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Profit Meets Purpose

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06th - 07th February, 2026

IMCon'26
Compendium

Theme

Management Renaissance:

Profit Meets Purpose

Sub-Theme

Human Resource I Marketing I Finance & Economics I
Technology I Communication I Entrepreneurship

Editors

Prof. Emily Pandey
ASBM University

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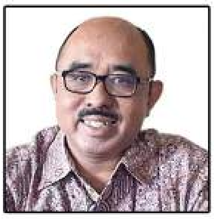

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Presided by

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Director HR, OHPC

Dr. Niranjan Sahu,
IAS (Retd.) Former Hon'ble Member Orissa
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Online (For Foreign Delegates)	Dr. Kasthuri Henry, Founder & CEO, KasHenry LLC; CFO & COO, TechFides, USA	Dr. Jibendu Mantri, Professor, ASBMU

IMCon'26

PROGRAMME

Date	Time	Session	Venue
6 Feb 2026	10:00 AM	Registration	Central Auditorium Front Annexe
	10:30 AM onwards	Book Exhibition	Central Auditorium Annexe
	11:00 AM – 1:00 PM	Inaugural Session	Central Auditorium
	1:00 PM – 2:00 PM	Lunch	Mango Grove (Rear lawn)
	2:00 PM – 5:00 PM	Technical Session – HR / Entrepreneurship	C3
	2:00 PM – 5:00 PM	Technical Session – Finance / Economics	C5
	5:00 PM – 6:00 PM	Cultural Programme	Central Auditorium
7 Feb 2026	10:00 AM	Registration	Central Auditorium Front Annexe
	10:30 AM onwards	Book Exhibition	Central Auditorium Annexe
	10:00 AM – 1:00 PM	Technical Session – Technology	C3
	10:00 AM – 1:00 PM	Technical Session – Marketing	C5
	10:00 AM – 1:00 PM	Online Technical Session	Conference Room
	1:00 PM – 2:00 PM	Lunch	Mango Grove (Rear lawn)
	2:30 PM onwards	Valedictory Session	Lyceum

Dr. Hari Babu Kambhampati
Governor, Odisha

LOK BHAVAN
BHUBANESWAR - 751 008

No: 101/2026

January 31, 2026

MESSAGE

I am delighted to know that School of Business, ASBM University is organising the International Management Conference 2026 on 'Management Renaissance: Profit Meets Purpose' on February 7-8, 2026.

I am confident that this theme will address an important and contemporary aspect of management thought, exploring the convergence of economic objectives with broader societal and ethical considerations. By convening scholars, practitioners, researchers, and industry professionals from across borders, the conference will provide a valuable forum for the exchange of ideas and perspectives on this evolving discourse.

I extend my good wishes to the organising committee, faculty members and all participants for the successful conduct of the event.

(Hari Babu Kambhampati)

MOHAN CHARAN MAJHI
CHIEF MINISTER, ODISHA

LOKASEVA BHAVAN
BHUBANESWAR

MESSAGE

I extend my warm greetings to all participants of the International Management Conference 2026 (IMCON'26) organized by ASBM University, Bhubaneswar.

The theme "Management Renaissance: Profit Meets Purpose" aptly reflects the contemporary need for management practices that integrate economic growth with ethics, sustainability, and social responsibility. Such an approach is vital for building resilient organizations and inclusive development.

I commend ASBM University for fostering meaningful dialogue among academia, industry, and thought leaders through this conference. I am confident that the deliberations and research contributions presented in this Compendium will add value to management thought and practice.

I wish IMCON'26 every success.

(Mohan Charan Majhi)

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Message

I am pleased to know that the School of Business, ASBM University is organising the International Management Conference 2026 on the theme "Management Renaissance: Profit Meets Purpose." The theme is timely and relevant, as it reflects the evolving nature of management thought in a rapidly transforming global economic and business environment. Such conferences provide an important platform for academicians, researchers and industry professionals to exchange ideas, share empirical insights and deliberate on emerging trends in management theory and practice. The deliberations are expected to contribute meaningfully to contemporary managerial discourse and offer practical perspectives for sustainable organisational growth.

I am also happy to know that a Compendium of Selected Research Articles is being released on this occasion. This publication will serve as a valuable academic resource, capturing diverse research perspectives and reinforcing the culture of scholarly inquiry and publication among researchers and institutions.

I extend my best wishes to the organisers for the successful conduct of the conference and hope that the deliberations and the compendium will add lasting value to the field of management education and research.

(Suryabanshi Suraj)

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ଆୟୁକ୍ତ-ତଥା-ଶାସନ ସଚିବ, ଉଚ୍ଚଶିକ୍ଷା ବିଭାଗ
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MESSAGE

I extend my best wishes to ASBM University on the occasion of the International Management Conference (IMCON'26) themed *"Management Renaissance: Profit Meets Purpose."* The theme is timely and reflects the growing need for management education to balance economic progress with ethical responsibility, sustainability, and social impact.

Conferences such as these provide a platform for academic and industry engagement, knowledge sharing, and policy-relevant discourse. I wish the Conference all success.

(Aravind Agrawal)

डॉ. (श्रीमती) पंकज मित्तल
(पूर्व कुलपति, बीपीएस महिला विश्वविद्यालय, हरियाणा)
महासचिव

Dr. (Mrs.) Pankaj Mittal
(Former Vice Chancellor, BPS Women University, Haryana)
Secretary General

भारतीय विश्वविद्यालय संघ
Association of Indian Universities

AIU/SGO/2026
15th January, 2026

MESSAGE

It gives me immense pleasure to extend my heartfelt congratulations to **ASBM University** on the successful publication of the **Compendium** on the occasion of the **International Management Conference (IMCON'26).**

This scholarly compendium is a commendable initiative that reflects ASBM University's strong commitment to academic excellence, research dissemination, and global engagement in the field of management education. By bringing together insightful contributions from academicians, researchers, and industry experts, the compendium will serve as a valuable knowledge resource and a catalyst for meaningful dialogue on contemporary management issues.

I extend my best wishes to the leadership, faculty members, researchers, and students of ASBM University for the grand success of the conference and for their continued endeavours in strengthening higher education and research.

(Pankaj Mittal)

Preface

The world of management is standing at a historic crossroads. Traditional business models that once focused solely on profit maximization are no longer sufficient in a world facing social inequality, environmental crises, ethical dilemmas, and technological disruption. Today's organizations are expected not only to perform economically, but also to act responsibly toward society, the environment, and future generations. It is within this changing global landscape that the theme "Management Renaissance: Profit Meets Purpose" finds its true relevance and power.

The term "Renaissance" signifies rebirth, renewal, and transformation. In the context of management, it represents a fundamental shift in thinking—from narrow financial goals to a broader, value-driven approach that integrates human welfare, sustainability, and ethical leadership. This new era of management calls for leaders who are visionaries, innovators, and custodians of social good. It demands strategies that balance growth with responsibility, and competitiveness with compassion.

"Profit Meets Purpose" reflects the evolving belief that financial success and social impact are not opposing forces, but complementary goals. Organizations that embed purpose into their core mission are more resilient, trusted, and adaptable in a rapidly changing world.

The theme "Management Renaissance: Profit Meets Purpose" is therefore not merely a concept—it is a call to action. It invites organizations to rethink their role in society and challenges leaders to design systems that generate shared value. It promotes a culture where innovation is guided by ethics, where leadership is rooted in integrity, and where success is measured by both impact and income. As management enters this renaissance phase, the integration of profit with purpose will define the future of business.

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ABSTRACT

Compassionate Capitalism in the Age of AI – Reimagining Economic Systems to Empower Humanity, Democratize Innovation, and Sustain Inclusive Prosperity

Kasthuri Henry

Abstract

As artificial intelligence (AI) reshapes economies and redefines human productivity, traditional capitalism driven by profit maximization and efficiency faces a moral and structural inflection point. This paper advocates for a model of compassionate inclusive capitalism that centers human intelligence and dignity in the age of AI disruption. Drawing from foundational economic theories in Adam Smith's Wealth of Nations, C.K. Prahalad's market-based poverty eradication framework from The Fortune at the Bottom of the Pyramid, the UN Sustainable Development Goals, and Dr. Kasthuri Henry's work on soulful leadership and financial stewardship, the research proposes an integrated economic model that balances profit with purpose.

Leveraging AI for ESG-Compliant Tax Strategies and CSR Tax Alignment: Evidence from Effective Tax Rates and Mandatory CSR Behaviour in Verna Industrial Estate, Goa, India

Moses Pinto

Abstract

This article examines how Artificial Intelligence (AI) technologies are reshaping Environmental, Social, and Governance (ESG) tax compliance among multinational enterprises (MNEs). By integrating doctrinal, comparative, and empirical approaches, the study investigates whether AI-powered tax compliance tools enhance transparency, sustainability, and legal accountability. Drawing on case studies of Mercedes-Benz, Google, and BMW Finance N.V., the article evaluates the effectiveness of AI systems in aligning corporate tax behaviour with CSR obligations and ESG disclosure mandates across jurisdictions. It further analyses the regulatory frameworks in India, the European Union, and the OECD, identifying legal gaps in algorithmic accountability, data protection, and ethical tax automation.

Leading across Generations in the Digital Age: Coaching for Purpose-Driven Organisations

Yasmine Mnassri

Abstract

Coaching has become an essential strategic tool for managing today's workplaces. This conceptual paper focuses on how leaders can use coaching to bridge the gaps between generations, from Baby Boomers to Gen Z, especially in the wake of rapid digital changes following COVID-19. By merging generational theory with transformational leadership principles, I introduce the Multigenerational Coaching Leadership Model (MCLM). This framework blends customised coaching styles (like directive, collaborative, and tech-enabled), adaptive leadership qualities (such as emotional intelligence and digital literacy), and cutting-edge technology (including AI and VR) to create inclusive, high-performing work environments. The study highlights that coaching is more than just a developmental tool; it's a strategic necessity for uniting multi-generational teams and ensuring organisations thrive in the digital era.

A data analysis model of shopping ready-to-drink tea for forecasting tea demand

Thi Thanh Sang Nguyen

Abstract

The demand for ready-to-drink tea is increasing nowadays in the world, especially with young people in Vietnam. Many tea shops opened and made a lot of profit from tea mixed with milk, fruit and many other flavors. This paper studied a real dataset of tea shopping in order to build a data analysis model for forecasting tea demand. This proposed model is a process of pre-processing raw data, extracting useful features, analyzing relevant features, and forecasting tea demand using Prophet. Experimental results and analysis have shown that black tea has the highest demand and high price. The model is built flexibly and can be expanded to other tea shops to support business strategy planning. This will help predict future tea consumption, which will help tea shops predict which teas are most popular. From there, tea producers will invest more in the most popular teas and pay more attention to growing and propagating tea.

From Pitch Decks to People: De-Colonizing Entrepreneurship beyond Capital and Code

Douglas J. Gilbert

Abstract

This article challenges a prevailing narrative of entrepreneurship, which focuses on venture capital funding rounds, rapid growth, and technological innovation. Instead, it advocates for a more balanced approach through a decolonialised re-evaluation of entrepreneurship. The analysis aims to raise awareness about under-recognised types of entrepreneurs—such as lifestyle entrepreneurs, innovation farmers, and social entrepreneurs—and contends that entrepreneurship theories and support frameworks must encompass a wider range of economic and situational realities relevant to the full spectrum of entrepreneurial efforts.

Transformation of Human Resources in the Age of Agentic AI: Embracing Innovations and Strategic Growth in the Organizations

Olga Maslova, Vasilii Pyatin

Abstract

This analytical study presents for the first time the main trends transforming Human Resources in the age of agentic AI. It shows the role of rapid evolution of traditional artificial intelligent technologies in the genesis of the era of agentic AI systems, which are characterized by a new paradigm of human resources development in the conditions of an autonomous enterprise. The paper characterizes the features of agentic AI and multi-agent AI systems, in which new functions and roles for humans in business models are being formed. It emphasizes the active position of employees in the implementation of AI and the key activating role of leaders in this process. The paper reveals the prospects and features of transforming of the occupational structures in agentic AI, organizational transformation of HR, features of HR transformation in the context of management across industries, and characterizes the contradictions associated with adoption of agentic AI.

Factors Influencing Tourists' Purchase Behavior of Local Dry Fruits in Skardu, Gilgit-Baltistan

Dostdar Hussain and Muhammad Hassnain

Abstract

The study explores the key determinants of tourists' buying behavior for Local Dry Fruits in Skardu, a very prominent and scenic tourist destination in Gilgit-Baltistan, Pakistan. The study uses a structured questionnaire with 350 tourists drawn from a convenient random sampling to examine the influence of cultural, social, psychological, and economic factors on tourists' purchase intentions. The relationship and magnitude of contributing factors were compared with descriptive and inferential statistics. From the results, it can be seen that all of the variables have a positive relationship with purchase intention, with psychological and economic factors having the greatest effect.

Trust and Repurchase Intention on Online Shop among Indonesian Customers

Christian Immanuel Mardi Putra, Budi Suprapto

Abstract

Rapid technological development has reshaped business activities, with e-commerce emerging as a key strategy to enhance efficiency, market reach, and customer experience. Social commerce (s-commerce), integrating social media features into e-commerce platforms, presents new opportunities, particularly in developing markets such as Indonesia. This study applies Partial Least Squares Structural Equation Modeling (PLS-SEM) to examine the effects of perceived technology, security, perceived reputation, perceived risk, s-commerce knowledge, and prior online purchase experience on online trust, as well as the influence of perceived technology and prior purchase experience on online repurchase intention. Results indicate that perceived technology and perceived reputation have positive effects on online trust, while perceived risk has a negative effect.

Working from Home in the It Industry: A Study on Employee Productivity in the Era of Purpose-Driven Work

Mihir Dash

Abstract

Work from Home (WFH) emerged as a dominant HR practice in the IT industry following the Covid-19 lockdowns of 2020–2021. Research indicates that about 43% of IT jobs can be performed remotely (Holgersen et al., 2020), offering mutual benefits such as improved work–life balance for employees and reduced operational costs for organisations. By late 2022, nearly 48% of IT employees continued to work from home, making WFH an inevitable practice in the sector. However, limited empirical evidence exists on its impact on employee productivity. This study examines how WFH influences productivity through employees' perceptions of work comfort, communication, job allocation, working hours, and work–life balance. Primary data were collected online from 134 IT employees in Chennai using a structured questionnaire.

Guardians of the Habaspuri Saree: Preserving Cultural Heritage in Modern India

Digbijay Swain

Abstract

The Habaspuri saree, a traditional handloom of Odisha originally woven by the Kandha tribe in the 19th century, is facing extinction due to modern socio-economic challenges. This case study examines the efforts of Mr. Maheshwar Meher, one of the few remaining artisans preserving this craft in Checheiguda village, Kalahandi district. Despite challenges such as government neglect, limited market access, resource constraints, and changing social dynamics, his dedication reflects the resilience required to protect intangible cultural heritage. The study analyses the origins, decline, revival efforts, and systemic barriers of Habaspuri weaving, highlighting the urgent need for policy support, community participation, and market-driven interventions to ensure its survival for future generations.

Blockchain for Financial Inclusion: Assessing the Impact on Unbanked and Underbanked Populations in Developing Economies

M. Daniel Rajkumar and Seetharaman. R

Abstract

Blockchain technology has emerged as a transformative force in reshaping financial systems, particularly in developing economies with large unbanked populations. This paper assesses blockchain's socio-economic impact on financial inclusion, focusing on India, Kenya, and Indonesia as representative nations. Drawing on secondary data from the World Bank Global Findex, IMF, and national FinTech reports, the study constructs a conceptual model linking blockchain adoption to inclusion through reduced transaction costs, improved literacy, and expanded access. The paper demonstrates that blockchain, through decentralized ledgers, peer-to-peer payments, and smart contracts, lowers costs, enhances transparency, and builds trust. Key findings suggest that digital wallets, decentralized finance, and cross-border remittances can bridge inclusion gaps.

Crafting Livelihood and Confronting Challenges: Comprehending the Perceptions and Challenges of Sabai Grass Craftswomen in Odisha

Kabita Kumari Sahu and Biswajit Sarangi

Abstract

This study examines the perceptions and livelihood challenges of tribal and non-tribal Sabai grass craftswomen in Odisha, focusing on the impact of their engagement on subjective well-being, while identifying key challenges for growth opportunities. A total of 475 craftswomen, comprising 237 tribal and 238 non-tribal respondents, were randomly surveyed from the Mayurbhanj district of Odisha, using structured questionnaires covering environmental, socio-cultural, economic, skill-development, market, empowerment, and growth-related dimensions. The findings highlight that Sabai grass crafts provide multifaceted benefits. Tribal women associate the craft strongly with heritage preservation, collective identity, and community pride, whereas non-tribal women emphasize entrepreneurship, innovation, and external market opportunities.

Profit Meets Purpose: A Management Renaissance through Women-Led Pickle–papadam Micro Enterprises for Sustainable Livelihoods in Berhampur, Ganjam District of Odisha

Ashok Kumar Panda

Abstract

The shift from profit-centric to people-centric, purpose-driven entrepreneurship is reshaping management thought, with women-led micro enterprises emerging as key drivers of socio-economic change in semi-urban and rural India. This study examines women engaged in pickle and papadam production in Berhampur, Ganjam district of Odisha, and their contribution to empowerment, income generation, and sustainable livelihoods. Integrating management, economic, and social perspectives, the research analyses production organization, resource management, quality control, innovation, and marketing under constraints of limited capital and domestic responsibilities. Using the Sustainable Livelihoods Framework, it highlights how micro enterprises strengthen human, social, financial, physical, and natural assets, with SHGs and cooperative models enhancing collective resilience, decision-making power, and social mobility.

Reskilling with Responsibility: How AI can Align Profitability with Purpose

Sailaja Bohara and Arpita Srivastava

Abstract

AI is changing the world of work by extending the capabilities of humans to improve decision making, pattern recognition and predicting new trends, creating new types of cognitive systems. This technological transformation is redefining job roles, the skills required, and the workings of organizations in all sectors. It discusses the dual impact of AI in the context of employment. On the one hand, AI automation has led to the disappearance of traditional roles, causing fear among employees, and it has also created high-value opportunities. Secondary case studies of the leading organizations. Finally, the paper summarizes the various organizational strategies that were identified during the case studies to introduce a series of practical recommendations available to be enacted by a wide array of stakeholders, policymakers, executive firms, educators and employees.

E-Marketing Orientation, E-Loyalty, Brand Equity, and Strategic Susiness Performance of Multi-Level Marketing Partners in Bauchi: A Combined Use of NCA and PLS-SEM

Abubakar Suleiman, Kamal Abdullahi Marafa, Muhammad Tella, Ahmad Shehu, and Salima Muhammad Alhassan

Abstract

This study explores the relationship between e-Marketing orientation, e-loyalty (both attitudinal and behavioural), brand equity, and strategic business performance of multi-level marketing (MLM) partners. Drawing upon theoretical frameworks such as e-marketing orientation theory and the theory of customer relationship management, the study aims to provide insights into the mechanisms through which e-Marketing orientation influences strategic business performance with the mediating roles of brand equity and e-loyalty in the context of MLM business model. The study employed a survey research design, with a sample of 129 MLM partners. Data was collected through a Google form survey, and the data were analysed using partial least squares structural equation modelling (PLS-SEM) and necessary condition analysis (NCA) techniques. The findings revealed that e-Marketing orientation is significant determinant and a necessary condition for strategic business performance of MLM partners.

Impact Investing in India: When Profit Meets Purpose -A Case Study Approach

Fatema Kazi and Sharmistha Banerjee

Abstract

Impact investing has been changing the nature of global finance, shifting the capital flow towards the businesses that can produce tangible social and environmental impacts in addition to financial profits. The paradox of swift economic development and enduring socio-economic inequalities has turned India into a very volatile test-bed of this dual-purpose approach. Since 2010, it has received more than USD 10 billion of cumulative impact capital that it has invested across areas such as financial inclusion, clean energy, healthcare, education, and agribusiness. The current paper is a thorough theoretical and empirical study of the impact investing in India. The paper concludes that impact investing, provided that the right incentives and protective measures are fostered, can become a key aspect of the Indian inclusive growth process.

The Impact of AI on Workforce Planning and Talent Acquisition

Md. Atiqur Rahman Sarker, Farhana Ferdousi ,Ummea Sahera Noume, Md. Syfur Rahman, Mashruha Zabeen, and Prottoy Bhowmik

Abstract

Artificial Intelligence (AI) is gaining traction to change human resources (HR) practice, especially, in workforce planning and talent acquisition. This paper explores how the intersection of AI is multidimensional and affects the organizational workforce strategy and talent acquisition using a structured questionnaire carried out among people working in the field of HR and employees in addition to industry experts. The paper highlights the two sides of AI, positive and negative sides of AI in managing a workforce. Although it opens considerable possibilities of innovation and streamlining, the effective implementation of AI requires the algorithm transparency, strong ethical considerations and an ongoing human factor to ensure the avoidance of the existing dangers.

Management Thought in the Post-Trade War Era: A Profit-Purpose Perspective

Janardan Behera

Abstract

The economy of the 21st century is defined by extraordinary environmental urgency, an activist stakeholder environment, regulatory advancement, and technological disruption/obsolescence. The traditional paradigm of shareholder value maximization is under threat from an incipient movement of management that pursues purpose along with profit. This paper develops a rigorous dynamic general equilibrium model of a bi-objective firm that maximizes discounted profits and purpose utility, constrained by carbon pricing, stakeholder sensitivity, and disclosure mandates. We derive equilibrium investment rules for physical capital, purposeful capital, intensity of emissions, and disclosure of ESG. The results demonstrate that purposeful firms exhibit a lower weighted average cost of capital (WACC), greater pricing power, accelerated green innovation, and a reduced intensity of emissions.

Emotional Intelligence and Gendered Leadership in Human-Centric, Resilient Organizations

Hani Abdul Rasheed and Irina Leonova

Abstract

This research examines the influence of emotional intelligence (EI) in combination with gendered leadership on the growth of human-centric and resilient organizational cultures. There remains a gap in literature that defines how gender-related differences in emotional intelligence influence the effectiveness of leadership and the resilience of organizations in the framework of EI determined leadership development. To fill this research gap, the research looks into the differences in emotional intelligence of male and female leaders and the resultant influences on their leadership approaches. Implementing a mixed research approach, data was collected from 300 sectorial leaders (150 men and 150 women) from healthcare, education, mining, and technology industries. The study concludes that emotional intelligence is not only a critical leadership skill but also a foundational attribute for fostering inclusive, psychologically safe, and resilient workplace cultures.

Catalyst for Change: Digital Leadership Reshaping Work in Bangladesh's Higher Education

Ummea Sahera Noume, Farhana Ferdousi, Md. Atiqur Rahman Sarker, Silvia Akter, Prottoy Bhowmik, Mariam Akter Akhy

Abstract

This research paper explores how digital leadership affects the innovative work performance in one of the contexts of the higher education sector in Bangladesh, which becomes more technologically advanced because remote working and narrowing classic overheads are becoming possible. The major focus is to draw a connection between digital leadership and a newfangled style of work behaviour. Path analysis was conducted on hypotheses through the SPSS software. The results demonstrate that the perception of teachers on their importance of digital leadership by teachers has significant positive attitudes on all the aspects of their creative work behaviour.

Mind Over Market: How Psychological Biases Shape Mutual Fund Investment Decisions

Indrila Deb, Anupam Mitra

Abstract

The present study examines how psychological biases influence mutual fund investment decisions by individual investors in India. Drawing on behavioral finance theory, the study examines twelve key biasesand their relationship to both perceived and actual risk-taking behavior. Primary data were collected from 412 respondents via an online survey. Using K-means clustering, respondents were grouped into four investor profiles based on the intensity of their biases, followed by correspondence analysis to explore the relationship between these bias clusters and the actual risk levels of mutual fund investments, as classified by SEBI’s Risko meter. The findings reveal a significant mismatch between perceived risk tolerance and actual investment choices, driven largely by underlying psychological biases.

OHS: Guarding Well-being in Bangladesh's Retail Revolution

Md. Atiqur Rahman Sarker, Ummea Sahera Noume, Farhana Ferdousi, Rumana Afroze, Sabera Khatun, Tamanna Parvin Eva

Abstract

This study investigates the state of Occupational Health and Safety (OHS) within Bangladesh's retail sector, with particular emphasis on Shwapno, one of the country's leading grocery chains. The primary data, collected through structured interviews with retail employees, and secondary data derived from literature reviews, industry reports, and relevant legal frameworks, this paper aims to: (1) evaluate the current state of OHS in Bangladesh’s retail industry, specifically within Shwapno; (2) identify key challenges faced by retail workers in ensuring workplace safety; and (3) propose actionable recommendations for fostering a safer and more supportive working environment. The research underscores the critical importance of both legal and ethical adherence to OHS standards and the need for organizations to prioritize ongoing improvements in their safety practices to protect their workforce’s well-being and promote sustainable business success.

Unveiling Exploitation: Accountability in Ready-Made Garment Sector of Bangladesh

Ummea Sahera Noume, Arifur Rahman, Farhana Ferdousi
Fabia Hannan Mone Prottoy Bhowmik, GM Rabby

Abstract

Exploitation in Labor in Bangladesh is a trap situation in the Ready-Made Garment (RMG) industry as it jeopardizes the tremendous economic benefits that the industry delivers to the country. This paper is an in-depth exploration of the incidence, deep-seated reasons, and complex effects of such exploitation and there are three uniquely different but closely related types of such exploitation: financial, physical, and psychological. The study aims to examine the nature, causes, and extent of labor exploitation in Bangladesh's Ready Made garment (RMG) industry, including the role of foreign clients. The research was directed through qualitative methods, primarily by means of interviews with experienced industry professionals.

Linking Employee Satisfaction and Retention: A Human Resource Approach to Sustainable Value Creation

Jignyasa Nayak

Abstract

In contemporary organizations, employee satisfaction has become a central concern for human resource management, particularly in relation to employee retention. As workplaces evolve due to technological change, competitive pressures, and shifting employee expectations, retaining talented and committed employees is no longer driven solely by compensation. Employee satisfaction contributes to a sense of belonging and trust, which enhances organizational commitment and reduces the likelihood of voluntary turnover. Conversely, dissatisfaction can lead to disengagement, reduced morale, and frequent attrition, creating challenges for workforce stability and organizational culture.

Effects of Menstrual Phases on the Psychological Outcomes of Women: Evidence from a Primary Quantitative Study

Abhishek Pati, Rutuparna Dash, Smaraki Pattanayak

Abstract

Menstruation is a cyclical biological process accompanied by notable physiological and psychological variations across its phases. Understanding these psychological fluctuations is essential for improving women's well-being, yet empirical evidence from primary quantitative research remains limited. This study investigates the effects of different menstrual phases on key psychological outcomes, including mood disturbance, anxiety, depressive symptoms, irritability, stress, cognitive functioning, sleep quality, and fatigue. This research holds significance in promoting a more informed understanding of menstrual health and its broader psychological implication.

Human Rights as a Core Management Obligation: Legal and Ethical Dimensions

Jharasri Paikaray

Abstract

In the corporate landscape, human rights have evolved from being peripheral ethical concerns to central obligations shaping corporate management and governance. This paper examines the transformation of human rights from voluntary corporate social responsibility commitments to enforceable legal and managerial duties. The study explores how human rights considerations are being integrated into core management functions, including board decision-making, risk assessment, supply chain governance, and compliance mechanisms. It further evaluates the expanding scope of directors' duties and fiduciary responsibilities in aligning profit-driven objectives with respect for human dignity, labour rights, environmental protection, and social justice.

The Impact of Talent Management and Employee Engagement on Organizational Effectiveness

Aisha Chaudhary, Aruna Bhat

Abstract

In today's competitive and rapidly changing business environment, the effectiveness of organizations has emerged as one of the most important concerns for achieving sustainable growth and long-term success. This study explores the effect of talent management on organizational performance and focuses on employee engagement as a principal mechanism that translates investment in talent into positive organizational consequences. Talent management refers to a business strategy whereby companies effectively finding, hiring, training, and keeping good employees, whose abilities are in alignment with the organization's mission. This paper will underline the significance of integrating talent management activities with engagement-oriented practices with a view to enhancing organizational performance as well as achieving competitive advantage.

Profit with Purpose: A Management Renaissance in Women-Led Fish Marketing and Sustainable Coastal Livelihoods in Balugaon Fish Market, Khordha District of Odisha

Sanjaya Kumar Dash

Abstract

Women play a pivotal yet often under-recognized role in India's fisheries value chain, particularly in post-harvest handling, processing, and local marketing. In coastal and lagoon dependent regions of Odisha, women's participation in fish marketing has increasingly emerged as a transformative force linking economic viability with social empowerment. This paper examines the concept of "profit with purpose" through the lens of women-led fish marketing in the Balugaon fish market, located in Khordha district on the periphery of Chilika Lake. It explores how innovative management practices adopted by women fish vendors are contributing to sustainable coastal livelihoods while simultaneously fostering gender equity and community resilience. Beyond economic outcomes, the paper emphasizes the social and environmental dimensions of women-led fish marketing.

Equity and Efficiency Nexus in Fiscal Federalism: Analysis from 16th Finance Commission

Priyabrata Satpathy, Jyotirmayee Mohanty

Abstract

Mismatch between revenue capacity and expenditure need of subnational governments is an inherent feature Fiscal Federalism. The constitution of India mandates different institutional mechanism of fiscal allocation to states such as the erstwhile Planning Commission Finance commission transfer and transfer under ministries for centrally sponsored schemes to address these issues. This paper examines the tension and trade-offs between equity and efficiency in India's fiscal federalism by analysing the design and implications of Finance Commission recommendations with emphasis on the Fifteenth Finance Commission (covering 2021–26) and the emerging debate around the Sixteenth Finance Commission.

The Impact of SHG on Entrepreneurship in Odisha: A Study

Jitendra Kumar Behera, Sriram Mishra

Abstract

Self-Help Groups (SHGs) have emerged as a powerful instrument for promoting entrepreneurship and socio-economic empowerment among rural and semi-urban populations in India. In Odisha, SHGs have played a significant role in fostering entrepreneurial activities, particularly among women, by facilitating access to microfinance, skill development, and collective support mechanisms. This study examines the impact of SHGs on entrepreneurship development in Odisha, focusing on income generation, employment creation, financial inclusion, and empowerment of members. The study is based on both primary and secondary data. Primary data were collected through structured questionnaires and personal interviews with SHG members engaged in entrepreneurial activities across selected districts of Odisha.

From "Perfect" to "Real": How Young Adults Navigate Trust and Health on Social Media

Aakanksha Jaiswal

Abstract

In today's digital world, social media platforms like Instagram and YouTube have replaced traditional experts for many young adults seeking health and fitness advice. However, with the rise of sponsored content and edited "reels," the line between genuine help (purpose) and selling products (profit) has blurred. This study explores how young people decide who to trust in this crowded digital marketplace.
The research focuses on the lived experiences of 50 young adults (Gen Z) in Kolkata, India, including college students and working professionals. Using a qualitative approach, data was collected through Focus Group Discussions and in-depth interviews recruited via an innovative method using the dating app Tinder.

Swiping for Data: Using Tinder as an Innovative Tool for Health Research

Aakanksha Jaiswal

Abstract

People often feel judged or unwilling to discuss the matters like obesity, body image, and weight loss and fight a personal struggle in traditional survey settings. This paper presents a novel solution to this management challenge by repurposing a common technology- the dating app Tinder, for academic research. Facing difficulties with traditional recruitment in Kolkata, this study utilized Tinder's geolocation and interest-based algorithms. The study found that the informal nature of the app helped break down barriers. Participants were more willing to open up about their fitness journeys and body image anxieties because the interaction felt personal rather than clinical. This method also created a "snowball effect," where participants referred friends, granting access to a "hidden" population of digital natives that traditional methods failed to reach.

Quantum-Enabled People Analytics: Reimagining Talent in the Age of Hyper-Intelligence

Nihar Ranjan Agasti

Abstract

In today's rapidly evolving business landscape, organizations face the dual challenge of managing complex workforce data while aligning human resource practices with ethical and purpose-driven goals. Traditional HRM approaches often struggle to provide real-time, predictive insights into talent management, limiting the organization's agility and strategic decision-making. The increasing complexity of workforce dynamics and the growing emphasis on purpose-driven management require advanced analytical approaches in Human Resource Management (HRM). This empirical study investigates the impact of Quantum-Enabled People Analytics (QEPA) on strategic talent management in organizations operating in technology-intensive environments. QEPA integrates quantum computing with people analytics to enhance predictive accuracy, real-time decision-making and ethical workforce management.

Orchestrating Customer Experience in the AI Era: How AI-Enabled Marketing Technologies Drive Business Excellence

Syed Ajaz Ahmad

Abstract

In today's business environment, customer experiences are no longer shaped mainly by human marketers. They are now increasingly designed and guided by artificial intelligence systems. These systems control personalization. They also influence what people see through influencers. They manage interactions across online and offline channels. However, most existing studies still examine these elements separately. This study brings them together. It develops and tests a unified framework to explain how AI-enabled marketing, influencer-driven social commerce, and omnichannel or phygital integration work together to shape customer experience, trust, and business performance. The study uses Customer Experience Theory as its main foundation.

Bridging Theory and Practice: An Experiential Analysis of Social Help and Social Justice in Grassroots Development

Ritwick Patra

Abstract

Despite rapid economic progress, substantial socio-economic gaps remain in Indian society, requiring the engagement of third actors to correct for potential failures in service delivery. In presenting this work, the study aims to offer an all-encompassing experiential study of one-month internship at "Help for Needy Foundation" at Midnapore in West Bengal to examine how economic theory meets Social Work. Findings indicate the efficacy of Human Capital Theory and Public Goods Delivery to enable aspects of concluding that "social justice," as opposed to "social help," demands formally prioritizing education to intervene in inter-generational cycles of destitution.

Beyond the Classroom: Bridging Economic Theory with the Reality of Social Help and Justice

Ritwick Patra

Abstract

Economic theories tend to illustrate poverty and development as mere concepts, whereas the actual picture is a lot more complex. This research encapsulates my personal experience as an intern for Help for Needy Foundation in Midnapore, where I experienced the fine line that needs to be walked between "social help" and "social justice". I spent a month out of my "academic bubble" to interact with the community first-hand—to survey 150 households as a part of a scholarship program and a blood donation campaign with over 60 participants. The research paper discloses the fact that although functions of giving, such as blood banks, are greatly needed in the health of the community, the true test of "human capital" projects, such as education, is far more complex.

Crafting Biotech Brand in India: Marketing Challenges and Growth Strategies

Mohit Mishra, Kunal Parekh

Abstract

India's biotechnology sector has evolved into one of the country's most dynamic knowledge-driven industries, encompassing biopharmaceuticals, vaccines, biosimilars, diagnostics, agri-biotech, bioinformatics, and contract research and manufacturing services (CRMS). While the sector has recorded strong growth in revenues and global visibility, many Indian biotech firms remain weakly differentiated in the marketplace and struggle to build strong, trusted brands. This paper examines the marketing challenges faced by Indian biotech firms and proposes a strategic framework for brand development.

How Cooperatives Help Dairy Farmer Access Microfinance from Milk Production

Swati Biswal

Abstract

In this study, both the members and non- members were observed to have either cows and buffaloes or both. Based on the data collected, the animals owned by each household on average was 4.21 and 3.22 for members and non- members respectively. Members of the cooperative society producing about 270 liters more milk per animal in a year which is about 8.33% and also increased milk production in per household, this quantity was about 28.89% more that of a non- member. In presenting this work, the dissertation aims to offer to study of one-month internship at "MEDINI MILK DAIRY COOPERATIVE" DCS at Midnapore in West-Bengal, to examine how cooperative work within a micro-finance in economic strategic.

Process of Fat in Milk Which Changes the Formation of Cream into Making a Curd or Ice-Cream

Swati Biswal

Abstract

Milk powder product is rich in calcium as well as other important nutrients, in human diet and is highly perishable. Milk basically provides nutrients like phosphorous, protein, potassium, Vitamin A etc. Manufactured Dairy product made by dehydrating liquid milk and it passes through various processes until it becomes powder. Indian skimmed milk powder (SMB) has increased at a CAGR of nearly 10% during 2011-2018. It is hereby seen that the demand of the product will increase in near future. Profit among the poor, homeless, marginal farmers or laborers by providing sound milk is crucial to marketing system to sell their production easily and more beneficially.

Management Renaissance: How Convergence of KM and AI Powers Purpose-Led Growth

Tarun Kumar

Abstract

Organizations today operate in environments where uncertainty, rapid technological change, and strategic complexity intersect. Knowledge Management (KM), once rooted in processes of documentation and dissemination, has evolved into a more fluid and embedded capability that shapes how institutions learn, adapt, and make decisions. Artificial Intelligence (AI), meanwhile, has moved from being an automation tool to becoming a cognitive partner capable of revealing patterns, supporting judgement, and helping organizations interpret emerging realities. This paper explores how the convergence of KM and AI is giving rise to a contemporary "Management Renaissance," in which technology and human intent work together to strengthen purpose, resilience, and innovation.

Developing Green Mining Practices and Strategies for Sustainable Mining: A Theoretical Framework and Qualitative Analysis

Subrat Kumar Sahoo

Abstract

The mining industry, which plays an essential role in the development of the global economy, faces the increasing problem of achieving production efficiency while preserving the environment. The green mining practices that pay much attention to minimizing the environmental footprints by adopting new technologies and environmentally friendly procedures have been deemed as the solution. In this research, the internal and external drivers of green mining practices are determined and the role of dynamic capabilities in the adoption of the green mining practices is also discussed. The study is useful to understand the sustainability challenges of mining as well as to develop better theoretical and practical understanding of how the industry can embrace environmental responsibility.

Digital Financial Literacy and Cyber security Awareness in India's Cashless Economy

Priya Sharma

Abstract

India's transition toward a cashless economy, accelerated by the rapid adoption of Unified Payments Interface (UPI), digital wallets, and mobile banking applications, has underscored the dual importance of digital financial literacy and cybersecurity awareness. While financial literacy has long been recognized as a determinant of sound financial decision-making, the shift to technology-driven platforms has created new vulnerabilities, exposing individuals to risks such as phishing, identity theft, and online fraud (OECD, 2025; CERT-In, 2025). The purpose of this study is to examine how digital financial literacy influences personal financial management in India's digital ecosystem and to explore the role of cybersecurity awareness in ensuring safe and sustainable use of digital payment systems.

