



Conference E-Abstract Proceedings
3rd International Conference on

EMERGING SOCIO-ECONOMIC TRENDS & BUSINESS STRATEGY

Editors

Sourav Kumar Das
Dr. Prithvish Bose

red'shine
PUBLICATION
L O N D O N



Conference E-Abstract Proceedings

3rd INTERNATIONAL CONFERENCE
On

EMERGING SOCIO-ECONOMIC TRENDS & BUSINESS STRATEGY *ESETBiz 3.0*

Date: August 29-30, 2025

Organised by

International School of Business & Media Kolkata (ISB&M)

Published in Greenford, UK



Conference E-Abstract Proceedings

EMERGING SOCIO-ECONOMIC TRENDS & BUSINESS STRATEGY

Editors

Sourav Kumar Das

Dr. Prithvish Bose

red'shine
PUBLICATION
LONDON

**CONFERENCE E-ABSTRACT PROCEEDINGS: EMERGING SOCIO-ECONOMIC TRENDS &
BUSINESS STRATEGY**

by: Sourav Kumar Das, Dr. Prithvish Bose

■
RED'SHINE PUBLICATION

232, Bilton road, Perivale, Greenford
Passcode: UB6 7HL London, UK.
Call : +44 7842 336509

In Association with,
RED'MAC INTERNATIONAL PRESS & MEDIA. INC
India | Sweden | UK

■
Text © *Authors*, 2025
Cover page ©RED'SHINE Studios, Inc, 2025

■
All rights reserved. No part of this publication may be reproduced or used in any form or
by any means- photographic, electronic or mechanical, including photocopying,
recording, taping, or information storage and retrieval systems- without the prior
written permission of the author.

■
ISBN: 978-1-257842-98-8
ISBN-10: 1-257842-98-6
DIP: 18.10.1257842986
DOI: 10.25215/1257842986
Price: £ 15
Edition: August, 2025 (First)

■
The views expressed by the authors in their articles, reviews etc. in this book are their
own. The Editors, Publisher and owner are not responsible for them.

■
Website: www.redshine.uk | Email: info@redshine.uk
Printed in UK | Title ID: 1257842986



CONFERENCE ORGANIZING COMMITTEE

CHIEF PATRON



Dr. Pramod Kumar

*PhD (Organizational Behaviour)- IIT Mumbai
President, ISB&M Group*



Prof. Arpita Roy

*Organizing Secretary
Campus Head, ISB&M Kolkata*



Prof. (Dr.) Prithvish Bose
Convener

Program Director, ISB&M Kolkata



Prof. Sourav Kumar Das
Co-ordinator

Assistant Professor, ISB&M Kolkata.

FOREWORD

It is a matter of great pride and pleasure to present the *Abstract Proceedings of the Conference on “Emerging Socio-Economic Trends and Business Strategy,”* a platform that brought together scholars, practitioners, and thought leaders from across the globe to engage in meaningful dialogue on the evolving dynamics of our socio-economic landscape. This volume comprises 88 abstracts contributed by scholars and professionals from across the country, reflecting a broad range of disciplines and research perspectives.

In an era marked by rapid technological advancement, shifting geopolitical currents, and transformative consumer behaviour, the need to reimagine business strategy has never been more urgent. The present socio-economic environment is undergoing significant transformation, shaped by globalization, technological innovation, sustainability imperatives, and shifting societal dynamics. These developments call for renewed academic inquiry and innovative strategies to address emerging challenges while capitalizing on new opportunities.

This conference served as a crucible for innovative ideas, rigorous research, and collaborative exploration, addressing themes ranging from digital disruption and sustainability to inclusive growth and strategic agility. This compilation of abstracts, embodying the spirit of the conference, provides a valuable forum for dialogue, reflection, and knowledge dissemination on these critical themes.

The papers compiled herein reflect the diversity and depth of perspectives shared during the event, with topics ranging from economic development and entrepreneurship to digital transformation, sustainability, and strategic management. They offer valuable insights into the challenges and opportunities that define our time, and they underscore the importance of interdisciplinary thinking in crafting resilient and forward-looking business models. Such breadth not only enriches scholarly discourse but also highlights the relevance of academic contributions to practice and policy.

This volume stands as a testament to the commitment of the academic community to advancing knowledge and fostering collaborative inquiry. We extend our heartfelt gratitude to all contributors, reviewers, and participants whose intellectual generosity and commitment to excellence made this conference a resounding success.

As you delve into these proceedings, we hope you find inspiration, provoke new questions, and discover pathways that contribute meaningfully to your own work and to the broader discourse on socio-economic transformation. It is also our fervent hope that this proceedings will serve as a useful reference for researchers, students, and practitioners, and will inspire further investigation into the evolving landscape of socio-economics and business strategy.

Sourav Kumar Das
Dr. Prithvish Bose
Editors

ABOUT ISB&M KOLKATA

ISB&M Kolkata was the second campus in the ISB&M family, set up in 2004. ISB&M, Kolkata has over 3000 alumni performing exceedingly well in different parts of the country and abroad. The ISB&M riverside campus is presently situated on the banks of the river Hooghly, in historical Budge Budge suburb. This peaceful, quiet, lush green, and unpolluted waterfront campus provides perfect ambience for learning and growth. An ideal setting to nurture learning and provide our scholars with endless and healthy “space” to grow.

International School of Business & Media (ISB&M) Kolkata belongs to the ISB&M Group of Colleges in India, which offers studies in Management, Media and Engineering. First established in Pune in the year 2000, we as a group have grown from strength to strength. The Founder of ISB&M Group is Prof. (Dr.) Pramod Kumar, a specialist in Organisational Behaviour with a Ph.D. from IIT Bombay. He has been associated for many years with XLRI, Jamshedpur, IIM, Ahmedabad and Symbiosis, Pune apart from being a consultant to companies both in India and abroad. Author of over a hundred research papers, cases and management games, his research has been quoted internationally in textbooks and journals.

Through Dr. Kumar's transformative leadership and vision for unmatched quality, ISB&M has risen to become one of the top management schools in India. ISB&M is unwaveringly committed to its mission of developing dynamic professionals who lead in a changing global business environment. Over 10,000 accomplished alumni working across the globe in leadership roles with the companies like Google, Apple, Goldman Sachs, Microsoft, L'Oréal, and other equally renowned organizations. ISB&M alumni work in 36 countries - large number in US, Canada, UK, Europe, Singapore and Dubai. ISB&M, Pune has garnered significant recognition in the field of education. The institute exhibits a strong commitment to nurturing academic research and facilitating meaningful industry interaction through research conferences, Faculty Development Programs (FDP), and Management Development Programs (MDP).

ABOUT THE CONFERENCE

ISB&M Kolkata is hosting the 3rd International Conference on "Emerging Socio-economic Trends & Business Strategy" on August 29-30, 2025. This conference aims to provide a platform to address and deliberate on various issues and concerns in the field of Finance, Economics, Marketing, Human Resources & Organizational Behaviour, Media & Communication, Supply Chain Management and Environmental Sustainability & Green Living. The conference attempts to facilitate researchers around the world to present their research work, expanding knowledge and insight into the significant current challenges. The program is structured to favour interactions among attendees coming from diverse horizons, both from academic and industry. It specially aims to synthesize research perspectives and foster interdisciplinary scholarly dialogues for developing integrated approaches to complex problems of Global Business Dynamics in different countries and various disciplines.

EMINENT SPEAKERS



Prof. (Dr.) Someswar Kesh
*Professor (Emeritus), University of Central
Missouri, USA*



Mr. Navanit Narayan
*Whole Time Director & CEO, Haldia
Petrochemicals Ltd
& Vice President Bengal Chamber of
Commerce and Industry*



Dr. Dil Rahut
*Vice-Chair of Research and Senior Research
Fellow, Asian Development Bank Institute
(ADBI), Tokyo, Japan*



Prof. (Dr.) Mohammad A. Wadud
*Professor of Economics, Rajshahi University,
Bangladesh*



Prof. (Dr.) Naveen Das
*Professor of Practice, KIIT Bhubaneswar and
Adjunct Professor, VGSOM, IIT Kharagpur*

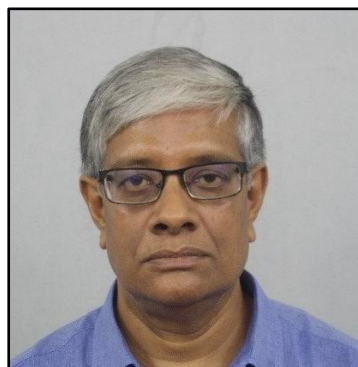


Prof. (Dr.) Ashish Kumar Sana
*Professor and Former Head, Department of
Commerce, University of Calcutta*

ADVISORS



Prof. (Dr.) Arpita Ghose
*Professor, Department of Economics,
Jadavpur University, West Bengal, India*



Prof. (Dr.) Ajitava Raychaudhuri
*Professor & Dean, School of Liberal Arts &
Cultural Studies, Adamas University, West
Bengal, India*



Prof. (Dr.) Soma Sur
*Professor of Management, St. Xavier's
University, Kolkata, West Bengal, India*



Prof. (Dr.) Ishita Chatterjee
*Associate Professor, Industrial &
Organizational Psychology, University of
Calcutta, West Bengal*



Mr. Debarshi Chakravorti
*VP, Head - Business Communication &
Planning
Interactive Avenues*



Prof. (Dr.) Nilanjan Ray
*Associate Professor of Marketing, JIS
University, West Bengal, India*



ESETBiz 3.0

3rd INTERNATIONAL CONFERENCE ON EMERGING SOCIO-ECONOMIC TRENDS & BUSINESS STRATEGY

PROGRAMME SCHEDULE

Day 1: 29th August, 2025 Friday

9.00 A.M.	Registration & Tea
9.45 A.M.	Inaugural Session
9.50 A.M.	Lighting of the lamp
10.05 A.M.	Welcome Address by Prof. Arpita Roy , Campus Head, ISB&M Kolkata
10.15 A.M.	Address by Dr. Pramod Kumar , President & Founder, ISB&M Group
10.25 A.M.	Address by Chief Guest Prof. (Dr.) Someswar Kesh , Professor (Emeritus), University of Central Missouri, USA.
10.50 A.M.	Address by Chief Guest Mr. Navanit Narayan , Whole Time Director & CEO, Haldia Petrochemicals Ltd & Vice President Bengal Chamber of Commerce and Industry
11.15 A.M.	Address by Guest of Honour Prof. (Dr.) Mohammad A. Wadud , Professor of Economics, Rajshahi University, Bangladesh
11.40 A.M.	Address by Special Guest Prof. (Dr.) Ashish Kumar Sana , Professor, Department of Commerce, University of Calcutta
12.05 P.M.	Address by Special Guest Dr. Dil Rahut , Vice-Chair of Research and Senior Research Fellow, Asian Development Bank Institute (ADBI), Tokyo, Japan.
12.25 P.M.	Address by Convener: Prof. (Dr.) Prithvish Bose , Program Director, ISB&M Kolkata
12.35 P.M.	Launch of the Conference Proceedings
12.45 P.M.	Technical Session-I: Parallel Tracks Track 1: Finance Track 2: Marketing Track 3: Human Resources & Organizational Behaviour
1.45 P.M.	Lunch Break
2.30 P.M.	Keynote Address by Prof. (Dr.) Naveen Das , Professor of Practice, KIIT Bhubaneswar and Adjunct Professor, VGSOM, IIT Kharagpur

3.00 P.M.	Technical Session-I: Parallel Tracks (Contd.) Track 1: Finance Track 2: Marketing Track 3: Human Resources & Organizational Behaviour
5.30 P.M.	Tea

Day 2: 30th August, 2025 Saturday

9.00 A.M.	Registration & Tea
9.45 A.M.	Session Starts
9.45 A.M.	Keynote Address by Prof. (Dr.) Arpita Ghose , Professor, Department of Economics, Jadavpur University
10.30 A.M.	Keynote Address by Mr. Debarshi Chakravorti , Vice-President, Business and Communications Planning, Interactive Avenues
11.15 A.M.	Technical Session- II: Parallel Tracks Track 4: Finance Track 5: Economics Track 6: Human Resources & Organizational Behaviour Track 7: Media & Communication Track 8: Environmental Sustainability & Green Living
1.30 P.M.	Lunch Break
2.15 P.M.	Technical Session-II: Parallel Tracks (Contd.) Track 4: Finance Track 5: Economics Track 6: Human Resources & Organizational Behaviour Track 7: Media & Communication Track 8: Environmental Sustainability & Green Living
3.45 P.M.	Tea
4.00 P.M.	Valedictory Address by Prof. (Dr.) Ajitava Raychaudhuri , Professor & Dean, School of Liberal Arts & Cultural Studies, Adamas University
4.30 P.M.	Announcement of Best Papers
4.50 P.M.	Vote of Thanks by Prof. (Dr.) Prithvish Bose , Program Director, ISB&M Kolkata
5:00 PM	Distribution of Certificates

DAY 1: 29 August 2025 (Friday)
TECHNICAL SESSION I

12:45 PM - 5:30 PM TRACK 1: FINANCE

Track Chairs:	Prof. (Dr.) Ashish Kumar Sana , Department of Commerce, University of Calcutta Prof. (Dr.) Mohammad A. Wadud , Rajshahi University, Bangladesh Dr. Somnath Banerjee , Faculty of Commerce & Management, St. Xavier's University, Kolkata	
Sl. No.	Title of the Paper	Author(s)
1	Volatility, Value and Vigilance: A Study of Risk Management Practices in the Indian Stock Market Post-Pandemic	Ms. Angana Chatterjee, Student (MBA), School of Business, Adamas University & Dr. Mainak Chakraborty, Associate Professor, School of Business, Adamas University
2	Cumulative Prospect Theory (CPT) and its Empirical Application in the Stock Market: A Pilot Study with ACC Ltd.	Dr. Paritosh Chandra Sinha, Associate Professor, Rabindra Mahavidyalaya, Hooghly, West Bengal
		Ms. Pooja Agarwal, Research Scholar, Department of Commerce, The University of Burdwan, West Bengal
3	Analysing the impact of competitive strategies on market share and profitability: A Case Study on leading Investment Banks	Ms. Saakshi GudGud, Department of Management Studies, St. Xavier's College (Autonomous) Kolkata
		Dr. Basuli Dasgupta, Assistant Professor Department of Management Studies, St. Xavier's College (Autonomous) Kolkata
4	The Influence of Peer Pressure on Financial Decisions and Behavioural Changes following Budget 2025	Ms. Ananya Lal, Dept Of Management Studies, St. Xavier's College (Autonomous) Kolkata
		Dr. Basuli Dasgupta, Assistant Professor, Department of Management Studies, St. Xavier's College (Autonomous) Kolkata
5	Women Entrepreneurship Development through Microfinance: A Conceptual Framework Bridging Capital and Intent	Mr. Debarghya Bagchi, ICFAI University, Jharkhand
		Ms. Pallavi Kumari, ICFAI University, Jharkhand
6	Evaluating the Financial Health of Leather Manufacturing Units: A Empirical Study of Firms in West Bengal	Mr. Athar Jamal, PhD Scholar, School of Business, Adamas University
		Dr. Mainak Chakraborty, Associate Professor, School of Business, Adamas University
7	A Study of Reporting the Extent of Cash Flow Disclosure by Companies Listed in Indian Stock Exchange	Ms. Debalina Chattopadhyay, Research Scholar, St. Xavier's University, Kolkata

8	Impact of Working Capital Components on Profitability: A Panel Data Analysis of Indian Steel and Iron Industry Companies (2020-2024)	Dr. Amit Kundu, Associate Professor, Department of Commerce, Cooch Behar Panchanan Barma University, West Bengal
		Ms. Ranjit Saibya, Assistant Professor, Department of Commerce, Mathabhanga College, Cooch Behar, West Bengal & Research Scholar, Cooch Behar Panchanan Barma University, West Bengal
9	Cultural Dynamics and Organizational Change in MSMEs: Evidence from West Bengal	Ms. Sudakshina Dutta Roy, Assistant Professor, The Heritage Academy, Kolkata & Research Scholar, JIS University
		Dr. Moumita Roy, Assistant Professor, JIS University
10	Modernizing Indian Public Sector Banks: An Exploratory Study	Ms. Gargi, Research Scholar, Adamas University, Whole Time Teacher, The Bhawanipur Education Society College
		Mr. Sayan Roy, Research Scholar, Adamas University, Whole Time Teacher, The Bhawanipur Education Society College,
		Dr. Mainak Chakraborty, Associate Professor, School of Business, Adamas University
11	Reforming Credit Practices in Banks: Pathways to a Healthier Financial Ecosystem	Mr. Kailash Chander, Research Scholar, Dept. of Commerce, Choudhary Devi Lal University, Sirsa

DAY 1: 29 August 2025 (Friday)
TECHNICAL SESSION I

12:45 PM - 5:30 PM TRACK 2: MARKETING

Track Chairs:	Prof. (Dr.) Soma Sur , St. Xavier's University, Kolkata Prof (Dr.) Sanjukta Ghosh , Srishti Manipal Institute of Art, Design and Technology Dr. Shivaji Banerjee , Department of Commerce & Business Administration, St. Xavier's College (Autonomous), Kolkata

Sl. No.	Title of the Paper	Author(s)
1	Digital Era Branding: Consumer Self-Concept and Co-Creation Strategies	Ms. Debalina Goswami, Assistant Professor, Calcutta Business School
2	Tourists' Motivation and Behavioural Intention to Visit a Sati Peetham: A case Study of Kankalitala	Ms. Tama Dwibedi, Research Scholar, Adamas university,
		Dr. Mainak Chakraborty, Associate Professor, Adamas University,
		Dr. Debashis Batabyal, Associate Professor, Amity University

3	Business Sustainability & Ethical Marketing Practices: Interconnection in Indian Healthtech Startup Ecosystem	Ms. Aliv Banerjee, PhD Scholar, Symbiosis Centre for Management Studies, Noida & Assistant Professor, Meghnad Saha Institute of Technology, Kolkata
		Dr. Shinu Vig, Associate Professor, Symbiosis Centre for Management Studies, Noida
4	Enhancing Pilgrim Experience Through Smart Tourism Technologies: A Study based on the select Shakti Peethas of Birbhum District, West Bengal	Mr. Sandip Karmakar, PhD Scholar in JIS University & Assistant Professor, Asansol Engineering College
5	Patient Perception and Satisfaction in Kolkata's Healthcare Sector: A Service Quality Perspective	Mr. Ritam Saha, PhD Scholar, Faculty of Management, JIS University
6	Digital Marketing in the Hospitality Industry: Adoption, Use, and Economic Development	Dr. Shuvendu Dey, Assistant Professor, Department of Business Administration, Siliguri Institute of Technology
		Ms. Santana Guha, Assistant Professor, Department of Business Administration, Siliguri Institute of Technology
		Ms. Sharmistha Bose, Assistant Professor, Department of Business Administration, Siliguri Institute of Technology
7	Strategic Transformation through Acquisitions and its Outcomes: A case Study of Zomato in Indian Digital Commerce	Ms. Arpita Chaudhuri, Research Scholar, School of Management Studies, JIS University
8	A Case Study on Consumer Behaviour Towards Consuming Food Products Across Cultural Boundaries with Special Reference to West Bengal	Ms. Anjana Roy, Full Time Faculty, Dept. of Commerce, THK Jain College
		Ms. Sumedha Majumder, Assistant Professor, Dept. of Commerce, Kabi Sukanta Mahavidyalaya
		Dr. Dilip Barik, Associate Professor, Dept. of Commerce, Lalbaba College
9	The Role of Augmented Reality in Reducing Online Purchase Anxiety: A Study of Virtual Try-On Technology	Ms. Asmita Paul, PGDM Student, ISB&M Kolkata
		Ms. Ananya Paul, PGDM Student, ISB&M Kolkata
10	Examining the Growth of E-Commerce and Digital Marketing in Rural Areas: Trends, Challenges, and Opportunities	Ms. Tanya Agarwal, Ms. Ritobina Chatterjee, Ms. Anubhuti Kedia, Ms. Raima Vidya, PGDM Students, ISB&M Kolkata
11	Effect of Digital and Social Media Marketing to Enhance Business in India	Mr. Netajee Prasad Kuiry, Associate Prof, Vidyanagar College

12	Persona-Bases Retail Customer Segmentation: A Cluster-Factor Segmentation Approach	Mr. Snehashis Khan, Doctoral Scholar (Marketing) IIT Sambalpur
13	Impulsive Fashion Apparel Consumption: The Role of Hedonism and Sales Promotion Tool	Ms. Shilpa Sharma, Kalinga University
14	Neuro-marketing for Sustaining Technology- Enabled Companies: A Study	Mr. Debayan Nandi, SIT

DAY 1: 29 August 2025 (Friday)
TECHNICAL SESSION I

12:45 PM - 5:30 PM TRACK 3: HUMAN RESOURCES & ORGANIZATIONAL BEHAVIOUR

Track Chairs:		Prof (Dr.) Rita Basu , Department of Applied Psychology, University of Calcutta Prof. (Dr.) Sumati Ray , IISWBM	
Sl. No.	Title of the Paper	Author(s)	
1	Understanding the Impact of Perceived Workplace Inclusion on Turnover Intention: A DEI Perspective from Kolkata's Private Hospitals	Ms. Debattri Das, Research Scholar, School of Management Studies, JIS University, & Asst. Prof. Dept of Hospital Management, GNIT	
2	Breaking the Glass Ceiling: Identifying barriers and Enablers for Women's Career Progression in the Tourism Industry with respect to North-Eastern States	Ms. Tanisha Mukherjee, Assistant Professor, Dept. of management, Sharda School of Business Studies, Sharda University, Agra	
3	Digital Presence and Brand Commitment as Drivers of Talent Attraction and Retention: An Empirical Study	Ms. Titly Dhar, Assistant Professor, IEM, UEM, Kolkata	
		Dr. Soma Bose Biswas, Associate Professor, Techno International New Town, Kolkata	
		Dr. Supti Mandal, Professor, Post Graduate Institute of Hospital Administration, Kolkata	
4	Issues and opportunities on implementation of NEP 2020: A study on the Administrators of HEIs in the Eastern and North Eastern Region of India	Dr. Munmun Dey, Assistant Professor, Dept. of Commerce, Vivekananda Mission Mahavidyalaya	
		Dr. Soumya Saha, Assistant Professor, Dept. of Commerce, Vivekananda Mission Mahavidyalaya	

5	Exploring the Factors Affecting Organizational Citizenship Behavior among Academicians in Higher Educational Institutes: A study in Kolkata	Ms. Pankhuri Sharma, Assistant Professor, Army Institute of Management, Kolkata
		Dr. Soma Sur, Professor and Dean, Xavier's Business School, St. Xavier's University, Kolkata
6	The Unseen Barriers: Examining Gender-Based Workplace Discrimination in Higher Education	Mr. Diwakar Das, Research Scholar, ICFAI Business School, The ICFAI University, Dehradun
		Dr. Neha Tomer, Assistant Professor, ICFAI Business School, The ICFAI University
7	Enhancing Employee Wellbeing: Strategic Approaches to Mental Health in the Workplace	Ms. Upama Biswas, Assistant Professor, Department of Allied Health Science, iLEAD
		Ms. Shreya Dutta, PG Student, MHA, NSHM Knowledge Campus, Kolkata
8	Work Life Balance and Social Security in India's Gig Economy: A Comparative Analysis of Blinkit and Zepto	Ms. Muskan Khatun, Student, Future Institute of Engineering & Management
		Dr. Bhaswati Bhattacharya, Associate Professor, Future Institute of Engineering & Management
9	Creative Leadership in the Creative Industries	Dr. Niret Alva, Professor, Srishti Manipal Institute of Art Design and Technology
10	Gender and Diversity Management in Indian Hospital Human Resource Policies: Challenges and Opportunities	Ms. Sneha Samanta, MHA, Swami Vivekananda University, Barrackpore
11	Enhancing Workforce Efficiency through Effective Training and Induction Programs: A Case Study of Brakes India Pvt. Ltd. Sholinghur	Dr. S. K. Gurumoorthi, Professor, Department of Management Studies, GRT Institute of Engineering & Technology

DAY2: 30 August 2025 (Saturday)

TECHNICAL SESSION II

11:15 AM - 3:45 PM TRACK 4: FINANCE

Track Chairs:	Prof. Pema Lama , Department of Commerce, University of Calcutta Dr. Samyabrata Das , Department of Commerce, University of Calcutta Dr. Sumanta Dutta , Post Graduate Department of Commerce, St. Xavier's College (Autonomous), Kolkata

