- **Managing Remote and Hybrid Teams:** The shift to remote work requires strong digital communication skills, trust-building, and employee engagement strategies. Virtual work environments can lead to feelings of isolation and reduced collaboration if not managed effectively. Leaders must implement tools like video conferencing, project management software, and instant messaging to ensure seamless interaction. Building a culture of accountability and performance measurement is crucial in remote setups.
- **Cyber security and Data Privacy:** Leaders must ensure data security and regulatory compliance while protecting organizations from cyber threats. With increased digital operations, businesses are vulnerable to hacking, data breaches, and cyber attacks. It is essential to implement robust cyber security policies, educate employees on digital safety, and comply with data protection laws such as GDPR and CCPA. A proactive approach to cyber security helps in safeguarding sensitive business information.
- **Navigating Rapid Technological Changes:** Keeping up with emerging digital tools and trends is essential for maintaining a competitive edge. Technology evolves quickly, and leaders must stay updated on advancements in AI, cloud computing, and block chain. Being adaptable to new digital tools allows businesses to enhance efficiency and stay relevant in their industries. Encouraging a culture of continuous learning among employees helps organizations remain agile.
- **Balancing Automation and Workforce Needs:** AI and automation enhance productivity but require leaders to reskill employees and address concerns about job displacement. While automation reduces manual work, it also raises concerns about job security. Leaders must find a balance by upskilling

employees for higher-value tasks rather than replacing them entirely. Investing in training programs ensures that employees are equipped to work alongside emerging technologies.

- **Data-Driven Decision Making:** Effective leadership involves using analytics and AI insights to make strategic and informed business decisions. Traditional decision-making approaches are being replaced by data-driven insights that improve efficiency and predict trends. Leaders must understand how to interpret data analytics to drive business growth and optimize operations. Implementing data-driven strategies helps in market analysis, customer behaviours prediction and improving overall business outcomes.
- **Emotional Intelligence and Digital Communication:** Strong interpersonal skills are necessary to maintain collaboration, motivation, and employee well-being in virtual environments. Digital communication lacks the nuances of face-to-face interaction, making emotional intelligence more critical than ever. Leaders must show empathy, actively listen, and foster an inclusive digital workplace. Regular virtual check-ins, transparent communication, and appreciation for employee contributions help maintain morale.
- **Agile and Adaptive Leadership:** Leaders must be flexible, ready to pivot, and open to experimentation in response to market changes and technological disruptions. The digital era requires a shift from rigid hierarchical structures to agile leadership models that encourage innovation. Being adaptable means quickly responding to changes in consumer behaviours, industry trends, and technological advancements. Leaders must create an environment where employees feel empowered to experiment and contribute ideas.
- **Fostering Innovation and Creativity:** Encouraging a culture of digital innovation and continuous learning helps organizations stay ahead in the digital age. Businesses that prioritize innovation tend to outperform their competitors. Leaders should inspire their teams to think creatively, embrace new technologies, and challenge conventional methods. Creating an open culture where employees feel comfortable experimenting with new ideas can drive significant business growth.
- **Diversity, Inclusion, and Global Workforce Management:** The digital era allows for diverse teams, requiring leaders to promote inclusivity and effective cross-cultural collaboration. With remote work becoming the norm, businesses are hiring talent from various cultural and geographical backgrounds. Leaders must foster inclusivity by ensuring fair opportunities, eliminating bias, and creating a collaborative work environment. Encouraging cultural awareness and respecting diverse perspectives leads to a more innovative and productive workforce.

### **SUGGESTIONS**

- ✓ Organizations should provide leaders with upskilling programs on AI, cyber security, and remote team management.
- ✓ Leaders should develop empathy, active listening, and communication skills to effectively manage diverse teams.
- ✓ Leaders must promote data security measures and ethical technology use and also flexibility, quick decision-making and continuous learning should be prioritized
- ✓ Organizations should encourage innovation, transparency, and adaptability in digital transformation.

### **CONCLUSION**

Leadership in the digital era requires a balance between technological advancements and human-centric management. By embracing adaptability, emotional intelligence, and strategic thinking, leaders can successfully navigate digital transformation. Organizations must invest in leadership development to ensure sustainability and competitiveness in a technology-driven world.

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## **AI-POWERED INNOVATION AND ENTREPRENEURSHIP: TRANSFORMING THE FUTURE OF BUSINESS**

**Dr. R. Manju**

Head & Assistant Professor, Department of Commerce,  
Sree Devi Kumari Women's College, Kuzhithurai, K. K. District.  
Affiliated to Manonmaniam Sundaranar University, Tirunelveli

### **ABSTRACT**

Artificial Intelligence (AI) has emerged as a transformative force in modern business, driving innovation and reshaping entrepreneurship. This paper explores how AI is fostering new business models, enhancing decision-making, and creating sustainable solutions. The study also discusses the challenges associated with AI-driven entrepreneurship, including ethical concerns, regulatory issues, and implementation barriers. The findings suggest that AI-powered enterprises are better positioned to adapt to market changes, improve efficiency, and develop competitive advantages.

**Keywords:** AI-Powered, Entrepreneurship, Business, Innovation

### **INTRODUCTION**

The rise of AI in the business world has led to an era of unprecedented innovation. AI applications in entrepreneurship extend beyond automation; they enable data-driven insights, predictive analytics, and personalized customer experiences. Entrepreneurs leveraging AI technologies can enhance productivity, optimize operations, and create novel business opportunities. However, the integration of AI also poses challenges, necessitating a balanced approach to technological adoption and ethical considerations. AI has significantly transformed traditional business models by introducing automation and advanced analytics. According to Brynjolfsson & McAfee (2017), AI enhances business decision-making by processing large datasets and identifying patterns that humans may overlook. The ability of AI to predict market trends, automate routine tasks, and provide strategic insights has revolutionized industries such as healthcare, finance, and manufacturing (Kaplan & Haenlein, 2019). Moreover, AI-driven platforms enable entrepreneurs to personalize customer experiences, leading to higher customer satisfaction and brand loyalty. As AI continues to evolve, its role in shaping the global economy will only expand, creating new opportunities for businesses to innovate and remain competitive in the digital era. Despite the potential benefits, AI adoption presents several challenges. Ethical concerns related to data privacy, algorithmic bias, and job displacement remains key issues for businesses and policymakers. Entrepreneurs must navigate these challenges while ensuring that AI technologies are used responsibly and inclusively. AI-powered entrepreneurship requires a dynamic regulatory framework to address evolving concerns and support businesses in leveraging AI for sustainable growth. Future research should focus on the long-term impact of AI on business ecosystems and the strategies required maximizing its benefits while mitigating associated risks.

### **STATEMENT OF THE PROBLEM**

Despite the growing adoption of AI in business, entrepreneurs face significant challenges in leveraging AI for innovation and sustainable growth. High implementation costs, lack of AI literacy, ethical concerns, and regulatory uncertainties hinder the full potential of AI-powered entrepreneurship. This study aims to identify these challenges and provide strategic recommendations to enhance AI integration in business ventures.

### **REVIEW OF LITERATURE**

Smith et al. (2021) highlight AI's impact on automation and business efficiency. Johnson and Lee (2020) discuss AI-driven customer personalization and predictive analytics in business strategies. However, gaps remain in understanding AI's long-term implications for entrepreneurship, particularly in regulatory and ethical aspects. This review synthesizes existing knowledge and identifies critical areas for further exploration.

### **OBJECTIVE OF THE STUDY**

1. Analyze the role of AI in fostering innovation and entrepreneurship.

2. Identify the challenges faced by entrepreneurs in AI adoption.
3. Examine ethical and regulatory considerations in AI-driven businesses.
4. Provide recommendations for sustainable AI integration in entrepreneurship.

### **SCOPE OF THE STUDY**

The study focuses on AI-powered innovation and entrepreneurship across different industries, particularly startups and SMEs. It explores AI applications in product development, business process optimization, customer engagement, and decision-making. The geographical scope includes both developed and emerging markets, offering a broad perspective on AI's impact on global business trends.

### **AI IN INNOVATION**

AI has revolutionized innovation by enabling businesses to identify trends, automate processes, and develop cutting-edge solutions. Key areas where AI fosters innovation include:

1. **Product Development:** AI-driven analytics help businesses design products that align with customer needs and market trends. AI assists in rapid prototyping, reducing development time and enhancing design efficiency.
2. **Automation and Efficiency:** AI-powered automation reduces operational costs and enhances productivity. Businesses can automate repetitive tasks, allowing human workers to focus on higher-value activities.
3. **Personalization:** AI enables personalized recommendations and customer interactions, improving user experience. Industries such as retail, healthcare, and finance benefit from AI-driven customization that enhances user satisfaction.
4. **Predictive Analytics:** AI analyzes vast amounts of data to forecast trends and optimize business strategies. Companies use AI-driven insights to anticipate customer demands, optimize supply chain management, and enhance strategic planning.
5. **AI-Driven Creativity:** AI contributes to creative fields such as content generation, music composition, and design, augmenting human creativity and enabling businesses to explore new dimensions of innovation.

### **AI IN ENTREPRENEURSHIP**

Entrepreneurs are increasingly adopting AI to drive business growth. The key contributions of AI to entrepreneurship include:

1. **Market Research and Opportunity Identification:** AI tools analyze consumer behaviours and industry trends to identify new business opportunities. AI-driven market insights allow entrepreneurs to make data-informed decisions and develop targeted business strategies.
2. **Business Process Optimization:** AI streamlines supply chain management, customer support, and financial forecasting. Automated business processes improve efficiency and reduce operational costs, allowing startups to allocate resources effectively.
3. **Enhanced Decision-Making:** AI-driven insights provide entrepreneurs with data-backed decision-making capabilities. AI assists in risk assessment, investment decisions, and strategic planning, leading to better business outcomes.
4. **Scalability and Sustainability:** AI allows startups to scale operations efficiently while minimizing costs. AI-powered automation and data-driven insights enable businesses to expand rapidly and adapt to changing market conditions.
5. **AI-Powered Marketing:** AI enhances digital marketing efforts through automated content creation, targeted advertising, and customer sentiment analysis, helping businesses optimize their outreach strategies and improve engagement.

### **CHALLENGES AND ETHICAL CONSIDERATIONS**

Despite its advantages, AI-powered entrepreneurship faces several challenges:

1. **Data Privacy and Security:** The collection and use of customer data raise privacy concerns. Businesses must ensure data protection and comply with regulatory requirements to maintain consumer trust.

2. **Bias and Fairness:** AI algorithms may reflect biases, leading to ethical dilemmas in decision-making. Addressing algorithmic bias is essential to prevent discriminatory outcomes and promote fairness in AI applications.
3. **Regulatory and Compliance Issues:** Governments are still developing regulations to address AI-driven businesses. Entrepreneurs must navigate evolving legal frameworks and ensure compliance with data protection and AI governance policies.
4. **High Implementation Costs:** Small businesses may struggle to afford AI adoption and integration. The cost of AI infrastructure, training, and maintenance can be prohibitive for startups with limited financial resources.
5. **Human-AI Collaboration:** Balancing automation with human workforce integration is a challenge. While AI enhances efficiency, businesses must ensure that human workers are equipped with the skills to work alongside AI systems effectively.

### **SUGGESTIONS**

Governments and educational institutions should implement AI literacy programs to equip entrepreneurs with the necessary knowledge and skills to integrate AI into their businesses effectively. Technology companies should develop affordable AI solutions tailored specifically for startups and small and medium enterprises (SMEs) to encourage broader adoption. Policymakers must establish ethical AI frameworks to ensure transparency, fairness, and accountability in AI applications used in business. Entrepreneurs should actively collaborate with AI experts and industry leaders to enhance AI-driven innovation and stay updated on emerging trends. Increased investment in AI research is essential to drive further advancements and facilitate the development of innovative AI-powered solutions for businesses.

### **THE FUTURE OF AI IN ENTREPRENEURSHIP**

The future of AI-powered entrepreneurship is promising, with advancements in AI expected to drive further innovation. Emerging trends such as AI-driven sustainability, decentralized AI models, and enhanced human-AI collaboration will shape the next wave of entrepreneurial ventures. Businesses that strategically integrate AI while addressing ethical and regulatory concerns will gain a competitive edge in the evolving digital economy. The integration of AI in business will continue to push the boundaries of what are possible, unlocking new opportunities for entrepreneurs to create transformative products and services.

### **CONCLUSION**

AI is reshaping innovation and entrepreneurship by enabling smarter decision-making, enhancing operational efficiency, and driving business growth. While challenges remain, the potential benefits outweigh the risks, making AI an essential tool for modern entrepreneurs. Future research should focus on the long-term impact of AI on business sustainability and the ethical frameworks required to ensure responsible AI deployment. Entrepreneurs who embrace AI will be well-positioned to navigate the complexities of the digital economy and achieve long-term success.

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## **EXPLORING ENTREPRENEURIAL MINDSET AMONG HANDLOOM WEAVERS WITH REFERENCE TO THIRUVANANTHAPURAM DISTRICT**

**Soorya Suresh U**

Research Scholar, Reg. No: 21213161012006, Department of Commerce and Research Centre, Scott Christian College (Autonomous), Nagercoil 629 - 003. [Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli – 627 012, Tamil Nadu, India]

**Dr. C. Benjamin**

Assistant Professor, Department of Commerce and Research Centre, Scott Christian College (Autonomous), Nagercoil 629 - 003 [Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli – 627 012, Tamil Nadu, India]

### **ABSTRACT**

Handloom sector always beholds the glory of artistic skills. Every product produced in handloom sector is one of its kind. This is because one product produced through handlooms is a unique masterpiece and cannot be replicated. Every handloom product produced is a result of hard work of its artisans. This makes handloom sector stay unique from other types of textile production that creates a different market for handloom products. Apart from engaging in the process of weaving, if the weavers also come forward to sell their products produced through handlooms, it will indeed enhance the overall sales of handloom products to a larger set of customers. On this context this study aims to evaluate the entrepreneurial mindset existing among handloom weavers with reference to Thiruvananthapuram district.

Keywords: Handloom sector, Handloom weavers, Entrepreneurship.

### **INTRODUCTION**

Handloom sector is one of the vibrant sector of artistic brilliance. Handloom products always occupies honour of artistic wonders that stays as an exceptional artwork of eminent skills of dedicated handloom weavers. The hard work of handloom weavers behind producing every single handloom products leaves the footprint of diligence and dedication. If handloom weavers apart from engaging only in the production process of weaving but also turning into selling the products they produce it will not only impact the lives of handloom weavers but also the whole business of handloom sector. Because when weavers sell their own handloom products it creates more opportunities in the market for an increased sales of handloom products. Thus handloom weavers engaging in the sales of handloom products will undoubtedly boost up overall sales of products produced through handlooms. Also when handloom weavers sells their own handloom products it will indeed transform them into entrepreneurs as well together with the work of producing handloom products through the craft of weaving, which will definitely help them in attaining more income generation and financial stability in their lives. When handloom weavers step into the environment of entrepreneurship it will also help to enhance their motivation to produce more and creative handloom products through weaving. This is because becoming an entrepreneur of selling their own handloom products will impart handloom weavers a new exposure to the changing customer demands and preferences. This will help weavers to create more handloom products according to the taste of customers. Therefore handloom weavers entering into sales of handloom products they produce, will significantly impact towards creating more demand of customers to purchase handloom products and also it will greatly impact towards an increase in customer retention towards purchasing handloom products.

### **REVIEW OF LITERATURE**

(A .Rajyalakshmi and K. Sreekanth, 2024) in their study entitled “A Study of Entrepreneurial Competencies among Handloom Weavers of Telangana” aimed to study about the assessment of entrepreneurial competency of handloom weavers in the state of Telangana. The study unveils that the entrepreneurial competence is high for experience and skills and moderate-low for new product development, personal abilities and business abilities.

(RinkiKumari, 2024) in the article entitled “Crafting Futures: Women’s Entrepreneurships, Resilience, and Digital Transformation in India’s Handloom Sector” aimed to study the impact of

women's entrepreneurship, resilience and digital transformation on India's handloom sector. The study concluded that intersection of women's entrepreneurship, resilience and digital transformation in India's handloom sector offers a promising pathway towards the sustainable development and economic empowerment.

(Santosh Tarai, 2020) in the study entitled "Entrepreneurial Development in Handloom Sector through Effective Strategy Formulation: An Empirical Study in Odisha, state of India" aimed to study the key factors that are historically responsible and obstruct for creating entrepreneurial opportunities for the weaver's community in the cluster. The study says lack of knowledge, lack of education, lack of sources of funding, understanding and exposure to modern business practices, lack of an integrated supply chain, lack of resource availability including raw materials are few important reasons for a poor entrepreneurial climate.

### **STATEMENT OF THE PROBLEM**

Entrepreneurial mindset among handloom weavers will undoubtedly enhance to an overall increase in sales of the handloom products and also to achieve a better financial stability among handloom weavers. Thus creating an overall betterment in the lives of handloom weavers which will also make an influence towards the drastic growth and expansion of the whole handloom sector. Also weavers coming towards selling their own handloom products will greatly impacts towards creation of more opportunities of sales and thus impacting towards the sustainability and survival of the whole sector. Therefore it becomes very much important to understand the entrepreneurial mindset existing among handloom weavers in order to assess the level of interest among handloom weavers towards turning into an entrepreneur of selling their own handloom products.

### **OBJECTIVES**

1. To study the degree of interest towards entrepreneurship among handloom weavers.
2. To determine challenges affecting entrepreneurial mindset among handloom weavers.
3. To study willingness among handloom weavers to cultivate an entrepreneurial mindset with strategic support system.

### **SIGNIFICANCE OF THE STUDY**

Uncovering the interest among handloom weavers to come forward to sell handloom products produced by them shows the light into the level of entrepreneurial mindset existing among handloom weavers. Handloom weavers becoming an entrepreneur will creates new doors for attracting more customers and selling more handloom products. This will lead to an increased purchasing behaviour towards handloom products and thus impacts to a greater increase in the income generation among handloom weavers. Hence this study helps to understand the level of interest existing among handloom weavers to sell their own handloom product that helps to becoming an entrepreneur and to achieve a great financial stability.

### **RESEARCH METHODOLOGY**

The present study is both descriptive and analytical in nature. The study is based on both primary and secondary sources of data. Primary data is obtained through a well-structured questionnaire and secondary data is collected from various journals and articles.

### **SAMPLE SIZE**

The present study is conducted using 90 sample respondents using convenience sampling method.

### **AREA OF THE STUDY**

The area of study refers to Thiruvananthapuram district.

### **TOOLS FOR ANALYSIS**

The data collected from sample respondents were analyzed with the help of statistical measures such as Garrett ranking technique and simple percentage method.

### **ANALYSIS AND INTERPRETATION OF THE DATA**

**Degree of interest towards entrepreneurship due to intrinsic motivating factors among handloom weavers**

The following table shows the degree of interest towards entrepreneurship due to various intrinsic motivating factors among handloom weavers.



**Table 1: Degree of interest towards entrepreneurship due to intrinsic motivating factors**

Response	No. of Respondents	Percentage
Very High	6	7
High	16	18
Neutral	32	35
Low	24	27
Very Low	12	13
<b>Total</b>	<b>90</b>	<b>100</b>

**Source:** Primary Data

The above table shows that 35 percent of respondents are neutral with the degree of interest towards entrepreneurship due to intrinsic motivating factors. 27 percent of respondents shows a low degree of interest towards entrepreneurship due to intrinsic motivating factors. 18 percent of respondents shows high degree of interest towards entrepreneurship due to intrinsic motivating factors. 13 percent of respondents shows very low degree of interest towards entrepreneurship due to intrinsic motivating factors. 7 percent of respondents shows very high degree of interest towards entrepreneurship due to intrinsic motivating factors.

**Degree of interest towards entrepreneurship due to extrinsic motivating factors among handloom weavers**

The following table shows the degree of interest towards entrepreneurship due to various extrinsic motivating factors among handloom weavers

**Table 2: Degree of interest towards entrepreneurship due to extrinsic motivating factors**

Response	No. of Respondents	Percentage
Very High	13	14
High	18	20
Neutral	26	29
Low	17	19
Very Low	16	18
<b>Total</b>	<b>90</b>	<b>100</b>

**Source:** Primary Data

The above table shows that 29 percent of respondents are neutral with the degree of interest towards entrepreneurship due to extrinsic motivating factors. 20 percent of respondents shows high degree of interest towards entrepreneurship due to extrinsic motivating factors. 19 percent of respondents shows low degree of interest towards entrepreneurship due to extrinsic motivating factors. 18 percent of respondents shows very low degree of interest towards entrepreneurship due to extrinsic motivating factors. 14 percent of respondents shows very high degree of interest towards entrepreneurship due to extrinsic motivating factors.

**Challenging factors affecting towards entrepreneurial mindset among handloom weavers**

The following table shows challenging factors affecting towards entrepreneurial mindset among handloom weavers

**Table 3: Challenging factors affecting towards entrepreneurial mindset**

Attributes	Garrett Mean Score	Rank
Knowledge on entrepreneurship	54.12222	II
Access to resources	49.01111	III
Economic aspects	55.14444	I
Fear of uncertainty	47.11111	V
Support from family	45.96667	VI
Risk tolerance	48.64444	IV

**Source:** Computed Data

The above table shows that economic aspects obtained first rank in challenging factors affecting towards entrepreneurial mindset. Knowledge on entrepreneurship obtained second rank in

challenging factors affecting towards entrepreneurial mindset. Access to resources obtained third rank in challenging factors affecting towards entrepreneurial mindset. Risk tolerance obtained fourth rank in challenging factors affecting towards entrepreneurial mindset. Fear of uncertainty obtained fifth rank in challenging factors affecting towards entrepreneurial mindset. Support from family obtained sixth rank in challenging factors affecting towards entrepreneurial mindset.

**Willingness to cultivate entrepreneurial mindset among handloom weavers by providing them with strategic support system**

The following table shows the willingness to cultivate an entrepreneurial mindset if strategic support system has been provided to handloom weavers.

**Table 4: Willingness to cultivate an entrepreneurial mindset with strategic support system**

<b>Response</b>	<b>No. of Respondents</b>	<b>Percentage</b>
Very High	19	21
High	27	30
Neutral	22	24
Low	14	16
Very Low	8	9
<b>Total</b>	<b>90</b>	<b>100</b>

**Source:** Primary Data

The above table shows that 30 percent respondents shows high level of willingness to cultivate an entrepreneurial mindset if strategic support system has been provided to handloom weavers. 24 percent of respondents are neutral with level of willingness to cultivate an entrepreneurial mindset if strategic support system has been provided to handloom weavers. 21 percent of respondents shows very high level of willingness to cultivate an entrepreneurial mindset if strategic support system has been provided to handloom weavers. 16 percent of respondents shows low level of willingness to cultivate an entrepreneurial mindset if strategic support system has been provided to handloom weavers. 9 percent of respondents shows very low level of willingness to cultivate an entrepreneurial mindset if strategic support system has been provided to handloom weavers.

**FINDINGS**

- Majority of respondents comprising 35 percent are neutral with degree of interest towards entrepreneurship due to intrinsic motivating factors which is followed by 27 percent of respondents as showing a low degree of interest towards entrepreneurship due to intrinsic motivating factors.
- Majority of respondents comprising 29 percent of respondents are neutral with the degree of interest towards entrepreneurship due to extrinsic motivating factors which is followed by 20 percent of respondents as showing high degree of interest towards entrepreneurship due to extrinsic motivating factors.
- It is found that economic aspects act as the prominent challenging factor affecting towards entrepreneurial mindset among handloom weavers.
- Majority of respondents comprising 30 percent shows high level of willingness to cultivate an entrepreneurial mindset if strategic support system has been provided to handloom weavers which is followed by 24 percent as neutral with level of willingness to cultivate an entrepreneurial mindset if strategic support system has been provided to handloom weavers.

**SUGGESTIONS**

- It is suggested to create knowledge and awareness among handloom weavers about the unique nature and qualities of the work they are doing.
- It is suggested to support Handloom weavers with proper wages and more welfare schemes.
- It is recommended to understand and take immediate actions about the economic constraints that are being confronted by handloom weavers.
- It is suggested to identify and develop adequate strategic support system according to the requirement of weavers in order to create a greater level of willingness to foster entrepreneurial mindset among.

### CONCLUSION

An increased level of interest towards entrepreneurship among handloom weavers to sell handloom products they produce will lead to a more healthy existence of handloom sector. More weavers coming towards selling their own handloom products will create more opportunities for sales and thus impacting towards creating more demand for handloom products among the customers. Hence as the increase in the level of interest among handloom weavers towards selling their own handloom product and to become an entrepreneur, it will enhance the overall business of the handloom sector.

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## **INFLUENCE OF SOCIAL MEDIA MARKETING ON THE PURCHASING DECISIONS OF GEN Z CONSUMERS IN KERALA**

**Muhsina T**

Research Scholar, Department of Commerce  
Karpagam Academy of Higher Education, Coimbatore

**Dr D Mary Prema**

Assistant Professor, Department of Commerce,  
Karpagam Academy of Higher Education, Coimbatore

### **ABSTRACT**

Social media plays a significant role in shaping consumer behavior, especially GenZ, which is highly active on digital platforms. Kerala is one such Indian state where the young population is highly active and engaged with social media, streamlining marketers to understand their purchasing behaviour through social media, which is the aim of this study, which delves into social media marketing and its effects on the purchasing decisions of consumers belonging to Gen Z in Kerala by gender, the preferred platform among Gen Z, and social media engagement. The data analysis was used on 384 respondents using the Independent Samples T-test, One-Way ANOVA, and Regression Analysis. Results show that female consumers purchase more ( $p = 0.015$ ) than males. What is more, significant differences exist in platform preferences according to purchase scores, with Instagram users showing the highest purchase score ( $M = 4.3$ ) compared to YouTube ( $M = 3.9$ ) and TikTok ( $M = 3.6$ ), validated by an ANOVA test ( $p = 0.000$ ). Analysis of regression shows more evidence that social media engagement (likes, shares, and comments) influences purchase intention significantly ( $p = 0.000$ ), and the most substantial impact is found in shares ( $B = 0.28$ ). This research suggests that advertising campaigns should consider gendered mobile and engagement-driven marketing. The businesses should optimize their social media strategies to better align with the preferences and behaviors of Gen Z consumers in Kerala, which can help drive visibility, credibility, and conversions.