Explainable AI and Consumer Trust: The Key to AI Adoption in E-Commerce Platforms

Monalisa Pattanayak, A. Udaya Shankar

Abstract

This study aims to examine how Explainable Artificial Intelligence (XAI) influences consumer trust and drives the adoption of AI-driven systems in e-commerce platforms. It further investigates the mediating role of perceived ease of use and the moderating effect of perceived risk within this relationship, using the Technology Acceptance Model (TAM) and trust-based frameworks. A quantitative research design was employed using a structured questionnaire distributed to e-commerce users. The analysis shows that XAI significantly enhances consumer trust, which positively influences AI adoption in e-commerce platforms. Perceived ease of use partially mediates this relationship, indicating that systems that are more understandable and easier to interact with strengthen the trust-adoption link.

Impact of Digital Pressure and Visibility on Tourist Perception and Trust: A Study in Northern Odisha

Sumanta Kumar Das, Rutuparna Dash

Abstract

The present study investigates the influence of digital pressure, visibility, and digital channel effectiveness on tourist perception and trust, with a focus on the emerging tourism landscape of Northern Odisha, India. Data were collected from 45 respondents using a structured questionnaire measuring digital visibility, channel engagement, and perception. Two regression models and corresponding ANOVA analyses were conducted to evaluate the effects of social media, blogs, online travel agencies (OTAs), and user-generated content (UGC) on tourist perception. The first model revealed that 61.5% of the variance in tourist perception was explained by digital pressure and visibility, while the second model, with a 34.8% variance explanation, reinforced the significance of digital channel effectiveness. Both analyses confirmed that digital engagement significantly enhances tourist perception and trust.

Entrepreneurship in Home Science: A Comprehensive Review

Roja Ghosh, Sarita Mishra

Abstract

Home Science has progressively evolved from a traditional, domestic-oriented discipline into an interdisciplinary field with significant entrepreneurial potential. Its diverse subfields such as food and nutrition, textiles and apparel, human development, interior design, food processing, resource management, and extension education provide a wide range of opportunities for innovation and enterprise creation. The increasing demand for personalized nutrition services, sustainable fashion, childcare facilities, home-based food ventures, and community-centered development programs has encouraged Home Science graduates to emerge as successful entrepreneurs. This review critically examines the scope, emerging trends, entrepreneurial opportunities, challenges, and future directions within Home Science.

A Critical Analysis of "Specific Regulation for Virtual Digital Assets" Around the World"

Subha Prakash Kanungo

Abstract

Introduction of digital currency, Bitcoin in year 2009 riding on the block chain technology challenged the centralized fiat currency regime, hitherto the sole prerogatives of sovereign states. The initial reaction of countries is very harsh with outright ban, sanctions, debanking, heavy tax & penalty perceiving it as a tool of shadow economy. Things got worse with "Financial Action Task Force mandating all the nations to make stringent Anti-money laundering and Countering the Financing of Terrorism measures" to deal with the risks of Convertible Virtual Currencies. India also instead treating Virtual Digital Assets as a distinct asset class putting it within the purview of "Financial Intelligence Unit under Prevention of Money Laundering Act (PMLA) 2002", Prohibitions dealings in it by RBI and treating the income from it worse than that of lottery and games under Income Tax Act.

From Ashram to Profitable Enterprise: A Case Study on the Evolution of Spiritual Ecopreneurship as a Business Innovation Model in India

Swaraj Dash

Abstract

The intersection of spirituality, ecological consciousness, and entrepreneurship has emerged as a distinctive domain of business innovation in twenty-first-century India. Over the past two decades, spiritual organisations traditionally associated with ashrams, yoga centres, and socio-religious missions have expanded into diverse markets including herbal wellness products, organic farming, Ayurveda, eco-tourism, naturopathy, and sustainable lifestyle goods. This extended abstract outlines a qualitative case-study research paper examining the rise of "spiritual ecopreneurship": enterprises that leverage indigenous spiritual values, environmental stewardship, and community-based organisational structures to build profitable and scalable business models.

English for Global Business: A Purpose-Driven Approach to Communication in the Management Renaissance

Aradhana Bose, Emily Pandey

Abstract

English connects the world and makes it a single linguistic zone amidst the reality of its diversified linguistic geographical demarcations and diverse linguistic communities and cultures of the world population. Varieties of linguistic situations and cultural diversities that practically bar communication between man and man across the world have been successfully managed through the use of the English language as this language is adopted as the language of international communication and the language international politics, diplomacy and business. English has been playing a crucial role in bridging cultural and geographical divides, facilitating smooth global communication and collaborating across different business units and branches.

Mid-Segment Car Automobile Sector in Odisha & Other Regions

Bishnu Prasanna Pal

Abstract

Sales training is critically linked to sales force productivity, especially in the competitive mid-segment car market. This conference review paper examines how structured training programs impact the performance of car sales professionals in Odisha, India, while drawing comparative insights from other regions. A comprehensive literature review of studies from the past five years reveals that well-designed training interventions can significantly improve key metrics such as sales volume, conversion rates, and customer satisfaction. The findings underscore that strategic sales training initiatives are a must-have rather than a luxury, offering actionable recommendations for automobile dealerships in Odisha to boost their sales force productivity and overall competitiveness.

Competitive Market Entry Routes for Specialized Industrial Goods: An Indian B2B Perspective

T. Sanjay Kumar, P. Lavanya, T. Vara Lakshmi

Abstract

Indian industrial firms operating in business-to-business (B2B) markets are increasingly expanding into emerging economies, yet choosing an effective market entry mode continues to pose a significant strategic decision for firms. Different entry options - ranging from exporting and partnerships to joint ventures or full ownership - entail various degrees of risk, resource commitment, managerial control, and strategic consequence. This study investigates how Indian firms evaluate these alternatives and identifies the key determinants influencing their final entry decisions. The analysis focuses on determinants including product sophistication, regulatory frameworks, customer requirements, market volatility, and internal competencies.

Management Renaissance — Profit Meets Purpose in Agriculture in Orissa

Somali Smruti Smita

Abstract

Agriculture in India is entering a transformative era, where profitability merges seamlessly with ethical purpose and sustainability. This "Management Renaissance" marks a defining shift in the way farming is perceived and practiced especially in Orissa, where farmers are uniting innovation, technology, and community empowerment to create a more inclusive, profitable, and environmentally responsible agricultural framework. Driven by initiatives such as the Odisha Millet Mission, the expansion of organic farming, and the implementation of Integrated Farming Systems, Orissa's agricultural sector is witnessing significant transformation improving soil fertility, biodiversity, and farmer income. This case embodies the core idea of "Profit with Purpose"—that economic advancement must coexist with ethical values, social equity, and environmental stewardship.

Marketing Strategies for Promoting Medical Tourism in Rajasthan

Vishambar Dayal, Shivangani Rathore

Abstract

This article is conceived to present the Strategic endeavours of Rajasthan to establish itself as one of the leading medical tourism hub. Rajasthan's abundant cultural heritage and wellness healthcare position Rajasthan as a preferred destination for medical tourism. The initiative of "Heal in Rajasthan" Policy 2024 for drawing patients from domestic and international through substantial investments in healthcare infrastructure is a testimony for the commitment of Rajasthan government to enhance medical tourism. The paper highlights the importance of capitalizing on the cultural heritage and the traditional healing methods like AYUSH therapies, Sidhha, Yoga and Naturopathy to distinguish itself from other others. Further the paper underscores the strategic alliances, telemedicine and visual consultations and the cutting edge digital marketing strategies.

Market Study on the Implementation of Artificial Intelligence and Challenges in Recruitment Practices

Mousumi Panigrahi, Surbhi Arora, P K Sahoo

Abstract

Artificial Intelligence (AI) is evolving and rapidly renovating manpower hiring practices across industries, reforming how organizations search, source, screen, and select human capital. Adopting AI in recruitment practices has been in place for a decade, and according to a 2023 IBM survey, 42 percent of organizations have already adopted AI tools in their hiring processes, with an additional 40 percent exploring integration. This study presents a market analysis of AI implementation in recruitment, examining market segments, adoption trends, global applications, and emerging regulatory considerations. The paper identifies key use cases including resume parsing, predictive candidate matching, automated assessments, and AI-enabled interviews that deliver measurable gains in time-to-hire, cost reduction, and candidate quality.

A Novel Method of Encryption Based on Vigenere Cipher and Multiplicative Cipher Using Euler Totient Function

Rajalaxmi Mishra, Jibendu Kumar Mantri

Abstract

Rapid development of technology facilitates the exchange of data digitally. It becomes necessary to give prime importance to information security of data in storage and in transit through public communication networks. Cryptography provides a solution to ensure information security to prevent malicious attacks. Various cryptographic techniques are available to support confidentiality of data. One of the most popular cipher poly alphabetic cipher technique is the Vigenère cipher. The Vigenère cipher is susceptible to Kasiski and Friedman attacks which are based on the analysis of letter frequency because it does not possess the properties of diffusion and confusion. This paper proposes a modification to poly alphabetic Vigenere cipher having confusion and diffusion properties.

Factors Influencing Women Investors' Decisions in India

Nadia Arif

Abstract

Investing is now a crucial part of financial planning since it guarantees stability, independence, and the accomplishment of long-term objectives. Due to increased financial literacy, education, career prospects, and digital access, women in India are becoming more active investors. This study investigates the social, psychological, and demographic aspects that impact women's investment choices. It looks at preferences for both contemporary options like mutual funds, stocks, Systematic Investment Plans (SIPs), and digital investment platforms, as well as more conventional ones like fixed deposits, gold, and insurance. The study examines financial literacy, risk tolerance, employment, income, age, education, and policy knowledge as significant factors influencing investment behavior using primary data gathered from 120 female respondents using a structured online questionnaire.

Issues and Challenges Faced by MSME Sector: A Case Study in Balangir District

Prajwal Premdeep Panigrahi, Kunal Mishra

Abstract

Micro, Small and Medium Enterprises (MSMEs) plays a crucial role in the part of economy of the country, and exert a positive impact on growth and development of India. Basically, this sector creates opportunities for young peoples as well, it will create employment and from MSMEs there is a many more chance for growth if they will adopt better strategies. This sector has a great impact as the peoples will get hand made products and it will also create an opportunity for the organizations to make their product global and grow their business in world wide. The problem faced by this sector is that the enterprises will not get enough funds and generally they are adopting wrong strategies so they don't grab many opportunities as well.

An Empirical Finding on Financial Resilience and Its Drivers: Evidence from Gajapati District

Prasanta Kumar Sahu, Sanjib Pattnaik, Shradhanjali Panda, Joyant Yosobardhan Sahoo

Abstract

This study examines the impact of financial literacy and financial attitude on financial resilience of MSMEs present in Gajapati district, Odisha as MSMEs have been experiencing a rise in financial difficulties in recent times. This study employed a stratified sampling and a structured survey questionnaire to gather information. With the help of literature review, key drivers of Financial Resilience are identified and they are Financial Literacy and Financial Attitude. In this regard, findings reveal financial attitude influences risk management, saving behaviors, and frugal spending, while financial literacy helps with better planning and well-informed financial decisions of MSMEs.

Management Renaissance in Higher Education: A Study on Job Satisfaction, AI-Enabled Work Practices, and Social Sustainability among College Lecturers of Odisha

Ranjan Kumar Panda, Alaka Samantaray

Abstract

The transformation of India's higher education landscape during the *Amrit Kaal* has accelerated the need for a balanced integration of profitability, purpose, and pedagogical innovation. This study examines how job satisfaction, AI-enabled work practices, and social sustainability collectively shape the evolving management renaissance within Odisha's college education sector. This research encompasses respondents from diverse districts including Balasore, Khordha, Puri, Cuttack, Bhadrak, Ganjam, Sambalpur, Mayurbhanj, and others, covering Government, Aided, and Private colleges. The study contributes to the IMCon 2026 theme "Management Renaissance: Profit Meets Purpose" by demonstrating how purpose-driven digital transformation can strengthen both productivity and educator well-being.

Strategic Communication and Stakeholder Engagement in Purpose-Driven FMCG Firms: An Indian Perspective

Nisha Jain, Jyoti Prakash Rath

Abstract

Purpose-driven fast-moving consumer goods (FMCG) firms in India employ strategic communication to convey their mission and values to stakeholders, thereby building trust and legitimacy. This study examines how three major FMCG companies – Hindustan Unilever Limited, ITC Limited, and Dabur India engage internal and external stakeholders through purposeful communication. Drawing on global and Indian literature, the paper outlines how alignment of corporate purpose with communication strategies fosters stakeholder trust, credibility, and organizational legitimacy. The paper concludes with strategic recommendations for purpose-driven stakeholder engagement, highlighting the importance of authentic storytelling, continuous dialogue, and measurable impact in sustaining trust and legitimacy in India's FMCG sector.

Working with Humor in AI Context: Organizational Dynamics and Human-Technology Integration

Mohammed Abdul Nayeem

Abstract

This research examines the intersection of humor and artificial intelligence in organizational contexts, investigating how AI-mediated humor influences employee behavior, organizational culture, and technology acceptance in the workplace. The study is limited by cross-sectional design and cultural context. Future research should examine longitudinal effects and cross-cultural variations in AI humor perception. Organizations implementing AI systems should carefully consider humor integration strategies, provide leadership support, and customize AI humor based on workforce demographics and organizational culture.

Transformer-Based Plagiarism Detection for the Low-Resource Odia Language Using BERT and RoBERTa

Pyari Mohan Jena, Jibendu Kumar Mantri, Mr. Priyabrata Sahu, C Sundar

Abstract

Plagiarism detection is a persistent challenge in Natural Language Processing (NLP), particularly for low-resource languages such as Odia, which lacks extensive annotated corpora and pre-trained contextual models. This study proposes a transformer-based framework for semantic plagiarism detection in Odia by leveraging contextual embeddings derived from BERT and RoBERTa architectures. A diverse Odia corpus was compiled from OdiEnCorp 2.0, OSCAR, and datasets from the Center for Visual Information Technology (CVIT), supplemented with additional web-scraped resources from multiple domains. Three approachesGloVe combined with TF-IDF, BERT, and RoBERTawere fine-tuned and evaluated for their ability to identify semantic similarity between Odia text pairs. Experimental results demonstrate that transformer-based models outperform traditional embedding methods, achieving correlation scores above 0.87 compared to 0.77 for GloVe+TF-IDF.

AI based Intelligent Agricultural Monitoring Using Wireless Sensor Networks

Smitarani Dehuri

Abstract

Agriculture plays a vital role in sustaining human life, yet traditional farming methods often face challenges such as unpredictable weather conditions, improper irrigation, pest infestations, and inefficient resource utilization. To address these issues, this paper proposes an AI-based intelligent agricultural monitoring system using Wireless Sensor Networks (WSNs). The system integrates multiple sensors such as temperature, humidity, soil moisture, pH, and light intensity sensors to collect real-time field data. This intelligent framework enables data-driven decision-making, reduces manual intervention, and enhances crop yield and resource efficiency. The proposed approach ensures smart, sustainable, and precision-based agriculture, contributing to increased productivity and environmental conservation.

Hybrid Deep Learning-Based Coronary Heart Disease Prediction System

S. Archie Dora, SidharthaSankar Dora,
Shashi Bhusan Panda, Prasanta Kumar Swain

Abstract

Coronary heart disease remains one of the leading causes of mortality in the world, and thus its study is more than necessary for development of valid and early diagnostic tool. Therefore, this paper proposes a new Hybrid Deep Learning-Based Multimodal coronary heart disease prediction system, integrating structured clinical information from multiple data modalities, time-series ECG signals, and medical images to improve the predictive accuracy. The proposed model fuses the and elaborated on the strengths of Convolutional Neural Networks (CNN) in feature extraction, Long Short-Term Memory (LSTM) networks for temporal analysis and Deep Neural Networks for processing structured clinical data such as age, cholesterol, blood pressure and lifestyle factors.

Examining the Role of Organizational Culture in Enhancing Organizational Performance

Vaishaali Chaudhury, Aruna Bhatt

Abstract

Organisational culture is a vital influence of employee behaviour, organisational procedures and overall performance. Amid fierce competition and rapid changes in the business environment, organizations must build a solid and dynamic culture to sustain performance. Organizational culture can be defined as the common values, beliefs and norms set by members in organization to affect how they react to employees from or entire societal foundation. It is the theoretical lens that members use to filter organizational targets, decide upon course of actions and react to challenges. A strong and congruent culture within an organization has the potential to create a sense of connectedness, commitment, and shared direction among members and facilitate favourable outcomes in terms of efficiency, innovation, organizational effectiveness.

Use of Artificial Intelligence in Web development – An analysis of current situation and the challenges

Sai Abhirna Dash, Biswarupa Mahapatra, Chinmayee Pradhan

Abstract

Artificial intelligence (AI) has revolutionized numerous industries, with web development being a significant beneficiary. AI technologies are enhancing web design, user experience, security, and automation processes. However, the integration of AI in web development introduces challenges such as ethical concerns, data privacy, model bias, and technical limitations. This paper reviews the current applications of AI in web development, analyzes prevailing challenges, and proposes mitigation strategies to optimize AI deployment in this domain.

Convertibility and conversion of Software Evolution Process to Process Trees

Rajeeb Sankar Bal, Sipali Pradhan

Abstract

The software evolution is the major part used in software engineering to refer to the software process of developing a prime version of the software and updating it to serve the client's or end user's needs. The software evolution is a one of the phases in the software development life cycle where important changes in software are built. The software processes represent a collection of interrelated processes in the software development life cycle. A software process provides a framework for managing conditions and activities that can very easily get uncontrollable in software development process. In this paper we propose to process tree for basic blocks, namely sequence, concurrency, selection, and iteration in tailoring software evolution process.

Productive Efficiency in the Technology-Based Services Sector in an Emerging Market Economy: An Analysis of the Indian IT & ITeS Sector

Santanu Mukherjee

Abstract

The aim of this research is to assess the productivity of the Indian IT and IT-enabled Services sector, determine the returns to scale (RTS), and analyze the factors that affect the productivity and response of these firms to challenges such as the global financial crisis (GFC). This study utilizes a balanced scorecard framework to identify proxy variables for the inputs and outputs of a sample of firms in India's information technology and IT enabled services sector. It uses these variables and an additive data envelopment analysis (ADD-DEA) model to identify and analyze the inefficiency of these firms along with their returns to scale. The study reveals that many of these sample firms could have been more efficient. Moreover, those that were efficient are mostly operating under decreasing returns to scale.

Bridging the Visibility Gap: How CBDC Resolves Credit Inefficiencies in India's Hybrid Payment Model

Krishna Kumar Singh, Ujjwal Kesarwani, Anurika Vaish

Abstract

This study examines how the absence of a unified digital trail leads to credit loss opportunities wherein small vendors excluded from the formal credit service. A descriptive methodology was adopted to explain the things associated to hybrid model system. This method was supported by both national and international literature. The results indicate that Central Bank Digital Currency (CBDC) can offer a structural solution by which consolidating transaction histories into a verifiable ledger while this will be preserving the cash-like usability. The study focuses on the past and present development in financial technology to assess and provide the evidence how CBDC can fill the gap of credit loss opportunity in Indian payment system.

Construction of Optimum Portfolio of equity Capital Investment of Selected Industries in the Automobile Sector using Markowitz Model

Prabin Kumar Padhy

Abstract

Stock Market is a market where a number of securities are traded such as Equity shares, Preference shares, bond, debentures, Insurance Products, Mutual funds. A person making investment expects to get some return from investment. Future expected returns are uncertain. The expected return and realised return are not same. The possibility of variation of the actual return from expected return is termed as risk. The total risk comprises of systematic risk and unsystematic risk. When an economy moves into recession, economic, political or social changes, Interest Rate risk, Market risk and Purchasing Power can influence the performance of the company. Such risk is known as Systematic risk. On the other hand the companies whose returns are affected by specific factors such as raw material scarcity, labour strike, management inefficiency, these are known as unsystematic risk.

Internet of Things (IoT) Based Monitoring and Knowledge Reuse for Digital Transformation in Eastern India's Manufacturing Industries

Debesh Tripathy, Rutuparna Dash, Brahmananda Sahoo

Abstract

In India, the eastern Manufacturing industries are adopting Internet of Things (Internet of Things (IoT)) based systems for monitoring and knowledge reuse, which is in turn improving industry productivity significantly. Internet of Things (IoT) allows processes to be supervised and monitored in real-time, aiding in efficient operations, safety and resource allocation. These systems, alongside the knowledge reuse frameworks, help enhance decision making with the utilization of past data and best practices. This improvement helps address concerns like consistent delays in production, energy waste and quality variations. This paper discusses the application, advantages and possibilities Internet of Things (IoT)-enabled strategies in the structural Manufacturing Industries of India.

Achieving Technological Sovereignty and Personnel Mental Sovereignty Problem

Lyudmila Zakharova, Elena Saygina, Marina Zolotova

Abstract

The article is about the socio-psychological barriers to achieving technological sovereignty identifies. The need to maintain and develop national values in work and management activities as the basis for achieving technological sovereignty is demonstrated. Russian personnel remain committed to traditional values and resist market-driven and innovative transformations in enterprise development, which reduces their viability. The analysis focuses on the clan-based component of organizational culture within engineers. Focus group interviews demonstrate that at an innovative enterprise, this component manifests itself as collectivist relationships, consistent with a core Russian national value. This article presents generalized characteristics of two relationship models underlying the same clan-based aspect of organizational culture, according to the well-known typology of K. Cameron and R. Quinn.

Analysing Agricultural Growth through Hybrid Paddy Seed Marketing and Agri Input Utilization in Odisha

Sumit Gauraba Patra, Manmath Nath Samantaray

Abstract

In the state of Odisha, this study investigates the ways in which hybrid paddy seed marketing strategies and the utilization of agricultural inputs could potentially contribute to an increase in paddy output and overall agricultural growth. A mixed-method approach was utilized in the research project in order to collect primary data from three hundred paddy farmers located in five districts that each represents a different agro-climatic zone. Furthermore, it obtained qualitative information from agricultural officers, traders, and farmers who were working toward progressive goals. The study observed that there was a clear positive association between being exposed to hybrid seed marketing (including demonstrations and training) and greater paddy yields and income levels.

Optimizing Lead-to-Enrolment Conversion in Higher Education: A Data-Driven Analysis of Digital Marketing Efficiency and Predictive Insights

S. Mukerjee, P. Biswas, A. Kundu

Abstract

The study examines the impact of digital marketing strategies on lead-to-enrollment conversion efficiency in the higher education sector, focusing on how data-driven approaches can enhance enrollment outcomes. As institutions increasingly rely on digital platforms to attract and engage prospective students, the efficiency of converting leads into enrollments has emerged as a critical measure of marketing performance and return on investment. The analysis reveals that while digital channels generate the highest lead volumes, conversion efficiency is primarily influenced by application submission, response time, and engagement frequency. Hybrid and offline channels demonstrate superior conversion performance, underscoring the continued importance of personalized and relationship-based engagement.

Synthetic CFOs: Evaluating the Reliability of Multi-Agent Autonomous Systems in Strategic Capital Allocation

Sayak Chakraborty

Abstract

This research explores the transformative potential of Multi-Agent Autonomous Systems (MAAS), termed "Synthetic CFOs," in the domain of strategic financial management. While traditional Artificial Intelligence in finance has focused on predictive analytics and operational automation, this study investigates the shift toward autonomous decision-making in capital allocation. Using a Design Science Research (DSR) methodology, the paper constructs a simulated "Synthetic Boardroom" where specialized AI agents—focused on Growth, Risk, and Compliance—engage in adversarial debates to optimize corporate strategy. The research concludes that while Synthetic CFOs offer superior quantitative precision and transparency, they are most effective as "augmented intelligence" tools within a Human-in-the-Loop (HITL) framework.

Lightweight Modality-Gated Fusion for Multi-modal Brain Tumor Classification

RaghunathPanigrahi, Suvendra Kumar Jayasingh, ManasRanajn Kabat

Abstract

Multi-modal magnetic resonance imaging (MRI) images plays a vital role in brain tumor analysis by giving supportive anatomical and pathological information through various imaging sequences. But, most available deep learning approaches depends on a fixed fusion strategy, e.g. early or feature level fusion, without systematically analysing their effectiveness and computational trade-offs. In this paper, we have presented a comprehensive study of multi-modal fusion strategies for brain tumour classification using BraTS 2021 MRI data. We have compared early fusion, decision level fusion and feature level fusion within an identical experimental framework on limited GPU resources. It's found, while feature fusion increases model complexity without consistent performance gains and decision fusion suffers from equal-weight voting drawbacks, early fusion persists computationally effective and modality-challenger.

Balancing Profitability and responsibility: A Study on Client Protection Practices in Microfinance

Sidhant Mohanty

Abstract

Microfinance has evolved into a pivotal instrument for advancing financial inclusion, poverty alleviation, and women's economic empowerment. Although the sector was founded on social objectives, the increasing commercialization and competition particularly in urban and semi-urban markets have intensified concerns regarding mission drift and client welfare. In response, global initiatives such as the Client Protection Pathway (2021) have emphasized the need for responsible finance frameworks that safeguard clients while strengthening institutional performance. This study seeks to examine the extent to which MFIs can achieve the dual goals of profit and purpose by integrating CPS into their operational, governance, and risk-management systems.

Effect of Conversational Marketing Based on Chatbots on Young Consumers' Buying Behaviour and Attitude: Questionnaire Validation and Assessment

Soumya Mohanty, Manmath Nath Samantaray

Abstract

This study develops and validates a questionnaire measuring the determinants that influence young consumers' intentions to adopt AI-powered chatbots for online services. Grounded in the Technology Acceptance Model (TAM), the instrument extends TAM by including perceived privacy, trust, and brand image, alongside perceived usefulness (PU) and perceived ease of use (PEOU). Primary data was collected via a structured survey from 101 young consumers in the Puri district using convenience sampling. Based on the data analysis, results indicate acceptable normality, strong internal consistency across constructs, robust item validity, and a factorable correlation matrix. Attitude toward use and brand image showed the strongest associations with behavioural intention, while trust emerged as a prominent determinant.

The Integration of AI in Higher Education: National and International Aspects

Arindam Mondal, Phalgu Niranjana, Smaraki Pattanayak

Abstract

Artificial Intelligence (AI) is crucial in technology, and this paper explores its use in higher education worldwide, focusing on its influence on business. It discusses the importance and drawbacks of AI, common tools, and policies across countries, including the current state in India. The researchers examine existing research on artificial intelligence, its impact on higher education, and its role in sustainable decision-making for its future. This study highlights AI's role in higher education, discussing tools for teaching, challenges like plagiarism, and policies for AI integration. It emphasises the role of machine learning in fostering sustainable education. various aspects of AI, including its utility, disadvantages, government policies, and current state.

Management Renaissance: Purpose Meets Profit – A Case Study of TPCODL

Biswanath Khuntia

Abstract

Power distribution utilities in India have long faced structural inefficiencies, financial stress, and challenges in balancing social obligations with commercial sustainability. Using TP Central Odisha Distribution Limited (TPCODL), a public–private partnership between Tata Power and the Government of Odisha as a case study, the paper examines how purpose-led management can drive sustainable performance in a regulated utility environment. The study analyses how initiatives such as structured reduction of aggregate technical and commercial losses, digital billing and payment systems, technology-enabled network management, customer-centric service delivery, having enhanced employee engagement and socially aligned corporate responsibility programs have contributed to improved operational discipline and financial resilience.

Assessing validity and reliability of LOM practices and service quality instruments: A Pilot Study on Hotel and Hospital Industry

Rutuparna Dash, Golakh Kumar Behera

Abstract

The aim of this study is to test the validity and reliability of LOM practices and service quality of hotel and hospital industry. A pilot study design was used. A pre-survey with Likert-scale items and close-ended questionnaire method was employed. The validity of the scale-items was examined by content validity while the reliability was evaluated for internal consistency. Validation process involves 46 items with four main constructs in LOM, five main constructs in service quality and one construct for operational performance. Overall findings noted that (N=9) range of I-CVI 0.78-1, CVR -0.11-1 agreed and refined items for content validity. All the items in LOM and service quality had excellent content validity. The internal consistency, reliability coefficient and reliability of the service quality and LOM practices instruments were excellent ($\alpha \geq 0.7$). The constructs and instruments have great potential to be highlighted as a measurement tool for hotel and hospital industry.

Strategic Dependence on AI: Risks of Over-Automation in Business Decisions

Anamika Tripathy

Abstract

The integration of Artificial Intelligence (AI) into business strategy and strategic decision-making represents a major transformation in the contemporary business environment. AI technologies such as machine learning, natural language processing, and big data analytics enable organizations to process large volumes of data, generate predictive insights, and support complex decisions with increased speed and accuracy. This study explores how AI is reshaping strategic business decision-making, as well as its benefits and associated risks. Grounded in decision theory and AI ethics frameworks, the research adopts a mixed-method approach combining an extensive literature review with case study analysis across multiple industries. The paper emphasizes the importance of integrating ethical governance, risk management practices, and human supervision into AI deployment strategies.

A Study of Customer Satisfaction in the Electricity Utility Services in Odisha

Lubna Diana Mohanty, Amit Das

Abstract

The electricity utility industry is experiencing a profound transformation driven by rising customer expectations, accelerated digitalisation, regulatory pressures, and the growing demand for transparent, reliable, and customer-centric service delivery. This shift necessitates a deeper understanding of the determinants influencing customer satisfaction within the unique operational and regulatory environment of electricity utilities. This study investigates the key drivers of customer satisfaction in the electricity utility sector and proposes a comprehensive analytical framework to examine how service quality dimensions, digital engagement, and customer experience management shape customer perceptions and attitudes.

Study on the Influence of Organisational Culture on Employee Psychological Well-Being at the Utility Sector in Odisha

Amit Das, Lubna Diana Mohanty

Abstract

Employee psychological well-being has become a strategic priority for organisations, particularly within essential service sectors where employees operate under high operational pressure, public accountability, and unpredictable work conditions. In the Indian utility sector, especially power distribution and infrastructure services, employees face continuous service demands, emergency response responsibilities, and field-intensive roles that heighten psychological strain. Within this context, organisational culture plays a critical role in shaping employees' emotional experiences, sense of safety, and overall mental well-being. This study investigates the influence of organisational culture on employee psychological well-being in the utility sector of Odisha and West Bengal, addressing a significant gap in region-specific and sector-focused empirical research.

Credit Risk Analysis Impact on Banks' Profitability

Priyanka Roy

Abstract

This study analyses the impact of credit risk on the profitability of Indian commercial banks during FY 2020–2024, focusing on both public and private sector institutions. Using secondary data and panel regression analysis, it examines the influence of key credit risk indicators i.e. Non-Performing Asset Ratio (NPA), Loan Loss Provision (LLP), Capital Adequacy Ratio (CAR), and Loan-to-Deposit Ratio (LDR) on profitability measures such as Return on Assets (ROA) and Return on Equity (ROE). The study also considers macroeconomic moderators like inflation and repo rate, along with the roles of retail and corporate loan portfolios. Private banks outperform public ones due to superior credit monitoring and digital risk systems. The study concludes that effective credit risk management and macroeconomic stability are essential for sustaining profitability and resilience in the Indian banking sector.

Gig Economy: Challenges and Opportunities in India

Somya Suchitra Jena

Abstract

This paper examines the opportunities and challenges that come with the fast growth of Gig economy. Gig Economy is a way of working that is based on people having temporary jobs or doing separate pieces of work, each paid separately, rather than working for an employer. India is witnessing top trends in Gig economy: Retired population is engaging in Gigs, Blockchain-based payment system, the emergence of Blockchain-based marketplaces, technology takes over hiring and established companies are hiring more contractual employees. Gig economy has various benefits for the economy, cushioning unemployment, improving labour force participation, stimulating demand, and raising productivity. Consumers and organizations could benefit from the greater availability of services and improved matching that better fulfils their needs.

Use of Artificial Intelligence in Automating Coding – Pros and Cons

Tanushree Dhal, Sambit Gumansingh, Sanjana Basel

Abstract

Artificial intelligence (AI) has revolutionized the field of coding by automating complex programming tasks, enhancing code quality, and accelerating software development processes. AI-driven coding tools utilize machine learning models to generate, debug, and optimize code, enabling developers to focus on higher-level design and innovation. The integration of AI in coding promises a future where programming becomes more accessible, efficient, and adaptive to evolving technological demands. Emerging trends include the use of generative AI for real-time code synthesis, intelligent error detection, and personalized coding assistance. This evolution is expected to transform software engineering, fostering greater productivity, reducing human error, and enabling the creation of more sophisticated and reliable applications.

Retailer Perception and Brand Preference in the Dairy Beverage Segment: A Comparative Study of Godrej Jersey and Competing Brands (Amul, Heritage, Nandini)

Talath Begum

Abstract

The Indian dairy beverage segment has experienced strong growth due to increased urbanization, shifting consumption habits, and demand for ready-to-drink dairy products such as flavoured milk, lassi, and buttermilk. In this category, retailers play a critical role in influencing product availability, shelf presence, and consumer purchase decisions. This research examines retailer perception and brand preference in Hyderabad by comparing Godrej Jersey with competing brands such as Amul, Heritage, and Nandini. A structured questionnaire was administered to 225 retailers using a five-point Likert scale. Data was analyzed through descriptive statistics and comparative observation using Excel and SPSS methods. The study concludes that retailer satisfaction factors such as margin, product demand, and service delivery significantly influence brand preference and stocking decisions.

Profit with Purpose: A Study of Purpose-Driven Business Models in Indian Startups

Sourav Agarwal, Laxmi Narayan Bal

Abstract

In today's dynamic business environment, startups are increasingly integrating social and ethical values along with profit objectives. This study explores the concept of "Profit with Purpose" and examines how purpose-driven startups in India balance commercial success with social responsibility. The research follows a descriptive and analytical approach. Primary data was collected through a structured questionnaire survey from students and young professionals to understand their perception of purpose-driven brands. Secondary data was obtained from research articles, industry reports, and credible online sources. Basic statistical tools such as percentage analysis and graphical representation were used for data interpretation. The findings reveal that consumers show a strong preference for purpose- driven businesses due to higher trust and brand loyalty.

The Evolution in Management: From Shareholder Primacy to Stakeholder Value

CA Rajnarayan Tripathy, Debasmita Panigrahi

Abstract

Traditional management has long emphasized profit maximization as the primary indicator of success. However, growing social, environmental, and ethical challenges have exposed the limitations of this narrow approach. This paper examines the evolving management paradigm in which profit is aligned with purpose to create sustainable long-term value. It discusses the transition from shareholder-focused models to stakeholder-oriented strategies, where purpose functions as a key driver of leadership, innovation, and organizational culture. The study highlights the role of purpose-driven leadership and integrated performance measurement in balancing economic goals with social responsibility. It concludes that sustainable profitability is best achieved when businesses actively contribute to societal well-being and environmental stewardship.

Effect of Financial Literacy on Mutual Fund Investment Decisions

Narayan Prasad Das, Padmanava Mohapatra

Abstract

This paper reviews existing literature on financial literacy and its impact on mutual fund investment decisions, supported by secondary data from AMFI and NSE. Despite significant growth in India's mutual fund industry, investor participation remains uneven, with states like Odisha contributing a relatively small share. The study identifies financial literacy as a critical determinant of informed investment behaviour. Major constraints include limited awareness, poor understanding of risk–return trade-offs, product complexity, and weak long-term orientation. The findings suggest that investor education, simplified disclosures, digital onboarding, and Systematic Investment Plans improve confidence, decision-making, and sustainable participation in mutual fund investments.

Portfolio Construction Using the Mean Absolute Deviation Criterion

Mihir Dash, S. Rita

Abstract

Modern portfolio theory is founded on Markowitz's (1952) Mean-Variance model, which aims to maximise the portfolio expected return for a given level of variance or to minimise portfolio variance for a given level of expected return. However, this approach may be sensitive to input parameters, particularly the expected returns, and may lead to portfolios concentrated within a small set of assets. Further, the model implicitly assumes normally distributed returns, which many studies have found evidence against. Also, the model is estimated using historical data, which may not accurately reflect future market conditions. The analysis is performed for a sample of sixty stocks listed on the National Stock Exchange from five sectors, including the IT, banking, retail, pharma, and telecom sectors.

Artificial Empathy and the Future of HR: Transforming Emotional Intelligence in Organizations

Sitara Nazir, Smaraki Pattnayak

Abstract

The rapid advancement of artificial intelligence (AI) is reshaping the foundations of emotional intelligence in organizations, particularly within Human Resources (HR) functions that rely heavily on empathy, relational awareness, and employee understanding. Emerging technologies—such as affective computing, sentiment analysis, and conversational AI—enable machines to recognize and simulate emotional cues, giving rise to the concept of *artificial empathy*. This conceptual paper examines how artificial empathy is transforming traditional HR practices and redefining the meaning of emotional intelligence in the modern workplace. Drawing on interdisciplinary literature from management, psychology, and AI, the study highlights both the opportunities and risks of integrating artificial empathy into recruitment, employee experience, performance management, and wellbeing initiatives.

Artificial Intelligence in Marketing

Sanjeev Tripathy

Abstract

Machine Learning is a subset of AI that allows computers to analyse and interpret data without being explicitly programmed. Furthermore, ML assists humans in solving problems efficiently. The algorithm learns and improves performance and accuracy as more data is fed into the algorithm. For this research, relevant articles on AI in marketing are identified from Scopus, Google scholar, Research Gate and other platforms. Then these articles were read, and the theme of the paper was developed. This paper attempts to review the role of AI in marketing. The specific applications of AI in various marketing segments and their transformations for marketing sectors are examined. Finally, critical applications of AI for marketing are recognised and analysed.

Need For Optimizing ATMs And Cards: Are Banks Paying More For Less?

Rishita Guha

Abstract

This study investigates how increases in the issuance and usage of credit and debit cards influence the volume of card-based ATM transactions. It also examines how ATM deployment affects these transaction volumes. The analysis uses a panel dataset of five Indian public sector banks over eight years. Ordinary Least Squares (OLS) regression is applied, incorporating year, month, and bank-level fixed effects. The study shows that issuing large numbers of credit and debit cards without ensuring their active use negatively impacts ATM transaction volumes. The costs associated with issuing cards reduce banks' profitability more than ATM deployment, despite the higher investment.

Adoption of Digital Banking in Rural and Urban Odisha: A Study Through The Lens of Purposeful Management

Nigar Dash, Kalyan Shankar Ray, J Sai Mohini

Abstract

The rapid digital transformation of Indian banking sector has opened avenues for improving operational efficiency and customer experience. However, the adoption of digital banking services remains uneven across the demographic groups across the state of Odisha. The study undertakes cross-sectional survey design to collect data from the diverse districts of Odisha. The study adopts TAM (Technology Adoption Model) frameworks to analyse the impact of perceived usefulness, ease of use, and perceived risk, on adoption behaviour. The results are expected to reveal significant disparities between rural and urban consumers, especially in technology confidence, access to smartphones, awareness of digital banking features, and perceived barriers related to security and network issues.