Sl. No.	Title of the Paper	Author(s)
1	A Study of Green Finance Initiative in India	Mr. Gourab Das, Assistant Professor, Department of Commerce, Vidyanagar College, South 24-Parganas, West Bengal
2	Structural Breaks and Asymmetry in Stock Market Volatility: Evidence from the COVID-19 Era	Ms. Arshi Firdous, Research Scholar (Ph.D.-SRF), Department of Commerce, University of Calcutta
		Mr. Shahbaaz Ahmed, Research Scholar (Ph.D.-SRF), Department of Commerce, University of Calcutta
3	Deriving Preference Ordinals of Green Funds- An Integrated AHP-TOPSIS Model	Ms. Baisakhi Mukherjee, Assistant Professor, Department of Business Administration, CIEM, Tollygunge, Kolkata
		Dr. Aniruddha Das, Associate Professor, Department of Business Administration, Amity Business School, Amity University, Kolkata
4	Role of Artificial Intelligence in Creating and Leveraging Patents	Dr. Arundhati Banerjee, Assistant Professor, Institute of Business Management, Jadavpur University
5	A Study on the Effect of FinTech Startups in India's Financial Services Sector	Ms. Punam Shaw, Commerce Faculty, School of Business, Adamas University
		Dr. Mainak Chakraborty, Associate Professor, School of Business, Adamas University
6	A Study on Impact of FinTech on the Indian Economy	Mr. Subrata Das, Asst. Prof. (Stage-II) Dept. of Commerce, Vidyanagar College, South 24 Parganas, West Bengal
7	A Study on Cryptocurrency in India: Issues and Challenges	Ms. Doyel Aich, Assistant Professor, Department of Commerce, Vidyanagar College, South 24 Parganas, West Bengal
8	A Human-Centered Design Approach To Cyber Fraud Prevention By Recognising Human Behaviour	Ms. Puneeta Kashyap, Srishti Manipal Institute of Art, Design and Technology, MAHE
		Ms. Priti Dhongani, Srishti Manipal Institute of Art, Design and Technology, MAHE
9	Between Fear and Finance: A Cross Regional Examination of Terrorism Risk and Digital-Payment Adoption	Mr. Indrayudh Sen De, PG Final Year Student, Dept Of Commerce (Morning) Faculty of Commerce and Management, St Xavier's University, Kolkata
		Dr. Sovik Mukherjee, Assistant Professor in Economics, Faculty of Commerce and Management, St. Xavier's University, Kolkata
10	Technology With Taxation Compliance	Ms. Uma Roy, Bachelor of Commerce (Honours), Shri Shikshayatan College

DAY2: 30 August 2025 (Saturday)

TECHNICAL SESSION II

11:15 AM - 3:45 PM TRACK 5: ECONOMICS

Track Chairs:	Prof. (Dr.) Ajitava Raychaudhuri , Adamas University Prof. (Dr.) Mohammad A. Wadud , Rajshahi University, Bangladesh Prof. (Dr.) Arpita Ghose , Department of Economics, Jadavpur University

Sl. No.	Title of the Paper	Author(s)
1	Impact of Digitalization on Global Hunger: An Empirical Approach	Mr. Shubhendra Singh Panwar, Research Scholar, Dr. DY Patil B-School, Pune, Maharashtra, India
2	Demand and Forecast Analysis of Sustainable interior Emulsions for Domestic Coatings in India	Mr. Sayantan Ghosh Dostidar, PhD Scholar, Dept. of Management Studies, NIT, Durgapur, Dr. Mousumi Roy, Professor, Department of Management Studies, NIT, Durgapur
3	Empowering Women through Direct Benefit Transfers: A Micro study of the Laxmi Bhandar Scheme in West Bengal	Ms. Lubna Ghazal, PhD Scholar, Adamas University, Kolkata
4	Growing Design, Green Economies: Mycelium Biofabrication and circular economy on Green Business	Ms. Shivangi Agarwal, PhD Scholar, Srishti Manipal Institute of Art, Design & Technology, MAHE-Bengaluru
5	Water Circularity for a Better Sustainable Urban Economy: The Case of Bengaluru	Mr. Madhusudhan D. PhD Scholar, Srishti Manipal Institute of Art, Design & Technology, MAHE-Bengaluru
6	Empowering the Gig Economy: A Consumer-centric approach to supporting Gig Workers	Ms. Mousumi Chaudhuri, Assistant Professor, Seth Soorajmull Jalan Girls' College
7	Global Financial Inclusion and Economic Resilience: A Longitudinal Comparative study, 2011-2021	Ms. Arna Ray, PhD Research Scholar, Adamas University, State Aided College Teacher, Vidyanagar College
8	The Role of Religious and Cultural Gatherings on the Indian Economy with Reference to Tourism, Hospitality, and Transportation Sector- A Descriptive Study	Ms. Drimit Das, MBA Student, MCKV Institute of Engineering

DAY2: 30 August 2025 (Saturday)
TECHNICAL SESSION II

11:15 AM - 3:45 PM TRACK 6: HUMAN RESOURCES & ORGANIZATIONAL BEHAVIOUR

Track Chairs:		Prof. (Dr.) Ishita Chatterjee , Department of Applied Psychology, University of Calcutta Prof. (Dr.) Manodip Ray Chaudhuri , Xavier Business School, St. Xavier's University, Kolkata
Sl. No.	Title of the Paper	Author(s)
1	Exploring the Determinants of Technology Acceptance Among Students of Higher Education Institutions in West Bengal: A Critical Review	Ms. Sumana Biswas, Research Scholar, School of Business, Adamas University
		Dr. Sudipta Majumdar, Associate Professor, School of Business, Adamas University
2	Spatial Variations in Digitalization and its Impact on the Occupational structure: Evidences from Rural India	Ms. Dipankar Saha, Assistant Professor, Department of Commerce, Khandra College
		Dr. Debarati Das Assistant Professor, Department of Economics, Khandra College
3	From Campus to Corporate: Strengthening Adversity Quotient to Enhance Mental Wellness for Gen Z at Workplace	Mr. Mriganka Dutta, Assistant Professor, NSHM Kolkata
4	Factors Motivating Women Entrepreneurial Participation in Handloom Sector: An Alderfer's ERG Theory Approach	Dr. Manidipa DasGupta, Assistant Professor in Commerce, The University of Burdwan
		Ms. Sandhya Kri Shaw, Research Scholar, Dept. of Commerce, The University of Burdwan
5	How Job Satisfaction is associated with Decent Work among Women Brickfield Workers? The mediating role of Mental-Health Wellbeing	Dr. Manidipa Dasgupta, Assistant Professor in Commerce, The University of Burdwan
		Mr. Sumanta Majumder, Assistant Professor, Dept. of Commerce, Bhatler College, Dantan
6	Organizational Culture and Job Satisfaction in the Private Healthcare Sector of Kolkata: A Behavioural Study	Mr. Tarpan Chakrabarty, Research Scholar, School of Management Studies, JIS University
7	A Prisma Review of Exploring the Work Life Balance Challenges among Female School Teachers: A Comprehensive Perspective	Ms. Rupa Saha, Research Scholar, The ICFAI University, Tripura
		Prof (Dr.) Subhasish Chatterjee, Dean Academic Affairs, The ICFAI University, Tripura

8	Motivation for Continuous Engagement of Food Delivery Gig Workers of Kolkata: A Qualitative Exploration	Ms. Sunita Saha, Research Scholar (Commerce) St. Xavier's College (Autonomous), Kolkata
		Dr. Sumanta Dutta, Assistant Professor, St. Xavier's College (Autonomous), Kolkata
9	Whistleblowing in Organization: An Investigation of Individual, Organisational and External Determinants	Ms. Shukla Das, PhD Scholar, Amity Business School, Amity University, Kolkata
		Dr. Sanghamitra Brahma, Associate Professor, Amity Business School, Amity University, Kolkata
		Ms. Chinhita Sanyal, Assistant Professor, Amity Business School, Amity University, Kolkata
10	Work after Work: A Descriptive Study on the Growing Trend of Moonlighting among the teachers	Ms. Priya Raju, Assistant Professor, GRT Institute of Engineering and Technology, Thiruthani
		Ms. Savitha M S, Assistant Professor, MBA Department, Jaya Arts And Science College
11	Reducing Resistance to Change: The Role of Balanced Culture in Learning Transfer	Dr. Aindrila Chatterjee, IMT Hyderabad
		Dr. Tumpa Dey, UPES Dehradun

DAY2: 30 August 2025 (Saturday)
TECHNICAL SESSION II

11:15 AM - 3:45 PM TRACK 7: MEDIA & COMMUNICATION

Track Chairs:		Prof. (Dr.) Sharmila Sinha , NSHM Design School, NSHM Knowledge Campus, Kolkata Mr. Debarshi Chakravorti , Vice-President, Business and Communications Planning, Interactive Avenues
Sl. No.	Title of the Paper	Author(s)
1	AI, Deepfakes, and Consent: The K-pop Idol as Digital Commodity	Prof. Priyanka Chakraborty, Assistant Professor, Department of Media and Film, iLEAD, College Kolkata, Under MAKAUT
2	Activities and Essential strategies of Library for Enhancing Level of Media Literacy with Emerging Trends in Digital Age and Empowering UG students of Academic College Located in Rural Area of West Bengal, India: An Assessment	Ms. Rumpa Pal, Librarian Vidyanagar College, South 24 Parganas, West Bengal

3	Political Communication in the Digital Age: A Case Study of Trinamool Congress's Facebook Strategy to Promote Duare Sarkar in West Bengal	Mr. Sayantan Ghosh, St. Xavier's College (Autonomous), Kolkata
4	She Writes, She Leads: Women Creators, Characters and Perceptions in Indian Children's Shows	Ms. Rucha Kshirsagar, Prof. Sandipan Bhattacharjee, Department of Communication Design, United world Institute of Design, Karnavati University
5	Social Media Algorithms and Their Impact on Consumer Perception: A Case Study Among Design Students at UID, Karnavati University	Ms. Prashansa Keshri, Department of Communication Design, United world Institute of Design, Karnavati University Prof. Sandipan Bhattacharjee, Department of Communication Design, United world Institute of Design, Karnavati University
6	Social Commentary and Narrative Reflexivity: A Study of Meta- Story Telling in Made in Heaven	Ms. Kankana Ghosh, Assistant Professor, NSHM Media School, Kolkata, Prof. Dr. Mahul Brahma, Visiting Research Fellow, Bath Business School, Bath Spa University, UK & Dean & Professor, NSHM Media School, Kolkata
7	Detection of Email Spam Through the Utilization of Machine Learning Algorithms and Enhancing Digital Communication	Ms. Monalisa Bhowmick, Vidyanagar College (SACT), South 24 Paraganas
8	The New Normal Advertising on Social Media Only: Case Study Analysis of Selected Campaigns from India in 2024	Ms. Sinjini Ghosh, Assistant Professor, Department of Media and Film, iLEAD, College Kolkata, Under MAKAUT Mr. Ansh Bilas Thakur, Assistant Professor, Department of Media and Film, iLEAD, College Kolkata, Under MAKAUT
9	Citizen Journalism and Mainstream Journalism in India: Evaluating Social Media's Role in Shaping Credibility and Public Trust	Ms. Aishwarya Chatterjee, PhD Scholar, MAKAUT, West Bengal, Assistant Professor, iLEAD, College Kolkata, Dr. Mou Mukherjee Das, Associate Prof., Future Institute of Engineering and Management
10	Exploring the Impact of Digital Media on Brand Recognition among Gen Z and Millennial Demographics	Mr. Raushan Kumar Saha, M s . Anannya Banerjee, M s . Riya Poddar, Mr. Shuvam Saha, Mr. Ayush Sen, PGDM Students, ISB&M Kolkata
11	Social Media Algorithms & the Impact on Consumer Perception	Ms. Ritika Singh, Mr. Abhishek Singh, Mr. Vaibhav Raj, Mr. Ashish Kr. Jha, Ms. Khyati Shulka, Mr. Raushan Kumar, PGDM Students, ISB&M Kolkata
12	Using social media to promote academic library and information services	Mr. Santanu Mondal, Librarian, Vidyanagar College

13	A Empirical study on the impact of using online and social media marketing in SMEs of NER, India	Dr. Lipika Sarkar, Assistant Professor, Techno India University

DAY2: 30 August 2025 (Saturday)

TECHNICAL SESSION II

11:15 AM - 3:45 PM TRACK 8: ENVIRONMENTAL SUSTAINABILITY & GREEN LIVING

Track Chairs:	Prof. (Dr.) Sumati Ray , IISWBM Dr. Nilanjan Ray , Department of Management, JIS University

Sl. No.	Title of the Paper	Author(s)
1	Green Warehousing for Indian FMCG sector: A conceptual Measurement Framework and Strategies to reduce Environmental Impact	Dr. Rudrangsu Biswas, Assistant Professor, IISWBM
2	Apiculture in South 24-parganas: A Step Towards Sustainable Development in Agriculture and Its Impact on Biodiversity	Dr. Sudipta Patra, Assistant Professor (Stage-II) Vidyanagar College, South 24-Parganas, West Bengal
3	Greening the Wardrobe: The Impact of Environmental Concern and Green Consumption Value on Green Purchase Behaviour	Ms. Pousali Banerjee, Research Scholar, Dept of Applied Psychology, University of Calcutta, and State Aided College Teacher Category-I, Dept of Psychology, Seth Anandram Jaipuria College, West Bengal
4	Invisible Footprints: Reforming Indian Municipal CAPs to Capture Scope 3 Emissions	Mr. Animesh Ghosh, Post graduate Student, Praxis Business School, Mr. Sagnik Mitra, Post graduate Student, Praxis Business School
5	Using The Metaverse for Sustainable Rural Cultural Tourism through Virtual Sacred Journeys	Ms. Priyanka Kanjilal, Research Scholar, JIS University, Assistant Professor, Asansol Engineering College
6	Incorporating Scientific Temper in Commerce and Management Education: A Framework Rooted from Indian Traditional Knowledge Systems	Dr. S. Chitra Assistant Professor, Department of Management Studies, SA Engineering College, Poonamallee-Avadi Road, Thiruverkadu, Chennai Dr. Hema Narayanan, Associate Professor, Department of Commerce, Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya, Enathur, Kanchipuram
7	Digital Transformation and Sustainable Development: An empirical analysis in the context of Artificial Intelligence	Mr. Shrikant Dalal, Research Scholar, Dr. D. Y. Patil B-School, Pune, Maharashtra, India.

8	Impact of access to electricity and clean fuel on per capita CO2 emission: In the context of sustainability	Ms. Diksha Yadav, Research Scholar, Dr. D. Y. Patil B-School, Pune, Maharashtra, India.
9	Drivers of Renewable Energy Adoption in Underserved Communities: An Integrative Perspective	Ms. Chinhita Sanyal, Assistant Professor, Amity Business School, Amity University, Kolkata
		Dr. Sanghamitra Brahma, Associate Professor, Amity Business School, Amity University, Kolkata
		Dr. Aniruddha Das, Associate Professor, Amity Business School, Amity University, Kolkata
10	More Than Hydration: Investigating Water Bottle Design As A Medium Of Social Signaling And Eco-Identity	Ms. Nimeela Parupudi, Department of Communication Design, Karnavati University, UID
		Prof. Sandipan Bhattacharjee, Department of Communication Design, Karnavati University, UID

CONTENTS

SR. NO.	ABSTRACT NAME	PAGE NO.
1	DIGITAL TRANSFORMATION AND SUSTAINABLE DEVELOPMENT: AN EMPIRICAL ANALYSIS IN THE CONTEXT OF ARTIFICIAL INTELLIGENCE <i>Shrikant Dalal</i>	1
2	IMPACT OF ACCESS TO ELECTRICITY AND CLEAN FUEL ON PER CAPITA CO2 EMISSION: IN THE CONTEXT OF SUSTAINABILITY <i>Diksha Yadav</i>	4
3	IMPACT OF DIGITALIZATION ON GLOBAL HUNGER: AN EMPIRICAL APPROACH <i>Shubhendra Singh Panwar</i>	7
4	VOLATILITY, VALUE, AND VIGILANCE: A STUDY OF RISK MANAGEMENT PRACTICES IN THE INDIAN STOCK MARKET POST-PANDEMIC <i>Angana Chatterjee, Dr. Mainak Chakraborty</i>	11
5	DEMAND AND FORECAST ANALYSIS OF SUSTAINABLE INTERIOR EMULSIONS FOR DOMESTIC COATINGS IN INDIA <i>Sayantan Ghosh Dastidar, Dr. Mousumi Roy</i>	14
6	DERIVING PREFERENCE ORDINALS OF GREEN FUNDS- AN INTEGRATED AHP-TOPSIS MODEL <i>Baisakhi Mukherjee, Dr. Aniruddha Das</i>	18
7	ROLE OF ARTIFICIAL INTELLIGENCE IN CREATING AND LEVERAGING PATENTS <i>Dr. Arundhati Banerjee</i>	24
8	NEURO-MARKETING FOR SUSTAINING TECHNOLOGY- ENABLED COMPANIES: A STUDY <i>Debayan Nandi</i>	27
9	REDUCING RESISTANCE TO CHANGE: THE ROLE OF BALANCED CULTURE IN LEARNING TRANSFER <i>Dr. Aindrila Chatterjee, Tumpa Dey</i>	30
10	ENHANCING EMPLOYEE WELLBEING: STRATEGIC APPROACHES TO MENTAL HEALTH IN THE WORKPLACE <i>Upama Biswas, Shreya Dutta</i>	34
11	IMPULSIVE FASHION APPAREL CONSUMPTION: -THE ROLE OF HEDONISM AND SALES PROMOTION TOOL <i>Shilpa Sharma</i>	39
12	AI, DEEPFAKES, AND CONSENT: THE K-POP IDOL AS DIGITAL COMMODITY <i>Priyanka Chakraborty</i>	43

SR. NO.	ABSTRACT NAME	PAGE NO.
13	CUMULATIVE PROSPECT THEORY (CPT) AND ITS EMPIRICAL APPLICATION IN THE STOCK MARKET: A PILOT STUDY WITH ACC LTD. <i>Dr. Paritosh Chandra Sinha, Miss. Pooja Agarwal</i>	48
14	EMPOWERING WOMEN THROUGH DIRECT BENEFIT TRANSFERS: A MICRO-STUDY OF THE LAXMI BHANDAR SCHEME IN WEST BENGAL <i>Lubna Ghazal</i>	52
15	WORK-LIFE BALANCE AND SOCIAL SECURITY IN INDIA'S GIG ECONOMY: A COMPARATIVE ANALYSIS OF BLINKIT AND ZEPTO <i>Muskan Khatun, Dr. Bhaswati Bhattacharya</i>	55
16	ACTIVITIES AND ESSENTIAL STRATEGIES OF LIBRARY FOR ENHANCING LEVEL OF MEDIA LITERACY WITH EMERGING TRENDS IN DIGITAL AGE AND EMPOWERING UG STUDENTS OF ACADEMIC COLLEGE LOCATED IN RURAL AREA OF WEST BENGAL, INDIA: AN ASSESSMENT <i>Rumpa Pal</i>	59
17	PERSONA-BASED RETAIL CUSTOMER SEGMENTATION: A CLUSTER-FACTOR SEGMENTATION APPROACH <i>Snehashis Khan</i>	63
18	POLITICAL COMMUNICATION IN THE DIGITAL AGE: A CASE STUDY OF TRINAMOL CONGRESS'S FACEBOOK STRATEGY TO PROMOTE DUARE SARKAR IN WEST BENGAL <i>Sayantana Ghosh</i>	66
19	GREEN WAREHOUSING FOR INDIAN FMCG SECTOR: A CONCEPTUAL MEASUREMENT FRAMEWORK AND STRATEGIES TO REDUCE ENVIRONMENTAL IMPACT <i>Dr. Rudransu Biswas</i>	69
20	SHE WRITES, SHE LEADS WOMEN CREATORS, CHARACTERS, AND PERCEPTIONS IN INDIAN CHILDREN'S SHOWS <i>Rucha Kshirsagar, Sandipan Bhattacharjee</i>	72
21	INVISIBLE FOOTPRINTS: REFORMING INDIAN MUNICIPAL CAPS TO CAPTURE SCOPE 3 EMISSIONS <i>Mr. Animesh Ghosh, Mr. Sagnik Mitra</i>	76
22	ANALYSING THE IMPACT OF COMPETITIVE STRATEGIES ON MARKET SHARE AND PROFITABILITY: A CASE STUDY ON LEADING INVESTMENT BANKS <i>Saakshi GudGud, Dr. Basuli Dasgupta</i>	81
23	SOCIAL MEDIA ALGORITHMS AND THEIR IMPACT ON CONSUMER PERCEPTION: A CASE STUDY AMONG DESIGN STUDENTS AT UID, KARNAVATI UNIVERSITY <i>Prashansa Keshri, Sandipan Bhattacharjee</i>	86

SR. NO.	ABSTRACT NAME	PAGE NO.
24	DRIVERS OF RENEWABLE ENERGY ADOPTION IN UNDERSERVED COMMUNITIES: AN INTEGRATIVE PERSPECTIVE <i>Chinhita Sanyal, Dr. Sanghamitra Brahma*, Dr. Aniruddha Das</i>	93
25	A STUDY ON THE EFFECT OF FINTECH STARTUPS IN INDIA'S FINANCIAL SERVICES SECTOR <i>Ms. Punam Shaw, Dr. Mainak Chakraborty</i>	98
26	WHISTLEBLOWING IN ORGANIZATION: AN INVESTIGATION OF INDIVIDUAL, ORGANISATIONAL, AND EXTERNAL DETERMINANTS <i>Shukla Das, Dr. Sanghamitra Brahma, Chinhita Sanyal</i>	101
27	DIGITAL ERA BRANDING: CONSUMER SELF-CONCEPT AND CO-CREATION STRATEGIES <i>Debalina Goswami</i>	105
28	SOCIAL COMMENTARY AND NARRATIVE REFLEXIVITY: A STUDY OF META-STORYTELLING IN MADE IN HEAVEN <i>Kankana Ghosh, Prof. Dr. Mahul Brahma</i>	110
29	FROM CAMPUS TO CORPORATE: STRENGTHENING ADVERSITY QUOTIENT TO ENHANCE MENTAL WELLNESS FOR GEN Z AT WORKPLACE <i>Mriganka Dutta</i>	114
30	THE INFLUENCE OF PEER PRESSURE ON FINANCIAL DECISIONS AND BEHAVIOURAL CHANGES FOLLOWING BUDGET 2025 <i>Ms. Ananya Lal, Dr. Basuli Dasgupta</i>	118
31	MODERNIZING INDIAN PUBLIC SECTOR BANKS: AN EXPLORATORY STUDY <i>Gargi, Sayan Roy, Dr. Mainak Chakraborty</i>	123
32	USING THE METAVERSE FOR SUSTAINABLE RURAL CULTURAL TOURISM THROUGH VIRTUAL SACRED JOURNEYS <i>Ms. Priyanka Kanjilal</i>	126
33	A STUDY ON GREEN FINANCE INITIATIVE IN INDIA <i>Gourab Das</i>	129
34	A STUDY ON IMPACT OF FINTECH ON THE INDIAN ECONOMY <i>Subrata Das</i>	132
35	CITIZEN JOURNALISM AND MAINSTREAM JOURNALISM IN INDIA: EVALUATING SOCIAL MEDIA'S ROLE IN SHAPING CREDIBILITY AND PUBLIC TRUST <i>Ms. Aishwarya Chatterjee, Dr. Mou Mukherjee Das</i>	135
36	THE NEW NORMAL OF ADVERTISING ON SOCIAL MEDIA ONLY: CASE STUDY ANALYSIS OF SELECTED CAMPAIGNS FROM INDIA IN 2024 <i>Ms. Sinjini Ghosh, Mr. Annessh Bilas Thakur</i>	139

SR. NO.	ABSTRACT NAME	PAGE NO.
37	DETECTION OF EMAIL SPAM THROUGH THE UTILIZATION OF MACHINE LEARNING ALGORITHMS AND ENHANCING DIGITAL COMMUNICATION <i>Monalisa Bhowmick</i>	143
38	THE ROLE OF AUGMENTED REALITY IN REDUCING ONLINE PURCHASE ANXIETY: A STUDY OF VIRTUAL TRY-ON TECHNOLOGY <i>Asmita Paul, Ananya Paul</i>	147
39	EXPLORING THE IMPACT OF DIGITAL MEDIA ON BRAND RECOGNITION AMONG GEN Z AND MILLENNIAL DEMOGRAPHICS <i>Raushan Kumar Saha, Anannya Banerjee, Riya Poddar, Shuvam Saha, Ayush Sen</i>	150
40	BREAKING THE GLASS CEILING: IDENTIFYING BARRIERS AND ENABLERS FOR WOMEN'S CAREER PROGRESSION IN THE TOURISM INDUSTRY WITH RESPECT TO NORTH-EASTERN STATES <i>Ms. Tanisha Mukherjee</i>	154
41	THE ROLE OF RELIGIOUS AND CULTURAL GATHERINGS ON THE INDIAN ECONOMY WITH REFERENCE TO TOURISM, HOSPITALITY, AND TRANSPORTATION SECTOR – A DESCRIPTIVE STUDY <i>Drimit Das</i>	157
42	BUSINESS SUSTAINABILITY & ETHICAL MARKETING PRACTICES: INTERCONNECTION IN INDIAN HEALTHTECH STARTUP ECOSYSTEM <i>Aliv Banerjee, Dr. Shinu Vig</i>	161
43	TOURISTS' MOTIVATION AND BEHAVIOURAL INTENTION TO VISIT A SATI PEETHAM: A CASE STUDY OF KANKALITALA <i>Tama Dwibedi, Dr. Mainak Chakraborty, Dr. Debashis Batabyal</i>	165
44	DIGITAL MARKETING IN THE HOSPITALITY INDUSTRY: ADOPTION, USE, AND ECONOMIC DEVELOPMENT <i>Dr. Shuvendu Dey, Santana Guha, Sharmistha Bose</i>	169
45	USING SOCIAL MEDIA TO PROMOTE ACADEMIC LIBRARY AND INFORMATION SERVICES <i>Santanu Mondal</i>	172
46	EFFECT OF DIGITAL AND SOCIAL MEDIA MARKETING TO ENHANCE BUSINESS IN INDIA <i>Netajee Prasad Kuiry</i>	175
47	ENHANCING PILGRIM EXPERIENCE THROUGH SMART TOURISM TECHNOLOGIES: A STUDY BASED ON THE SELECT SHAKTI PEETHAS OF BIRBHUM DISTRICT, WEST BENGAL <i>Sandip Karmakar</i>	178
48	PATIENT PERCEPTION AND SATISFACTION IN KOLKATA'S HEALTHCARE SECTOR: A SERVICE QUALITY PERSPECTIVE <i>Ritam Saha</i>	181