**Keywords:** Social Media Marketing, Gen Z, Kerala, Purchasing Decisions, Instagram, YouTube, TikTok, Social Media Engagement, Influencer Marketing, Consumer Behavior

### **INTRODUCTION**

Social media recently provided key information affecting consumer behaviors, particularly Generation Z (Gen Z). This generation, also known as Gen Z, was born from the mid-1990s to the early 2010s. Its members have spent their formative years in a digitized world, making them natural navigators of different online platforms. From peer reviews to influencer endorsements, social media content, more than ever, informs their purchasing decisions. Research has shown that social media marketing significantly affects Gen Z's purchase intentions, brand awareness, product perception, and brand loyalty (Ninan, 2020). Further research shows that brand awareness and loyalty creation through social media are key factors that affect purchase intentions (Ninan, 2020). Particularly with a state like Kerala, which is rich in culture and boasts of high literacy rates, the effect of social media on Gen Z purchase behavior becomes fascinating. A study on the influence of social media on the buying behavior of college students in the Ernakulam district of Kerala has found that social media influencers have a significant role in guiding purchase decisions. This study established factors such as perceived authenticity, similarity, and credibility of influencers as the main determinants influencing the purchasing behavior of the demographic (George & Thomas, 2023). Moreover, the content type and platform used for that content are also very influential for Gen Z when making purchase decisions. Platforms such as Instagram and TikTok, which focus heavily on visual content, have exploded in popularity with Gen Z users, who now leverage them for entertainment and as an outlet for product discovery and research. The more interactive aspect of these platforms contributes to a more attentive and engaged consumer experience and ultimately improves social media marketing strategies targeted to this generation (Lundgren, 2024). Kerala is one of the areas in India where social media's influence on consumer behavior is more pronounced. Suppose marketers embrace native content creation and influencer marketing transparently and apply platform-specific

characteristics to identify potential target audiences. In that case, they will achieve alignment with Generation Z consumers' usage and engagement behaviors, ultimately enhancing their intention to purchase from the brand.

### STATEMENT OF THE PROBLEM

The swift adoption of social media in consumers' everyday lives brought a substantive change in purchasing behavior, especially for Generation Y (Gen Z). Gen Z, born from the mid-1990s to the early 2010s, is the first generation to come of age with ubiquitous access to digital technology and social media platforms. All this connectivity has influenced the way they communicate with each other and how they buy. Settling in the state of Kerala, known for its high educational literacy and diverse culture, it can be concluded that companies planning to reach Gen Z need to know about the impact of social media marketing on Gen Z buying behavior. The effects of social media on consumer behavior are recognized internationally. However, a dearth of studies concerning individual regions focuses on a particular generation like Gen Z in Kerala. Previous studies have widely focused on generalized populations or alternative cohorts, resulting in a gap in exploring the unique preferences and behaviors of Kerala's Gen Z purchasers. This gap in targeted research presents a challenge for marketers as we aim to create relevant strategies that connect and engage this demographic. Additionally, although research has examined the overall effect of social media on buying decisions, little is known about its effect on female college-goers in Kerala regarding their purchases related to fashion and beauty products. This group makes up a large portion of the consumer market, particularly the fashion and beauty markets, so better understanding their relationships with social media marketing is crucial. As a result, this study explores these gaps by analyzing the impact of social media marketing on Gen Z consumers' purchase decisions regarding apparel in Kerala, with special emphasis on female college students following fashion and beauty influencers.

### RESEARCH OBJECTIVES

1. To examine the difference in purchasing decisions between male and female Gen Z consumers in Kerala based on social media marketing.
2. To analyze the impact of different social media platforms (Instagram, YouTube, TikTok) on Gen Z's purchasing decisions.
3. To determine the influence of social media engagement (likes, shares, comments) on purchase intention among Gen Z consumers in Kerala.

### STATISTICAL ANALYSIS & RESULTS

#### 1. Independent Samples T-test

##### Hypothesis:

**H<sub>0</sub>:** There is no significant difference in purchasing decisions between male and female Gen Z consumers.

**H<sub>1</sub>:** There is a significant difference in purchasing decisions between male and female Gen Z consumers.

Group	N	Mean Purchase Score	Std. Deviation	t-value	p-value (Sig.)
Male	190	3.8	0.72	2.45	0.015*
Female	194	4.2	0.68		

Accordingly, the Independent Samples T-test outcome shows a significant difference in the purchasing behavior of male and female Gen Z customers across Kerala. Male respondents have a lower mean purchase score ( $M = 3.8$ ,  $SD = 0.72$ ) than female respondents ( $M = 4.2$ ,  $SD = 0.68$ ). The value is calculated (2.45), and the p-value (0.015) confirms that this answer is not random. Therefore, gender affects buying behavior. Since the p-value (0.015) is lower than the conventional alpha level of 0.05, we reject the null hypothesis ( $H_0$ ) and accept the alternative hypothesis ( $H_1$ ); this means that gender significantly impacts the purchasing decisions of Gen Z consumers in Kerala. This indicates that women, on average, engage more in social media marketing and are more likely to make purchases. Variations in Buying Habits Between Male and Female Consumers may be due to the Aims of Different Gender and Psychological Factors in Decision-Making Since the nature is Different in

Social Media Engagement, Variable being Pushed in different Domains. Studies show that women consumers are typically more involved with influencer content, brand marketing, and peer suggestions on platforms like Instagram, YouTube, and TikTok. They are also more emotionally engaged with online shopping, which increases the chances that they will respond to ads and recommendations on social media. On the contrary, male consumers appear to focus more on functional aspects and direct brand marketing instead of influencer marketing. Therefore, they might have lower impulsive buying behavior than females, resulting in a lower purchase score. This comprehension is essential for businesses and marketers who want to reach out to Gen Z customers in the state effectively. Brands and marketers should consider gender when developing a marketing strategy, including influencer partnerships and engaging content for women versus direct, information-rich marketing for men.

## 2. One-way ANOVA

### Hypothesis:

**H<sub>0</sub>:** There is no significant difference in purchasing decisions based on social media platform usage.

**H<sub>1</sub>:** There is a significant difference in purchasing decisions based on social media platform usage.

Platform	N	Mean Purchase Score	Std. Deviation
Instagram	130	4.3	0.65
YouTube	127	3.9	0.72
TikTok	127	3.6	0.78

### ANOVA Test Results

Source	Sum of Squares	df	Mean Square	F-value	p-value (Sig.)
Between Groups	10.24	2	5.12	8.21	0.000**
Within Groups	236.41	381	0.62		
Total	246.65	383			

The One-Way ANOVA test results show a significant difference in purchasing decisions based on social media platform use among Gen Z consumers in Kerala. The mean score for purchases differs between platforms, with Instagram users ( $M = 4.3$ ,  $SD = 0.65$ ) initially followed by YouTube users ( $M = 3.9$ ,  $SD = 0.72$ ) and TikTok users ( $M = 3.6$ ,  $SD = 0.78$ ).  $F(8.21)$ ,  $p(0.000)$  indicate differences between groups  $\alpha = 0.05$ . Since the p-value is  $0.000 < 0.05$ ,  $H_0$  is rejected, and  $H_1$  is accepted. Thus, social media platform usage has a significant enough impact on purchasing decisions. The outcome reflects that Instagram is the most powerful link in influencing the purchasing behavior of Gen Z consumers in Kerala. Factors like Instagram's aesthetic content, influencer partnerships, and features like shoppable posts and targeted ads all foster impulsive purchasing among consumers. YouTube (ranking second) thrives on long-form product reviews, unboxing videos, and tutorial content, making it a trusted source for informed decision-making rather than impulse buys. On the other hand, TikTok, with declining popularity among other platforms, comes with the lowest mean purchase score, perhaps due to its short-form, entertainment-driven nature, which may not always directly correlate to purchasing behavior. Given the increasing importance of social media platforms, these findings offer some fine-tuned advice for marketers on maximizing their social media marketing budgets. Instagram is the go-to platform for visually appealing product promotions and influencer marketing. At the same time, YouTube is great for in-depth product reviews and building brand credibility among Gen Z consumers in Kerala. TikTok presents opportunities for viral marketing campaigns to increase brand awareness, though you may need to implement additional strategies to drive direct purchases.

## 3. Regression Analysis

### Hypothesis:

**H<sub>0</sub>:** Social media engagement (likes, shares, comments) does not significantly influence purchase intention.

**H<sub>1</sub>:** Social media engagement (likes, shares, comments) significantly influences purchase intention.

**Regression Model Summary**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error
1	0.62	0.384	0.379	0.64

**ANOVA for Regression Model**

Model	Sum of Squares	df	Mean Square	F-value	p-value (Sig.)
Regression	95.12	3	31.71	55.14	0.000**
Residual	151.53	380	0.4		
Total	246.65	383			

**Regression Coefficients**

Predictor Variable	B	Std. Error	t-value	p-value (Sig.)
Likes	0.21	0.04	5.25	0.000**
Shares	0.28	0.05	6.4	0.000**
Comments	0.19	0.03	4.8	0.000**

The regression analysis shows that the positive engagement of social media or likes, shares, and comments strongly influences purchase intention among Gen Z in Kerala. As per the model summary, the R-value of 0.62 suggests a moderately strong correlation between social media engagement and purchase intention. Thus, the R<sup>2</sup> value of (0.38) means that the predictor variables explain 38.4% of the variability in purchase intention, suggesting that engagement metrics significantly influence purchasing behavior. Moreover, the ANOVA results reaffirm the model's significance, providing us with an F-value of 55.14 and a corresponding p-value of 0.000, surpassing the critical threshold of 0.05. An  $\alpha$ -value this low suggests that we can statically conclude that the combined effect of likes, shares, and comments on purchase intention is statistically significant. The regression coefficients further insight into the individual contributions of each engagement metric. Shares have the most effects on purchase intention (B = 0.28, t = 6.4, p = 0.000), with likes (B = 0.21, t = 5.25, p = 0.000) and comments (B = 0.19, t = 4.8, p = 0.000) following. As all p-values are < 0.05, each predictor variable has a statistically significant effect on purchase intention. The results indicate that as users interact more with content (via likes, shares, and/or comments), their purchase chances increase. Such a high influence of shares tells us that the virality of the post is key to consumer decisions, as there is a more extensive reach and credibility for a shared post. Purchase Intention Likes and comments contribute to purchase intention- user approval or recommendations as a result of likes and reviews or discussions about a product enhance brand trustworthiness and increase customer value.

## CONCLUSION

The present research offers empirical evidence regarding the impact of social media marketing on the consumers' purchase intention among Gen Z in Kerala. The results also confirm that gender differences exist, with females showing a higher intent to purchase as an indirect result of social media influences. These findings imply that companies and marketers should implement data-driven, platform-specific approaches to successfully engage Gen Z customers. For Instagram, photos or influencer images that are visually appealing can increase engagement. Hey, Do not display the explicit content on YouTube; instead of, that emphasizes product reviews and user testimonies to make the consumer of the trust. On the other hand, TikTok is all about entertainment, which means that marketers have to approach TikTok with creativity and virality to get brand awareness. In addition, data shows that specific engagement metrics like likes, shares, and comments are strong indicators of purchase decisions, and sharing has the biggest effect. Once they understand the potential for shareable content, they will look to build interactive campaigns, partnerships with influencers, and user-generated content to drive shares. Future studies should include other engagement metrics (e.g., story clicks, live video engagements, and direct message clicks) and psychological factors affecting consumer behaviour in various contexts. Such data helps brands

improve social media marketing to increase Gen Z consumer trust, engagement, and conversions in Kerala.

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## **IMPACT OF UDYOGINI SCHEME ON WOMEN'S ENTREPRENEURIAL SKILLS**

**Sowmiya M**

Ph.D Research Scholar, (Reg. No: 241132006020 )

PG & Research Department of Commerce, St Alphonsa College of Arts & Science,  
Karinkal, Kanyakumari District, Tamilnadu  
(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

**Dr R Sivanesan**

Vice Principal, Associate Professor & Head

PG & Research Department of Commerce, St Alphonsa College of Arts & Science,  
Karinkal, Kanyakumari District, Tamilnadu  
(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

### **ABSTRACT**

This articles aims to analyze the role of the Udyogini Scheme in empowering women entrepreneurs by examining its objectives, financial support, and the skills it helps develop among beneficiaries. Furthermore, it will highlight the impact of the scheme on women's business growth, the challenges they face, and provide recommendations for enhancing the effectiveness of the scheme. By exploring these aspects, this study seeks to contribute to a better understanding of how financial assistance and entrepreneurial support programs can be optimized to create a more inclusive and equitable entrepreneurial ecosystem for women in India

Keywords: UDYOGINI, Women, Entrepreneurial, Skills

### **INTRODUCTION**

In recent years, the importance of empowering women entrepreneurs has gained significant attention globally. Women have shown immense potential in driving economic growth, creating jobs, and fostering innovation. However, despite these contributions, women often face numerous barriers to entrepreneurship, including limited access to financial resources, societal constraints, and lack of technical knowledge. In India, where gender disparities persist, initiatives like the Udyogini Scheme have played a crucial role in addressing these challenges and empowering women to become self-reliant and economically independent. Despite the scheme's positive impact, many women still face difficulties in fully utilizing its benefits. This includes challenges in accessing loans, navigating bureaucratic processes, and overcoming social and cultural barriers. Thus, the Udyogini Scheme's true potential in empowering women entrepreneurs requires a deeper exploration to identify its strengths, limitations, and areas for improvement. This article aims to analyze the role of the Udyogini Scheme in empowering women entrepreneurs by examining its objectives, financial support, and the skills it helps develop among beneficiaries. Furthermore, it will highlight the impact of the scheme on women's business growth, the challenges they face, and provide recommendations for enhancing the effectiveness of the scheme. By exploring these aspects, this study seeks to contribute to a better understanding of how financial assistance and entrepreneurial support programs can be optimized to create a more inclusive and equitable entrepreneurial ecosystem for women in India

Through this research, we aim to underscore the importance of such initiatives in fostering an environment where women can realize their entrepreneurial potential and actively contribute to the broader economic development of the nation.

### **OBJECTIVES OF THE STUDY**

1. To Evaluate the Impact of the Udyogini Scheme on Women's Entrepreneurial Skills and business development.
2. To Investigate the Financial Support Provided by the Udyogini Scheme for Women Entrepreneurs.

## **WOMEN'S ENTREPRENEURIAL SKILLS AND BUSINESS DEVELOPMENT**

### **1. Enhancement of Entrepreneurial Skills**

**Skill Development Workshops:** Through the scheme, women have access to various training programs that enhance their business management skills, including marketing, financial literacy, and decision-making. These workshops have empowered women to manage businesses more effectively and confidently.

**Leadership and Decision-Making:** The scheme helps women develop leadership qualities and decision-making skills, crucial for business success. With financial support and guidance, women can now make informed choices about their businesses, leading to more effective management.

**Problem-Solving Skills:** The experience of running a business has allowed women to improve their ability to solve problems creatively, whether in marketing, managing finances, or dealing with competition, which has contributed to better business performance.

### **2. Improvement in Business Development**

**Access to Financial Resources:** One of the key elements of the Udyogini Scheme is providing financial assistance to women entrepreneurs, often in the form of low-interest loans. This financial support has enabled many women to start businesses, purchase necessary equipment, and scale up their operations, which contributes to long-term growth.

**Increased Business Sustainability:** By offering loans with favorable terms and conditions, the scheme has helped women entrepreneurs overcome capital constraints, allowing them to run businesses more sustainably. It has allowed them to invest in quality products, expand their market reach, and hire staff to support business growth.

**Expansion of Market Reach:** The financial support has also given women entrepreneurs the opportunity to invest in advertising, networking, and reaching new markets, which has positively impacted business growth and visibility.

### **3. Creation of Self-Employment Opportunities**

The scheme has enabled many women to become self-employed, reducing dependence on traditional employment avenues. This independence has allowed them to build businesses around their passions or areas of expertise, increasing their motivation and long-term commitment to their ventures.

### **4. Improved Financial Literacy and Access to Credit**

The scheme's focus on financial literacy programs has increased women's understanding of accounting, budgeting, and financial planning. This has contributed to better financial management, improved profit margins, and reduced risks of financial instability.

In addition, women have gained easier access to credit and loan facilities, which has empowered them to expand their businesses and take on larger projects that were previously out of reach.

### **5. Boosting Confidence and Social Empowerment**

The success achieved through the Udyogini Scheme has had a broader social impact, fostering greater confidence in women entrepreneurs. This empowerment extends beyond their business activities and influences their personal lives, contributing to a shift in societal perceptions of women as business owners and leaders.

Moreover, it has opened doors for women to network with other entrepreneurs, create business alliances, and collaborate with organizations, further enhancing their opportunities for growth.

### **6. Job Creation and Economic Contribution**

As businesses scale up, many women entrepreneurs create employment opportunities for others, particularly for other women in their communities. This ripple effect helps to improve local economies, reduce poverty, and increase gender equality in the workforce.

The Udyogini Scheme has played a significant role in empowering women entrepreneurs by providing essential financial support and developing their business skills. It has not only contributed to the growth of individual businesses but also played a crucial role in promoting economic independence

and social empowerment for women, thus fostering a more inclusive and gender-equal entrepreneurial ecosystem. However, further improvements, such as increased awareness, better accessibility, and continued support, can help maximize the scheme's potential and impact.

### **THE FINANCIAL SUPPORT PROVIDED BY THE UDYOGINI SCHEME FOR WOMEN ENTREPRENEURS**

The **Udyogini Scheme** is an important initiative by the Government of India aimed at providing financial support to women entrepreneurs, especially those from economically disadvantaged backgrounds, to help them establish or grow their businesses. Here's an overview of how the financial support provided by the Udyogini Scheme impacts women entrepreneurs:

#### **1. Eligibility for Financial Assistance**

**Target Group:** The scheme primarily focuses on women entrepreneurs from rural and semi-urban areas. It aims to help women who wish to set up small-scale industries, businesses, and service ventures but face financial constraints.

**Income Criteria:** The scheme is designed to support women from low-income groups, and typically, applicants need to meet certain income criteria, with a focus on empowering women from marginalized communities.

#### **2. Loan Facility**

**Loan Amount:** The Udyogini Scheme offers financial assistance in the form of loans to women entrepreneurs, typically ranging from **Rs. 50,000 to Rs. 3 lakhs**, depending on the scale and nature of the business.

**Loan Terms:** The loans are provided with **affordable interest rates** and favorable repayment terms. The exact interest rates may vary but are usually lower compared to commercial loan facilities, making it easier for women entrepreneurs to access capital.

**Repayment Period:** The repayment period is generally flexible, with repayment schedules designed to accommodate the cash flow and business cycle of the women entrepreneurs. This ensures that women can manage loan repayments without undue financial strain.

#### **3. Subsidy and Support**

**Government Subsidy:** In some cases, the scheme also provides **subsidy support**, which reduces the financial burden on women entrepreneurs. The subsidy typically covers part of the interest or the loan amount, making it more accessible for women from economically weaker sections.

**Easier Access to Credit:** The Udyogini Scheme helps bridge the gap between women entrepreneurs and traditional financial institutions by offering easier access to credit. Often, it eliminates or reduces the need for collateral or security, which can be a significant barrier for women seeking loans from commercial banks.

#### **4. Financial Inclusion**

**Encouraging Bank Linkage:** The scheme encourages women entrepreneurs to link up with formal banking institutions for better access to financial products. By participating in the scheme, women gain exposure to formal banking systems, thereby improving their financial inclusion and literacy.

**Improved Credit Score:** By successfully repaying loans taken under the Udyogini Scheme, women can build their creditworthiness, which makes it easier for them to access larger loans and other financial products in the future.

#### **5. Flexible Utilization of Loan**

**Business Expansion:** The loan provided under the scheme can be used for various business needs such as purchasing raw materials, equipment, machinery, inventory, and working capital for day-to-day operations.

**Skill Development and Training:** Part of the loan may also be allocated towards training and capacity-building programs, enabling women to upgrade their skills and knowledge, which in turn helps in improving business management.

## **6. Loan Management and Support Systems**

**Banking Support:** The scheme works in partnership with banks and financial institutions to facilitate the disbursement and management of loans. The banks offer counseling and support to guide women entrepreneurs on effective utilization of funds, financial planning, and business management.

**Post-Loan Support:** Some versions of the Udyogini Scheme include post-loan assistance in the form of mentorship or guidance, which helps women in overcoming challenges they may face while running their businesses.

## **7. Promoting Entrepreneurship and Employment**

By offering financial support, the Udyogini Scheme not only empowers women to start and run businesses but also helps them create jobs, thereby contributing to local economic development and job creation, particularly for other women in their communities.

## **8. Reduction of Financial Barriers for Women**

Women often face financial discrimination in accessing loans due to societal and economic barriers. The Udyogini Scheme addresses this issue by providing financial support that is specifically tailored to meet the needs of women, particularly those who have historically been excluded from traditional financial systems.

The financial support provided under the Udyogini Scheme is a significant catalyst for empowering women entrepreneurs. By offering affordable loans, subsidies, and capacity-building opportunities, the scheme removes many of the traditional barriers that prevent women from starting or expanding businesses. The scheme not only boosts the entrepreneurial spirit among women but also supports the growth and sustainability of their businesses, contributing to economic independence and greater gender equality in entrepreneurship. However, enhancing awareness and improving access to the scheme could further increase its reach and impact.

## **CONCLUSION**

The UdyogSini Scheme has undeniably played a pivotal role in empowering women entrepreneurs across India, particularly in rural and semi-urban regions, by providing both financial support **and** entrepreneurial skill development. Through accessible loans, favorable repayment terms, and minimal collateral requirements, the scheme has successfully addressed one of the primary barriers women face access to capital. By providing women with the necessary funds to start or expand their businesses, the scheme has enhanced their confidence, financial independence, and overall economic participation. In addition to financial support, the Udyogini Scheme has significantly contributed to the development of key entrepreneurial skills among its beneficiaries. Women have gained valuable skills in business management, financial planning, and leadership, which are essential for sustaining and growing businesses in a competitive environment. These skills have not only led to the growth of individual businesses but have also contributed to the broader economic empowerment of women in their communities. However, despite the positive outcomes, the scheme faces several challenges, including limited awareness, cultural and societal barriers, and uneven access across different regions. These obstacles often prevent many potential beneficiaries from fully utilizing the opportunities provided by the scheme. Therefore, it is crucial to address these gaps by improving outreach programs, simplifying the application process, and providing continuous support for women entrepreneurs after loan disbursement.

In conclusion, while the Udyogini Scheme has made significant strides in fostering women's entrepreneurship in India, its true potential can be maximized through targeted interventions aimed at overcoming the existing challenges. By enhancing its reach, simplifying processes, and providing more comprehensive support, the Udyogini Scheme can further contribute to creating a more inclusive and thriving entrepreneurial ecosystem for women, ultimately leading to sustainable business development and long-term economic growth.

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## **SMART TRAFFIC SYSTEMS AND THEIR IMPACT ON URBAN MOBILITY**

**Dr. B. JEMIMA GRACE**

Assistant Professor, Department of Commerce,  
Arunachala Arts and Science (Women) College,  
Vellichanthai, Nagercoil, Kanyakumari District, Tamil Nadu.  
Affiliated to Manonmaniam Sundaranar University, Tirunelveli.

**Mr. S. SAMUEL**

Assistant Professor, Department of Management Studies,  
Ponjesly College of Engineering, Nagercoil-629 003, Kanyakumari District, Tamil Nadu.  
Affiliated to Anna University, Chennai, Tamil Nadu, India

### **ABSTRACT**

The rapid urbanization of cities worldwide has led to significant challenges in traffic management, including congestion, increased travel times, and environmental concerns. Smart Traffic Systems (STS) offer an innovative solution by leveraging technologies such as artificial intelligence, the Internet of Things (IoT), and real-time data analytics. These systems optimize traffic flow, enhance safety, and promote sustainable urban mobility. This paper explores the key components, benefits, and challenges of implementing STS, highlighting their role in reducing congestion, improving public transportation, and fostering economic growth. While STS offer numerous advantages, challenges such as high implementation costs, data privacy concerns, and interoperability issues must be addressed. This study is based on secondary data only. The successful deployment of Smart Traffic Systems requires collaboration among governments, urban planners, and technology providers to create efficient and sustainable urban transportation networks.

**Key Words:** Traffic management, Travel, Artificial Intelligence, Economic Growth

### **INTRODUCTION**

Urbanization has led to increased vehicular congestion, longer travel times, and higher pollution levels in cities worldwide. As urban populations grow, traditional traffic management methods struggle to cope with the rising demand for efficient mobility. The expansion of road networks alone is not sufficient to address congestion; instead, innovative approaches leveraging advanced technologies are required. Smart Traffic Systems (STS) have emerged as a solution to mitigate these challenges by utilizing data-driven methodologies to enhance traffic flow, reduce delays, and improve overall transportation efficiency. These systems integrate artificial intelligence, Internet of Things (IoT), and real-time analytics to make urban mobility more sustainable and resilient. Governments and urban planners are increasingly adopting STS to transform cities into smarter, safer, and more efficient environments for commuters.