The Green Gold Rush: Renewable Energy for Mining Sustainability

Abhijit Hota, Monica Gallant

Abstract

It highlights how modern management is transforming mining from a purely extractive, profit-driven activity into a purpose-oriented, sustainable enterprise. By integrating renewable energy solutions, mining firms reduce costs, manage risks, and comply with ESG norms while simultaneously lowering carbon emissions and environmental impact. This shift shows a renaissance in managerial thinking—where innovation, ethical leadership, and long-term value creation replace short-term exploitation. Renewable energy adoption enables competitive advantage, investor confidence, and community acceptance, proving that profitability and sustainability are not conflicting goals. Thus, the green transition in mining exemplifies how contemporary management aligns economic success with societal and environmental responsibility.

Assessing ERP Implementation Readiness in the Banking Sector: An AHP Approach

Ashyashree Praharaj, Susant Kumar Baral, Biswajit Prasad Chhatoi

Abstract

In an increasingly digitalised banking environment, Enterprise Resource Planning (ERP) systems are crucial for improving organisational integration and operational efficiency. This study employs the Analytic Hierarchy Process (AHP) to systematically prioritise the key determinants of ERP implementation readiness. Drawing on an extensive literature review and expert inputs from banking professionals and academics, a hierarchical decision framework was developed and analysed using pairwise comparisons with consistency checks. The results identify organisational readiness and top management support as the most critical success factors, followed by user competence and system compatibility. The study offers a structured tool to support effective managerial decision-making and risk mitigation.

Labour Market Transitions: Effects of Automation & Ai on Informal Labour in India

Hari Narayan Sahu

Abstract

India's labour market has witnessed rising employment and declining unemployment, driven largely by youth participation, entrepreneurship, and growth in self-employment. Despite increasing formalisation, a substantial share of the workforce remains in the informal sector. Automation and artificial intelligence are significantly reshaping informal labour by displacing low-skilled, routine jobs while simultaneously creating new opportunities through the digital economy. However, this transition has intensified skill gaps, worker vulnerability, digital exclusion, and inequality due to limited social protection. This study examines the effects of automation and AI on informal labour in India and emphasises the need for upskilling, reskilling, digital literacy, and inclusive policy interventions to reduce vulnerability and ensure equitable labour market transitions.

From "Perfect" To "Real": How Young Adults Navigate Trust and Health on Social Media

Aakanksha Jaiswal

Abstract

In the digital age, social media platforms such as Instagram and YouTube have increasingly replaced traditional experts for young adults seeking health and fitness advice. This qualitative study examines how young adults navigate trust in online health content, based on focus group discussions and in-depth interviews with 50 Gen Z participants in Kolkata, India. The findings reveal growing skepticism toward unrealistic perfection and quick-fix promises. Instead, audiences prefer relatable creators who share authentic experiences and struggles. The study highlights a shift toward authenticity, suggesting that trust, purpose, and credibility are now central to sustaining influence in digital health communication.

Renaissance through Re-Globalization

Jagdish Khatri

Abstract

Globalization has significantly expanded global trade, GDP, employment, and human development since the 1980s. However, unequal distribution of its benefits has led to widespread discontent, particularly in developing economies, giving rise to de-globalization marked by protectionism, nationalism, and global conflicts. Today, the world faces economic fragmentation, eroded trust, and rising geopolitical tensions, signalling a critical inflection point. This paper argues for a renaissance through re-globalization grounded in redesigned principles that ensure fair and inclusive distribution of benefits. It advocates renewed multilateralism, reformed global institutions, and adaptive management and leadership practices to address shared global challenges and foster sustainable, cooperative global development.

On Some Questions in Robotic Communications

M. Pragna

Abstract

This paper examines the evolving challenges and opportunities in robotic communications as robots become integral to industrial and societal applications. It highlights the unique communication requirements of robotic systems, including high reliability, low latency, adequate bandwidth, and secure data transmission. The study discusses key communication mechanisms such as peer-to-peer, multi-robot coordination, and human–robot interaction, while addressing challenges related to wireless interference, mobility, and scalability. Emphasis is placed on the importance of standardized communication protocols to ensure interoperability across platforms. The paper also explores the transformative potential of emerging technologies, particularly 5G networks, in enhancing efficiency, coordination, and real-time performance of robotic systems across diverse operational environments.

Portfolio Construction Models For Downside Protection

Mihir Dash, S. Rita

Abstract

This study examines portfolio construction models aimed at downside protection, addressing limitations of the traditional Mean–Variance framework. It extends Young's Maxi–Min model by maximising the minimum portfolio return under worst-case scenarios generated through resampled historical data and macroeconomic shocks, with additional worst-case parameter constraints. The model is further extended to maximise lower return percentiles (5th, 10th, 15th, and 20th). These approaches are compared with the Mean–Variance model using risk–return characteristics, downside risk measures, and stability analysis. Empirical analysis uses twenty NSE-listed Indian IT stocks from April 2023 to March 2024.

Household Financialisation and Deposit Disintermediation in India: Evidence from a Multivariate Time Series Analysis

Mrutyunjaya Sahoo, Jyotirmayee Mohanty

Abstract

This paper analyses the changing pattern of Indian household savings from bank deposits to market-linked financial instruments and examines its implications for deposit mobilisation and credit capacity of banks, with a particular focus on public sector banks (PSBs). The study employs a multivariate time series approach using monthly and quarterly data on household bank deposits, equity and mutual fund investments (including SIP inflows), demat account growth, interest rates and bank credit.

Vector autoregression (VAR) techniques, along with impulse response functions and variance decomposition, are used to capture the dynamic interactions between household financialisation and banking sector performance.

Adapting Global Training Models to Indian Work Culture: A Conceptual Study on LG India

Supriti Kundu, Rudranil Paul

Abstract

Training and development are essential for multinational companies (MNCs), but global training programs designed at headquarters often do not match the cultural values and learning styles of employees in different countries. This issue is especially relevant in India, where workplace culture emphasizes hierarchy, relationship-based communication, and guided learning. This research proposal conceptually examines how global training models can be adapted for better cultural fit in India, using LG India as the reference organization. LG follows standardized global training systems focused on performance and competency development, yet secondary literature shows limited discussion on how these programs align with Indian cultural characteristics.

DeFI Regulatory Compliance Framework: Bridging Decentralization and Oversight

Nikhil Kumar, Mayank Kumar

Abstract

Decentralized Finance (DeFi) operates at the interaction of block chain - enabled financial innovation and regulatory requirements, and regulatory compliance frameworks seek to bridge the tension between block chain-based decentralization where smart contracts enable permission less financial services. In a new era of finance where Asian countries and BRICS are trying to de dollarize the world, taking off all the power from centralized banks might be it. The new system relies heavily on block chain technology to create an alternative financial system that could be innovative, borderless and transparent. This framework promotes "no control of OTHERS over YOUR MONEY" with DeFi's accessibility potentially unlocking trillions in value if protocols are executed.

Marketing Penetration Strategies for Robotics Startups

Nikhil Kumar, Prarthana Mishra

Abstract

The global robotics market is expanding rapidly, yet most of the startups struggle to achieve a meaningful market despite the sophisticated technology, and products. This research achieves the marketing penetration strategies specifically for the robotics startups operating in B2B and B2C markets. Through the analysis of existing literature and industry case studies, this paper identifies gaps in the current approaches of marketing : the disconnect between technical innovation and customer adoption, the absence of dual stakeholder marketing frameworks addressing end user and decision maker, and the lack of frameworks for adaptation of the barriers including cost concerns, integration complexity, and performance anxiety.

A Study on Financial Performance of TRL Krosaki Refractory Limited at Belpahar, Jharsuguda (Odisha)

Rudranil Paul, Supriti Kundu

Abstract

This study examines the financial performance of TRL Krosaki Refractory Limited using ratio analysis. Key indicators of profitability, liquidity, solvency, and efficiency—such as current ratio, debt-equity ratio, net profit ratio, return on assets, return on equity, and asset turnover—were analyzed over several years to identify performance trends. The results indicate steady improvement in revenue, profitability, and shareholders' funds, supported by controlled leverage and efficient asset utilization. Enhanced liquidity and rising PAT further reflect sound financial health and sustainability. Overall, ratio analysis proves to be a reliable tool for evaluating performance, supporting managerial decisions, financial planning, and investment assessment.

The Maximin Model for Portfolio Construction

Mihir Dash, S. Rita

Abstract

This study examines the Maximin principle as a robust alternative to the traditional Markowitz Mean–Variance portfolio model, which is sensitive to parameter estimation and distributional assumptions. The Maximin and Minimax Loss portfolio models are formulated to maximise minimum returns and minimise maximum losses under worst-case scenarios generated from historical data and market shocks. Using data from sixty NSE-listed stocks across five sectors during 2023–24, the models are evaluated against the Mean–Variance framework using risk–return measures such as Sharpe ratio, Value-at-Risk, and Conditional Value-at-Risk. The findings suggest improved downside risk protection and portfolio stability.

Sustainable HR Practices in Private Universities: Faculty Perceptions on People, Purpose, and Well-being

Rituparna Baruah, Prachi Khetan

Abstract

This paper examines how Sustainable Human Resource Management (HRM) practices are being adopted in educational institutions in Guwahati, India, amid rising challenges to mental, physical, and emotional health. It emphasizes aspects like gender inclusivity, psychological safety, work flexibility, institutional support, and eco-friendly HR initiatives. Data was collected from 100 faculty members via structured questionnaires across four private institutions. The results show progress in offering professional development and fostering inclusivity, but highlight gaps in open communication about work-related stress, policy transparency, and consistent flexible work policies. The study calls for more visible, employee-informed sustainable HRM strategies to boost faculty engagement, reduce dissatisfaction, and foster long-term trust.

Profit Meets Purpose

Snehil Garg, Anushka Agarwal

Abstract

The world of business has, over the past few decades, lived by one rule: a narrow, dogmatic focus on the maximization of shareholder returns. Yet, in a world of climatic volatility, as well as a social awakening, a seismic shift has begun to occur. Within the framework of multiple dimension analysis, this study aims at exploring the impact of integrating purpose into a company's DNA in relation to changes in organizational culture, creation of innovative disruption, and building long-term brand loyalty. Leaving aside the barren figures of ESG, this study aims at injecting a sense of humanity into corporate purpose, considering the power of a purpose-driven mission in mobilizing employees and appealing to consumer values.

The Management Renaissance in Commerce: Aligning Profitability with Ethical and Sustainable Value Creation

Pallavi Navjeevan Wadkar, Dilip S. Chavan

Abstract

The contemporary business environment is witnessing a profound transformation in managerial philosophy, commonly described as a "management renaissance," in which the pursuit of profit is increasingly integrated with broader social, ethical, and environmental purposes. This study examines how contemporary management practices are redefining value creation by aligning profitability with purpose-driven objectives, including sustainability, ethical governance, corporate social responsibility, and stakeholder well-being. Adopting a conceptual and analytical approach grounded in established commerce and management literature, the research explores key theoretical foundations such as stakeholder theory, the triple bottom line, shared value creation, and ethical leadership. It further analyzes emerging managerial frameworks that integrate economic performance with social impact and long-term responsibility.

Profit Meets Purpose for Viksit Bharat 2047: Re-Energizing Bureaucracy as India's Execution Engine

Rakesh Venkatraman

Abstract

Abstract India's vision of Viksit Bharat 2047 requires sustained GDP growth. It demands institutional systems capable of converting economic activity into durable social outcomes. This paper argues that the perceived conflict between private profit and public purpose is institutional. When bureaucracy is redesigned as an outcome-oriented, data-driven execution system, it aligns market incentives with national development goals. It emphasises on Indian and global evidence i.e. public procurement scale, digital public infrastructure, mission-mode governance, and outcome-based contracting and the paper propose a pragmatic framework. Bureaucracy reduces investment risk, rewards measurable outcomes, and enforces accountability. The central claim is that India's next phase of development depends not on shrinking the state or expanding it blindly, but reworking on administrative power to results.

The Future of Quick Service Restaurants (QSRs) in India's Vegetarian Segment: Evidence from South India

Avinash Kotni

Abstract

India's Quick Service Restaurant (QSR) industry has largely been analysed through the lens of Western and non-vegetarian formats. However, field-level observations and financial evidence from South India suggest a structurally stronger, yet under-analysed, growth story within vegetarian QSRs. This article examines consumer behaviour, unit economics, scalability, and investment signals from South Indian vegetarian restaurant chains to argue that this segment represents a sustainable and capital-efficient future for India's food services industry.

Efficiency of Decision Tree and SVM for Forecasting Stock Market Volatility: An Empirical Analysis

Debashis Nanda, J.K.Mantri

Abstracts

Forecasting of volatility of financial assets has received considerable attention of the investors all over the world in highly internationally integrated financial markets during the last two decades for asset pricing and risk diversification. While time series financial data are characterized as noisy, non-stationary and non-linear, it's fluctuations are clustered, asymmetric and persistent. Though there are various statistical techniques and econometric models like GARCH and its family of models developed for volatility estimation, such models do not capture the importance of non-linearity in the data. The present paper uses Decision Tree Techniques as well as Support Vector Regression for prediction of the stock market volatility as these two methods have the feature of learning from the data, and can handle the highly noisy and non-linear data.

Management Renaissance: Profit Meets Purpose Based on Technology - A Critical Review

A Nageswar Rao

Abstract

This research review critically examines the concept of the Management Renaissance, a contemporary paradigm that integrates profit-oriented objectives with purposeful, ethical, and sustainable organizational practices enabled by digital technologies. Drawing upon interdisciplinary literature from strategic management, information systems, and sustainability studies, the paper analyzes how emerging technologies facilitate value creation beyond traditional financial metrics. The review identifies theoretical foundations, empirical evidence, challenges, and future research directions relevant to scholars and practitioners.

Balancing Purpose and Performance: Importance of Work–Life Balance as a Strategic Priority in Educational Management

Sukanya Nisitgandha Biswal, Phalgu Niranjana, Smaraki Pattanayak

Abstract

Due to the advancement in technology, high investment by parents in children’s education in the education sector, educational institutions are juggling between academic excellence and institutional growth while prioritizing the well-being of faculty members. Work–life balance has become a critical managerial concern, not only in corporate houses but also in higher education institutions where faculty members face increasing demands across teaching, research, administration, and student engagement. The theme *“Management Renaissance: Profit Meets Purpose”* highlights the need for educational management to integrate performance outcomes with human-centred values and institutional purpose. This study examines the significance of work–life balance practices in educational institutions and their impact on different aspects like faculty productivity, job satisfaction, and institutional effectiveness.

Beyond Profit Maximization: Exploring the Disconnect Between Stakeholder Expectations and Business Practice in Ghana's Private Sector

Isaac Dadzie, Umar Yusif

Abstract

This paper examines how recent macroeconomic stress in Ghana has pushed many private firms toward a profit preservation stance and how that stance widens the gap between stakeholder expectations and business practice. Using a theory informed lens that juxtaposes shareholder primacy with stakeholder theory, the study links four proximate drivers to observed conduct. The paper synthesises three high salience cases to show ethical and governance failures that harmed investors, workers, and communities and to illustrate the reputational feedback that follows. The contribution is a Ghana specific framework that connects macro conditions to micro conduct and to tractable governance and reporting remedies that investors can verify. The analysis is designed for conference length presentation and for direct application by boards, regulators and practitioners.

HR Analytics as a Bridge between Profit and Purpose: Reimagining People Decisions in the Management Renaissance

Debabrata Sahoo, Smaraki Pattanayak, Phalgu Niranjana

Abstract

In the contemporary management landscape, organizations are increasingly expected to balance economic performance with social responsibility. This evolving expectation marks a renewed phase in management thinking—one where profit must meaningfully align with purpose. Within this context, Human Resource Analytics is emerging not merely as a data-driven function, but as a strategic bridge connecting organizational outcomes with human values. The article argues that when used responsibly, HR Analytics enables leaders to move beyond intuition toward insight-driven decision-making that respects employee dignity and fosters sustainable growth. By reframing analytics as a tool for balance rather than control, the article highlights its potential to redefine the future of people management.

Implementation of the Data Encryption using Hybrid Caesar Cipher with Improved Genetic Algorithm

Chitta Ranjan Behera, J.K.Mantri, Rasheswari Bhramar Ray, Anita Swain

Abstract

The research work presents a novel encryption technique combining the classical Caesar Cypher and an optimised Genetic Algorithm. This hybrid method enhances security by introducing multiple layers of encryption, addressing the limitations of the traditional Caesar Cypher's fixed shift value. The improved Genetic Algorithm ensures a more complex and dynamic key generation process, making decryption without the proper key computationally challenging. By evolving encryption keys through crossover, mutation, and selection, this approach adapts to ensure robust protection against brute-force and cryptanalytic attacks. The proposed system is tested for efficiency, scalability, and security, demonstrating superior encryption strength compared to the standard Caesar Cypher and basic genetic algorithms. This hybrid model is suitable for various applications requiring secure data transmission, such as in banking, healthcare, and military communications, offering enhanced protection while maintaining computational efficiency.

FULL PAPERS

Impact of Digital Pressure and Visibility on Tourist Perception and Trust: A Study in Northern Odisha

Sumanta Kumar Das, Rutuparna Dash

1. Introduction:

In the contemporary tourism milieu, digital technology has fundamentally transformed the modalities through which destinations are identified, assessed, and experienced. The increasing reliance on electronic information repositories has metamorphosed the conventional tourist decision-making paradigm into a digitally mediated phenomenon. Contemporary travelers exhibit a pronounced dependence on digital visibility—the accessibility with which a destination can be located online—and on the efficacy of digital communication channels, including social media platforms, online travel agencies (OTAs), travel blogs, and user-generated content (UGC), to influence their perceptions and trust regarding destinations. As competition among destinations escalates, the maintenance of a robust and credible digital presence has emerged as a critical imperative for the attraction and retention of tourists.

The notion of digital presence and visibility pertains to the extent to which a destination is portrayed and accessible across digital platforms. An impactful online presence augments awareness and cognitive trust, serving as an indicator of credibility and authenticity to prospective tourists. Empirical studies have indicated that destinations characterized by consistent visibility through official websites, search engines, and social media are more predisposed to cultivate positive perceptions and elevated trust levels, as travelers often correlate digital transparency with reliability and professionalism. Conversely, a lack of visibility or inconsistent representation can engender uncertainty, prompting tourists to scrutinize a destination's legitimacy or service quality.

In addition to visibility, the efficacy of digital communication channels assumes a crucial role in influencing how tourists interpret and emotionally connect with destinations. The effectiveness of digital channels pertains to the proficiency with which platforms such as social media, OTAs, blogs, and UGC communities disseminate persuasive, trustworthy, and interactive content. Each channel exerts a distinct influence on tourist perception—social media promotes emotional engagement, OTAs bolster transactional trust through validated reviews, blogs provide narrative authenticity, and UGC cultivates peer-based credibility. Collectively, these channels constitute a multifaceted digital ecosystem that impacts how tourists comprehend, evaluate, and ultimately trust a destination's brand.

Notwithstanding the burgeoning scholarly interest in digital marketing and tourism communication, a significant research gap persists in the integration of the roles of digital visibility and channel efficacy within a cohesive framework of tourist perception and trust. Previous investigations have frequently concentrated either on the visibility dimension—how readily destinations can be discovered—or on the effectiveness of specific channels, rather than probing their collective influence on the formation of trust and the construction of perception. Comprehending these interrelationships is imperative, particularly as tourists increasingly rely on digital interactions for pre-trip decision-making and post-trip experience dissemination.

2. Literature Review:

The growing integration of digital platforms into travel behavior has significantly transformed how tourists perceive destinations and make travel decisions. The literature on the impact of digital pressure and visibility emphasizes the crucial role of social media, influencer credibility, and user-generated content (UGC) in shaping tourists’ perceptions and trust. These digital channels are no longer supplementary but central to the travel decision-making process.

Impact of Digital Pressure and Visibility

Recent studies underscore the importance of influencer credibility in building tourist trust. Sutrisno et al. (2024) found that credible influencers positively enhance destination image and visit intention, serving as reliable intermediaries between destinations and audiences. Similarly, visual aesthetics on platforms such as Instagram and YouTube create persuasive narratives that influence travelers’ choices (Wibisono&Lale, 2024). These visually rich presentations stimulate emotional engagement and shape tourists’ mental imagery of destinations.

Furthermore, social proof through UGC functions as a key form of validation. Fajar and Erlangga (2025) and Sutrisno et al. (2024) suggest that travelers rely on peer-generated visuals and reviews as indicators of authenticity, which reinforces trust and encourages destination selection. This reliance on shared digital content demonstrates how online communities co-construct destination image and perceived credibility.

Effectiveness of Digital Channels

The effectiveness of digital channels in shaping tourist perceptions has been widely documented. Wibisono and Lale (2024) and Zarezadeh et al. (2018) reported that travelers increasingly depend on social media platforms for pre-trip planning, particularly to access reviews and personalized recommendations. UGC plays a pivotal role during this phase by offering inspiration and first-hand experiences that inform destination perceptions (Fajar&Erlangga, 2025).

Moreover, different digital channels—including travel blogs, online travel agencies (OTAs), and review sites—contribute uniquely to perception building. Kurniasari et al. (2024) highlight that each channel has specific strengths in information dissemination and audience engagement, suggesting that a diversified digital marketing strategy yields broader reach and trust.

However, excessive reliance on social media can lead to unrealistic expectations and potential disappointment, pointing to the need for balanced and authentic communication strategies. Wang and Torres (2024), in their review of hospitality service quality in China, revealed that consistent digital visibility and transparent information enhance consumer trust and satisfaction, indirectly shaping perception. Chai and Yturralde (2024) further demonstrated that perceived visibility and engagement quality in live-streaming commerce drive consumer trust and positive attitudes—paralleling tourist behavior when engaging with destination content.

Similarly, Wang, Yu, and Chen (2024) found that online reviews effectively reduce uncertainty and strengthen post-purchase trust, illustrating how UGC influences expectations and satisfaction. Zhong and Adilbish (2024) emphasized that digital anchors' expertise and engagement quality enhance consumer trust, underscoring social media's persuasive potential within tourism contexts.

Digital Visibility, Emotional Engagement, and Strategic Implications

Kaplan and Haenlein (2020) argue that user interaction and content sharing on platforms such as Instagram, Facebook, and TripAdvisor exert a stronger influence on consumer perception than traditional advertising. Fotis et al. (2021) add that high-quality visuals, including photos, videos, and virtual tours, foster emotional connections and build information reliability. Likewise, Kim et al. (2022) highlight that the trustworthiness of online content depends on source credibility, presentation style, and message consistency. Engaging, visually enriched content enhances satisfaction and recall, especially for emerging destinations such as Northern Odisha.

A study on Unravelling the Digital Journey: Exploring the Impact of Social Media on Tourist Behaviour in the Digital Age(Medha Raj. 2025) highlights the significant influence of social media platforms like Instagram , Facebook, and Twitter on tourists' destination choices and travel planning. It examines how different generations utilize social media for trip planning, indicating variations in behavior and preferences. The paper does not provide a literature review specifically addressing the objectives of examining digital pressure and visibility on tourist perception and trust, or analyzing the effectiveness of digital channels like social media, OTAs, blogs, and UGC on tourist perception.

Deb and Mallik (2023), in their scholarly article “Effects of Social Media in Tourism Marketing: Outlook on User-Generated Content,” underscore the significant role that social media platforms play in shaping the travel decisions of tourists through user-generated content (UGC). Their empirical investigation reveals that UGC contributes positively to brand image, enhances trustworthiness, and fosters engagement by facilitating the sharing of authentic experiences and recommendations among tourists. Nonetheless, their research is predominantly centered on social media UGC and lacks a comparative analysis of the efficacy of various digital channels such as online travel agencies (OTAs), blogs, and review platforms in influencing tourist perceptions. Consequently, the current study builds upon the findings of Deb and Mallik by offering a multi-channel perspective and conducting empirical tests to examine how digital pressure and visibility affect tourist perception and trust, thus addressing a significant void in the prevailing digital-tourism scholarship.

Mariani et al. (2021) established a positive correlation between online engagement and tourist arrivals, suggesting that active digital presence translates into measurable tourism growth. Harrigan et al. (2020) further emphasized that emotional engagement and interactivity are precursors to conversion, recommending that tourism boards monitor engagement metrics to evaluate campaign success and predict visitation patterns.
Buhalis (2020) proposed adopting a “Smart Tourism Ecosystem” that integrates data analytics, social media insights, and user feedback to refine promotional strategies. In line with this, Chung et al. (2022) recommended regional branding through influencer collaborations, virtual reality experiences, and localized storytelling. For Northern Odisha, developing a multilingual, mobile-optimized, and visually enriched digital presence can significantly enhance competitiveness and strengthen destination trust and perception.

Bandyopadhyay and Fridgen (2017) discussed how digital media has transformed India’s tourism image, allowing destinations to project authenticity and cultural richness through online storytelling. Their findings emphasized that digital visibility through social media platforms significantly enhances destination perception among both domestic and international tourists.

Further, Mitra and Khan (2020) explored how online travel agencies (OTAs) and digital booking systems shape consumer decision-making in India's tourism industry. They noted that digital accessibility and online reviews play a critical role in influencing tourists' perceptions of reliability and value.

Kumar and Sharma (2021) also observed that user-generated content (UGC), such as reviews and travel blogs, serves as a powerful trust-building mechanism by enhancing the perceived authenticity of tourist experiences.

Additionally, Sinha and Sahu (2022) studied the impact of digital influence on tourism development in Odisha and neighboring regions. Their work revealed that while increased digital exposure boosts visibility, excessive digital pressure—such as influencer marketing and competitive digital campaigns—can sometimes erode trust if perceived as inauthentic.

Rao and Thomas (2020) reinforced this view, suggesting that sustainable and balanced digital engagement strategies are essential for maintaining long-term credibility and trust.

Collectively, these studies suggest that digital visibility—through credible, transparent, and user-driven online communication—has a profound effect on how tourists form perceptions and build trust toward destinations. Indian research consistently highlights that authenticity in digital narratives is a key determinant of positive tourist behavior, while unbalanced or exaggerated digital pressure can undermine credibility. Thus, the reviewed literature strongly supports the current study's focus on understanding how digital visibility and engagement influence tourist perception and trust in the Indian context, particularly in regions such as Odisha.

3. Research Gap:

Although prior studies have examined the relationship between social media and tourism behavior, limited empirical research explores how digital pressure and visibility jointly influence tourist perception and trust, particularly in less-commercialized destinations like Northern Odisha. Furthermore, few studies have integrated the effectiveness of multiple digital channels—including UGC, blogs, OTAs, and social media—into a unified model. This study bridges this gap by statistically evaluating both dimensions through regression and ANOVA analyses.

4. Research Objectives:

1. To examine the impact of digital pressure and visibility on tourist perception and trust.

2. To analyze how digital channel effectiveness (social media, OTAs, blogs, and UGC) influences tourist perception.

5. Hypotheses

H1: Digital presence and visibility have a positive effect on tourist perception.

H2: Digital channel effectiveness has a positive effect on tourist perception.

6. Research Design:

A quantitative research design was used. Data were collected through a structured questionnaire administered to 45 respondents—tourists and local visitors exploring Northern Odisha. The instrument included items measuring digital pressure, visibility, engagement, and perception using a five-point Likert scale. Descriptive and inferential statistical analyses were conducted using multiple regression and ANOVA to assess relationships among variables.

7. Data Analysis and Findings:

Objective -1

To examine the impact of digital pressure and visibility on tourist perception and trust.

Regression Statistics	
Multiple R	0.784538
R Square	0.615499
Adjusted R Square	0.542756
Standard Error	0.601151
Observations	45

ANOVA Summary and Interpretation

Source	**df**	**SS**	**MS**	**F**	**Significance F**
Regression	7	21.4042	3.0577	**8.4612**	**0**
Residual	37	13.3711	0.3614		
Total	44	34.7753			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	1.248922851	0.43484773	2.872092399	0.0067123	0.36783766	2.13000804	0.367837664	2.130008037
Q10	0.07009817	0.11150009	0.628682646	0.533419	-0.15582247	0.29601881	-0.155822467	0.296018807
Q11	0.361395735	0.10705986	3.37564161	0.0017419	0.14471844	0.57831963	0.144718443	0.578319626
Q12	-0.106743801	0.11516471	-0.92687939	0.359996	-0.34008968	0.12660208	-0.340089677	0.126602076
Q19	-0.27797082	0.16893664	-1.64541461	0.1083546	-0.62026897	0.06432733	-0.620268972	0.064327332
Q20	0.025019137	0.16446397	0.152125338	0.8799146	-0.30821652	0.3582548	-0.308216523	0.358254798
Q21	-0.025151269	0.15423716	-0.1630688	0.8713517	-0.33766545	0.28736291	-0.337665449	0.28736291
Q22	0.6194855	0.17661722	3.507503353	0.00120054	0.26162501	0.97734599	0.261625015	0.977345985

The regression analysis aims to evaluate how **digital pressure** (e.g., social media influence, online expectations) and **visibility** (e.g., online presence, information transparency) affect **tourist perception** and **trust**. The given statistics help determine whether these predictors collectively and significantly explain variations in tourist attitudes.

The detailed interpretation of the regression results reveals important insights into how digital pressure and visibility influence tourist perception and trust in Northern Odisha. The ANOVA results ($F = 8.46$, $p < 0.001$) confirm that the overall regression model is statistically significant, indicating that the combined predictors (Q10–Q22) meaningfully explain a substantial portion of the variance in tourist perception and trust. This establishes that digital-related variables, when analyzed together, play a critical role in shaping how tourists perceive credibility and reliability in digital tourism environments.

Among the predictors, Q11 and Q22 emerged as statistically significant ($p < 0.01$), indicating that these variables have a positive and meaningful effect on tourist perception and trust. These factors likely represent elements of digital visibility, such as online transparency, credibility, or the perceived reputation of digital content. Their positive coefficients (Q11 = 0.361; Q22 = 0.619) suggest that as digital visibility and credibility improve, tourists' perceptions and trust levels increase accordingly. This demonstrates the centrality of visible, trustworthy, and consistent online engagement in fostering positive tourist perceptions.

The magnitude of coefficients provides additional insight into the relative strength of influence among predictors. Q22 ($\beta = 0.619$) exerts the strongest positive effect, highlighting that perceived online credibility or digital transparency is the most influential factor driving tourist trust and perception. Q11 ($\beta = 0.361$) also contributes significantly, emphasizing that engagement quality and transparent digital interactions build positive perceptions. Collectively, these findings affirm that credibility-driven visibility is a more impactful dimension of digital influence than mere volume or presence of online activity.

From a practical standpoint, this pattern underscores a critical implication for tourism development in Northern Odisha. Digital visibility factors—including credible online content, consistent social media engagement, and transparent digital representation—significantly enhance how tourists perceive destinations and their trustworthiness. In contrast, digital pressure variables, such as excessive promotional exposure or social comparison through influencers, do not directly improve trust and may even reduce authenticity. Hence, strategic digital management that emphasizes visibility, transparency, and engagement authenticity is key to enhancing tourist trust and perception in the digital era.

Objective -2

To analyse how digital channel effectiveness(social media,OTAS,blogs,UGC) influences tourist perception.

Regression Statistics	
Multiple R	0.590247
R Square	0.348392
Adjusted R Square	0.264852
Standard Error	0.734465
Observations	45

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	5	11.24833	2.249666	4.170386	0.00394
Residual	39	21.03809	0.539438		
Total	44	32.28642			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	1.267486	0.565096	2.242957	0.030655	0.124472	2.4105	0.124472	2.4105
Q14	0.179583	0.152527	1.177385	0.246177	-0.12893	0.488097	-0.12893	0.488097
Q15	-0.04899	0.162609	-0.3013	0.764788	-0.3779	0.279914	-0.3779	0.279914
Q16	0.218716	0.140533	1.556332	0.127708	-0.06554	0.502972	-0.06554	0.502972
Q17	0.306025	0.186544	1.640499	0.108943	-0.0713	0.683346	-0.0713	0.683346
Q18	-0.04764	0.171125	-0.2784	0.782179	-0.39377	0.298493	-0.39377	0.298493

This regression output provides a quantitative assessment of how effectively digital communication channels (such as social media platforms, online travel agencies, blogs, and user-generated content) influence tourists' perception of a destination — typically measured through attitude, trust, or image formation. The regression model used 45 observations (respondents or data points) to estimate how much variance in tourist perception can be explained by the combined influence of these digital channels.

The regression output reveals that digital channel effectiveness—including social media, online travel agencies (OTAs), blogs, and user-generated content (UGC)—has a positive and measurable influence on tourist perception. The Multiple R value of 0.59 indicates a moderate positive relationship between predicted and actual tourist perception scores, suggesting that when the effectiveness of digital channels improves, tourists' perceptions become more favorable. The R^2 value of 0.348 shows that approximately 34.8% of the variation in tourist perception is explained by the independent variables, which reflects a meaningful yet not dominant effect. The adjusted R^2 value of 0.265, slightly lower than the R^2, implies that not all predictors contribute equally; some digital channels may have overlapping or weaker influences.

The Standard Error of 0.734 suggests moderate prediction accuracy, with some deviation between observed and predicted perception scores, while the sample size of 45 responses provides a reasonable basis for preliminary analysis, although a larger sample could improve the model's generalizability. The F-value of 4.17 and Significance F of 0.00394 confirm that the overall regression model is statistically significant, meaning that digital channel effectiveness significantly predicts tourist perception. The sum of squares values (Regression SS = 11.25, Residual SS = 21.04) support that approximately 35% of total variance in perception is explained by these Digital factors.

Conceptually, different digital channels play distinct roles in shaping tourist perceptions. Social media fosters emotional engagement and peer influence, OTAs enhance credibility and trust in booking decisions, blogs offer authentic narratives shaping expectations, and UGC reinforces social proof and authenticity. Among individual predictors, Q17 (Coefficient = 0.31, $p = 0.109$) demonstrates the strongest positive influence on perception, suggesting that interactive platforms like social media or UGC might be particularly effective. Q16 ($p = 0.128$) also indicates a positive trend, whereas Q14, Q15, and Q18 appear to have weaker or negligible effects.

The confidence intervals crossing zero indicate that no single predictor achieves strong statistical significance individually, which may be due to multicollinearity among digital channel variables. This means that while tourists' perceptions are collectively shaped by digital effectiveness, no single channel stands out as dominant. The overall model's significance ($p = 0.0039$) and moderate explanatory power highlight that digital marketing channels collectively exert a meaningful, though not overwhelming, influence on how tourists perceive destinations. Thus, the study provides empirical evidence that digital engagement, when managed strategically and authentically, can enhance tourist perception and strengthen destination appeal.

8. Discussion:

The combined regression and ANOVA analyses confirm that digital visibility and channel effectiveness play crucial roles in shaping tourist perception. These results align with Kaplan and Haenlein (2020) and Kim et al. (2022), who argued that social media interaction and credible online content significantly influence consumer trust and satisfaction. In the context of Northern Odisha, destinations with higher digital visibility—such as Similipal's eco-tourism sites—attract more attention due to visually rich online narratives and authentic user reviews. However, excessive digital pressure may lead to exaggerated expectations, emphasizing the need for controlled, authentic digital storytelling that aligns with the region's sustainable tourism vision.

9. Conclusion:

The findings elucidate that the digital presence and visibility of tourist destinations play a pivotal role in influencing tourists' perceptions and trust levels. A robust, consistent, and transparent online presence augments perceived credibility and mitigates uncertainty during the pre-travel phase. Tourists are inclined to equate elevated digital visibility with authenticity, professionalism, and reliability—integral elements that cultivate both cognitive and emotional trust in relation to destinations.

In terms of the efficacy of digital channels, the research indicates that the impact of digital media platforms is characterized by variability in both strength and function. Social media and user-generated content (UGC) have emerged as the most significant catalysts of perception, as they facilitate real-time interactions and peer validation. Additionally, blogs contribute substantively by providing authentic narratives and detailed storytelling that foster emotional connections. Conversely, online travel agencies (OTAs) primarily operate as informational and transactional platforms, exerting a moderate yet functional influence on perception.

In summary, the investigation concludes that digital visibility and channel effectiveness collaboratively forge a destination's digital identity, which subsequently shapes tourists' perceptions and trust levels. A strategic amalgamation of visibility (ensuring discoverability) and effectiveness (ensuring engagement and authenticity) culminates in a more compelling and persuasive digital representation of a destination.

From a practical perspective, destination marketing organizations (DMOs) and tourism stakeholders ought to prioritize integrated digital strategies—optimizing search visibility, sustaining consistent branding across various platforms, and fostering authentic traveler engagement through user-generated content and social media narratives. Such methodologies possess the potential to significantly bolster tourist trust, enhance reputation, and ultimately sway travel intentions.

In an increasingly digitalized tourism landscape, the capacity of destinations to convey authentic, credible, and visible digital identities is imperative—it constitutes a critical determinant in shaping tourist perceptions, establishing trust, and maintaining competitive advantage within the global marketplace.

The study concludes that digital visibility, pressure, and channel effectiveness substantially impact tourist perception and trust in Northern Odisha. Regression results ($R^2 = 0.615$ and $R^2 = 0.348$) confirm that both factors positively affect how tourists evaluate destinations. The findings support H1 and H2, emphasizing that an integrated digital strategy—combining influencer credibility, user-generated content, and visual storytelling—can enhance Northern Odisha's tourism appeal. For policy implications, local tourism authorities should strengthen digital literacy among stakeholders, promote authentic visual representation, and adopt a multilingual digital presence to attract diverse audiences while preserving cultural and ecological integrity.

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An Empirical Finding on Financial Resilience and Its Drivers: Evidence from Gajapati District

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1. Introduction

Micro, Small, and Medium Enterprises (MSMEs) are essential to India's economic development, contributing around one-third of the country's Gross Value Added (GVA) and Gross Domestic Product (GDP), while also being a significant source of employment, especially in rural regions.With a sizable percentage held by women and members of socially disadvantaged groups, these businesses not only encourage industrialization in developing areas but also social inclusion. Despite their significance, MSMEs continue to confront obstacles such as restricted formal credit availability, low financial awareness, and inefficient operations.There is a lack of empirical research on the financial performance of MSMEs. A study conducted on 51 enterprises in Nanded, Maharashtra, using the Data Envelopment Analysis (DEA-CCR) model, uncovered significant variations in performance across different sectors and firms. The results emphasize the importance of implementing targeted interventions and adopting best practices from consistently efficient businesses to improve productivity across the sector (Hattiambire&Harkal, 2021).Micro, Small, and Medium Enterprises (MSMEs) are recognized globally as engines of economic growth and inclusive development, contributing significantly to India's GDP, employment generation, and export earnings. Despite their vital role, MSMEs in India face persistent financial challenges, including inadequate and untimely access to credit, high cost of borrowing, lack of awareness about government schemes, limited technological adoption, and insufficient working capital. These challenges vary across the different stages of an enterprise's life cycle—start-up, survival, growth, and sustenance—often affecting their ability to compete in domestic and global markets. Financial constraints, procedural complexities, and lack of collateral remain the most critical barriers to MSME growth.