SR. NO.	ABSTRACT NAME	PAGE NO.
49	STRATEGIC TRANSFORMATION THROUGH ACQUISITIONS AND ITS OUTCOMES: A CASE STUDY OF ZOMATO IN INDIAN DIGITAL COMMERCE <i>Arpita Chaudhuri</i>	184
50	EMPOWERING THE GIG ECONOMY: A CONSUMER- CENTRIC APPROACH TO SUPPORTING GIG WORKERS <i>Mousumi Chaudhuri</i>	187
51	"ENHANCING WORKFORCE EFFICIENCY THROUGH EFFECTIVE TRAINING AND INDUCTION PROGRAMS": A CASE STUDY OF BRAKES INDIA PVT. LTD. SHOLINGHUR <i>Dr S K Gurumoorthi</i>	192
52	EXPLORING THE FACTORS AFFECTING ORGANIZATIONAL CITIZENSHIP BEHAVIOR AMONG ACADEMICIANS IN HIGHER EDUCATIONAL INSTITUTES: A STUDY IN KOLKATA <i>Pankhuri Sharma, Prof. (Dr.) Soma Sur</i>	199
53	WORK AFTER WORK: A DESCRIPTIVE STUDY ON THE GROWING TREND OF MOONLIGHTING AMONG THE TEACHERS <i>Priya R, Savitha M S</i>	202
54	FACTORS MOTIVATING WOMEN ENTREPRENEURIAL PARTICIPATION IN HANDLOOM SECTOR: AN ALDERFER'S ERG THEORY APPROACH <i>Manidipa Das Gupta, Ph.D, Sandhya Kri Shaw</i>	207
55	HOW JOB SATISFACTION IS ASSOCIATED WITH DECENT WORK AMONG WOMEN BRICKFIELD WORKERS? THE MEDIATING ROLE OF MENTAL-HEALTH WELLBEING <i>Manidipa Das Gupta, Ph.D, Sumanta Majumder</i>	212
56	UNDERSTANDING THE IMPACT OF PERCEIVED WORKPLACE INCLUSION ON TURNOVER INTENTION: A DEI PERSPECTIVE FROM KOLKATA'S PRIVATE HOSPITALS <i>Ms. Debattri Das</i>	216
57	ORGANIZATIONAL CULTURE AND JOB SATISFACTION IN THE PRIVATE HEALTHCARE SECTOR OF KOLKATA: A BEHAVIOURAL STUDY <i>Tarpan Chakrabarty</i>	220
58	CREATIVE LEADERSHIP IN THE CREATIVE INDUSTRIES <i>Niret Alva</i>	226
59	THE UNSEEN BARRIERS: EXAMINING GENDER-BASED WORKPLACE DISCRIMINATION IN HIGHER EDUCATION <i>Diwakar Das, Dr. Neha Tomer</i>	231
60	EXPLORING THE DETERMINANTS OF TECHNOLOGY ACCEPTANCE AMONG STUDENTS OF HIGHER EDUCATION INSTITUTIONS IN WEST BENGAL: A CRITICAL REVIEW <i>Ms. Sumana Biswas, Dr. Sudipta Majumdar</i>	235

SR. NO.	ABSTRACT NAME	PAGE NO.
61	DIGITAL PRESENCE AND BRAND COMMITMENT AS DRIVERS OF TALENT ATTRACTION AND RETENTION: AN EMPIRICAL STUDY <i>Titly Dhar, Dr. Soma Bose Biswas, Dr. Supti Mandal</i>	238
62	MOTIVATION FOR CONTINUOUS ENGAGEMENT OF FOOD DELIVERY GIG WORKERS OF KOLKATA: A QUALITATIVE EXPLORATION <i>Sunita Saha, Dr. Sumanta Dutta</i>	242
63	WOMEN ENTREPRENEURSHIP DEVELOPMENT THROUGH MICROFINANCE: A CONCEPTUAL FRAMEWORK BRIDGING CAPITAL AND INTENT <i>Debarghya Bagchi, Pallavi Kumari</i>	245
64	A STUDY ON CRYPTOCURRENCY IN INDIA: ISSUES AND CHALLENGES <i>Doyel Aich</i>	250
65	EVALUATING THE FINANCIAL HEALTH OF LEATHER MANUFACTURING UNITS: AN EMPIRICAL STUDY OF FIRMS IN WEST BENGAL <i>Athar Jamal, Dr. Mainak Chakraborty</i>	252
66	A HUMAN-CENTERED DESIGN APPROACH TO CYBER FRAUD PREVENTION BY RECOGNISING HUMAN BEHAVIOUR <i>Puneeta Kashyap, Priti Dhongani</i>	256
67	BETWEEN FEAR AND FINANCE: A CROSS-REGIONAL EXAMINATION OF TERRORISM RISK AND DIGITAL-PAYMENT ADOPTION <i>Mr. Indrayudh Sen De, Dr. Sovik Mukherjee</i>	260
68	IMPACT OF WORKING CAPITAL COMPONENTS ON PROFITABILITY: A PANEL DATA ANALYSIS OF INDIAN STEEL AND IRON INDUSTRY COMPANIES (2020–2024) <i>Amit Kundu, Ranjit Saibya</i>	264
69	CULTURAL DYNAMICS AND ORGANIZATIONAL CHANGE IN MSMES: EVIDENCE FROM WEST BENGAL <i>Sudakshina Dutta Roy, Dr. Moumita Roy</i>	268
70	TECHNOLOGY WITH TAXATION COMPLIANCE <i>Uma Roy</i>	273
71	GREENING THE WARDROBE: THE IMPACT OF ENVIRONMENTAL CONCERN AND GREEN CONSUMPTION VALUE ON GREEN PURCHASE BEHAVIOUR <i>Pousali Banerjee</i>	275
72	APICULTURE IN SOUTH 24-PARGANAS: A STEP TOWARDS SUSTAINABLE DEVELOPMENT IN AGRICULTURE AND ITS IMPACT ON BIODIVERSITY <i>Dr. Sudipta Patra</i>	282
73	SPATIAL VARIATIONS IN DIGITALIZATION AND ITS IMPACT ON THE OCCUPATIONAL STRUCTURE: EVIDENCES FROM RURAL INDIA <i>Dipankar Saha, Debarati Das</i>	284

SR. NO.	ABSTRACT NAME	PAGE NO.
74	WATER CIRCULARITY FOR A BETTER SUSTAINABLE URBAN ECONOMY: THE CASE OF BENGALURU <i>Madhusudhan D</i>	287
75	GROWING DESIGN, GREEN ECONOMIES: MYCELIUM BIOFABRICATION AND CIRCULAR ECONOMY IN GREEN BUSINESS <i>Shivangi Agrawal</i>	294
76	ISSUES AND OPPORTUNITIES ON IMPLEMENTATION OF NEP 2020: A STUDY ON THE ADMINISTRATORS OF HEIS IN THE EASTERN AND NORTH-EASTERN REGION OF INDIA <i>Dr. Munmun Dey, Dr. Soumya Saha</i>	298
77	A PRISMA REVIEW OF EXPLORING THE WORK LIFE BALANCE CHALLENGES AMONG FEMALE SCHOOL TEACHERS: A COMPREHENSIVE PERSPECTIVE <i>Mrs. Rupa Saha, Prof. (Dr.) Subhasish Chatterjee</i>	303
78	GLOBAL FINANCIAL INCLUSION AND ECONOMIC RESILIENCE: A LONGITUDINAL COMPARATIVE STUDY, 2011-2021 <i>Arna Ray</i>	308
79	REFORMING CREDIT PRACTICES IN BANKS: PATHWAYS TO A HEALTHIER FINANCIAL ECOSYSTEM <i>Kailash Chander</i>	313
80	SOCIAL MEDIA ALGORITHMS & THE IMPACT ON CONSUMER PERCEPTION <i>Ritika Singh, Abhishek Singh, Vaibhav Raj, Ashish Kr. Jha, Khyati Shukla, Raushan Kumar</i>	319
81	STRUCTURAL BREAKS AND ASYMMETRY IN STOCK MARKET VOLATILITY: EVIDENCE FROM THE COVID-19 ERA <i>Arshi Firdous, Shahbaaz Ahmed</i>	324
82	AN EMPIRICAL STUDY ON THE IMPACT OF USING ONLINE AND SOCIAL MEDIA MARKETING IN SMES OF NER, INDIA <i>Dr. Lipika Sarkar</i>	326
83	INCORPORATING SCIENTIFIC TEMPER IN COMMERCE AND MANAGEMENT EDUCATION: A FRAMEWORK ROOTED FROM INDIAN TRADITIONAL KNOWLEDGE SYSTEMS <i>Dr. S. Chitra, Dr. Hema Narayanan</i>	329
84	EXAMINING THE GROWTH OF E-COMMERCE AND DIGITAL MARKETING IN RURAL AREAS: TRENDS, CHALLENGES, AND OPPORTUNITIES <i>Tanya Agarwal, Ritobina Chatterjee, Anubhuti Kedia, Raima Vidya</i>	332
85	GENDER AND DIVERSITY MANAGEMENT IN INDIAN HOSPITAL HUMAN RESOURCE POLICIES: CHALLENGES AND OPPORTUNITIES <i>Sneha Samanta</i>	336

SR. NO.	ABSTRACT NAME	PAGE NO.
86	A CASE STUDY ON CONSUMER BEHAVIOUR TOWARDS CONSUMING FOOD PRODUCTS ACROSS CULTURAL BOUNDARIES WITH SPECIAL REFERENCE TO WEST BENGAL <i>Anjana Roy, Sumedha Majumder, Dr. Dilip Barik</i>	340
87	A STUDY OF REPORTING THE EXTENT OF CASH FLOW DISCLOSURE BY COMPANIES LISTED IN INDIAN STOCK EXCHANGE <i>Debalina Chattopadhyay</i>	344
88	MORE THAN HYDRATION: INVESTIGATING WATER BOTTLE DESIGN AS A MEDIUM OF SOCIAL SIGNALING AND ECO-IDENTITY <i>Nimeela Parupudi, Sandipan Bhattacharjee</i>	347

DIGITAL TRANSFORMATION AND SUSTAINABLE DEVELOPMENT: AN EMPIRICAL ANALYSIS IN THE CONTEXT OF ARTIFICIAL INTELLIGENCE

Shrikant Dalal ¹

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

This research article explores the impact of digitalization on sustainable development. That becomes important in a digital era amidst the approaching deadline of the Sustainable Development Goals (SDGs). The existing literature is full of logical and theoretical debate on the interaction between digitalization and sustainable development but there is a paucity of empirical works on this topic. The present chapter addresses this research gap.

Literature Review

Karki and Thapa (2021) maintain that existing research commonly held a dual perspective by which sustainability and digitalization were seen as separate phenomena. Their brief review of scholarly works hints at a shift to a more unified ontology that takes into account their interconnectedness. They recommend that for the attainment of such kind of matching, conceptual definitions need to be more exact, links be theory-driven, and the work of social business in building the bridge between the Digital Transformation and Sustainable Development frameworks be the primary area of concern (Karki and Thapa, 2021).

Abdeldjalil et al. (2024) highlight the double-edged nature of AI's capacity to drive economic growth and ecological efficiency as well as worrying issues of inequality, ethics and energy usage. The authors of the study stressed the importance of AI governance in making equal contribution to the SDGs.

The manner in which artificial intelligence is linked to the SDGs by Nasir et al. (2023) is investigated through a multi-perspective approach that combines frameworks, educational systems, and scholarly literature. The most applications of artificial intelligence can be found in SDG 9 (Industry Innovation and Infrastructure) as they have the least in SDGs 5 (Gender Equality) and 15 (Life on Land), thus leaving the mentioned disparity as a call for better AI implementation avenues.

Xu et al. (2022) demonstrate that intelligent digital technologies can actually be reinvented into systems used to enable inclusive social development, increased transparency in governance and environmental sustainability (ESG). On the other hand, the researchers state that the coexistence of complexity of implementation and digital inequality is still an unresolved challenge (Xu et al., 2022). An investigation quite similar to this is done by Deveci (2024) where he lucidly analyzes the environmental, financial, and technological problems that exist in the process of digital technology implementation for sustainability. The work of the researcher exposes the fallibility of the models for making decisions that are a hindrance both the governments and corporates to the successful execution of SDG-compliant plans (Deveci, 2024).

While the digital technology in Ireland is a big talking point, most of the global community are the developing nations of the world. Odiche and Akeem (2024) have analysed the transformation of the

¹ Research Scholar, Dr. D.Y. Patil B-School, Pune, Maharashtra, India

digital technologies in Nigeria within the geographical context. They discuss the prospects for eco-friendly conditions for poor countries in the course of their economic growth and as a result of the reduction in waste gas emissions. On the contrary, electronic garbage and the online service digital divide are demerits. In this perspective, the authors present digital inclusion as the most efficient way to sustainable development and the most suitable strategies for implementation.

While analyzing the talking of 34 countries with the use of the composite indices measuring social, economic, and environmental progress, which were based on a global comparative perspective, Singh, A. K., & Jyoti, B. (2013) came to the conclusion about the influence of digitalization. A fine line was drawn between the areas of economy and society with the positive connotation of the relationship, whereas one of the effects of digitalization on environmental sustainability was negative and thus needed more green innovation.

Raihan (2024) demonstrates the effect of economic activity on the environment through the use of energy, which further deepens our knowledge of the environment-energy-economy interaction. His literature review using a systems-thinking approach also identifies digital technology and renewable energy as effective means to bring about the emergence of the green economy.

Goralski, M. A., & Tan, T. K. (2020) a peer reviewed research based around an anonymous group of academics analysing artificial intelligence's prospective impact on sustainability, AI could potentially tackle tough SDG-related challenges, however, it could also harbour inequalities and moral dilemmas if inclusive policies and ethical standards are not adhered to.

In modern academic and policy discussion, the linkage of sustainable development and digital transformation is a crucial field of study. Researchers are looking into how much digital technologies like artificial intelligence (AI), can support economic, social, and environmental sustainability as the SDGs become a more prominent topic on the global agenda. Three main topics can be seen in the literature namely the conceptual integration of Digital Transformation and Sustainable Development, the contribution artificial intelligence to the achievement of the Sustainable Development Goals; there is a paucity of quantitative literature. The present article intends to bridge that gap.

Methods

The article considers the data of access to electricity (without that digitalization is not possible), access to fixed broadband, mobile and fixed telephone. Then using principal component analysis, it creates a composite digitalization index. Further the sustainable development indicator score has been considered as the dependent variable and the novel digitalization index, rural urban population ratio, per capita GDP in constant USD (2015) and annual population growth as the independent variables. These data have been collected for more than 100 countries from 2000 to 2020. All the data has been collected from World Development Indicators and sustainable development index website. Finally, the article resorts to panel data analysis.

Findings

The result shows that with rise in digitalization index improves the Sustainable Development Indicator Score whereas per capita GDP as defined and annual population growth decreases the sustainable development indicator score.

Implications

The creation of novel digitalization index marks the novelty of the chapter. Moreover, it proves that amidst the advent of Artificial Intelligence that brought two successive industrial revolution in recent and quick time, the era of digitalization is beneficial for sustainable development. Moreover, per capita

GDP as mentioned leads to the decline of the sustainable development indicator score that comes from random utility theory that shows impulsive consumption that eventually leads to irresponsible consumption violates the Sustainable development goals 12. In this background at the policy level higher level of digitalization should be encouraged and demand side control should be enacted. The annual population growth rate also reduces the sustainable development indicator score so taming the population growth rate is another aspect that should be taken care by the government and at the individual level.

Conclusion

This is a digital era and becoming more pro-digital with the advent of Artificial Intelligence and Machine Learning. The world-wide market economy within its capitalist structure has engaged into a consumption spree facilitated by digital markets. Moreover, with the successive development of technology, digital products are becoming defunct or obsoleted in quick time. All these lead to digital debris that are not bio-degradable. However, such ill to the environment brought by digitalization would eventually surpass by the benefits digitalization brings. However, vigilance, awareness and self-restrain holds the key to optimize the benefits of digitalization to the sustainable development. In this context the future research should be geared towards bio friendly digitalization and responsible production and consumption. From the demographic point of view awareness should be spread to tame the annual growth of population. All these together will boost the SDI score and take the world towards more sustainable development instead of anthropocentric vandalism of mother nature.

Keywords: Sustainability; Digitalization; Panel Data, Empirical, Index

References

- Karki, Y., & Thapa, D. (2021). Exploring the link between digitalization and sustainable development: research agendas. In *Responsible AI and Analytics for an Ethical and Inclusive Digitized Society: 20th IFIP WG 6.11 Conference on e-Business, e-Services and e-Society, I3E 2021, Galway, Ireland, September 1–3, 2021, Proceedings 20* (pp. 330-341). Springer International Publishing.
- Abdeldjalil, C., Mohammed, K., & Asma, O. (2024). Digitalization and sustainable development: A literature review focused on artificial intelligence (2019-2024). *Journal of Law and Sustainable Development*, 12(11), e4155-e4155.
- Xu, J., She, S., & Liu, W. (2022). Role of digitalization in environment, social and governance, and sustainability: Review-based study for implications. *Frontiers in psychology*, 13, 961057.
- Deveci, M. (2024). Digital technologies and sustainable development—challenges and opportunities. *Decision Support Systems for Sustainable Computing*, 1-18.
- Raihan, A. (2024). Environment-Energy-Economy Nexus: A Review of Empirical Research. In *Proceedings of the International Conference on Environmental and Energy Economics*.
- Odiche, D. A., & AMODU, A. (2024). A Review of Issues and Challenges of Digital Transformation and Sustainable Development in Nigeria. *Lead City Journal of The Social Sciences*, 9(3), 147-164.
- Wang, Y., Yu, Y., & Khan, A. (2025). Digital sustainability: Dimension exploration and scale development. *Acta Psychologica*, 256, 105028.
- Singh, A. K., & Jyoti, B. (2023). Impact of digitalization on global sustainable development across countries. *Green and Low-carbon Economy*.
- Goralski, M. A., & Tan, T. K. (2020). Artificial intelligence and sustainable development. *The International Journal of Management Education*, 18(1), 100330.
- Nasir, O., Javed, R. T., Gupta, S., Vinuesa, R., & Qadir, J. (2023). Artificial intelligence and sustainable development goals nexus via four vantage points. *Technology in Society*, 72, 102171.
- Liengpunsakul, S. (2021). Artificial intelligence and sustainable development in China. *The Chinese Economy*, 54(4), 235-248.

Introduction

SDG7 vouches for affordable and clean energy. From the context of reduced Anthropocene atrocities this vertical is of immense importance. Question however, remains unanswered that whether access to electricity and environment friendly fuel and technology for meal preparation really is a boon for nature? There is a theory called rebound effect that actually mentions that improvement in energy efficiency lead to an increase in energy usage due to behavioral changes the present chapter empirically investigates this relation.

Literature Review

These days, most countries are trying very hard to limit pollution, particularly carbon dioxide (CO₂) that leads to global warming. Here's a huge question: Can increasing people's availability of a reliable electricity and clean energy for food preparation cut down on CO₂ emissions? Researchers have analyzed this in most countries, and here's what they have discovered. How Electricity Affects CO₂ Emissions Electricity is crucial for development. It contributes to making people's lives better and helps businesses. But the source of electricity makes a difference. If it's generated from coal or oil, it puts a great deal of CO₂ into the atmosphere. If it's generated from clean sources such as solar or wind, it's a lot kinder to the planet. Other studies argue that higher consumption of electricity leads to more pollution. For instance, in Kuwait, Salahuddin and colleagues (2018) discovered that higher usage of electricity resulted in higher CO₂. The same happened in Pakistan (Abbasi et al., 2021) and SAARC countries (Ikram et al., 2020). These nations predominantly rely on fossil fuels, which are harmful to the environment. Other research produces varying results. In Asian nations, Bilgili et al. (2022) discovered that increased access to electricity decreased CO₂ emissions—most likely due to cleaner energy being used. Baloch et al. (2020) also discovered no solid connection, meaning electricity may not always cause pollution. Overall, therefore, electricity's impact on CO₂ is dependent on what the electricity is derived from. Clean sources are beneficial; dirty sources are detrimental. How Clean Cooking Fuel Influences CO₂ Emissions

Now let's discuss cooking. In most poor communities, individuals continue to use wood, cow dung, or kerosene for cooking. These fuels produce a lot of pollution and smoke and are harmful both to the environment and health. Clean fuels such as LPG, electricity, or biogas are far superior. Clean cooking fuels are beneficial according to most studies. Murshed (2020) researched South Asia and concluded that cleaner fuel usage lowers CO₂. Imran et al. (2022) put it in simple terms: it takes 15 kilos of CO₂ to produce one kilo of wood, but clean fuel produces a much smaller amount. Yahong et al. (2023) researched 18 Asian nations and concluded that clean fuels can reduce pollution and benefit the world. But they also asserted we require improved technology and government help to make it happen everywhere. Other researchers considered Africa. Dagnachew et al. (2020) cautioned that unless there is a change, hundreds of millions will continue to rely on dirty fuels by 2030. Aemro et al. (2021) indicated that the transition to electric cookstoves can cut CO₂ by 100% and save lives. Other studies also revealed

¹ Research scholar, Dr. D.Y. Patil B-School, Pune

the importance of enabling women and families to make more efficient fuel choices (Murshed, 2022). In Nepal, Lohani et al. (2021) demonstrated more bio mass gas use could reduce millions of tons of CO₂. In China, Niu et al. (2021) indicated that bio fuel not only benefited the environment, but also saved individuals money and enhanced their health. Overall, the research suggests that while electricity provision might have different effects depending on how it is produced, clean cooking fuel will have lower emissions and better health outcomes in almost all cases. There are still gaps in research to be filled, however—especially for larger regional analyses of Asia. Most analyses cover only a few countries or neglect other significant variables like income, urbanization, or cultural practices. The current research attempts to bridge that gap by looking at 44 Asian countries to better understand the relationship between the availability of electricity and clean fuel and per capita CO₂ emissions. To provide a wider picture, that can give a more clearer picture and help more effective, evidence-based policies towards a green future.

Methodology

The present chapter considers per capita CO₂ emission as the dependent variable and checks the impact of access to electricity and clean fuel and technology per hundred people both as independent variables on the dependent variable. To avoid endogeneity and omitted variable bias, per capita GDP measured in constant dollars 2015, population density per square kilometer, annual population growth rate, rural urban population ratio all these have also been considered as independent variables. Finally the analysis resorts to a panel data analysis with more than 100 countries from 2000 to 2020.

Findings

The rise in availability of both clean fuel and technology for cooking and access to electricity actually increases per capita CO₂ emission. What seems green as per the SDG7 that proposes affordable and clean energy will eventually hamper SDG13 that proposes actions against climate change. A common chord is missing between these two SDGs and immediate resolution is necessary.

Conclusion

The rebound effect seems to be operating with the rise access to clean fuel and technology for food preparation and access to electricity. It is recommended that behavioral restrain along with decoupling of electricity production from fossil fuel will actually help SDG7 to add value to the sustainable development goals.

Keywords: *Access to cleaner energy, SDG7, SDG13, Rebound effect, behavioral restrain.*

References

- Abbasi, K. R., Shahbaz, M., Jiao, Z., & Tufail, M. (2021). How energy consumption, industrial growth, urbanization, and CO₂ emissions affect economic growth in Pakistan? *Energy*, 221,
- Aemro, Y. B., Moura, P., & de Almeida, A. T. (2021). Inefficient cooking systems: A challenge for sustainable development—A case of rural areas of Sub-Saharan Africa. *Environment, Development and Sustainability*, 23(10), 14697–14721.
- Baloch, M. A., Khan, S. U. D., Ulucak, Z. Ş., & Ahmad, A. (2020). Analyzing the relationship between poverty, income inequality, and CO₂ emissions in Sub-Saharan African countries. *Science of the Total Environment*, 740, 139867.
- Bilgili, F., Koçak, E., & Bulut, Ü. (2022). Investigating the effect of electricity access on CO₂ emissions in Asian countries using panel quantile regression. *Sustainability*, 14(1), Article 107.
- Dagnachew, A. G., Lucas, P. L., Hof, A. F., & van Vuuren, D. P. (2020). Scenario analysis for promoting clean cooking in Sub-Saharan Africa: Costs and benefits. *Energy*, 192, 116641.