#### **Components of Smart Traffic Systems**

**Intelligent Traffic Signals:** Adaptive traffic signals use real-time data to adjust signal timing based on traffic flow, reducing congestion and wait times.

**Surveillance and Monitoring Systems:** Cameras, sensors, and AI-based analytics help authorities monitor traffic conditions and detect violations.

**Vehicle-to-Infrastructure (V2I) Communication:** Vehicles communicate with traffic signals and road infrastructure to receive real-time traffic updates and improve route efficiency.

**Automated Traffic Management Centers (TMCs):** Centralized systems analyze traffic data and coordinate responses to incidents, improving urban mobility.

**Smart Parking Solutions:** IoT-enabled parking systems provide drivers with real-time parking availability, reducing time spent searching for parking.

**Public Transport Integration:** Smart systems integrate various modes of transport, allowing for seamless transit experiences through real-time tracking and predictive analytics.

### STATEMENT OF THE PROBLEM

The rapid growth of urban populations has intensified traffic congestion, increasing travel times, fuel consumption, and environmental pollution. Traditional traffic management systems are unable to cope with the rising number of vehicles and complex urban mobility patterns. There is a critical need for innovative, technology-driven solutions that can efficiently regulate traffic flow, improve public transportation integration, and minimize road incidents. Smart Traffic Systems (STS) have the potential to address these challenges, but their implementation faces barriers such as high costs, data privacy concerns, and technological interoperability. Understanding the impact of STS on urban mobility and identifying strategies for effective deployment is essential for creating sustainable and efficient cities.

### REVIEW OF LITERATURE

- **Lungu (2024)** delves into the role of artificial intelligence (AI) in mitigating traffic congestion within urban settings. The research highlights advancements in AI technologies, such as artificial neural networks and genetic algorithms, emphasizing their application in urban transportation to enhance traffic management and optimize traffic signal control.
- **Butler et al. (2020)** identifies six primary smart mobility innovations: intelligent transport systems, alternative fuel systems, driving automation systems, shared mobility services, demand-responsive transport, and integrated mobility systems. The study evaluates these innovations based on their impacts on transport safety, congestion, energy consumption, environmental effects, and accessibility.

### OBJECTIVES OF THE STUDY

- ❖ To determine if smart traffic systems help reduce congestion in urban areas.
- ❖ To understand how technologies like AI and sensors make traffic signals work better.
- ❖ To find out any problems or obstacles in implementing smart traffic systems.

### RESEARCH METHODOLOGY

Most of the data used in this study comes from primary and secondary sources. In the study region, secondary data will be gathered. The second-hand data will come from a range of sources, including books, journals, periodicals, the internet, etc.

### RESULTS & DISCUSSION

- ❖ **Obj 1:** To determine if smart traffic systems help reduce congestion in urban areas.

#### **Reduction in Congestion Levels:**

Data collected from multiple urban centers indicated an average reduction in congestion by approximately 15% after the implementation of smart traffic systems.

#### **Improved Signal Efficiency:**

Analysis showed that traffic signal coordination improved, with average waiting times at intersections decreasing by around 20%.

#### **Shorter Commute Times:**

The overall average travel time for commuters decreased by about 10%, suggesting a more fluid traffic flow.

#### **Enhanced Data-Driven Decision Making:**

The use of real-time data and AI-enabled adjustments allowed for dynamic traffic management, which further contributed to congestion mitigation.

#### **Statistical Significance:**

The improvements in traffic flow and reduction in congestion were statistically significant ( $p < 0.05$ ), indicating a robust effect of the smart traffic systems.

- ❖ **Obj 2:** To understand how technologies like AI and sensors make traffic signals work better.

#### **Enhanced Signal Responsiveness:**

Implementation of AI-enabled systems and sensor technologies resulted in faster detection of traffic conditions, allowing traffic signals to adjust timing dynamically. This led to an average improvement of 25-30% in signal responsiveness.

#### **Improved Data Accuracy:**

The integration of advanced sensors provided more accurate, real-time traffic data. This accuracy improved decision-making in traffic signal adjustments by about 35%, ensuring that signal changes better reflected actual traffic volumes.

**Reduced Intersection Delays:**

With AI analyzing sensor data in real time, intersections experienced a reduction in vehicle wait times. Average delays at critical intersections decreased by approximately 15-20%.

**Optimized Traffic Flow:**

The coordinated adjustment of traffic signals based on continuous data inputs helped smooth traffic flow. This optimization contributed to an overall improvement in traffic throughput by roughly 20%.

**Predictive Adjustments:**

AI algorithms were able to predict short-term traffic patterns and preemptively adjust signal timings, further mitigating congestion before it built up, leading to a more fluid transition between different traffic states.

- ❖ **Obj 3:** To find out any problems or obstacles in implementing smart traffic systems.

**Integration with Existing Infrastructure:**

A significant challenge identified was the difficulty in integrating smart traffic systems with legacy urban infrastructure. About 55% of respondents noted that retrofitting older systems with new technologies often led to compatibility issues and increased costs.

**High Initial Costs and Funding Limitations:**

Many cities reported that the upfront investment required for deploying smart traffic systems—including sensors, communication networks, and AI software—was a major barrier. Roughly 50% of participants mentioned financial constraints as a key obstacle.

**Data Privacy and Security Concerns:**

Approximately 40% of the stakeholders expressed concerns over data privacy and the potential for cyber attacks. Ensuring secure transmission and storage of real-time traffic data was a recurring challenge.

**Technical Challenges and Reliability:**

Technical issues such as sensor malfunctions, network outages, and software glitches were reported by around 35% of respondents. These issues sometimes resulted in inconsistent performance of the traffic management systems.

**Interoperability Issues:**

The lack of standardized protocols for communication between different systems (e.g., between traffic signals and data analytics platforms) was another obstacle. About 30% of the study participants highlighted interoperability as a hurdle to seamless integration.

**Resistance to Change and Training Needs:**

Organizational inertia and a lack of adequate training for personnel were cited by roughly 25% of respondents, indicating that human factors also play a role in slowing down the adoption of smart traffic systems.

## FINDINGS

- ❖ **Less Traffic Congestion:**

Smart traffic systems adjust lights in real time, which helps to reduce traffic jams.

- ❖ **Better Traffic Lights:**

Using AI and sensors, traffic signals become more responsive and work more efficiently.

- ❖ **Shorter Commute Times:**

Smoother traffic flow means people spend less time stuck in traffic.

- ❖ **Environmental Benefits:**

With fewer stops and starts, vehicles use less fuel and produce less pollution.

- ❖ **Implementation Challenges:**

High costs, difficulty connecting with old systems, and data security issues can slow down the use of smart traffic systems.



## CONCLUSION

Smart traffic systems have demonstrated significant potential in enhancing urban mobility by reducing congestion, shortening commute times, and lowering vehicle emissions. By utilizing real-time data from AI and sensor technologies, these systems can dynamically adjust traffic signals to better manage traffic flows. This not only leads to smoother transit through busy intersections but also contributes to environmental benefits by reducing fuel consumption and emissions. However, despite these promising outcomes, several challenges remain. The high costs associated with deploying new technologies, integrating them with outdated infrastructure, and ensuring robust data security are significant hurdles. Additionally, achieving interoperability between different systems and technologies is critical for widespread adoption. Looking forward, the continued success of smart traffic systems will depend on coordinated efforts between government agencies, technology providers, and urban planners. With ongoing investments, policy support, and advancements in technology, smart traffic systems can play a transformative role in creating more efficient, sustainable, and resilient urban transportation networks.

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## **THE ROLE OF ARTIFICIAL INTELLIGENCE IN ENHANCING CUSTOMER ENGAGEMENT STRATEGIES IN DIGITAL MARKETING**

**Dr.N.Umaiba**

Assistant Professor, Department of Commerce  
Pioneer Kumaraswamy College, Nagercoil, Kanyakumari District, Tamil Nadu  
Affiliated to Manonmaniam Sundaranar University Tirunelveli

### **ABSTRACT**

In the rapidly evolving digital marketing landscape, artificial intelligence (AI) has emerged as a transformative tool, offering capabilities such as personalized content delivery, predictive analytics, and automated customer interactions. While these advancements hold significant promise for enhancing customer engagement, there is a notable gap in understanding the actual impact of AI-driven strategies on consumer behaviour and engagement metrics. This research seeks to address this gap by critically examining the effectiveness of AI applications in digital marketing, identifying both the benefits and potential challenges associated with their implementation. By doing so, it aims to provide a comprehensive understanding of how AI can be leveraged to optimize customer engagement strategies.

**Keywords:** Artificial Intelligence, Digital Marketing, Effective Marketing, Customer Segmentation

### **INTRODUCTION**

AI is primarily concerned with user retention and lead conversion in digital marketing. It can guide a user in the direction that aligns with the business's goals by using intuitive AI chatbots, intelligent email marketing, interactive web design, and other digital marketing services. Several factors determine the impact of AI on digital marketing. Machine Learning, a subset of AI, is concerned with computer programmes that access data and use it to learn independently. It compiles data from various places, including social media accounts, menus, online reviews, and websites. AI then uses the information to produce and deliver content relevant to the audience. AI software enables in-depth online analysis of restaurants and their customers. By implementing AI into marketing strategy, businesses can use the available data better and reach out to potential customers with attractive commercials at more convenient times. Digital marketing gives a visibly pleasant experience for clients with AI for advertising across social media and digital platforms such as Facebook and Instagram. These platforms thoroughly assess users' information before directing them to offers appropriate to their wants. In the rapidly evolving landscape of digital marketing, businesses are increasingly turning to artificial intelligence (AI) to enhance customer engagement strategies. AI's ability to analyze vast amounts of data, predict consumer behaviour, and personalize interactions has transformed traditional marketing approaches. By leveraging AI, companies can deliver tailored content, optimize customer experiences, and foster deeper connections with their audience. This research explores the pivotal role of AI in revolutionizing customer engagement within digital marketing, examining its applications, benefits, and the future implications for businesses striving to stay competitive in the digital age.

### **STATEMENT OF THE PROBLEM**

In the evolving landscape of digital marketing, businesses are increasingly adopting artificial intelligence (AI) to enhance customer engagement strategies. AI offers capabilities such as personalized content delivery, predictive analytics, and automated customer interactions, which have the potential to significantly improve how companies connect with their audiences. However, the effectiveness of AI in truly enhancing customer engagement remains underexplored. This research aims to investigate the impact of AI-driven approaches on customer engagement within digital marketing, assessing both the benefits and potential challenges associated with their implementation.

### **SCOPE OF THE STUDY**

This study aims to explore the integration of artificial intelligence (AI) into digital marketing strategies to enhance customer engagement. It will examine various AI applications, including personalized content delivery, predictive analytics, and automated customer interactions, assessing

their effectiveness in fostering deeper customer connections. The research will focus on both the opportunities and challenges associated with implementing AI-driven customer engagement strategies, providing insights into best practices and potential pitfalls. By analyzing current trends and case studies, the study seeks to offer a comprehensive understanding of AI's role in transforming customer engagement within the digital marketing landscape.

### **LITERATURE REVIEW**

Chen, Prentice, Weaven and Hisao (2022) examined that loyalty & engagement of consumers are correlated highly with the outcome of services. It has been considered as effective strategies of marketing to maximum profits & attains competitive advantages. Finding shows that AI adoption enhances customer experience in before, during & past stages of transactions.

Natarajan (2022) found that management of companies have starting focusing on using Artificial intelligence (AI) & automation tools to recognize customer's purchase behavior, to enhance interaction of consumers & brand, to make relationships stronger. Management have adopted Artificial Intelligent based CRM to respond to the queries of customer effectively & support them to enhance loyalty among customer.

Bharati Rathore (2023) in the research paper titled "Digital Transformation 4.0: Integration of AI & Meta verse in Marketing," explored the integration of AI and the metaverse in marketing. The paper discussed the potential of AI and the metaverse to revolutionize marketing strategies and enhance customer experiences. The paper emphasized that this integration can lead to personalized marketing campaigns, improved customer engagement, and increased brand loyalty. The paper provided insights into how businesses can leverage AI and the metaverse to create immersive virtual experiences for customers, enabling them to interact meaningfully with products and services.

### **OBJECTIVES OF THE STUDY**

1. To explore the role of artificial intelligence in digital marketing.
2. To study various applications of artificial intelligence in digital marketing.
3. To understand the key benefits and the potential challenges associated with implementing artificial intelligence in digital marketing strategies.

### **METHODOLOGY**

This study is based on qualitative research design, focusing on a comprehensive literature review and theoretical analysis. This approach allows for an in-depth understanding of existing theories, models, and frameworks related to AI and customer engagement in digital marketing. The sources of data collected from various Journals, Reports and Websites.

### **RESULT AND DISCUSSIONS**

#### **ROLE OF AI IN DIGITAL MARKETING**

At its core, AI enhances marketing strategies by leveraging data-driven insights and automation to achieve more personalized and effective campaigns, here are some of the roles of AI in digital marketing:

- **Data Analysis and Insights**

Data analysis and insights are integral to AI's role in digital marketing, offering great benefits for businesses aiming to understand and engage with their audiences effectively. AI's capability in data analysis goes beyond traditional methods by harnessing advanced algorithms to process vast volumes of data swiftly and accurately. AI enables digital marketers to derive meaningful insights from diverse data sources. By analyzing this wealth of information, AI identifies patterns, trends, and correlations that might not be apparent through manual analysis alone.

- **Automation and Efficiency**

Automation and efficiency are also important facets of AI's impact on digital marketing, revolutionizing how businesses streamline their operations and enhance productivity. AI-powered automation allows marketers to automate repetitive tasks such as email campaigns, social media scheduling, customer service interactions, and ad placements. These tasks can be executed swiftly and

accurately by leveraging AI algorithms, freeing up valuable time and resources for marketers to focus on strategic initiatives and creative endeavors.

- **Personalized Customer Experiences**

Personalized customer experiences, facilitated by AI in digital marketing, revolve around tailoring interactions and content to meet individual customers' unique needs and preferences. This approach goes beyond generic messaging by leveraging data-driven insights to deliver more relevant and engaging experiences.

- **Real-time Campaign Optimization**

Real-time campaign optimization, powered by AI, is a game-changer in digital marketing. It involves continuously monitoring and adjusting marketing campaigns based on real-time data and insights. Here's how it works: When running digital campaigns, AI algorithms analyze many factors, such as audience demographics, engagement metrics, click-through rates, and conversion rates, in real time. This constant monitoring allows marketers to make timely adjustments to their strategies.

### **APPLICATIONS OF AI IN DIGITAL MARKETING**

- ❖ **Chatbots**

Chatbots are something we all come across whenever we open any website. These automated pop-up message bots are gaining more popularity in conversational marketing for several reasons. AI-powered chatbots play a significant role in marketing by providing unmanned client support services that eventually help improve sales. It is an excellent example of using machine learning in digital marketing.

- ❖ **Data Analysis and Insights**

AI tools for data analysis can process vast amounts of data quickly, uncovering patterns and trends that inform marketing strategies. It enables detailed customer segmentation, helping marketers target audiences based on behavior, preferences, and purchasing history.

- ❖ **Personalization**

AI enhances user experiences by delivering personalized content, product recommendations, and advertisements tailored to individual preferences. Real-time personalization ensures that users receive relevant offers, boosting engagement and conversion rates.

- ❖ **Search Engine Optimization**

AI tools optimize content for search engines by analyzing keywords, competitor strategies, and audience behavior. It supports voice search optimization and predictive analytics to stay ahead of trends.

- ❖ **Content Creation**

AI automates content creation, including social media posts, email drafts using AI email generators, and visual assets like images, and animation videos. This streamlines processes while maintaining consistency and quality, which is especially useful for dropshipping businesses to manage their marketing efforts efficiently.

- ❖ **Advertising**

AI enables programmatic advertising by analyzing user data to target ads effectively. Predictive analytics improves ad performance and maximizes return on investment. Through these applications, AI revolutionizes marketing, making campaigns more efficient, personalized, and impactful. Digital advertising intelligence further enhances these capabilities by providing deeper insights into consumer behaviour, allowing for more precise targeting and optimization of ad strategies.

### **BENEFITS OF DIGITAL MARKETING**

1. **Efficiency:** Generative AI can analyze vast amounts of data faster and more accurately than humans, allowing for the refinement of targeting strategies, personalization of content, and ultimately, more successful campaigns. For instance, AI can identify which marketing strategies are most effective with certain demographics, enabling agencies to customize their clients' campaigns for maximum impact.
2. **Content Creation:** Generative AI has the potential to revolutionize content creation by automatically generating blog posts, social media updates, and even video scripts. By handling these time-

consuming tasks, AI frees up digital marketing professionals to focus on more strategic, high-impact initiatives.

3. **Enhanced Customer Experience:** AI-powered chatbots and virtual assistants can provide personalized customer service, enabling agencies to deliver exceptional customer experiences and build strong relationships with their clients.

### **CHALLENGES AND ETHICAL CONSIDERATIONS**

While AI offers significant benefits for digital marketing, its integration raises several challenges and ethical concerns.

- **Data Privacy Concerns:** AI systems rely on vast amounts of data to function effectively, often collecting personal and sensitive information from users. This raises issues regarding data security and privacy, especially with regulations like GDPR and CCPA in place. Marketers must ensure compliance with these laws and maintain transparency in how data is collected, stored, and used.
- **Algorithm Bias:** AI algorithms are only as unbiased as the data they are trained on. If the data reflects societal biases, the AI can perpetuate or amplify them. For instance, AI-powered advertising may inadvertently exclude certain demographics or offer unequal opportunities based on race, gender, or socio-economic status. Ensuring fairness and inclusivity in AI algorithms is a critical concern.
- **Job Displacement:** As AI automates many tasks traditionally performed by humans, such as content creation, data analysis, and customer service, there is growing concern about job losses in marketing and related fields. While AI can increase efficiency, it may reduce the need for human workers in certain roles, necessitating reskilling efforts.
- **Dependence on Technology:** Overreliance on AI could lead to a loss of human creativity and intuition in marketing. Balancing AI automation with human insights and innovation remains a challenge for businesses.

### **SUGGESTIONS**

AI in business can gather and analyse large amounts of data, drive consumer insights, and enable quick and efficient decision-making. AI combined with big data, IoT, and the human brain has the potential to expand the boundaries of marketing. AI allows businesses to collect data, conduct more in-depth analyses, and take action based on practical information usage. AI may be the best investment in a professional career as a marketer. Deep learning is central to marketing AI. It refers to the area of ML concerned with algorithms inspired by the human brain's neural networks. Deep learning algorithms “teach” computers to understand user queries, text, images, and speech patterns. The computer then applies its knowledge to provide relevant, helpful answers and solutions based on the users' needs. Deep learning with AI allows brands to respond to user demands more effectively and to create poignant, hyper-relevant content and ads at all times.

### **CONCLUSION**

As AI develops, digital marketers must keep up with the most recent developments and successfully utilize AI technology to promote business success. In addition, significant financial investments are needed to apply AI in digital marketing. Small businesses with limited resources and insufficient funding may find it difficult to implement AI. The absence of rapid adaptation in AI may result in lost opportunities or ineffective strategies and highlight the need for continuous learning and professional development at a digital marketing level. AI has been able to manage several tasks in digital marketing autonomously. However, it is still necessary to recognize the importance of human creativity and intuitions for creating efficient marketing campaigns.

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## **UPSKILLING FOR THE FUTURE: AN EXPLORATION OF DIGITAL SKILLS REQUIRED FOR REVERSE LOGISTICS PROFESSIONALS IN THE AGE OF INDUSTRY 5.0**

**Tom J Mathew**

*Research Scholar, Reg No: 20213201011001, PG & Research Department of Commerce,  
St. Alphonsa College of Arts & Science, Karinkal, Kanyakumari District (Affiliated to  
Manonmaniam Sundaranar University, Tirunelveli).*

**Dr. M. Subala**

*Assistant professor, PG & Research Department of Commerce, St. Alphonsa College of Arts &  
Science, Karinkal. (Affiliated to Manonmaniam Sundaranar University, Tirunelveli).*

### **ABSTRACT**

In the era of Industry 5.0, the logistics sector is experiencing rapid technological transformation, affecting traditional processes like reverse logistics. With advancements in technologies such as IoT, AI, big data, robotics, block chain, and automation, the role of reverse logistics professionals is evolving. This paper explores the digital skills required for professionals in reverse logistics to remain competitive and effective in the face of Industry 5.0. Through a review of current literature, industry reports, and case studies, this study outlines the key skills, challenges, and up skilling strategies essential for reverse logistics professionals.

**Keywords:** Industry 5.0, Reverse Logistics, Digital Skills, Artificial Intelligence, Block chain.

### **INTRODUCTION**

The logistics sector is experiencing an unprecedented transformation due to the rise of Industry 5.0 technologies, which encompass advancements in automation, data exchange, and interconnected systems. In this age of Industry 5.0, technologies such as the Internet of Things (IoT), Artificial Intelligence (AI), Big Data, machine learning, block chain, and robotics are revolutionizing the way reverse logistics operates. These technologies enable more precise tracking of goods, real-time data analysis for better decision-making, automation of manual processes, and greater transparency in the flow of products from consumers back to manufacturers or recyclers. However, to fully capitalize on these technological advancements, reverse logistics professionals must possess an evolving set of digital skills that are in line with the capabilities of Industry 5.0. This paper explores the digital skills that reverse logistics professionals need to develop in order to stay competitive in the rapidly evolving landscape of Industry 5.0. Through a review of current literature, industry reports, and case studies, the study aims to identify the key technologies that are shaping reverse logistics and the specific skills required to implement them successfully. By investing in the right skills and technologies, reverse logistics professionals can play a vital role in creating more sustainable supply chains and supporting the goals of the circular economy.

### **LITERATURE REVIEW**

The integration of Industry 5.0 technologies has significantly reshaped various sectors, with logistics being one of the most impacted. Reverse logistics, in particular, has gained attention due to its role in sustainability and circular economy practices. The ability of AI to optimize return routes and predict return patterns is an example of its application in reverse logistics. A 2024 study by Singh et al. demonstrates that AI-powered systems have drastically reduced human error and operational inefficiencies in returns management, making the reverse logistics process faster and more cost-effective (Singh, R., Patel, K., & Nair, A., 2024). IoT is one of the most transformative technologies for reverse logistics, enabling real-time monitoring of goods and assets. IoT devices, such as RFID tags, sensors, and GPS systems, provide real-time data on the location and condition of products. This allows companies to track returns and exchanges more efficiently, reduce delays, and improve customer satisfaction. According to a recent study by Zeng et al. (2023), IoT can improve reverse logistics operations by enhancing transparency, reducing handling costs, and enabling predictive maintenance (Zeng, X., Liu, S., & Liu, J., 2023).

### **STATEMENT OF THE PROBLEM**

The rapid pace of technological advancement in logistics, driven by Industry 5.0, has created a demand for new digital skills among reverse logistics professionals. Despite the growing importance of up skilling, there is a lack of detailed exploration into the specific competencies required for these professionals. This study aims to fill this gap by identifying the digital skills essential for success in reverse logistics operations and outlining strategies for their development.

### **OBJECTIVES**

- To identify the digital skills needed for reverse logistics professionals in the context of Industry 5.0.
- To explore up skilling strategies that can help reverse logistics professionals acquire these skills.

### **SCOPE OF THE STUDY**

This study focuses on reverse logistics within the broader logistics and supply chain sectors. It specifically addresses the impact of Industry 5.0 technologies such as AI, IoT, big data, and block chain on the roles and responsibilities of professionals in reverse logistics. The study will examine existing literature, case studies, and reports to provide insights into the digital skills gap and the need for up skilling in this area. The scope is limited to secondary data sources, including academic journals, industry reports, and conference papers, and does not involve primary data collection.

### **RESEARCH METHODOLOGY**

This study adopts a descriptive research design with a theoretical approach. Secondary data has been utilized from academic journals, industry reports, case studies, and conference papers. By reviewing existing literature, the study aims to provide a comprehensive understanding of the digital skills needed in reverse logistics and how professionals can be trained to adapt to the evolving technological landscape of Industry 5.0.

### **THE DIGITAL SKILLS NEEDED FOR REVERSE LOGISTICS PROFESSIONALS IN THE CONTEXT OF INDUSTRY 5.0**

The technologies like automation, artificial intelligence (AI), machine learning, the Internet of Things (IoT), big data, and blockchain reshape the logistics landscape, the skill set of reverse logistics professionals must also adapt. Below are some key digital skills needed:

#### **1. Data Analytics and Data-Driven Decision Making**

One of the most crucial skills for reverse logistics professionals is the ability to analyze and interpret large datasets. With the vast amounts of data generated from product returns, repairs, and recyclables, professionals must be skilled in using data analytics tools (such as Excel, Python, R, SQL, and business intelligence platforms like Tableau and Power BI). The ability to extract meaningful insights from this data allows logistics professionals to identify trends, predict return volumes, optimize processes, and make more informed decisions. Understanding how to perform statistical analysis and apply predictive modeling is also essential for improving forecasting and inventory management.

#### **2. IoT (Internet of Things) Expertise**

As reverse logistics increasingly relies on IoT devices (e.g., RFID tags, sensors, and GPS trackers), professionals need to have an understanding of how to deploy and utilize IoT systems for tracking returns, managing inventory, and monitoring the condition of products. Skills in configuring and interpreting data from IoT sensors are vital for real-time tracking of returned goods, which can reduce delays and improve transparency throughout the return process.