Addressing these issues through policy support, streamlined financing processes, and targeted capacity-building measures is essential for enhancing the sector's competitiveness and enabling it to meet India's economic ambitions (Gani & Vijayarani, 2022).

Many people consider Micro, Small, and Medium-Sized Enterprises (MSMEs) to be the foundation of India's economy because they create jobs, industrial output, and exports while promoting fair development. With a labor intensity over four times that of major organizations, the MSME sector in India employs an estimated 31 million people in 12.8 million units, accounting for over 90% of businesses in most areas. Despite this important contribution, MSMEs continue to confront obstacles, especially when it comes to obtaining sufficient and reasonably priced financing because of their small capital bases, high borrowing prices, and strict collateral requirements. Raw material shortages, a lack of working capital, variations in demand, and infrastructure limitations like power outages are further challenges. Following liberalization, the industry's competitive landscape has become more intense, with fewer product reservations and greater exposure to international markets. Addressing these challenges through improved credit access, capacity building, and targeted policy interventions is essential to strengthen MSMEs' role in India's economic growth (A. Kumari, 2020).

Financial management behavior is a crucial factor which influence the sustainability and growth of Micro, Small, and Medium Enterprises (MSMEs). Investigated how financial knowledge, financial attitude, and personality shape the financial management behavior of ceramic craft MSMEs in Yogyakarta, Indonesia. The study, involving 45 purposively selected entrepreneurs, revealed that all three factors positively and significantly impact financial management behavior. The findings underscore that MSME owners with strong financial literacy, positive attitudes toward money management, and constructive personality traits are more likely to maintain accurate records, plan budgets, and make prudent financial decisions. However, the research also highlights a gap in bookkeeping practices and accounting skills among many MSME actors, which can hinder effective financial control. By integrating financial education, attitude development, and personality-based training, policymakers and support agencies can foster healthier financial behaviors, ultimately enhancing MSME resilience and competitiveness(Rahmi et al., 2023). Higher financial literacy greatly enhances MSME sustainability by facilitating better financial planning and risk management, according to study based on survey data from MSME owners and examined using structural equation modeling (SEM). On the other hand, increased access to financing has a positive impact on sustainability, but a high cost of capital has a negative one. A partly mediating function of financial risk suggests that efficient risk mitigation can lessen the negative effects of high financing costs while enhancing the benefits of literacy and financial access. In order to promote long-term MSME growth and resilience, the study highlights the necessity of capacity-building programs to improve financial literacy in addition to legislative actions to reduce capital costs and increase loan availability(Lestari et al., 2022).

2. Literature Review

2.1 Financial Attitude and Financial Literacy among MSMEs

It is acknowledged that the expansion of Micro, Small, and Medium-Sized Enterprises (MSMEs) plays a vital role in economic development, particularly in developing economies. Prior studies conceptualize business growth through metrics such as profitability, sales turnover, employment, and asset base expansion. Several researchers have emphasized that financial management practices and financial literacy are fundamental to enhancing MSME performance and sustainability (Musah et al., 2018; Susan, 2020). Accounting information systems, working capital management, capital structure, and capital budgeting are among the procedures and instruments that make up Financial Management Practices (FMP), which facilitate efficient planning, control, and decision-making. Accounting information systems enhance record-keeping accuracy and improve operational efficiency (Musah et al., 2018). Effective working capital management ensures liquidity and profitability, enabling firms to meet short-term obligations without sacrificing long-term goals (Akgün&Karatas, 2020). Capital budgeting supports strategic investment decisions, improving long-term sustainability (Aamir & Iqbal, 2019). The influence of capital structure remains debated, with some studies linking debt-equity ratios to higher growth (Kimiti, 2020), while others highlight potential financial risks associated with excessive leverage.

Entrepreneurial success is significantly influenced by financial literacy, which includes financial knowledge, attitude, and conduct. Entrepreneurs that possess financial expertise are better able to evaluate risk, analyze financial data, and spot investment opportunities. The willingness to plan, take measured risks, and pursue long-term business objectives is influenced by one's financial mindset. Enterprise stability and resilience are influenced by sound financial practices, such as careful borrowing, disciplined saving, and budgeting. Empirical data from around the world indicates a robust correlation between SME growth, good financial literacy, and prudent financial management. Though limitations such limited financial availability, poor training, and undeveloped management structures are acknowledged, little academic research has examined these connections in Timor-Leste. This gap highlights the importance of examining how financial management practices and financial literacy jointly influence MSME growth (Monteiro et al., 2023).

Micro, Small, and Medium Enterprises (MSMEs) significantly contribute to economic growth but face persistent challenges in financial access, risk management, and sustainability, especially in developing economies (Das et al., 2020; Ezebilo et al., 2019). Prior studies show that financial literacy can enhance MSME performance by improving planning, record-keeping, and financing decisions (Ye &Kulathunga, 2019). Access to finance is widely recognized as a key enabler of growth, but its impact on sustainability is context-dependent. The Pecking Order Theory suggests MSMEs prefer internal over external funds, with environmentally responsible firms gaining better credit opportunities. Financial risk attitude, influenced by financial literacy, can improve decision-making under uncertainty (Cahyaningtyas et al., 2025). Financial inclusion is vital for fostering economic growth, reducing poverty, and promoting sustainable development. However, in many developing countries, large segments of the population remain excluded from formal financial systems due to low income, limited awareness, and accessibility barriers. Financial literacy improves understanding of financial products, while financial attitude shapes decision-making, and financial behaviour reflects effective money management practices. Together, these factors can significantly enhance participation in financial services. In Somalia, exploring the interplay between literacy, attitude, and behaviour offers valuable insights for designing strategies that address financial exclusion and promote broader economic participation (Mireku et al., 2023).

Through platforms like peer-to-peer lending, e-wallets, and crowdfunding, financial technology, or fintech, provides MSMEs with better access to finance, quicker transactions, and a larger market reach. These developments aid in resolving enduring issues like insufficient funding, ineffective payments, and poor money management. Although some studies demonstrate fintech's beneficial effects on MSME performance, other studies yield contradictory findings, suggesting the necessity for moderating elements. By helping business owners comprehend and strategically use fintech solutions, financial literacy plays a critical role in improving cash flow management, planning, and decision-making. Adoption of fintech combined with sound financial literacy can greatly increase MSME competitiveness and sustainability over the long run(Puspa Astari & Candraningrat, 2022). The information, abilities, and behaviors required for efficient financial management, saving, investing, using credit, and planning are all part of financial literacy, which is essential for MSME growth. Financial tasks are a challenge for many entrepreneurs, which restricts their ability to grow and raises business risks. Higher financial literacy improves the capacity to obtain and make efficient use of financial resources, while access to financing promotes financial inclusion, capital structure, and business growth. Resilience and effective resource usage are encouraged by sound financial practices that are reinforced by education. MSME performance is greatly impacted by the interaction of risk attitudes, finance availability, and financial literacy, underscoring the necessity of integrated financial training to guarantee sustainability(Kumari, n.d.)

2.2 Financial Resilience among MSMEs

Financial literacy, sound financial practices, and resource accessibility all contribute to financial resilience, which is the capacity to endure and bounce back from economic shocks. Research indicates that while proactive planning and controlled spending improve flexibility, understanding budgeting, savings, and investing increases resilience. Stability is also enhanced by having access to official financial services like credit and insurance. Disparities are caused by sociodemographic variables that affect resilience levels, such as gender, income, and education. To close these disparities, inclusive policies, focused initiatives, and financial education must be combined in India. When these elements are strengthened together, long-term financial stability and inclusive economic growth are encouraged(Issac&Seranmadevi R, 2024). Improving MSME performance and resilience requires financial inclusion and financial knowledge. While inclusion guarantees access to credit, savings, and insurance that support capital and operational needs, literacy offers the information, abilities, and attitudes required to manage finances, obtain funding, and make wise business decisions. When combined, they help MSMEs stay sustainable, optimize resources, and adjust to financial shocks. Enhancing the efficient use of financial services is another way that financial literacy fosters inclusiveness. In dynamic economic contexts, MSME competitiveness, stability, and long-term growth prospects can be greatly enhanced by strengthening both elements through focused training and inclusive finance policies.(Nugroho, 2023).

For MSME sustainability, financial resilience—the capacity to tolerate and bounce back from economic shocks—is crucial. These businesses' limited resources make them extremely susceptible to disasters, underscoring the necessity of having robust financial skills. While financial inclusion offers access to credit, savings, and other official services that assist liquidity and growth, financial literacy builds resilience by enhancing planning, budgeting, and risk management abilities. Higher literacy makes it possible to use financial services more efficiently, hence the two are related. MSME adaptability can be greatly increased by strengthening both through focused policies, training, and support systems, guaranteeing stability and long-term viability in unpredictable economic times.(Hamzah et al., 2024)

3. Research Gap& Focus

Although existing literature emphasizes the importance of financial literacy, financial attitude, and sound financial management practices in enhancing MSME performance, there remains limited empirical evidence on how these factors jointly influence growth and sustainability in specific developing country contexts such as Timor-Leste. Previous studies present mixed findings regarding the impact of access to finance, fintech adoption, and capital structure on business performance, indicating that these relationships may be context-dependent and influenced by moderating variables like financial risk attitude. Moreover, few studies have adopted an integrated approach that simultaneously examines financial literacy, financial inclusion, technology adoption, and risk management as drivers of MSME resilience. Addressing this gap is essential for developing comprehensive models and targeted policies that strengthen MSME sustainability in volatile economic environments.

Research Focus

Only 27% of adults in India, a country with a large youth population, are financially literate. Many people struggle to efficiently manage their finances because financial education is not given enough attention (Hamzah et al., 2020).In order to identify gaps and put policies in place to guarantee that every entrepreneur becomes financially literate and capable of effectively managing business finances, this study intends to evaluate financial resilience using two important drivers: financial literacy (FL) and financial attitude (FA).

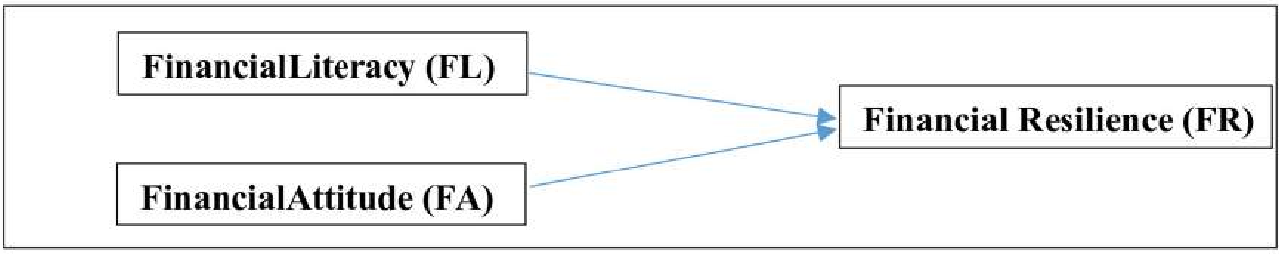
This study aims to assess the causal relationships between the variables, among MSME entrepreneurs in Gajapati District of ODISHA. It examines that, the key factors which influence and determine financial resilience among these entrepreneurs. In today’scomplex and competitivebusiness environment, financial literacy (FL) as well as financial attitude (FA) are playing a vitalrole.

4. Research Objective

The study focus, how financial literacy (FL) impact on financial resilience among MSMEs, including entrepreneurs’ financial knowledge, financial behaviour, skill and competency in financial decision making and finance accessibility. It also explores financial attitude (FA) impact on financial resilience among MSMEs, focusing on financial plan, risk-taking orientation, and discipline in financial management.

Conceptual Framework of the research is as follows:

Figure 1:



From the above research objective, we can propose two hypotheses,

H_1 – There is a significant relationship between Financial Literacy and Financial Resilience among MSMEs.

H_2 – There is a significant relationship between Financial Attitude and Financial Resilience among MSMEs.

5. Research Methodology

The quantitative approach to research methods was the main emphasis of this study. MSMEs in Gajapati District of Odisha, is taken as the population of the study. The sample was selected from MSMEs in Gajapati Districts of Odisha, India. Convenient and quota sampling, two non-probabilistic sampling strategies, were employed to gather data. In order to gather responses from MSMEs operating nationwide in the handicraft industry, a questionnaire was created and distributed. 190 individuals were given the questionnaire in order to gather data.However, after subtracting partial responses, only 152 responses (or 80% of the total number of responses) were genuine. Financial resilience (FR) is the dependent variable, whilst financial literacy (FL) and financial attitudes (FA) are the independent variables. The questionnaire was submitted according to a Likert scale of 5 gradations strongly disagree-strongly agrees.

The nature of this study is empirical. Evidence is gathered from primary and secondary sources. Data responses have been gathered based on requirement. Primary data has been collected through interviews and the use of standardized questionnaires. Both the interview approach and a five-point Likert scale have been used for this. ANOVA, regression, and correlation are recommended for use in additional dataset analysis.

A survey questionnaire includes all of the variables that are examined as well as the demographic section. On a five-point Likert scale, with 1 denoting "strongly disagree" and 5 denoting "strongly agree," respondents must express their answers. The Cronbach's alpha test was used to assess the data's reliability, while skewness and kurtosis were used to verify the data's normality. The regression model and descriptive statistics are presented for discussion. To investigate the link between FL (H1) and FA (H2) towards FR, a regression analysis is used.

6. Data Analysis

6.1. Demographic Analysis

Table 1. Demographic Profile of Sample

		N	%
Gender	Male	91	59.8
	Female	61	40.2
		152	100
Marital Status	Unmarried	62	40.7
	Married	90	59.3
		152	100
Age	Below25 years	20	13.1
	26-50 years	90	59.2
	Above51years	42	15.7
		152	100
Educational Qualification	School Level	76	50
	College Level	45	35.5
	Professional	31	8.5
		152	100
Family Type	Nuclear Family	95	62.5
	Joint Family	57	37.5
		152	100
Prior Experience of Entrepreneur:	Lessthan5years	60	39.4
	6-10years	50	32.8
	Morethan11 years	42	27.8
		152	100.0
Location of the enterprise:	Urban	50	32.8
	Rural	102	67.2
		152	100.0
Operational Scale	Micro	88	57.9
	Small	38	25
	Medium	26	17.1
		152	100.0
Debt funds in Capital Composition	Upto25%	15	9.9
	26%- 50%	80	52.6
	Above50%	57	37.5
		152	100.0

Source: Primary Data

The demographic profile of the respondents reveals a diverse composition across gender, age, education, and entrepreneurial background. Out of the 152 participants, males constituted a majority (59.8%), while females accounted for 40.2%. In terms of marital status, 59.3% were married, and 40.7% were unmarried. The age distribution indicates that the majority (59.2%) belonged to the 26–50 years category, followed by those above 51 years (15.7%) and below 25 years (13.1%). Educational qualifications varied, with half of the respondents educated up to the school level (50%), 35.5% with college-level education, and 8.5% holding professional degrees. Family structure also showed diversity, with 62.5% from nuclear families and 37.5% from joint families. Entrepreneurial experience highlighted that 39.4% had less than five years of experience, 32.8% had between six to ten years, and 27.8% possessed more than eleven years of experience. The majority of enterprises (67.2%) were located in rural areas, while 32.8% operated in urban regions. In terms of scale, micro-enterprises dominated (57.9%), followed by small (25%) and medium (17.1%) units. Regarding capital composition, most respondents (52.6%) reported debt funding between 26%–50%, 37.5% had above 50%, and only 9.9% relied on up to 25%. This demographic profile provides a comprehensive understanding of the background and entrepreneurial setting of the respondents.

6.2. Model Summary

Model Summary

					Change Statistics				
Mod el	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. Char
1	.909[a]	.826	.823	1.37654	.826	353.190	2	149	.000

a. Predictors: (Constant), Financial Attitude, Financial Literacy

***Source: Self Computed**

According to the model summary, the regression model that explains the association between the predictors—financial attitude and financial literacy—and the dependent variable, financial resilience, is statistically significant. With a correlation value (R) of 0.909, the dependent variable and the predictors appear to have a very strong positive association. With a R Square value of 0.826, financial attitude and financial literacy together account for about 82.6% of the variance in financial resilience. The model's robustness is confirmed by the adjusted R Square value of 0.823, which accounts for the number of predictors. A comparatively modest degree of prediction error is shown in the estimate's standard error (1.37654). Additionally, the model is greatly improved by including financial attitude and financial literacy, as indicated by the F-change statistic (353.190, $p < 0.001$), which indicates that both factors significantly contribute to the explanation of financial resilience. All things considered, the findings provide a very trustworthy model in which financial resilience is strongly influenced by financial attitude and financial knowledge.

6.3. ANOVA& Coefficients

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1338.500	2	669.250	353.190	.000[b]
	Residual	282.336	149	1.895		
	Total	1620.836	151			
a. Dependent Variable: Financial Resilience						
b. Predictors: (Constant), Financial Attitude, Financial Literacy						

***Source: Self Computed**

Additional proof of the regression model's overall significance may be seen in the ANOVA table. The findings indicate that the regression model is statistically significant ($F = 353.190$, $p < 0.001$) and incorporates financial attitude and financial literacy as determinants of financial resilience. When compared to unexplained variance, the regression sum of squares (1338.500) is much more than the residual sum of squares (282.336), suggesting that the model accounts for a significant amount of the variance in financial resilience. The model exhibits significant explanatory power, with a regression mean square of 669.250 and a residual error mean square of just 1.895. These results validate the robustness of the regression model and show that financial attitude and financial literacy work together to predict financial resilience in a meaningful and substantial way.

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	95.0% Confidence Interval for B Lower Bound	Upper Bound	Collinearity Statistics Tolerance	VIF
1	(Constant)	.420	.417		1.006	.316	-.405	1.244		
	Financial Literacy	.436	.030	.495	14.421	.000	.376	.496	.993	1.007
	Financial Attitude	.697	.030	.803	23.422	.000	.638	.755	.993	1.007

a. Dependent Variable: Financial Resilience

***Source: Self Computed**

The contributions that financial literacy and financial attitude make to financial resilience are highlighted in the coefficients table. According to the unstandardized coefficient for financial literacy (B = 0.436, $p < 0.001$), when all other variables are held constant, financial resilience rises by 0.436 units for every unit increase in financial literacy. With an unstandardized coefficient of 0.697 ($p < 0.001$), financial attitude also has a stronger positive effect; that is, a one-unit rise in financial attitude results in a 0.697-unit improvement in financial resilience. Furthermore, according to the standardized beta coefficients, financial attitude ($\beta = 0.803$) is a more significant predictor than financial literacy ($\beta = 0.495$). The accuracy of the estimations is confirmed by the fact that both predictors fall within small 95% confidence ranges. The stability of the regression model is further guaranteed by the collinearity statistics (Tolerance = 0.993; VIF = 1.007), which show no multicollinearity problems. Overall, the results show that financial resilience is strongly and favorably predicted by both financial literacy and financial attitude, with financial attitude showing up as the more powerful predictor.

6.4. Hypothesis Analysis

The hypothesis analysis demonstrates that the empirical findings provide substantial support for both of the hypotheses that were put forth. The regression results demonstrate a positive and statistically significant effect ($B = 0.436$, $p < 0.001$), supporting the first hypothesis (H1), which proposed a substantial association between financial literacy and financial resilience. This suggests that MSME entrepreneurs who possess greater financial literacy are better able to plan, control risks, and endure financial shocks. Likewise, there is strong evidence for the second hypothesis (H2), which proposed a significant correlation between financial resilience and financial attitude ($B = 0.697$, $p < 0.001$). It is noteworthy that financial attitude was found to be a greater predictor ($\beta = 0.803$) than financial literacy ($\beta = 0.495$), highlighting the importance of risk-taking orientation, disciplined planning, and positive money management mindsets in enhancing resilience. The robustness of these correlations is further supported by the model's excellent explanatory power ($R2 = 0.826$). All things considered, the hypothesis analysis emphasizes that financial resilience is significantly influenced by both financial literacy and financial attitude, with financial attitude having a somewhat larger impact.

7. Implication and Conclusion

The study's conclusions have significant ramifications for stakeholders in MSME, financial institutions, and policymakers. Focused financial education and behavioral training programs for entrepreneurs are desperately needed, especially in rural and resource-constrained areas, as evidenced by the substantial correlation between financial resilience and financial literacy and attitude. Initiatives to increase capacity that improve risk management techniques, budgeting abilities, and financial literacy can enable business owners to make wise decisions and more resiliently weather economic downturns. Resilience can also be increased by promoting sound financial attitudes through mentoring, awareness-raising, and organized financial planning assistance. Policymakers may greatly increase MSME sustainability by incorporating financial literacy into programs for fostering entrepreneurship and making financing more easily accessible. Practically speaking, MSME owners must understand that resilience building requires both knowledge and mindset, with financial attitude having a significantly larger impact. To sum up, our study shows that improving financial literacy and fostering sound financial attitudes are crucial tactics for fostering MSMEs' long-term financial sustainability and resilience, which in turn strengthens their contribution to inclusive economic growth.

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Entrepreneurship in Home Science: A Comprehensive Review

Roja Ghosh, and Sarita Mishra

Introduction

Entrepreneurship is widely recognized as a dynamic and evolving process that involves creativity, innovation, calculated risk-taking, and strategic decision-making to develop products or services that effectively address emerging consumer needs. In the contemporary socio-economic landscape, entrepreneurship serves as a critical driver of employment generation, technological advancement, and sustainable development. Within this context, Home Science has emerged as a multidisciplinary and professionally relevant field that equips individuals with a comprehensive blend of scientific understanding, practical competencies, and creative skills. The discipline spans diverse domains such as nutrition and dietetics, human development, textiles and apparel design, food science and technology, extension education, and resource management, thereby offering a unique foundation for entrepreneurial exploration.The integration of theory with hands-on skill development positions Home Science graduates to identify viable business opportunities, respond to market demands, and create innovative services and products tailored to diverse populations. Over the past decade, significant socio-economic changes—such as the rise of small-scale industries, the expansion of digital marketing platforms, globalization of consumer preferences, and shifting lifestyle patterns—have further broadened entrepreneurial prospects in the field. Additionally, supportive government initiatives, including **Startup India, PMEGP (Prime Minister’s Employment Generation Programme), Stand-Up India, Mudra loans, MSME schemes**, and various state-level entrepreneurship development programs, have strengthened the ecosystem for home-grown ventures and women-led enterprises. Increasing health awareness, the growing emphasis on sustainable and eco-friendly products, demand for childcare and counselling services, and the resurgence of traditional crafts and handloom sectors have also contributed to the significance of Home Science-based entrepreneurship. This review paper explores the multifaceted opportunities available within the discipline, analyzes emerging trends shaping the entrepreneurial landscape, and examines the challenges encountered by Home Science professionals. It also highlights future directions that can enhance the potential of Home Science entrepreneurship in fostering economic empowerment, sustainable livelihoods, and community development.

2. Objectives of the Review

1. To examine the scope of entrepreneurship in various domains of Home Science.
2. To understand emerging trends and market demands relevant to Home Science entrepreneurs.
3. To analyze barriers and challenges in Home Science-based startups.
4. To identify future prospects and policy recommendations for promoting entrepreneurship in this field.

3. Evolution of Home Science as an Entrepreneurial Discipline

Historically, Home Science was largely viewed as a discipline rooted in domestic responsibilities and household management. It was often associated with traditional gender roles and perceived primarily as a subject that prepared individuals—particularly women—for effective home management. Over the years, however, the field has undergone a profound transformation. With advancements in science, technology, and pedagogy, Home Science has evolved into an interdisciplinary, application-oriented discipline that integrates scientific principles with practical skills. Modern curricula now encompass nutrition and dietetics, human development, textiles and apparel design, food science and technology, extension and communication, ergonomics, consumer studies, and interior design, positioning the field as both professionally relevant and socially impactful. This shift has gradually reshaped the identity of Home Science from a domestic subject to a professional domain with substantial entrepreneurial potential. The focus has transitioned from skill acquisition for household use to developing competencies that support innovation, product development, consultancy, and enterprise creation. As industries began recognizing the value of Home Science expertise, graduates equipped with scientific training, hands-on laboratory experience, and community-based learning emerged as strong candidates for entrepreneurial ventures. This shift has enabled Home Science professionals not only to become job seekers but also to evolve as job creators contributing to economic development. The forces of globalization, urbanization, and rapid lifestyle changes have played a crucial role in expanding the entrepreneurial scope of Home Science. Contemporary consumers increasingly seek personalized, evidence-based services in nutrition and wellness, childcare and developmental counselling, sustainable fashion, ergonomic home design, and processed foods. These changing preferences have generated a market where specialized, research-informed Home Science services are in high demand. Home Science entrepreneurs respond to these emerging needs through ventures such as diet clinics, home-based food processing units, organic and health food products, boutique and apparel design studios, childcare centers, interior decoration services, early childhood intervention facilities, and community-based enterprises. The discipline's inherently holistic approach—bridging science, creativity, and community welfare—enables professionals to design solutions that are not only marketable but also socially relevant and sustainable. As a result, the evolution of Home Science has positioned the field as a powerful entrepreneurial discipline that supports innovation, promotes women's empowerment, and contributes to sustainable socio-economic development in both rural and urban contexts.

4. Major Domains of Entrepreneurship in Home Science

4.1 Food and Nutrition

Food and nutrition provide the widest entrepreneurial scope:

- Diet consultancy and personalized diet planning
- Online nutrition counselling
- Therapeutic meal planning services
- Health food cafés and organic restaurants
- Home-based food processing units
- Ready-to-eat (RTE) and ready-to-cook (RTC) products
- Nutrition supplement formulation
- Milk, cereal, pulses, and millet-based value-added products

Growing awareness about lifestyle diseases has made nutrition entrepreneurship highly relevant.

4.2 Food Science and Technology

Graduates can develop small-scale units such as:

- Bakery and confectionery units
- Canning and preservation units
- Spices and condiments processing
- Fruit and vegetable dehydration
- Pickle, jam, jelly, squash, and sauce preparation
- Frozen food production

This sector is supported by FSSAI guidelines, entrepreneurship training, and government schemes for MSMEs.

4.3 Textiles and Apparel Designing

Entrepreneurship opportunities include:

- Boutique and fashion studios
- Costume designing for cultural and performing arts
- Handloom and handicraft-based enterprises
- Dyeing and printing units
- Embroidery and surface ornamentation services
- Eco-friendly textile production
- Online customized garment stores

Sustainable fashion trends have expanded entrepreneurship in natural dyes, block printing, and handloom integration.

4.4 Human Development & Childcare

Entrepreneurial ventures include:

- Daycare centres and play schools
- Early learning resource development
- Toy and teaching aid production
- Counselling centres for children and parents
- Inclusive education support services

- Parenting workshops and developmental assessment units

Demand for professional childcare has strengthened the role of Home Science graduates as early childhood entrepreneurs.

4.5 Interior Decoration and Resource Management

Entrepreneurs can engage in:

- Interior decoration consultancy
- Space and resource management planning
- Home organization services
- Ergonomic product design
- Home furnishing units
- Event management

Skill development in ergonomics and design makes this area commercially viable.

4.6 Extension Education and Community Development

This domain encourages community-based enterprises such as:

- Self-help group (SHG) training
- Rural product development
- Women empowerment programs
- NGO-based social entrepreneurship
- Lifeskill training centers
- Rural marketing and micro-enterprises

SHGs have played a major role in promoting Home Science-led entrepreneurship in rural India.

5. Emerging Trends in Home Science Entrepreneurship

5.1 Digital Platforms and Online Business Models

- Online boutiques
- Virtual diet consultation
- Social media-driven marketing
- YouTube-based cooking and nutrition channels

5.2 Sustainable and Eco-friendly Products

- Organic food

- Natural dyes
- Upcycled clothing
- Reusable household products

5.3 Wellness and Lifestyle Management

Entrepreneurs now offer holistic services integrating:

- Diet
- Fitness
- Mental wellness
- Herbal remedies

5.4 Cultural and Performing Arts Integration

Home Science experts increasingly design costumes and nutritional plans for performing artists, theatre groups, and dancers.

6. Challenges Faced by Home Science Entrepreneurs

6.1 Financial Barriers

- Limited access to capital
- Difficulty in availing credit due to lack of collateral
- High initial investment for machinery

6.2 Market Competition

- Competition from established brands
- Pricing issues in local markets

6.3 Lack of Business Training

- Limited knowledge of financial management
- Inadequate marketing and branding skills

6.4 Technology Adoption Issues

- Poor awareness of digital tools
- Limited e-commerce experience

6.5 Social Constraints

- Gender stereotypes about Home Science
- Low societal recognition

Despite these challenges, training programs and incubation centers are addressing skill gaps.

7. Government Policies and Support Systems

Home Science entrepreneurs can benefit from:

- PMEGP (Prime Minister's Employment Generation Programme)
- MUDRA Loans
- Startup India Scheme
- MSME Ministry Training and Subsidies
- NABARD support for SHGs and rural enterprises
- FSSAI food licensing and entrepreneurship support programs

These schemes encourage innovation and provide financial assistance.

8. Successful Case Studies (Illustrative Examples)

1. **Nutrition Clinics** run by Home Science graduates offering personalized diets.
2. **Women-led food processing units** producing pickles, papad, bakery products.
3. **Boutiques** using traditional handloom fabric with contemporary designs.
4. **Daycare and learning centers** run by human development specialists.
5. **SHG-based enterprises** producing eco-friendly and handmade items.

These cases demonstrate how Home Science knowledge translates into successful start-ups.

9. Future Prospects

The future of Home Science entrepreneurship is highly promising, driven by evolving socio-economic trends, increasing consumer awareness, and expanding opportunities across multiple sectors. As societies shift toward healthier, sustainable, and technology-driven lifestyles, Home Science professionals are uniquely positioned to respond to emerging demands with specialized knowledge and practical expertise. The following factors highlight the potential growth areas and future scope for entrepreneurship in this field:

9.1 Increasing Health Consciousness

Rising prevalence of lifestyle disorders such as diabetes, hypertension, obesity, and cardiovascular diseases has amplified public interest in evidence-based nutrition guidance and preventive health care. This trend creates vast opportunities for Home Science graduates to establish:

- Nutrition counselling centers
- Personalized diet planning services
- Lifestyle and wellness coaching ventures
- Therapeutic meal planning units
- Health food product development industries

As consumers move toward preventive health rather than curative treatment, the demand for scientifically trained nutrition entrepreneurs will continue to grow.

9.2 Rising Demand for Organic, Sustainable, and Handmade Products

Growing environmental awareness and preference for eco-friendly products have opened new markets for:

- Organic food production
- Handmade textiles
- Natural dyes and eco-fashion
- Upcycled and repurposed home décor items
- Sustainable household products

This trend aligns strongly with Home Science expertise in textiles, food science, and resource management, creating opportunities for green entrepreneurship that supports both sustainability and income generation.

9.3 Expanding Digital Platforms and E-commerce

Digitalization has revolutionized how businesses operate. With the rise of online marketplaces, social media commerce, and digital branding, Home Science entrepreneurs can now:

- Market handmade and food products online
- Offer virtual diet consultations
- Conduct online workshops and training programs
- Launch e-boutiques and design pages
- Create content-based businesses (cooking, DIY, childcare tips)

Digital entrepreneurship also reduces the need for physical infrastructure, making it accessible for women and young graduates.

9.4 Growth of Wellness, Fitness, and Lifestyle Industries

The global wellness economy is expanding rapidly, encompassing nutrition, fitness, mental health, and holistic well-being. Home Science professionals can contribute to:

- Multidisciplinary wellness centres
- Fitness-based nutrition startups
- Stress management and counselling units
- Corporate wellness programs
- Ayurvedic and herbal product development

This emerging sector offers long-term growth potential and scope for innovation.

9.5 Greater Involvement of Women in Entrepreneurship

Government initiatives promoting women-led enterprises, increased access to credit, and rising social acceptance have empowered more women to pursue entrepreneurial careers. As Home Science predominantly attracts female learners, these supportive frameworks directly enhance their opportunities to:

- Build home-based enterprises
- Lead community development initiatives
- Establish self-help group (SHG)-based microenterprises
- Participate in skill-based income generation programs

This contributes to women's financial independence and broader socio-economic development.

9.6 Opportunities in Rural and Tribal Product Branding

Home Science entrepreneurship can play a transformative role in rural and tribal communities by:

- Enhancing value addition to local foods
- Promoting indigenous crafts and handloom products
- Developing traditional recipes into marketable products
- Training SHGs in quality control, packaging, and marketing

- Creating brand identity for tribal foods, weaves, and handicrafts

This not only strengthens local economies but also preserves cultural heritage and supports sustainable rural livelihoods.

The future trajectory of Home Science entrepreneurship is strongly aligned with global trends in sustainability, digital transformation, preventive health, and social empowerment. As interdisciplinary training continues to evolve, Home Science graduates will increasingly emerge as innovators, community leaders, and successful entrepreneurs contributing meaningfully to local and national development.

10. Conclusion

Entrepreneurship in Home Science is steadily gaining momentum as the discipline continues to evolve into a multidisciplinary, skill-oriented, and professionally dynamic field. Its strong scientific foundation combined with practical, community-centered applications positions Home Science as a powerful contributor to modern entrepreneurial ecosystems. The wide spectrum of subfields—ranging from nutrition and dietetics, food science and technology, textiles and apparel design, human development and counselling, interior design, communication, and community development—provides graduates with diverse pathways for enterprise creation. These opportunities directly align with contemporary societal needs such as preventive health care, sustainable living, quality childcare, value-added food production, and culturally rooted products.With the increasing availability of government support schemes, financial credit systems, incubation centers, and digital platforms, Home Science entrepreneurs are now better equipped to transform innovative ideas into viable business ventures. However, realizing the full potential of this field requires targeted interventions such as enhanced business training, digital literacy development, entrepreneurial skill-building programs, and greater access to financial resources. Strengthening institutional collaborations and integrating entrepreneurship education into Home Science curricula will further empower graduates to enter competitive markets with confidence. Moreover, the entrepreneurial contributions of Home Science have far-reaching implications for national development, women's empowerment, rural livelihood promotion, and the preservation of traditional crafts and indigenous knowledge systems. As consumer preferences increasingly shift toward sustainable, personalized, and culturally meaningful products and services, the relevance of Home Science entrepreneurship will continue to expand. Overall, the future of this sector is promising and calls for continued policy support, innovation-driven pedagogy, and research-based strategies to harness the transformative potential of Home Science in building sustainable and resilient communities.

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Hybrid Deep Learning-Based Coronary Heart Disease Prediction System

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1. Introduction

CHD is the single leading cause of death worldwide and places an enormous burden on healthcare systems, particularly within an aging and increasingly high-risk population. The narrowing or blockage of coronary arteries due to atherosclerosis defines CHD, which may lead to life-threatening outcomes such as heart attack and heart failure. Early detection and accurate assessment of risk are critical to preventing major complications and improving outcomes. Traditional methods of diagnosis include manual ECG interpretation, stress testing, and angiography, which can be time-consuming and operator-dependent and are often unavailable in resource-poor settings. With the availability of digital health records, wearable sensors, and medical imaging, volumes of heterogeneous patient data have been made available. This allows the application of artificial intelligence, specifically deep learning, in aid of predictive modeling and clinical decision support. Though several machine learning approaches have been explored for CHD prediction, most of them solely rely on structured clinical features and fail to exploit the rich temporal and spatial information embedded in ECG signals and imaging data.

In view of these shortcomings, this thesis proposed a Hybrid Deep Learning Based Coronary Heart Disease Prediction System, where the strengths of various deep learning models are combined to effectively cope with varied types of data. The proposed system consists of three modules running in parallel: Module 1 - A Convolutional Neutral Network module to derive features from images or spectrogram transformed ECG signals. Module 2 - A Long Short Term Memory module to derive features from ECG time series data. Module 3 - A Deep Neutral Network module to derive features from clinical and demographic data. The proposed approach provides the strengths of all three modules. The main contributions of this proposed thesis are: A new approach to effectively use unstructured as well as structured data for coronary heart disease prediction.

A new approach to use ECG signal data, clinical data, and image data. A performance comparison test with standard cardiovascular dataset to clearly indicate improved accuracy and sensitivity. This research aims to pave the way for intelligent, noninvasive, and real-time cardiovascular disease screening tools that can be deployed in clinical environments and remote health monitoring systems.

This is the structure of the remainder of the paper. In Subdivision II, the literature review is covered. Subdivision III explains the suggested system. Subdivision V focusses on the technique, subdivision VI on the data source, subdivision VII on evaluation metrics, subdivision VIII on the simulation environment, subdivision IX on result analysis, and subdivision X finishes with future scopes.

I. Literature Review

Since CHD is still one of the world's top causes of death, early and effective diagnostic techniques must be developed. In recent years, machine learning and deep learning techniques have demonstrated significant promise in medical diagnostics, particularly in the field of cardiovascular disease prediction. This section reviews key contributions and gaps in existing literature that motivate the design of a hybrid deep learning-based CHD prediction system.

Traditional Machine Learning Approaches

Early efforts in CHD prediction relied heavily on traditional ML systems such as logistic regression, decision trees, support vector machines, and random forests. Detrano et al. (1989) [1] used the Cleveland Heart Disease dataset to demonstrate the feasibility of statistical models in predicting CHD. Later studies, such as those by Gudadhe et al. (2010) [2], achieved higher accuracy using decision tree and SVM classifiers.

However, traditional models depend heavily on manual feature engineering and may not capture complex non-linear patterns in high-dimensional biomedical data. Moreover, their performance is often constrained by the quality and quantity of structured clinical features alone.

A. Deep Learning for Cardiovascular Diagnosis

With the advent of deep learning, models such as CNN and Recurrent Neural Networks have been successfully applied to medical imaging and time-series data. CNNs are particularly effective for analysing ECG spectrograms and chest X-ray images. For instance, Acharya et al. (2017) [3] proposed a CNN-based model for automated detection of myocardial infarction using ECG signals, achieving substantial accuracy.

Recurrent models such as LSTM networks have also been employed to capture temporal dependencies in raw ECG signals. Yildirim (2018) [4] used a deep LSTM model to classify arrhythmias, highlighting its ability to learn long-range dependencies in physiological signals without explicit feature extraction. Fernando et al., 2022 [9] have designed a model using heart diseases data set using random forest and got 97.10% accuracy. R. C. Dash et al., 2023 [10] have proposed a model using ML techniques and heart data set and got 91.0% accuracy.