- Ikram, M., Zhang, Q., Sroufe, R., & Shah, S. Z. A. (2020). Towards a sustainable environment: The nexus between ISO 14001, renewable energy consumption, access to electricity, agriculture and CO₂ emissions in SAARC countries. *Sustainable Production and Consumption*, 22, 218–230.
- Imran, M., Zahid, A., Mouneer, S., Özçatalbaş, O., Ul Haq, S., Shahbaz, P., Muzammil, M., & Murtaza, M. R. (2022). Relationship between household dynamics, biomass consumption, and carbon emissions in Pakistan. *Sustainability*, 14(11), 6762.
- Lohani, S. P., Dhungana, B., Horn, H., & Khatiwada, D. (2021). Small-scale biogas technology and clean cooking fuel: Assessing the potential and links with SDGs in low-income countries—A case study of Nepal. *Sustainable Energy Technologies and Assessments*, 46, 101301.
- Murshed, M. (2020). An empirical analysis of the non-linear impacts of ICT-trade openness on renewable energy transition, energy efficiency, clean cooking fuel access and environmental sustainability in South Asia. *Environmental Science and Pollution Research*, 27(29), 36254–36281.
- Murshed, M. (2022). Pathways to clean cooking fuel transition in low and middle-income Sub-Saharan African countries: The relevance of improving energy use efficiency. *Sustainable Production and Consumption*, 30, 396–412.
- Niu, S., Dai, R., Zhong, S., Wang, Y., Qiang, W., & Dang, L. (2021). Multiple benefit assessment and suitable operation mechanism of medium- and large-scale biogas projects for cooking fuel in rural Gansu, China. *Sustainable Energy Technologies and Assessments*, 46, 101285.
- Salahuddin, M., Alam, K., Ozturk, I., & Sohag, K. (2018). The effects of electricity consumption, economic growth, financial development and foreign direct investment on CO₂ emissions in Kuwait. *Renewable and Sustainable Energy Reviews*, 81, 2002–2010.
- Yahong, W., Cai, Y., Khan, S., & Chandio, A. A. (2023). How do clean fuels and technology-based energy poverty affect carbon emissions? New evidence from eighteen developing countries. *Environmental Science and Pollution Research*, 30(13), 37396–37414

Introduction

The present era may be described as the era of digital revolution. Beginning in the 1990s with the early steps of mobile and internet technology, and moving forward to their convergence with Artificial Intelligence, the world has witnessed two industrial revolutions in quick succession, namely Industry 4.0 and Industry 5.0. These developments have transformed production and consumption significantly. However, it remains an open question whether digital transformation has contributed to achieving zero hunger under Sustainable Development Goal 2. The present chapter is dedicated to analysing the impact of Digitalization on global hunger.

Literature Review

Industrial revolutions have historically transformed economies and societies. Today, digitalisation driven by Industry 4.0 and 5.0 is reshaping global dynamics, with technologies such as AI and IoT increasing efficiency and enabling data-driven decision-making (European Commission, 2021). Industry 5.0 goes further, placing emphasis on human well-being and sustainability, seeking to ensure that technological advances enhance human welfare rather than simply replace it. However, technological progress alone cannot secure food security or sustainable economic growth; it must be accompanied by policies that promote equity, good governance, and inclusive development (Islam, 2025).

Despite the promise of digitalisation, its benefits remain unevenly distributed across regions and social groups. While digital technologies can create economic opportunities, enhance productivity, and contribute to achieving the Sustainable Development Goals (SDGs), they also risk deepening existing inequalities between those who have access to digital resources and those who do not. In India, stark digital divides persist. Urban internet penetration reaches 67%, while rural usage stands at just 31%. Moreover, only 2.7% of the poorest households own a computer, compared to 27.6% among the wealthiest, and women are 33% less likely than men to access mobile internet, reflecting the widest gender gap in the Asia-Pacific region (GSMA, 2022). These disparities hinder participation in economic growth, education, and civic life, reinforcing historical patterns of socio-economic disadvantage (DiMaggio & Hargittai, 2001). Without deliberate policy interventions, digitalisation may reinforce socio-economic inequalities rather than reduce them (OECD, 2022). Richey et al. (2021) observe that even well-intentioned development interventions using digital tools can sometimes prioritise commercial or reputational interests over genuine social progress, underscoring the complex motivations behind technological deployments.

Digital technologies are also significantly transforming agriculture. Innovations such as precision farming, satellite imagery, remote sensing, data-driven advisory systems, and digital marketplaces collectively enable better resource management, informed decision-making, and increased sustainability in agricultural practices (FAO, 2020; McFadden et al., 2022). According to the OECD (2022), digitalisation holds significant potential for addressing productivity, sustainability, and resilience challenges in agriculture. However, adoption remains uneven due to high costs, skill barriers, and

¹ Research Scholar, Dr. D.Y. Patil B-School, Pune, Maharashtra, India

mistrust towards new technologies in many regions. While precision agriculture and agro ecology offer notable gains in productivity and sustainability, their benefits often remain inaccessible to smallholder farmers unless paired with policies ensuring equitable distribution and capacity-building (Islam, 2025). Melo-Velasco et al. (2025) caution that digital technologies risk amplifying existing disparities by concentrating power among dominant agricultural corporations, while undermining the agency and opportunities of vulnerable farmers, highlighting the socio-ethical complexities tied to technological innovation. Although digitalisation in agriculture holds promise, McFadden et al. (2022) underscore the need for more comprehensive and reliable evidence on digital agriculture adoption trends, particularly in under-researched areas such as livestock and specialty crops.

Global hunger remains a multifaceted phenomenon driven by complex economic, environmental, and political dynamics. Classical Malthusian theories predicted that exponential population growth would inevitably outpace food supply, leading to widespread suffering (Malthus, 1798). However, modern scholars, particularly Amartya Sen (1981), have reframed hunger as resulting primarily from socio-political and institutional failures rather than simple resource scarcity. Even where global food supplies are sufficient, millions remain undernourished due to poverty, inequitable distribution systems, and barriers to market participation and food access (FAO, 2022; Islam, 2025). Alvarado et al. (2021) illustrate how policy measures, such as fiscal tools like sugar-sweetened beverage taxes, can influence consumption behaviour, yet these effects often depend on public awareness and corporate counteractions, highlighting the complex interplay between policy and market forces.

While digitalisation often serves as a catalyst for innovation and efficiency, it also introduces significant risks for labour markets and social equity. Automation and AI can fundamentally redefine job requirements, displacing workers whose skills no longer align with evolving technological demands (Acemoglu & Restrepo, 2020). Many workers in developing economies lack access to educational pathways and reskilling opportunities necessary to adapt to this shift, risking further entrenchment of socio-economic disparities and marginalisation of vulnerable populations. The COVID-19 pandemic starkly revealed these vulnerabilities, demonstrating how reliance on digital platforms exposed structural weaknesses in sectors such as tourism, hospitality, and informal economies (Gerwe, 2021). In agriculture, while digital tools promise efficiency and sustainability, concerns remain that their implementation may disproportionately benefit large agribusinesses, exacerbating rural inequality and marginalisation of smallholder farmers (Melo-Velasco et al., 2025; OECD, 2022).

Population growth continues to be central to discussions about hunger and food security. While Malthusian theories warned of inevitable resource scarcity, modern evidence suggests that hunger often results more from socio-economic and institutional factors than purely biological limits. Islam (2025) notes that although population growth exerts additional pressure on food systems, it can also contribute essential labour resources which, if effectively managed, can enhance agricultural productivity and stimulate economic development. Despite extensive scholarship on digitalisation, inequality, and food security, substantial gaps persist in understanding how these dynamics intersect, especially in developing countries. Much existing literature focuses heavily on technological capabilities without fully addressing their socio-economic consequences or their impacts on inequality and access. McFadden et al. (2022) emphasise the urgent need for robust and representative data on digital agriculture to support informed policy-making and ensure inclusive technology deployment.

This study examines how digitalisation in the new industrial revolution impacts sustainable development and hunger reduction in developing regions. It explores how digital divides affect inequality and food security, aiming to inform policies that ensure digital innovation promotes inclusive growth.

Methodology

This study analyses data from 22 countries around the world covering the period 2007 to 2022. A Digitalization index was constructed using relevant variables, and the reliability of this index was

assessed through the determinant value of the covariance matrix, Bartlett's test of sphericity, and the KMO statistic. The Global Hunger Index (GHI) for these countries was used as the dependent variable, while the Digitalization index, population density, and annual population growth served as independent variables. Panel data analysis was conducted to identify relationships among these variables.

Findings

The analysis reveals that higher levels of Digitalization are associated with an increase in the Global Hunger Index score, meaning higher Digitalization correlates with higher levels of hunger. Population growth, on the other hand, is found to reduce the GHI value, while the effect of population density is statistically insignificant.

Implications

These findings suggest that although Digitalization is widely regarded as a driver of progress, it can inadvertently worsen hunger if it leads to job losses and reduced purchasing power. This highlights the need to balance technological advances with socio-economic stability. The study also challenges the traditional view that population growth is purely a burden. Instead, it suggests that growing populations, if well managed, can support food production and reduce hunger. Overall, the research indicates that digital transformation alone is not sufficient to achieve Sustainable Development Goal 2 (Zero Hunger) without policies that protect employment and promote fair income distribution. Policymakers in developing regions must therefore approach Digitalization carefully, recognizing its potential to deepen socio-economic inequalities if not managed inclusively.

Conclusion

In conclusion, the study underscores that Digitalization must be implemented thoughtfully, as it has the potential to cause job losses, lower purchasing power, and increase global hunger if safeguards are not in place. Furthermore, contrary to traditional assumptions, population growth is not necessarily harmful and can positively contribute to food production by expanding the available workforce. However, the insignificant impact of population density suggests gaps in our understanding, indicating a need for further research into how the spatial distribution of populations relates to hunger.

Keywords: *Digitalization, Industry 4.0, Global Hunger Index (GHI), Digital Divide, Sustainable Development Goals (SDG 2)*

References

- Acemoglu, D., & Restrepo, P. (2020). Robots and jobs: Evidence from US labor markets. *Journal of Political Economy*, 128(6), 2188–2244.
- Alvarado, V., Unwin, H. J. T., Sharp, M. K., Hutubessy, R., & Ferguson, N. M. (2021). Assessing the impact of sugar-sweetened beverage taxes on global health: A modelling study. *The Lancet Global Health*, 9(12), e1754–e1764.
- Concern Worldwide & Welthungerhilfe. (2007–2022). Global hunger index reports.
- DiMaggio, P., & Hargittai, E. (2001). From the 'digital divide' to 'digital inequality': Studying internet use as penetration increases.
- European Commission. (2021). Industry 5.0 – Towards a sustainable, human-centric and resilient European industry.
- Food and Agriculture Organization of the United Nations. (2020). The state of food and agriculture 2020: Overcoming water challenges in agriculture.
- Gerwe, O. (2021). The COVID-19 pandemic and the acceleration of digital transformation in the global economy. *Journal of Business Research*, 138, 425–432.
- GSMA. (2022). The mobile gender gap report 2022.

- Islam, M. S. (2025). Digitalization and sustainable development: Rethinking pathways to food security.
- Malthus, T. R. (1798). An essay on the principle of population.
- McFadden, B. R., Lusk, J. L., & Crespi, J. M. (2022). Adoption and impact of digital agriculture technologies. *Food Policy*, 112, 102374.
- Melo-Velasco, S., Wilson, B., & Jones, A. (2025). Social implications of digital agricultural technologies. *Journal of Agriculture, Food Systems, and Community Development*, 14(1), 55–71.
- Organisation for Economic Co-operation and Development. (2022). Digital opportunities and challenges in agriculture.
- Richey, L. A., Ponte, S., & Baab, M. (2021). The sentimental economy of humanitarianism: Corporate engagement with distant suffering. *World Development*, 145, Article 105520.
- Schwab, K. (2017). The fourth industrial revolution.
- Sen, A. (1981). Poverty and famines: An essay on entitlement and deprivation.
- von Grebmer, K., Bernstein, J., Wiemers, M., Brown, T., Prasai, N., Yohannes, Y., & Foley, C. (2023). 2023 global hunger index: The inequality of hunger.
- World Bank. (2023). World development indicators.

4

VOLATILITY, VALUE, AND VIGILANCE: A STUDY OF RISK MANAGEMENT PRACTICES IN THE INDIAN STOCK MARKET POST-PANDEMIC

Angana Chatterjee ¹, Dr. Mainak Chakraborty ²

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

The COVID-19 pandemic ushered in an unprecedented period of economic disruption that tested the resilience of financial markets across the globe. In India, the stock market exhibited extreme volatility during 2020–2022, reflecting investor uncertainty, disrupted corporate earnings, and monetary interventions (Kumar & Srivastava, 2021). This extended abstract aims to explore the evolution of risk management practices within the Indian stock market during and after the pandemic, with particular focus on how market participants—retail investors, institutional investors, and regulators—responded to rising volatility and systemic risk.

The Indian equity market, comprising major indices like the Nifty 50 and BSE Sensex, experienced a sharp crash in early 2020, followed by a surprising and aggressive recovery. This V-shaped recovery challenged conventional risk frameworks and prompted a reassessment of value-driven strategies under high uncertainty (Chakraborty & Gupta, 2022). Understanding how Indian investors and financial managers adapted their risk management practices in this period is critical for shaping future investment frameworks, policy guidelines, and financial education in emerging economies.

Background and Significance

Risk management is central to financial decision-making and is especially significant in volatile markets. Effective strategies, including diversification, hedging, and quantitative risk models, help reduce potential losses and preserve capital during market downturns (Jorion, 2010). In India, the increased participation of retail investors, driven by digital platforms and low-cost trading apps, added new dimensions to market volatility and behavioral finance considerations (SEBI, 2021).

While traditional models such as Value at Risk (VaR), Conditional VaR, and the Capital Asset Pricing Model (CAPM) remain popular, their reliability under stress conditions—such as those experienced during the pandemic—was questioned. This period also saw the emergence of ESG (Environmental, Social, and Governance) metrics as a soft form of risk control and sustainable investing (Reddy & Varma, 2023).

The Reserve Bank of India (RBI), Securities and Exchange Board of India (SEBI), and market intermediaries introduced policy responses, circuit breakers, liquidity measures, and financial awareness campaigns to protect market integrity. The pandemic thereby served as a "natural stress test" for India's stock market risk management ecosystem (RBI, 2022).

¹ Student (MBA), Department of Management, School of Business, Adamas University

² Associate Professor, Department of Management, School of Business, Adamas University

Research Objectives

The proposed study is designed to achieve the following objectives:

1. To assess the volatility trends in the Indian stock market during and post-COVID-19.
2. To analyze the effectiveness of institutional and investor-level risk management strategies.
3. To evaluate changes in investor behavior and their influence on market performance.
4. To explore the integration of ESG-based approaches as part of post-pandemic risk frameworks.

Methodology

The study will adopt a **mixed-methods approach** combining **quantitative** analysis of market data and **qualitative** interviews.

- **Data Collection:** Secondary data will be sourced from NSE, BSE, RBI bulletins, and SEBI publications from 2019–2024. Daily stock returns, volatility indices (India VIX), and trading volumes will be used.
- **Volatility Analysis:** GARCH (Generalized Autoregressive Conditional Heteroskedasticity) models will be employed to estimate volatility clustering before, during, and after the pandemic. Cross-correlation with global indices (e.g., S&P 500, FTSE) will also be assessed.
- **Investor Sentiment & Behavior:** Retail investor participation rates and mutual fund inflow/outflow patterns will be analyzed. Surveys or interviews with 50 market participants (including brokers and analysts) will provide behavioral insights.
- **Risk Management Frameworks:** Analysis will be conducted on how asset management firms altered their portfolio strategies, including diversification, stop-loss limits, hedging via derivatives, and increased reliance on ESG filtering.

Findings

Preliminary literature suggests that Indian investors adopted a mix of reactive and adaptive risk strategies during the pandemic (Mitra & Mohan, 2021). Younger investors were more risk-tolerant, leading to speculative trading spikes, while institutional investors sought safe havens in FMCG, pharma, and IT stocks (Banerjee, 2021). The Nifty 50's recovery, outpacing GDP growth, highlighted a growing disconnect between financial market optimism and real economy fundamentals—a phenomenon echoed globally.

The study expects to find that:

- Traditional risk models were insufficient in capturing tail risk events.
- Behavioral biases, such as herding and overconfidence, increased market fragility.
- A significant shift occurred toward thematic and ESG-aligned investing.
- Regulatory responses were more reactive than proactive but helped stabilize sentiment.

Implications for Practice and Policy

This study will offer actionable insights for financial managers, regulators, and MBA-level learners. It will recommend:

- Enhancing early-warning systems using machine learning for real-time volatility tracking.
- Promoting financial literacy among new retail investors.
- Institutionalizing ESG criteria as part of a standard risk control toolkit.
- Strengthening the role of SEBI in mandating stress-testing for mutual funds and institutional investors.

Further, this paper will inform MBA students on how real-world financial disruptions challenge textbook risk models, necessitating hybrid strategies blending behavioral finance, big data analytics, and ESG filters.

Conclusion

The COVID-19 pandemic exposed structural vulnerabilities in India's financial markets while catalyzing the evolution of risk management strategies. Understanding how investors navigated this crisis offers deep insights into market psychology, financial governance, and investment resilience. As India continues to position itself as a high-growth emerging economy, robust and inclusive financial risk frameworks are vital for sustained investor confidence and capital market development.

This research will contribute to the ongoing discourse on sustainable risk management in developing markets and will serve as a strong academic and practical reference for MBA students, educators, and industry professionals.

Keywords: *Risk Management, Indian Stock Market, Financial Volatility, Post-Pandemic Finance, Investor Behavior, APA 7*

References

- Banerjee, S. (2021). Market Response to COVID-19: An Indian Perspective. *Journal of Emerging Markets, 15*(3), 122–134.
- Chakraborty, R., & Gupta, M. (2022). *V-Shaped Recovery in Indian Equities: Drivers and Risks*. *Asian Journal of Finance & Economics, 11*(1), 45–59.
- Jorion, P. (2010). *Financial Risk Manager Handbook* (6th ed.). Wiley.
- Kumar, A., & Srivastava, N. (2021). Financial Markets and COVID-19: Lessons from India's Volatility Trends. *Indian Journal of Economics and Finance, 5*(2), 98–115.
- Mitra, A., & Mohan, S. (2021). Investor Behavior under Crisis: A Case Study of Indian Retail Participation during COVID-19. *Behavioral Finance Review, 9*(1), 33–47.
- RBI. (2022). *Financial Stability Report – July 2022*. Reserve Bank of India.
- Reddy, V., & Varma, K. (2023). ESG and Risk Management: A Framework for Indian Investment Firms. *Sustainable Finance Journal, 3*(2), 67–82.
- SEBI. (2021). *Annual Report 2020–21*. Securities and Exchange Board of India.

Introduction

In Indian Domestic Coating Industry, sustainable products are considered to be optimally washable, with extremely low VOC and water-soluble acrylic products. Indian Domestic Coating Industry is divided in such a way that more than 55% of the market share is with one single Giant and balance is divided into 4 to 5 National and International players where all are Challengers. New entrants are continuously getting added to make the nature of the market Oligopolistic. Demand Analysis and Forecasting become critical specially for Challengers and in new segments like Sustainable Interior Emulsions so that the quality and precision of the same ensures optimum resource planning and assist to decide on relevant strategy. So, a unique, original, comprehensive and comparative study is done where demand is analysed, forecasted and compared for sustainable interior emulsions signifying Pandemic as major extraneous factor to provide a perspective on individual organization's AOP & policy for sustainable products' management where enough future opportunities of studies created for industry and academics.

Select Literatures

Bhanuj Nigam, D. A. (Bhanuj Nigam, 2021) has taught us the use of Original Box-Jenkins methods of ARIMA model for Sales Forecasting specially in the extreme environmental challenges like Covid-19 and how Pandemic becomes a huge input factor variable in the entire planning process. Jeffrey G. Covin et. al. (Jeffrey G. Covin, 2000) detailed on competitive tactics, environment and firm growth of pioneers and followers where pioneers, followers and probable hostile market environment are explained, emphasized and cost is identified as an important perspective of followers and the same has been inferred through testing of hypotheses utilizing ANOVA, cluster analysis, correlation as statistical instruments. Weng Marc Lim (Lim, 2020) established challenger marketing with business-to-business approach which is fundamentally described as a sales strategy that brings disruption in the market from the point of view of both challenger sales and challenger consumers.

Purpose of the Study

Purpose of the study is to analyse for Indian domestic coating industry, forecast and demand of Sustainable Interior Emulsions. Separately, estimation is done on demand movement by testing aberrations of pandemic and shown how same is varying before and after pandemic period indicating any significant changes. Same is compared by benchmarking projected GDP growth of India in 2024 & 2025 which is highly relevant for Indian Coating Industry's context. So, instead of reaching forecast numbers, main purpose of the study is to focus on market strategies, different processes & comparisons, approaches, preferences, consumer behavioural changes, prolonged extraneous factors and how to do the treatment of the same etc. and all these specifically from the perspective of sustainable interior emulsions. We applied concept of ARIMA & Hypotheses Testing utilizing relevant test Statistics to analyse the data which directs us towards definite conclusion.

¹ PhD Scholar, Department of Management Studies, National Institute of Technology, Durgapur

² Professor, Department of Management Studies, National Institute of Technology, Durgapur

Methodology

Utilized data in this Study is a real time, time-series quarterly secondary data from 2018 to 2023, collected and factored with single multiplier with zero bias to make the dataset a close representative of domestic coating industry of India and, certainly not a representation of any specific paints Organization. Projected GDP growth of Indian Economy suggests that coating industry will grow at 10% to 12% as CAGR and continue till 2025. Historically domestic coatings in India tends to expand at a rate of 1.5 times of GDP growth rate (<https://realty.economictimes.indiaimes.com>, 11th Sep'23 & www.businessworld.in "Indian paints Industry Shines Bright With Strong Growth Forecast amid increasing competition", 11th Nov'2024). Report from Deloitte in "India Economy Outlook, Oct'2024" at Deloitte Global Economic Research Centre proposed 7% to 7.20% GDP growth of India during 2024 and 2025 (<https://www2.deloitte.com>). Sales volume of 2021 is not purely for the coating sites of 2021 itself, but a summation of both two consecutive pandemic years of 2020 & 2021 due to pent up demand (<https://m.economictimes.com>, 8th Aug'21). The same is confirmed by IMF as pent-up demand accumulated during COVID is exhausted and Economy will connect with its actual potential from 2025 onwards (<https://m.economictimes.com>). We have applied approach of Auto Regressive Integrated Moving Average (ARIMA) Model ideal for Short Term Forecasting and efficient application on Stationary Time Series data ideally set on monthly or quarterly basis. The Model suggests that, after estimating both Auto Regressive (AR) and Moving Average (MA) models, the same needs to finally get combined to have the ideal equation form of ARIMA with differencing for stationary status. We have applied this approach with SPSS package to reach the final forecast sales numbers for 2024 which is defined here as S_t . Objectives are supported with Hypotheses to test each of them at 95% confidence level. Single factor ANOVA applied to test p value and to consider it significant with value less than 0.05 to reject Null. Through critical F value on the existing df we compared the calculated F and p to decide upon rejection or non-rejection of Null.

Analysis & Findings

Indian Coating industry to a great extent is utilitarian and price inelastic, hence, here price factor is ignored.

5.1 ARIMA Forecast Model

5.1.1 Demand forecast comparison and planning of total product volumes

Table1 Total products demand forecast

		Total Products Demand Forecast			
		With 24 quarters including pandemic		With 16 quarters excluding pandemic	
Year	Quarter	Demand Forecast	ARIMA Model	Demand Forecast	ARIMA Model
2024	Q1	5843.17	ACF=3 (p)	5944.59	ACF=2 (p)
2024	Q2	5626.22	PACF=1 (q)	5694.38	PACF=0 (q)
2024	Q3	5542.85	Differencing=1	5790.86	Differencing=1
2024	Q4	5819.7	(3,1,1)	6067.34	(2,1,0)
Total		22831.94		23497.17	

5.1.2 Demand forecast comparison & planning of sustainable Interior Emulsion volumes

Table2 Sustainable Interior Emulsion demand forecast

Sustainable Interior Emulsion Demand Forecast & Contribution							
		With pandemic		Without pandemic		Contribution with Pandemic	Contribution without Pandemic
Year	Quarter	Demand Forecast	ARIMA Model	Demand Forecast	ARIMA Model		
2024	Q1	538.35	ACF=2 (p)	540.71	ACF=1 (p)	9.21%	9.10%
2024	Q2	503.4	PACF=1 (q)	569.19	PACF=0 (q)	8.95%	10.00%
2024	Q3	503.17	Differencing=1	597.46	Differencing=1	9.08%	10.32%
2024	Q4	545.25	(2,1,1)	626.48	(1,1,0)	9.37%	10.33%
Total		2090.17		2333.84		9.15%	9.93%

Table3 Test statistics for forecast numbers

Test Statistics for Forecast numbers	R ²	SE	t	RMSE	MAPE	MAE
Total Volume Forecast with pandemic	0.40	75.26	0.66	758.23	11.01	474.95
Total Volume Forecast without pandemic	0.57	54.64	1.52	367.01	5.70	283.27
Sustainable Product Volume Forecast with pandemic	0.78	5.09	2.36	54.00	16.49	36.36
Sustainable Product Volume Forecast without pandemic	0.86	0.26	2.21	39.30	9.53	30.69

5.2 Hypotheses outcomes

Hypotheses	F	F-Crit	p-Value	Status of Null
H1 Quarterly, Percentage Contribution of Interior Emulsions to total coatings Volume is equal for quarters of 2023 and volume forecasted quarters of 2024 including Pandemic period	1.43871	5.98738	0.27556	Not Rejected
H2 Quarterly, Percentage Contribution of sustainable Interior Emulsions to total coatings Volume are equal for forecasted quarters of 2024 including and excluding pandemic period	9.75305	5.98738	0.02051	Rejected
H3 Contributions percentage of sustainable Interior Emulsions to the Total coatings Volume are equal pre and post pandemic	24.40150	4.30095	0.00006	Rejected

Practical Implications

Coating Organizations, especially Challenger brands can plan functional strategies with meticulous forecast considering prolonged extraneous like pandemic. They can also study consumer behaviour trends towards sustainability especially post pandemic and execute attack strategy i.e. flanking is mostly relevant here. Future study opportunities are there to analyse forecast and demand of sustainable products emphasizing pandemic as an input cue. Challengers' strategy innovation for sustenance, growth and market share along with deep study and analysis of diminishing "pent-up" demand for pandemic can be a major Research area for Domestic Coating Industry with significance of Sustainable Interior Emulsions.