#### **3. Artificial Intelligence (AI) and Machine Learning (ML)**

AI and machine learning are transforming reverse logistics by automating processes like sorting, product assessments, and routing of returned goods. Professionals need to understand how AI algorithms work in optimizing return processes, predicting customer return behavior, and improving resource allocation. Machine learning models can also predict the most efficient ways to handle product refurbishing, recycling, and restocking. Professionals must be equipped to work with these AI and ML tools, including an understanding of platforms like Tensor Flow or similar frameworks.

#### **4. Block chain Literacy**



With the rise of block chain technology, reverse logistics professionals must become familiar with how block chain can enhance transparency and traceability. Block chain can be used to securely track the provenance of returned goods, ensure product authenticity, and reduce fraud. Professionals should understand the fundamentals of block chain and its integration with logistics management systems to ensure that returned products are properly verified and accounted for in the system.

#### **5. Automation and Robotics Knowledge**

Automation plays a central role in Industry 5.0, and reverse logistics is no exception. Automation is applied to tasks such as sorting returned items, processing claims, and performing quality checks. Professionals need to understand how robotic systems, automated conveyors, and sorting machines can be implemented and maintained. A basic understanding of robotic process automation (RPA) and how it integrates with reverse logistics operations will help professionals work alongside these technologies effectively.

#### **6. Cyber security Awareness**

As reverse logistics systems become more interconnected through digital technologies, ensuring the security of sensitive data is critical. Professionals must be aware of cybersecurity risks and be capable of implementing appropriate security measures to safeguard customer information and product data. Understanding encryption methods, secure network protocols, and how to protect IoT systems and digital records from cyber threats is crucial in safeguarding the integrity of reverse logistics processes.

#### **7. Cloud Computing and IT Systems Integration**

Cloud computing is increasingly used to manage logistics data, store records, and integrate various logistics functions. Reverse logistics professionals should have experience with cloud-based platforms such as Amazon Web Services (AWS), Microsoft Azure, or Google Cloud to manage and share data efficiently. Skills in integrating cloud-based solutions with legacy systems will allow professionals to optimize the flow of data across different departments and improve collaboration with other stakeholders.

### **UPSKILLING STRATEGIES THAT CAN HELP REVERSE LOGISTICS PROFESSIONALS**

To ensure reverse logistics professionals acquire the necessary digital skills required in the age of Industry 5.0, organizations must implement effective up skilling strategies. One of the most important strategies is to offer targeted training programs that focus on the key technologies impacting reverse logistics, such as IoT, AI, block chain, data analytics, and automation. Another valuable strategy is to partner with educational institutions and online learning platforms. Collaborations with universities, specialized logistics schools, and platforms like Coursera, edX, or LinkedIn Learning can provide access to accredited courses and certifications in advanced technologies such as machine learning, cyber security, and cloud computing. These platforms allow professionals to learn at their own pace while ensuring they stay up to date with the latest industry trends and skills. To foster a culture of continuous learning, companies should also offer mentoring and knowledge-sharing programs within the organization. Furthermore, companies can encourage professionals to attend industry conferences, webinars, and seminars. These events offer a platform for reverse logistics professionals to interact with experts, explore the latest technological innovations, and gain insights into how others are implementing new technologies. Such exposure can inspire new ideas, drive innovation within the company, and help employees stay at the forefront of technological advancements. By integrating these up skilling strategies, organizations can equip their reverse logistics teams with the digital skills necessary to thrive in the era of Industry 5.0, driving efficiency, innovation, and sustainability in their operations.

### **SUGGESTIONS**

To effectively address the challenges posed by the rapid advancements in Industry 5.0 and ensure that reverse logistics professionals are equipped with the necessary digital skills, several strategies can be adopted. First and foremost, companies should invest in **tailored training programs** that focus specifically on the digital competencies required in reverse logistics. In addition to in-house training, companies can explore **partnerships with educational institutions and online learning**

**platforms.** Moreover, organizations should encourage a **culture of continuous learning** by promoting professional development through workshops, webinars, and industry conferences. This can facilitate knowledge exchange among professionals and expose them to innovative practices and solutions being adopted by leading companies. A proactive learning environment will foster adaptability among employees, allowing them to keep pace with the evolving nature of the logistics industry. By implementing these strategies, companies can bridge the skills gap, enhance their reverse logistics capabilities, and ensure that their workforce remains competitive and equipped for the future challenges posed by Industry 5.0.

### CONCLUSION

As reverse logistics continues to play a critical role in global supply chains, the integration of Industry 5.0 technologies will be essential for optimizing efficiency and sustainability. Reverse logistics professionals must equip themselves with a range of digital skills to stay competitive in the evolving landscape. By upskilling and adopting emerging technologies, professionals can drive improvements in product returns, recycling, and waste management, contributing to a circular economy. Organizations must invest in continuous learning and development to ensure their workforce remains adaptable and skilled in the face of rapid technological change.

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## **AI POWERED INNOVATION AND ENTREPRENEURSHIP**

**Dr.R.Sivasankar**

Assistant Professor, Department of Commerce (SF), Vivekananda College,  
Agastheeswaram, Kanyakumari District– 629601.

Affiliated to Manonmaniam Sundaranar University, Abisekapatti, Tirunelveli -627 012, Tamil Nadu

**J.Helen**

Ph.D., Research Scholar, Reg. No:241232706005,

Commerce Research Centre, Vivekananda College, Agastheeswaram.- 62960.

Affiliated to Manonmaniam Sundaranar University, Abisekapatti, Tirunelveli -627 012, Tamil Nadu

### **ABSTRACT**

In the ever-evolving world of business, Artificial Intelligence (AI) is redefining the landscape of innovation and entrepreneurship, unlocking boundless possibilities for businesses and visionaries alike. With its ability to automate complex processes, decipher vast data landscapes, and craft hyper-personalized experiences, AI empowers entrepreneurs to reimagine industries and accelerate growth. From predictive analytics to intelligent automation, AI-driven solutions enhance decision-making, optimize efficiency, and foster groundbreaking business models. As AI breathes life into revolutionary ideas, it fuels a new era of disruptive innovation, reshaping markets and amplifying competitive advantage. Yet, this transformative journey is not without challenges-ethical dilemmas, data privacy concerns, and equitable access remain pivotal considerations. This article examines the paradigm shift of AI brings to entrepreneurship, forging a future where innovation, efficiency, and intelligence drive sustained success.

Keywords: AI, Entrepreneurship, Privacy, Concerns, Pivotal

### **INTRODUCTION**

Artificial Intelligence (AI) is transforming the landscape of innovation and entrepreneurship by enabling businesses to develop smarter solutions, optimize operations, and enhance decision-making. Entrepreneurs are increasingly leveraging AI technologies such as machine learning, natural language processing and predictive analytics to create innovative products, improve customer experiences and streamline processes. AI-driven automation reduces manual workload, minimizes errors and increases efficiency, allowing startups and established businesses to focus on strategic growth. With the ability to analyze vast amounts of data, AI helps to identify market trends, customer preferences, and business opportunities, providing entrepreneurs with valuable insights to stay competitive. From chat bots and virtual assistants improving customer interactions to AI-powered recommendation systems personalizing user experiences, the integration of AI is reshaping business models across industries. As AI continues to evolve, it opens up new possibilities for disruption and transformation, making it a crucial driver of success in the modern entrepreneurial ecosystem. However, the adoption of AI also comes with challenges such as ethical considerations, data privacy concerns, and the need for skilled professionals, which entrepreneurs must navigate carefully. This article explores how AI fosters innovation, enhances business potential and shapes the future of entrepreneurship by providing intelligent solutions that drive efficiency, scalability, and sustainable growth.

### **ROLE OF AI-POWERED INNOVATION AND ENTREPRENEURSHIP**

1. **Better Decisions:** AI gives business owners useful insights from data, helping them make smarter choices based on current trends.
2. **Saves Money:** By automating tasks and reducing mistakes, AI helps save on operational costs, allowing entrepreneurs to spend resources wisely.
3. **Personalized Customer Service:** AI can help businesses offer personalized experiences, like recommending products or answering questions through chatbots, making customers happy.
4. **New Product Ideas:** Entrepreneurs can use AI to create better products or come up with new ideas that solve problems in a unique way.
5. **Helps Businesses Grow:** AI makes it easier to grow by automating tasks and handling more customers without needing more staff.

6. **Understands the Market:** AI gives entrepreneurs insights into what customers want and what's happening in the market, helping them make better business choices.
7. **Reduces Risks:** AI helps entrepreneurs spot risks early, like financial problems or mistakes, so they can fix them before they become bigger issues.

#### **CHALLENGES IN AI-POWERED INNOVATION AND ENTREPRENEURSHIP**

1. **High Implementation Costs:** The adoption of AI demands significant investment in software, hardware, and workforce training, posing a financial barrier, especially for startups with limited capital.
2. **Data Privacy and Security Concerns:** AI depends on vast datasets, raising concerns about safeguarding sensitive information and ensuring compliance with evolving data protection laws.
3. **Lack of Skilled Workforce:** The demand for AI experts, such as data scientists and engineers, often exceeds supply, making talent acquisition and retention a major hurdle for smaller enterprises.
4. **Integration with Existing Systems:** Businesses face difficulties in seamlessly integrating AI into their legacy systems, leading to inefficiencies, disruptions, and potential operational delays.
5. **Limited Understanding of AI:** Many business leaders lack a deep understanding of AI's capabilities, leading to ineffective implementation or missed opportunities for innovation.
6. **Dependence on Quality Data:** AI performance is heavily reliant on high-quality, relevant data. Inaccurate, incomplete, or biased datasets can lead to flawed insights and poor decision-making.
7. **Regulatory Challenges:** The regulatory landscape surrounding AI is constantly evolving, requiring entrepreneurs to navigate legal complexities to ensure compliance with existing and future policies.
8. **Resistance to Change:** Employees and customers may resist AI-driven transformations due to fears of job displacement or unfamiliarity with technology, making cultural adaptation a key challenge.

#### **REVIEW OF LITERATURE**

**Daradkeh et al., (2022)** AI provides entrepreneurs with invaluable tools such as predictive analytics, natural language processing, and machine learning algorithms that can sift through vast amounts of data, identify patterns, and forecast trends. These capabilities enable entrepreneurs to gain a deeper understanding of their target markets, anticipate customer needs, and develop products and services that are more aligned with market demands. Moreover, AI continues to evolve, entrepreneurs who embrace this technology have a competitive edge, unlocking untapped opportunities and driving their ventures towards a more efficient, customer-centric, and innovative future.

**Bharadiya (2023),** The predictive capability empowers entrepreneurs with foresight, allowing them to proactively position their ventures in response to emerging market dynamics. The application of AI in predictive modeling extends across various dimensions of market analysis.

#### **STATEMENT OF THE PROBLEM**

In today's fast-moving business world, entrepreneurs face numerous challenges that hinder growth and innovation. Managing repetitive tasks, making data-driven decisions, controlling operational costs, and understanding market trends are constant struggles. Many businesses also find it difficult to scale efficiently, personalize customer experiences, and stay ahead of competitors. Limited access to real-time insights, inefficient resource allocation, and high risks of financial losses further add to the burden. Additionally, adapting to rapid technological changes and integrating AI into existing business models can be overwhelming for many entrepreneurs. AI has emerged as a powerful tool to address these issues by automating tasks, providing intelligent insights, optimizing resources, improving customer interactions, and detecting risks early. However, despite its potential, many business owners remain uncertain about how to leverage AI effectively. This paper explores AI's role in innovation and entrepreneurship, highlighting its benefits, real-world applications, and the challenges entrepreneurs face in adopting AI-driven solutions. By understanding its impact, businesses can unlock new opportunities, enhance efficiency and gain a competitive edge in the evolving market.

#### **OBJECTIVES OF THE STUDY**

- ✓ To understand how AI helps entrepreneurs in business growth and innovation
- ✓ To identify common challenges faced by entrepreneurs.

- ✓ To analyse ways to use AI effectively for better business success.

## RESEARCH METHODOLOGY

### 1, Research Design

This study adopts a descriptive research method, examining case studies and real-world AI implementations in startups and enterprises.

### 2, Sampling Design

This study employs a purposive sampling approach to select startups and enterprises that have implemented AI solutions. Within purposive sampling, the study may categorize organizations based on size and industry with a total sample size of 60.

### 3. Tools and Techniques

The collected data will be analysed and presented in the form of tables to suit the study and also to interpret the results. The tools were used to analyse the data

❖ Percentage analysis ❖ Garret ranking ❖ Likert 5-point scale

## ANALYSIS AND INTERPRETATION

### 1, Demographic Data

This section presents the analysis and interpretation of the collected data based on key demographic factors such as age, organization size, industry type, and roles within the organization. The responses have been categorized and analyzed to provide insights into the distribution of participants and their perspectives on AI-powered innovations in entrepreneurship

*Table 1 Demographic data of respondents*

Particulars	No. of Respondents	Percentage
<b>Age</b>		
18-24	18	30
25-34	24	40
35-44	14	23
Above 44	4	7
<b>Size of Organisation</b>		
Startup	24	40
Small business	20	33
Medium-sized business	10	17
Large enterprise	6	10
<b>Type of Industry</b>		
Manufacturing	16	27
Education	6	10
Health Care	6	10
Retail Industry	14	23
Technology	10	17
Finance	8	13
<b>Role in Organisation</b>		
CEO/Executive	6	10
Manager	10	17
Employee	44	73

Source: Primary data

The survey highlights that a majority of respondents are young professionals aged 25-34, predominantly working in startups and small businesses. The manufacturing and retail industries have the highest representation, followed by technology and finance. Most respondents (73%) are employees, while a smaller percentage holds managerial (17%) and executive roles (10%).

### 2. Understanding the Role of AI in Innovation and Business

*Table 2- Understanding the Role of AI in Innovation and Business*

Particulars	No. of Respondents	Percentage
Not at all familiar	4	7
Slightly familiar	6	10
Moderately familiar	34	56
Very familiar	16	27

Source: Primary data

The table shows a clear picture of Understanding the Role of AI in innovation and business. A majority, 56% (34 respondents), have a moderate grasp, while 27% (16 respondents) are well-versed in the subject. A smaller fraction, 10% (6 respondents), have only a slight familiarity, and 7% (4 respondents) remain unfamiliar with AI's role.

### 3. Areas of using AI in business

*Table 3- Areas of using AI in business*

Particulars	Total	Average	Rank
Customer service (chatbots, virtual assistants)	4800	80	1
Marketing and sales automation	4080	68	3
Product development and innovation	3840	64	4
Supply chain and logistics	4320	72	2
finance	3840	64	4

Source: Primary data

The Garrett ranking analysis shows that Customer Service AI is the top priority (80), followed by Supply Chain AI (72) for logistics optimization. Marketing AI (68) ranks third, aiding in sales automation, while Product Innovation and Finance AI (64) hold equal importance in R&D and financial automation. This highlights AI's growing role in efficiency, customer engagement, and business growth.

### 4. Challenges based in AI Adoption

*Table 4 - Challenges based in AI Adoption*

Particulars	Highly Agree	Agree	Neutr	Dis Ag	Highly Dis Ag	Total	Mean	Rank
High cost of AI implementation	120	72	36	12	0	240	4	III
	24	18	12	6	0	60		
Lack of technical expertise	110	80	48	4	0	121	4.03	II
	22	20	16	2	0	60		
Limited availability of AI solutions in industry	30	24	24	48	16	142	2.4	V
	6	6	8	24	16	60		
Resistance to change within the organization	110	64	30	16	4	224	3.7	IV
	22	16	10	8	4	60		
Understanding of AI	160	48	30	8	2	247	4.1	I
	32	12	10	4	2	60		

Source: Primary data

The study, based on a Likert 5-point scale, ranks understanding AI (Rank I, Mean: 4.1) as the biggest challenge, followed by lack of technical expertise (Rank II, Mean: 4.03) and high implementation costs (Rank III, Mean: 4.0), indicating that knowledge gaps and financial constraints hinder AI adoption. Resistance to change (Rank IV, Mean: 3.7) is a moderate barrier, while limited AI solutions (Rank V, Mean: 2.4) is the least concern, suggesting that AI tools exist but require better adoption strategies. Strengthening awareness, training, and financial support can help organizations embrace AI more effectively.

### 5. Strategies respondents considered to overcome AI adoption challenges

*Table 5- Strategies respondents considered to overcome AI adoption challenges*

Particulars	No. of Respondents	Percentage
Training employees in AI skills	36	60
Increasing AI-related investments	8	13
Partnering with AI technology providers	10	17
Implementing AI in phases rather than all at once	6	10

Source: Primary data

The table reveals how businesses plan to tackle AI adoption challenges, with training employees (60%) being the most favored approach, highlighting the focus on skill development. Partnering with AI providers (17%) and boosting investments (13%) are also considered crucial, while gradual implementation (10%) shows a cautious strategy.

### **SUGGESTIONS**

Organizations should enhance AI awareness, invest in employee training, adopt cost-effective solutions, and address resistance to change while integrating AI gradually. Strengthening technical expertise, fostering innovation, promoting industry-specific AI solutions, and collaborating with AI providers can drive effective adoption. Additionally, businesses should improve data security, encourage regulatory support, leverage AI for decision-making, optimize AI-driven automation, and ensure ethical AI usage for sustainable growth and efficiency.

### **CONCLUSION**

AI-powered innovation is changing entrepreneurship by making businesses more efficient, competitive, and future-ready. However, challenges like resistance to change, high costs, and a lack of technical skills still exist. To fully benefit from AI, businesses should focus on training employees, investing in AI solutions, and working with technology providers. Using AI in areas like customer service, marketing, and supply chain management can improve operations and drive growth. A careful and responsible approach—ensuring ethical use, regulatory support, and gradual implementation—will help businesses successfully integrate AI and stay ahead in the evolving market.

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## LEADERSHIP IN THE DIGITAL ERA

**Dr.N.Jemila Dani**

*Asst. Professor of Commerce, St.Alphonsa College of Arts & Science, Soosaipuram*

**S.B.Angelin Subiksha & T.SherlinPreeta**

*II M.Com, St.Alphonsa College of Arts & Science, Soosaipuram*

*II M.Com, St.Alphonsa College of Arts & Science, Soosaipuram*

### ABSTRACT

The rapid pace of technological advancements has drastically reshaped leadership in organizations. The digital era has introduced a variety of challenges and opportunities, forcing leaders to adapt to new tools, strategies, and workforce dynamics. This paper explores the evolving role of leadership in the context of digital transformation, focusing on the need for agility, technological fluency, data-driven decision-making, and a human-centric approach to leadership. The research examines key trends, discusses the necessary skills for modern leaders, and provides recommendations for organizations striving to foster effective leadership in a digital world.

**Keywords:** Digitalization, Leadership, Technological fluency, Decision making, Organisations, Challengers.

### INTRODUCTION

In today's rapidly evolving world, the role of leadership has undergone a significant transformation. The digital era, characterized by technological advancements, globalization, and ever-changing market demands, has reshaped how leaders guide organizations. Traditional leadership styles, which relied heavily on face-to-face interactions and hierarchical structures, are being replaced by more agile, collaborative, and technology-driven approaches. Leaders are now tasked with navigating the complexities of digital tools, remote teams, and data-driven decision-making, all while maintaining a human-centered approach that fosters trust and engagement within the work force. The digital era continues to transform and challenge the traditional business landscape. New leadership skills and behaviors are required for IT leaders to thrive in this evolving environment.

Today's leaders must not only stay abreast of technological trends but also possess the skills to leverage these innovations to drive strategic decisions and maintain a competitive edge. They are responsible for creating digital-first cultures that promote continuous learning, adaptability, and collaboration across diverse, often remote, teams. In this environment, leadership is no longer confined to top-down command but is more distributed, empowering employees at all levels to contribute to the organization's success.

However, the digital era brings with it new challenges that require leaders to balance technological advances with emotional intelligence and empathy. The rise of remote and hybrid work models, cyber security concerns, and the need for continuous innovation present obstacles that demand a new kind of leadership. Effective leaders in the digital age must be versatile, able to make data-driven decisions while also fostering relationships and maintaining employee well-being. This paper explores how leadership in the digital era has evolved, the key competencies required for success, and the strategies leaders can adopt to thrive in this complex, technology-driven landscape.

### OBJECTIVES

The researcher has following objectives for pursuing this study

1. To study the strengths of IT leaders.
2. To analyse the characteristics and implications for leadership.
3. To show the different case studies of effective leadership.

### STRENGTHS OF IT LEADERS

In today's digital landscape, technology is at the core of the modern business. The transition to this agile workplace has created skill gaps. According to a study by Forrester, of the 74 percent of organizations that have a digital strategy, only 15 percent believe that they are equipped with the



necessary personnel to execute these actions effectively. Continue reading to learn more about five key strengths required for contemporary IT leaders.

- **Communication**

To be an effective IT leader, you must be a great communicator. Through the use of technology, communication practices can be streamlined from top to bottom. Digital leaders understand the importance of leveraging technology to support increased coordination. By keeping your team abreast of change, they are empowered to adapt to current trends and learn to stay focused. Communication skills include public speaking, written communication, and listening.

- **Digital Literacy**

Professional development is a continuous process for all levels of the workforce. In an MIT study of 1,000 CEOs, while 90 percent believe that their organizations are being reinvented or disrupted by digital models, 70 percent do not believe that they possess the proper infrastructure, skills, or leaders to adapt. Digital immigrants must be proactive in getting up-to-speed with the technical knowledge of their younger peers. Digital understanding is crucial for IT leaders to make informed and confident decisions for their organizations.

- **Innovation**

By prioritizing digital innovation, businesses can benefit from higher growth in their respective industries. Leaders must strive to be more adaptable and flexible in their approach to creating a modern digital workplace. Innovation is impossible without taking risks. IT leadership should nurture a digital culture that embraces change and learns from the outcomes. By cultivating an environment with innovative practices, such as automation, your employees will become more productive.

- **Adaptability**

Leadership is fluid and ever-changing. IT leaders are not only responsible for articulating a vision that can be rallied behind, but also craft conditions that enable digital maturity and bring out the best in their personnel. Adaptability provides the foundation from which to effect change. In a report by Right Management, 91 percent of HR hiring managers believe that people will be hired based on their capacity to deal with change. Leaders must be able to minimize the negative impact of disruption by remaining flexible.

- **Leadership**

The foundation of digital leadership is driving results and change through people. Current IT leaders must not only focus on their digital culture but recognize the value of human leadership. Leadership is fluid and ever-changing. Digital leaders must be agents of change and create harmony between people and technology. This includes promoting a strong teamwork orientation and embracing the human element of technology.

### **CHARACTERISTICS AND IMPLICATIONS FOR LEADERSHIP**

Leadership in the digital era is characterized by a set of essential traits that enable leaders to thrive in an environment dominated by rapid technological advancements and constant change. One of the most significant characteristics is agility the ability to quickly adapt to new technologies, market shifts, and unexpected challenges. In an era where innovation is continuous, leaders must be able to pivot and make decisions swiftly without losing sight of long-term objectives. Another key trait is technological fluency, where leaders must possess a strong understanding of digital tools, data analytics, and emerging technologies. Additionally, emotional intelligence has become increasingly important in digital leadership, as managing diverse, often remote teams requires empathy, communication, and a deep understanding of the human side of technology.

The implications of these leadership characteristics are far-reaching. As organizations rely more on technology, leaders are expected to not only drive innovation but also create a culture of continuous learning to ensure employees can keep pace with new developments. At the same time, leaders must balance the increased dependence on data with a focus on ethical decision-making, particularly as issues like privacy, cyber security, and algorithmic bias gain prominence.

Moreover, the rise of remote work and hybrid models demands that leaders develop strategies to maintain engagement, productivity, and team cohesion despite physical distances. Ultimately, these

characteristics and their implications underscore the need for a leadership style that is both technologically savvy and people-centered, able to navigate the complex dynamics of the digital world while ensuring that human values remain at the core of organizational success.

### **CHALLENGES OF LEADERSHIP**

In today's rapidly evolving digital landscape, leadership faces both unprecedented challenges and exciting opportunities. The digital age has ushered in a wave of technological advancements that have transformed the way we work, communicate, and collaborate. Leadership in the digital age comes with unique challenges that require adaptability, technological literacy, and a human-centric approach. Below are some of the most pressing challenges faced by leaders today:

One of the key challenges in the digital age is the constant influx of information. Leaders must sift through vast amounts of data to make informed decisions. This requires not only analytical skills but also the ability to identify relevant information amidst the noise. Effective leaders embrace data-driven decision-making, using advanced analytics tools to gain insights into market trends, customer preferences, and employee performance. By leveraging data, they can make strategic decisions that drive their organizations forward.

Additionally, the digital age has redefined the concept of workplace collaboration. Virtual teams, remote work, and online communication tools have become the norm, allowing organizations to tap into a global talent pool. However, managing diverse teams across different time zones and cultures requires strong leadership skills. Leaders must foster a sense of belonging and camaraderie among team members despite the physical distance. Building a positive organizational culture, fostering open communication, and encouraging collaboration are crucial in this context.

Cybersecurity is another pressing concern in the digital age. With the increasing reliance on digital technologies, organizations are vulnerable to cyber threats that can disrupt operations and compromise sensitive information. Effective leaders prioritize cybersecurity measures, investing in robust systems and employee training to mitigate risks. They stay abreast of the latest cyber security trends and work closely with IT professionals to safeguard their organizations against potential attacks.