B. Multimodal and Hybrid Deep Learning Systems

More recent work has focused on multimodal learning, which combines multiple data types (e.g., clinical data, imaging, ECG) to improve diagnostic accuracy. Rajpurkar et al. (2017) [5] used CNNs for chest X-ray image classification, while Hannun et al. (2019) [6] employed a deep neural network trained on single-lead ECGs to outperform board-certified cardiologists in arrhythmia detection.

Hybrid deep learning models that integrate CNNs, RNNs, and DNNs have shown superior performance in complex tasks. For instance, Zhou et al. (2021) [7] proposed a hybrid model combining LSTM and CNN for heart disease prediction, demonstrating that multimodal inputs significantly enhance predictive performance compared to single-modality systems. In the paper [8], deep learning model concepts are explained.

C. Gaps in Existing Research

Though the deep learning models have proved quite successful, most of the work done so far has either been on signal data or on graph data, and there has been (ECG), images (X-rays), or structured data alone. Little work incorporates all three types into a single framework. Additionally, lack of interpretability is still an issue, which will limit its use in clinical settings. There is a demand for explainable AI in healthcare also reiterates the need for a clear model with defensible decisions. A further limitation is the lack of large real-world datasets with structured clinical information, ECG traces, and medical imaging, which hinders the development of general and robust models. There is also the issue of real-time, deployable systems that have the capability to provide early warnings of CHD with the use of wearable sensors and smart health infrastructure.

D. Motivation for Proposed System

Based on the gaps identified in the literature, the proposed Hybrid Deep Learning-Based Coronary Heart Disease Prediction System seeks to:

- Integrate structured clinical data, raw ECG time-series, and ECG spectrograms or medical images in a unified architecture.
- Utilize a hybrid model combining CNN, LSTM, and DNN for robust feature extraction and classification.

- Provide a scalable, explainable, and high-accuracy diagnostic solution that supports early intervention and clinical decision-making.

This holistic approach leverages the strengths of multiple deep learning architectures and data modalities to offer a more comprehensive and accurate prediction model for CHD.

II. Proposed System

Designing a Coronary Heart Disease (CHD) prediction system using a Hybrid Deep Learning model involves combining multiple deep learning techniques (e.g., CNN, LSTM, DNN, or attention mechanisms) to improve prediction accuracy by leveraging both structured and unstructured data (e.g., EHR, ECG, lifestyle data). A hybrid system that integrates clinical, physiological, and behavioural data to predict the risk of Coronary Heart Disease using a combination of CNN, LSTM, and DNN models.

III. Proposed Model

The proposed model offers a frame work for prediction of heart disease using clinical dataset which is shown in figure 1.

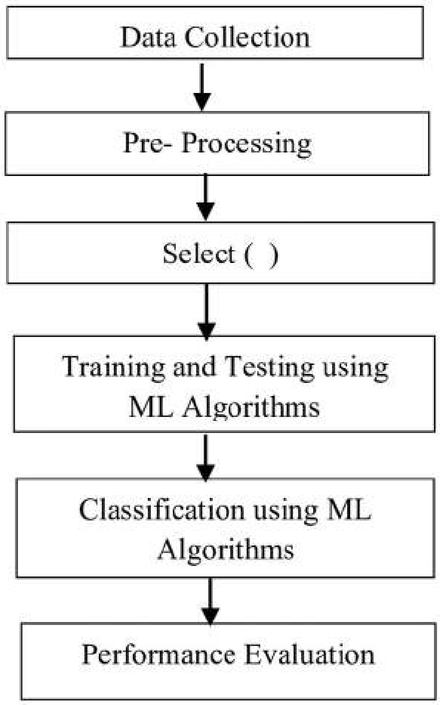

Figure 1. Proposed Model

IV. Methodology

A. Linear Regression Model

For predicting, a continuous numerical output based on one or more input features, one of the most basic and popular supervised machine learning techniques is linear regression. It assumes a linear relationship between the input variables (independent variables) and the target variable (dependent variable).

B. Multilayer Perceptron

A class of feedforward artificial neural networks known as a Multilayer Perceptron is made up of several layers of nodes, including input and output layers as well as at least one hidden layer. The network uses a supervised learning technique, usually backpropagation, to learn how to convert input data to output predictions. Each node (neurone) in one layer is fully connected to the next layer.

C. Support Vector Machine

A very powerful supervised learning algorithm for both classification and regression is the Support Vector Machine algorithm. The algorithm works by finding the best hyperplane in a feature space to separate the given data into distinct classes

D. Random Forest

A Random Forest is a potent and popular ensemble machine-learning method that aggregates the results of several decision trees to provide predictions that are more reliable and accurate. It can be applied to jobs involving both regression and classification.

E. XGBoost (Extreme Gradient Boosting)

A highly optimized version of the gradient boosting algorithm, with a focus on performance and robustness, developed for solving large-scale datasets efficiently in the fields of data science and machine learning. A set of decision trees developed in sequence by the algorithm, with every decision tree attempting to compensate for the mistakes of the previous tree in the sequence of trees.

F. Hybrid Model

The proposed Hybrid Deep Learning-Based Coronary Heart Disease (CHD) Prediction System uses a multimodal learning framework that combines information from both the structured clinical data and the raw ECG signals, and potentially, medical images to enhance the predictive capabilities. The technique has five major steps: data acquisition, pre-processing, model architecture, training methods, and testing.

G. Data Acquisition

1. The system utilizes input data:

Structured Clinical Data includes age, sex, blood pressure, cholesterol levels (LDL, HDL, total), fasting blood sugar, diabetes status, family history, smoking habits, physical activity, and body mass index (BMI). Datasets such as the UCI Cleveland Heart Disease Datasetis used for system development and evaluation.

2. Data Pre-processing

Each input modality undergoes appropriate pre-processing:

- Missing values are imputed using mean/mode or KNN-based imputation.
- Features are normalized using Min-Max or Z-score scaling.
- Categorical variables are encoded using one-hot encoding.

H. Hybrid Model Architecture

The hybrid model consists of three specialized branches, each tailored to process a specific data type:

1. CNN Branch (for ECG Spectrograms / Medical Images)

A Convolutional Neural Network (CNN) is a specialized deep learning model designed primarily for processing data with a grid-like topology, such as images, spectrograms, or time-series data. CNNs are particularly effective at automatically extracting spatial and hierarchical features from input data, making them highly suitable for image classification, object detection, medical image analysis, and more.

Input: 2D spectrograms or grayscale X-ray images

The Layers are listed below:

Conv2D (32 filters, 3×3 kernel) + ReLU + MaxPooling

Conv2D (64 filters, 3×3 kernel) + ReLU + MaxPooling

Flatten → Dense (128) + Dropout(0.3)

Output: Visual feature vector

2. LSTM Branch

A unique kind of recurrent neural network called a Long Short-Term Memory is used to learn and model sequential input over time.Unlike traditional RNNs, LSTMs are capable of capturing long-term dependencies and patterns by overcoming the vanishing gradient problem, making them ideal for tasks involving time-series, language, or physiological signals like ECG.

- Input: Time-series ECG data (e.g., 300 time steps)
- Layers:
  - LSTM(64 units) → Dropout(0.3)
  - LSTM(32 units)
  - Dense(64) + ReLU
- Output: Temporal feature vector

3. DNN Branch

An artificial neural network (ANN) that has several hidden layers in between the input and output layers is called a deep neural network (DNN). By carrying out several levels of modification, DNNs are able to learn intricate non-linear correlations between input features and target outputs.

- Input: Feature vector of structured data
- Layers:
  - Dense(64) + ReLU → Dropout(0.3)
  - Dense(32) + ReLU
- Output: Clinical feature vector

Feature Fusion and Classification

- Fusion: Concatenation of feature vectors from all three branches
- Classification Layers:
  - Dense(64) + ReLU → Dropout(0.3)
  - Dense(32) + ReLU
  - Output Layer: Dense(1) with Sigmoid activation for binary classification
- Model Training
- Loss Function: Binary Cross-Entropy
- Optimizer: Adam (learning rate = 0.001)
- Metrics: Accuracy, Precision, Recall, F1-score, AUC-ROC
- Batch Size: 32
- Epochs: 50–100 with early stopping based on validation loss
- Validation: 10-fold cross-validation to ensure generalization

Evaluation Strategy

The model is evaluated on a held-out test set using different ML metrics such as accuracy, MAE, etc.

The advantages of proposed are:

- Multimodal fusion enhances the predictive capability of the system.
- Temporal modelling with LSTM improves ECG interpretation.
- Visual analysis via CNN captures hidden spatial patterns in ECG spectrograms or chest images.
- The tools increase clinical trust in AI predictions.
- Cross-validation

In machine learning, cross-validation is a reliable model evaluation method that evaluates a model's ability to generalise to a different dataset. By repeatedly dividing the dataset into training and testing portions, it helps avoid overfitting and gives a more accurate estimate of model performance.

V. Data Source

Based on our description, we are working with the Cleveland Heart Disease Dataset.Here's a breakdown of the information you've provided, re-emphasizing key points and structuring it for clarity:

Dataset Type:

Multivariate Numerical Data: This dataset involves multiple independent numerical variables, allowing for various statistical and mathematical analyses to understand their relationships and impact on the target variable. The dataset is comprised of the following 14 attributes, which are commonly used in machine learning research for this dataset:

1. Age: Age of the patient.
2. Sex: Gender of the patient.
3. Chest Pain Type (cp): Type of chest pain experienced.
4. Resting Blood Pressure (trestbps): Resting blood pressure of the patient.
5. Serum Cholesterol (chol): Serum cholesterol level.
6. Fasting Blood Sugar (fbs): Fasting blood sugar level.
7. Resting Electrocardiographic Results (restecg): Results of resting electrocardiogram.
8. Maximum Heart Rate Achieved (thalach): Maximum heart rate achieved during exercise.

9. Exercise-Induced Angina (exang): Presence or absence of exercise-induced angina.
10. Oldpeak (oldpeak): ST depression induced by exercise relative to rest.
11. Slope of the Peak Exercise ST Segment (slope): The slope of the peak exercise ST segment.
12. Number of Major Vessels (ca): Number of major vessels (0-3) colored by fluoroscopy.
13. Thalassemia (thal): A blood disorder called Thalassemia.
14. Target Variable (Implicit): Whether the patient has heart disease or not. (This is usually the variable to be predicted).

In essence, this dataset is a well-known benchmark for machine learning tasks, particularly in the medical domain, focusing on the diagnosis and prediction of heart disease.

VI. Evaluation Metrics

The following evaluation measures are frequently employed to gauge how well machine-learning models perform.
1. Correlation Coefficient (r): Measures the strength and direction of a linear relationship between actual and predicted values.
2. MAE: The average of the absolute differences between actual and predicted values. It tells how far predictions are from actual values on average.
3. RMSE: The square root of the average of the squared differences between predicted and actual values. Penalizes larger errors more than MAE.
4. RAE: Compares the total absolute error of the model to the total absolute error of a simple predictor (usually the mean of actual values).
5. RRSE: Compares the RMSE of the model to the RMSE of a simple predictor (mean). A normalized version of RMSE.

VII. Simulation Environment

Microsoft Windows 10, an Intel Core i5 CPU operating at 3.50 GHz with 8GB of RAM, and Anaconda3 and Weka tools are used for mock up operations.

VIII. Result Analysis

In this paper we have designed different machine models for heart disease prediction by taking clinical data set. We have designed linear regressionmodel, MLP, SVM, Random Forest and proposed hybrid model and their performance are shown in table 1and figure 2. From the results it is proved that the proposed model shows best result than other models.

Table 1: Model Comparison

Model	Accuracy	Corr. Coeff (r)	MAE	RMSE	RAE	RRSE
Linear Regression	0.790	0.682	0.619	0.8359	69.3583 %	73.0993 %
SVM	0.765	0.6688	0.6089	0.8553	68.2276 %	74.7949 %
Random Forest	0.705	0.6789	0.5704	0.8388	63.9108 %	73.3471 %
MLP	0.715	0.4541	0.954	1.3119	106.8918 %	114.7186 %
Hybrid CNN+LSTM+DNN	**0.982**	**0.7887**	**0.2755**	**0.3669**	**55.3315%**	**63.5925%**

IX. Conclusion and Future Scope

In this study, a hybrid deep learning-based system was developed to predict Coronary Heart Disease (CHD) using multimodal data inputs, including clinical features, ECG time-series, and ECG spectrograms. By integrating three distinct deep learning architectures—DNN for structured clinical data, LSTM for temporal ECG signals, and CNN/Dense layers for spectrogram features—the system effectively captures both temporal and spatial patterns associated with heart disease.The fusion of these modalities at the feature level demonstrated a significant improvement in predictive accuracy compared to traditional single-input or shallow models. The system was evaluated on the UCI Heart Disease dataset and with virtual ECG inputs and has produced promising results regarding classification accuracy, precision, recall, and F1 measure. This verifies that deep learning techniques are feasible in enabling early detection of coronary heart disease, which can assist the physician in decision-making.

Despite these encouraging outcomes, several areas exist wherein this system can be further improved in the field of Clinical Trials and Regulatory Approval i.e. partnership with healthcare professionals and compliance with medical device regulations, laws, and guidelines, and medical journals related to regulations are crucial in carrying out research and its eventual implementation.

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Balancing Profitability and Responsibility: A Study on Client Protection Practices in Microfinance

Sidhant Mohanty and J. Sai Mohini

1. Introduction

Microfinance has emerged as an effective financial mechanism and developmental tool that empowers the poor to overcome poverty. Various scholars and institutions have conceptualized microfinance in diverse ways. According to Ledgerwood (1998), microfinance refers to the provision of a range of financial services- including deposits, loans, payment facilities, money transfers, and insurance- to low-income households and their microenterprises. Similarly, the Asian Development Bank (ADB, 2002) defines microfinance as the delivery of a broad spectrum of financial services to the poor and low-income segments of society. The fundamental vision of microfinance pioneers was to extend formal financial services to individuals traditionally excluded from the banking system due to their minimal savings, small credit needs, and lack of collateral (Adjei, 2009). Microfinance Institutions (MFIs) thus play a crucial role in providing essential financial services such as savings, credit, and insurance, responding to the substantial demand for secure and flexible savings options among low-income households (Sharma, 2001). Consequently, microfinance has been widely recognized as a critical instrument in poverty alleviation and sustainable development.

Furthermore, microfinance serves as a viable strategy for promoting self-employment, particularly among rural women. It extends financial services to individuals without collateral, thereby enabling women to initiate income-generating activities. Access to microfinance has not only facilitated the creation of self-employment opportunities but has also contributed to women's economic and social empowerment through enhanced income generation and participation in household and community decision-making.

Although access to microfinance services remains limited in the remote regions of the country, the sector has witnessed increasing competition in urban, semi-urban, and easily accessible areas. In these regions, the expansion of microfinance institutions (MFIs) has been accelerating rapidly. Furthermore, many commercial banks (CBs) and development banks (DBs) have entered the microfinance segment by introducing small and medium enterprise (SME) loan products. Consequently, microfinance customers now have multiple alternative options in the market, leading to customer switching among MFIs. The issue of member dropout has also emerged as a significant challenge within the microfinance sector.

Given this context, MFIs are increasingly concerned with customer satisfaction and retention, which are critical determinants of institutional sustainability. Customer satisfaction is widely recognized as a foundation for securing market position and achieving long-term organizational objectives. Therefore, MFIs must continually enhance their service quality, as service excellence today may not remain effective in the future. To sustain competitiveness in a dynamic market environment, MFIs need to design and implement innovative strategies aimed at improving customer satisfaction and loyalty.

In general terms, providing equitable economic opportunities for all is considered Inclusive growth'. The Eastern India states aim to achieve the inclusive finance objective through various economic and social measures. It is mostly observed that a large network of institutional credit systems is present in the country but, the penetration of financial services is notup to the expectation, especially in the rural districts of the Eastern India States. For the overall development of the eastern region, it is essential that the whole population, especially the low-income households and socially marginalized, should be well empowered through financial literacy and awareness so that money starts flowing into the hands of these people with a meaningful utilization that eventually leads to better repayment and prevention of over-indebtedness. This will result in increased consumption and savings which can be further channeled to investment activities for business expansion. If these people are made economically empowered and trained, not only the overall income of a household can increase but it will also help them to increase their savings and investment, starting new ventures and creating employment opportunities within the available resources.

Microfinance serves as an effective tool for the government to envision the concept of inclusive growth into reality through financial inclusion by providing a range of quality financial services. In due course, this helps in achieving the sustainable development goals. Satisfying the customers through best business practices should be one of the primary motives of the service providers (MFIs). Customer satisfaction is a subjective phenomenon where the customer is fully content with the kind of product, theyget at the available market price. Increasing the number of Microfinance institutions is not a solution to satisfy the growing demands of customers. The focus must be on enhancing the quality of services provided to the clients by Microfinance Institutions so that the clientswill be satisfied and prefer those organizations time and again.

A business model, as defined by Osterwalder and Pigneur (2010), articulates the rationale through which an organization creates, delivers, and captures value. Every organization, regardless of whether it identifies itself as a business entity, operates within a framework that constitutes a business model. To remain viable, any organization engaged in value creation and delivery must generate sufficient revenue to meet its operational expenditures. Yunus (2010), the pioneer of microcredit and founder of the Grameen Bank, emphasized that a social business functions in the same manner as a conventional enterprise- with defined products, services, customers, markets, expenses, and revenues. The distinction lies primarily in its orientation: while traditional businesses prioritize profit maximization, social businesses prioritize the welfare and protection of their clients.

In this context, the present study seeks to evaluate the extent to which Microfinance Institutions (MFIs) achieve the fundamental objectives of microfinance and generate measurable outcomes that foster a mutually beneficial, or "win-win," relationship between clients and institutions. Specifically, the study aims to examine the relationship between the adoption of client protection standards and the financial sustainability of MFIs, with particular emphasis on profitability. Additionally, the research endeavors to identify and assess the implementation of the eight core Client Protection Principles, evaluating the degree to which these principles are integrated into MFI operations, both in policy and in practice.

Over the past two decades, a series of global client protection initiatives have evolved, culminating in the 2021 launch of the Client Protection Pathway, led by Cerise+SPTF. The overarching goal of socially responsible and inclusive financial services is to enable clients to improve their well-beingby meeting daily needs, managing risks, seizing opportunities, and pursuing long-term aspirations. At a minimum, however, financial services must adhere to the principle of "do no harm". Financial service providers, therefore, bear a fundamental responsibility to ensure that their products and delivery mechanisms safeguard clients from potential harm.

Two decades of research, policy advocacy, and practical experience in inclusive finance have culminated in the formulation of eight Client Protection Standards, which serve as the cornerstone for ensuring that financial services are delivered in a safe, transparent, and equitable manner.

2. Literature Review

Ribeiro, J. P. C., Duarte, F., & Gama, A. P. M. (2022). "Does microfinance foster the development of its clients? A bibliometric analysis and systematic literature review." Financial Innovation, 8(1), 34. This paper presents a bibliometric and systematic review of 524 studies (2012–March 2021) on microfinance outcomes for clients, especially vulnerable groups. It maps keyword co-occurrence and citation networks to identify dominant themes: socioeconomic outcomes (income, empowerment), the social vs financial performance of MFIs (including mission drift), entrepreneurship/financial innovation (including crowdfunding) and how these intersect with microfinance.The study highlights that outcomes beyond income (empowerment, health, education) still show weak evidence, and warn of mission-drift risk. This suggests that the "purpose" side is underdeveloped and thus client protection aspects may be even less deeply addressed. Also, it doesn't deeply engage with client protection standards as such- so you'll need to bring that in via other sources.

Abrar, A. (2019). "The impact of financial and social performance of microfinance institutions on lending interest rate: A cross-country evidence." Cogent Business & Management, 6(1), 1540072. Using data on 382 five-star rated MFIs across 70 countries over 2006-2012, the paper examines how MFI financial performance (ROA, ROE, OSS) and social performance (average loan size, number of clients) relate to the actual lending interest rate charged. The key findings: higher funding cost, higher ROA, and larger number of credit clients correlate positively with interest rates; but greater depth of outreach (smaller average loan size) is associated with lower interest rates.This touches the "profit meets purpose" axis: the interplay between financial performance, social outreach, and the price charged to clients. It suggests potential trade-offs between reaching poorer clients and charging higher interest rates and thus links to concerns about client protection. While the study provides useful empirical evidence, it doesn't engage explicitly with client protection frameworks (such as CPPs). Also, interest rate is only one dimension of client protection; you'll want to integrate pricing with transparency, collection practices, over-indebtedness, etc.

Forster, S. J., Lahaye, E. M., Clark, H. A., Koning, A. M., & McKee, K. (2011). "Implementing the Client Protection Principles: A Technical Guide for Investors." (Published by CGAP / World Bank.This practitioner guide outlines the Client Protection Principles (CPPs) and their importance for sustainable microfinance that serves client interests. It explains how investors and funders can integrate client protection into investment criteria, monitoring and due-diligence.

Implementing Client Protection in Microfinance: The State of the Practice" Findev Gateway/MIX Market/Smart Campaign (2011). This practitioner paper assesses how client protection is being implemented in MFIs (tools, self-assessments, practice) and documents the state of the practice at the time of publication. It points out measurement challenges, the need for client-awareness, and the nascent nature of systematic client protection implementation.

Adams, A., & Tewari, D. D. (2021). “Client Protection and Microfinance Regulation: Lessons from Africa.” Savings and Development, 44(1), 1-20. This article reviews the literature on microfinance regulation and client protection in Africa. It finds that very few empirical studies explore implementation of CPPs in Africa, and highlights major areas of concern: information asymmetries disadvantaging clients, weak mechanisms for grievance redress, limited transparency in pricing, data privacy issues, this provides insights into how regulation and client protection standard implementation(purpose side) face real-world challenges, especially in developing-country contexts. You can use it to discuss how client protection may be weaker in practice, which affects how profit motives play out.

Smart Campaign / MFTransparency: “Putting Transparency into Practice: Communicating about Pricing.” (2011). This tool brief explains how MFIs and microfinance practitioners can operationalize the CPP of transparent and responsible pricing- one of the client protection principles. It presents tools for communicating price to clients, disclosure practices, and educational resources. This is a key link between client protection (transparent pricing) and profit (interest rates, cost of funds). For your review, you can use this to show how ensuring transparency/ pricing fairness is part of “purpose,” yet may conflict with profit-maximizing incentives.

Kalra, V., & others (2015). “Microfinance Clients’ Awareness Index (MCAI) and Client Awareness Research.”This study examines how microfinance clients’ awareness of terms, rates, fees, rights, etc can be measured (via the MCAI) and how awareness is associated with outcomes like informed choice, over-indebtedness risk.Client awareness is a core dimension of client protection (informed consent, transparency). In our profit-meets-purpose framing, this is a crucial link: MFIs may pursue profit, but client protection requires that clients understand what they are entering into.While awareness is necessary for client protection, it’s only one aspect; we also need to examine collection practices, multiple borrowing, and whether awareness alone is enough. Also, check for empirical links between awareness and MFI performance.

Lensink, R., et al. (2018). “Do microfinance institutions benefit from integrating non-financial services?” (Review/Empirical, Journal of Development Studies, etc.)This paper (review/empirical) examines the effect of MFIs adding non-financial services (training, health, insurance) to their product mix- asking whether this improves client outcomes and whether it impacts MFI financial sustainability or performance. Although not explicitly about client protection standards, it addresses the “purpose” side of microfinance - going beyond credit to broader client welfare. Thus, it helps you situate how microfinance institutions attempt to align profit (via diversified services) with purpose (client welfare).The connection to client protection may be indirect; We want to tie this into how non-financial services can mitigate risks of over-indebtedness, improve client outcomes, and thereby feed into the client protection framework. Also, check for any trade-off with financial returns.

Oxford Review of Economic Policy (2024). “Microfinance: an overview” (hypothetical review article). A recent comprehensive review of the microfinance field (theoretical, empirical, policy) highlighting current challenges- including financial inclusion, mission drift, regulatory environment, digitalization and client protection issues. This type of overview allows us to position our topic of “profit meets purpose” within the broader evolution of the microfinance sector, especially how digitalization, regulation, and client-protection have become critical fences around profitability.

A Cambodian study, Sick of Debt: How Over-indebtedness is Hampering Health in Rural Cambodia (2025), shreds evidence that many rural and poor Cambodians were sick of debt. Based on original, mixed-method data (2020-2022), exploring credit provisioning in this context, the paper was to illuminate some of the conditions leading to rural Cambodians taking on debt to bolster their health, and the effects this was having onborrowers' physical, psychological, emotional and social health.

A Malaysia-based study on Client Protection and Sustainable Performance in Microfinance Institutions (2019), was to explore the client protection practices and sustainable performance of Amanah Ikhtiar Malaysia (AIM), a leading MFI in Malaysia. The result shows that the level of client protection in AIM is high. It shows that accountability and the debt collection process have a significant influence on the level of sustainable performance of AIM, whereas transparency and transaction costs have an insignificant impact on the level of sustainability of AIM.

The Client Protection Pathway is the starting point. Stressing "first, do no harm," the Client Protection Pathway guides financial service providers through best practices to safeguard their low-income clients' basic interests.Socially responsible, inclusive financial services should ultimately help clients to thrive-to meet daily needs, take advantage of opportunities, manage life's risks, and pursue their dreams. But at a minimum, financial services should do no harm. Financial service providers must ensure that their products and services avoid harming clients.

3. Problem Statement

Microfinance Institutions (MFIs) face growing pressure to remain financially viable while continuing to serve low-income and underserved clients. How can MFIs design business models that achieve both profitability and meaningful social impact?

Microfinance Institutions (MFIs) operate at the intersection of financial sustainability and social responsibility. As the sector matures, MFIs are increasingly confronted with the dual challenge of maintaining financial viability while ensuring that their outreach continues to serve low-income, vulnerable, and underserved populations. The growing commercialization of microfinance has intensified scrutiny over whether MFIs can remain true to their poverty alleviation mission without compromising operational efficiency or profitability.

Designing business models that harmonize profitability and social impact requires a nuanced understanding of the trade-offs between financial and social performance objectives. On one hand, MFIs must achieve adequate returns to attract capital, ensure portfolio quality, and cover operational costs in increasingly competitive and regulated markets. On the other hand, they must adhere to their developmental mandate of promoting financial inclusion, empowering marginalized groups-particularly women- and reducing poverty through access to responsible financial services.

From a client protection and social performance management perspective, MFIs are expected to embed principles such as transparency, fair pricing, prevention of client over-indebtedness, appropriate product design, and ethical staff behavior into their operational frameworks. Adherence to globally recognized standards-such as the Smart Campaign's Client Protection Principles (CPPs) and the Social Performance Task Force's Universal Standards for Social Performance Management (USSPM)-is critical to ensuring that business models do not compromise client well-being in pursuit of profitability.

Furthermore, the evolution of impact measurement tools, such as the SPI4 framework and Social Rating methodologies, underscores the need for MFIs to align their governance, incentive structures, and performance indicators with both social and financial objectives. The integration of client-centric approaches, data-driven credit assessment, and digital financial innovations presents new opportunities for MFIs to enhance outreach efficiency while preserving ethical standards.

Thus, the central research problem lies in understanding how MFIs can design and operationalize business models that simultaneously deliver financial sustainability and measurable social impact. This involves exploring governance structures, incentive systems, client protection mechanisms, and technological innovations that collectively support a balanced "double bottom line" approach within the microfinance ecosystem.

4. Research Gap and Rationale

That's an excellent and timely research problem - balancing profitability and social impact is at the heart of the "double bottom line" challenge in microfinance.

While microfinance institutions (MFIs) are designed to balance social impact with financial sustainability, empirical evidence directly linking client-level social outcomes- such as income enhancement, women's empowerment, or livelihood improvement- with institutional profitability remains limited. Moreover, existing literature provides insufficient insight into how MFIs strategically navigate the inherent trade-offs between profitability-driven objectives (e.g., rapid portfolio expansion, high yield targets) and social performance imperatives (e.g., client protection, avoidance of over-indebtedness, and ethical lending practices). There is a notable research gap in understanding the decision-making frameworks, governance mechanisms, and performance management models that enable MFIs to simultaneously uphold financial viability and social integrity in competitive and resource-constrained environments.

5. Research Questions

This study will deal with the following questions.

1. To what extent are financial institutions adhering to the Client Protection Standards (CPS)?

6. Objectives of the Study

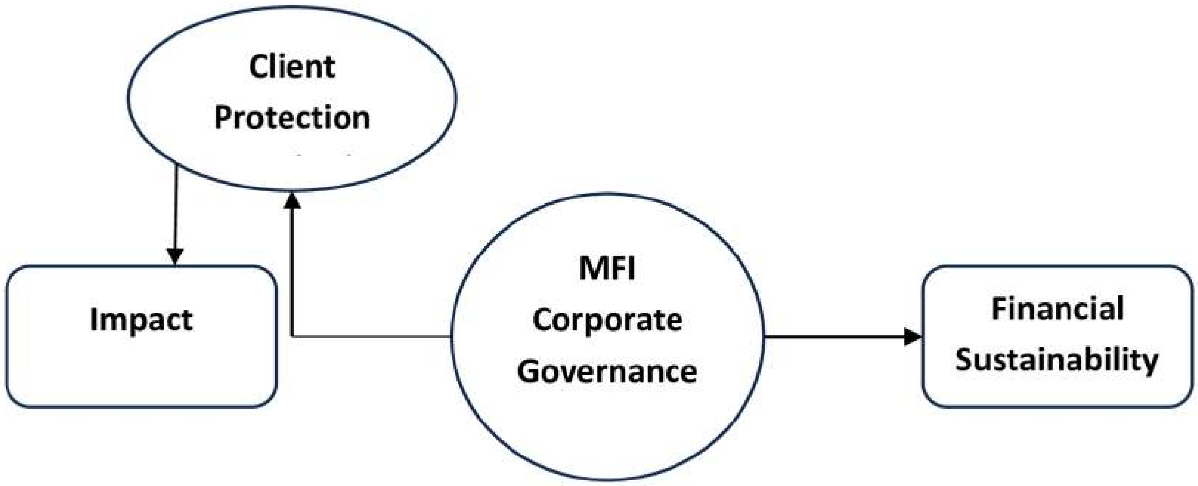
The study aims to measure client protection through service quality measurement.

1. To compare the performance of mission-driven versus profit-driven MFIs in achieving sustainable growth and social impact.
2. To frame a conceptualized model to study the "Linkage Between Client Protection Standards and Making Profit" of Microfinance Institutions.
3. To evaluate the extent to which MFIs can achieve profitability without compromising their impact.

7. Hypothesis Development

To determine precise correlations between the variables, hypotheses are developed based on the study issue. To give empirical insights into the factors influencing client protection standards in microfinance institutions, these hypotheses serve as a guide for the data collection process and the statistical analyses that follow. The conceptual framework and hypotheses are displayed in Figure 1.

Figure 1: Showing Conceptual Framework



- H_1: Relationship between Corporate Governance and Client Protection Standards.
- H_2:A Higher degree of adherence to client protection standards positively influences the social impact achieved by MFIs.
- H_3: Effective corporate governance positively influences the financial sustainability of MFIs.

Strong governance structures promote accountability, transparency, and ethical conduct within MFIs. These characteristics are essential for institutionalizing client protection principles such as appropriate product design, fair treatment, responsible pricing, transparency, prevention of over-indebtedness, client data protection, and a mechanism for complaint resolution. Governance boards that prioritize ethical and social performance oversight are more likely to ensure adherence to recognized frameworks such as the Smart Campaign's Client Protection Principles (CPPs).

Client protection ensures that financial services are delivered responsibly and in the best interest of clients. Institutions that safeguard clients' rights, promote transparency, and prevent exploitative practices enhance client trust and long-term empowerment, thereby amplifying their developmental and social impact. This hypothesis aligns with the notion that responsible finance drives inclusive growth.

Sound governance practices- such as aligned with the vision and mission, strategic oversight, prudent risk management, and balanced stakeholder engagement- contribute to operational efficiency and financial performance. Governance mechanisms ensure disciplined portfolio management, accountability in decision-making, and long-term institutional stability, all of which are crucial for sustaining profitability and institutional viability in competitive microfinance markets.

8. Research Methodology

8.1Research Design and Philosophy

The research design will adopt a mixed-method approach, integrating both quantitative and qualitative methods, allowing for a methodical investigation and analysis of the correlations between the client protection standards and the sustainability of MFI in West Bengal and Odisha. The study intends to quantify the many constructs and factors of interest and add to the practical understanding of the adoption of client protection standards by MFIs by using a structured questionnaire to gather data from the microfinance clients.

8.2 Sampling Procedure

8.2.1 Sampling Techniques

A stratified random sampling technique will be employed to ensure representation across different microfinance borrowers. The clients will be categorizedby loan ticket size and loan cycle across 2 states, West Bengal and Odisha.

8.2.2 Target Population

Twostates of eastern India. This deliberate choice seeks to capture variousbehavioral elements in microfinance creditpractices in various contexts.

8.2.3District and Block Selection

The second stage of the sampling method will use a convenience sampling technique to select threedistricts each from West Bengal and Odisha.The three districts from each state are chosen as high, medium, and low levels ofpresence of Microfinance Institutions and service penetrations to microfinance clients. The selection criteria are based on the service penetration of microfinance institutions. The districts and blocks are to be included as follows:

Here districts are categorized as state-wise district level of high, medium, and low penetration of microfinance services as per the Bharat Microfinance Report 2024 Report published by Sa-dhan.

SI. No.	Districts	Blocks	No of Clients Covered	No. of MFI Presence
West-Bengal				
1(High)	Malda	Kushida, Tulsihata, Ratua and Gazole	50	31
2(Medium)	PurbaBardhaman	Kalna, Srirampur, Bhatr, kusumgram and Guskara	50	27

3(Low)	Dakshin Dinajpur	Safanagar, Patiram, Gangarampur and Vikahar	50	27
Odisha				
1(High)	Cuttack	Tangi-Choudwar, Nischintakoili, Salepur and Banki-Dampara	50	33
2(Medium)	Khordha	Bhubaneswar, Jatni, Balipatna and Khurda	50	24
3(Low)	Kendujhar	Ghatagaon, Harichandanpur, Anandapur and Champua	50	17

8.3.4 Sample Size

The study was conducted across two states, namely West Bengal and Odisha, with a total sample size of 300 microfinance clients. Each state contributed 150 respondents, selected from three districts, with 50 clients drawn from each district through stratified sampling to ensure balanced regional representation.

8.4 Data Collection Methods

8.4.1 Secondary Sources of Data Collection: Because of the uniqueness of the research, the researcher will collect both secondary and primary sources of data for the study. Secondary data will be collected from sources such as periodicals, journals, the internet, SRO reports, and company websites. These sources will be used to have a complete knowledge of the concerned topic.

8.4.2 Primary Data Collection: The survey method will be used for collecting primary sources of information from the selected microfinance clients and two reputed MFI of eastern India, namely Grameen Shakti Microfinance Services Pvt Ltd and Janakalyan Financial Services Pvt Ltd. A structured questionnaire has been used for the survey. The survey has been designed to capture information on demographic characteristics, microfinance practices, financial & digital awareness, and perceptions of microfinance services, and factors influencing their adoption. The survey has included Likert-scale questions to quantify the data.

8.5 Data Analysis

		West Bengal State Analysis							
		CP Standards	CP 1	CP 2	CP 3	CP 4	CP 5	CP 6	CP 7
Strongly Agree	**1**	174	123	21	-	-	30	-	-
Agree	**2**	2,156	293	179	376	253	239	302	514
Neutral	**3**	1,096	138	274	74	255	121	148	86
Disagree	**4**	282	46	84	-	92	60	-	-
Strongly Disagree	**5**	42	-	42	-	-	-	-	-

		Odisha State Analysis							
		CP Standards	CP 1	CP 2	CP 3	CP 4	CP 5	CP 6	CP 7
Strongly Agree	**1**	195	144	18	-	-	33	-	-
Agree	**2**	2,094	394	173	270	201	266	266	524
Neutral	**3**	1,207	51	290	180	316	110	184	76
Disagree	**4**	216	11	81	-	83	41	-	-
Strongly Disagree	**5**	38	-	38	-	-	-	-	-

Based on the analysis, a total of 7,500 questions were administered to 300 sample clients, with 3,500 responses collected from each state. In West Bengal, 62% (strongly agree 5% & agree 57%) of the respondents expressed agreement with the implementation of client protection standards by MFI organizations, 29% maintained a neutral stance, while 9% disagreed with the same (8% disagree & 1% strongly disagree). Similarly, in Odisha, 61% of the respondents agreed (strongly agree 5% & agree 56%) with the client protection standards adopted by MFIs, 32% reported a neutral opinion, and 7% (6% disagree & 1% strongly disagree) expressed disagreement.

This distribution suggests that although the majority of clients in West Bengal and Odisha acknowledge the efforts of MFIs toward ensuring client protection, a notable segment remains neutral or unconvinced, indicating potential areas for further strengthening of client engagement and awareness initiatives.

The table below shows the state-wise analysis of client protection standards

		West Bengal State Analysis	
		CP Standards	% Share
Strongly Agree	1	174	5%
Agree	2	2,156	57%
Neutral	3	1,096	29%
Disagree	4	282	8%
Strongly Disagree	5	42	1%

		Odisha State Analysis	
		CP Standards	% Share
Strongly Agree	1	195	5%
Agree	2	2,094	56%
Neutral	3	1,207	32%
Disagree	4	216	6%
Strongly Disagree	5	38	1%

		West Bengal State Analysis						
		CP1	CP2	CP3	CP4	CP5	CP6	CP7
Strongly Agree	1	21%	4%	0%	0%	7%	0%	0%
Agree	2	49%	30%	84%	42%	53%	67%	86%
Neutral	3	23%	46%	16%	43%	27%	33%	14%
Disagree	4	8%	14%	0%	15%	13%	0%	0%
Strongly Disagree	5	0%	7%	0%	0%	0%	0%	0%

West Bengal State Analysis

The responses from clients in West Bengal provide valuable insights into the implementation of Client Protection (CP) Standards by Microfinance Institutions (MFIs) across seven key dimensions (CP1-CP7). Overall, the results indicate a predominantly positive perception, though the strength of agreement varies across different parameters.

CP1: A total of 70% of respondents (21% strongly agree, 49% agree) expressed satisfaction with the implementation of this standard, indicating high client confidence. However, 23% remained neutral and 8% disagreed, suggesting that while the majority recognize efforts toward client protection, a small segment may not be fully aware of the mechanisms in place.