Originality

Efforts given to establish demand movement of sustainable interior emulsion both in volume and contribution with pre and post pandemic approach. Also, the same is checked from the perspective of growth or stagnancy with sales numbers post pandemic for sustainable interior emulsions. Forecast of sustainable interior emulsion through ARIMA including and excluding pandemic to identify better numbers commensurate with trend is also a new area of exploration. Along with that, checking of discrepancies between forecast numbers of sustainable interior emulsions comparing "volume forecast" and "contribution forecast" is also emphasized. Projected GDP growth and irregular sales numbers during pandemic along with quarterly contribution trend are benchmarked and factored for all relevant reasons and outcomes

Conclusion and Recommendations

In this study, we tried to address the change in contribution and growth of sustainable Interior Emulsion products before and after pandemic as significance of extraneous and how the same may become strategically extremely important in Indian domestic coating industry with special emphasis given on Challenger Coating brands. The same has been benchmarked against projected GDP growth rate and total volume forecast and then to arrive at contribution percentage of all such products. Sustainable Interior Emulsions have become heavily contributing especially after pandemic and the same has been tried to be shown effectively with ARIMA and Hypothesis testing. The same gives a distinct Consumer Behaviour trend towards increasing consciousness of sustainable Interior Emulsions and making purchase decisions thereafter.

Keywords: *Forecast, Demand, ARIMA, Extraneous, Sustainable, Hypotheses, Challenger*

References

- Bhanuj Nigam, D. A. (2021). Sales Forecasting Using Box Jenkins Method Based Arima Model Considering Effect Of Covid -19 Pandemic Situation. *International Journal of Engineering Applied Sciences and Technology*.
- Jeffrey G. Covin, D. P. (2000). Pioneers and followers: competitive tactics, environment, and firm growth. *ELSEVIER; Journal of Business Venturing*, 175-210.
- Lim, W. M. (2020). Challenger Marketing. *ELSEVIER; Industrial Marketing Management*, 342-345.

Introduction

In current scenario, impact investing has surfaced as an elucidative focus for investors and policymakers, reflecting a mushrooming emphasis on sustainable development and responsible investment practices. ESG funds, also referred to as "green funds," offer investors an opportunity to align their financial objectives with ethical and sustainability goals. However, the diversity in ESG fund offerings and the varying priorities of investors make it challenging to systematically evaluate and rank these funds. As a result, there is a need for robust decision-support frameworks to assist investors in selecting funds that align with their preferences and sustainability aspirations.

Literature Review

The development of impact investing demonstrates how it went from being a specialised strategy to a widely used investment method. By highlighting their function in promoting sustainable development, the United Nations Principles for Responsible Investment (UNPRI) program in 2006 further accelerated the implementation of responsible investment principles worldwide (*UNPRI, 2006*). According to recent research, incorporating green investing variables into investing strategies can improve long-term risk-adjusted returns while also being consistent with ethical goals (*Boffo & Patalano, 2020*).

MCDA have emerged as effective tools for addressing the multi-dimensional nature of impact investment fund evaluation. The Analytic Hierarchy Process (AHP), introduced by *Saaty (1980)*, is widely used to derive the comparative significance of the variables by structuring decision problems into hierarchical frameworks. This method is particularly useful in responsible investment contexts, where criteria such as ecological impact, governance quality, and financial performance must be prioritized (*Ishizaka & Labib, 2011*).

The Technique for Order Preference by Similarity to Ideal Solution (TOPSIS), coined by *Hwang and Yoon (1981)*, complements AHP by ranking the available choices based on their nearness to an ideal scenario. TOPSIS has been successfully applied in impact investment-related studies to rank sustainable investment options by integrating quantitative and qualitative factors (*Shad et al., 2019*). TOPSIS ranks alternatives based on their distance from an ideal and a negative-ideal solution, making it suitable for green fund analysis where multiple objectives need balancing. *Kaya and Kahraman (2011)* applied TOPSIS in sustainability evaluations, demonstrating its effectiveness in scenarios requiring trade-offs between qualitative and quantitative criteria. The combination of AHP and TOPSIS provides a robust framework for evaluating impact investment funds, leveraging the strengths of both methods to ensure a comprehensive and systematic analysis. Combining AHP and TOPSIS provides a hybrid model that leverages the strengths of both methods. AHP is used to determine criteria weights, while TOPSIS generates a ranked order of alternatives. Applications of this integrated model have been reported in

¹ Assistant Professor, Department of Business Administration, Calcutta Institute of Engineering and Management, Tollygunge, Kolkata

² Associate Professor, Department of Business Administration, Amity Business School, Amity University, Kolkata

supply chain sustainability (*Govindan et al., 2013*) and renewable energy project selection (*Kumar et al., 2017*), showcasing its versatility in complex decision-making contexts.

The focus of clean investing has expanded beyond financial returns to include broader stakeholder impact. The idea that companies should generate value for all stakeholders, including workers, clients, and communities, is supported by *Freeman's (1984)* stakeholder theory. Impact investment funds tend to prioritize companies with ethical governance practices, diverse leadership, and minimal exposure to controversial industries such as fossil fuels and weapons (*Friede, Busch, & Bassen, 2015*).

Despite their popularity, assessing and ranking green funds remains complex due to the diverse criteria and subjective priorities associated with their performances. The absence of established parameters and varying methodologies for ESG ratings have created discrepancies in fund evaluations (*Berg, Kölbel, & Rigobon, 2022*). These inconsistencies create a need for frameworks that provide greater transparency and uniformity in IMPACT INVESTMENT fund assessments. Furthermore, there is growing concern over "greenwashing," where funds claim to be green-compliant without substantial evidence of sustainability impact (*Hartzmark & Sussman, 2019*). Moreover, investors must balance financial returns with qualitative aspects such as ethical alignment and stakeholder impact. This multi-faceted nature of responsible investment necessitates decision-support tools capable of handling such complexity. Addressing these challenges requires enhanced transparency, regulatory oversight, and standardized reporting frameworks (*Kotsantonis, Pinney, & Serafeim, 2016*).

Purpose

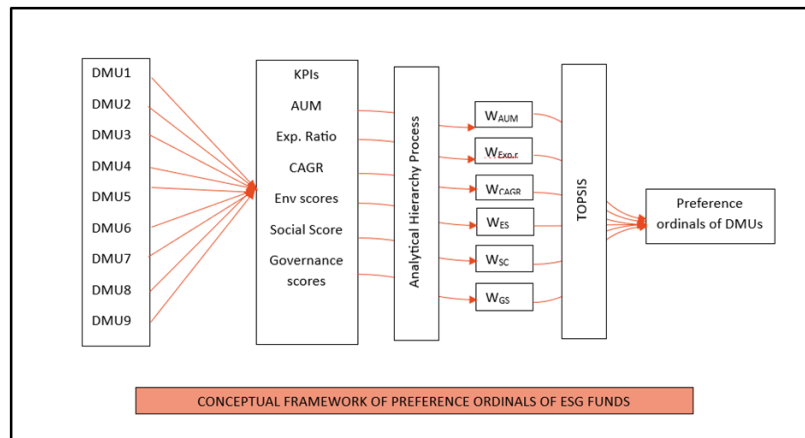
This research addresses the challenge by employing a multi-criteria decision-making (MCDM) approach, integrating the Analytic Hierarchy Process (AHP) and the Technique for Order Preference by Similarity to Ideal Solution (TOPSIS). AHP provides a structured methodology to derive the comparative significance of various constructs while TOPSIS facilitates ranking decision-making units by measuring their proximity to an ideal solution. Together, these methods enable a comprehensive evaluation of ESG funds, ensuring that the rankings are both data-driven and reflective of investor priorities. By applying the integrated AHP-TOPSIS model, this study aims to derive preference ordinals for green funds, offering valuable insights into the prioritization process.

Methodology

Research Objectives:

1. To utilise AHP to calculate the weights of the objective- key performance indicator (KPI) that are used to evaluate the responsible funds' performance.
2. To develop a preference order model of the green funds by applying TOPSIS.

Conceptual Framework



Research methodology

Integrated AHP-TOPSIS approach- The integrated Analytic Hierarchy Process (AHP) and Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) approach is a powerful hybrid method that combines the strengths of both multi-criteria decision-making (MCDA) techniques. AHP focuses on structuring complex decision problems by assigning relative weights to criteria, while TOPSIS provides a ranking of alternatives based on their proximity to the ideal and anti-ideal solutions. This hybrid approach has been widely used in areas like financial decision-making, supply chain management, and sustainability.

Data collection

To conduct the systematic literature review, literature from various sources such as Scopus, WOS, Elsevier, Google Scholar, Research Gate, Academia reservoir have been used which have been compiled by using Dimensions AI. For the second stage of the analysis Crisil Report 2022 have used as a source to establish the most popular green funds in the NSE, India. The ESG scores of the top performing funds have been extracted from the report which has been published and accepted by the Credit Rating Agency and as per the established standards of SEBI. That's makes the study successful by using judgemental sampling of the most preferred sustainable funds in the Indian perspective.

To derive the preference ordinals of the funds by applying TOPSIS the following steps have been performed.

Step1- Defining the objective

The objective is to rank the funds based on the extent to which their outcome or return are influenced by the criterions namely AUM, CAGR, Environmental Scores, Social Scores, Governance Scores.

Step 2:- Prepare the data for analysis

The data are organized into structural format such as a matrix where the rows represent the funds of decision units and the columns represents the criteria and each cell represents the score or values for specific criterions.

Step 3: Normalize the data

The matrix is normalized to make it unit less and comparable.

Step 4: Assign weights to the criteria

In this step the comparative significance of each criterion is derived by assigning equal weights if the criterion is equally important otherwise by using expert opinions or statistical techniques such as AHP to derive weights of the criteria based on importance. This study intends to apply AHP to derive the weights of the criteria and using those weights to derive the preference ordinals by applying TOPSIS.

Step 5: Derive the Ideal and Negative -Ideal Solutions

Step 6: The distance of the ideal and Negative -Ideal solutions are being computed by applying the concept of Euclidian distance of each fund from the ideal solutions and Negative- Ideal Solutions.

Step 7: The comparative closeness to the Ideal Solutions is computed.

Step 8: The funds are ranked on the basis of TOPSIS index in the descending order.

Analysis and Findings

The study has been conducted on the data of CRISIL report 2022 which provides the top performing green mutual funds and the scores impact criteria. According to the literary evidences it has been discovered that the SBI magnum Equity fund is the most efficient impact fund which is also justified in the present analysis conducted by attempting AHP-TOPSIS hybrid model. The analysis of the study has been conducted in two stages. the first stage uses Analytical Hierarchical Process to derive the weights of each construct, used to evaluate the performance of the funds. In the second stage of the analysis, the weights of the criteria are used to derive the preference ordinals or ranks and it has been found that the SBI Magnum Equity fund is the closest fund from the ideal solution index supporting the previous analysis.

Practical Implementations

The findings of the study can be used to rank the investment alternatives on the basis of the multiple criteria. The model designed in the study can be applied not only in the ESG funds, it can be used to derive the ranks of the alternatives in decision making process of other financial decision-making process.

Originality

It is anticipated that the results will add to the expanding corpus of research on sustainable investing and offer helpful advice to investors looking to make wise and conscientious investment choices.

Additionally, this study underscores the importance of incorporating systematic decision-making tools in ESG fund evaluation to enhance transparency, reliability, and alignment with sustainability goals.

Conclusion and Recommendations

The study uses Saaty scale of Preference ranks and Random Consistency index which could be improvised by collecting experts' opinion in the real time frame which is one of the most important research gaps that can lead to future research direction. The study uses secondary data to source of information to sample the most preferred green funds which could also be improvised in the future research.

Keywords: *ESG, Green funds, AHP, TOPSIS, Preference ordinals*

References

1. Berg, F., Kölbel, J. F., & Rigobon, R. (2022). Aggregate Confusion: The Divergence of IMPACT INVESTMENT Ratings. *Review of Finance*, 26(1), 131–165.
2. Bear, S., Rahman, N., & Post, C. (2010). The Impact of Board Diversity and Gender Composition on Corporate Social Responsibility and Firm Reputation. *Journal of Business Ethics*, 97(2), 207–221.
3. Boffo, R., & Patalano, R. (2020). IMPACT INVESTMENT Investing: Practices, Progress and Challenges. *OECD Paris*.
4. Cheng, B., Ioannou, I., & Serafeim, G. (2014). Corporate Social Responsibility and Access to Finance. *Strategic Management Journal*, 35(1), 1–23.
5. Clark, G. L., Feiner, A., & Viehs, M. (2015). From the Stockholder to the Stakeholder: How Sustainability Can Drive Financial Outperformance. *Oxford University Press*.
6. Davis, J. H., Schoorman, F. D., & Donaldson, L. (2020). Toward a Stewardship Theory of Management. *Academy of Management Review*, 22(1), 20–47.
7. Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The Impact of Corporate Sustainability on Organizational Processes and Performance. *Management Science*, 60(11), 2835–2857.
8. Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*. Cambridge University Press.
9. Friede, G., Busch, T., & Bassen, A. (2015). IMPACT INVESTMENT and Financial Performance: Aggregated Evidence from More than 2000 Empirical Studies. *Journal of Sustainable Finance & Investment*, 5(4), 210–233.
10. Giese, G., Lee, L. E., Melas, D., Nagy, Z., & Nishikawa, L. (2019). Foundations of IMPACT INVESTMENT Investing: How IMPACT INVESTMENT Affects Equity Valuation, Risk, and Performance. *Journal of Portfolio Management*, 45(5), 69–83.
11. Gillan, S., Koch, A., & Starks, L. T. (2021). Firms and Social Responsibility: A Review of IMPACT INVESTMENT and CSR Research in Corporate Finance. *Journal of Corporate Finance*, 66, 101889.
12. Govindan, K., Khodaverdi, R., & Vafadarnikjoo, A. (2013). A Grey DEMATEL Approach for Developing Supplier Selection Criteria. *International Journal of Production Economics*, 145(1), 251–261.
13. Govindan, K., Khodaverdi, R., & Jafarian, A. (2015). A Fuzzy Multi Criteria Approach for Measuring Sustainability Performance of a Supplier Based on Triple Bottom Line Approach. *Journal of Cleaner Production*, 89, 295–314.
14. Hartzmark, S. M., & Sussman, A. B. (2019). Do Investors Value Sustainability? A Natural Experiment Examining Ranking and Fund Flows. *Journal of Finance*, 74(6), 2789–2837.
15. Hwang, C. L., & Yoon, K. (1981). *Multiple Attribute Decision Making: Methods and Applications*. Springer.
16. Ishizaka, A., & Nemery, P. (2013). *Multi-Criteria Decision Analysis: Methods and Software*. Wiley.
17. Kaya, T., & Kahraman, C. (2011). Multi-Criteria Decision Making in Energy Planning Using a Modified TOPSIS Methodology. *Expert Systems with Applications*, 38(7), 6577–6585.
18. Kumar, A., Shankar, R., & Thakur, L. S. (2017). A Big Data Driven Sustainable Manufacturing Framework for Condition-Based Maintenance. *Computers & Industrial Engineering*, 112, 1–14.
19. Kotsantonis, S., Pinney, C., & Serafeim, G. (2016). IMPACT INVESTMENT Integration in Investment Management: Myths and Realities. *Journal of Applied Corporate Finance*, 28(2), 10–16.
20. Mardani, A., Jusoh, A., & Zavadskas, E. K. (2015). Sustainable and Renewable Energy: An Overview of the Application of Multiple Criteria Decision Making (MCDM) Methods. *Renewable and Sustainable Energy Reviews*, 41, 934–949.
21. Saaty, T. L. (1980). *The Analytic Hierarchy Process: Planning, Priority Setting, Resource Allocation*. McGraw-Hill.

22. Shad, R., Khorramian, S., & Ostad-Ahmad-Ghorabi, H. (2019). A Comprehensive Methodology to Evaluate Green Building Materials. *Sustainable Cities and Society*, 46, 101412.
23. Velasquez, M., & Hester, P. T. (2013). An Analysis of Multi-Criteria Decision Making Methods. *International Journal of Operations Research*, 10(2), 56–66.

Introduction

The role of artificial intelligence in the creation and strategic utilization of patents has become increasingly significant in today's innovation-oriented landscape. AI technologies are not only streamlining the process of patent generation by analyzing vast amounts of data to identify novel ideas and trends, but they are also enhancing the efficiency of patent searches and evaluations. By employing sophisticated algorithms, AI can explore through millions of existing patents, identifying potential areas of coincidence and ensuring that new inventions are truly original.

Moreover, AI's capabilities extend beyond mere creation; it plays a crucial role in leveraging patents for competitive advantage. Companies can utilize AI-driven analytics to assess the market landscape, identify potential licensing opportunities, and forecast the commercial viability of their patented technologies. This strategic approach allows organizations to maximize the value of their intellectual property, ensuring that their innovations not only protect their interests but also contribute to their overall business growth.

As the intersection of technology and intellectual property continues to evolve, the integration of artificial intelligence into the patent process is poised to revolutionize how inventors and businesses approach innovation, ultimately leading to a more dynamic and competitive marketplace.

Literature review

A review of the current literature reveals that research into the effective integration of artificial intelligence (AI) in patent analysis and the advancement of new innovations is still in progress. Ashif Mohammad, Farhana Mahjabeen in their work focusses on a wide range of AI-powered innovations in solar energy. Additionally, the study explores how artificial intelligence (AI) and machine learning algorithms can be applied to improve the efficiency of solar cells, maximize energy output, and support the integration of smart grid systems. Ohalette et al. research the impact of artificial intelligence (AI) and data science on renewable energy, focusing on solar and wind energy. They explore AI solutions that improve efficiency, reliability, and sustainability in this sector.

While several studies have been undertaken, there is still significant potential for additional exploration in this field. This paper specifically focuses on how artificial intelligence contributes to the patent creation process across diverse industries. Furthermore, it examines the use of AI tools in the monetization of patents, an area that has been notably under-researched. Consequently, this paper aims to illuminate various facets and tools involved in the monetization of patents, providing valuable insights into this emerging topic.

¹ Assistant Professor, Institute of Business Management, Jadavpur University

Purpose

The paper aims to explore the role of artificial intelligence in patent generation in different segments e.g. pharma, solar, software and so on and secondly how artificial intelligence tools are used in successful patent monetization.

Research Design and Methodology

The research is based on secondary data. The paper uses exploratory tools and case-studies for purpose of the study.

Analysis and Findings

The paper is dedicated to exploring the transformative role of artificial intelligence in the realm of patent generation across various sectors. It delves into how AI technologies are not only facilitating the creation of innovative patents but also examines the ways in which these advanced tools are being employed to streamline processes for patent owners. By doing so, the paper aims to illuminate how AI is paving a smoother pathway for these individuals and organizations, enabling them to effectively leverage their patents for commercial success and technological advancement.

Relating to the first objective the paper explores patents belonging to the sectors like solar, water pollution, air pollution, drug, software, wind energy, automobile through google patent search engine. The survey has revealed that artificial intelligence plays an important role in unique and novel innovations thereby facilitating the generation of patents.

The second aim of the paper is to explore data and various information relating to the way in which the AI tools can enhance the monetization process from exploiting the patents. The survey relating to this segment has also indicated that artificial intelligence tools are being widely used in various processes crucial for patent monetization.

Practical Implications

The paper will provide an insight on the different areas where artificial intelligence has been implemented to assist innovations and how artificial intelligence tools has been used in easing the process of patent monetization.

Conclusion

Today in the world of innovation, artificial intelligence has emerged as a helping guide for the inventors. This tool should be wisely used while performing the vital actions. Although the paper primarily concentrates on the application of artificial intelligence methods within the patenting domain, this tool also holds promise in various other areas of intellectual property rights. Thus, in the modern day of knowledge, artificial intelligence has been unique innovation which has made its foot hold in every sphere.

Keywords: *Artificial Intelligence, Patent, Patent Leveraging, Patent Monetization, Patent purchase and sale.*

References:

1. The Future Is Here! How Artificial Intelligence is ‘Driving’ Patents In the Auto Industry!, <https://garcia-zamor.com/2023/07/10/ai-affecting-patents-and-the-auto-industry/>

2. Mohammad, Ashif, and Farhana Mahjabeen. "Revolutionizing Solar Energy with AI-Driven Enhancements in Photovoltaic TECHNOLOGY." *BULLET : Jurnal Multidisiplin Ilmu*, vol. 2, no. 4, 2023, pp. 1174-1187.
3. Ohalet, N. C., Aderibigbe, A. O., Ani, E. C., Ohenhen, P. E., Daraojimba, D. O., & Odulaja, B. A. (2023). AI-driven solutions in renewable energy: A review of data science applications in solar and wind energy optimization. *World Journal of Advanced Research and Reviews*, 20(3), 401-417
4. AI for energy optimisation and innovation, <https://www.iea.org/reports/energy-and-ai/ai-for-energy-optimisation-and-innovation>
5. Using Artificial Intelligence, Better Pollution Predictions Are in the Air, <https://www.jhuapl.edu/news/news-releases/240130b-ai-improves-air-quality-forecasting>
6. Bošnjaković, M. (et.al), Application of Artificial Intelligence in Wind Power Systems, *Appl. Sci.* 2025, 15, 2443
7. Artificial intelligence in the pharmaceutical industry: analyzing innovation, investment and hiring trends, <https://www.pharmaceutical-technology.com/data-insights/artificial-intelligence-in-pharma/>
8. The legal realities of software patents in AI and Machine Learning (ML), <https://roboticsbiz.com/the-legal-realities-of-software-patents-in-ai-and-machine-learning-ml/>
9. Safeer, S., Pandey, R. P., Rehman, B., Safdar, T., Ahmad, I., Hasan, S. W., & Ullah, A. (2022). A review of artificial intelligence in water purification and wastewater treatment: Recent advancements. *Journal of Water Process Engineering*, 49, 102974.
10. Transforming Patent Commercialization in the Digital Era, <https://powerpatent.com/blog/transforming-patent-commercialization-in-the-digital-era>
11. Transforming Patent Commercialization in the Digital Era, <https://powerpatent.com/blog/transforming-patent-commercialization-in-the-digital-era>

Introduction

Neuro-marketing has emerged as a noteworthy area in the present global economy. The amalgamation of neuroscience, that engages analyzing the brain and its functional processes in relation to human activities, has been a very old incident in numerous fields, including neuropsychology as a branch of psychology. However, the term "neuro-marketing" has been officially pioneered by Professor Ale Smidts (2002) to portray the application of neuroscience to expand a enhanced perceptive of consumer behavior, predominantly in the context of selecting and buying decisions. This innovative concept offers valuable insights and powerful techniques for marketing research, particularly in the analysis of consumer behavior. The main focus of neuro-marketing involves in understanding brain activities, investigating into the subconscious mind of consumers, highlighting their choices, motivations, anticipations, and envisaging their behavior. It is significant to note that neuro-marketing does not look for replacement of traditional marketing methods but to a certain extent provides exceptional and harmonizing insights.

In today's fast growing technological context, technology based organizations are facing diverse challenges in brand establishment and escalating brand equity. Neuro-marketing, an application of neuroscience principles to marketing, provides insights into consumer behavior and decision-making processes. On the other hand Tech- enabled companies, focuses on ever-increasing applications and user experience in the design of products and technology.

Select Literatures

Neuromarketing aims to understand how consumers think and why the consumer chooses products by applying "neuroscientific methods to analyze and understand human behavior in relation to markets and marketing exchanges" (Lee, Broderick, & Chamberlain, 2007, p. 200). It is a subset of the study of neuroeconomics, which combines neuroscience, genetics, economics, and psychology to understand how specific neuron activation may lead to larger scale market behavior (Levallois et al., 2012). While both neuromarketing and neuroeconomics involve the use of neuroimaging tools, neuromarketing focuses on the aspect of selling to a consumer and how to create a better product or advertisement to attract consumers. The neuroimaging technology helps scientists and marketers understand the consumers' mind to find the motives behind his or her purchases. An example of this is Campbell's Soup. In 2010, Campbell Soup changed it's label from the historic metallic spoon on a white background to a large white bowl filled with steaming soup. This was due largely to the research done by Innerscope, a neuromarketing research company, where scientists recorded consumers' responses to the old labels using eye-tracking, pupil dilation tests, and biometric measurements of heart and respiratory rates, sweat levels and body postures. Researchers collected over half a billion data points and ran these points through an algorithm that gave insights into activity within the participants' brain. Robert Woodard, Campbell's vice president of global consumer and customer insights, found that traditional interviews had not been entirely useful because oftentimes people's words "could not fully capture their unconscious responses", while this approach captured the neurological and bodily responses rather than how people thought they were responding (Brat, 2010). While these tools may not entirely be able to pinpoint

¹ Assistant Professor, Siliguri Institute of Technology

emotions or what a person is precisely thinking, if these biological metrics are moving in the same direction for a diverse group of people then it is likely that all subjects are being emotionally engaged in the same fashion (Brat, 2010).

Purpose

On two major objectives this study has been conducted, primarily to develop a progressive neuro-marketing methodology that can combine with neuro-scientific tools with marketing strategies without much technological glitches. This ground-breaking approach looks to cover a broad understanding of consumer buying decisions, emotions and repeat purchase behaviors outshining the restrictions of conventional marketing functionalities. The other objective of the study initiates to evaluate the usefulness of this methodology by analyzing a different group of samples.

Methodology

This paper functions as theoretically oriented research, combining insights and results from various research studies, academic articles, and books with radical neuro-marketing approaches, encompassing a holistic view of consumer behavior. The information base of this study was theoretical research of neuro-marketing scientists, thematic sites, results of neuro-marketing researches presented by the companies-clients. The researches of these approach general scientific and specific methods have been used, in particular: dialectic method of studying the effect of neuro-marketing tools in digital and social media. The study aimed to introduce a gamut of courses of actions derived from different disciplines that have verified influential in real-world marketing practices.