On the flipside, the digital age presents numerous opportunities for innovative leaders. Automation, artificial intelligence, and machine learning technologies can streamline processes, increase efficiency, and enhance productivity. Forward-thinking leaders embrace these technologies to optimize their operations and deliver superior products and services to customers. They invest in continuous learning and encourage their teams to acquire digital skills, ensuring they stay ahead in the rapidly changing technological landscape.

Moreover, the digital age has transformed customer interactions. Social media, online reviews, and instant messaging platforms provide organizations with direct avenues to engage with their audience. Leaders who understand the power of social media leverage these platforms to enhance brand visibility, gather customer feedback, and create personalized experiences. By fostering meaningful connections with their audience, they can build strong brand loyalty and gain a competitive edge in the market.

Leadership in the digital age demands a combination of technical proficiency, adaptability, and strategic vision. Leaders who can navigate the challenges of information overload, remote collaboration, cyber security threats, and evolving customer expectations are well-positioned to capitalize on the vast opportunities that the digital landscape offers. By embracing digital technologies and fostering a culture of innovation, organizations can thrive in the digital age under the guidance of visionary leaders.

### **CASE STUDIES OF EFFECTIVE LEADERSHIP**

#### **Case Study 1: Tesla and Elon Musk's Visionary Digital Leadership**

Tesla, led by Elon Musk, exemplifies a bold and visionary approach to digital leadership. Musk's leadership style has disrupted traditional industries, most notably in the automotive sector, by positioning Tesla as a leader in electric vehicles (EVs) and renewable energy. Musk utilized technology and innovation to revolutionize electric cars, integrating AI

and advanced software systems into the vehicles for autonomous driving and optimization. Under his leadership, Tesla has been able to leverage big data to enhance vehicle performance, improve customer experience, and streamline production processes.

Musk has also driven the company to embrace a highly digital-first strategy, with Tesla focusing on online sales and remote software updates for vehicles, providing ongoing improvements without needing customers to visit dealerships. This shift not only disrupted the traditional automotive industry but also set a new standard for how digital technology can transform industries. Musk's visionary leadership and willingness to take risks, alongside a focus on long-term sustainability, have positioned Tesla as a key player in the future of green energy and autonomous driving.

#### **Case Study 2: Zoom Video Communications and Eric Yuan's Leadership**

Zoom, led by Eric Yuan, became a household name during the COVID-19 pandemic when it provided a vital platform for remote communication. Yuan, a former Cisco executive, demonstrated exceptional digital leadership by rapidly scaling Zoom's infrastructure to handle a massive surge in users. His ability to make quick decisions, emphasize scalability, and maintain quality user experiences under pressure was crucial for Zoom's success.

Yuan's leadership style is characterized by a focus on customer feedback and user-centric innovation. He constantly sought to improve Zoom's features to meet the evolving needs of businesses, educational institutions, and individuals. As remote work and online collaboration became the norm, Zoom capitalized on its simplicity and reliability. Yuan also maintained a focus on employee culture and well-being, ensuring that Zoom's internal culture remained strong during rapid growth. This emphasis on innovation, agility, and customer-centricity has made Zoom one of the most widely adopted video communication tools in the world.

#### **FUTURE TRENDS IN LEADERSHIP**

The future of digital leadership will be defined by an increasing reliance on artificial intelligence (AI) and automation. As AI technologies advance, leaders will need to use data-driven insights and machine learning to guide decision-making processes, enhancing both operational efficiency and customer experience. This will empower leaders to make more informed and strategic decisions in real-time, while also automating repetitive tasks to focus on high-impact work. However, this trend will also require leaders to ensure that ethical considerations, such as data privacy, security, and bias in algorithms, are prioritized. Leaders will need to balance technological innovation with responsibility to maintain trust and transparency within their organizations and with customers.

Another major trend will be the rise of hybrid leadership models, where leaders are tasked with managing both in-office and remote teams. The growing adoption of flexible work arrangements will require leaders to develop strong digital communication skills, ensuring seamless collaboration across various locations and time zones. The ability to foster a sense of belonging and engagement in remote teams will be key, as leaders balance productivity with employee well-being. Additionally, continuous learning will become a cornerstone of leadership, as leaders and teams alike will need to adapt to an ever-changing digital landscape. Leaders will prioritize professional development programs helping their workforce stay up-to-date with emerging technologies and foster a culture of innovation.

#### **CONCLUSION**

Leadership in the digital era requires a dynamic blend of technological proficiency, emotional intelligence, and adaptability. As organizations continue to embrace digital transformation, leaders must stay ahead of technological trends, while fostering a culture that encourages innovation, collaboration, and continuous learning. The digital landscape is constantly evolving, and leaders who can navigate these changes by leveraging technology effectively, making data-driven decisions, and maintaining a human-centered approach will be poised for success. Moreover, the increasing importance of remote work, cyber security, and ethical considerations further underscores the complexity and responsibility that comes with digital leadership. In this ever-changing digital world, those who can lead with vision, compassion, and strategic foresight will not only drive organizational

success but also shape the future of leadership itself.

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## **OPPORTUNITIES AND CHALLENGES FOR WOMEN ENTREPRENEURS WITH SPECIAL REFERENCE TO BOUTIQUE BUSINESS**

**Dr. P.BESMI**

Assistant Professor PG & Research Department Commerce, St. Alphonsa College of Arts and  
Science, Karungal

**F.RISHMA, J.SHERIN, C.RISHA SHANI, A.PRIYA DHARSHINI, N.STEFNEE DHAS**  
III B com, Department of Commerce, St. Alphonsa College of Arts and Science, Karungal

### **ABSTRACT**

Women entrepreneurship has gained significant traction in recent years, with women increasingly venturing into diverse business sectors, including the fashion and retail industry. One prominent area where women are making a mark is in the boutique business, where they leverage creativity, personalized services, and niche offerings to cater to specific consumer demands. This abstract explores the unique opportunities and challenges faced by women entrepreneurs in the boutique business. While the boutique industry presents opportunities such as creative freedom, a growing market for sustainable fashion, and the ability to engage with customers directly through personalized experiences, women often face barriers such as limited access to capital, gender biases, and societal expectations related to work-life balance. Despite these challenges, women entrepreneurs continue to innovate and carve out successful businesses, using their strengths in customer relationship management, product differentiation, and online marketing to overcome obstacles. This study seeks to provide an overview of the current landscape for women in the boutique business, highlighting the key factors contributing to their success, while also identifying areas where they face difficulties and suggesting strategies for overcoming these challenges. The findings aim to contribute to a better understanding of how women entrepreneurs can thrive in the competitive boutique business sector, and how support systems can be improved to empower more women in this industry.

**KEYWORDS:** Opportunities, Challenges, Gender biases, work-life balance

### **INTRODUCTION**

The rise of women entrepreneurship has significantly impacted various industries, and the boutique business is one area where women are particularly excelling. The boutique industry offers women unique opportunities to showcase creativity, cater to niche markets, and build personalized customer experiences, particularly in the growing demand for sustainable and customized fashion. Women entrepreneurs can leverage their design expertise, social media platforms, and e-commerce channels to expand their businesses and build strong brands. However, they also face several challenges, including limited access to financial resources, gender biases in securing funding and business networks, and societal pressures that often demand women balance both work and family responsibilities. The highly competitive nature of the boutique market requires constant innovation and differentiation, posing a significant hurdle for women entrepreneurs with limited resources. Despite these obstacles, many women continue to succeed in the boutique industry by overcoming challenges with resilience, creativity, and strategic thinking, contributing to the growing empowerment of women in the business world.

### **STATEMENT OF THE PROBLEM**

The rise of women entrepreneurs, particularly in the boutique business sector, presents a unique blend of opportunities and challenges. While the boutique industry offers women the ability to showcase creativity, cater to niche markets, and tap into growing consumer demand for personalized and sustainable fashion, women entrepreneurs in this field face significant barriers that can hinder their growth and success. These challenges include limited access to financial resources, gender biases in business networks and funding opportunities, societal expectations that often place additional care-giving responsibilities on women, and intense competition within the boutique market. Despite these obstacles, many women continue to succeed, but the question remains as to how these entrepreneurs navigate the intersection of opportunities and challenges to establish sustainable businesses. This study seeks to understand the specific opportunities available to women in the boutique industry and

the challenges they face, while examining the strategies they employ to overcome these barriers, ensuring their long-term success and empowerment in the business world.

### **OBJECTIVES**

1. To analyze the psychological barriers and confidence issues among women entrepreneurs.
2. To investigate the work-life balance challenges for women boutique entrepreneurs.
3. To determine the impact of gender bias on women boutique business.

### **SCOPE OF THE STUDY**

The study of opportunities and challenges for women entrepreneurs with special reference to boutique business focuses on exploring the opportunities and challenges faced by women entrepreneurs in the boutique business sector. This research will examine the various factors that influence the success and sustainability of women-owned boutique businesses, including market trends, customer preferences, and the role of creativity and innovation in shaping their entrepreneurial journey. The study will also address the specific challenges women encounter, such as access to funding, gender biases, lack of mentorship, and the balancing of work and family responsibilities. The study will investigate the impact of social media and e-commerce platforms on the growth of boutique businesses, as well as the opportunities these tools offer women to expand their reach and connect with a global audience. The research will be limited to women entrepreneurs in the boutique industry and will primarily focus on small to medium-sized businesses. The findings will be based on surveys, interviews, and case studies from a sample of women boutique owners, allowing for a deeper understanding of both the obstacles and strategies used to overcome.

### **OPPORTUNITIES FOR WOMEN ENTREPRENEURS**

1. **Creative Freedom:** Women entrepreneurs have the opportunity to express their creativity through unique product designs, styling, and branding. This enables them to cater to niche markets with personalized and exclusive fashion offerings.
2. **Growing Demand for Sustainable and Ethical Fashion:** Consumer interests are increasing in sustainable and ethically produced clothing, women boutique owners can capitalize on this trend by offering eco-friendly products, aligning with consumer values.
3. **Leverage Social Media and E-commerce:** Social media platform like Instagram and Facebook, along with e-commerce websites, provide women entrepreneurs with affordable marketing tools to showcase their boutique collections and reach a global audience.

### **PROBLEM FACED BY WOMEN ENTREPRENEURS**

1. **Limited Access to Funding:** Women often face challenges in securing loans, investments, or credit due to gender bias in financial institutions. This lack of access to capital can prevent them from scaling their businesses, investing in inventory, or expanding operations.
2. **Gender Bias and Stereotypes:** Women entrepreneurs in the boutique industry may encounter gender-biased biases that affect their credibility and authority. This can result in limited networking opportunities, reduced access to business partnerships, and difficulty in gaining trust from investors, suppliers, or customers.
3. **Work-Life Balance Struggles:** Many women entrepreneurs face pressure to balance their professional and personal responsibilities, such as care-giving or household duties. This responsibility can lead to time constraints, making it difficult to focus on growing the boutique Business.

### **SUGGESTIONS**

- ❖ To overcome the challenge of limited access to funding, women entrepreneurs should actively seek out government schemes, grants, and financial programs aimed at supporting women in business. This can help secure the capital needed to grow and expand boutique businesses. Additionally, financial institutions could offer women-specific business loans or incentives to reduce gender bias in lending.
- ❖ Women boutique owners can address the issue of gender bias by building strong networks of mentorship, peer support, and business alliances. By connecting with other successful women entrepreneurs or joining women-focused business organizations, they can gain credibility, enhance their business knowledge, and access more networking opportunities.

- ❖ To manage the pressures of work-life balance, women entrepreneurs should consider hiring skilled staff, delegating tasks, or using technology to streamline operations (e.g., inventory management systems, automated customer service tools). Outsourcing certain aspects of the business, such as accounting or marketing, can also free up more time to focus on strategic growth.
- ❖ Women boutique owners can take advantage of the growing opportunities in e-commerce and digital marketing. By building an online presence through user-friendly websites and social media platforms, they can reach a global audience and sell their products outside of their local markets. Partnering with influencers or using social media ads can further help expand their customer base.

### **CONCLUSION**

Women entrepreneurs in the boutique business face several challenges, including limited access to funding, gender biases, and the pressure of balancing work and personal responsibilities; they also have unique opportunities to thrive in this dynamic industry. The growing demand for personalized, sustainable, and ethical fashion provides a significant opportunity for women to create distinctive brands that resonate with modern consumer values. By leveraging digital tools like social media and e-commerce platforms, women can expand their reach, build loyal customer bases, and compete on a global scale. Overcoming the challenges of financial barriers and gender bias through support networks, mentorship, and targeted financial resources will enable women boutique owners to strengthen their businesses. Ultimately, with resilience, creativity, and strategic planning, women entrepreneurs in the boutique business can navigate obstacles and harness the full potential of the opportunities available to them, paving the way for long-term success and empowerment.

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## **ASSESSING EMPLOYEE PRODUCTIVITY AND WELL-BEING IN THE ERA OF HYBRID WORK MODEL**

**L.N.Arthi**

Assistant Professor, Department of Management Studies  
Arunachala College of Engineering for Women, Manavilai, Kaniyakumari.

**Dr.E.Joseph Rubert**

Professor and Head, Department of Management Studies  
Arunachala College of Engineering for Women, Manavilai Kaniyakumari.

### **ABSTRACT**

The transition to hybrid work models has fundamentally reshaped organizational structures and employee experiences, blending remote and in-office work. This study aims to assess the impact of hybrid work arrangements on employee productivity and well-being. By analyzing diverse organizational settings, this research explores the factors influencing productivity, such as task management, collaboration tools, and communication practices. Simultaneously, it evaluates well-being through metrics like work-life balance, mental health, and job satisfaction. The study employs both primary and secondary data for the study. The primary data was collected through the questionnaire and secondary data was collected from the books and websites, the research examines the roles of technology, communication, organizational support, and work-life balance in shaping employee experiences. Findings are expected to provide actionable recommendations for optimizing hybrid work models. These include strategies for fostering employee engagement, implementing equitable policies, and leveraging technology to bridge gaps between remote and on-site teams. This research contributes to a deeper understanding of how hybrid work environments can be structured to benefit both organizations and their employees, ensuring long-term sustainability in a rapidly evolving workforce landscape.

**Key Words:** hybrid work, work-life balance, mental health, productivity

### **INTRODUCTION**

The shift to hybrid work models has become a significant trend across various industries, accelerated by the global pandemic and the rapid evolution of technology. This transformation, which blends remote work and on-site office presence, has reshaped how organizations function and how employees engage with their work. As businesses adapt to this new normal, understanding the impact on employee productivity and well-being is critical for organizational success. Employee productivity and well-being are crucial to a company's long-term performance. While hybrid work models offer greater flexibility, they also present new challenges, such as managing remote teams, maintaining a strong organizational culture, and ensuring work-life balance. Furthermore, the blurred boundaries between home and workspaces may affect employees' mental health and job satisfaction. This research aims to assess the relationship between the hybrid work model and its impact on employee productivity and well-being. By analyzing the benefits and challenges faced by employees working in a hybrid environment, this study will provide valuable insights into how organizations can optimize their operations and create a sustainable work culture that enhances both productivity and well-being.

Key areas of focus will include:

1. **Employee Productivity:** How hybrid work influences efficiency, output, and goal achievement.
2. **Well-being:** The impact of hybrid work on mental health, work-life balance, and job satisfaction.
3. **Workplace Dynamics:** Changes in collaboration, communication, and team dynamics in a hybrid setting.
4. **Organizational Strategies:** Best practices for managing hybrid teams while promoting both productivity and employee welfare.

The findings of this research are expected to provide actionable recommendations for businesses striving to create an environment where employees can thrive while contributing to organizational goals effectively.



### **SCOPE OF THE STUDY**

This study focuses on evaluating the effects of the hybrid work model on employee productivity and well-being, with an emphasis on understanding the unique dynamics that emerge when employees split their time between working remotely and in the office. The scope encompasses both the positive and negative outcomes associated with hybrid work, examining factors such as work-life balance, mental health, job satisfaction, and overall performance metrics.

### **OBJECTIVES OF THE STUDY**

1. To assess how the hybrid work model influences employee performance on productivity.
2. To examine the effect of hybrid work on employee well-being.
3. To analyze the role of organizational practices in supporting hybrid work.
4. To identify best practices for hybrid work implementation.

### **REVIEW OF LITERATURE**

The transition to hybrid work models has been a subject of extensive research, particularly in the context of its impact on employee productivity and well-being. This literature review explores existing studies and theoretical frameworks that examine the intersection of hybrid work arrangements, performance outcomes, and employee welfare.

*Bloom et al. (2015)* revealed that remote work arrangements could lead to improved employee productivity by minimizing workplace distractions and offering a personalized work environment. Employees reported higher focus levels when working from home, particularly in tasks requiring deep concentration.

*Choudhury et al. (2020)* found that hybrid work allows employees to better allocate their time, often leading to increased output. Their study emphasized that hybrid workers who spend time both at home and in the office can leverage the strengths of each environment: focused work at home and collaborative interactions at the office.

*Hoffman and Boudreau (2022)* warned of potential decreases in team cohesion, which can hinder collective productivity. The lack of spontaneous in-person interactions—often crucial for innovation and problem-solving—is a noted drawback of the hybrid model. Furthermore, *Allen et al. (2021)* highlighted that unclear expectations and inadequate management practices could exacerbate misalignment between individual and team goals.

*Wang et al. (2021)* indicates that hybrid work models can enhance work-life balance, allowing employees to spend more time on personal responsibilities and reduce commuting stress. This flexibility has been linked to higher job satisfaction and improved mental health.

*Sonnentag et al. (2021)* noted that the blurred boundaries between home and work life can result in overwork and burnout. Employees who lack a clear division between personal and professional spaces may experience increased stress, particularly when expectations for availability extend beyond standard working hours.

*Woods et al. (2020)* highlighted the importance of collaboration tools such as Slack, Microsoft Teams, and Zoom in maintaining communication and ensuring that remote workers feel connected. These tools help bridge the gap between on-site and remote employees, enabling seamless interaction and workflow management.

*Kelliher and Anderson (2020)* stressed the need for managers to adopt adaptive leadership styles, emphasizing trust, clear communication, and regular feedback. Their research suggests that hybrid work requires leaders to focus on outcomes rather than micromanaging processes, as the latter can undermine employee autonomy and motivation.

*Edwards et al. (2021)* recommend implementing clear and inclusive hybrid work policies to ensure fairness and consistency. Regular team-building activities and periodic in-person meetings can also help strengthen team cohesion. Organizations are encouraged to invest in robust technological infrastructure and training for both employees and managers to adapt to the unique demands of hybrid work.

### RESEARCH METHODOLOGY

The present research study adopts the Descriptive Research Design. The study uses both primary and secondary data. Primary data was collected through the questionnaire method; Secondary data was collected through journals, books, etc. The respondents were employees and managers, enabling an exploration of personal experiences, challenges, and strategies related to hybrid work. Stratified random sampling will ensure representation across job roles, while thematic analysis and statistical tools. The sample size for the study consists of 120 respondents in Kanyakumari District. The questionnaire consists of mostly closed-ended questions with a 5-point Likert scale ie. The statistical tools applied for the study are correlation and the Chi-square test.

### DATA ANALYSIS AND INTERPRETATION

**CHI-SQUARE:** Chi-square is a statistical method that calculates the difference between observed and expected data values. It's used to determine how closely actual data fits expected data.

**Null Hypothesis:** H0: There is no significant relationship between Age and Overall emotional well-being hybrid work

**Alternative Hypothesis:** H1: There is a significant relationship between Age and Overall emotional well-being in hybrid work

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
AGE * OVERALLEMOTIONAL WELL-BEING	120	100.0%	0	0%	120	100.0%

AGE * OVERALLEMOTIONALWELL-BEING Crosstabulation							
		OVERALLEMOTIONALWELL-BEING					Total
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	
AGE	Below 30	5	3	0	0	0	10
	30 - 40	46	9	1	1	0	66
	40 - 50	16	6	6	5	1	34
	Above 50	5	5	0	0	0	10
Total		72	23	18	7	7	120

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	25.759 <sup>a</sup>	9	.002
Likelihood Ratio	25.353	9	.002
Linear-by-Linear Association	2.349	1	.125
N of Valid Cases	120		
a. 9 cells (56.2%) have expected count less than 5. The minimum expected count is .70.			

### INFERENCE:

Here the calculated value is greater than the tabulated value. Hence, we reject H<sub>0</sub>. Thus, it is concluded that there is a significant relationship between Age and Overall emotional well-being.

### CORRELATION ANALYSIS:

Correlation is a statistical measure that expresses the extent to which two variables are linearly related (meaning they change together at a constant rate). It's a common tool for describing simple relationships without making a statement about cause and effect.

**Null Hypothesis:** H<sub>0</sub>: There is no significant relationship between hybrid work improved work-life balance and the hybrid work model improved the efficiency and effectiveness of job execution and completion

**Alternative Hypothesis:** H<sub>1</sub>: There is a significant relationship hybrid work improved work-life balance and the hybrid work model improved the efficiency and effectiveness of job execution and completion

Correlations			
		HYBRID WORK IMPROVED WORKLIFE BALANCE	HYBRID WORK MODEL IMPROVED EFFICIENCY AND EFFECTIVENESS OF JOB EXECUTION AND COMPLETION
HYBRID WORK IMPROVED WORKLIFE BALANCE	Pearson Correlation	1	.813**
	Sig. (2-tailed)		.000
	N	120	120
HYBRID WORK MODEL IMPROVED EFFICIENCY AND EFFECTIVENESS OF JOB EXECUTION AND COMPLETION	Pearson Correlation	.813**	1
	Sig. (2-tailed)	.000	
	N	120	120
**. Correlation is significant at the 0.01 level (2-tailed).			

### INFERENCE:

The Correlation Coefficient  $r = 0.813$ , i.e.) there is a strong positive relation between hybridworkimprovedwork-lifebalance and the hybrid work model improved the efficiency and effectiveness of job execution and completion

### FINDINGS

The survey of 120 respondents revealed a preference for the Hybrid work model, with 99 in favor, while 20 preferred remote work and only one favored traditional face-to-face arrangements. Notably, participants aged 30 to 40 showed a strong preference for the Hybrid model, indicating this preference. Additionally, 32% favor a blended work model. A large majority (38%) said that working in an office five days a week prevents them from getting their dream career. The study highlighted those employees' found contentment and satisfaction through the Hybrid model's flexibility. However, there is room for improvement in aligning the model with individual work-life balance and personal commitments. The preference for the Hybrid model demonstrated a strong positive correlation with positive perceptions of job execution, teamwork, work-life balance, satisfaction, and overall employee experience. This indicates that those favoring the Hybrid model reported more positive experiences in these areas, emphasizing the value of flexibility and autonomy offered by the model as a positive exchange for engagement.

### SUGGESTIONS

The findings of this study indicate that the hybrid work model (BWA) is the preferred choice for most employees, primarily because of its flexibility, which supports a balance between professional and personal responsibilities. However, there are areas where the hybrid model could be further optimized:

1. **Customized Strategies:** Employers can design targeted strategies to better cater to the preferences of younger employees and women, who tend to favor the hybrid model more.
2. **Enhanced Deadline Management:** Strengthening systems for managing deadlines and deliverables can address existing challenges in this area.
3. **Improved Work-Life Balance:** Organizations should explore initiatives to help employees better maintain a work-life balance, particularly by ensuring tasks are completed within designated work hours.
4. **Leveraging Flexibility Benefits:** Companies can build on the positive perceptions of the hybrid model's flexibility and its influence on teamwork and job execution to drive higher engagement and productivity.
5. **Training and Resources:** Providing employees with training and support, especially in remote work management, can help them fully utilize the advantages of the hybrid model.
6. **Regular Feedback Mechanisms:** Continuously gathering feedback from employees about their experiences with the hybrid model can offer valuable insights for ongoing improvements.

### CONCLUSION

In conclusion, this study highlights that the hybrid work model strikes a balance between flexibility and structure, making it a preferred option for many employees. Its ability to enhance work-life balance, promote job satisfaction, and support teamwork underscores its potential to boost productivity and employee well-being. However, optimizing the hybrid model requires addressing specific challenges such as managing deadlines, ensuring equitable accommodations for diverse employee groups, and fostering effective remote work practices through training and support. Organizations can capitalize on the model's strengths by leveraging its flexibility and regularly soliciting employee feedback to refine strategies. By doing so, businesses can create an environment that aligns with employee needs while driving organizational success in the evolving workplace landscape.

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## **RISK MANAGEMENT AND FINANCIAL PERFORMANCE OF BANKS IN TRIVANDRUM DISTRICT**

**Mrs.S.R.Jalin Sharmila**

(Reg No:241231108008), Research Scholar, Department of Management Studies  
Nesamony Memorial Christian College, Marthandam.  
Affiliated to Manonmaniam Sundaranar University, Abishekapatti.

**Dr.S.Sam Santhos**

Assistant Professor, Department of Management Studies  
Nesamony Memorial Christian College, Marthandam  
Affiliated to Manonmaniam Sundaranar University, Abishekapatti.

### **ABSTRACT**

Risk management issues in the banking sector do not only have greater impact on bank performance but also on national economic growth and general business development. Risks that have the potential to result in poor performance are what drive the bank to manage risks. The relationship between bank financial performance in Trivandrum districts and risk management strategies is the main topic of this study. The secondary data was obtained using a panel data estimation technique and the financial statements and four-year progressive annual reports of 10 banks. The findings suggest a negative correlation between bank financial performance and question loans, whereas the capital asset ratio was determined to be both positive and significant. In the same way, it implies that the more money banks manage, the better the results. According to the study, risk management and bank performance are significantly correlated. To safeguard the interests of investors, banks must thus engage in responsible risk management.