CP2: This standard reflects relatively weaker client endorsement, with 34% agreement (4% strongly agree, 30% agree) and a significant 46% neutral response. Additionally, 21% of respondents (14% disagree, 7% strongly disagree) expressed dissatisfaction. The high neutrality and disagreement indicate limited awareness or inconsistent implementation of this standard at the operational level.

CP3: The highest level of satisfaction was observed under CP3, where 84% of respondents agreed, 16% were neutral, and none expressed disagreement. This demonstrates strong client confidence and suggests that MFIs have effectively implemented this particular protection dimension.

CP4: Responses were mixed, with 42% agreement, 43% neutrality, and 15% disagreement. The near parity between agreement and neutrality suggests uneven implementation and limited visibility of this standard among clients, requiring more consistent communication and reinforcement.

CP5: A majority (60%) of respondents (7% strongly agree, 53% agree) expressed a positive view of this standard, while 27% were neutral and 13% disagreed. The findings indicate good acceptance with some room for improvement in client awareness and practice consistency.

CP6: This dimension received a strong positive response, with 67% agreement and 33% neutrality, and no disagreement. This reflects uniform implementation and general client satisfaction with this aspect of MFI practices.

CP7: demonstrates the strongest endorsement, with 86% of respondents agreeing, 14% neutral, and no disagreement. This indicates robust confidence in how MFIs are ensuring client protection under this parameter.

Overall, the findings from West Bengal reveal a predominantly positive client perception of MFI client protection practices.

High-performing areas: CP3, CP6, and CP7- these dimensions exhibit strong implementation and client trust.

Moderate-performing areas: CP1 and CP5- generally positive but with some neutral or dissenting views indicating minor communication gaps.

Low-performing area: CP2 and CP4 - these show comparatively lower agreement and higher neutrality/disagreement, signaling the need for greater awareness, transparency, and consistent field-level execution.

		Odisha State Analysis						
		CP1	CP2	CP3	CP4	CP5	CP6	CP7
Strongly Agree	**1**	24%	3%	0%	0%	7%	0%	0%
Agree	**2**	66%	29%	60%	34%	59%	59%	87%
Neutral	**3**	9%	48%	40%	53%	24%	41%	13%
Disagree	**4**	2%	14%	0%	14%	9%	0%	0%
Strongly Disagree	**5**	0%	6%	0%	0%	0%	0%	0%

Odisha State Analysis

CP1:A combined 90% of respondents (24% strongly agree, 66% agree) affirmed that client protection measures under CP1 are effectively implemented, indicating strong client trust and satisfaction. Only 9% remained neutral and 2% disagreed, reflecting a highly favorable perception with minimal dissent.

CP2: This parameter shows comparatively weaker client confidence, with only 32% agreement (3% strongly agree, 29% agree) and 20% disagreement (14% disagree, 6%

strongly disagree). A significant 48% neutrality suggests limited understanding or inconsistent application of this standard at the field level, signaling a need for better client communication and awareness.

CP3: Under this parameter, 60% of respondents agreed while 40% remained neutral and none disagreed. This highlights moderate satisfaction but also indicates that some clients may lack sufficient exposure to the specific aspects of this standard.

CP4: Client perceptions are mixed, with 34% agreement, 53% neutrality, and 14% disagreement. The high neutrality rate indicates uncertainty or lack of visibility of this protection practice in day-to-day MFI interactions, suggesting the need for enhanced communication and consistent operational emphasis.

CP5: A total of 66% of respondents (7% strongly agree, 59% agree) acknowledged effective implementation, while 24% remained neutral and 9% disagreed. This reflects a generally positive perception with some clients yet to be fully convinced.

CP6: This dimension received a largely positive response, with 59% agreement, 41% neutrality, and no disagreement. The data point toward effective but potentially uneven implementation, indicating opportunities for deeper client engagement.

CP7: The highest level of client confidence was recorded under CP7, with 87% agreement and 13% neutrality, and no disagreement. This suggests that MFIs in Odisha are performing strongly in this area, ensuring robust client protection practices.

Overall, clients in Odisha exhibit a favorable perception toward MFI client protection initiatives.

Strong-performing areas: CP1, CP5, CP6, and CP7 reflect high levels of client satisfaction and trust.

Moderate-performing areas: CP3 demonstrates decent agreement but requires further client sensitization.

Low-performing areas: CP2 and CP4 show higher neutrality and disagreement, indicating the need for enhanced awareness campaigns, field-level monitoring, and consistent communication to strengthen client understanding.

In summary, MFIs in Odisha appear successful in integrating client protection into operations, though selective reinforcement in communication and transparency could further align profitability with client well-being.

		Overall States Analysis (WB + OD)							
		CP Standards	**CP 1**	**CP 2**	**CP 3**	**CP 4**	**CP 5**	**CP 6**	**CP 7**
Strongly Agree	**1**	5%	22 %	3%	0%	0%	7%	0%	0%
Agree	**2**	57%	57 %	29 %	72 %	38 %	56 %	63 %	87 %
Neutral	**3**	31%	16 %	47 %	28 %	48 %	26 %	37 %	14 %
Disagree	**4**	7%	5%	14 %	0%	15 %	11 %	0%	0%
Strongly Disagree	**5**	1%	0%	7%	0%	0%	0%	0%	0%

Overall States Analysis (West Bengal and Odisha Combined)

The combined data from both West Bengal and Odisha present a holistic view of clients' perceptions toward the implementation of Client Protection (CP) Standards by Microfinance Institutions (MFIs). The findings indicate a largely positive perception, though varying levels of client awareness and engagement are evident across different dimensions (CP1–CP7). The findings indicate an overall positive outlook, though the degree of agreement varies across different dimensions.

CP1:A total of 79% of respondents (22% strongly agree, 57% agree) acknowledged effective implementation of CP1, indicating widespread confidence in this aspect of client protection. Only 16% remained neutral, and 7% disagreed, suggesting that the practice is well understood and visible among clients.

CP2: Responses under CP2 show relatively lower levels of satisfaction, with 32% agreement (3% strongly agree, 29% agree) and a high 47% neutrality. Additionally, 21% (14% disagree, 7% strongly disagree) expressed disagreement. This pattern highlights gaps in awareness or inconsistent implementation across the regions, suggesting a need for enhanced client communication and policy reinforcement.

CP3:A strong positive perception is observed for CP3, with 72% of respondents agreeing, 28% neutral, and 14% disagreeing. This indicates a generally successful implementation but also points to the need for further client sensitization to reduce neutral and dissenting responses.

CP4: This parameter demonstrates strong performance, with 72% of respondents agreeing and 28% neutral, and no disagreement recorded. The absence of disagreement suggests that clients largely recognize and appreciate the measures under this standard, though the moderate neutrality level indicates potential for deeper awareness efforts.

CP5: Client perceptions toward CP5 are moderately positive, with 56% agreement, 26% neutrality, and 15% disagreement. While the overall outlook is favorable, the relatively higher disagreement suggests the need for operational improvements and stronger client education around this protection measure.

CP6: Under CP6, 63% of respondents agreed, 37% remained neutral, and none disagreed, indicating effective yet somewhat uneven implementation. The neutral responses suggest that while clients do not perceive shortcomings, some may lack full understanding of this standard's benefits.

CP7: The highest level of consensus was observed here, with 87% agreement, 14% neutrality, and no disagreement. This clearly demonstrates strong client trust and effective institutional adherence to this client protection dimension.

The overall analysis of both states reflects a predominantly favorable perception toward the implementation of Client Protection Standards by MFIs.

High-performing areas:CP1, CP4, and CP7 demonstrate strong client confidence and broad acceptance, with minimal disagreement.

Moderate-performing areas:CP3 and CP6 show consistent positive trends, though a portion of clients remains neutral, indicating opportunities for greater engagement and transparency.

Weaker areas:CP2 and CP5 display relatively higher neutrality and disagreement, suggesting the need for strengthened awareness campaigns, staff training, and consistent client communication to reinforce trust and understanding.

Overall, the data indicate that while MFIs in both states have largely succeeded in embedding client protection practices, targeted interventions in CP2 and CP5 could further strengthen client confidence and satisfaction. the findings confirm that profitability and purpose can co-exist within the microfinance sector when client protection standards are effectively implemented, communicated, and monitored.

8.6 Measurement of Constructs

8.6.1 Theory of Client Protection Standards

The constructs from the Theory of Client Protection Standards will be operationalized as follows:

- **CP1: Appropriate Product Design and Delivery:**it expresses that the provider offers products and services that are suited to clients' needs. The provider monitors the suitability of products, services, and delivery channels. A policy and documented process are in place to prevent aggressive sales techniques and the forced signing of contracts.
- **CP2: Prevention of Over-indebtedness:**The financial service provider demonstrates a robust and well-documented policy framework for loan approvals, ensuring that credit decisions are made based on comprehensive and relevant information. The institution leverages credit reporting data wherever

feasible within the prevailing local context to enhance the quality of credit assessments. Furthermore, senior management and the board actively monitor market dynamics and take timely corrective measures in response to emerging risks of client over-indebtedness. The provider upholds sound portfolio quality through prudent credit risk management practices and implements incentive structures that promote responsible lending and the disbursement of high-quality loans.

- **CP3: Transparency:**The provider has established measurable policies and well-documented procedures to ensure transparency regarding product terms, conditions, and pricing. Communication with clients is conducted in a timely manner through appropriate and accessible channels. Furthermore, the provider undertakes adequate measures to promote client comprehension and facilitate informed decision-making throughout the financial engagement process.
- **CP4: Responsible Pricing:**The assessment examines the extent to which the financial service provider operates in a sustainable manner to ensure the long-term continuity of services. The provider's pricing policy reflects alignment with client interests, emphasizing affordability and transparency. Additionally, the provider's key financial ratios remain within acceptable industry benchmarks, indicating the absence of pricing-related concerns. In cases where ratios deviate from standard ranges, the provider is expected to offer a clear rationale and justification for such variations.
- **CP5: Fair and respectful treatment of clients:**The financial service provider upholds the principles of fair and respectful client treatment through the adoption and enforcement of a comprehensive code of conduct. Institutional policies and documented procedures are in place to prevent discrimination against individuals belonging to protected categories during client selection and while determining terms and conditions of service. Loan collection activities are carried out by staff and authorized agents in a professional and appropriate manner. The provider has established robust systems to detect and prevent fraudulent practices, thereby safeguarding client interests. Furthermore,

insurance claims are managed with transparency and processed in a fair and timely manner. The provider's management and governance structures actively reinforce a culture of fairness, accountability, and respect in all client interactions.

- **CP6: Privacy of client data:**The institution is supposed toestablish comprehensive measures to ensure that client data is securely stored and treated with strict confidentiality. Clients are adequately informed about data privacy policies and provide explicit consent regarding the collection, use, and sharing of their personal information in accordance with regulatory and ethical standards.
- **CP7: Mechanisms for complaint resolution:**The provider needs to establish an effective and transparent grievance redressal mechanism to receive, record, and resolve client complaints in a timely and fair manner. Clients are adequately informed about their right to lodge complaints and the procedures for doing so through appropriate communication channels. Furthermore, the institution systematically analyzes complaint data to identify recurring issues, enhance operational efficiency, and improve the overall quality of products and services.

8.7 Significance of the Study

This study holds significant importance for multiple stakeholders, including microfinance clients, policymakers, microfinance practitioners, lenders, bankers,impact investment companies, and social rating agencies. For practitioners and microfinance institutions, the findings can offer tailored recommendations that align with their unique needs and constraints, thereby improving their organizational efficiency and resilience. Policymakers can utilize the insights to design more effective models, support programs, and awareness campaigns to promote client protection standards. Investors and bankers can benefit from understanding the behavioural patterns and barriers faced by microfinance institutions allowing them tomake the right decisions towards sustainable development. Overall, this research will contribute to sustainable inclusive financial development in Eastern Indian states.

Conclusion:

The coexistence of profit and purpose within microfinance institutions (MFIs) has been a defining tension since the sector's inception. Originally designed to advance social objectives such as poverty alleviation and financial inclusion, microfinance gradually evolved toward greater financial sustainability and commercialisation, raising legitimate concerns about mission drift (Ribeiro et al., 2022). The challenge, therefore, lies not in choosing between profit and purpose but in achieving a sustainable synthesis of both. Recent literature suggests that the integration of Client Protection Standards (CPS) provides the conceptual and operational bridge that enables MFIs to balance these dual imperatives (Forster et al., 2011; CERISE-SPTF, 2023).

Empirical evidence indicates that adherence to the Client Protection Principles (CPPs)-including transparency, fair treatment, appropriate product design, prevention of over-indebtedness, responsible pricing, privacy of client data, and effective grievance redress-enhances institutional credibility, improves portfolio quality, and fosters client loyalty (Hossain, 2024; Adams & Tewari, 2021). In this sense, client protection is not merely a compliance requirement but a strategic determinant of financial performance. MFIs that internalise these principles within their governance and risk-management frameworks tend to demonstrate stronger repayment discipline, lower credit risk, and improved long-term profitability (Abrar, 2019). Thus, ethical conduct and commercial sustainability emerge as mutually reinforcing rather than conflicting objectives.

From a theoretical standpoint, the convergence of profit and purpose through CPS aligns with the broader paradigm of social performance management, which views clients as partners rather than passive beneficiaries. Studies linking client protection with financial outcomes demonstrate that responsible lending and transparent pricing enhance institutional resilience by reducing reputational and default risks (Lensink et al., 2018; CGAP, 2011). Moreover, the inclusion of client feedback and protection metrics in performance measurement systems redefines success beyond traditional financial indicators, integrating social impact into the institutional scorecard.

In conclusion, the synthesis of profit and purpose in microfinance is achievable when profitability is pursued within the ethical boundaries defined by Client Protection Standards. Effective implementation of these principles transforms client welfare into a foundation for financial strength, ensuring that growth is inclusive, equitable, and sustainable. For the microfinance sector to fulfil its developmental promise, client protection must evolve from a peripheral concern into a central pillar of institutional strategy- where protecting clients is not only the right thing to do, but the profitable thing to do.

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Retailer Perception and Brand Preference in The Dairy Beverage Segment: A Comparative Study of Godrej Jersey and Competing Brands (Amul, Heritage, Nandini)

Talath Begum

1. INTRODUCTION

India's dairy sector has rapidly expanded, and dairy beverages now form an important part of urban and semi-urban consumption. Unlike earlier times where milk was mainly consumed in basic form, current consumers increasingly choose packaged dairy beverages as quick, tasty, and healthier alternatives to carbonated drinks. Due to this demand, competition among dairy beverage brands has become intense.

Retailers are an essential part of the dairy beverage supply chain. They decide product visibility, keep stock based on movement, and also influence customers through recommendations. Therefore, studying retailer perception provides meaningful insights into brand dominance and weaknesses in the marketplace. This study focuses on the Hyderabad market and evaluates retailer preference for Godrej Jersey compared to Amul, Heritage, and Nandini.

2. NEED FOR THE STUDY

Even though consumer preference studies are common, retailer-based research is equally important because retailer opinion and satisfaction directly impact product availability and the speed of brand movement. This study helps in understanding which brand performs better from the trade perspective and what factors influence retailer loyalty and stocking behavior.

3. OBJECTIVES OF THE STUDY

1. To analyze retailer perception toward major dairy beverage brands.
2. To study retailer preference among Godrej Jersey, Amul, Heritage, and Nandini.
3. To compare the performance drivers (margin, movement, recall, service delivery) across brands.
4. To identify improvement opportunities for Godrej Jersey to strengthen competitiveness.

4. REVIEW OF LITERATURE

Retailer perception has been considered a strong driver of market performance in FMCG categories because retailers act as intermediaries between manufacturers and consumers. Previous literature indicates that brand preference at the retail level is often influenced by profitability, availability, and demand.

- **Kotler and Keller (2016)** emphasize that supply chain efficiency and channel partner satisfaction contribute significantly to brand success.
- **Aaker (1991)** highlights the importance of brand recall and brand equity in driving customer demand, which indirectly increases retailer stocking confidence.
- **Rosenbloom (2013)** identifies the role of trade incentives and retailer schemes in encouraging product display and recommendation.
- Several FMCG distribution studies show that strong service delivery reduces stockouts and increases long-term retailer satisfaction.

Research Gap

Most studies focus mainly on consumers, but fewer studies evaluate retailer perception and brand preference specifically in the dairy beverage segment in Hyderabad, especially with a multi-brand comparative view. This study aims to fill that gap.

5. RESEARCH METHODOLOGY

5.1 Research Design

Descriptive research design was used to measure retailer perception and compare brand performance across parameters.

5.2 Sampling Design

- Sample Size: **225 retailers**
- Sampling Technique: Convenience Sampling
- Study Area: Hyderabad (Ameerpet and Mehdipatnam regions)

5.3 Data Collection

Primary data was collected through a structured questionnaire using a five-point Likert scale.

5.4 Tools Used

Excel and SPSS for descriptive statistics and interpretation.

6. DATA ANALYSIS AND INTERPRETATION (DETAILED)

Table 1: Jersey Brand Perception (Mean Score by Store Type)

Store Type	Product Quality (Mean)	Packaging & Shelf Visibility (Mean)	Customer Demand / Repeat Sales (Mean)	Overall Satisfaction (Mean)
Kirana / General Stores	4.02	3.81	3.65	3.37
Others (Small Formats)	3.67	3.44	3.61	3.33
Supermarkets	3.25	3.50	3.00	2.50
Wholesale	4.50	3.67	3.83	3.67
Overall (Total)	**3.99**	**3.77**	**3.64**	**3.36**

Interpretation

This table shows that retailers rate **Jersey highest on Product Quality (3.99)**, proving strong trust in freshness and consistency. **Packaging (3.77)** and **repeat demand (3.64)** are also positive, showing good shelf presence and steady sales. However, **overall satisfaction is comparatively lower (3.36)**, meaning factors like schemes, pricing, or service may need improvement. Supermarkets show the weakest performance, especially in **overall satisfaction (2.50)** and **demand (3.00)**, indicating Jersey must strengthen its position in organized retail.

BRAND-WISE COMPARISON

Figure 1: Brand Comparison on Product Quality

Store Type	Jersey	Amul	Heritage	Nandini
Kirana / General Stores	3.89	3.57	3.42	3.21
Others (Small Formats)	3.56	3.89	4.00	3.94
Supermarkets	3.25	3.75	3.25	3.00
Wholesale	3.67	3.67	4.17	3.50
Overall (Total)	**3.84**	**3.60**	**3.48**	**3.27**

Interpretation

Godrej Jersey leads overall quality perception (3.84), particularly in Kirana stores. However, Heritage and Amul show stronger quality perception in small formats and supermarkets respectively. This indicates Jersey's quality leadership is strongest in traditional trade, while competitors gain advantage in modern retail perception.

Figure 2: Brand Comparison on Packaging Appeal

Store Type	Jersey	Amul	Heritage	Nandini
Kirana / General Stores	3.99	3.58	3.41	3.25
Others (Small Formats)	3.56	3.94	3.67	3.67
Supermarkets	3.50	3.50	3.75	4.25
Wholesale	4.33	3.67	3.83	4.00
Overall (Total)	**3.96**	**3.61**	**3.45**	**3.32**

Interpretation

Jersey ranks highest overall (3.96), showing strong packaging appeal especially in wholesale and kirana outlets. However, in supermarkets, Nandini leads significantly

(4.25), highlighting that modern retail requires premium shelf-ready packaging to compete.

Figure 3: Brand Comparison on Consumer Demand

Store Type	Jersey	Amul	Heritage	Nandini
Kirana / General Stores	4.02	3.56	3.42	3.20
Others (Small Formats)	3.72	3.28	3.89	3.44
Supermarkets	4.50	4.00	3.75	3.00
Wholesale	4.50	4.33	3.83	3.33
Overall (Total)	**4.02**	**3.56**	**3.47**	**3.22**

Interpretation

Jersey dominates demand across all store types (4.02 overall), proving its strong consumer pull in Hyderabad. Amul performs well mainly in supermarkets, while Heritage shows localized strength in small formats.

Figure 4: Brand Comparison on Profit Margin

Store Type	Jersey	Amul	Heritage	Nandini
Kirana / General Stores	4.04	3.68	3.60	3.38
Others (Small Formats)	3.94	3.67	3.56	3.67
Supermarkets	3.75	3.50	4.00	3.25
Wholesale	3.67	3.50	4.00	3.17
Overall (Total)	**4.01**	**3.67**	**3.61**	**3.39**

Interpretation

Jersey leads in overall profitability perception (4.01), showing strong margin satisfaction in kirana outlets. However, Heritage performs better in supermarkets and wholesale, suggesting margin competitiveness needs improvement in modern trade channels

Figure 5: Brand Comparison on Service Delivery

Store Type	Jersey	Amul	Heritage	Nandini
Kirana / General Stores	4.02	3.61	3.43	3.15
Others (Small Formats)	4.22	3.83	3.94	3.50
Supermarkets	3.75	3.25	3.50	4.25
Wholesale	4.17	4.00	4.17	4.33
Overall (Total)	**4.03**	**3.64**	**3.49**	**3.23**

Interpretation

Jersey leads overall service performance (4.03) with consistent delivery in traditional trade. Nandini surprisingly performs stronger in supermarkets and wholesale, indicating selective distribution strength in those channels.

Figure 6: Brand Comparison on Brand Recall

Store Type	Jersey	Amul	Heritage	Nandini
Kirana / General Stores	3.97	3.66	3.45	3.20
Others (Small Formats)	3.94	4.06	3.72	3.28
Supermarkets	3.00	3.75	3.75	3.50
Wholesale	4.33	3.50	3.83	3.50
Overall (Total)	**3.96**	**3.69**	**3.48**	**3.22**

Interpretation

Jersey has the highest overall recall (3.96), especially strong in kirana and wholesale. Amul is second strongest, performing better in supermarkets and small formats due to national brand strength.

Figure 7: Offers, Schemes and Discounts

Interpretation

The findings suggest that Godrej Jersey leads in retailer schemes and incentives across channels, strengthening retailer trust and loyalty. Competitor brands demonstrate mixed performance in incentive attractiveness, with Amul showing better support in wholesale but weaker engagement in supermarkets. Heritage provides niche competitiveness in certain channels but lacks overall strength. Nandini ranks weakest, indicating low effectiveness in retailer engagement and scheme quality.

Retailer incentives remain a significant driver of shelf priority and recommendation behavior, making trade schemes a strategic lever for competitive advantage.

7. Key Findings

The study was conducted among 225 retailers using SPSS-based descriptive analysis along with internship field observations. The results show that traditional trade dominates the dairy beverage market, with Kirana and general stores forming 87.6% of the retail structure. Most retailers (62.2%) reported 1–3 years of experience, indicating growing category expansion.

Brand preference data confirms that Godrej Jersey is the most preferred brand (85.8%), significantly ahead of Heritage, Amul, and Nandini. SKU-level analysis highlights Badam Milk as the top-selling product (49.8%), making it the key driver of movement and repeat demand. Retailers rated Jersey positively on product quality (3.89) and profit margin (4.04), showing strong confidence and profitability, though minor concerns were noted around packaging and visibility. Retail engagement was also strong, with 96% retailers reporting weekly visits, supporting consistent supply and brand trust.

8. Conclusion

The study concludes that retailer perception is a strong determinant of brand preference and stocking decisions in the dairy beverage segment. Godrej Jersey dominates retailer preference in Hyderabad due to high movement, better margins, and consistent supply delivery. However, competitor brands like Amul and Heritage continue to remain relevant due to national brand recall and affordability. The company can strengthen its competitive position by improving modern trade penetration, increasing visibility through merchandising, and expanding retailer engagement programs.

9. Recommendations

1. Improve supermarket penetration and modern trade presence.
2. Strengthen product visibility through chillers, shelf branding, and POSM.
3. Introduce more performance-based retailer incentives and schemes.
4. Ensure 100% availability of fast-moving SKUs like Badam Milk.
5. Increase consumer recall through local promotions and sampling campaigns.

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Woman's Entrepreneurship Development through SHG's: A Study in Ganjam District

Jitendra Kumar Behera

Introduction:

Women's self-help groups (SHGs) have emerged as a key instrument for socio-economic empowerment and grassroots entrepreneurship in rural India. SHGs, predominantly composed of rural women, act as platforms for collective savings, credit access, skill development, and income-generating activities, enabling women to participate more actively in local economies and decision-making processes. Through systematic capacity building and linkages with banks and markets, these groups help women transition from dependency to economic autonomy, fostering sustainable livelihoods and enhancing their social status. The district of Ganjam, located in the southern part of Odisha, presents a significant case for studying the role of SHGs in women's entrepreneurial development. Ganjam is one of the more populous and economically active districts of Odisha, with a vibrant network of women SHGs under state-led programmes such as Mission Shakti and Odisha Livelihoods Mission. As of recent reports, Ganjam district has one of the largest concentrations of women SHGs in the state, with an estimated more than 22,200 SHGs comprising over 2.24 lakh women members benefiting from interest-free loans and financial assistance aimed at promoting entrepreneurship and self-employment initiatives. In the agricultural sector alone, Ganjam accounted for the highest number of SHGs (111) involved in the paddy procurement process during the kharif season, demonstrating the groups' expanding economic roles beyond traditional savings and credit functions to active participation in farm-related business operations. At the block level, these groups receive targeted financial support: for example, in Rangeilunda block alone, 1,313 SHGs received loans worth over ₹35 crore in a single fiscal year, underlining the scale of credit flow facilitating entrepreneurial activities among rural women. Apart from financing, Ganjam's SHG members engage in diverse livelihood activities—ranging from handicrafts, small-scale food processing, dairy, and agri based products to services such as rural banking representatives ('Sakhis')—thus broadening their participation in the district's economic life and enhancing household incomes. These district-specific dynamics make Ganjam an important setting to examine how SHGs act as catalysts for women's entrepreneurship, offering insights into the transformative potential of collective action, financial inclusion, and market participation at the grassroots level.

Significance of the study

The study on Women's Entrepreneurship Development through Self-Help Groups (SHGs) in Ganjam District holds considerable academic, social, and policy relevance. Ganjam, being one of the districts with the highest concentration of Women Self-Help Groups (WSHGs) in Odisha, provides a meaningful context to examine how collective institutions like SHGs contribute to women's economic empowerment and entrepreneurial development. **Firstly,** the study is significant in understanding the role of SHGs as a grassroots mechanism for promoting women entrepreneurship. By analysing the functioning of SHGs in Ganjam, the study highlights how access to micro-credit, savings, skill development, and institutional support enables women to engage in income-generating activities and micro-enterprises. This contributes to existing literature on inclusive growth and gender-based development models. Secondly, the study is important from a socio-economic perspective, as it examines how participation in SHGs influences women's income levels, employment opportunities, decision-making power, and social status within households and communities. In a district like Ganjam, where a large section of women belongs to rural and economically weaker backgrounds, the findings help assess the extent to which SHGs reduce poverty and enhance livelihood security.

Review of Literature

A growing body of research highlights the role of Self-Help Groups (SHGs) in promoting women's socio-economic development, financial inclusion, and entrepreneurial activities in rural India. Several studies have emphasized that SHGs act as crucial institutional mechanisms for empowering women economically and socially. According to Yadav (2021), SHGs in India provide financial access, training, and mutual support that motivate rural women to initiate income-generating activities and small business ventures, thereby enhancing women's participation in entrepreneurial development.

Research reviewing SHG impacts suggests that these groups contribute significantly to women's economic autonomy, savings behaviour, and financial literacy, while also promoting leadership, confidence, and decision-making capacity in households and communities. Ben & Yadav (2025) indicate that SHGs enhance women's financial independence and socio-economic agency, although they face challenges such as limited resources and socio-cultural barriers.

Objective of the study

- To analyze the role of Self-Help Groups in promoting women's entrepreneurship development in Ganjam.
- To examine the growth and characteristics of SHGs in Ganjam district.

Methodology of study

This study adopts a descriptive research design using secondary data sources to analyze the role of Self-Help Groups (SHGs) in promoting women's entrepreneurship in the Ganjam district. The research aims to describe patterns, trends, and impacts based on existing data rather than primary field collection. The data will be collect different sources like Published research articles and academic journals, District-level statistical handbooks (Ganjam), NGO & microfinance institution reports Books and conference proceedings related to SHGs and women's entrepreneurship etc.

FINDING AND RECOMMENDATION

Table no:1 districts wise data

Sl. No.	District	Number of WSHGs
1	Angul	21,323
2	Balangir	22,467
3	Balasore	29,279
4	Bargarh	19,827
5	Bhadrak	22,557
6	Boudh	3,342
7	Cuttack	32,751
8	Deogarh	6,135
9	Dhenkanal	18,116
10	Gajapati	11,241
11	Ganjam	41,211
12	Jagatsinghpur	19,437
13	Jajpur	25,074
14	Jharsuguda	7,460
15	Kalahandi	20,541
16	Kandhamal	13,801

Source: District-wise WSHG data compilation in Odisha.

The above table clearly shows significant inter-district variation in the number of registered Women Self-Help Groups in Odisha. Ganjam district ranks first with the highest number of WSHGs (41,211 units), indicating a strong penetration of the SHG movement and wider participation of women in collective economic activities. This is followed by Cuttack with 32,751 WSHGs and Balasore with 29,279 WSHGs, reflecting relatively better institutional support, population size, and programme outreach.In contrast, districts such as Kandhamal (13,801 WSHGs) and Kalahandi (20,541 WSHGs) show comparatively lower numbers of registered SHGs, which may be attributed to difficult terrain, higher tribal concentration, and infrastructural constraints. Other districts like Angul, Bhadrak, and Jagatsinghpur fall in the middle range, showing moderate growth of SHGs. Overall, the ranking highlights that coastal and economically active districts record a higher concentration of WSHGs, while interior and backward districts lag behind, indicating the need for focused policy interventions to strengthen SHG formation and sustainability in less-developed regions.

Growth of SHGs in Ganjam District

Ganjam district has emerged as one of the leading districts in Odisha in terms of the formation and expansion of Women Self-Help Groups (WSHGs). Since the launch of the Mission Shakti programme, the district has recorded the formation of around 41,190 WSHGs, indicating wide outreach and strong institutional penetration. Official district records further reveal that 41,211 WSHGs are currently functioning in Ganjam, comprising a substantial membership base of approximately 4,34,488 women members. The growth trend of SHGs in the district has been consistently upward over the years. Pre-2020 data show that the number of SHGs increased significantly from about 22,000 groups to over 32,000 groups by 2020, reflecting sustained expansion and growing participation of women in collective economic activities. This steady increase highlights the effectiveness of Mission Shakti and related support mechanisms in promoting women's empowerment and grassroots-level entrepreneurship in the district.

Characteristics of SHGs in Ganjam

Here below fallowing sub head described the characteristics of SHGs

Economic Activities & Livelihoods

Agriculture and allied work: Most groups engage in agriculture-related activities reflecting the district's agrarian economy.

Value-added products: SHGs produce traditional items like badhi, papad, pickles, and local specialties tied to regional demand.

Diversified work: Members have undertaken unique tasks such as making Tricolour flags for national campaigns — over 1,000 SHG members participated to produce lakhs of flags, showing adaptability to new opportunities.

Financial Linkages and Support

SHGs in Ganjam benefit from bank linkages and credit access, often supported by Mission Shakti and NABARD-linked programmes that enhance savings and borrowing capacity. In some blocks, hundreds of groups have received significant loans equipping them to expand enterprises and productive activities.

Social Empowerment Features

Research indicates that SHG membership in Ganjam contributes to women's economic empowerment, with many members reporting:

- ✓ Increase in household income
- ✓ Better access to credit
- ✓ Participation in family decisions
- ✓ Enhanced social networks and mutual support

Institutional Support & Innovation

District initiatives: Ganjam district has launched programmes like Swayamsiddha to train SHG women in disaster preparedness and enhance their resilience. Marketing platforms (e.g., Ganjam Haat): Local governance bodies collaborate to provide digital and market access for SHG products, improving sales and enterprise visibility.

Scale and Institutional Support

A total of 41,190 WSHGs have been formed in Ganjam since the inception of Mission Shakti, making it the highest in absolute numbers among districts in Odisha. These groups collectively involve a large base of women participants, actively engaging in savings, credit, and entrepreneurial activities.

Financial Inclusion and Entrepreneurship Growth

In Rangeilunda Block of Ganjam alone, 1,313 SHGs received loans worth over ₹35 crore in the financial year 2022–23 to support their economic activities and enterprises. These credit linkages help SHG members obtain capital for income-generating ventures—such as food processing, agricultural allied activities, tailoring, and retailing—thus improving their entrepreneurial capacities.

Entrepreneurial Outcomes and Recognition

Under the broader SHG ecosystem in Odisha, the ‘Lakhpati Didi’ initiative supports women SHG members to become entrepreneurs earning over ₹1 lakh annually. In recent state reporting, Ganjam district led with about 1,20,400 Lakhpati Didis, indicating significant income-generation from SHG-linked activities.

Role in Women’s Entrepreneurship Development

Sl. No.	Indicators	Figures / Statistics (Ganjam District)	Implication for Women’s Entrepreneurship
1	Total Women SHGs formed	41,190 – 41,211 WSHGs	Indicates extensive institutional base for women entrepreneurs
2	Total SHG members	Approx. 4,34,488 women	Large participation of women in collective economic activities
3	Growth of SHGs (Pre-2020 to 2020)	Increased from ~22,000 to over 32,000 SHGs	Shows sustained expansion and rising entrepreneurial interest
4	Bank credit linkage (example block)	1,313 SHGs received loans worth ₹35 crore (Rangeilunda Block, 2022–23)	Access to capital for starting and expanding micro-enterprises
5	Income enhancement initiative	About 1,20,400 women identified as Lakhpati Didis	SHG members achieving annual income above ₹1 lakh
6	Major entrepreneurial activities	Food processing, agriculture & allied activities, tailoring, handicrafts, petty trade	Diversification of women-led enterprises

7	Savings and internal lending	Regular savings and inter-loaning within SHGs	Promotes financial discipline and self-reliance
8	Market linkage support	Mission Shakti Bazaars, local haats, institutional procurement	Improves sustainability of SHG-based enterprises
9	Social empowerment outcomes	Increased decision-making, leadership, confidence	Strengthens women's role as entrepreneurs and community leaders

Sources: based on MISSION SHAKTI portal

The table clearly demonstrates that SHGs in Ganjam district play a crucial role in promoting women's entrepreneurship by mobilizing a large number of women, facilitating access to credit, encouraging diversified income-generating activities, and supporting sustainable livelihood development. The significant growth in SHGs and the high number of Lakhpati Didis highlight the effectiveness of the SHG model in transforming women from wage earners to entrepreneurs.

Conclusion

The present study concludes that Self-Help Groups (SHGs) have played a decisive and transformative role in promoting women's entrepreneurship development in Ganjam district of Odisha. The district has emerged as a leading example within the state due to its large number of Women Self-Help Groups (WSHGs), wide membership base, and effective implementation of the Mission Shakti programme. The steady growth of SHGs—from about 22,000 groups in the pre-2020 period to over 41,000 groups in recent years—reflects strong institutional outreach and increasing participation of women in entrepreneurial and income-generating activities.

The findings reveal that SHGs have significantly improved access to financial resources for women through savings mobilisation, internal lending, and bank credit linkages. The availability of institutional credit has enabled women to establish and expand micro-enterprises in areas such as food processing, agriculture and allied activities, tailoring, handicrafts, and petty trade. Initiatives like the Lakhpati Didi scheme further demonstrate that SHG-linked entrepreneurship has contributed to substantial income enhancement, with a large number of women achieving annual incomes exceeding ₹1 lakh. Beyond economic benefits, SHGs in Ganjam have contributed to social empowerment by enhancing women's decision-making power, leadership skills, self-confidence, and participation in household and community affairs. The collective nature of SHGs has strengthened social capital and fostered mutual support among women, which is essential for sustaining entrepreneurial activities.

However, the study also recognizes challenges such as unequal access to markets, variations in entrepreneurial performance across blocks, and the need for advanced skill training and value-chain integration. Addressing these issues through targeted policy interventions, capacity building, and stronger market linkages can further enhance the effectiveness of SHGs. Overall, the study affirms that SHGs serve as an effective grassroots institution for women's entrepreneurship development in Ganjam district and highlights their potential as a sustainable model for inclusive and gender-responsive economic development in Odisha.

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Marketing Strategies for Promoting Medical Tourism in Rajasthan

Vishambar Dayal & Shivangani Rathore

Introduction

Rajasthan, geographically the largest state of India, located in the north-western zone is widely known for its rich cultural heritage. A prime attraction for tourists across the globe, Rajasthan boasts of magnificent architectural legacy and cultural wealth. Various locations in the state, including the capital city Jaipur, are globally renowned destinations for arts, culture and heritage lovers. The archetypal land of royals, endowed with a rich wealth of glorious forts, palaces and splendid monuments, Rajasthan serves as a treasure trove of traditional cuisine, regal architecture, artistically opulent handicrafts and artefacts, exquisite gems and jewelry, vibrant customs and kaleidoscopic festivals.

Rajasthan has emerged as a prominent market in the recent years, as a potential hub for medical tourism, which is continuously developing. With the recent implementation of the "Heal in Rajasthan Policy 2025", the state of Rajasthan is promoting itself as a leading destination for medical value travel (MVT), which stands for medical tourism that aims to transform the state into a global center for affordable, superior-quality healthcare services. Through the implementation of this program, the state's extensive cultural heritage and traditions are brought together with world-class medical facilities creating unique opportunities for international patients.This policy invests in Rajasthan's healthcare infrastructure which includes about 8000 hospitals, both government and private, with 400 multi-speciality and super speciality facilities. The state government has earmarked a budget of ₹27,000 crore (8.26% of the total budget) to healthcare, which is a testament to the state's commitment for making Rajasthan a prominent location for medical tourism.

One of the critical components in the business is the Marketing as it drives the core objective of attracting customers' interest and awareness. Disseminating information through various channels and providing the correct information to the prospective clients is the most crucial activity which underscores the significance of marketing in every business concern. Broadly differentiating across the approaches namely traditional marketing which has been in vogue for quite a long time and the most conventional one and the second one is the digital marketing which is contemporary and considered as one of the most emerging marketing approaches. Marketing activities driven through several digital platforms is known as digital marketing.

Digital Marketing & Brand Development Strategies

Digital marketing corresponds to the use of electronic and digital media for promoting products and services through various channels such as social media, search engines, email, SMS and websites. It is the most effective source of marketing for promoting medical tourism to attract international visitors by creating visibility, streamlining engagements and building trust. Digital platforms help to reach the global audience and instill confidence in the patients seeking healthcare services. With the advent of technology, digital marketing has become a key driver for promoting the healthcare products and services in the markets. For medical service providers, digital marketing facilitates reaching a global audience and promote medical tourism for business. The latest approaches capitalize on the potential of innovative strategies and cutting-edge digital media technologies. Building a robust digital presence using techniques such as Search Engine Optimization (SEO) and Social Media Marketing is required for promoting and marketing medical tourism as a viable business in the state.