Analysis & Findings

The analysis of the study aims to expose the methodology's ability to make out and interpret the responses and emotions of the target audience aimed towards technology enabled organizations, highlighting the complex relationship between technology, brand image and the customers changing mind set. Neuro-marketing is a state-of-the-art set of neuro-techniques, neuro methods and neuro-technology that helps establish communication between the company and the consumer audience at the level of the subconscious and to intensify the purchase of goods and services. In social science, neuro-marketing is compared and time and again recognized with sensory marketing. For example, when a person hears the right music (the jingle of Titan watches or Horlicks plain folks namely "epang opang jhapang") , it has resultant associations with the brand. This is because all the processes of neuro-marketing present the sensory perception of the product, its colour, aroma, and image. Through these avenues companies are opening up novel opportunities to sell goods and build relationships with buyers. The approaches to the blow of neuro-marketing on subconscious consumers specifically are audio marketing, merchandising (displaying keeping aesthetic characteristics in mind). Audio marketing is a typical pattern of neuro-marketing that studies the impact of sound on consumer behavior. Measured sound effects have been shown to add to impulsive decision making about unplanned purchases while scrolling social media accounts or watching video clips in platform like YouTube. A person may spend 40% more money than planned on spending a heartbeat. Merchandising studies the impact on consumers' subconscious mind using color, images, and chronological situations. Choosing the right product color, image, labeling can greatly affect the sale of products. It was found that 60% of buyers pay attention to color, so the consequence of color can be successfully used in the fashioned individual style of the company. Visualization is one of the main ways to influence human behavior.

Practical implications

The study intended to build up the marketing strategies by collecting qualitative data through selecting suitable data from primary and secondary sources, significantly analyzing and assessing the findings, and lastly interpreting the findings for the improvement work.

Originality

To mitigate the challenges of understanding new age customers especially Gen Z , this research initiative addresses an approach that encompasses advanced neuro-scientific mechanisms blended with marketing practices, aiming to inculcate the pattern of the customer buying decision techniques specifically aimed to technology enabled companies that mostly depends of digital marketing.

Conclusion & Recommendations

As a final point, the study concludes in the presentation of convincing insights, recommendations, and prototypes to enhance the technology enabled company's marketing strategies, facilitating enormous proficient and resource-saving approach to develop business growth.

Keywords: *Neuroscience, Neuro-Marketing, Buying Decision, consumer behaviour*

References

1. Alsharif A. H. , Abdullah A. H. , Khraiwish A. , and Ashaari A. (2023). Neuromarketing Tools Used in the Marketing Mix: A Systematic Literature and Future Research Agenda, <https://doi.org/10.1177/21582440231156>
2. Aida Azlina Mansor, and Salmi Mohd Isa (2020). Fundamentals of neuromarketing: What is it all about? NEUROSCIENCE RESEARCH NOTES <https://doi.org/10.31117/neuroscirn.v3i4.58>
3. Anupadhyay (2023), System Design of Uber App – Uber System Architecture, Retrieved from <https://www.geeksforgeeks.org/system-design-of-uber-app-uber-system-architecture/> on 10/9/2023
4. Baalbaki S., Guzmán F. (2016). A consumer-perceived consumer-based brand equity scale. *Journal of Brand Management*, 23(3), 229–251.
5. Bercia M.D. (2012). Quantitative versus qualitative in neuromarketing research. Munich Personal RePEc Archive. <https://mpira.ub.uni-muenchen.de/44134/> (Accessed on July 30, 2023).
6. Cha K. C., Suh M., Kwon G., Yang S., Lee E. J. (2019). Young consumers' brain responses to pop music on Youtube. *Asia Pacific Journal of Marketing and Logistics*, 32(5), 1132–1148. <https://doi.org/10.1108/apjml-04-2019-0247>
7. Danziger, T., Mortillaro, M., & Scherer, K. R. (2012). Introducing the Geneva Multimodal expression corpus for experimental research on emotion perception. *Emotion*, 12(5), 1161-1179.
8. Department of Mobility Systems Engineering (2023).Tobii Pro Glasses 2 for eye-tracking have arrived, Retrieved From <https://www.mos.ed.tum.de/en/mos/about-us/news-events/article/tobii-pro-glasses-2-for-eye-tracking-have-arrived/> on 5/7/2023
9. Dos Santos J. P. M., Martins M., Ferreira H. A., Ramalho J., Seixas D. (2016). Neural imprints of national brands versus own-label brands. *Journal of Product & Brand Management*, 25, 184–195.
10. Ferdousi Sabera Rawnaque, Khandoker Mahmudur Rahman, Syed Ferhat Anwar, Ravi Vaidyanathan, Tom Chau, Farhana Sarker, and Khondaker Abdullah Al Mamun (2020). Technological advancements and opportunities in Neuromarketing:a systematic review, *Springer Nature*, 10.
11. Hamelin N., El Moujahid O., Thaichon P. (2017). Emotion and advertising effectiveness: A novel facial expression analysis approach. *JOURNAL OF RETAILING AND CONSUMER SERVICES*, 36(2), 103-111.<https://doi.org/10.1016/j.jretconser.2017.01.001>

Introduction

In a world marked by accelerating technological breakthroughs, intense competition, and rapid changes in work settings, organizational learning can play a crucial role in determining a firm's success (Nonaka and Takeuchi 2007). A key factor influencing organizational learning is the effective transfer of knowledge garnered from training programs. Transfer of Learning is a dynamic field since the environment in which learning happens is ever changing. Organizational culture is another important factor influencing organizational learning, with prior research showing significant correlation between culture and performance (Kotter and Heskett 1992). In organizational studies, a balanced culture integrates diverse, often competing, cultural dimensions. Based on the Competing Values Framework (CVF) (Cameron & Quinn, 2011), it blends Clan, Adhocracy, Market, and Hierarchy cultures—promoting collaboration, innovation, results, and control. Rather than favoring one type, balanced cultures adapt fluidly to shifting demands, maintaining innovation and discipline, collaboration and performance. This flexibility enhances resilience, adaptability, and long-term effectiveness, especially in complex, fast-changing environments. Organizations like Google, IBM, P&G, and Salesforce exemplify this dynamic equilibrium.

Purpose

Empirical studies highlight the role of balanced culture in organizational effectiveness (Gregory et al., 2009) and ambidexterity (Hafstad et al., 2024). Denison and Mishra (1995) argue that high-performing firms manage tensions between internal integration (Clan, Hierarchy) and external adaptation (Adhocracy, Market). Aichouche et al. (2022) link knowledge management success to a balanced mix of cultural traits. However, the impact of balanced culture on learning transfer remains underexplored. This paper addresses that gap, focusing on its influence on generic transfer factors independent of specific training programs (Holton et al., 2000).

Learning transfer depends on both 'can do' and 'will do' attitudes. The 'can do' reflects Personal Self-Efficacy (PSE)—belief in one's ability to apply skills—while 'will do' stems from Performance Outcome Expectation (POE), or belief that applying training leads to rewards (Chiaburu & Lindsay, 2008). Resistance to Change (RC), especially within teams, weakens motivation to transfer by discouraging new behaviors (Holton et al., 2000; Burnes, 2004). While PSE is individually driven, POE is more socially influenced. RC likely impacts POE more strongly due to its ties to support and recognition. Therefore, we hypothesize:

H1: Resistance to Change (RC) in a team has a stronger negative influence on Performance Outcome Expectation (POE) than on Personal Self-Efficacy (PSE).

Resistance to change may stem from individual fears or identity threats (Bovey & Hede, 2001) but is also influenced by team and organizational culture (George & Jones, 2001; Schein, 2010). Subcultures

¹ IMT Hyderabad and Tumpa Dey, UPES Dehradun

² UPES Dehradun

often shape change perceptions more directly than overall culture. Research shows mixed results: people-oriented cultures foster change through trust (Carlström & Ekman, 2012), while control-driven cultures aid implementation (Alharbi et al., 2012). These contradictions suggest a balanced culture—integrating clan, adhocracy, market, and hierarchy (Cameron & Quinn, 1999)—best supports change. Such balance reduces resistance by fostering safety, innovation, performance, and fairness, leading to our second hypothesis.

H2: Lesser is the imbalance in team culture, lesser is the Resistance to Change.

Research Design and Methodology:

Organizational Culture Assessment Instrument (Cameron and Quinn, 1999) was administered to measure individual's perception of his/her team culture. Learning Transfer System Inventory (LTSI) version 4 (Holton et al., 2000) was used as the second instrument where a part of the LTSI questionnaire, viz. the 15 items pertaining to the generic transfer factors was administered to capture PSE, POE and RC. Based on convenience and snowball sampling, we obtained responses from 156 individuals coming from industries like IT/ITES, pharma, real estate, education, finance, services, retail and both B2B and B2C organizations across India. For the first hypothesis, we use two dependent variables: (i) *PSE* or Personal Self Efficacy measured as the sum of items in the LTSI questionnaire that capture individual's internal belief, confidence and self-motivation and (ii) *POE* or Performance Outcome Expectations, measured as the sum of items in the LTSI questionnaire that capture an individual's expectation to be rewarded after implementing a change that affects performance positively. The independent variable is *RC* or Resistance to Change, which is measured as the sum of LTSI items that capture whether team members are reluctant to try new things and whether seniors ridicule them if they try to do so. For our second hypothesis, RC is used as the dependent variable. Our independent variable is *Imbalance*, which is measured as the sum of square of difference of each culture score from the ideal balanced score of 150, operationalized in the lines of Limaj and Bernroider (2019):

$$(Clan\ score - 150)^2 + (Adhocracy\ score - 150)^2 + (Market\ score - 150)^2 + (Hierarchy\ score - 150)^2$$

We run OLS regression after adding several control variables.

Analysis and Findings

The findings indicate that RC has a negative and significant impact on POE ($\beta = -0.2607$, $p = 0.000$). However, the influence of RC on PSE is marginally significant, highlighting a differential impact of RC on these two transfer factors. This supports our first hypothesis. Furthermore, the analysis reveals that Imbalance has a significant and positive effect on RC ($\beta = 1.81e-05$, $p = 0.027$). This finding supports our second hypothesis that cultural imbalance within the organizational context contributes to increased resistance to change. In other words, a balanced culture is associated with lesser resistance to change.

Regression results: Effect of RC on PSE and POE

Variables	Model 1 PSE	Model 2 POE	Model 3 RC
RC	-0.155+ (0.077)	-0.267*** (0.000)	
Imbalance	-9.09e-06 (0.221)	-7.02e-06 (0.389)	1.81e-05* (0.027)
Revenue	1.03e-07 (0.152)	7.90e-08 (0.329)	1.60e-07* (0.044)
Profit before tax	-2.78e-07 (0.153)	-2.39e-08 (0.885)	-1.87e-09 (0.992)
Team members	-0.000890 (0.173)	-0.000628 (0.378)	-0.00104* (0.021)
L&D Investment	-4.39e-08 (0.959)	-9.36 e-07 (0.367)	1.31e-06 (0.242)
Female	-0.351 (0.552)	-0.0126 (0.981)	0.862 (0.124)
Experience	0.0327 (0.426)	0.0673* (0.029)	0.0129 (0.811)
Function	-0.0330 (0.967)	-0.370 (0.430)	-1.375 (0.208)
Origin	-0.174 (0.849)	-1.368 (0.189)	-1.005 (0.340)
Industry	Yes	Yes	Yes
Constant	12.91*** (0.000)	12.96*** (0.000)	6.374*** (0.000)
Sample size	153	153	153
R ²	0.125	0.215	0.154
AIC	697.6	662.5	746.0
BIC	752.2	717.0	797.5

Conclusion and Recommendations

The negative impact of RC on POE underscores the detrimental effects of resistance to change on employees' expectations of rewards and recognition from implementing learnings at workplace, while the significant positive relationship between imbalance and RC highlights the importance of a balanced culture in attenuating that effect. The differential effects observed also suggest that while resistance to change severely undermines performance outcome expectation, it does not significantly alter employees' perceived personal self-efficacy. Our research adds valuable insights into the interplay between imbalance, resistance to change, performance outcome expectation and personal self-efficacy.

In conclusion, a balanced organizational culture values innovation and stability, teamwork and individual excellence, and trust alongside risk-taking. It supports diverse work styles while promoting learning and reducing resistance to change. This enables employees to apply new skills, fostering personal and organizational growth. Balanced cultures institutionalize change, building learning organizations with sustainable competitive advantage (Hatch & Dyer, 2004). Such organizations are better positioned for collaboration and knowledge exchange, even in cooperative settings (Bouncken & Fredrich, 2016). Change and learning are inexorably and intricately related to each other. A balanced organizational culture, with an equitable focus on people, process, innovation and competition will ensure that resistance to change does not detriment organizational learning through learning transfer.

Keywords: *Balanced culture, Training Transfer, LTSI, OCAI, Resistance to Change*

References

- Aichouche, R., Chergui, K., Brika, S. K. M., El Mezher, M., Musa, A., & Laamari, A. (2022). Exploring the relationship between organizational culture types and knowledge management processes: A meta-analytic path analysis. *Frontiers in Psychology, 13*, 856234.
- Alharbi, T. S. J., Ekman, I., Olsson, L.-E., Dudas, K., & Carlström, E. (2012). Organizational culture and the implementation of person-centered care: Results from a change process in Swedish hospital care. *Health Policy, 108*(2–3), 294–301.
- Bouncken, R. B., & Fredrich, V. (2016). Learning in coopetition: Alliance orientation, network size, and firm types. *Journal of Business Research, 69*(5), 1753–1758.
- Bovey, W. H., & Hede, A. (2001). Resistance to organisational change: The role of defence mechanisms. *Journal of Managerial Psychology, 16*(7), 534–548.
- Burnes, B. (2004). Kurt Lewin and the planned approach to change: A re-appraisal. *Journal of Management Studies, 41*(6), 977–1002.
- Cameron, K. S., & Quinn, R. E. (1999). *Diagnosing and changing organizational culture*. Addison-Wesley.
- Carlström, E. D., & Ekman, I. (2012). Organisational culture and change: Implementing person-centred care. *Journal of Health Organization and Management, 26*(2), 175–191.
- Chiaburu, D. S., & Lindsay, D. R. (2008). Can do or will do? The importance of self-efficacy and instrumentality for training transfer. *Human Resource Development International, 11*(2), 199–206.
- Denison, D. R., & Mishra, A. K. (1995). Toward a theory of organizational culture and effectiveness. *Organization Science, 6*(2), 204–223.
- George, J. M., & Jones, G. R. (2001). Towards a process model of individual change in organizations. *Human Relations, 54*(4), 419–444.
- Gregory, B. T., Harris, S. G., Armenakis, A. A., & Shook, C. L. (2009). Organizational culture and effectiveness: A study of values, attitudes, and organizational outcomes. *Journal of Business Research, 62*(7), 673–679.
- Hafstad, M. D., Bang, H., Bjørkli, C., Myklebust, T., & Fostervold, K. I. (2024). Cultivating flexibility: The relationship between flexible organizational values, participation climate, and job attitudes from an employee perspective. *Current Psychology, 43*(41), 32027–32039.
- Hatch, N. W., & Dyer, J. H. (2004). Human capital and learning as a source of sustainable competitive advantage. *Strategic Management Journal, 25*(12), 1155–1178.
- Holton, E. F., III, Bates, R. A., & Ruona, W. E. A. (2000). Development of a generalized learning transfer system inventory. *Human Resource Development Quarterly, 11*(4), 333–360.
- Kotter, J. P., & Heskett, J. L. (2008). *Corporate culture and performance*. Simon & Schuster.
- Limaj, E., & Bernroider, E. W. N. (2019). The roles of absorptive capacity and cultural balance for exploratory and exploitative innovation in SMEs. *Journal of Business Research, 94*, 137–153.
- Nonaka, I., & Takeuchi, H. (2007). The knowledge-creating company. *Harvard Business Review, 85*(7/8), 162–171.
- Schein, E. H. (2010). *Organizational culture and leadership* (4th ed.). Jossey-Bass.

Introduction

In the contemporary competitive, stressful corporate environment, mental health has come to be a vital issue that causes impacts on organizational performance, employee retention rate, and general productivity. Although organizations all over the world have begun to acknowledge the value of physical health benefits, mental wellbeing and emotional happiness continue to experience great neglect, stigmatization, and underspending. This study fills the existing gap between the corporate targets and mental conditions of the workforce.

Selected Literatures

The body of literature on mental health in the work place is large, crosses various areas of study which include psychology, human resource management, organizational behavior and occupational health. This research has been based on major research contributions and frameworks:

- Karasek developed his Job Demand-Control Model in 1979 and the model points to the above imbalance between low job control and the high job demands as one of the major causes of work stress.
- The Effort-Reward Imbalance Theory (1996) by Siegrist claims that when there is disproportion between efforts provided and the resultant rewards, whether monetary, social, or career-related), both in terms of stress responses and health consequences result in low-level chronic stress and unfavourable consequences in health.
- Maslach and Leiter (1997) emphasize the importance of burnout that is the syndrome caused by work in an emotionally demanding environment over a long period of time.
- According to Danna & Griffin (1999), there is a direct connection between the outcomes of companies such as turnover, performance and social wellbeing and employment.
- WHO (2022) recommendations on the promotion of mental health at work offer evidence-based recommendations on supporting mental health in the workplace on a global scale in the form of the Guidance Manual.
- As in recent empirical research (e.g., Harvey et al., 2017; Ramesh & Gelfand, 2020), psychological safety, leadership behavior, and flexible working arrangements can be described as the main moderators of employee wellbeing.

¹ Assistant Professor, Dept. of Allied Health Science, Institution of Leadership Entrepreneurship & Development

² PG Student, MHA, NSHM Knowledge Campus, Kolkata

Purpose

This paper is intended to understand and discuss the subject of employee mental health and wellbeing strategies in such a way as to formulate a coherent model that can coordinate the organizational objectives to the psychological wellbeing of the employees.

More precisely, the paper will set out to:

- Learn how mental health impacts benefits of engagement, productivity, and retention in workplaces.
- Cover effective mental wellness-oriented strategies, interventions and policies.
- Examine the influence of leadership, organization culture and HR on employee wellbeing.
- Suggest sustainable evidence-based approaches that institutions can adopt to embrace mental health resilience.

The reason why this research is important is that the understanding of a mentally healthy workforce as not only a moral obligation but also strategic one to organizations and their future success and sustainability is gaining traction as the issue of ensuring a mentally fertile workforce lays at the intersection of personal and vital goals of organizations and individual employees.

Design

The study will utilize the methodology of mixed research because the qualitative data will be supplemented by the quantitative one. What the study entailed was the following:

1. Literature Review: A in-depth review of more than 50 of the most recent articles, organizational reports, and policy documents on mental health and employee wellbeing over the last 15 years.
2. Survey Research: A questionnaire was set up and applied to 150 employees representing a variety of industries (IT, healthcare, education, manufacturing), and participant demographics were recorded to assess the extent of stress, their satisfaction at work, signs of burnout, stress-reducing coping strategies, and knowledge of mental health policies.
3. In-depth Interviews: 25 interviews with HR managers, wellness consultants, and mental health specialists were made semi-structurally to explore further how the HR managers, wellness consultants, and mental health specialists think about these organizational approaches in order to ground the interviews in organizational strategies and implementation impediments.
4. Research Design: This research utilizes a mixture of the Biopsychosocial Model and Positive Organizational Behavior Theory to reveal the complicated interaction between psychological wellbeing, organizational culture, and the behavior of a person.
5. Data Analysis: The quantitative data in the form of workload and burnout were analyzed based on correlations using SPSS software and the qualitative data of conducted interviews were coded using NVivo thematically.

Analysis & Findings

Key findings from the study include:

- **Mental Health logic:** The rate of employees with work-related stress exceeds 65 percent of the surveyed staff members expressed shock that at least once a week they had experienced stress connected with their work. Besides, approximately 38 percent of the respondents demonstrated symptoms that would indicate signs of burn-out (emotional exhaustion, cynicism, and a lack of professional efficacy).
- **Absence of Support Systems:** 27% of respondents also indicated that their organizations had formal mental health policies and only 19% had access to the professional counseling services.
- **Correlation with Performance:** There existed a positive correlation ($r=0.61$) between job satisfaction and employee wellbeing. In the same way, productivity and the level of engagement were also negatively correlated ($r=-0.54$) with stress.
- **Leadership Matters:** Interviews showed that most powerful in forming workplace wellbeing culture were leadership empathy and open communication.
- **Successful Strategies Identified:**
 - Policies of remote job and flexible working time
 - Employee Assistance Programs (EAP)
 - Regular medical check-ups and psychological surveys
 - Educational websites, workshops and campaigns on mental health
 - Emotional intelligence training, yoga and mindfulness training
 - Establishment of peer networks

Practical Implications

The results of the study have great importance to the HR professional, policymakers, and business leaders:

- **Policy Formulation:** The creation of welcoming, transparent mental health policies according to the global standards, including the WHO guidelines, should be among the priorities of the organizations.
- **Training and Awareness:** Training managers on mental health literacy and making sure their employees educate each other on the same matter can decrease the stigma and lead to earlier treatment.
- **Designing Work for Wellness:** Stress can be alleviated by redesigning work structure so that there are manageable workloads, autonomy and task variety.
- **Monitoring and Evaluation:** Constantly conducted wellbeing audits and anonymous mental health surveys can provide organizations with an opportunity to monitor progress to make informed changes.

- **Technology Integration:** Use of virtual intellectual health tools consisting of wellness apps, AI chatbots for emotional help, and teletherapy structures can broaden get right of entry to to care, particularly in faraway or hybrid setups.

Originality

This research makes contribution in the following ways:

- **Interdisciplinary Approach:** This paper brought together organizational psychology, HRM and health science to come with comprehensive conceptualization of dealing with the mental health of employees.
- **Sector-wise Comparative Analysis:** The study covers a survey across several industries, thus providing personalized information in terms of stressors and wellbeing practices within specific sectors.
- **Strategic Focus:** This research is unlike the previous studies that used to center on the individual coping mechanisms only but the current research concentrates on the strategic organizational processes, cultural change, and leadership responsibility.
- **Actionable Framework:** This study offers a 6-Pillar Model of Mental Wellness at work: Policy, People, Practices, Participation, Prevention and Performance. The model is used as a reference guide in how organizations can integrate mental health into their strategic HR strategies.

Conclusion and Recommendations

Alternatively, in a close, this study confirms that the issue of mental health and employee wellbeing is no longer optional or side effect to be considered: the latter is essential to long-term success, sustainability, and ethical reputation of contemporary organizations. The direct dependency and relationship between a healthy workforce and an increased productivity, employee engagement, a reduced turnover, and organizational resilience are evident. Organizations should as well ensure that interventions are customized depending on the various needs of the workforce by employing data-driven approaches and practices that embrace inclusivity. Conclusively, it is not a humane decision to prioritize employee mental health it is a conscious decision to become more innovative, retain talent and generate long-term value. In managing this, the following suggestions are given:

Mental Health has to be institutionalized: A special wellness committee has to be formed and invested in the work of mental health with special funds.

1. **Embed into Culture:** Instill a psychologically secure culture whereby employees can talk freely about mental health issues without fear of judgments and reprisal.
2. **Customize Interventions:** Develop mental care interventions according to demographic, occupational and cultural composition of the workforce.
3. **Promote Work-Life Harmony:** Implement a flexible schedule, provide work-at-home or work-away-from-home opportunities and enforce limitations to work-related communications in other hours.
4. **Measure What Matters:** Employee happiness index, the rate of absenteeism, and EAP utilization measures are some of the KPIs that monitor mental wellness results.

After all, proactive, strategic and human approach to mental health is not only necessary in terms of employee wellbeing, but also constructing future-proven, humane and sustainable organisations.

Keywords: *Employee Wellbeing, Mental health, Stress at the Workplace, Organizational Strategy, Psychological safety, Burnout, Human resource management.*

References

- Brewster, L., Jones, E., Priestley, M., Wilbraham, S. J., Spanner, L., & Hughes, G. (2022). 'Look after the staff and they would look after the students' cultures of wellbeing and mental health in the university setting. *Journal of Further and Higher Education*, 46(4), 548-560.
- Cohen, C., Pignata, S., Bezak, E., Tie, M., & Childs, J. (2023). Workplace interventions to improve well-being and reduce burnout for nurses, physicians and allied healthcare professionals: a systematic review. *BMJ open*, 13(6), e071203.
- Elufioye, O. A., Ndubuisi, N. L., Daraojimba, R. E., Awonuga, K. F., Ayanponle, L. O., & Asuzu, O. F. (2024). Reviewing employee well-being and mental health initiatives in contemporary HR Practices. *International Journal of Science and Research Archive*, 11(1), 828-840.
- Hunt, D. F., Bailey, J., Lennox, B. R., Crofts, M., & Vincent, C. (2021). Enhancing psychological safety in mental health services. *International journal of mental health systems*, 15(1), 33.
- Jain, A., Hassard, J., Leka, S., Di Tecco, C., & Iavicoli, S. (2021). The role of occupational health services in psychosocial risk management and the promotion of mental health and well-being at work. *International journal of environmental research and public health*, 18(7), 3632.
- Kelloway, E. K., Dimoff, J. K., & Gilbert, S. (2023). Mental health in the workplace. *Annual Review of Organizational Psychology and Organizational Behavior*, 10(1), 363-387.
- Keppler, T., Kuosmanen, T., Hodgins, M., & Barry, M. M. (2021). Mental Health Promotion Interventions and Supports Provided by Voluntary Organisations to Workplaces.
- Lovejoy, M., Kelly, E. L., Kubzansky, L. D., & Berkman, L. F. (2021). Work redesign for the 21st century: promising strategies for enhancing worker well-being. *American journal of public health*, 111(10), 1787-1795.
- Rachmad, Y. E. (2022). Psychological Optimization Theory.
- Rugulies, R., Aust, B., Greiner, B. A., Arensman, E., Kawakami, N., LaMontagne, A. D., & Madsen, I. E. (2023). Work-related causes of mental health conditions and interventions for their improvement in workplaces. *The Lancet*, 402(10410), 1368-1381.
- Shen, P., & Slater, P. F. (2021). The effect of occupational stress and coping strategies on mental health and emotional well-being among university academic staff during the COVID-19 outbreak. *International Education Studies*, 14(3), 82-95.
- Waddell, A., Kunstler, B., Lennox, A., Pattuwage, L., Grundy, E. A., Tsering, D., & Bragge, P. (2023). How effective are interventions in optimizing workplace mental health and well-being? A scoping review of reviews and evidence map. *Scandinavian journal of work, environment & health*, 49(4), 235.
- Wu, A., Roemer, E. C., Kent, K. B., Ballard, D. W., & Goetzl, R. Z. (2021). Organizational best practices supporting mental health in the workplace. *Journal of occupational and environmental medicine*, 63(12), e925-e931.
- Zamani, M., Nosrati, N., & Sarabi, A. S. (2025). Towards a business healthy lifestyle: Reducing risks while increasing efficiency?. *Code, Cognition & Society*, 1(1), 29-58.