Keywords: risk management, credit risk, reputable risk, bank performance.

### **INTRODUCTION**

The global financial crisis has had a severe impact on developing economies in addition to the world's largest nations. Due to poorly executed subprime mortgage lending to businesses and individuals with poor and untrustworthy credit, numerous financial institutions have either failed or are on the verge of failing. The banking crises have demonstrated that banks not only frequently take on excessive risk, but also that the dangers vary depending on the bank. The substantial decline in equity market indexes has resulted in a decline in the quality of assets held by the majority of banks. Because of their reaction to the perceived risk of lending to one another, their operations were subsequently curtailed, causing profits and returns to suffer. Along with a notable decline in public trust in banks, this resulted in shortages of credit and liquidity, but also threatening the economy and financial system as a whole. The truth is that banks are key players in the development of financial systems and are catalysts for economic expansion (King and Levine, 1993; Levine, 19).

### **Risk Management Procedures**

The management of the banking firm relies on a sequence of steps to implement a risk management system. **Santomero (1997)** identify four sequential steps to implement a risk management system. These can be seen as containing the following four parts: (i) Standards and reports, (ii) Position limits or rules, (iii) Investment guidelines or strategies, (iv) Incentive contracts and compensation. In general, these tools are established to measure exposure, define procedures to manage these exposures, limit individual positions to acceptable levels, and encourage decision makers to manage risk in a manner that is consistent with the firm's goals and objectives. To see how each of these four parts of basic risk management techniques achieves these ends, we elaborate on each part of the process below. In Section IV we illustrate how these techniques are applied to manage each of the specific risks facing the banking community. (i) Standards and Reports The first of these risk management techniques involves two different conceptual activities, i.e., standard setting and financial reporting. They are listed together because they are the sine qua non of any risk system. Underwriting standards, risk categorizations, and standards of review are all traditional tools of risk management and control. Consistent evaluation and rating of exposures of various types are essential

to understand the risks in the portfolio, and the extent to which these risks must be mitigated or absorbed. The standardization of financial reporting is the next ingredient. Obviously outside audits, regulatory reports, and rating agency evaluations are essential for investors to gauge asset quality and firm level risk.

### **Risk Management and Bank Performance**

Increasing shareholders' return, which is a key goal of bank management, is a reflection of the performance of the bank. Often, achieving the goal means taking on more risk. A bank may be exposed to interest, market, credit, off-balance, technological, and operational risks, as well as foreign exchange, nation, and liquidity hazards. As well as the possibility of insolvency (**Tandelilin et al, 2007**). The hazards that could result in poor bank performance are what drive the bank to manage its risks.

Risk management concerns in the banking industry have a bigger effect on economic growth as well as the bank (**Tandelilin et al, 2007**). According to Tai (2004), some empirical data suggests that previous return shocks from the banking industry have a major influence on more than only foreign exchange volatility and overall stock markets, as well as on their values, indicating that banks may be a significant source of contagion during the crisis.

Banks which better implement the risk management may have some advantages: (i) It is in line with obedience function toward the rule; (ii) It increases their reputation and opportunity to attract more wide customers in building their portfolio of fund resources; (iii) It increases their efficiency and profitability. Cebenoyan and Strahan (2004) find evidence that banks which have advanced in risk management have greater credit availability, rather than reduced risk in the banking system. The greater credit availability leads to the opportunity to increase the productive assets and bank's profit.

### **REVIEW OF LITERATURE**

There is a high level of risk inherent in the banking industry. It is extremely dangerous because it is the only company where the percentage of borrowed funds is significantly greater than the owners' equity (**Owojori et al., 2011**). The banking industry is completely vulnerable to dangers when compared to other forms of human endeavor. In addition to accepting deposits and disbursing loans, banks now work in a quickly evolving industry where they are under constant pressure to increase profits. Ongoing product or service development to please customers through upselling and cross-selling. Risks are now far more complicated, with multiple risks associated with a single behavior. There are risks inside hazards (**Luy, 2010**).

According to the Basel Committee on Bank Supervision, there are three categories of banking risks: credit, market, and operational. **Santomero (1997)**, however, distinguishes six categories of risk, including legal, operational, and systemic or market risk. Galai, Mark, and **Crouhy (2006)**. When a lender faces the possibility of suffering a loss due to a borrower, counterparty, or obligator who does not fulfill their contractual obligations, credit risk is created (**Luy, 2010**). **Colquitt (2007)** states that this loss could be the result of the counterparty's credit quality declining, which would reduce the value of **Crouhy et al. (2006)** state that when a borrower voluntarily fulfills their responsibilities, they default on their debt. Credit failures in banks is not new or a rare occurrence, they affect their liquidity position as well as cash flows and profits. Hence, **Greuning and Bratanovic (2009)** maintain that it is a biggest threat to any bank performance and the principal cause of bank failure.

### **STATEMENT OF THE PROBLEM**

The banking sector in Trivandrum District faces various financial risks, including credit, market, and operational risks, which impact overall performance. Ineffective risk management strategies can lead to financial instability, reduced profitability, and regulatory challenges. Banks must adopt robust risk management frameworks to enhance financial resilience and sustainability. There is a need to assess the relationship between risk management practices and financial performance in these banks. This study aims to analyze how risk management influences the profitability and stability of banks in Trivandrum District.

### RESEARCH OBJECTIVES

1. To analyze the impact of risk management practices on the financial performance of banks in Trivandrum District.
2. To examine the relationship between credit risk, market risk, and operational risk with bank profitability and stability.
3. To provide recommendations for enhancing risk management frameworks to improve the financial performance of banks in Trivandrum District.

### RESEARCH METHODOLOGY

#### 1 Population of the Study

Data for this study consists of annual observations on 10 banks.

#### 2 Sample Design

The sample used in this study is Convenience sampling method under Non-probability sampling method.

#### 3 Data Collection

For a study on the risk management and financial performance of banks in Trivandrum District, the data collection process should involve both primary and secondary sources to provide a comprehensive analysis.

##### 3.1 Primary Data Collection

##### • Surveys

The data collected from 10 banks in Trivandrum Districts

##### 3.2 Secondary Data Collection

Research Papers and Articles:

- Review previous studies on risk management and financial performance of bank.
- Analyze trends, best practices, and case studies that could inform the current study.

### DATA ANALYSIS

The data collected was analyzed using descriptive, correlation matrix.

### RESULTS AND DISCUSSION

To analyze the impact of risk management practices on the financial performance of banks in Trivandrum District.

**TABLE 1: The impact of risk management practices on the financial performance of banks in Trivandrum District**

Variable	Risk Identification	Risk Assessment	Risk Control	Risk Monitoring	ROA	ROE
Risk Identification	1	0.55**	0.62**	0.58**	0.35*	0.42**
Risk Assessment	0.55**	1	0.70**	0.64**	0.31*	0.40**
Risk Control	0.62**	0.70**	1	0.75**	0.45**	0.50**
Risk Monitoring	0.58**	0.64**	0.75**	1	0.38*	0.46**
Financial Performance (ROA)	0.35*	0.31*	0.45**	0.38*	1	0.80**
Financial Performance (ROE)	0.42**	0.40**	0.50**	0.46**	0.80**	1

Source: Computed Data

#### Interpretation

The correlation matrix reveals that risk management practices like **Risk Control** and **Risk Monitoring** have a strong positive relationship with financial performance, particularly with **ROE**, indicating that better control and monitoring of risks lead to improved financial outcomes. **Risk**

**Identification** and **Risk Assessment** also show positive correlations with financial performance, but their impact is less significant. Notably, **Risk Control** is most strongly linked to both **ROA** and **ROE**, while **Risk Monitoring** shows moderate positive associations with both financial metrics. Additionally, **ROA** and **ROE** are highly correlated, suggesting that banks with strong asset returns generally achieve better equity returns. In summary, banks aiming to improve financial performance should prioritize enhancing **Risk Control** and **Risk Monitoring** practices.

**To examine the relationship between credit risk, market risk, and operational risk with bank profitability and stability.**

**TABLE 2: The relationship between credit risk, market risk, and operational risk with bank profitability and stability**

Variable	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
(Constant)	2.55		5.1	0
Credit Risk	-0.15	-0.23	-2.68	0.01
Market Risk	-0.1	-0.18	-2.02	0.048
Operational Risk	-0.2	-0.3	-3	0.003

**Source: Computed Data**

#### **Interpretation**

The **credit risk** coefficient is **-0.15** and is statistically significant ( $p = 0.010$ ), meaning that for every unit increase in credit risk, bank profitability decreases by 0.15 units, indicating a negative relationship. The **market risk** coefficient is **-0.10** and is significant ( $p = 0.048$ ), showing that higher market risk negatively impacts profitability. The **operational risk** coefficient is **-0.20** and is highly significant ( $p = 0.003$ ), indicating that operational risk has the strongest negative effect on bank profitability.

#### **SUGGESTIONS**

**Strengthening Risk Management Frameworks:** Banks should implement comprehensive risk management policies that align with regulatory guidelines and industry best practices.

**Enhancing Credit Risk Assessment:** Adopting advanced credit scoring models and regular monitoring of loan portfolios can help reduce default risks.

**Diversification of Investment Portfolios:** Banks should diversify their investments to mitigate market risks and ensure financial stability.

**Leveraging Technology and Data Analytics:** Utilizing AI, machine learning, and big data analytics can improve risk prediction and decision-making processes.

**Regular Stress Testing and Scenario Analysis:** Conducting periodic stress tests can help banks assess their resilience to financial shocks and economic downturns.

**Employee Training and Awareness Programs:** Providing training to bank employees on risk management techniques will enhance their ability to identify and mitigate risks effectively.

#### **CONCLUSION**

Effective risk management is crucial for ensuring the financial stability and performance of banks in Trivandrum District. By implementing robust risk management frameworks, banks can mitigate credit, market, and operational risks, leading to improved profitability and sustainability. The integration of advanced technologies, regulatory compliance, and strategic financial planning can further enhance risk mitigation efforts. Regular risk assessments, stress testing, and employee training programs are essential to strengthening the overall risk management process. A well-structured risk management approach not only safeguards banks against financial uncertainties but also fosters long-term growth and resilience in an evolving banking landscape.

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## **A PATHWAY TO ENHANCING WORK-LIFE BALANCE OF WOMEN WORKERS IN THE UNORGANISED TEXTILE SECTOR**

**Ms. S. Metlin Sajima**

Reg.No.21213161012005, Research scholar, Department of commerce,  
Scott Christian college (Autonomous) Nagercoil,  
Affiliated to Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India,

**Dr. T.P. Sherin**

Assistant Professor, Department of commerce,  
Scott Christian college (Autonomous), Nagercoil,  
Affiliated to Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India.

### **ABSTRACT**

Women workers in the unorganised textile sector face significant work-life balance (WLB) challenges due to long working hours, low wages, job insecurity, and lack of social security benefits. Unlike the organised sector, these workers often lack access to structured policies, workplace flexibility, and digital tools, making it difficult to balance professional and personal responsibilities. This study, based on secondary data, explores the impact of working conditions, digital adaptation, and organisational change on the work-life balance of women in the unorganised textile sector. The findings indicate that limited access to digital tools, lack of leadership support, and inadequate workplace policies contribute to increased stress and work-life imbalance. However, digital financial inclusion, skill development programs, and flexible work arrangements have shown potential in improving WLB by providing economic stability and time management solutions. The study highlights the need for policy interventions, workplace reforms, and technological integration to enhance the well-being of women in this sector. By reviewing existing literature, this research suggests practical strategies such as providing digital literacy programs, implementing flexible work policies, and ensuring access to financial resources to empower women workers. The study contributes to ongoing discussions on gender equality, economic sustainability, and the role of technology in informal employment, offering insights for policymakers and industry stakeholders.

**Keywords:** Work-life balance, unorganised textile sector, women workers, digital adaptation, organisational change.

### **INTRODUCTION**

Work-life balance (WLB) is essential for the well-being and productivity of workers, yet women in the unorganised textile sector often struggle to manage both work and family responsibilities. The absence of structured policies, long working hours, low wages, job insecurity, and lack of social security benefits create significant challenges, making it difficult for women to achieve a balanced life. Unlike the organised sector, where formal labour laws and workplace support systems exist, women in unorganised employment often face high levels of stress, burnout, and poor working conditions. In recent years, digital adaptation and organisational change have emerged as potential solutions to improve work-life balance. Digital tools, such as flexible work platforms, e-commerce opportunities, mobile-based financial services, and skill development programs, can help women manage their work more efficiently while ensuring financial stability. Similarly, sustainable leadership and workplace interventions can provide necessary support systems, enabling better work-life integration. However, despite these advancements, women in the unorganised textile sector remain largely excluded from such benefits, highlighting a crucial gap in research and policy implementation. This study aims to identify the key work-life balance challenges faced by women workers in the unorganised textile sector, assess the impact of digital adaptation and organisational transformation, and propose effective strategies to enhance their well-being. By addressing these issues, the research seeks to contribute to policy recommendations that promote a more inclusive and supportive work environment for women in the unorganised textile industry.

## **REVIEW OF LITERATURE**

The ability of people to manage their work obligations while also taking care of their personal and family lives is known as work-life balance (WLB) (Greenhaus & Beutell, 1985). According to a number of studies, keeping a healthy WLB promotes increased output, mental health, and general job satisfaction (Hill et al., 2001). However, employees in the unorganized sector frequently lack formal policies, which results in low pay, long hours, and a poor work-life balance (Bhandari & Sinha, 2019).

By providing flexible work arrangements and skill-development initiatives, digital tools and technology-driven solutions can significantly improve WLB (Agarwal & Nath, 2021). Online financial transactions, e-commerce platforms, and mobile-based attendance tracking have all assisted women in the unorganized sector in becoming more economically empowered and less reliant on middlemen (Kumar & Rani, 2022). But a major obstacle that keeps many female employees from taking full advantage of these developments is still digital literacy (Mishra, 2020).

## **OBJECTIVES**

1. To assess the existing work-life balance challenges faced by women workers in the unorganized textile sector.
2. To examine the role of digital tools and workplace support in improving work-life balance.
3. To suggest practical strategies for enhancing work-life balance among women in the unorganised textile sector.

## **STATEMENT OF THE PROBLEM**

Women workers in the unorganized textile sector face significant work-life balance challenges stemming from long working hours, precarious employment characterized by low wages and job insecurity, and a lack of social security protections. These challenges are exacerbated by the absence of flexible work policies, limited opportunities for digital adaptation, and insufficient workplace support systems. Consequently, women struggle to reconcile their work and family responsibilities, leading to increased stress, diminished well-being, and potentially negative impacts on their families and communities.

While digital tools and organizational reforms have demonstrably improved work-life balance in other sectors, their potential and actual impact on women in the unorganized textile sector remain significantly underexplored. This study aims to: (1) comprehensively identify the key challenges hindering work-life balance for these women; (2) assess the role and potential of digital adaptation and supportive leadership practices in mitigating these challenges; and (3) propose practical and context-specific strategies for enhancing work-life balance and promoting women's well-being in this vital yet sector.

### **Work-life balance challenges faced by women workers in the unorganized textile sector**

#### **1. Long Working Hours**

Women in the unorganised textile sector often work 10-12 hours per day with little to no breaks. Due to high production demands and low wages, they are forced to take on excessive workloads.

#### **2. Low Wages and Financial Instability**

Most women in this sector earn below the minimum wage, making financial stability a constant challenge. Payments are often irregular and delayed, making it difficult to plan household expenses. Women workers are vulnerable to wage exploitation as they have no legal contracts or formal wage protection. Many rely on daily wages or piece-rate payments, which fluctuate based on work availability.

#### **3. Job Insecurity**

The unorganised textile sector provides no job security since most workers are employed on an informal basis. Women can be terminated at any time without notice or compensation. Seasonal employment patterns mean many workers face periods of unemployment with no financial backup. The absence of labour laws and union representation makes it difficult for them to demand job stability.

#### **4. Lack of Social Security and Benefits**

Women workers do not receive maternity leave, paid leave, health insurance, or retirement benefits. There is no provision for pension schemes or social security, leaving them vulnerable in old age. Many do not have access to healthcare support, forcing them to continue working even when sick. In the absence of legal protections, they have no avenue to demand their rights.

#### **5. Limited Access to Digital Tools and Resources**

Many women workers lack digital literacy, making it difficult for them to access financial services, digital payments, or online work opportunities. Limited access to smart phones and the internet prevents them from benefiting from e-commerce platforms. Digital tools, such as online work scheduling and remote job options, could enhance flexibility but remain out of reach for most workers.

#### **6. Poor Work-Life Integration**

Unpredictable work schedules prevent women from having a consistent routine for personal and family activities. High stress levels, lack of rest, and no recreational activities affect their mental and emotional well-being. Without proper workplace policies, burnout, physical fatigue, and emotional exhaustion become common problems.

#### **Role of digital tools and workplace support in improving work-life balance**

##### **1. Flexible Work Arrangements**

Digital platforms enable women to work to choose flexible hours, reducing commute stress and allowing better time management.

##### **2. Digital Financial Inclusion**

Access to online banking, mobile payments, and microfinance empowers women to manage finances independently. Reduces dependency on middlemen, ensuring direct payments and financial security.

##### **3. Skill Development and Online Learning**

E-learning platforms provide training in textile work, digital marketing, and entrepreneurship. Increases employability and enables women to shift to higher-paying roles.

##### **4. Health and Well-being Applications**

Mobile apps offer mental health support, maternity care guidance, and stress management tools. Helps women maintain physical and emotional well-being while balancing work and family.

##### **5. Workplace Support Policies**

Providing childcare facilities, paid leave, and grievance redressal mechanisms improves job satisfaction. Encouraging gender-sensitive policies ensures a supportive work culture.

##### **6. Digital Communication and Networking**

Social media and online groups help women connect with peers, share experiences, and find job opportunities. Digital forums enhance collective bargaining power for better wages and working conditions.

##### **1. Flexible Work Policies**

Introduce part-time, remote, or shift-based work to help women manage household responsibilities. Implement output-based payment systems instead of fixed working hours to provide autonomy.

##### **2. Digital Skill Development**

Provide training on digital tools, e-commerce, and online financial management to improve employability. Encourage participation in government-sponsored digital literacy programs.

##### **3. Financial Inclusion and Support**

Ensure direct wage transfers through digital banking to prevent wage exploitation. Promote microfinance loans and self-help groups (SHGs) to support entrepreneurship.

##### **4. Improved Workplace Facilities**

Establish onsite childcare centres to reduce family-care burdens. Implement health and hygiene measures, including clean restrooms and medical check-ups.

##### **5. Social Security and Legal Protection**

Advocate for minimum wage regulations, maternity benefits, and social security schemes. Strengthen worker unions and collectives to negotiate fair work conditions.

#### **6. Use of Technology for Communication and Support**

Develop mobile apps for grievance redressal, awareness campaigns, and employment opportunities. Facilitate online networking platforms to help women share experiences and access support.

### **RECOMMENDATIONS**

#### **1. Smart Workstations & Co-Working Hubs**

Set up community-based co-working spaces with childcare facilities, Wi-Fi, and rest areas. Introduce shared workspaces in rural areas where women can work in flexible shifts.

#### **2. Digital Hubs for Training & Entrepreneurship**

Establish "Women Digital Empowerment Centres" to train women in digital tools, online business, and financial literacy. Create YouTube or WhatsApp-based micro-training sessions in local languages for skill development.

#### **3. E-Commerce & Home-Based Work Opportunities**

Promote direct-to-consumer sales through platforms like Etsy, and Amazon Handmade. Support women in setting up home-based textile businesses with online marketing and logistics assistance.

#### **4. AI-Powered Work-Life Balance Assistants**

Develop a mobile app that provides daily work-life balance tips, financial tracking, and mental health support. AI-based chatbot for legal advice, health consultations, and employment opportunities.

#### **5. Hybrid Work Models & Digital Employment Platforms**

Introduce gig work models in the textile industry, where women can take up short-term assignments as per their availability. Develop a dedicated job portal for unorganised textile workers, connecting them to ethical employers.

#### **6. Workplace Happiness Programs**

Implement women-led support groups to provide emotional and career guidance. Organize monthly wellness camps focusing on physical health, mental well-being, and financial security.

#### **7. Social Media Campaigns for Awareness & Advocacy**

Launch #EmpowerTextileWomen campaigns to advocate for better policies and financial inclusion. Encourage brands to source directly from women-led textile groups to ensure fair wages and ethical sourcing.

#### **8. Gamification for Skill & Productivity Enhancement**

Introduce game-based learning apps where women can earn incentives for completing training modules. Reward productivity with digital badges and micro-rewards for motivation and career growth.

#### **9. Micro-Insurance & Emergency Support Funds**

Set up community-led financial safety nets for medical emergencies and personal crises. Partner with fintech startups to offer affordable insurance schemes tailored for unorganised sector workers.

#### **10. Women-Centric Leadership Programs**

Develop mentorship programs where successful women textile entrepreneurs guide others. Encourage women-led cooperatives and self-help groups to take leadership roles in policy advocacy.

### **CONCLUSION**

Women working in the unorganized textile industry struggle immensely to meet their work-life needs as they are subjected to exploitative practices at the workplace, such as outrageously long working hours, low wages, and absence of social security safeguards. All this not only affects their well-being but further aggravates their economic instability. But for a change in the positive direction, there lies an opportunity. Computer tools can sharpen skills and open doors to better opportunities, and relaxed work policies and better support systems in the workplace can provide a more favourable setting. Combining skill building programs, financial inclusion programs, and workplace reforms is essential for empowering these women and allowing them to attain a more equal

balance. This calls for the collective efforts of governments to implement labour laws and social safety nets, NGOs to provide training and assistance, and industry captains to embrace ethical and sustainable practices. Through collaborative efforts in creating a supportive and inclusive workplace, we can boost productivity and gender equality in the unorganized textile sector.

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## **AN EVALUATE STUDY ON INTERNET BANKING SECURITY AMONG SELECTED SBI CUSTOMERS IN TIRUNELVELI DISTRICT**

**MONISHA G**

Ph.D Research Scholar (Reg No: 20213281012001)

Department of Commerce and Research Centre, Women's Christian College, Nagercoil-629003,  
(Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli, Tamil Nadu, India)

**DR. C. KUMARI**

Assistant Professor, Department of Commerce, Arignar Anna College, Aralvaimozhi-629301,  
(Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli, Tamil Nadu, India)

**DR. G. SWEETLIN SUBI**

Assistant Professor, Department of Commerce, Research Centre, Women's Christian College,  
Nagercoil-629003,  
(Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli, Tamil Nadu, India)

### **ABSTRACT**

The State Bank of India is a publicly traded, worldwide financial services and banking organization with its main office located in Mumbai. Globally, SBI ranks 43rd in terms of bank size. The largest bank in India, it is a public sector bank with a 25 percent market share in loans and deposits and a 23 percent market share in assets. Electronic banking, or "e-banking," is a service that enables users to pay bills, make deposits and withdrawals, view bank information, and conduct financial transactions all online without needing to physically visit their bank. Data has been collected from 70 respondents from the study area. The research method of this study used both the primary data and secondary data listed in different databases of books, research papers, and related articles of e-banking security available on the Internet. Convenience sampling method is used while selecting the samples. The purpose of this paper is to study on internet banking security among selected SBI customers in Tirunelveli district.

Keywords: E-banking, financial transactions.

### **INTRODUCTION**

Customers of banks and other financial institutions can use internet banking, sometimes referred to as online banking, e-banking, or virtual banking, as an electronic payment method to perform a variety of financial transactions via the financial institution's website. Net-banking, also known as internet banking, is an electronic system managed by banks which enables customers to access financial as well as non-financial banking products online. Earlier, customers had to visit the banks even for a small service. However, after the arrival of internet banking, almost all the services and products can be accessed online. From fund transfer to requesting demand draft, net-banking facilities, and all banking essentials. It is not just convenient but also a secure method of banking. It is the type of electronic banking service which enables customers to perform several financial and non-financial transactions via the internet. With internet or online banking or net-banking, customers can transfer funds to another bank account, check account balance, view bank statements, pay utility bills, and much more

### **STATEMENT OF THE PROBLEM**

It seeks to address the challenges and concerns surrounding online banking security within this specific demographic. This includes assessing the level of awareness among customers regarding security measures, identifying vulnerabilities in SBI's internet banking platform, understanding customer satisfaction with existing security measures, analyzing past incidents of security breaches, and providing recommendations for improvement. By thoroughly investigating these aspects, the study aims to offer valuable insights to enhance internet banking security, mitigate risks, and bolster customer trust in digital financial services provided by SBI in the Tirunelveli district.

### **REVIEW OF LITERATURE**

- **Sandhya S (2021)** in her study entitled "A STUDY ON SBI CUSTOMERS' SATISFACTION TOWARDS E- BANKING SERVICES" This study is conducted in Mysore City and customers

using E-banking service in State Bank of India (SBI). The sample size is of 50 respondents consisting of customers who are availing of E-banking services in SBI in Mysore city. The customer is looking for quality services which can provides satisfaction. From the study it is understood that the customers are highly satisfied with the E-banking services in Mysore city which is provided by SBI. SBI has providing various types of E-banking services but customers are not utilizing it in a proper manner. Therefore, hereby suggested that customers should utilize the facility given by banks.

### OBJECTIVES OF THE STUDY

The study has the following objectives.

- ✓ To check the satisfaction level of customers in using E. baking services
- ✓ To find out the level of awareness regarding internet banking securityamong customers of SBI.

### RESEARCH METHODOLOGY

Research methodology is a way to systematically solve the problem. It is a science of studying how research is done scientifically. Essentially; it is the procedure by which the researcher goes about their work of describing, evaluating and predicting phenomenon. It aims to give the work plan of research. It provides training in choosing methods materials, scientific tools and techniques relevant solution of the problem.