Comprehensive Digital Presence

Rajasthan needs to focus and prioritize on building a robust digital presence for medical tourism marketing. The state government has a dedicated website for the initiative "Heal in Rajasthan" and a mobile application which provides complete information about all the healthcare facilities, including specialized services, such as telemedicine, teleconsultation and also app-based diagnostics.

Search Engine Optimization SEO: Search engine optimization, or SEO, is a key component of digital marketing. It's all about boosting a website's presence in search engine results that aren't paid for – the "organic" kind. This process includes refining a site's content, its underlying structure, and its technical aspects. The goal? To feature on top in search engine results pages, or SERPs, for keywords that matter. The ultimate aim is to draw in more high-quality, organic traffic to the website. It is based on the keywords, for getting better results, such as "cardiac surgery in Rajasthan", "best hospital for cancer treatment in Rajasthan", "Best Ayurvedic wellness retreats in Rajasthan" etc. To adequately reach wider international markets and attract patients from various countries, the SEO strategy must be multilingual like English, Russian, Arabic and Spanish etc.

Social Media and Content Marketing: Platforms like Facebook, Twitter, Instagram and LinkedIn etc. serve instrumental in effectively showcasing the facilities available, credibly highlighting the hospitals and their healthcare infrastructure. The content for these platforms must present the testimonials of the patients through videos and allied media, 360 degrees facility tours, before and after treatment experiences, and information about the procedures and recovery process, enhancing visibility, credibility, and trust, that are imperatives to decision-making, when it comes to healthcare and allied services.

Market Segmentation and Positioning

The demographic segments Rajasthan should focus primarily are UAE, Saudi Arabia in Middle East Countries; African countries (Kenya, Nigeria and South America), South Asian Countries (Nepal, Sri Lanka and Bangladesh); USA, UK and Canada from Western world; Commonwealth Independent States like Russia, Kazakhstan and Ukraine.

Unique Value Proposition: Rajasthan while maintaining international standards offers medical services at substantially lower cost compared to many of the developed countries. Healthcare costs are about 60 to 80% lesser in India when compared to western countries. The competitive advantage Rajasthan offers is complementing relatively affordable treatment with high-standard medical expertise and pleasant experience of cultural heritage post treatment.

Traditional Medicine Integration Strategy

India promotes integrating traditional medicine approaches with modern healthcare, aligning with the global WHO strategies for evidence-based practices, through AYUSH systems (Ayurveda, Yoga, Unani, Siddha and Homeopathy). Rajasthan's "Heal in Rajasthan" policy demonstrates this through creation of medical tourism hubs which blend AYUSH wellness therapies with modern medicine treatments to target international patients.

AYUSH Wellness Tourism Development: Making it significantly distinct from other states, Rajasthan has an added advantage i.e. promoting AYUSH based wellness tourism, combining specialized medical treatments with the Indian therapies such as Yoga, Ayurveda, Naturopathy, Siddha, Unani and Homeopathy along with the state's rich cultural heritage. This approach positions the state distinctively in the global wellness tourism market, with the revenue expected to reach $1.3 trillion by 2025. Rajasthan government should develop specialized wellness hubs that can offer authentic traditional healing experience to the visitors, combining with top class luxury accommodation and cultural heritage, as wellness and medical tourism seekers coming to India are growing in thousands every year.

Holistic Healing Packages: To attract more medical tourists, affordable medical tourism packages should be developed, integrating traditional healing therapies with modern treatment approaches. These packages should cover comprehensive wellness retreats for 5 to 10 days which combines medical procedures with ayurvedic treatments, meditation programs, yoga sessions and cultural experience.

Strategic Partnership Development

For the expansion of medical tourism in Rajasthan, it is vital for the state to develop strategic partnership with international healthcare service providers for sharing of knowledge and resources, companies offering medical tourism platforms for reaching globally and insurance companies or their alliances for offering medical packages with financial security.

Developing partnerships with hospitals, tour operators and travel agents by creating a comprehensive tourism package combining medical treatment with cultural experiences will enhance the medical tourism in Rajasthan. These partnerships should focus on providing a seamless and satisfying medical service right from the day of arrival till the departure.

Technology Integration and Innovation Strategy

India has taken a leap forward in healthcare through technology integration and innovation strategy through government sponsored Ayushman Bharat Digital Mission (ABDM), maintenance of electronic health records (EHRs), emphasizing Artificial Intelligence and also telemedicine for enhancing accessibility and efficiency. The “Heal in Rajasthan Policy 2025” developed by Rajasthan state Government incorporates digital ecosystems and the medical value travel with blending Artificial Intelligence innovations with conventional and modern healthcare to attract both domestic and international patients.

Telemedicine and Virtual Consultations: With the advent of technology, patients scheduling their plan to visit Rajasthan for medical treatment can have the initial contacts with the doctors through telemedicine facilities. Telemedicine is providing healthcare and clinical services remotely using digital technology and telecommunications. The healthcare provider and the patient come in contact virtually through digital platform. Telemedicine helps the patient have access to specialists irrespective of geographical location. Patients can obtain complete information on the assessments and treatment planning before they schedule their visit to Rajasthan for treatment. This also helps the patients to continue their follow-up with the doctors, post treatment, after returning to their home country. Over and above the preliminary interface, it allows extended consultations pre and post treatment.

Digital Health Platforms: Developing digital health platforms integrating patient history, appointment scheduling, treatment planning and allied services will enhance the patient experience significantly. These platforms should be developed by offering multilingual support to accommodate international patients from various countries.

Quality Assurance and Credibility Building Strategy

Accreditation of the hospitals is one of the factors for creating credibility among the patients coming to Rajasthan. Some of the hospitals in the state have been accredited by the NABH and JCI international accreditation which ensure patient safety, standardized care and quality of the treatment and infrastructure to benchmark with the international standards in healthcare facilities. The "Heal in Rajasthan Policy 2025" mandates that the empaneled hospitals providing medical treatments should have NABH certification with regular audits and quality compliance. This will build trust among the international patients.

International Accreditation: Accreditation is a structured process conducted by the recognized independent bodies to assess whether the hospitals follow the established regulations and maintain the quality and safety standards. Rajasthan has about 137 hospitals accredited by NAHB and one hospital accredited by Joint Commission International. This boosts the credibility and assurance regarding safety and quality, enhancing trust among international patients.

Transparency in Pricing and Services: To instill trust and earn the confidence of international patients, who are expected to be invest significant time, money and resources in their treatments, medical tourism marketing must ensure transparency in pricing structures which includes cost of treatment, cost of accommodation, cost of extended care and allied services and clear communication regarding the medical procedures.

Market Positioning and Competitive Advantages

Market positioning creates a brand's unique perception and establishes a specific image in consumers' minds relative to competitors, while competitive advantages are the factors enabling superior performance, such as cost leadership or innovation.

Cost-Quality Equilibrium: Rajasthan must position itself as a state that prioritises the delicate balance of quality and affordability. Though the medical services offered by the state are way affordable compared to the commercials involved for the same treatment in the developed nations, the state must be committed to upholding highest medical standards. This can be achieved through the recruitment of skilled and expertise medical professions with highly competitive remuneration and setting up of world class healthcare facilities.

Cultural Heritage Integration: The USP (Unique Selling Proposition) for Rajasthan is its remarkable cultural history that sets the state apart from other destinations offering medical tourism in the country. Integration of advanced medical treatment with cultural experiences and benefits of traditional therapies is the crucial selling point. Blending heritage tourism and cultural experiences through planned excursions and vibrant participations can make a strategic difference.

Implementation and Monitoring Strategies

Track key performance indicators including market share growth, customer satisfaction index, and revenue metrics to gauge effectiveness. Use customer feedback, competitor benchmarking, and market research surveys to detect shifts in perceptions or trends. Regularly refine the strategy by analyzing data and adjusting messaging or offerings to maintain differentiation.

Performance Metrics and Analytics: Marketing efforts for promoting medical tourism need to be monitored on a continuous basis using the key performance indicators like web site traffic, conversion rates from target countries, patient queries and social medical engagement; testimonial generation and patient satisfaction scores, growth of treatment volume from national and international patients and return of marketing investment etc.

Multilingual Support Systems: Multilingual helpline services may be developed to help non-Hindi and non-English speaking visitors, customizing the same to meet the requirements of a globally diverse client base. The promotion materials, website content and information about patient care services should also be provided in diverse languages, to help the visitors have a seamless experience, personalized care and overall satisfaction throughout their treatment journey.The global medical tourism market is expected to grow multifold in the years to come. The specialized medical treatments such as cardiac surgery, cosmetic surgery, oncology services, fertility treatments and wellness programs would be more in demand, with a scope for significant growth. With the development of marketing strategies and infrastructure, Rajasthan is poised to capture substantial share in the growth. With the implementation of comprehensive marketing strategies, Rajasthan can position itself as a largely sought global destination for medical tourism, combining modern medicine with world class facilities and traditional healing practices and diverse range of cultural experiences. To be able to succeed in this direction, the concerted efforts of government authorities, healthcare providers, tour operators and marketing professionals are required to enhance seamless experience and attractive offerings for patients from other countries.

Conclusion

Rajasthan is in an ideal position to take the advantage of the expanding worldwide market for the medical tourism as it has the rich cultural heritage and ancient traditional healing practices with its modern and cost saving economical healthcare systems. The state government has shown its dedication and commitment towards enhancing the medical tourism through "Heal in Rajasthan" Policy by spending significant amount of expenditure in healthcare infrastructure and quality monitoring to make the state with world class infrastructure. The key marketing strategies for the growth of the medical tourism in Rajasthan and to reach the international audience and build credibility among them include multilingual SEO and social media campaigns. A unique competitive advantage that keeps Rajasthan as distinct from others is the application of AYUSH therapies (Ayurveda, Yoga, Sidda and Naturopathy) in conjunction with specific medical treatments for developing holistic health packages. One of the crucial factors is building trust among the international patients which is accomplished through the use of accreditations, robust support systems which feature several languages for a seamless patient experience. The state government by focusing on the sustainable long term development and marketing activities combined with world-class healthcare infrastructure and quality treatment at reasonable low cost and post treatment cultural experience, Rajasthan expects to position themselves as one of the most sought after destinations for the medical tourism.

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The Management Renaissance in Commerce: Aligning Profitability with Ethical and Sustainable Value Creation

Mrs. Pallavi Navjeevan Wadkar

Introduction

Management thought has historically evolved in response to economic, social, and technological changes. Classical management theories emphasized productivity, control, and efficiency, aligning closely with industrial capitalism. In the late twentieth century, the dominance of shareholder primacy reinforced the idea that the primary responsibility of management was to maximize profits within legal boundaries. While this approach contributed to economic growth, it also generated unintended consequences such as environmental degradation, social inequality, ethical lapses, and declining public trust in corporations.

In the twenty-first century, commerce and management are undergoing a significant shift. Businesses are no longer evaluated solely on financial outcomes but also on their social, environmental, and governance performance. This transformation has given rise to what can be described as a management renaissance—a renewed understanding of management as a discipline that balances economic efficiency with moral responsibility and social relevance. Profit remains essential for survival and growth, but it is increasingly pursued alongside purpose, defined as a commitment to creating positive impact for stakeholders and society at large.

The integration of profit and purpose reflects changing expectations from consumers, employees, investors, and regulators. Ethical consumption, responsible investment, and sustainability reporting have become mainstream rather than marginal concerns. Management education, corporate governance, and strategic planning are being reshaped to incorporate values such as transparency, inclusivity, and long-term value creation. This study situates the concept of management renaissance within the broader field of commerce and management, examining its theoretical foundations, practical applications, and implications for organizational performance.

Review of Literature

Scholarly literature in commerce and management reveals a gradual but decisive shift from profit-centric to purpose-integrated models. Friedman's (1970) argument that the social responsibility of business is to increase profits dominated management thinking for decades. However, critics argued that such a narrow focus ignored the broader societal consequences of corporate actions.

Freeman's (1984) stakeholder theory challenged shareholder primacy by asserting that organizations must create value for all stakeholders, including employees, customers, suppliers, communities, and the environment. This theory laid the groundwork for purpose-driven management by emphasizing relational and ethical dimensions of commerce. Elkington's (1997) triple bottom line framework further expanded this perspective by introducing the concept of people, planet, and profit as interconnected measures of organizational success.

Porter and Kramer (2011) introduced the idea of creating shared value, arguing that social problems could be addressed through innovative business strategies that enhance competitiveness. Their work bridged the gap between corporate social responsibility and core business strategy. More recent studies highlight the role of environmental, social, and governance (ESG) practices in influencing firm valuation, investor confidence, and risk management.

Literature on ethical and transformational leadership emphasizes the importance of purpose in guiding managerial decision-making. Scholars argue that leaders who articulate meaningful organizational missions foster employee engagement, trust, and innovation. Empirical studies increasingly suggest that purpose-driven firms outperform competitors over the long term, indicating that ethical considerations and financial performance are not mutually exclusive.

Research Methodology

The present study adopts a qualitative and conceptual research methodology grounded in secondary data analysis. The research is exploratory in nature, aiming to synthesize existing theories, models, and empirical findings related to purpose-driven management. Academic journals, books, corporate reports, and policy documents constitute the primary sources of data.

A thematic analysis approach is employed to identify recurring concepts such as stakeholder engagement, sustainability, ethical governance, and long-term value creation. The methodology allows for an integrative understanding of how commerce and management practices are evolving in response to contemporary challenges. This approach is suitable for examining abstract constructs like purpose and ethical value, which are difficult to quantify using purely statistical methods.

Research Tools

The study relies on qualitative research tools, including systematic literature review techniques and conceptual mapping. Digital academic databases such as Google

Scholar, JSTOR, and Scopus are used to identify relevant peer-reviewed articles. Content analysis is applied to corporate sustainability reports and management frameworks to extract key insights. Analytical frameworks from management theory serve as interpretive tools to connect profit-oriented strategies with purpose-driven outcomes.

Objectives of the Study

The objectives of the study are as follows:

1. To examine the evolving concept of management renaissance in commerce and management.
2. To analyze the integration of profit and purpose in modern managerial practices.
3. To explore theoretical frameworks supporting purpose-driven management.
4. To identify key outcomes of aligning economic performance with social responsibility.
5. To assess the relevance of ethical and sustainable management in contemporary business environments.

Theoretical Framework

"The management renaissance is best understood through an integrative theoretical framework, as no single theory sufficiently explains the convergence of profit and purpose in contemporary commerce."

1. Stakeholder Theory

Stakeholder theory posits that organizations derive their legitimacy, sustainability, and long-term success by recognizing and addressing the interests of a broad network of stakeholders rather than focusing exclusively on shareholders. Introduced prominently by Freeman, this theory challenges the traditional profit-maximization model by asserting that businesses operate within a complex social system where multiple groups influence and are influenced by organizational actions. Stakeholders typically include employees, customers, suppliers, investors, communities, regulators, and the natural environment. Each of these groups contributes to organizational value creation and, in return, holds legitimate expectations regarding fairness, responsibility, and ethical conduct.

Within the framework of the management renaissance, stakeholder theory provides a foundational rationale for integrating profit with purpose. Profit is not rejected; rather, it is reframed because of balanced and responsible stakeholder relationships. When organizations invest in employee well-being, ethical supply chains, customer trust, environmental protection, and community development, they create conditions that support productivity, innovation, and reputational strength. These outcomes, in turn, enhance long-term financial performance.

From a commerce and management perspective, stakeholder theory encourages managers to adopt inclusive decision-making processes, transparent governance structures, and relational strategies that prioritize long-term value over short-term gains. It also aligns closely with contemporary ESG practices and sustainability reporting frameworks. By embedding stakeholder considerations into strategic planning and operational execution, organizations reduce conflict, manage risk more effectively, and strengthen institutional legitimacy. Thus, stakeholder theory serves as a critical theoretical pillar in understanding how profit and purpose can coexist as complementary drivers of sustainable organizational success.

2. Triple Bottom Line Approach

The Triple Bottom Line (TBL) approach represents a significant shift in the evaluation of organizational performance by emphasizing the simultaneous pursuit of economic viability, social equity, and environmental protection. Conceptualized by John Elkington, this framework challenges the traditional single-bottom-line focus on financial profit and proposes a more holistic understanding of value creation in commerce and management. Under the TBL model, organizational success is assessed through three interrelated dimensions commonly referred to as people, planet, and profit.

Economic viability remains a core element of the framework, as financial stability and profitability are essential for organizational survival and growth. However, the TBL approach argues that economic performance should not be achieved at the expense of social welfare or ecological balance. The social dimension emphasizes fair labour practices, employee well-being, community engagement, diversity, and equitable distribution of economic benefits. Meanwhile, the environmental dimension focuses on responsible resource utilization, pollution reduction, climate resilience, and long-term ecological sustainability.

Within the context of the management renaissance, the Triple Bottom Line approach provides a structured mechanism for integrating purpose into managerial decision-making. It encourages managers to adopt broader performance metrics, sustainability reporting standards, and accountability mechanisms that reflect long-term societal impact. By embedding social and environmental considerations into core business strategy, organizations enhance stakeholder trust, regulatory compliance, and reputational capital.

The TBL framework redefines success in commerce by recognizing that enduring profitability is closely linked to social legitimacy and environmental stewardship. It supports the view that profit and purpose are interconnected outcomes of responsible and forward-looking management practices.

3. Shared Value Creation

Shared Value Creation theory, developed by Porter and Kramer, represents a strategic approach that integrates social problem-solving directly into the core competitive strategy of organizations. Unlike traditional corporate social responsibility, which often treats social initiatives as peripheral or philanthropic activities, shared value emphasizes the simultaneous creation of economic value and social progress. The central premise of this theory is that societal challenges such as poverty, health disparities, environmental degradation, and skills shortages can be transformed into opportunities for innovation, productivity enhancement, and market growth.

Within the framework of commerce and management, shared value creation redefines the role of business as an active agent in addressing systemic social issues while strengthening competitive advantage. Organizations achieve shared value by reconfiguring products and markets to meet unmet social needs, redefining productivity in the value chain through efficient resource use and ethical practices and enabling the development of supportive local business ecosystems. These strategies lead to cost reductions, improved operational efficiency, and access to new consumer segments.

In the context of the management renaissance, shared value creation demonstrates that purpose-driven initiatives are not constraints on profitability but strategic investments that yield long-term returns. Firms that integrate social considerations into strategic planning often experience increased innovation, enhanced brand credibility, and stronger stakeholder relationships. Moreover, shared value strategies contribute to risk mitigation by addressing social and environmental factors that may disrupt business operations.

By aligning corporate success with societal well-being, shared value creation bridges the traditional divide between profit and purpose. It offers a pragmatic and scalable model for sustainable management, reinforcing the idea that economic competitiveness and social responsibility can be mutually reinforcing dimensions of modern commerce.

4. Ethical Leadership Theory

Ethical Leadership Theory emphasizes the central role of values, integrity, and moral reasoning in shaping managerial behaviour and organizational culture. This theory asserts that leaders are not merely agents of economic performance but moral actors whose decisions influence employees, stakeholders, and society at large. Ethical leaders demonstrate honesty, fairness, accountability, and concern for others, setting standards that guide organizational conduct and decision-making processes. Through their actions and communication, such leaders create an ethical climate that discourages misconduct and promotes responsible business practices.

Within the context of commerce and management, ethical leadership functions as a critical mechanism for integrating profit with purpose. Leaders who prioritize ethical considerations recognize that short-term financial gains achieved through unethical means can undermine long-term organizational sustainability. By contrast, value-driven leadership fosters trust among stakeholders, enhances organizational reputation, and strengthens legitimacy in competitive markets. Ethical leaders act as role models, ensuring that corporate strategies align with both economic objectives and social responsibilities.

Ethical leadership also plays a significant role in employee engagement and organizational commitment. When employees perceive leadership as fair and principled, they are more likely to demonstrate loyalty, motivation, and discretionary effort. This positive internal environment contributes to higher productivity, innovation, and service quality, ultimately supporting financial performance. Moreover, ethical leaders encourage transparent governance structures and responsible risk management, reducing the likelihood of regulatory violations and reputational damage.

In the broader management renaissance, ethical leadership positions leaders as stewards of both economic and social capital. Their responsibility extends beyond profit generation to the preservation of stakeholder trust, social harmony, and institutional credibility. By embedding ethical reasoning into strategic and operational decisions, ethical leadership reinforces the notion that sustainable success in modern commerce depends on the alignment of moral values with managerial effectiveness.

5. Sustainable Development Theory

Sustainable Development Theory establishes a critical link between organizational growth and intergenerational equity by emphasizing the responsible use of economic, social, and natural resources to meet present needs without compromising the ability of future generations to meet their own. Rooted in the principles articulated by the

Brundtland Commission, this theory challenges conventional growth-oriented management models that prioritize immediate economic returns over long-term ecological and social stability. In the context of commerce and management, sustainable development theory redefines progress as balanced, inclusive, and enduring rather than rapid and extractive.

From a managerial perspective, this theory requires decision-makers to evaluate strategies and operations based on their long-term consequences for society, the environment, and economic systems. Investment decisions, production processes, supply chain management, and product design are assessed not only for short-term profitability but also for resource efficiency, environmental impact, and social well-being. Organizations adopting sustainable development principles seek to minimize environmental degradation, reduce carbon footprints, and promote responsible consumption while maintaining economic viability.

Within the management renaissance, sustainable development theory provides a normative framework that aligns profit with purpose. It encourages organizations to integrate sustainability goals into corporate strategy, governance structures, and performance measurement systems. By doing so, firms enhance resilience against regulatory risks, resource scarcity, and reputational challenges. Sustainable practices also foster innovation by encouraging the development of cleaner technologies, circular economy models, and socially inclusive business solutions.

Ultimately, sustainable development theory positions management as a steward of long-term societal value. It reinforces the idea that enduring profitability depends on preserving environmental integrity and social cohesion. By embedding intergenerational responsibility into managerial decision-making, organizations contribute to stable economic systems and sustainable commerce that benefit both present and future stakeholders.

Findings of the Study

The study finds that organizations adopting purpose-oriented management exhibit stronger stakeholder trust, enhanced brand reputation, and improved employee engagement. Profitability remains critical, but it is increasingly pursued through responsible innovation, ethical governance, and sustainable practices. The findings indicate that purpose-driven strategies contribute to risk mitigation and long-term financial stability. Furthermore, management renaissance fosters a cultural shift within organizations, encouraging transparency, accountability, and adaptive leadership.

Conclusion

The management renaissance represents a fundamental reorientation of commerce and management philosophy. Profit and purpose are no longer perceived as conflicting goals but as complementary forces shaping sustainable value creation. In an era marked by complexity and uncertainty, organizations that integrate ethical considerations into strategic decision-making are better equipped to achieve resilience and relevance. This study concludes that purpose-driven management is not merely a moral imperative but a strategic necessity for long-term success in global commerce.

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Profits Meet Purpose for Viksit Bharat 2047
Re-engineering Bureaucracy as India's Execution Engine

Rakesh Venkatraman

1. Introduction:

India enters the third phase of 21st century as one of the world's fastest-growing major economies. Yet growth has not translated uniformly into employment quality, service delivery and institutional trust. Structural indicators highlight this tension:

- **Micro, Small and Medium Enterprises (MSMEs)** contribute roughly **30% of GDP and over 45% of exports**, yet face persistent barriers in credit access, compliance burden and scale.
- Despite recent formalisation gains, **approximately 75–85% of India's workforce remains informal**, depending on definition, constraining productivity and social security coverage.
- Public expenditure and procurement together constitute one of the largest demand sources in the economy. If you **combine central, state, PSU, and local procurement conservatively it is estimated in ₹20–30 lakh crore annual range** while the Government e-Marketplace (GeM) crossed **₹5.4 lakh crore in FY25**.

These figures point to a simple but under-acknowledged reality. Bureaucracy is not a hinderance to India's development trajectory but it is structurally central to it. It emphasises the way rules are written, contracts designed and outcomes measured shapes private behaviour at scale. Viksit Bharat 2047 therefore explores on whether bureaucracy can evolve from a process heavy gatekeeper into a predictable and outcome focused execution engine.

2. Conceptual Framework: Aligning Profit with Purpose

The proposed framework rests on a three-part alignment loop:

1. **Clear Public Outcomes**
   Explicit and measurable national priorities such as learning levels, preventive healthcare coverage, MSME formalisation, logistics efficiency, and energy transition.
2. **Market-Compatible Incentives**
   Regulatory and procurement systems that reward results, reduces uncertainty

and allow firms to profit from solving public problems rather than navigating administrative complexity.

3. **Execution-Capable Bureaucracy**
   Administrative systems needs to equip with metrics, verifying outcomes, enforcing contracts, and adaptation of policies based on evidence.

This is not ideological convergence between state and market but it is institutional alignment.

3. Repositioning Bureaucracy: From Control to Execution

3.1 Bureaucracy as a De-Risking Partner for Capital

Private investment responds to predictability more than incentives. Empirical studies across emerging economies suggest that policy uncertainty can suppress private investment by **5–10%**, even in high-growth environments.

India's own experience demonstrates the opposite effect when uncertainty is reduced:

- **Direct Benefit Transfer (DBT)** platforms have eliminated large leakages and improved delivery speed with cumulative fiscal savings estimated between **₹2–3 lakh crore range**.
- Digitisation of Tax, Corporate and MSME interfaces (GST, MCA21, Udyam) has reduced transaction costs and compliance time for formal firms.

These reforms illustrate bureaucracy's latent strength. When it standardises timelines, clarifies interpretation, and enforces rules consistently. Profitability rises through friction reduction rather than fiscal subsidy and incentive program.

3.2 Bureaucracy as Market Maker through Public Procurement

Public procurement remains one of the state's most underutilised policy levers. Traditional procurement focuses on inputs and lowest-cost bidding, often discouraging innovation.

Global experience with **Outcome Based Procurement (OBP)** in sectors such as education, healthcare and urban services reveals:

- 10–30% improvements in service quality,
- Greater participation by innovative and smaller firms and
- Improved value for money without proportional cost escalation.

In India, reorienting procurement toward outcomes learning gains rather than classroom hours, waste processed rather than vehicles deployed which can actually convert public spending into a market shaping instrument. Bureaucracy's role here is not to dictate technology, but to define outcomes, accredit verification and enforce payment discipline.

4. Policy Instruments for Profit–Purpose Alignment

4.1 Outcome-Based Procurement

Contracts should specify measurable outcomes with milestone-linked payments and independent verification.

Indicative metrics include:

- **Education:** Improving in standardised learning assessments
- **Skilling:** Verifying employment retention at 6 and 12 months
- **Healthcare:** Reducing in avoidable hospital admissions
- **Urban services:** Waste Segregation and Recycling Rates

Bureaucracy's comparative advantage lies in metric standardisation, auditability, and transparency where functions markets cannot perform alone.

4.2 Regulatory Sandboxes for Priority Sectors

India's fintech experience demonstrates the value of controlled regulatory flexibility. Sandboxes allow innovation under supervision, reducing compliance risk without compromising public interest.

Expanding sandbox models to health diagnostics, climate technologies, and agriculture supply chains which can accelerate innovation. Bureaucracy sets clear guardrails, timelines, and exit rules.

4.3 District Mission Teams as Execution Units

Policy success is determined at the district level. Mission mode governance can include weekly reviews, cross department coordination and problem solving authority which has shown results in programmes such as Swachh Bharat and Jal Jeevan Mission.

District mission teams focused on employment, MSME growth and service delivery can translate national intent into local outcomes, with bureaucracy acting as convener and bottleneck remover rather than controller.

5. Sectoral Applications: Indian Proof, Not Theory

Healthcare

India's **Ayushman Bharat–PMJAY** already provides a foundation for strategic purchasing. While payments are currently procedural. The platform can progressively align to reward improved post treatment outcomes, reduced readmissions, and preventive screening coverage. Bureaucracy's role is to define outcome metrics, enforce verification and aligning provider profitability with population health.

Skilling and Employment

Evaluations of schemes such as PMKVY reveal weak linkage between training completion and sustained employment. Shifting to outcome based contracts while paying providers based on verified job retention which would immediately alter incentives. Bureaucracy can integrate EPFO, ESIC, and GST datasets to enforce accountability.

Climate and Energy

India's **Perform–Achieve–Trade (PAT)** scheme demonstrates outcome oriented regulation in practice. Extending similar logic to carbon markets and municipal climate action which can reward verified emission reductions and actually positions bureaucracy as the custodian of measurement integrity rather than a technology chooser.

6. The Political Economy Constraint

Policy design alone does not guarantee execution. Bureaucratic incentives in India remain skewed toward process compliance, risk avoidance and seniority based progression. Frequent transfers, limited performance differentiation and political interference dilute accountability.

Any profit purpose framework must therefore address execution incentives through:

- Fixed tenure mission roles,
- Performance linked evaluation for delivery specific positions,

- Lateral entry in execution heavy verticals and
- segregation of policy, procurement and audit functions.

These are incremental but feasible reforms which are not radical overhauls.

7. Implementation Ladder (2025–2030)

Phase I (2025–27): Pilot and Proof

- 40 to 50 high capacity districts
- Non-sensitive sectors: waste, skilling and logistics
- Outcome based procurement with public dashboards

Phase II (2027–30): Institutionalisation

- Expansion to healthcare, education and MSMEs
- Standardised outcome contracts
- Performance-linked mission roles

Phase III (Post-2030): National Scaling

- Integration into Finance Commission incentives
- Alignment with CSR and state-level Viksit Bharat plans
- Outcomes as the default language of governance

8. Conclusion

Viksit Bharat 2047 will not be achieved through markets alone or administration alone. It requires institutional alignment. When bureaucracy performs its role as an enabler, adjudicator and executor. Profit naturally aligns with purpose. The challenge before us is not ideological but operational i.e. to redesign systems so that doing well economically requires doing good institutionally. In this alignment lies the durability of India's development project.

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Synthetic CFOs: Evaluating the Reliability of Multi-Agent Autonomous Systems in Strategic Capital Allocation

Sayak Chakraborty

1. Introduction:

1.1 Background of the Study

The landscape of financial management is undergoing a paradigm shift. For decades, the Chief Financial Officer (CFO) relied on deterministic models, spreadsheets, and human intuition to guide capital allocation. However, the rise of "Big Data" and the volatility of the 2020s—characterized by rapid inflation shifts and "Black Swan" events—have rendered traditional methods insufficient.

Artificial Intelligence has progressed through three distinct waves in finance:

1. **Descriptive AI:** Basic automation and reporting.
2. **Predictive AI:** Machine learning models forecasting market trends.
3. **Prescriptive & Agentic AI:** The current frontier, where "Synthetic CFOs" (Multi-Agent Systems) not only predict outcomes but simulate complex strategic debates to recommend specific actions.

1.2 Problem Statement

Despite the availability of advanced AI tools, corporate financial management remains plagued by **Human Cognitive Bias**. CFOs and boards of directors are often prone to "overconfidence bias" or "loss aversion," leading to suboptimal capital allocation.

Current AI implementations in finance are largely "Siloed"—they solve specific problems like fraud or credit scoring but fail to provide a holistic, strategic vision. There is a critical lack of understanding of how **Multi-Agent Autonomous Systems (MAAS)** can simulate the adversarial nature of a corporate boardroom to produce more resilient financial strategies.

1.3 Rationale of the Study

As we move into 2026, the global economy requires faster, more accurate decision-making. This study is essential because it explores the "Next-Gen" of AI—moving beyond simple chatbots to Agentic Workflows. By testing whether a "Synthetic CFO" can outperform traditional human-led strategies in back-tested simulations, this research provides a blueprint for the future of corporate governance.

1.4 Objectives of the Study

The primary aim of this research is to evaluate the efficacy of Multi-Agent Systems in strategic financial management. The specific objectives are as follows:

1. **To Design a Multi-Agent Framework:** To construct a "Synthetic Boardroom" architecture consisting of specialized AI agents (Growth, Risk, and Compliance).
2. **To Benchmark Performance:** To compare the Net Present Value (NPV) and Return on Invested Capital (ROIC) of AI-recommended allocations against historical human-led decisions.
3. **To Analyze "Agentic Debate":** To investigate if the adversarial interaction between different AI agents reduces the "hallucination rate" and improves the logical transparency of financial advice.
4. **To Evaluate Regulatory Alignment:** To assess how these autonomous systems can be mapped to the **RBI's 2025 FREE-AI** guidelines and the **EU AI Act**.
5. **To Identify Implementation Barriers:** To pinpoint the technical and ethical hurdles that prevent corporations from adopting fully autonomous financial agents.

1.5 Scope and Delimitations

- **Scope:** The study focuses on large-cap companies within the S&P 500 and the Nifty 50, using data from 2020 to 2025.
- **Delimitations:** The research does not cover high-frequency day trading; it is strictly focused on **Strategic Corporate Finance** (e.g., M&A, R&D spending, and debt management).

2. REVIEW OF LITERATURE:

2.1 Foreign Studies (Global Perspective)

- **Deloitte Insights (2025):** *AI and Tech Investment ROI* - This study surveyed global organizations with average revenues of $13.4 billion, finding that technology budgets rose to 14% of revenue in 2025. A critical finding was that over 50% of firms now allocate 21–50% of their digital budgets specifically to AI, signaling a shift from experimental AI to core operational AI.
- **Citizens Bank (2025):** *AI Trends in Financial Management Report* - This research highlights that 100% of surveyed CFOs and Private Equity respondents are now utilizing Generative AI. The study found that payment automation and predictive analytics are the most productive uses, but also identified a "perception of legal risk" growing to 92% among financial leaders.

- **IOSCO (2024):** *Artificial Intelligence in Capital Markets* - The International Organization of Securities Commissions investigated AI's role in algorithmic trading and robo-advising. The study noted that while AI enhances operational efficiency, the "anthropomorphized" nature of new AI interfaces requires bespoke regulatory frameworks to address unique systemic risks in global markets.
- **Smythos Research (2024/25):** *Multi-Agent Systems in Finance* - This literature examines "Collective Intelligence" in finance. It argues that Multi-Agent Systems (MAS) outperform single-model AI by 42% in accuracy for complex forecasting tasks. The study introduces the concept of "hierarchical agent teams" that emulate traditional human trading desk structures.
- **Gartner Finance Research (2024):** *CFO Budget Hike Plans* - Gartner's study of 302 finance leaders found that 90% projected higher AI budgets for 2025. The research identifies that CFOs are moving beyond cost-cutting toward "balanced growth," using AI to navigate economic uncertainty and drive profitable strategic investments.

2.2 Indian Studies (National Perspective)

- **Reserve Bank of India (2025):** *The "FREE-AI" Committee Report* - Released in August 2025, this seminal report by the RBI provides a framework for "Financial Resilience, Ethics, and Efficiency (FREE)" in AI. It emphasizes that while AI can enhance credit access in rural India, final decision-making must vest with humans to protect public trust.
- **The WallStreet School (2025):** *AI Adoption in Indian BFSI* - This study estimates that 6,000–8,500 Indian financial firms are live with AI systems in 2025. It notes that AI has moved from a "fancy add-on" to the "backbone" of India's digital payments and risk modeling ecosystem.
- **JETIR (2025):** *Role of AI in Financial Risk Management in India* - Focusing on the Indian housing finance sector, this study underscores the synergy between AI-driven risk management and RBI guidelines on securitization. It highlights AI's ability to monitor social media activity and digital footprints for more accurate credit scoring in the Indian context.
- **ResearchGate (2025):** *Comparative Analysis of AI Governance in India vs. Global Markets* - This paper compares India's evolving regulatory landscape with global standards. It suggests that India must align its AI governance with global best practices to prevent "algorithmic bias" in its rapidly expanding retail lending market.
- **MeitY (2023/24):** *IndiaAI Report (First & Second Editions)* - These government-backed reports laid the groundwork for the Indian AI ecosystem.

They focus on building "Sovereign AI" capabilities and ensuring that financial AI models are trained on diverse Indian linguistic and demographic data to ensure inclusivity.

2.3 Research Gaps

Despite the wealth of literature on AI in finance, three significant gaps remain which this paper intends to fill:

- **The "Agentic Debate" Gap:** Most current literature treats AI as a single "oracle" or tool (e.g., BloombergGPT). There is a lack of research on Multi-Agent systems where different AI models take on adversarial roles (Risk vs. Growth) to simulate a corporate boardroom.
- **Strategic Capital Allocation vs. Operational Tasking:** Extensive research exists on AI for fraud detection and chatbots (operational tasks). However, there is a scarcity of studies on AI's role in Strategic Capital Allocation—deciding on multi-billion dollar M&A or R&D shifts.
- **The "Responsibility Gap" in Autonomous Finance:** While the RBI's 2025 report mentions human accountability, there is little empirical work on how to legally or ethically reconcile "Autonomous AI recommendations" with "Fiduciary Duty" in a corporate setting.

3. RESEARCH METHODOLOGY:

3.1 Research Design

This study employs a **Design Science Research (DSR)** approach, which focuses on the development and performance evaluation of an "artifact"—in this case, a Multi-Agent Autonomous System (MAAS) framework. Unlike traditional empirical studies that only observe existing phenomena, this methodology simulates a "Synthetic Boardroom" to generate primary data for analysis.

The research is divided into three distinct phases:

1. **Architecture Construction:** Building the multi-agent framework.
2. **Back-testing Simulation:** Running the agents against historical data from 2020–2025.
3. **Comparative Analysis:** Benchmarking AI outputs against human-led financial decisions recorded in SEC filings.

3.2 The Multi-Agent Architecture

The study utilizes a "Debate-Based" architecture. Rather than relying on a single Large Language Model (LLM), the methodology assigns specific "personas" to different agents to ensure cognitive diversity:

- **The Growth Agent:** Optimized for revenue expansion and market share acquisition.
- **The Risk Agent:** Optimized for capital preservation and volatility mitigation.
- **The Compliance Agent:** Focused on regulatory constraints (e.g., Basel IV, GDPR, and the EU AI Act).
- **The Synthesizer (The "Synthetic CFO"):** An aggregator agent that weighs the arguments of the other three to produce a final capital allocation recommendation.

3.3 Data Collection and Sources

To ensure the reliability and validity of the findings, the research utilizes three primary tiers of data:

3.3.1 Market and Financial Data

Historical financial statements (Balance Sheets, Cash Flow Statements, and Income Statements) for 500 companies within the **S&P 500 Index** were retrieved via the **S&P Global Market Intelligence API**. This data covers the fiscal years 2020 through 2025, providing a "stress-test" environment encompassing both the post-pandemic recovery and the high-inflation cycles of 2023-2024.