Introduction

University students, influenced by westernization and diverse product availability, often engage in impulsive fashion buying to stay trendy (Kumar, 2007). Impulse buying studied since the 1950s has evolved into a key area in consumer behaviour, psychology, and marketing (Rook, 1987; Piron, 1991). In the postmodern era, shopping has become a social and recreational activity, reducing planned purchases (Banerjee & Saha, 2012). The fashion industry, worth billions globally, reflects culture and identity (Holmberg & Öhnfeldt, 2010; Tungate, 2008). Fashion follows a pyramid model from haute couture to mass-market brands each catering to different consumer segments based on style, price, and exclusivity (Easey, 2009). This dynamic, fast-paced market thrives on impulsive buying and constant product renewal (Bhardwaj & Fairhurst, 2010).

Impulsive Buying

Stern (1962) previously referred to purchases as planned, unplanned or impulse. According to this framework, planned purchases are those decisions that involve the time-consuming search for product information and conscious decision making, while unplanned purchases are all shopping decisions that are made in a non-deliberative manner. Impulse purchasing is different from the impromptu purchases in that quick decisions are made. An impulse purchase is not only unplanned but also involves feeling a very strong, sudden and irresistible urge to buy (Muruganatham & Bhakat, 2013) without forming a pre-shopping intention before entering a store (Beatty & Ferrell, 1998; George & Yaoyuneyong, 2010). Bayley and Nancarrow (1998:99) defined impulse buying as “a sudden, compelling, hedonically complex purchasing behaviour in which the rapidity of the impulse decision-making process precludes thoughtful, deliberate consumer are one of the most liberal consumers around the world.

Select Literatures

Dhurup (2014) studied hedonism, fashion orientation, and emotional gratification among South African university students, focusing on Black consumers who spend significantly on fashion apparel as a reflection of cultural identity. The study, conducted at a single university, used structured questionnaires based on a 7-point Likert scale. A pilot test ensured reliability, and data were analysed using SPSS with correlation, regression, and exploratory factor analysis (PCA with Varimax rotation). Results indicated high impulse buying among youth, suggesting further research is needed across diverse product categories and online platforms, considering cultural and retail developments.

Haq and Abbasi (2016) found that the rise in shopping complexes has led to increased impulse buying due to more options, time, and hedonic satisfaction. The study focused on fashion items, using a quantitative, correlational design with convenience sampling. Data were analyzed using SPSS and bootstrapping, applying a double mediation model. Findings showed fashion orientation and positive emotions influence impulse buying, especially when studied directly. The researchers suggested expanding future studies across product categories and regions, using longitudinal methods. They

¹ Kalinga University

recommended boosting impulse buying through non-cash rewards, flexible return policies, and credit expansion.

Altunişik et al. (2006) highlighted that modern consumers, especially females, are influenced by both rational and hedonic motives. Shopping is seen as a lifestyle activity, often done for enjoyment. Data were collected via 920 valid questionnaires and 15 in-depth interviews, analysed using SPSS. Factor analysis and K-means cluster analysis revealed 15% showed impulse buying behaviour, 28% were hedonistic shoppers, and 30% were rational. Impulse buyers were often married men (30–40 years) and single women (21–25 years), mostly university graduates. Hedonic shoppers enjoy the process more than the purchase and compare options for fun. The study concluded that impulse buying is not always irrational.

Zulfiqar et al. (2018) noted that rising disposable income, lifestyle changes, and credit access have boosted impulse buying across retail formats. Reviewing 55 studies from 2000–2017, they identified key impulse buying traits—sudden, emotional, unplanned—and influencing factors like sales promotions, store environment, and demographics. The study emphasized impulse buying as a complex yet crucial research area that helps marketers refine strategies to boost sales and profitability.

Shamout (2016) highlighted that the global retail market uses various promotional tools—like free samples, discounts, and offers—to boost sales and attract customers. Data were collected from literature and 160 customer questionnaires. The study focused on the impact of tools such as samples, coupons, and price discounts on consumer buying decisions. Findings showed that tools like price discounts, samples, and "buy one get one free" significantly influence purchases, while coupons had less impact. Overall, sales promotions play a key role in increasing sales, customer trust, and market share.

Malhotra (2020) found that factors like store atmosphere, product quality, discounts, and emotions significantly influence consumer buying behavior. Using questionnaires and logistic regression, the study showed that emotions—especially positive ones—drive impulse buying, particularly in fashion. Young consumers (ages 20–21) with moderate income tend to save more. Good salesperson behavior and high-demand items also trigger impulse purchases. The study highlighted how evolving retail strategies and consumer psychology shape impulse buying patterns.

Impulse buying emotional and unplanned has been widely studied, with researchers linking it to psychological factors and promotional tactics like discounts and limited-time offers. **Kaur (2023)** explored how financial and non-financial promotions influence impulse buying in India's retail sector, highlighting the growing role of promotions in shaping consumer behaviour.

Purpose

In today's fast-paced fashion industry, consumer behaviour is increasingly driven by emotional satisfaction and smart advertising. This study explores how hedonism and sales promotions influence impulsive fashion purchases. Hedonism leads consumers to buy for pleasure rather than need, while promotional tactics like discounts and limited-time offers trigger urgency, encouraging spontaneous decisions. The study aims to understand how these emotional and marketing factors shape impulsive buying in fashion clothing.

Methodology

The present study adopts a quantitative, cross-sectional research design to explore the influence of hedonistic consumption traits and sales promotion tools on impulsive fashion apparel buying behaviour. Data will be collected through a structured questionnaire comprising Likert-scale items, targeting consumers in urban and semi-urban areas who are actively engaged in fashion purchases. To ensure relevance, a purposive sampling technique will be employed, supplemented by snowball sampling where

necessary. The research focuses exclusively on the fashion apparel sector and considers three major sales promotion types—discounts, BOGO offers, and limited-time deals. The collected data will undergo descriptive analysis to understand the demographic profile, followed by reliability testing using Cronbach's alpha to assess the internal consistency of the scales. Hypotheses will be tested using correlation analysis, regression modelling, ANOVA, and moderation analysis using tools such as the PROCESS macro in SPSS. This methodology enables the study to establish statistically significant relationships, compare promotional effectiveness, and analyse interaction effects between consumer traits and marketing stimuli, providing a robust framework for understanding impulsive fashion consumption behaviour.

Analysis and Findings

The study analyzed responses from fashion consumers using structured Likert-scale questionnaires, aiming to investigate how hedonistic consumption traits and sales promotion tools (discounts, BOGO offers, and limited-time deals) influence impulsive fashion buying behavior. The data was statistically examined using SPSS, employing descriptive statistics, reliability testing (Cronbach's alpha > 0.7), correlation analysis, multiple regression, ANOVA, and moderation analysis via the PROCESS macro.

Key findings revealed a strong positive correlation between hedonistic tendencies and impulsive buying ($r > 0.6$, $p < 0.05$), supporting the hypothesis that emotional gratification significantly drives spontaneous fashion purchases. Among sales promotion tools, limited-time offers had the most significant impact on triggering impulse behavior (F-test $p < 0.05$), followed by discounts and BOGO offers. Interaction analysis showed that hedonistic consumers were more responsive to promotions, especially time-bound ones, indicating a meaningful interaction effect between emotional traits and promotional cues.

Furthermore, demographic factors such as age and gender moderated the relationship between both hedonism and promotional impact on impulsive buying. For example, young female consumers exhibited higher sensitivity to promotional cues and greater impulsiveness compared to other groups.

Overall, the results highlight that emotional drivers and sales promotions act synergistically, amplifying impulsive purchases in the fashion sector. These insights provide valuable implications for marketers to design emotionally engaging and time-sensitive promotional strategies, tailored by consumer segments.

Practical Implications

- Marketers can design more effective campaigns by combining emotional messaging with urgency-based promotions (e.g., flash sales).
- Retailers should target hedonistic consumers, especially young adults, with tailored online and offline experiences.
- Promotional strategies should emphasize limited-time offers to maximize impulse responses.
- Data insights can help optimize store layouts, website design, and timing of promotional events for emotional impact.

Originality & Value

- Integrates hedonistic psychology and marketing tactics within a single empirical framework.
- Offers context-specific insights on Indian fashion consumers—an under-researched market.
- Bridges the gap between consumer emotional traits and sales promotion responsiveness.

- Provides a behavioural lens for interpreting fast fashion trends and impulsive consumption patterns.

Conclusion

The study concludes that hedonistic motivations and sales promotion tools, especially limited-time offers, play a significant role in driving impulsive fashion purchases. The interaction between emotional triggers and marketing stimuli is further influenced by demographics like age and gender. These findings contribute to both academic understanding and retail strategy development in the dynamic fashion industry.

Recommendations

- Brands should invest in **emotionally engaging content** and pair it with **urgent promotional formats**.
- Fashion retailers must **segment consumers demographically** to personalize promotional tactics.
- Future research should explore **longitudinal behaviour** and include other promotion types (e.g., influencer deals).
- Incorporate **sustainability messaging** to balance impulsiveness with responsible consumption.

Keywords: *Impulse Buying, Hedonism, Sales Promotion, Fashion Consumption, Consumer Behavior*

References

- Altunışık, R., Çallı, L., Altunisik, R., Calli, L., & Sarikaya, N. (2006). *An Examination of Shopping Styles Comparison of Impulse and Hedonistic Buying Behavior AN EXAMINATION OF SHOPPING STYLES: COMPARISON OF IMPULSE AND HEDONISTIC BUYING* Bella Vior. <https://www.researchgate.net/publication/355352688>
- Dawood Shamout, M. (2016). The Impact of Promotional Tools on Consumer Buying Behavior in Retail Market. In *International Journal of Business and Social Science* (Vol. 7, Issue 1). www.ijbssnet.com
- Dhurup, M. (2014). Impulsive fashion apparel consumption: The role of hedonism, fashion involvement and emotional gratification in fashion apparel impulsive buying behaviour in a developing country. *Mediterranean Journal of Social Sciences*, 5(8), 168–177. <https://doi.org/10.5901/mjss.2014.v5n8p168>
- Haq, M., & Abbasi, S. (2016). Indirect Impact of Hedonic Consumption and Emotions on Impulse Purchase Behavior: A Double Mediation Model. *Journal of Management Sciences*, 3(2), 108–122. <https://doi.org/10.20547/jms.2014.1603202>
- Malhotra, J. S. (2020). Article ID: IJM_11_10_141 Cite this Article: Jaideep Singh Malhotra, Study of Factors Effecting the Impulse Buying Behaviour of Customers in Textile/Apparel Industry. *International Journal of Management*, 11(10), 1550–1560. <https://doi.org/10.34218/IJM.11.10.2020.141>
- Kaur, G. (2023). *Impact of sales promotional tools on impulsive buying behavior in the retail sector* (Doctoral dissertation, Punjabi University, Patiala). Shodhganga. <http://hdl.handle.net/10603/593469>

Introduction

K-pop is becoming more integrated into global culture lately. With the emergence of groups like BTS, K-pop has become an essential component of world culture. Moreover, the reasons behind their fame extend beyond music; it also includes their online presence, the way they resonate emotionally with fans, and their omnipresence in the media. However, emerging technologies such as AI and deep fakes are transforming our perceptions of identity, consent, and ownership. Fans can use BTS's voice or digitally alter videos to put their faces over them using AI tools, and the idols lose control over their public personas.

This essay demonstrates how these technologies successfully make K-pop idols, such as BTS, controllable and authoritative entities. It explains how consent is undermined during the era of algorithmic production and platform capitalism.

Literature Review

Li (2023) examines the success of BTS under the monopolized ecosystem of the K-pop market, especially under the SM, YG, and JYP Entertainment hegemony. In the study, BTS' pioneering approaches including socially responsible lyrics, use of online channels, and establishment of a specialized platform for fandom have been recognized as the critical drivers which enabled them to break through the prevailing value chain and attain worldwide success, even amidst the COVID-19 pandemic.

Jang and Kim (2023) describe the strategic evolution of intellectual property (IP) in Korea's media sector. Using resource-based and knowledge-based theories, they propose that Korea is evolving from a content-creating country to an IP owner and user country. The authors emphasize the need to develop business strategies to enable local companies to maintain and develop IP value, instead of surrendering rights to international platforms such as Netflix.

Keith (2024) explores how various actors, such as entertainment firms, technology firms, and fans, imagine and integrate artificial intelligence (AI) into K-pop. Through discourse analysis, the research identifies mixed views: while firms present AI as an innovation and outreach tool, fans will tend to view it as an innovation threat to authenticity and labor. AI is a commercial and cultural power reshaping the music industry.

Amaliyah et al. (2023) write on the cultural diplomacy of South Korea and the use of AI. The authors contend that AI, particularly in its use in K-pop as virtual idols and virtual concerts, is a soft power tool that enhances Korea's worldwide influence. The authors position AI at the forefront of the post-pandemic cultural content transition and digital diplomacy and solidify Korea's position as a cultural and technological trendsetter.

¹ Assistant Professor, Department of Media and Film, iLEAD, Kolkata

Purpose of the Study

1. It Discuss how AI and deepfake technologies help commodify K-pop idols.
2. It analyzes the ethical concerns of unauthorized uses of an image or voice of a k-pop idols.
3. It Discuss the role of fan labor and online platforms in this system.
4. It uses BTS as a case study to comprehend the real-life repercussions and potential reactions to these advancements.

Methodology

This research employs a descriptive qualitative research design underpinned by cultural theory and critical media studies. Instead of a data collection approach based on empirical data, the research relies upon conceptual inquiry, text analysis, and interpretive synthesis. The article seeks to build an enhanced understanding of how K-pop idols, especially BTS, are rebranded as digital commodities through AI and deepfake technologies.

1. Conceptual Frameworks

The analysis is informed by a series of intersecting theoretical perspectives:

- Posthumanism (Hayles, 1999): to explore how computer simulations undermine the boundaries among human agency, embodiment, and identity.
- Platform Capitalism (Srnicek, 2017): in order to contextualize how digital infrastructures commodify cultural labor and celebrity images.
- Wang and Fiesler's (2021) study explores the moral issues of image rights and the loss of autonomy in algorithmic spaces.
- Digital Labor and Fan Studies (Terranova, 2000): to comprehend the contribution of fandom towards creating, disseminating, and authenticating media produced by AI.

2. Case Study Method

This research utilizes BTS as a case study due to their record-breaking digital visibility, enormous global fan base, and leading status within the K-pop industry. BTS is a conceptual vehicle by which broader industry trends and technological forces are examined. The case study is non-empirical but used illustratively—to ground theoretical claims within an everyday and culturally familiar example.

Discourse and Text Analysis

The study relies on text analysis of publicly accessible digital information, including:

- AI-created BTS music covers and deepfakes of BTS posted on YouTube, TikTok, and other social media.

The remarks, responses, and arguments of online supporters about the application of BTS's image in virtual media.

- Industry and company policies regarding virtual idols and AI utilization in the entertainment business.

This is an interpretive and analytical account of how language, imagery, and digital practice produce new meanings of identity, consent, and commodification.

Scope and Limitations

This article is not an empirical or quantitative analysis; it does not involve the application of interviews, questionnaires, or systematic data coding. Instead and by its strength, it is the synthesis of cultural theory, media critique, and ethical critique. Although the emphasis on BTS may not be generalizable to all K-pop stars, it is a compelling and universally applicable case that illustrates the implications of AI technologies throughout the entertainment sector.

Analysis

The Idol as Dataset:

Given their enormous online presence, BTS members are now the ideal subject for AI training. Their voices are mimicked in AI song covers; their faces pop up in deepfakes ranging from playful edits to sensational forgeries. This process successfully converts idols into datasets—assemblages of audio-visual data endlessly repurposed, usually without permission or payment. Though fans might consider such productions to be fan art, they reinforce a system whereby identity is detached from personhood, and hence entails difficult ethical and legal issues.

Consent and the Dissolution of Agency:

Consent is generally not sought in AI-produced content. Deepfake artists rarely request permission from the idols or their management, which is indicative of what Wang and Fiesler (2021) characterize as the dissipation of substantial consent in the digital context. K-pop celebrities are already part of heavily controlled systems; AI further restricts their agency, maintaining an exploitative power dynamic.

Fan Labor and Platform Capitalism:

Fan-made AI material usually picks up millions of views, earning platforms such as YouTube and TikTok. The fans whose affective labor produces this content are not usually paid, nor are entertainment corporations that own the original likeness. This process reflects Terranova's (2000) theory of "free labor," in which affective and creative labor is sucked into corporate systems with little in return for producers.

Synthetic K-pop and Future Risks:

Firms such as HYBE are currently creating AI-created idols, promising efficiency at the cost of reducing artists to intellectual property. As synthetic content continues to rise, identity dilution, overexposure, and emotional manipulation could become deeper issues, pushing the limits of authenticity for K-pop.

Practical Implications

For Artists

BTS and other artists need to push for digital likeness protection provisions in contracts. They require legal protections regarding how their image, voice, and persona are utilized—even by their own agencies.

For Companies

Entertainment firms need to:

- Establish moral standards for AI use.
- Create policies regarding what types of AI-generated material are permissible.
- Teach fans about respectful boundaries on the digital stage.

For Fans

Fan groups must consider critically:

- Whether AI-generated material invades moral boundaries.
- How unauthorized simulations can be abused using emotional attachment.
- Their contribution to resisting or reinforcing digital co modification.

For Platforms

Social media platforms need to introduce:

- Improved flagging mechanisms for unauthorized deepfakes.
- Clear data collection and AI recommendation mechanisms transparency.
- Collaboration policies with rights holders in order to deal ethically with synthetic content.

Originality and Contribution

This work presents one of the first scholarly examinations of AI ethics in K-pop, by employing BTS to investigate:

- Post human commodification of celebrity selves.
- Emergent definitions of consent in the platform era.
- The interplay of fan labor, corporate power, and technological agency in complex ways.

It presents a critical perspective on how cultural industries are evolving—or not evolving—to quick changes in the media production technology.

Conclusion

AI and deepfakes are redefining K-pop, blurring concepts of identity, consent, and online ownership. BTS shows the process by which idols are commodified during this process. With corporations embracing artificial performances, ethical lines get blurred. This paper urges fans, platforms, and regulators to impose responsible norms—making sure technological innovation does not cheapen the humanity of artists and the authenticity of their image.

Keywords: *K-pop, BTS, AI, deepfakes, consent, digital commodity, platform capitalism*

References

- Amaliyah, R. N. A., Jatmika, S., & Surwandono. (2023). The rise of artificial intelligence as the future of Korean culture diplomacy. *Jurnal Studi Komunikasi*, 7(3), 865–878. <https://doi.org/10.25139/jsk.v7i3.6219>
- Jang, C., & Kim, S. (2023). Extensions of intellectual property in the media industry: The Korean case. In 32nd European Conference of the International Telecommunications Society (ITS). <https://hdl.handle.net/10419/277976>
- Keith, S. (2024). New toys, new apps, new idols: K-pop's AI imaginary. *Brazilian Creative Industries Journal*, 4(2), 13–40. <https://doi.org/10.25112/bcij.v4i2.3835>
- Li, Z. (2023). K-pop value chain study: Case study of K-pop group BTS. In M. F. Sedon et al. (Eds.), *Proceedings of SSHA 2023: Advances in Social Science, Education and Humanities Research* (Vol. 752, pp. 1150–1158). Atlantis Press. https://doi.org/10.2991/978-2-38476-062-6_147

CUMULATIVE PROSPECT THEORY (CPT) AND ITS EMPIRICAL APPLICATION IN THE STOCK MARKET: A PILOT STUDY WITH ACC LTD.

Dr. Paritosh Chandra Sinha ¹, Miss. Pooja Agarwal ²

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

Traditional economic models like Expected Utility Theory (EUT) often fail to explain real-world decision-making under risk, as human behavior frequently deviates from rational expectations. Behavioral economics, particularly Tversky and Kahneman's Cumulative Prospect Theory (CPT), offers a more nuanced framework. The CPT incorporates key concepts like reference dependence (outcomes evaluated as gains/losses relative to a reference point), loss aversion (losses felt more acutely than equivalent gains), and probability weighting (overweighting small probabilities, underweighting large ones). These elements provide a more realistic understanding of choices in uncertain environments.

This pilot study empirically applies CPT to ACC Ltd., a prominent Indian cement company, to examine its practical relevance in a corporate context. By analysing investor decision-making or financial outcomes within ACC Ltd. through the CPT lens, the research aims to provide empirical evidence of its explanatory power and offer valuable insights for strategic decision-making, risk management, and investment analysis.

Literature Review

The Standard finance theories, based on investor rationality and market efficiency, often fail to explain real-world market anomalies driven by psychological biases. Kahneman and Tversky's behavioral finance theories address these deviations from Expected Utility Theory (EUT). Prospect Theory (PT) (Kahneman and Tversky, 1979) posited that individuals evaluate outcomes as gains or losses relative to a reference point, exhibiting an S-shaped value function (concave for gains, convex for losses). Cumulative Prospect Theory (CPT) (Tversky and Kahneman, 1992) refined PT by applying weighting functions to cumulative probabilities, enhancing its generalization.

Empirical literature on the PT and CPT is extensive, utilizing stock and option market data. Notable PT studies include Barberis, Huang, and Santos (2001) and Benartzi and Thaler (1995), while CPT applications are seen in Barberis, Mukherjee, & Wang (2016) and Baele, Driessen, Ebert, Londono, and Spalt (2019).

Specific findings reinforce CPT's insights: Kumar (2009) showed that overweighting small probabilities of large gains leads to preference for "lottery-like" stocks and lower subsequent returns. Kliger & Levy (2009) and Gurevich, Kliger & Levy (2009) found empirical support for inverse S-shaped probability weighting and CPT-consistent value functions from US option markets. More recently, Gupta, Mishra, and Jacob (2022) revealed that global equity mutual fund investors favour funds aligning with CPT principles.

¹ Associate Professor of Commerce, Rabindra Mahavidyalaya, Hooghly, West Bengal

² Research Scholar, Department of Commerce, The University of Burdwan, West Bengal

Despite these contributions, a comprehensive empirical application of CPT in the Indian stock market remains an important research area. This study aims to fill this gap by conducting a pilot investigation using ACC Ltd. to analyse CPT's weighting and value function effects within the Indian context, preceding a larger sample study.

Purpose

This study seeks to explore the empirical applicability of the CPT with reference to a particular stock i.e. ACC Ltd. in the Indian stock market. We will analyse the stock's time series monthly absolute returns data to calculate a corresponding monthly time series data for the Prospect Theory Value (PTV). This will allow us to deeply construct investors' subjective value functions as well as decision weights, and finally, analyse consistent behavioral patterns whether investors' PTVs could explain their average monthly absolute returns or not.

Data and Research Methodology

This research investigates the impact of Cumulative Prospect Theory (CPT) on investor decisions in the Indian stock market, focusing on ACC Ltd. from April 2000 to March 2022. Using daily closing prices, the study calculates the Prospect Theory Value (PTV) by applying the methodology of Barberis, Mukherjee, and Wang (2016), incorporating Tversky and Kahneman's (1992) value and probability weighting functions.

The process involves:

1. Calculating monthly absolute returns and sorting them into gains/losses.
2. Assigning equiprobable objective probabilities.
3. Applying a value function ($V(x)$) with parameters $\alpha = 0.88$ and $\lambda = 2.25$ to reflect asymmetric perception of gains and losses.
4. Deriving probability weights using Tversky and Kahneman's (1992) function (with $\gamma = 0.61$ for gains, $\delta = 0.69$ for losses).
5. Computing decision weights based on cumulative probabilities.
6. Finally, calculating the total PTV for each month.

To analyse the relationship between average monthly absolute returns and PTV, the study employs Nonlinear Autoregressive Distributed Lag (NARDL) models. This approach is crucial because it decomposes PTV into positive and negative components, effectively capturing the asymmetric behavior central to CPT, unlike symmetric models like standard Least Squares or ARDL. The analysis will compare these models to determine which best explains the impact of positive and negative PTVs on returns.

Analysis and Findings

The analysis investigates the relationship between Prospect Theory Value (PTV) and average monthly absolute returns for ACC Ltd., testing Least Squares, ARDL, and NARDL models for both negative and positive PTV contexts.