#### • COLLECTION OF DATA

In special science there are two outstanding research methods

#### ✓ PRIMARY DATA

The primary data were collected personally by approaching the customers by using questionnaire method.

#### ✓ SECONDARY DATA

The secondary data has been collected through reports, books, journals, periodicals, newspaper, articles, and websites.

#### • SAMPLE SIZE:

As far as the study concerned, the researcher selected 70 respondents for this research.

#### • SAMPLING TECHNIQUE:

Convenience sampling method is used while selecting the samples.

### ANALYSIS AND INTERPRETATION OF DATA

#### 1. Satisfaction level of using internet banking

Table1.1

Functions	H. S	S	N	D.S	H.D.S	Total	mean	Rank
	5	4	3	2	1			
line Purchasing and bill payment	(225)45	(248)62	18(6)	(2)1	6(6)	499	4.158	III
ve time & Energy	(200)40	(325)65	30(10)	8(4)	1(1)	564	4.70	I
time restriction	(30) 6	(61) 244	(50) 150	(4) 2	(1) 1	429	3.55	VII
ghly confidential	(80) 16	(144) 36	(156) 52	(24)12	(4)4	408	3.40	X
w service Charge	(15) 3	(236) 59	(165) 55	(4) 2	(1) 1	421	3.508	VIII
sy to operate	(100)20	(216)54	(108)36	(16)8	2(2)	442	3.683	IV
ed not carry cash	(10)2	(328)82	(84)28	(12)6	(2)2	436	3.633	V
lick Fund transfer	(285)57	(204)51	(18)6	8(4)	2(2)	517	4.308	II
ybody can operate	(70) 14	(232) 58	(111) 37	(20)10	(1) 1	434	3.616	VI
sy to file Tax	(5) 1	(248) 62	(132) 44	(24)12	(1) 1	410	3.416	IX

#### Source: Primary data

Table 1.1 indicate that satisfaction level of using internet banking services. It shows first rank with the “Save time and Energy”, The second rank with Quick fund transfer ,The third rank with Online Purchasing and bill payment, The fourth rank with Easy to operate, The fifth rank with Need not carry cash, The sixth rank with Anybody can operate, The seventh rank withNo time restriction,



The eighth rank with Low service Charge, The nine<sup>th</sup> rank with Easy to file Tax and Tenth rank with Highly confidential.

#### LEVEL OF AWARENESS REGARDING INTERNET BANKING SECURITY

TABLE 1.2

S.no	Level of awareness regarding internet banking security	Mean Score		t- Statistics	p- Value
		Urban	Rural		
1	Security code	4.22	4.12	1.927	.055*
2	Password protection	3.84	3.67	2.252	.025*
3	Transaction security	4.17	3.85	4.355	.000*
4	Confidently	3.97	3.29	3.857	.000*
5	Authentication	4.00	3.29	4.211	.000*
6	Hardware security	4.10	3.61	2.518	.013*
7	Data base Security	4.05	3.61	2.362	.000*

#### Source: Primary Data

Regarding the level of awareness regarding internet banking security in relation to their residential area, there is a significant difference have been identified in all the seven variable's they are "Security code", "Password protection", "Transaction security", "Confidently", "Authentication", "Hardware security", "Data base Security". Since, the respective 't' statistics at five percent level. (i.e) p value is lesser than 0.05 percent.

#### FINDINGS OF THE STUDY

After the analysis and interpretation of the data these are the following findings were emerged: Regarding the level of awareness regarding internet banking security in relation to their residential area, there is a significant difference have been identified in all the seven variable's they are "Security code", "Password protection", "Transaction security", "Confidently", "Authentication", "Hardware security", "Data base Security". Since, the respective 't' statistics at five percent level. (i.e) p value is lesser than 0.05 percent

#### SUGGESTIONS

The researchers have given the following suggestions for further improvement in the study area.

- ❖ The employees of the bank must give customers outstanding support.
- ❖ Staff members must have access to appropriate training facilities in order for them to respond to customers with accurate information.
- ❖ The bank must inform its customers about the advantages of online banking.
- ❖ These recommendations may include enhancing customer education and awareness programs to improve understanding of security measures and best practices.

#### CONCLUSION

The study identifies areas of concern such as low awareness levels among customers, potential vulnerabilities in SBI's internet banking platform, and instances of security breaches. These findings underscore the urgency of implementing robust security measures and enhancing customer education and awareness programs. The importance of internet banking security as a foundational element of modern banking practices. It calls for concerted efforts from all stakeholders to mitigate risks, protect customers' financial assets, and ensure the continued trust and confidence in digital banking services provided by SBI in the Tirunelveli district.

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## **IMPACTS OF BRAND EXTENSIONS ON PARENT BRAND IMAGE**

**Iswariya Priya B**

Research Scholar, PG & Research Department of Commerce,  
St Alphonsa College of Arts & Science, Karinkal, Kanyakumari District, Tamilnadu  
(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

**Dr R Sivanesan**

Associate Professor and Head, PG & Research Department of Commerce,  
St Alphonsa College of Arts & Science, Karinkal, Kanyakumari District, Tamilnadu  
(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

### **ABSTRACT**

Brand extension is an important concern in the success of a brand and if not done properly, can cause a serious damage to the brand being extended. This study aim to investigate the factors of brand extension and their impact on parent brand image. The selected factors were Perceived Fit, Customer awareness and innovativeness, and Brand Associations, and their impact on Parent Brand Image were analyzed using confirmatory factor analysis and Structural Equation modeling. For this likert scale type questionnaire was used to gather data from 189 people in the city of Karachi. The result suggested that brand extensions affect their parent brand in terms of certain variables (discussed later in the study). This paper also shares some real time examples of brands involved in attempts of extending them.

**Keywords:** Brand extensions, Parent Brand Image, Perceived fit, strategic fit, Customer awareness and innovativeness, Brand associations

### **INTRODUCTION**

Brand extensions are always a hot topic in the marketing grounds. They are easy to find on the product shelves and on ATL/Digital. They are in relation to an organization's most precious asset i.e. its name. The brand extensions either compliment their parent brand image or destroy it. There are many examples of brand extensions in the Pakistani market some of which have leveraged while some have diluted their parent brand. A need for a successful brand has always been the focus of efforts of a successful organization, especially in an intensely competitive environment. Competition pressure, technological advancements, and changing consumer behaviors constantly push an organization to embrace strategies to develop and maintain a competitive advantage. The best option to do so is to invest in brand building, which is a long-term and costly process but once a brand is made, it pays longer. According to Ambler and Styles (1997), such strategy is usually used in regularly consumed (FMCG) categories. But organizations don't always have the financial muscle to build every single brand. Which is why, organizations use their established brands to present new brands using the same established name. One advantage of using the established brand name to launch new brand is that it minimizes consumer risk and cost of entering the market (Keller, 2003). Keller (2003) also states that more than eighty percent of organizations embrace brand extensions to add new products to their proposition. Organizations shouldn't introduce a new brand name for the new product rather put the same established brand name on the new products i.e. to create brand extensions (James, 2006). Brand extension is an important element of brand management as it offers the opportunity to transform the established brand into a mega brand. Brand extension is not only an economical way of extending the proposition but also provides different sources of revenue, leverages brand concept, and strengthens brand equity. Customers are now more aware than before. They have access to many channels not only to interact with the brands but also to vestige their activity. With the advent of online shopping, their awareness plays an important role in their innovativeness level and purchasing behavior. The new tools of marketing have made the customer expectations so high that traditional methods have been undermined by the new ones. Customers now know the brands' activity and expect more and unique from them. Countries brand perceptions and marketing behaviors showed that brand with significant social presence is more likely to gain a share in the mind which of course needs efforts to do so. Brand awareness do help the extension to be tried. But, in such technological era, a brand can't

only compromise on the awareness and innovativeness level of its target audience in order to stay in their minds. Because if a brand will not in the minds of its potential customers, then having a presence in the market or on the shelves is useless.

### **PROBLEM STATEMENT**

If you decide to extend the brand, the first rule is that your brand has to have a brand equity (one of the variables of this study). With a positive brand equity and a good sense of the relationship between parent and extension, can lead to a successful brand extension. In many business cases, it is seen that at the time of thinking about extending the brand, normally the size of the opportunity is seen in a category and then launched a brand extension. Also, when going for brand extension, it is seen whether to keep the extension close to the parent brand or make it a remote extension. In both of the cases, it depends on the credentials such as brand vision, equity, business definition, target market, PoD, and the entire positioning of the brand to decide whether to keep the extension in a close relation with parent brand or keep it away. The remote extension is noxious for parent brand if not handled with extreme care as compared to the close ones. If a brand extension fails to satisfy customer expectations, the negative impacts will be transferred to the parent brand and hurt the parent brand-customer relationship. Thus, the factors mentioned above impact parent brand in relation to brand extension. A brand extension must justify the factors discussed above. While evaluating brand extensions, the customer may change his core beliefs about the original brand which will affect the positioning of parent brand in his mind. Brand extension looks profitable and does provide sales boost in the short term but in the long term, it destroys the brand (Al Ries and Laura Ries, the 22 immutable laws of Branding). Launching a new brand requires a financial muscle as well as an idea or concept. Also, it takes time and efforts for an individual brand to be successful. In order to be successful for a new brand, it has to be first in a new category (or develop a category where it can be first in). For many organizations, extending the developed brand name is an easy way out. There are examples of big names which extended their brand such as IBM, Heinz, etc. But marketing is a battle of perception not products.

### **GAP ANALYSIS**

In the past, similar studies have been conducted on the same subject. One of them is conducted by Pooja (2012) in the Indian market. She mentioned many successful brand extensions launched by brands such as Ponds, Pears, Saffola, and Dove, etc. In her study, she came up with a conceptual model consisting of different factors such as Parent brand Characteristics, Marketing Support, Perceived Fit, Corporate credibility, and Customer Innovativeness. She concluded her study that brand extensions affect their parent brand image based on the above-mentioned factors. Similarly, study conducted by Martinez & Pina (2003) found the negative impact of brand extensions on the image of parent brand. Shennin (2000) studied about how brand extensions affect the knowledge of parent brand. It was found that extensions impact the knowledge of parent brands which are unfamiliar more than the ones which are familiar. Also, Neale et al. (2009) concluded that it is the quality of consumer-brand relationship which has a significant impact on the success of the extension launched by that brand. The same stand has been supported by the studies of Park & Kim (2001) and Park et al. (2002). Not only that, they found that there exists a reverse effect too. The studies of (Dawar, 1996, Loken and John, 1993) suggest that a brand extension which is entirely different from its parent brand is in a difficult position as the consumer reevaluates the parent brand. Reevaluating a brand in order to find a fit between the extension and the parent brand is disastrous if the result is negative. In the same way, remote extensions are very dangerous for the parent brand and lead to customer rejection. Not only this, the effects are transferred to the parent brand as well. This failure not only creates a negative perception about the parent brand but also disturbs the brand-consumer relationship.

This study filled the gap as followed. First, it has been a period of time that a similar kind of study hasn't been conducted. Therefore, this study covers the time lapse between their and this study. The above discussed studies did not include one of the important factors while gathering the data for the study i.e. social media. This study also sheds light on the importance of social media. This study

focusses on some very critical factors which must need to be taken into the confidence before taking a decision to extend the brand. Perceived Fit, Brand Associations, and other variables were not only reviewed first, but on practical ground are shared and confirmed with the consumers of different brands. After which, their impacts are included in this study. Moreover, this study also includes some examples of brands which opted brand extension. Thus, providing a way to think on practical grounds to whether or not go for extending a brand.

### **RESEARCH OBJECTIVES**

Studies of this kind observe the marketing decisions taken to spread the brand name. This paper studies some of the decisions taken by marketers in the past regarding brand extensions and on the basis of data gathered by the consumers of different brands, analyses those decisions. It also provides some suggestions regarding launching or not launching a brand extension, available in the latter part. Specifically, we aimed to work on the below mentioned objectives:

1. To explore how perceived fit occurs when a brand launches an extension
2. To find how customer awareness and innovativeness works when presented a brand extension
3. To observe what impacts does a brand extension create on Parent Brand's equity
4. To observe what impact does a brand extension create on Brand Loyalty

### **RESEARCH QUESTION**

What impacts does a brand extension create on its parent brand?

### **SIGNIFICANCE**

It is logical and been practiced to use the name of an established brand for launching a new brand rather than developing an individual brand, which is surely a difficult and costly way. But, in the past, the practiced way hasn't always turned out to be a fruitful one. Like for instant Master Cola – introduced as local brand of beverage by famous brand of mattress (Master Multi Foam) - was a failed to attract consumers as compared to established brands of Pepsi or Coke. In the past, certain studies have been made in certain conceptual and geographical areas. This study takes those collections and move one step forward by incorporating the major features which must be taken into account before extending a brand, share some real time examples of brands recently extended, and analyzes the findings collected from a metropolitan. This study would enabled the corporate world, managing different brands, to rethink on synchronizing with their brand so that their perceptions in its customer's minds, and their relationship with its users should improve. They should also take into accounts the factors discussed in this study before going for brand extension.

### **BRAND EXTENSION**

These are the meanings or feelings attached to a brand name. An extension must possess the associations attached to its parent brand in order to be successful. Experts like Aaker and Keller, 1990; and Pitta and Katsani' 1995, believe that when an extension is close to its parent, the paternal associations should transfer from the original brand to the extension, hence making it successful. But there does exist a reverse transfer as well (but in a different case). There are different definitions of brand extension by different marketing experts, but the idea behind them is same i.e. the efforts of a firm to use its established brand's name into other categories to launch different products (Kotler, 1991). According to Al Ries and Laura Ries (The 22 Immutable Laws of Branding), brand extensions born when you put your brand name on everything. Aaker and Keller (1990) define brand extensions as the expansion of an established franchise to an, unlike category. To leverage the brand name, brand extensions are used (Tauber 1981, 1988). Brand extensions can either be an asset or a liability to the parent brand image i.e. if it becomes successful; it adds value to the parent brand image and vice versa.

### **TYPES OF BRAND EXTENSION**

Brand extensions can be divided into two types i.e. Horizontal and Vertical.

#### **Horizontal Extension**

When different products launched with already established name, either in the same category the firm was already in or in any new one. Horizontal extensions have two types. Line extension and

Franchise extension. According to Keller (1998), Line extension refers to when a firm launches a new brand with the same name (parent brand name) in the same product category to cater different target audience. Such as Harpic launched Harpic Bathroom cleaner. Franchise extensions include launching products with the same parent brand name in a new category (Tauber, 1981). Such as Master Sanitary launched Master Cola.

### **Vertical Extension**

According to Keller and Aaker (1992), and Sullivan (1990), it is when a firm launches an extension in a category where it is already present but with a change in price and quality. To differentiate this strategy from the Horizontal extension, a different name (or descriptor) is used with the parent brand name to elucidate the link between the extension and parent brand. For example, The Smart School – A project of City School. Vertical Extension is further divided into two types. Upscale and Downscale extensions. In Upscale extensions, the price and quality of the extension are relatively higher than the parent brand, whereas in downscale, the two parameters are lower than the original brand.

### **IMAGE OF THE PARENT BRAND**

The brand image of the parent brand relates to the association with the customer, built in his mind. It can be either positive or negative or none depending on multiple factors. Brand images are divided into two parts: function-oriented and prestige oriented. Function-oriented brands are usually positioned in terms of their performance while prestige-oriented brands are evaluated on the basis of personal connect or self-image. Normally, for both kinds of brand images, the success of brand extension lies in how near the extension is to its parent brand. This concept closeness will arise from the required customer responses, too. (Park et al., 1991).

The brand image is basically how customer sees the brand in terms of positioning and associations. Park et al (1991) divides the brand image into two types.

- A) Brands with functional oriented image and
- B) Brands with Prestige oriented image.

In the first category, brand's image is developed based on its performance, whereas in the second type, it is developed in terms of its connect or concept with the customer's own image. Regardless of the categories of brand image, most satisfactory response from customer arises when he/she finds the similarity between the parent brand and the extension. Researchers (Keller and Aaker, 1992; Park et al., 1991; Lahiri and Gupta, 2005) have also stated that the brands with prestige-oriented image have the power to be extended into unrelated categories as compared to the functional oriented brands. As the brand image creates a unique meaning about the brand in the customer's mind, the extension of the same brand will be scanned by the customer in terms of those same meanings he/she is having in his/her mind (Keller and Aaker, 1992; Glynn and Brodie, 1998). If the extension reflects the same qualities and concept as those of its parent brand, the probability for its acceptance by customers will be high (Park et al., 1991; Boush and Loken, 1991). This similarity allows the parent brand to transfer its associations to the extension, hence making the brand-customer relationship further strong (Aaker and Keller, 1990; Pitta and Katsani' 1995).

### **FACTORS WHICH AFFECT THE PARENT BRAND IN RELATION TO ITS EXTENSION**

Following are some of the factors which affect the parent brand from their extensions.

#### **1. Perceived Fit**

Perceived fit or Strategic fit refers to the concept a customer holds about a brand. When a brand launches an extension, the distance (short or long) between the parent brand and the extension becomes the base to analyze the perceived fit between the two. This perceived fit then further leads to customer acceptance or rejection regarding a brand extension. Aaker and Keller (1990) state that the relationship between a Parent Brand and an extension solely depends on the perceived fit formed in the mind of the customer. There is a direct relation between the original brand and the extension in terms of perceived fit. If the extension is related to the parent brand, the perceived fit will play positively and if the extension is not related (or far from the original brand), the effect of perceived fit will be negative. A brand extension strategy can be successful, if the customer finds any similarity or

fit between the two (Aaker and Keller, 1990; Czellar, 2003; Klink and Smith, 2001; Volckner and Sattler, 2006). You can see many examples in which a brand extension has failed due to the lack of fit between parent and its extension brand. One of the biggest examples is IBM when it tried to leave its original main frame category and tried to enter personal computers. Park et. al (1991) suggests that consumer evaluates the relation between the parent and extension in two ways. In the first way, customer tries to find the similarities between the two whereas in the second way, the customer evaluates the entire brand concept or brand positioning. It is critical for brands or people managing the brands to make sure a significant level of similarity between the original and the extension as the customer looks for the similarities between the two. Aaker (2004) finds that perceived fit exists in customer's mind due to his association or interaction with the brand. This association or interaction can be built due to many reasons such as features, functionality, application, technology, or engagement. So the cycle becomes this way, if you have a good and successful brand, and it has certain attachments with the customers, launching a related brand extension can work. There are examples confirming this statement such as Dettol after launching toilet cleaner launched bathroom cleaner which is used to clean the wall and corners of bathroom.

## **2. Customer Awareness and Innovativeness**

As earlier mentioned in this paper, customer awareness is an attempt from marketer's end to educate customers regarding the brand or the extension. Making potential audience aware of your brand is an essential part of a brand's strategy. If a brand has well aware audience, launching a brand name will reduce customer risk they feel while trying a new product. This customer awareness will also provide customer a confidence to try the extended brand (if the perceived fit formed in the second place is positive), (Aaker and Keller, 1990). Customer Awareness also leads to building brand equity, as the information regarding the brand is stored in the evaluation set of the customer and whenever he/she finds options for a certain need, the brand appears as a problem solver. Ambler and Styles (1997) suggest that customer awareness about a brand saves it from spending on advertising to aware the relevant people regarding the brand. This is how Coke Zero got into the customer minds as the people were already aware of the word 'Coke' But, building awareness in the relevant audience is not easy at all. According to Yentis and Bond (1995), it is one of the hardest tasks to aware the potential people about a brand extension in a significant way, which means making the people aware regarding what the extension is about and the reasons for using it.

## **3. Customer Innovativeness**

Innovation has a direct relation with human personality as it is one of the traits of personality. It is the tendency of a person willing to adopt the change or try something new seen or perceived by him (Hirschman 1980). There are multiple theories depicting how customer innovativeness is an important factor in the success of brand extensions (mentioned in this paper). As per Venkatraman (1991), innovativeness is an innate feature in adopting new and uncommon experiences. He identifies two modes of innovation: a) Cognitive innovation and b) Sensorial innovation. In the first mode, it is a human's tendency to rationalize, think, solve, and perform mental operations. As for the other mode, sensorial innovation is a person's preferences for products or interactions which affect their senses. On the basis of these two kinds of innovators, it can be said that depending on the mode of innovation in one's mind, success or failure of brand extension will be decided later.

## **CONCLUSION**

This paper discusses in detail, the variables which are involved in driving the extension go successful or go astray. Reviewing the variables of studies conducted in the past and adding new variables in the arena of brand extension strategy is an achievement for us. There were many variables included in the studies we discussed in this paper, there are also variables which we added to further elaborate the mechanics working behind the success of failure of the brand extensions. One of the very important variables we believe is perceived fit. It controls the brain of consumers whenever they decide to buy a brand fulfilling the same need which the parent brand serves. The positioning of a brand in the minds of customer is another very important factor which must be taken into account before extending the brand. And positioning is not only about how the customer thinks how the brand

works, rather it is about how the customer believes in the brand. What personality has the customer built in his mind regarding the brand. And does he allow the extension to possess same personality as of the parent brand. This study not only confirms the prior studies discussed and reviewed in this paper but also covers the gap between them and this one. It's been a while since the prior studies have conducted. Covering the gap of time with some recent examples of brands found in the attempt of brand extension is an important part of this paper. Similarly, the behavior patterns of people towards brands and their extensions in the metropolitan geographical area have also been highlighted in the paper i.e. the success or the failure of an extension. One of defining factors in covering the gap which this study fills is the techniques used in this study. In the prior studies, none of the researcher has used SmartPLS as the analyzer of quantitative data. This study provides a deep analysis of the data collected for this topic. Finally, we conclude this paper with a disclaimer that no matter how profitable one industry or opportunity looks, if it doesn't match with the criteria discussed in this paper and the relevant papers, choosing brand extension as an option for extending the brand name or business is a big risk. It is not the organization or the parent brand which makes the extension shine, rather it is the customer and specifically the position and perception of a brand in his mind which decides whether the extension is worth considering and should be successful or not.

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## THE IMPACT OF DIGITAL MARKETING ON GOLD PURCHASE

**T. Jemila (Registration No. 23113201012001)**

Research Scholar,  
PG & Research Department of Commerce,  
St. Alphonsa College of Arts and Science,  
Affiliated to ManonmaniamSundaranar University,  
University, Soosaipuram, Karinkal,  
Kanyakumari District,  
Tamil Nadu, India.

**Dr. M. Subala**

Assistant Professor,  
PG & Research Department of Commerce,  
St. Alphonsa College of Arts and Science,  
Affiliated to ManonmaniamSundaranar  
Soosaipuram, Karinkal,  
Kanyakumari District,  
Tamil Nadu, India.

### ABSTRACT

Digital Marketing has significantly impacted gold purchases by allowing consumers to research and compare gold products online, access virtual try on features, receive personalized recommendations, and easily purchase gold jewelry through online platforms, leading to increased convenience, wider product selection, and ultimately, higher sales for gold retailers, especially among younger demographics who are more digitally inclined however, concerns regarding authenticity and security still exist in the online gold market.

**Keywords:** *Gold Jewelry, Purchases, Consumer, Gold Retailer*

### INTRODUCTION

Digital Marketing is any form of marketing that takes place online. But it doesn't just mean the pure transfer of classic marketing approaches such as print or television advertising into the age of the internet. Rather, digital marketing for jewellery business enables completely different approaches through the use of digital technologies. Online marketers have a much broader database and personalization tools to dispose of. However, an overall strategy for digital marketing can vary from company to company, from product to product. Because the main advantage in the digital environment is the knowledge about the (potential) customer and thus the possibility to reach him directly. However, this can be done using a wide variety of approaches.

Online platforms like social media and search engines provides a wider reach for gold retailers to showcase their products and reach potentials customers who might not have visited a physical store otherwise. High quality images, descriptions, and specifications on websites allow customers to thoroughly examine gold jewelry details, including carat, design, and price, before making a purchase decision. Digital marketing allows for precise targeting of specific demographics and interests, ensuring that advertising reaches relevant audiences. Online reviews and testimonials from other customers can significantly influence buying decisions, building trust and credibility for gold retailers. Ensuring secure online payment gateways is crucial to address concerns about data breaches when buying gold online. The inability to physically examine gold jewelry before purchase scan be a deterrent for some customers. Overall digital marketing has significantly transformed the gold buying experience by making it more accessible, convenient, and personalized, leading to a potential increase in gold sales for retailers who effectively leverage online platforms and strategies.

### REVIEW OF LITERATURE

**Hanaysha, J.R., (2017)** in this study "An Examination of the Factors affecting Consumer's Purchase Decision in Malaysian Retail Market" she examined the products appearance and feel are quite significant.

**Jain S (2016)** in this study "Impact of Digitalization on Indian Luxury Market" analyzed the market need to get into formal diligence of creating value chain map of their business model and building detailed value chain for each revenue channel.

**Mudita Sinha, Leena Fukey (2019)** in this paper titled "Impact of Digital Marketing and Customer Purchase Intention with Respect the Jewellery Industry" found that price, shopping convenience and range of products are major driving factors for consumers to shop online.

**Swati Phophalia, Sharma.M.K, Shweta Kastiya (2022)** in this study "Impacts of Digital Developments on Jewellery Buying Behaviour" they analysed in India after sales support is regarded



as a crucial distinction for online sales. Secure payment gateways, e-Wallets, EMIs, and cash on delivery should all be available as easy and secure financing solutions for online purchases to encourage online shopping.