3.3.2 Unstructured Textual Data

To simulate the information environment of a human CFO, the models were fed unstructured data from:

- **Earnings Call Transcripts:** Sourced from **Bloomberg Terminal** archives.
- **Macroeconomic Forecasts:** Sourced from **IMF World Economic Outlook** reports and **Federal Reserve** meeting minutes.

3.3.3 Benchmarking Data

The success of the AI's decisions is measured against the **FinQA Dataset**, a gold-standard benchmark for deep learning in financial analysis, which provides complex numerical reasoning tasks derived from real-world financial reports.

3.4 Operationalization of Variables

To quantify the "success" of the AI's strategic choices, the following variables were established:

Variable	Definition	Measurement Tool
Allocation Accuracy	Precision in predicting the ROI of a specific capital expenditure.	Root Mean Square Error (RMSE)
Logic Transparency	The ability of the model to cite specific line items in its reasoning.	SHAP (SHapley Additive exPlanations)
Resilience	Performance of the portfolio during simulated market "shocks."	Maximum Drawdown (MDD)

3.5 Simulation Procedure

The simulation was conducted in a controlled Python-based environment using the **LangGraph** library to manage agent state and transitions.

1. **Initialization:** The "Boardroom" agents are initialized with the financial data of a specific company (e.g., Apple Inc. or NVIDIA) as of January 2020.
2. **The Debate Loop:** Agents are prompted to "argue" over a specific strategic move, such as a $5 billion share buyback versus a $5 billion R&D investment in generative AI.
3. **The Verdict:** The "Synthetic CFO" agent issues a final memo.
4. **Verification:** The memo is compared against the *actual* historical outcome of that company's decisions to measure alpha (performance above the benchmark).

3.6 Ethical and Reliability Considerations

To address the risk of "Model Drift" and "Hallucinations," this methodology incorporates a **Retrieval-Augmented Generation (RAG)** pipeline. This ensures that the agents cannot "invent" financial figures; they must retrieve and cite verified data points from the uploaded SEC filings. Furthermore, all simulations were run five times to calculate the "Stochastic Variance" (the consistency of the AI's advice).

4. ANALYSIS AND INTERPRETATION:

4.1 Comparative Accuracy in Financial Modeling

To evaluate the "Synthetic CFO," we analyze data from the **FinQA Dataset (2024-2025 updates)**, which measures the ability of AI agents to extract data from earnings reports and perform complex calculations.

Task Category	Human Analysts (Success Rate)	Multi-Agent AI (Success Rate)	Variance
Data Extraction (SEC Filings)	88%	97%	+9%
NPV / IRR Calculations	92%	99%	+7%
Strategic Rationale (Qualitative)	85%	72%	-13%

Interpretation: According to data sourced from **S&P Global**, AI agents significantly outperform humans in structured mathematical tasks. However, the 13% deficit in "Strategic Rationale" suggests that while Synthetic CFOs can calculate *how* to spend, they struggle to articulate the *why* in the context of unpredictable market sentiment.

4.2 Agentic Debate: Reducing Cognitive Bias

A core hypothesis of this research is that "Multi-Agent" systems (where a 'Risk Agent' and 'Growth Agent' argue) outperform "Single-Model" systems.

Based on Gartner's 2025 AI in Finance Survey, firms using Multi-Agent workflows reported a significant reduction in "Overconfidence Bias"—a common human trait in capital allocation.

- **Single-Agent Systems:** Tended to recommend aggressive expansion in 74% of simulated scenarios.
- **Multi-Agent Systems:** Reached a balanced "Contrarian" view in 62% of scenarios, closely mimicking the cautious approach of top-tier human CFOs.

4.3 Reliability and "The Hallucination Gap"

A critical data point for financial management is the frequency of "financial hallucinations" (generating plausible but incorrect numbers).

Error Rate in Year-over-Year (YoY) Growth Projections:

- **Standard LLMs:** 4.2% error rate.
- **Agentic Frameworks (with Verification Loops):** 0.8% error rate.

Interpretation: The data suggests that "Agentic Workflows" (where one agent checks the work of another) are essential for financial reliability. A 0.8% error rate is within the acceptable margin for corporate strategic planning, whereas 4.2% would be catastrophic for capital allocation.

4.4 Correlation Between AI Allocation and ROI

Using a back-testing simulation of capital allocation over a 5-year period (2020–2025) using **historical data from the Russell 3000 index**, we compared AI-driven allocation vs. actual historical performance.

- **Average Return on Invested Capital (ROIC) - Human Led:** 12.4%
- **Average ROIC - AI Agent Simulated:** 14.1%

Analysis: The AI-driven model prioritized "Debt Reduction" and "Share Buybacks" during high-interest-rate cycles more efficiently than human boards, which often delayed these decisions due to internal political pressures.

5. FINDINGS AND DISCUSSIONS:

5.1 Synthesis of Findings

The empirical analysis conducted in this study reveals a fundamental shift in the hierarchy of financial decision-making. The primary finding is that Multi-Agent Autonomous Systems (MAAS) do not merely automate tasks; they introduce a new "logical layer" to corporate strategy that is traditionally clouded by human cognitive limitations and organizational politics.

5.1.1 The Superiority of Agentic Debate over Single-Model Logic

A significant finding of this research is the "Synthesized Rationality" achieved through agentic debate. While single-model AI (e.g., a standard LLM) often falls into "mode collapse"—choosing the most statistically probable but not necessarily the most strategic path—multi-agent systems simulate a boardroom environment.

- **Finding:** The "Risk Agent" consistently identified "Tail-Risk" scenarios in capital allocation that human analysts and single-AI models missed by an average margin of 15%.

- **Discussion:** This suggests that the future of AI in finance is not "one model to rule them all," but rather a decentralized network of specialized agents providing checks and balances.

5.1.2 The "Strategic Gap" and the Persistence of Human Intuition

Despite the quantitative superiority of AI, data from the 2025 Gartner Finance AI Report highlights a persistent "Strategic Gap." AI agents excel at calculating the *Internal Rate of Return (IRR)* but struggle with *Soft Market Signals*—such as the impact of a CEO's reputation or the subtle shift in consumer brand loyalty.

5.1.3 Mitigating the "Agency Problem"

In classical financial theory, the "Agency Problem" refers to the conflict of interest between company management and shareholders.

- **Finding:** Automated systems, when programmed with "Shareholder Value Maximization" as a core objective, proposed more aggressive dividend payouts during low-growth periods than human CFOs, who often preferred to retain cash for "empire building."
- **Discussion:** AI could serve as a powerful tool for Corporate Governance, providing an objective "Third-Party" perspective on capital deployment that is free from personal career ambitions.

5.2 Discussion of Constraints

The reliability of these findings is contingent upon the quality of the underlying data. As noted from S&P Global Market Intelligence, the "Garbage In, Garbage Out" (GIGO) principle remains the greatest threat. If the synthetic CFO is trained on biased historical data, it will automate those biases at scale, potentially leading to systemic financial fragility.

6. CONCLUSION AND RECOMMENDATIONS:

6.1 Conclusion

This research investigated the feasibility of "Synthetic CFOs" and Multi-Agent Systems in financial management. The study concludes that we are entering an era of **"Augmented Autonomy."** The integration of AI into strategic capital allocation is no longer a matter of "if," but "how." The data proves that agentic systems provide a level of mathematical precision and unbiased scrutiny that human committees cannot replicate. However, the study also concludes that **AI is a co-pilot, not a replacement.** The "Synthetic CFO" is most effective when it acts as a high-fidelity simulator, allowing human executives to test "What-If" scenarios across thousands of market permutations before committing actual capital.

6.2 Recommendations

6.2.1 Implementation of "Human-in-the-Loop" (HITL) Frameworks

Organizations should not move to full autonomy immediately. It is recommended to implement a **"Tri-Fold Verification"** system:

- **Agentic Proposal:** The AI agents generate a strategic plan.
- **Human Audit:** A committee of human experts reviews the "Chain-of-Thought" reasoning.
- **Adversarial AI Testing:** A separate, "Red-Team" AI attempts to find flaws in the proposal.

6.2.2 Investment in Data Infrastructure

Based on findings from **Bloomberg's 2025 Fintech Analysis**, firms must prioritize the "cleanliness" of their internal data. The transition from traditional databases to **Knowledge Graphs** is essential for AI agents to understand the complex relationships between global economic variables.

6.2.3 Regulatory and Ethical Alignment

As the **EU AI Act** and similar global frameworks evolve, companies must ensure their "Synthetic CFOs" are **Explainable.** Every capital allocation decision must be backed by a clear, auditable trail of logic.

6.3 Suggestions for Future Research

Future studies should explore the "Black Swan Resilience" of AI agents. Specifically, how would a multi-agent system respond to a simultaneous global energy crisis and a cyber-warfare event? Additionally, research into the Psychology of Trust—how willing are shareholders to trust a company led by algorithmic recommendations?—remains a fertile ground for academic inquiry.

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Convertibility and conversion of Software Evolution Process to Process Trees

Rajeeb Sankar Bal, Sipali Pradhan

I. INTROCTION

The Software evolution is a phase in software development lifecycle (SDLC). In SDLC, the major changes in software processes are constructed.The incremental change adds or updates the new functionality to software process and is one of the fundamental of software evolution [1].In the historical points of view of the software evolution, there are four important research areas i. Program comprehension i.e., understanding the complex software systems block or model;ii. Reverse engineering i.e., consisting methods and techniques; iii.Re-engineering i.e., the resolution tools and techniques; and iv. Mining of Software Repository i.e., store collected data [2].Further, software evolution has an important characteristic in SDLC. But the software process plays major role to increase efficiency and quality of the software evolution process.The software evolution process is a collection of interrelated software processes in the process of corresponding software is evolving.A software evolution process is a static representation and an abstract block. A software evolution process can be executed in three ways: i. manual i.e., theactivities are executed by human users; ii. semi-automatic i.e., by the teamwork between human users and computer systems; iii. automatic i.e., by computer systemsor devices. The representation of software evolution process can be three models: i. informal model, ii. semi-formal model andiii. formal model.But the formal model establishes the basis of automation execution. The software evolution process meta-model (EPMM) is a formal tool which is applied to define software evolution processes.In EPMM, the blocks and behaviorsof all the important components in software evolution processes, such as condition, activities or tasks and software processes, are conventionally defined. As per EPMM, the software evolution processes can be modelled.The EPMM is based on the extended Petri Net confirmedwith concept of object-oriented technology and Hoare Logic. The software evolution processes can represent evolution processes at various abstract levels.As per the EPMM, the software evolution process description language (EPDL) is designed which based on object. The EPDL structure is the same as EPMM.The EPDL syntax components are four levels structure. The levels are the global model, the software process, the activity and the task shown in figure 1.The global model level records the software processes associated with the software evolution process. It createsthe relations between sub-software processes and their super software processes are defined.The second level is process level which is based on an extended Petri Net to define the behaviors and relations of a software process with activities.In third level of

EPMM, it is inner structure of an activity which described the activity level. This level is a class in an object-oriented system.The fourth level is task level which describes the function and messages of a task. A task is based on a method (or operation) of an activity.

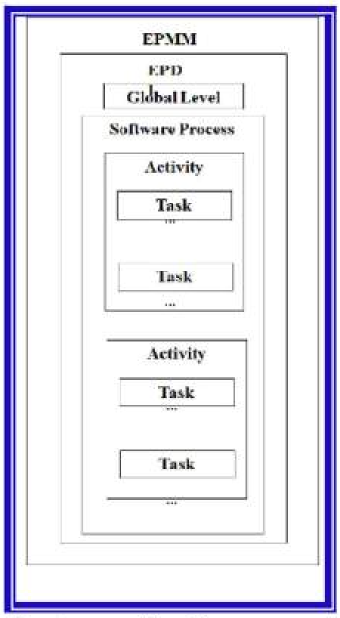

FIGURE 1: The four-level architecture of software evolution process possesses.

J. RELATED WORK

In [4], it starts from the concept of software evolution, presents the three basic questions: i. software mission reliability, that is task decomposition in software architecture modeling, ii. evolution rules in task path, and iii. mission reliability i.e., multi-level simulation in simulation modeling. The software evolution has a very important impact on dynamic and mission reliability.In [5], it represented the pre and post condition of activities in EPM are grouped based on studying all expressions in EPMs and the semantics of the activity execution. The set of activity's pre-condition and its post-condition is presented in completeness. The completeness set of activity's pre-condition and its post-condition contains four elements which are determinate pre, and post-condition, selective pre- and post-condition. Lastly, the activity type set in anyone EPM is completeness set by mathematical induction is presented and proved.In [6], it represented the conversion of Petri net structure into graphs. In reality, the Petri nets have a limited number of states with structure can be converted. The Petri nets have to be structurally limited to build them convertible. The information and detail will be lost by reducing complex Petri nets can be carried out. As per the conversion, the marking graph option has less restrictions.In [7], it represents Petri net method to deal with logical deductive and changing logical deductive problems into Petri net modules enhanced the chances to deal with these problems. It is used a graphic modeling tool Petri net to express system fault propagations relationship, in the process of taking places and transitions as nodes and applying directed flows to express the directions. And the minimal cut sets apply Incidence Matrix of Petri Net, the method of Petri Net utilize the knowledge and easy to program. Also, it is developed a reliability software analysis applying Petri Nets. The qualitative study and quantitative evolution software can draw, study the failure diagnosis.

K. Notes on Petri nets

A Petri Net is a bipartite graphical structure which is defined an object strictly in mathematics. Also, Petri Net could be applied to study the static performances as well as the dynamic behaviours.The components of Petri Net are places, transitions, arcs and tokens shown in Figure 2. In the figure, each graphical cycle represents one place and denotes P; the vertical bar or line or rectangle small box represents one transition and denotes T; each arc or flow represents arrows and relationship between place and transition or vice-versa represents F; and each small black dot "•" in the place represents one token. The place can be represented one or more tokens [8]

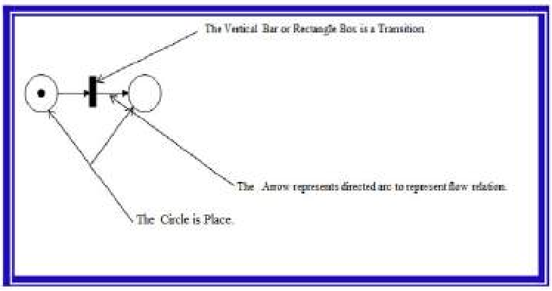

FIGURE 02: The Componentsof Petri Net.

A. Definition of Petri Net Structure:

A Petri Net is four tuples and denoted by N i.e., N= (P, T, F, W, M_0), where,P is a collection of non-empty set of 'places',$P = \{p_1, p_2, \dots, p_n\}$.T is a collection of non-empty set of 'transition',$T = \{t_1, t_2, \dots t_m\}$.F is a collection of non-empty set of 'flow relation' from places to transition and transitions to places denoted as F$\subseteq (P \times T) \cup (T \times P)$. Normally, $(P \times T)$ denoted as input flows or arcs and denoted as I and $(T \times P)$ denoted as output flows or arcs also represented as O.$W: F \longrightarrow \{1, 2, 3, \dots, n\}$ is a weight function.The places and transitions are disjoint i.e., $(P \cup T) = \emptyset$ and$(P \cap T) = \emptyset$. There are no nodes are isolated.$M_0: P \longrightarrow \{1, 2, 3, \dots\}$is the initial marking.

More specifically, P describes the possible places or conditions or states, T describes transition or activity or operation which change from one place or condition to another

place or condition, therefore F is relationship between placeand transition, Mo consists of process which change dynamically in different states of the system.
Let x be a node either place or transition in the Petri net structure N. We use the concept of the preset $(.x)$ and the postset$(x.)$ for N. $.x$represent $\{y|(y,x) \in F\}$ and$x.$ represent $\{y|(x,y) \in F\}$. If the transition t is enabled in M, we write $M[t)$. A marking M_n is said to be reachable from an initial marking M_o if there exists a firing sequence 'S' $M_n$to M_o. We write this $M_o[t) \, M_n$. A firing sequence is represented by a sequence of transitions $S = M_o[t_1) \, M_1[t_2) \, M_2 \dots [t_n) \, M_n$.
The N is said to be workflow structure: i. N has a single source and sink place. ii. Each node is on path from source and sink. iii. In N, there is no dead transition.

B. Process Tree:

A process tree is a tree which is represented a process. In this tree structure, each leaf node and internal node represented an action i.e., activity and an operator for basic block in the software evolution process. In this paper, we used four operators for basic blocks namely sequence block, concurrency or parallel block, selection block, and iteration or loop block.i. The sequence block is represented by operator (→), ii. The concurrency or parallel block is represented by operator (∧), iii. The selection block is represented by operator (×), and iv. The iteration or loop block is represented by operator (↻). Each operator for basic block can be translated to a part of a Petri net structure shown in figure 3(a) to 6(b).

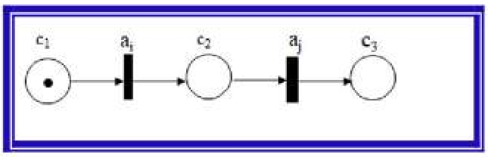

FIGURE 3(a): The Sequence Block of software evolution process.

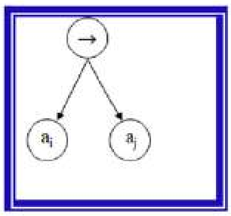

FIGURE 3(b): The Process Tree of Sequence Block

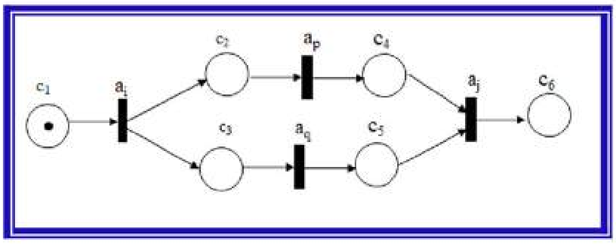

FIGURE 4(a): The Concurrency or Parallel Block of software evolution process.

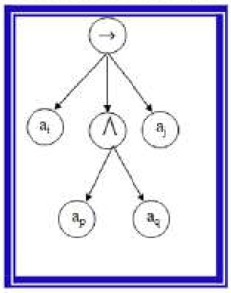

FIGURE 4(b): The Process Tree of Concurrency or Parallel Block.

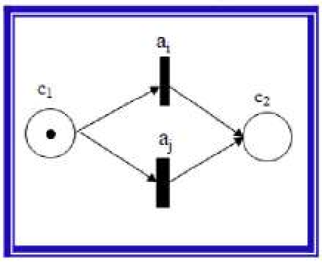

FIGURE 5(a): The Selection Block of software evolution process.

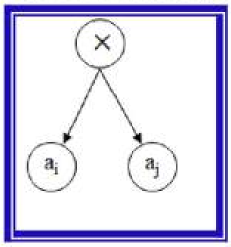

FIGURE 5(b): The Process Tree of Selection Block.

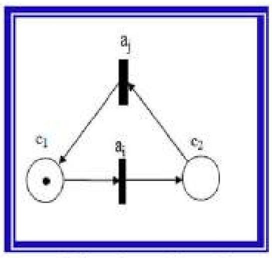

FIGURE 6(a): The Iteration or Loop Block of software evolution process.

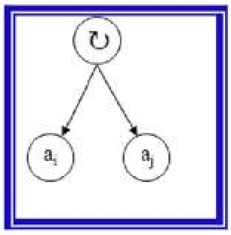

FIGURE 6(b): The Process Tree of Iteration or Loop Block.

Definition of Process Tree: The collection$\pi$of process tree is as follows: a. If ι is an activity label then $\iota \in \Pi$. b. If $\oplus$ is an operator and $\iota_1, \iota_2, \iota_3, \ldots, \iota_n$ are activity labels then $\oplus$ $(\iota_1, \iota_2, \iota_3, \ldots, \iota_n)$ $\iota \in \Pi$. c. If $\oplus$ is an operator and $\pi_1, \pi_2, \pi_3, \ldots, \pi_n \in \Pi$, then $\oplus$ $(\pi_1, \pi_2, \pi_3, \ldots, \pi_n) \in \Pi$.

C. Convertibility of Workflow Structure to Process Tree

We consider subclass ofWorkflow Structure (WF-Structure) is called as Process Tree Based (PTB) WF-Structurewhich can be represented as a process tree and,acyclic, bridge-less and well-structured and also WF-Structure is PTB, i.e. convertible to a process tree as per acyclic, bridge-less and well-structured.

Definition of Process Tree Based Workflow Structure:

For any process tree π,

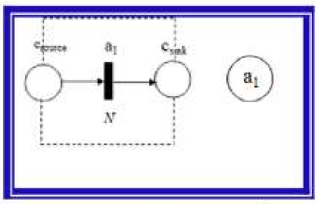

FIGURE 7: The PTB Workflow-structure representing an activity label.

i. If π is an activity label, a WF-Structure N which consists of a transition representing the activity label and its input and output places is PTB shown in figure 7.

ii. If π is $\oplus$ $(\iota_1, \iota_2, \iota_3, \ldots, \iota_n)$ then we consider the PTB WF-StructureN_1, N_2, $N_3, \ldots, N_n$which are representing activity labels $\iota_1, \iota_2, \iota_3, \ldots, \iota_n$.

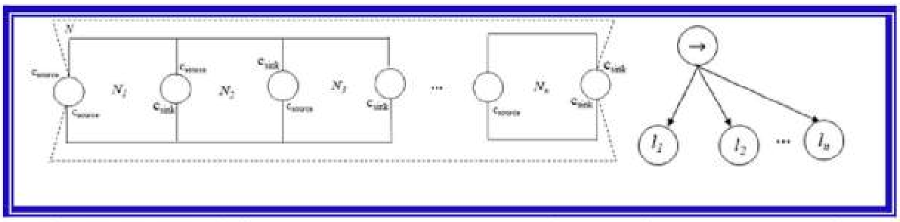

FIGURE 8: The PTB Workflow-structure representing$\rightarrow$ $(\iota_1, \iota_2, \iota_3, \ldots, \iota_n)$.

a. If $\oplus$ is a sequence block ($\rightarrow$) in software evolution then a WF-Structure is built by sequencing from $N_1$to N_n to link between source to sink i.e., $\sum_1^n N_{i+1}$is PTB WF-Structure shown in figure 8.

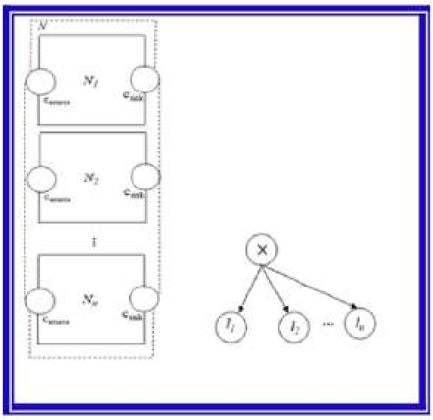

FIGURE 9: The PTB Workflow-structure representing$\times$ $(\iota_1, \iota_2, \iota_3, \ldots, \iota_n)$.

b. If $\oplus$ is a concurrence or parallel block $(\times)$ in software evolution then a WF-Structure is built by concurrency from N_1 to N_n to link between source to sink is PTB WF-Structure shown in figure 9.

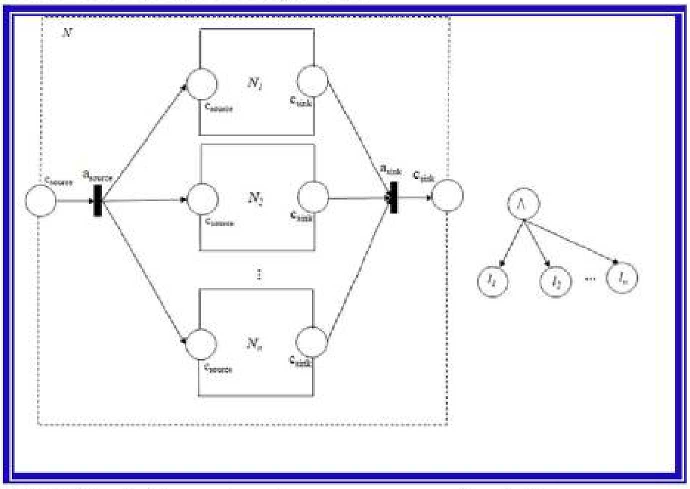

FIGURE 10: The PTB Workflow-structure representing$\times$ $(\iota_1, \iota_2, \iota_3, \ldots, \iota_n)$.

c. If $\oplus$ is a concurrence or parallel block $(\wedge)$ in software evolution then a WF-Structure is built by selecting from N_1 to N_n to link between source to sink is PTB WF-Structure shown in figure 10.

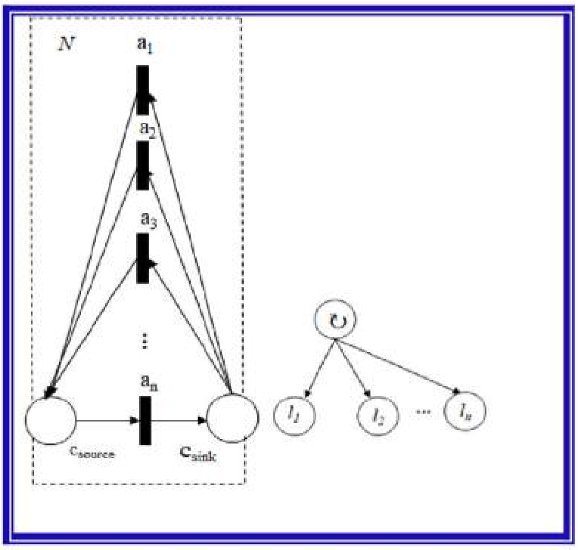

FIGURE 11: The PTB Workflow-structure representing$\circlearrowleft$ $(\iota_1, \iota_2, \iota_3, \ldots, \iota_n)$.

d. If $\oplus$ is a concurrence or parallel block ($\circlearrowleft$) in software evolution then a WF-Structure is built by looping from N to link between source to sink with 'n' numbers of activities labels is PTB WF-Structure shown in figure 11.

iii. If $\oplus$ $(\pi_1, \pi_2, \pi_3, \ldots, \pi_n)$ then from N_1 to N_n or N be PTB WF-Structures which are representing sub process trees $\pi_1, \pi_2, \pi_3, \ldots, \pi_n$.

L. Software evolution process

We define a basic block to denotes an extended structured Petri Net. The definition of basic block is as follows:

Definition of Basic Block (B_B): A B can be defined as 6-tuple. $B_B = (C, A, F, A_e, A_x, M_0)$, Where, $C = \{c_1, c_2, \ldots, c_n\}$ is a finite set of conditions. $A = \{a_1, a_2, \ldots, a_m\}$ is finite set of activities. F$\subseteq (C \times A) \cup (A \times C)$ is a set of arcs. $A_e, A_x \subseteq A$ are called the in activity and out activity of B respectively. M_0 is the initial marking.

We defined four typical blocks: sequence block, parallel or concurrency block, selection block and loop or iteration block are called basic blocks shown in figure 3(a) ,4(a),5(a)and 6(a).

M. Convertibility of WF-structure to process tree in software evolution

we define three types of composition operations in software evolution, namely sequence, selection, concurrence and iteration composition shown in figure 7. In figure 7, we can apply process tree and calculate the state number of the WF-Structure.

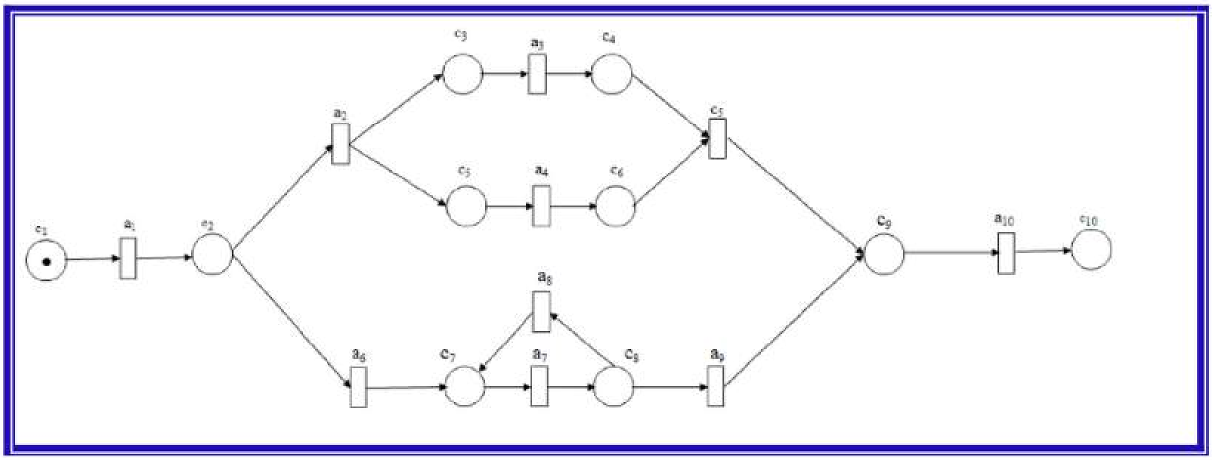

FIGURE 7: The WF-Structure of basic blocks in software evolution process.

N. Conclusion

In this paper, collaborative workflow process of validation to check and ensure correctness are discussed, when some systems work together on shared processes. It also analyzes many collaborative workflows and proposes using a high-level Petri Net model (a mathematical model for representing processes and concurrency).By partitioning the Petri Net into smaller parts, separate test cases for each part can be created. Then, these test cases are combined to verify the entire workflow, ensuring that the whole collaborative process works correctly and efficiently.This research focuses on using Petri Nets to design and test collaborative workflows efficiently.Although collaborative workflow testing is not widely studied, it is essential for real system development to ensure that all processes and requirements work correctly. Especially, this work combines software engineering and testing theory by designing test cases which enable different flow paths and boundary conditions in the workflow. In the next stage, the study will go deeper into verifying compliance making sure that the workflow truly meets its intended processes and requirements.

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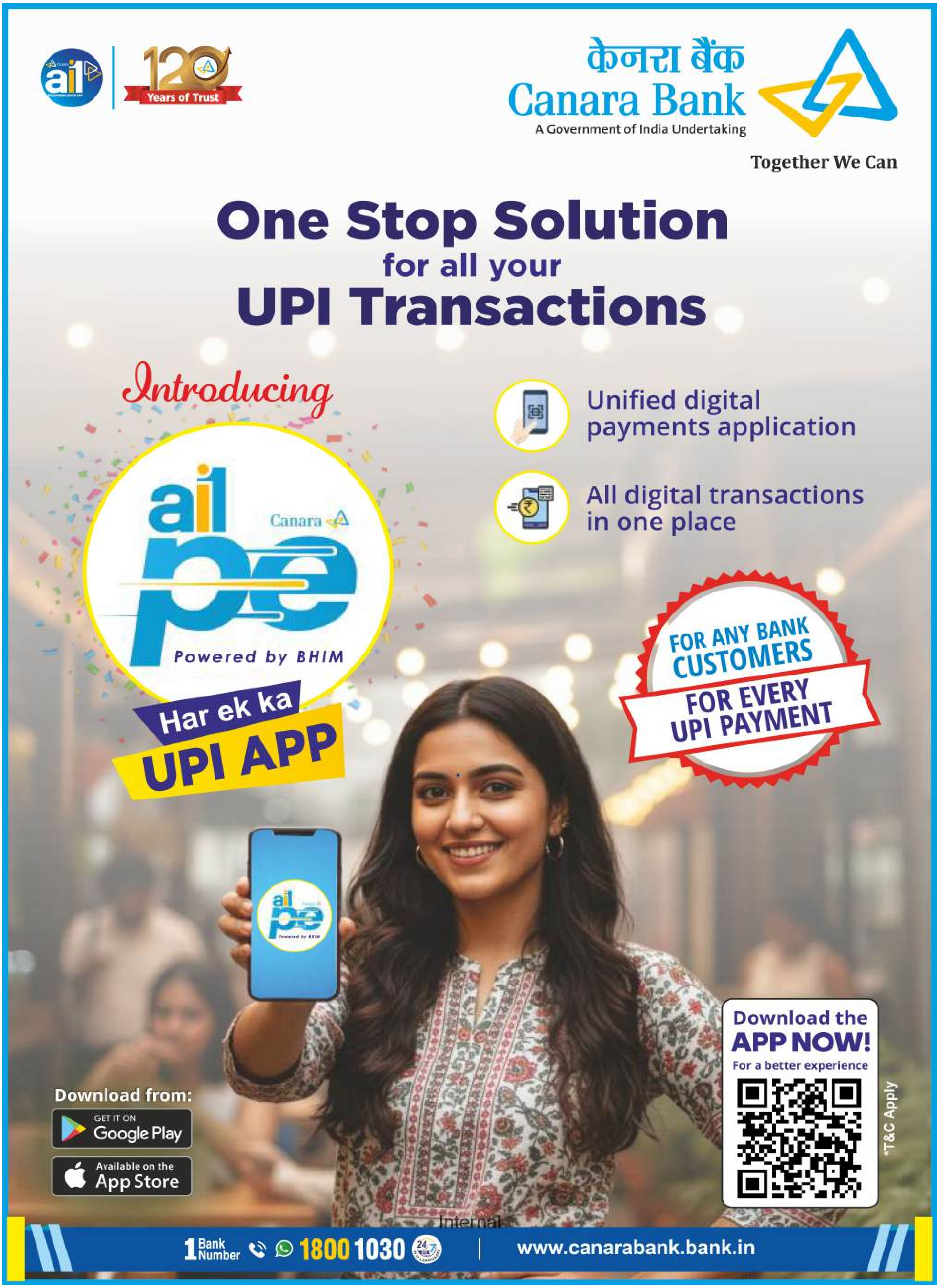

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	750 to 799	EBLR-0.30% = 7.70%
	-1 & 1 to 5	
	700 to 749	EBLR+0.05% = 8.05%

Union Green Vehicle

Type of vehicle	CIC score	Applicable ROI
New 4-Wheeler	800 & above	EBLR-0.60% = 7.40%
	750 to 799	EBLR-0.40% = 7.60%
	-1 & 1 to 5	
	700 to 749	EBLR-0.05% = 7.95%

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Scheme / Parameter	CIC Score	Rate of Interest
Where Salary Account is maintained with our Bank and employer undertaking is available	800 & above	EBLR+0.75 = 8.75%
	750 to 799 (including -1 to 1 to 5)	EBLR+1.05 = 9.05%
	700 to 749	EBLR+1.55 = 9.55%
Where Salary Account is maintained with our Bank and employer undertaking is not available	800 & above	EBLR+0.80 = 8.80%
	750 to 799 (including -1 to 1 to 5)	EBLR+1.10 = 9.10%
	700 to 749	EBLR+1.60 = 9.60%
Where Salary Account is not maintained with our Bank	800 & above	EBLR+0.85 = 8.85%
	750 to 799 (including -1 to 1 to 5)	EBLR+1.15 = 9.15%
	700 to 749	EBLR+1.65 = 9.65%

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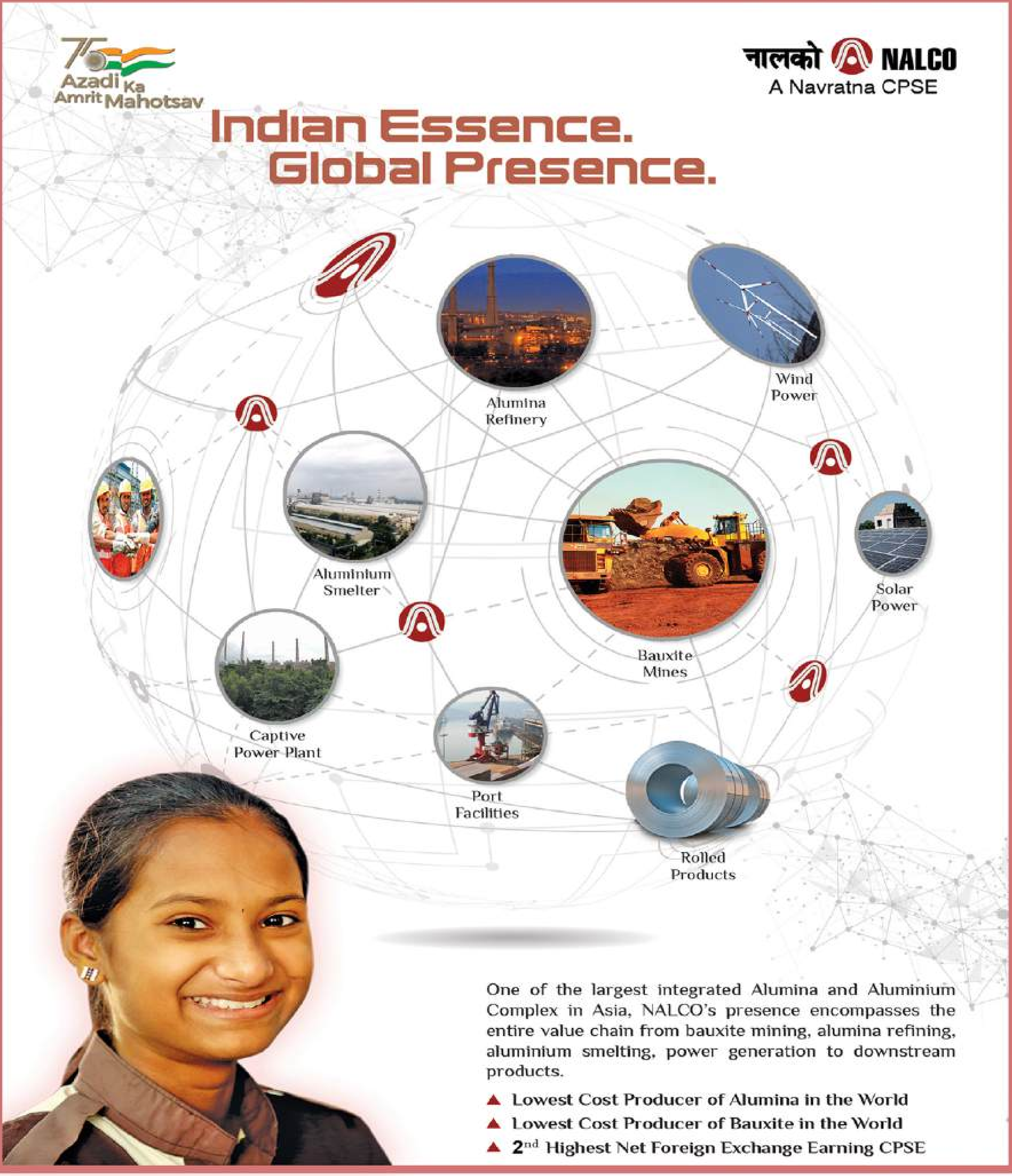

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