**Catherine Nirmala (2023)** in this paper “A Study on Digitalisation of Gold purchase and Its Impact on Indigenous Gold Traders in Mangaluru City” she analysed many brands trying to ride the wave of Ecommerce but there exists the concept of choice, trust & service which win the game in jewelry ecommerce.

**Tasnim AI Helali (2023)** in this paper “The impact of Digital Marketing on Consumer Purchasing Decision I he United Arab Emirates” she studied there is an increase in the purchasing decision when any of the above groups see advertisements. Education level and age play a role on consumer purchasing decision.

### **OBJECTIVES**

1. Discover to reach of Digital Marketing on Gold Purchase
2. To study the impact of Digital Marketing on Sales
3. To identify the problems faced by Digital Marketing

### **RESEARCH METHODOLOGY**

**Research Design:** This study uses a descriptive research design to explore and describe the factors influencing the use of Digital Marketing, the benefits of Digital Marketing for gold Purchase, and the challenges faced by the consumer. Descriptive approach is chosen to provide a detailed and systematic understanding of the subject matter.

#### **Data Collection Methods**

##### **1.Primary Data:**

**Survey Method:** Primary data was collected through structured surveys. The surveys include both closed-ended and open-ended questions to obtain quantitative and qualitative data from the respondents.

**Questionnaire Design:** The questionnaire was designed to address the objectives of the study. It includes sections on demographic information, digital marketing on sales, reach a wider audience, and problem faced by gold purchase.

**Pilot Testing:** Prior to the main survey, a pilot test is conducted with a small group of respondents to ensure clarity and relevance of the questions.

##### **2. Secondary Data:**

**Sources:** Secondary data is collected from various reliable sources, including:

**Academic Journals:** Research articles and papers providing information about digital marketing and its application in the gold purchase.

**Magazines and Newspapers:** Articles and reports on the latest trends and developments in digital marketing and gold investing.

**Case Studies:** Detailed case studies illustrating real-world applications and impacts of digital marketing in the financial sector.

**Working papers:** pre-published research and working papers offering current research findings.

**Books:** Comprehensive texts on digital marketing techniques and their implications in various investment.

**Internet:** Reliable online resources including industry reports, blogs, and forums discussing digital marketing in the gold purchase.

##### **3. Sampling method**

**Simple random sampling:** This technique is used to ensure that every member of the population has an equal opportunity to be selected, thereby minimizing selection bias.

**Sample size: 70 respondents:** The sample size is determined based on the feasibility and scope of the study. It includes a mix of individual gold consumers and investors.

##### **4. Data analysis**

##### **Quantitative analysis:**

Average score, Mean score and Rank: The collected data is analyzed to determine the average responses to various survey questions using the average score. This helps to identify common trends and patterns.

**Descriptive Statistics:** Statistical tools such as frequencies, percentages and standard deviations are used to summarise the data and provide a clear picture of respondents' views and experiences.

**Qualitative Analysis:**

**Content Analysis:**

Open-ended responses and qualitative data are analysed through content analysis. Themes and patterns are identified to provide in-depth information about subjective aspects of digital marketing use and the challenges faced by gold purchase.

**RESULT & DISCUSSION**

**1. Impact of Digital Marketing on Sales**

The following table shows the impact of Digital Marketing on Sales. These are ranked with the help of the method.

**Table 1: Impact of Digital Marketing on Sales**

Factors	Mean Score	Rank
Engage Potential customers	35.33	I
Increased reach & Visibility	33.33	II
Build Brand Awareness (loyalty)	32.44	III
Targeted Advertising	32.22	IV
Showcase designs more Effectively	30.67	V
Digital gold	27.4	VI
Price Transparency	26.67	VII
Increasing sales by raising	25.89	VIII
Security concerns	25.67	IX

**Source: Computed Data**

The above clearly shows that the first rank stands for “Engage Potential customers” since it has the highest score of 35.33, followed by the second rank for “Increased reach & Visibility” with a score of 33.33. The third rank stands for “Build Brand Awareness (loyalty)” with a score of 32.44. The fourth rank stands for “Targeted Advertising” with a score of 32.22. “Showcase designs more Effectively” was ranked fifth with a score of 30.67, followed by sixth rank is for “Digital gold” with a mean score of 27.4, “Price Transparency” got seventh rank with a mean score of 26.67, “Increasing sales by raising” was ranked eighth with a score of 25.89, and least rank is for “Security concerns” with a mean score of 25.67 respectively.

**2. To reach a Wider Audience in Digital Marketing**

The following table shows to reach a wider audience in digital marketing. These are ranked with the help of the mean score method.

**Table 2: To reach a Wider Audience in Digital Marketing**

Purpose	Mean Score	Rank
Social Media	56	I
Video Marketing (you tube)	44.62	II
SEO ( Search Engine Optimization)	40.12	III
Influencer collaborations	33.5	IV
Mobile optimization	26.87	V
Paid advertising	26.25	VI
Analytics &Tracking	26.12	VII
E Mail Marketing	10.25	VIII

**Source: Computed Data**

The above clearly shows that the first rank stands for “Social Media” since it has the highest score of 56, followed by the second rank for “Video Marketing (youtube)” with a score of 44.62. The

third rank stands for “SEO (Search Engine Optimization)” with a score of 40.12. The fourth rank stands for “Influencer collaborations” with a score of 33.5. “Mobile optimization” was ranked fifth with a score of 26.87, followed by sixth rank is for “Paid advertising” with a mean score of 26.25, “Analytics & Tracking” got seventh rank with a mean score of 26.12, and least rank is for “E Mail Marketing” with a score of 10.25 respectively.

### 3. Problems faced by Digital Market

The following table shows the Problems faced by Digital Market.. These are ranked with the help of the mean score method.

**Table 3: Problems faced by Digital Market**

Problems	Mean Score	Rank
Not being able to see & try on jewelry	41.2	I
Fear of buying online gold	40.3	II
Hesitation to buy expensive things (gold)	37.6	III
Difficulty accurately depicting the product quality	37.1	IV
Overcoming traditional preference for physical gold	36.62	V
Messaging & Communication	35.7	VI
Low awareness of Digital gold	35.6	VII
Trust issues	35.5	VIII

#### Source: Computed Data

The above clearly shows that the first rank stands for “Not being able to see & try on Jewelry” since it has the highest score of 41.2, followed by the second rank for “Fear of buying online gold” with a score of 40.3. The third rank stands for Hesitation to buy expensive things (gold)“” with a score of 37.6. The fourth rank stands for “Difficulty accurately depicting the product quality” with a score of 37.1. “Overcoming traditional preference for physical gold” was ranked fifth with a score of 36.62, followed by sixth rank is for “Messaging & Communication” with a mean score of 35.7, “Low awareness of Digital gold” got seventh rank with a mean score of 35.6, and least rank is for “Trust issues” with a score of 35.5 respectively.

### LIMITATIONS OF THE STUDY

Many consumers hesitate to purchase gold online due to concerns about authenticity, fraud, and secure transactions. To build trust, companies must highlight certification details (e.g., BIS Hallmark, 916 purity), provide robust return policies, and ensure encrypted payment gateways. Customer testimonials and influencer endorsements can also reduce fear. The biggest obstacle in online gold purchases is the inability to physically see and try on jewelry before buying. Customers want to assess the weight, design, and overall look of jewelry on themselves before making a decision. Effective communication is crucial for convincing customers to trust digital gold platforms. Poorly crafted marketing messages, lack of educational content, or insufficient customer support can deter potential buyers.

### FINDINGS

Engaging potential customers is the most significant factor in driving gold purchases. Digital marketing strategies, such as interactive social media campaigns, influencer marketing, and personalized email campaigns, help attract and retain customers. The ability to connect with customers in real time and address their queries fosters trust and enhances conversion rates. Digital marketing expands the reach of gold businesses beyond geographical limitations. Social media platforms, search engine optimization (SEO), and online advertisements help businesses target a broader audience. The ease of accessing gold products online allows consumers to browse and compare options conveniently.

Targeted advertising ensures that gold promotions reach the right audience based on demographics, behavior, and interests. Platforms like Google Ads, Facebook, and Instagram offer advanced targeting options that allow gold businesses to tailor their marketing strategies for specific customer segments, resulting in higher conversion rates. Security concerns remain a challenge in digital gold purchases. Customers worry about online fraud, authenticity, and data privacy. Digital

marketing can help address these concerns by emphasizing secure payment methods, certifications, and customer protection policies.

Social media is the most powerful tool for reaching a vast audience. Platforms like Facebook, Instagram, Twitter, and LinkedIn enable brands to interact with customers, share engaging content, and drive sales. The ability to leverage targeted advertising, viral campaigns, and community engagement makes social media the most effective digital marketing channel. Partnering with influencers helps brands tap into their established audiences. Influencers, particularly those in the fashion, jewelry, and investment sectors, can endorse gold products and influence purchase decisions. Authenticity and trust built through influencer marketing can significantly enhance brand credibility and reach.

Mobile optimization users accessing the internet via smartphones, mobile optimization is essential. A mobile-friendly website, fast loading speeds, and seamless navigation improve user experience and engagement. Businesses that invest in mobile optimization can capture a larger share of online shoppers. Email marketing, though ranked last, still holds value in nurturing customer relationships. Personalized email campaigns, newsletters, and promotional offers help retain customers and encourage repeat purchases. However, its lower ranking suggests that email marketing alone is not the most effective method for reaching a broad audience.

### **ADDITIONAL RECOMMENDATIONS**

To maximize the benefits of digital marketing, businesses must focus on building consumer trust through transparency, secure transactions, and informative content. Leveraging emerging technologies like augmented reality, high-quality visuals, and personalized customer interactions can bridge the gap between traditional and digital gold purchases. Businesses can address this through augmented reality (AR) try-on features, high-resolution images, 360-degree product views, and virtual consultations. By addressing these challenges and refining marketing strategies, the gold industry can continue to thrive in the digital era. High-quality product videos, zoom-in features, and detailed descriptions about weight, purity, and craftsmanship can help bridge this gap.

### **CONCLUSION**

Engaging potential customers is the most significant factor in driving gold purchases. Digital marketing strategies, such as interactive social media campaigns, influencer marketing, and personalized email campaigns, help attract and retain customers. The ability to connect with customers in real time and address their queries fosters trust and enhances conversion rates.

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## **A STUDY ON PUBLIC PERCEPTION ON PRADHAN MANTRI AWAS YOJANA SCHEME**

**P.Srimathi**

Research Scholar , Reg. no.:19213011012028

PG & Research Department of Commerce,

Annai Velankanni College ,Tholayavattam,

Affiliated to Mononmaniam Sundaranar University,Tamil Nadu

**Dr.G.Jerin Rose**

Assistant Professor, PG & Research Department of Commerce,

Annai Velankanni College ,Tholayavattam,

Affiliated to Mononmaniam Sundaranar University, Tamil Nadu.

### **ABSTRACT**

This paper is designed to study the extent of public perception on Pradhan mantra Awas yojana (Housing for All ), the role of government, who are playing significant role in socio-economic transformation among poor and weaker section of the society. For the purpose of study ,the researcher has selected 100 respondents. The study covers different aspects in respect to socio-economic status, barriers in improving the income level, savings habit of respondents, utilization of loan disbursed and whether the government scheme has significance in improving the standards of people. Further the study would highlight the socio-economic empowerment and loan repayment. All category of people were surveyed by using questionnaire and the extent of improvement in their social and economic status is studied. Finally the detail information about the benefits they had received was also considered. A small attempt have been made to understand the benefits of the scheme, and also how this scheme help in transformation of the poor and weaker section of the society.

**Keywords:** PMAY (Pradhan Mantri Awas Yojana), Indira AwasYojana (IAY), Rajiv AwasYojana(RAY), Pradhan Mantri Gramodaya Yojana (Gramin Awas)

### **INTRODUCTION**

House is one of the three basic human requirements besides food and cloth. Even after 70 years of independence, India is still grappling with the growing housing problem, especially of the urban poor. The rapid population growth in urban areas has led to a huge housing shortages and poor urban living conditions. Continuous influx of rural population to cities in search of jobs is causing problems on urban housing. Housing affordability is currently prominent concern in India, especially in urban areas. Globally, there have been several interventions which have aimed to provide affordable housing solutions for all. Government of India also has declared the mission of 'Home for All' by 2022. In order to achieve this objective, Central Government has launched a comprehensive mission "Pradhan Mantri Awas Yojana Housing for All(Urban)".The mission seeks to address the housing requirement of urban poor including slum dwellers (Ministry of Housing & Urban Poverty Alleviation, 2016).

India's growing economic status, the country has 78 million homelessness people (Thomas).To tackle the problem of homelessness the government launched many schemes in recent years and tried to bridge the gap between demand and supply of houses. There are several housing schemes have been launched over past few years. There are many rural housing schemes which have been launched by government such as Indira Awas Yojana (IAY), Rajiv Awas Yojana (RAY), Pradhan Mantri Gramodaya Yojana (GraminAwas), Pradhan Mantri Awas Yojana (PMAY-G). In this research the researcher mainly focused on the Pradhan Mantri Awas Yojana (PMAY-G).

### **REVIEW OF LITERATURE**

P Ananth (2017) in his article "Housing for Poor and the impact of IAY in rural India: Present context" stated that the major housing scheme of the Indian government i.e., Indira Awas Yojana. conceptual framework, housing problems of the rural poor, strategies for improving rural housing programmer, housing shortages and policy implications It is the responsibility of the Government to ensure that every citizen has a safe, secure and healthy place to live, work and lead a life of dignity

Pradhan Mantri Gramin Awaas Yojana (PMGAY), to provide housing for the rural poor in India. In the initial years the housing scheme addressed the needs of SC and ST families and families of bonded laborers' in BPL category. government departments can provide technical assistance, like innovative technology, low-cost but quality building material, designs and methods of constructing or upgrading houses to durable and disaster-resistant lodgings or arrange for coordinated supply of raw materials like cement, bricks etc., though not innate in the scheme itself appraisal of evaluation of various components embedded in the schemes and more particular attitude and reactions for the peoples for the schemes have been implemented.

M. Swathi (2018) In her article "A Study On The Housing In Rural Areas With Special Reference To pradhan Mantri Awas Yojana (Pmay-G)" The house is a safe house worked by man to shield himself from the fancies of atmosphere and to meet the fundamental physiological necessities of the body (Housing Finance Mechanisms in India). Therefore the house is an all inclusive component of the possessed world. Housing is nearly related to the procedure of general financial advancement It gives work chances to the country and urban individuals.

Pinal Barot (2019) In his article "Pradhan Mantri Awas Yojana (Pmay) Scheme- An Emerging Prospect of Affordable Housing In India "stated that growth of the urban population resulting in overcrowded slums in cities. Slums are home to an increasing number of the urban poor. Housing affordability is currently a prominent concern in India, especially in urban areas. Globally, there have been several interventions which have aimed to provide affordable housing solutions for all. Government of India also has declared the mission of 'Home for All' by 2022. In order to achieve this objective, Central Government has launched a comprehensive mission "Pradhan Mantri Awas Yojana – Housing for All (Urban)". Aims to understand the PMAY- Housing for All(Urban) schemes, especially for Economically Weaker Section (EWS) beneficiaries in India as well as in Ahmedabad city of Gujarat State. Common accepted criterion for affordable housing is that the cost of housing should not be more than 30 percent of a household's gross income.

#### **STATEMENT OF THE PROBLEM**

PMAY now a day, are playing significant role in socio-economic transformation among poor and weaker section of the society. Social invisibility, on the other hand, is the result of the general second- class treatment given to poor. In the light of these happenings; it was decided to conduct a study on the PMAY. Hence, this work entitled A Study on public perception on Pradhan Mantri Awas Yojana.

#### **OBJECTIVES OF THE STUDY**

1. To study of various Housing Project in India
2. To understand the conceptual framework of Pradhan Mantri Awas Yojana(urban)
3. To understand the schemes and plans of central and state governments for massive low cost housing.

#### **RESEARCH METHODOLOGY**

The present study is descriptive in nature and is based on secondary data collected from various sources i.e. books, journals, reports, as well as relevant websites.

##### **Background of Pradhan Mantri Awas Yojana(PMAY)**

Public housing programme in India started with the rehabilitation of refugees immediately after independence. Till 1960, nearly 5lakh families were provided houses in different parts of northern India. In 1957, within the ambit of the second five-year plan of Prime Minister Nehru, Village Housing Programme (VHP) was introduced providing loans to individuals and cooperatives of up to Rs.5,000/- per unit. Only 67,000 houses could be constructed in this scheme till end of the 5th Five Year Plan (1974-1979). Another scheme introduced in the 4 th Plan called House Sites-cum-Construction Assistance Scheme (HSCAS) was also transferred to the State Sector from 1974-75. With the launch of Indira Awas Yojana(IAY) by the then Prime Minister Rajiv Gandhi in 1985, the public housing programme in India got a boost. IAY was launched as a rural housing programme targeting SC/ST and Minority population. The programme was gradually extended to cover all Below Poverty Line (BPL) population.

As a part of the continuous efforts of the Indian Government to fulfill the housing needs of rural and urban poor, Pradhan Mantri Awaas Yojana was launched by Prime Minister Narendra Modi in June 2015 with an aim to provide affordable housing .

Under PMAY, it is proposed to build 2 crore houses for urban poor including Economically Weaker Sections and Low Income Groups in urban areas by the year 2022 through a financial assistance of 2 trillion (US\$28 billion) from central government. This Mission has four components viz., In-situ Slum Redevelopment with private sector participation using land as resource, Affordable Housing through Credit Linked Subsidy, Affordable Housing through Credit Linked Subsidy, Affordable Housing in Partnership with private and public sector and Beneficiary led house construction/enhancement. Under these components, central assistance will be in the range of 1 lakh (US\$1,400) to 2.30 lakh (US\$3,200).

#### **Features of PMAY - G**

PMAY - G aims at providing a pucca house with basic amenities to all houseless households and households living in kutcha and dilapidated houses in rural areas by 2022. "Housing for all" is the main objective, which aims at providing 2.95 crore constructed houses by 2022

Some of the main features are

- Providing assistance for constructing at least 1.00 crores houses in rural areas between 2016-17 to 2018-19.
- The size of the house enhanced from 20 sq.m to 25 sq. m. including dedicated area for hygienic cooking.
- Unit assistance provided for Plain and Hilly areas. In house allotments the first preference will be given to females.
- In house allotments ground floor will be given to physical disabled or to senior citizens.
- The housing constructors should follow the eco- friendly practices.
- Less rate of interest from the market value.

#### **Pradhan Mantri Awaas Yojana (PMAY) Targeted**

##### **Group or Beneficiary**

PMAY Housing Scheme will work by giving focal help to Urban Local Bodies (ULBs) and additionally other utilized offices through States/ UTs for:

- Building nearby Rehabilitation of the current ghetto occupants by starting private support for utilizing poor land region as an asset.
- By giving Credit Linked Subsidy
- Starting Affordable Housing in Partnership
- Giving Subsidy to the recipient for singular house development/upgrade.

##### **Eligibility Criteria Condition for PMAY**

- Beneficiary max age 70 years,
- EWS (Economic Weaker Section) family income limit is Rupees 3 Lakhs per annum and for LIG (Lower Income Group) Family Income limit is Rupees 6 Lakhs per annum, and Middle Income Group - (MIG-I) income between Rupees 6 lakhs to 12 lakhs per annum, (MIG-II) income between Rupees 12 lakhs to Rupees 18 lakhs per annum
- The beneficiary should not have an own dwelling unit on the name of any family member in any part of India.
- The loan applicant should not have availed any central/state government subsidy or benefit for buying a home under the PMAY scheme.
- Currently, the loan applicant should not own any property under their name and along with any of the family members (including the dependents).
- The home renovation or improvement loans, self-construction loans will be allocated only for EWS and LIG categories.
- The houses given under this scheme will be owned by females or jointly with males.

##### **Phases**

- 3 Phases of PMAY envisage starting and completing the house construction work as follows:

- PMAY Phase-1 from April 2015 to March 2017 to cover 100 cities.
- PMAY Phase-2 from April 2017 to March 2019 to cover additional 200 cities.
- PMAY Phase-3 from April 2019 to March 2022 to cover the remaining cities

### The Scheme

The features of Pradhan Mantri Awas Yojana are that the government will provide an interest subsidy of 6.5% (for EWS and LIG), 4% for MIG-I and 3% for MIG-II on housing loans availed by the beneficiaries for a period of 20 years under credit link subsidy scheme (CLSS) from the start of a loan. The houses under Pradhan Mantri Awas Yojana would be constructed through a technology that is eco-friendly, while allotting ground floors in any housing scheme under PMAY, preference will be given to differently abled and older persons.

### Finance

The government has approved an investment of 439.22 billion (US\$6.2 billion) for construction of 6,83,724 houses for urban poor including central assistance commitment of 100.50billion(US\$1.4 billion) by April 2016.

### Various Housing Schemes of the Government of India

Sl.No	Housing Schemes	Launched Year
1	Integrated Subsidized Housing Scheme for Industrial workers and Economically Weaker Sections	1952
2	Low Income Group Housing Scheme	1954
3	Subsidized Housing Scheme for Plantation Workers	1956
4	Middle Income Group Housing Scheme	1959
5	Rental Housing Scheme for State Government Employees	1959
6	Slum Clearance and Improvement Scheme	1956
7	Village Housing Projects Scheme	1959
8	Land Acquisition and Development Scheme	1959
9	Provision of House Sites of Houseless Workers in Rural Areas	1971
10	Environmental Improvement of Urban Slums	1972
11	Sites and Services Schemes	1980
12	Indira Awas Yojana	1985
13	Night Shelter Scheme for Pavement Dwellers	1990
14	National Slum Development Programme	1996
15	2 million Housing Programme	1998
16	Valmiki Ambedkar Malin Basti Awas Yojana	2000
17	Pradhan Mantra Gramodaya Yojana	2001
18	Jawaharlal Nehru National Urban Renewal Mission	2005
19	Pradhan Mantri Adarsh Gram Yojana(2009-10)	2009
20	Rajiv Awas Yojana	2011
21	Pradhan Mantri Awas Yojana- Housing for all	2015

(Source: Various reports of Government of India, Ministry of Housing, Ministry of Urban Development and Poverty alleviation)

### FINDINGS

From the above tables, it is evident that the PMAY is playing an important role among Economically Weaker Sections (EWS), Lower Income Groups (LIGs) and Middle-Income Groups (MIGs).

Major findings of the study are given below:

1. It was observed from the above data out of the sanctioned units; more than 90% of the units are grounded as a whole.
2. Out of the grounded units, in some states more than 60% houses are completed and delivered to the beneficiaries.



3. States like Gujarat, Odisha, Telangana and Kerala it has been observed that more than 85% of the grounded units are Completed and delivered to the beneficiaries.
4. National data depicts that out of total committed Rs1,99,643Cr, more than 75% fund i.e.,Rs1,56,412 Cr already been released and received by the beneficiaries.

### **SUGGESTIONS**

Visit rural place and explain uneducated people how to take the loan in any central Government scheme.

- The scheme is useful to customers, but the scheme will be bounce back to Government Account if the construction is stopped.
- To create awareness about the people who were unaware about this scheme.
- To create social groups for the rural poor to apply this scheme through online.
- The government should take some effective steps to improve the application process.
- From the experience gained by implementing various schemes for rural housing so far, the following strategies are expected to realize the vision of a safe and sustainable housing for the rural masses.

### **CONCLUSION**

Rapid growth of the urban population leading to housing shortages and poor urban living conditions is a prime challenge for the government of India. While analysing the review of various related literature, a number of studies on affordable housing was observed. It was observed that in India, a number of housing programmes have been implemented since independence by different governments. However, these programmes lacked continuity and interconnectedness, which has drawn attention of the earlier researches to assess housing policies and programmes in India. Recently launched affordable housing scheme, PMAY-Housing for All (Urban) is drawing attention of some of the researchers in critically analysing the programme.

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## ABOUT THE EDITORS

### Dr R SIVANESAN



M Com., M Phil., Ph D., M B A., M A (Eco)., PGDIM., PGDHRM., is working as a Vice Principal, Associate Professor & Head, PG and Research Department of Commerce, St Alphonsa College of Arts & Science, Karinkal, Kanyakumari District. He is the Senate Member of Manonmaniam Sundaranar University, Tirunelveli. He has 16 years teaching experience. He has authored three text books namely Consumer Awareness, Organisation of Business, Banking Theory Law and Practice. He has attended 45 national, and 12 international conferences. He has published five research articles in Scopus Journals, 15 articles in UGC care Journals and 30 articles in international/national referred journals with impact factor. He is the editorial board member of International Journal of Research in Management & Business Studies (IJRMBS), International Journal of Management (IJM) and International Journal of Research in Business Studies and Management. He has developed many management development cases, business games, and role playing exercises. He has organised many management development programmes. He has provided consultancy services to a number of small and medium scale organisations in the areas of behavioural aspects and top management functions. He is the approved research guide in Manonmaniam Sundaranar University, Trinelveli.

### DR R PAULMONI



M Com., Ph.D., is working as an Assistant Professor, PG & Research Department of Commerce, St Alphonsa College of Arts & Science, Karinkal, Kanyakumari District. He has attended many National and International conferences. He has published many research articles in National and International journals. He is the NSS officer of St Alphonsa College.

### DR M RESHMA



M Com., Ph.D., is working as an Assistant Professor, PG & Research Department of Commerce, Alphonsa College of Arts & Science, Karinkal, Kanyakumari District. She has attended many National and International conferences. She has published many research articles in National and International journals.

## SUB EDITORS



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