Results with Negative PTV:

- Least Squares revealed a statistically significant PTV coefficient (0.954006, p-value = 0.0001) but suffered from serial correlation and heteroskedasticity.
- The ARDL model successfully addressed serial correlation (DW = 2.048799) but failed to eliminate heteroskedasticity.
- The NARDL model proved superior. It decomposed PTV into positive (gain/favourable momentum) and negative (loss/unfavourable momentum) variations. Both positive (coefficient: 1.132786) and negative (coefficient: 0.942928) PTV changes showed highly significant impacts (p-values = 0.0001) on absolute returns. A Chow Test confirmed the significant difference between these effects. This implies that while both good and bad news drive price movements, initial positive sentiment can generate greater market movement than negative sentiment. The NARDL model's high R^2 (0.979195) and Adjusted R^2 (0.977998) with no apparent serial correlation (DW = 1.792652) validated its fit for capturing non-linear investor perception.

Results with Positive PTV:

- Least Squares showed a significant PTV coefficient (0.2640655, p-value = 0.0001) but suffered from positive serial correlation (DW = 1.063496) and heteroskedasticity.
- The ARDL model eliminated serial correlation (DW = 2.087570) but heteroskedasticity persisted.
- The NARDL model again outperformed. Positive (coefficient: 1.907301) and negative (coefficient: 1.505874) PTV changes both significantly influenced absolute returns (p-values = 0.0001). The larger coefficient for positive PTV suggests investors are more susceptible to chasing gains, leading to higher overall absolute movements.
- An interesting asymmetry in lagged effects was observed: a swift market reaction to losses (first lag of positive PTV change being -0.187878 in the negative PTV NARDL model) contrasts with a more complex, delayed response to gains (significant coefficient of 0.189266 only at the second lag for positive PTV change in the positive PTV NARDL model). This dynamic asymmetry aligns with the "S"-shaped CPT value curve, confirming investors process losses and gains differently over time. The NARDL model's robust R^2 (0.955106), Adjusted R^2 (0.950381), and DW statistic (1.940128) further support its suitability.

In brief, the NARDL model consistently demonstrates superior capability in capturing the asymmetric effects of PTV on absolute returns, providing insights consistent with CPT principles, unlike the limitations of Least Squares and ARDL models.

Practical Implications

Rather than using the restrictive capital assets pricing models like the CAPM, investors can use these findings to overcome their own biases, leading to smarter investment choices. Financial advisors and wealth managers can give better advice to their clients and design products that account for clients' non-linear risk perceptions. Lastly, fund managers could use this understanding to identify market anomalies and create new investment strategies based on behavioral factors.

Originality

This pilot study offers valuable insights by empirically examining the Cumulative Prospect Theory (CPT) effect specifically within the Indian stock market, taking ACC Ltd. as a proxy. It supports for a

full-length empirical study with a justified representation of sample firms in the stock market and thereby, exploring the possibility of generalisation on its applicability empirically.

Conclusion and Recommendations

This study successfully demonstrated the empirical applicability of Cumulative Prospect Theory (CPT) in the Indian stock market using ACC Ltd. as a proxy. The research found the NARDL model to be superior in capturing investors' non-linear risk perceptions and the asymmetric effects of gains and losses, unlike the least squares and ARDL models which showed limitations with serial correlation, heteroskedasticity, and symmetric assumptions. These findings have practical implications for the investors, financial advisors, academics and finance researchers vis-à-vis fund managers in making informed decisions and developing strategies based on behavioral finance.

Keywords: *Cumulative Prospect Theory (CPT), Value Function, Probability Weighing Function, Prospect Theory Value, Indian Stock Market*

References

1. Baele, L., Driessen, J., Ebert, S., Londono, J. M., & Spalt, O. G. (2019). Cumulative Prospect Theory, Option Returns, and the Variance Premium. *The Review of Financial Studies*, 32(9), 3667–3723.
2. Barberis, N., Huang, M., & Santos, T. (2001). Prospect theory and asset prices. *The quarterly journal of economics*, 116(1), 1-53.
3. Barberis, N., Mukherjee, A., & Wang, B. (2016). Prospect theory and stock returns: An empirical test. *The Review of Financial Studies*, 29(11), 3068–3107.
4. Benartzi, S., & Thaler, R. (1995). Myopic loss aversion and the equity premium puzzle. *Quarterly Journal of Economics*, 110(1), 73-92.
5. Gupta, N., Mishra, A. V., & Jacob, J. (2022). Prospect theory preferences and global mutual fund flows. *Journal of International Money and Finance*, 125, 102640.
6. Gurevich, G., Kliger, D., & Levy, O. (2009). Decision-making under uncertainty - A field study of cumulative prospect theory. *Journal of Banking & Finance*, 33(7), 1221-1229.
7. Kahneman, D., & Tversky, A. (1979). Prospect Theory: An analysis of decision under risk. *Econometrica*, 47(2), 263-291.
8. Kliger, D., & Levy, O. (2009). Theories of choice under risk: Insights from financial markets. *Journal of Economic Behavior & Organization*, 71(2), 330-346.
9. Kumar, A. (2009). Who Gambles in the Stock Market? *The Journal of Finance*, 64(4), 1889-1933.
10. Tversky, A., & Kahneman, D. (1992). Advances in prospect theory: Cumulative representation of uncertainty. *Journal of Risk and Uncertainty*, 5(4), 297-323.

EMPOWERING WOMEN THROUGH DIRECT BENEFIT TRANSFERS: A MICRO-STUDY OF THE LAXMI BHANDAR SCHEME IN WEST BENGAL

Lubna Ghazal ¹

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

Direct Benefit Transfer (DBT) schemes are increasingly recognized as innovative policy tools to reduce poverty and promote gender equity. In India, DBTs are often aimed at women to foster not only economic assistance but also greater social empowerment. The Laxmi Bhandar scheme, initiated by the Government of West Bengal, provides monthly unconditional cash transfers to women aged 25–60 from economically disadvantaged households. Lakshmi Bandar" Scheme is a flagship program launched by the West Bengal Government in February 2021, to provide financial assistance to women from economically weaker sections of society. For the empowerment of women in the age group of 25-60 years and enrolled in 'Swasthya Sathi', ₹ 1,200/- every month to women SC/ST households and ₹ 1,000/- per month to other beneficiaries are provided. This research explores how these transfers influence women's empowerment, particularly in the context of the Presidency Division.

Select Literatures

Raychaudhury (2024) stated that the rise in the Lakshmir Bhandar provisions has been attributed to the 10.6% increase in the AITC vote share among women in the general elections of 2024 (Chatterjee and Basu, 2024). By emphasising the presence of women in her public speeches and meetings, calling them "my mothers," "my sisters," and "my Kanyashrees" (Raychaudhury 2021a), as well as "my Lakshmir Bhandars"—a clear allusion to the AITC government's welfare programs—Banerjee has established and strengthened a direct, intimate, and emotionally charged connection with a segment of the beneficiary female electorate who are framed under the category of submissive and acceptable femininity.. Mariano (2020) stated that focussed how to elevate female autonomy and empowerment has helped the Economic Empowerment: Ensuring women have access to financial resources, employment opportunities, and the ability to make economic decisions that affect their lives and communities (Corona and Gammage, 2017).. Majeed et al. (2024) acknowledged that has led to high quality healthcare where the CCT programs considerably improved Pakistan women empowerment. Indian response to economic empowerment for women as highlighted by (Mandal, 2023) showed in Labpur Community Development Block of Birbhum District in WB that has gained through CCT. Nath and Ray (2022) reported the linking of political campaigning and how CCTs was deployed to gain political mileage. The study of (Basu and Karlekar, 2020) found that West Bengal where the women life expectancy has improved considerably in the state, when compared to the Westren India in rural areas. Prior studies offer mixed findings on the role of DBTs in achieving gender empowerment. Sugiyama and Hunter (2020) identified moderate improvements in women's financial autonomy under Brazil's Bolsa Família. Sen and Banerjee (2024) reported that India's Kanyashree scheme delayed early marriage and promoted education. Mukherjee and Mukherjee (2020) highlighted limitations of such schemes in altering deeply rooted patriarchal norms. These studies indicate that while financial aid can provide immediate relief and some agency, broader social empowerment requires additional institutional support.

¹ PhD scholar, Adamas University

Purpose

This study aims to evaluate the effectiveness of the Laxmi Bhandar scheme in enhancing women's financial independence, decision-making capacity, and overall agency within households. It also examines the structural and cultural barriers that may influence the degree of empowerment resulting from direct financial support.

Methodology

The research was carried out using a simple and clear method. First, a questionnaire was designed to understand how women use the money they receive from the Laxmi Bhandar scheme and how it affects their role in family decisions. The questionnaire included both multiple-choice and open-ended questions. It covered topics such as how the cash is spent, who controls it, and whether it helps women feel more confident and independent. The survey was conducted with 100 women selected from three blocks in the Presidency Division. These women were already receiving the scheme's benefits. They were chosen using purposive sampling to ensure that only relevant participants were included. All responses were collected through face-to-face interaction. The data was then analyzed using SPSS software to identify patterns and key findings related to women's financial behavior and empowerment. Descriptive statistics and cross tabulation were used to explore the relationships between the variables like education, spending habits and all the indicators of empowerment.

Analysis & Findings

From the data analysis we received educational evidence about the changes that are occurring in female lives in the Kolkata Metropolitan area as a result of the implementation of the Laxmi Bhandar scheme. Among the 72% of women that said they had sole control over the money received as a result of this scheme many experienced a greater realisation of their own agency and autonomy with these funds. Our findings showed that 63% opting into previously being mostly excluded from being engaged in household budgeting, spending on groceries, healthcare, and children education. This represents a change in traditionally defined female roles. In terms of expenditure, 41% spent the funds primarily on food and daily living expenses, 27% spent the funds on their child educational expenses, and 18% on healthcare. There was also a small portion (7%) of women who reported saving some of the money for an emergency fund or starting a small home-based business. It was promising that 58% of the women in the group indicated that they felt they had earned greater respect and were promoted to a more dignified position in their households and neighborhoods. It was also informative for us that 38% of the women continued to experience many barriers, such as mobility challenges, reliance on male family members to access the banking system, and low levels of digital literacy. These significant barriers highlight how important it is to realise that while financial assistance is important, it can be more effective if it is part of additional empowerment framework.

Practical implications

Practical implications: This research emphasizes several valuable policy implications. First, it highlights that DBT schemes like Laxmi Bhandar could catalyze positive behavioral and economic shifts when targeting is appropriate. However, for these programs to be effective it is crucial to have some type of complementary strategy, such as financial literacy, digital literacy and institutional support. Government and non-governmental organizations should consider developing some type of training or outreach and communication programs for women on how to manage finances, utilize digital banking, and claim their rights. With some effort to put women in control of their own bank accounts, remove barriers to women accessing their benefits through the process, and improve how grievances are reported and redressed, female DBT programs could be effective. Moreover, DBT schemes could be improved by integrating them with other social protection programs that are focused on health, education, and skills development, to provide women with sustainable program benefits.

Originality

This research is among the first empirical studies to evaluate the Laxmi Bhandar scheme's impact through a gendered lens. It contributes to the discourse on social protection by assessing not just financial outcomes, but also deeper social dimensions of empowerment. It underscores the complexity of translating monetary assistance into transformative social change.

Conclusion and Recommendations

While the Laxmi Bhandar scheme has enabled women to assert greater financial agency, empowerment remains a multi-faceted goal that requires integrated support systems. Policymakers should combine DBT initiatives with legal literacy, mobility rights, and skill development programs to promote comprehensive and sustainable empowerment.

Keywords *Direct Benefit Transfer, Women Empowerment, Cash Transfer Scheme, Laxmi Bhandar, Gender Equity, West Bengal*

References

1. Mukherjee, S., & Mukherjee, S. (2020). Kanyashree Prakalpa in West Bengal: Desirability and Promises. *Journal of Indian Education*, 46(2), 177–184.
2. Mukhopadhyay, D. K., et al. (2018). Exploring the Bottlenecks: An Assessment of the Implementation Process of Janani Suraksha Yojana in the State of West Bengal, India.
3. Sen, G., & Banerjee, S. (2024). Persistent Effects of a Conditional Cash Transfer: Empowering Women through Kanyashree in India. *Journal of Population Economics*.
4. Sugiyama, N. B., & Hunter, W. (2020). Do Conditional Cash Transfers Empower Women? Insights from Brazil's Bolsa Família. *Latin American Politics and Society*, 62(2), 53–74.
5. Urbina, D. R. (2020). In the Hands of Women: Conditional Cash Transfers and Household Dynamics. *Journal of Marriage and Family*, 82(5), 1571–1586.
6. Sharma, S.N., Chatterjee, S. and Dehalwar, K., 2023. Mahatma Gandhi National Rural Employment Guarantee Scheme: Challenges and Opportunities. *Think India Journal*, 26(1), 7-15.
7. Nayak, A. and Paul, K., 2024. Empowerment of Indian women: An inter-state comparative analysis with special reference to West Bengal. *Pragati: Journal of Indian Economy*, 11(2), 1-26.

Introduction

India's labour market is undergoing a structural transformation driven by the rapid growth of digital platforms and the rise of the gig economy. Characterized by short-term, task-based work without long-term contracts, the gig economy now encompasses millions of workers engaged in food delivery, ride-sharing, logistics, and digital services. According to NITI Aayog (2022), India's gig workforce is projected to reach 23.5 million by 2029–30, accounting for 4.1% of the total workforce and 6.7% of the non-agricultural labour force. This model is expected to contribute over \$455 billion to the Indian economy in 2025 (ETCFO, 2024).

Quick-commerce platforms such as Blinkit and Zepto exemplify this labour model, offering 10–20-minute grocery deliveries through a workforce of gig-based delivery partners. Blinkit, rebranded from Grofers and acquired by Zomato in 2022, and Zepto, founded in 2021 by two Stanford dropouts. While these platforms emphasize speed and efficiency, the workers often lack basic social protections such as job security, health insurance, paid leave, and retirement benefits. The Code on Social Security (2020) aims to address these issues, but its implementation remains inconsistent, and platform accountability limited. There is a huge gap between legal provisions and practical enforcement. Despite the promise of flexibility, gig workers frequently encounter long hours, unstable earnings, and high occupational stress—conditions that impact both their work-life balance and sense of security.

Literature Survey

The gig economy has reshaped India's labour landscape, shifting employment from traditional jobs to flexible, task-based models (Healy, Nicholson, & Pekarek, 2017). While it offers autonomy and income opportunities, it also exposes workers to precarity and weak labour protections (Sugumaran & Vishwanathan, 2023).

Platform-based companies benefit from lower labour costs, but often neglect worker welfare. While Kuhn and Maleki (2017) describe the positive effects of autonomy and schedule control, but lots of researches points to the lack of formal contracts, job security, insurance, and paid leave for gig workers, which raises concerns about long-term sustainability (Sharma, 2021; Soodan & Rana, 2023). Psychological distress, economic instability, and limited access to grievance redressal further worsen working conditions (International Journal of Research Publication and Reviews, 2023). Ramachandran and Kulanda's review of gig economy literature emphasizes the need for recognition, fair rewards, and health safeguards in digital labour markets (Ramachandran & Kulanda, 2022). Although some studies note benefits like schedule flexibility, others underline challenges like stress, social isolation, and lack of career progression in algorithm-driven platforms (Kuhn & Maleki, 2017; Wood et al., 2019). Job

¹ Student, Future Institute of Engineering & Management

² Associate Professor, Future Institute of Engineering & Management

insecurity and unstable income continue to affect gig workers, demanding urgent policy interventions and platform accountability (Kost et al., 2019)

The International Labour Organisation highlights minimal worker representation in platform jobs and urges integration of international labour standards into national policies (ILO, 2024). While the Code on Social Security (2020) aims to include gig workers, implementation gaps remain.

Purpose of the study

While a growing body of literature addresses gig work in India, comparative studies between platforms are limited. Most available studies either generalize across platforms or focus on a single provider (e.g., Swiggy, Ola, Zomato). Few focus specifically on the Q-commerce sector. This study fills that gap by conducting a comparative analysis between Blinkit and Zepto, in Kolkata—two hyperlocal delivery platforms with similar business models but potentially divergent internal practices. The study aims to:

1. Analyze and compare the work-life balance of gig workers in Blinkit and Zepto.
2. Evaluate the perceived job security and social security benefits among the workers.
3. Explore differences and similarities in employment experiences across both platforms.

Methodology

This research follows a descriptive research design, using primary data collected from 82 workers of Blinkit (43 samples) and Zepto (39 samples) administered through a Google form having 35 questions. The questionnaire includes both closed and open-ended questions related to working hours, earnings, health benefits, job satisfaction, and perceptions of social security. Paired Sample t-Tests and box plots are used to analyse the data for Work-Life Balance (WLB) and Job Security.

Analysis & Findings

The findings of the study is divided in two parts the demographic profile of Gig workers and paired sample T test to find out worklife balance and social security. The demographic context underscores the vulnerability of a largely young, male, lower-middle-income population operating without employment stability. The skewed distribution (90%) indicates a male-dominated respondent base confirming gender biasness of the sector. A significant portion of the workforce in quick-commerce platforms is composed of young adults likely in the early stages of their careers, the largest segment (27%) falls within the 21 to 25 age group. A portion of the gig workforce has completed secondary or higher education; a notable segment still possesses only basic or below-basic formal qualifications. Most workers surveyed are engaged in familial responsibilities, as in married individuals (55%) and notable proportion of Singles were found, comprising 39% of the workforce. The data demonstrates a salary structure predominantly centered around mid-range earnings (10,000–15,000 rupees) which is par with industry standard. The workforce is largely composed of individuals in the initial stages of their careers, which may be indicative of recent hiring trends, with 29% workers with less than 1 year experience.

The one-tailed t-test produced a t-statistic of -1.7968 and a p-value of 0.0499, which is just below the 0.05 significance level. This provides weak but suggestive evidence that Zepto workers may experience better work-life balance (WLB) compared to Blinkit workers. However, the two-tailed test returned a p-value of 0.1059, indicating that the observed difference is not statistically significant at the 5% level. Therefore, the null hypothesis of no difference in WLB cannot be confidently rejected, although visual data (e.g., box plots) suggest a trend favoring Zepto.

In contrast, the analysis of perceived job security yielded a p-value below 0.05, indicating a statistically significant difference between the two platforms. Box plot comparisons further support this finding, showing a higher median and narrower interquartile range for Zepto, suggesting greater consistency and satisfaction. These results indicate that Zepto likely offers a more secure and stable work environment, leading to the acceptance of the alternative hypothesis in this case.

Practical Implications

The findings have significant implications for policymakers, platform companies, and labour rights organizations. Despite similarities in day-to-day work, Zepto demonstrates a relatively better structure for supporting worker well-being and security. Companies can take a clue from this to improve their employee frameworks. Policymakers must focus on universalizing minimum employment standards for gig workers, including social protection and safety nets. Companies should also invest in employee support systems, including mental health services, grievance redressal mechanisms, and insurance benefits. The study reveals that gig workers in neither company are aware of the social security measures under the labour codes. None are registered on the e-Shram portal. This highlights a critical need for awareness campaigns and other interventions.

Originality

This study is among the few comparative analyses focusing specifically on gig workers' work-life balance in India's quick-commerce sector. While many studies discuss gig work broadly, this research narrows down the comparison to two prominent platforms—Blinkit and Zepto—using empirical data from workers. The study also adds value by combining quantitative analysis with qualitative indicators such as satisfaction, security, and demographic insights.

Conclusion

Gig work is redefining labour dynamics in India, offering flexible but precarious employment. Through a comparative analysis of Blinkit and Zepto gig workers, this study highlights that both companies present similar challenges in work-life balance. However, Zepto performs better in providing job security and welfare benefits. The findings stress the need for regulatory mechanisms, platform accountability, and proactive company policies to ensure dignified and stable work conditions for gig workers. The future of work may well depend on how effectively we bridge the gap between flexibility and security in platform-based employment.

Keywords: *Gig economy, work life balance, job security, Quick commerce platform , social protection*

References

1. Healy, J., Nicholson, D., & Pekarek, A. (2017). Should we take the gig economy seriously? *Labour & Industry: A Journal of the Social and Economic Relations of Work*, 27(3), 232–248. <https://doi.org/10.1080/10301763.2017.1377048>
2. Sugumaran, T., & Vishwanathan, A. (2023, April). *Infrastructural services and social security benefits play catalytic role for gig workers of food and beverage industry in Mumbai Metropolitan Region*. *International Journal for Multidisciplinary Research (IJFMR)*, 5(6), 1–15.
3. International Journal of Research Publication and Reviews. (2023). Economic instability and psychological distress among gig workers. *International Journal of Research Publication and Reviews*, 4(7), 205–210.
4. International Labour Organization. (2024). Decent work for platform workers in India: The role of Employers' Business Member Organizations. <https://www.ilo.org/global/publications>

5. Kost, D., Fieseler, C., & Wong, S. I. (2019). Boundaryless careers in the gig economy: An oxymoron? *Human Resource Management Journal*, 30(1), 100–113. <https://doi.org/10.1111/1748-8583.12265>
6. Kuhn, K. M., & Maleki, A. (2017). Micro-entrepreneurs, dependent contractors, and instaserfs: Understanding online labour platform workforces. *Academy of Management Perspectives*, 31(3), 183–200.
7. Ramachandran, R. M., & Kulandai, A. (2024, September). *Gig workers: A paradigm shift in the Indian workforce—A bibliometric analysis and future directions*. *Metamorphosis: A Journal of Management Research*. Advance online publication. <https://doi.org/10.1177/09726225241257731>

ACTIVITIES AND ESSENTIAL STRATEGIES OF LIBRARY FOR ENHANCING LEVEL OF MEDIA LITERACY WITH EMERGING TRENDS IN DIGITAL AGE AND EMPOWERING UG STUDENTS OF ACADEMIC COLLEGE LOCATED IN RURAL AREA OF WEST BENGAL, INDIA: AN ASSESSMENT

Rumpa Pal ¹

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

College students are not children. They are in the starting point of the adult phase. So, they should have enough capability of decision-making. Not only for national election purpose, their decisions are required in every point of society to build the nation. So, decision-making is a vital matter in their life. At the college level, they are not concentrated only on education. They spend time in other social works and activities also. In the present time, young generation is engaged more time in social media. They are watching all things which are available on the social media platform. Sometimes, it can be seen that two controversial reports are running simultaneously. Now question is: which is right – which is reliable. The young generation should have enough knowledge to detect the correct news or information. So, media literacy is important. This literacy is not only for social media; this is same essential for other print, electronic media also.

College authority and college library authority have enough role to literate students about this digital atmosphere. Because in the digital world, anyone can upload any news without any restriction. They intentionally or unintentionally are doing this continuously. This may give good or bad impact on society. The new generation having low media literacy and as a result they may be influenced in wrong way. To prevent this and to protect the students, college authority and college library authority should take initiatives to literate the students about media, fake news, wrong information, etc.

Only librarians can say the correct and appropriate answer in between a hundred results of any information search. So, it is needed to know that is students aware about fake news or not and do they feel any importance of college library to grow media literacy skill, are they dependent on college and college library, etc.

Select Literatures:

Before starting this study, the author intended to consult with similar literatures (i.e. survey conducted to know current scenario of media literacy) which are easily available.

Chaudhuri (2025) conducted a survey with 121 respondents of 16 to 35 age group. **Raulo (2024)** studied with 428 respondents of all age groups resided in Ganjam district of Odisha. **Thouba (2024)** conducted a survey on 388 Meitei Pangal Youth of Manipur. **Nongkesh (2023)** surveyed with 120 college students of Shillong. **Sachdeva (2022)** conducted a survey among 600 students of universities of Delhi. **Chanda (2021)** studied with 158 students of 7 universities of North Eastern India. **Boruah (2019)** surveyed among PG students and faculty members of the media communication discipline of Assam. **Dutta (2019)**

¹ Librarian, Vidyanagar College, South 24 Parganas, West Bengal

studied among adult media users of Assam. **Sharma (2019)** conducted a survey for investigation among XI and XII class students of school of Delhi. **Uniyal (2018)** surveyed among 1054 UG, PG, PhD students of 3 IITs of North India. **Sudha (2014)** studied with 1120 users of rural libraries of Dindigul district of Tami Nadu. **Patil (2008)** conducted a survey on electronic media only among 475 research scholars and university librarians of Karnataka.

Here almost 12 literatures that are related with detailed study on media literacy. But there is no such study has been done among students coming from rural areas of West Bengal.

Purpose

Before the planning the future strategies and discussing about existing activities of an institution, analysis of the present scenario is necessary. And to know the actual current picture, a detailed study or survey needs to be conducted.

The National Education Policy 2020 (NEP 2020) was launched by the Ministry of Education in India on 29th July 2020. India Government enforced education digitally i.e. online learning by implementing NEP 2020. This policy says to try for providing quality education for all and highlights the importance of digital literacy and online learning. As per this order or advisory, academic libraries are trying to provide services to access the digital resources and tools by using digital technologies. Libraries can also provide training and support to students to develop digital literacy skills. For achieving the goal of NEP 2020, the gap between services available in library and demand of digital resources by library users needs to be traced for minimizing. After five years of NEP 2020 in India, the level of digital literacy i.e. awareness about ICT tools and technologies among students needs to be assessed.

Beside these, college students are not busy with their printed text books and electronic books, etc. They are also willing to search other things like social, political, etc. related issues. But they cannot able to handle all things like media stories, media trial, etc. So, now it is a right time to assess the media literacy among the new generation.

Methodology

Data is collected through interview method from randomly selected sample sixty students from each discipline—Arts, Commerce, and Science—resulting in a total of 180 students from Vidyanagar College, South 24 Parganas, during the study period from July 2024 to June 2025. This research work is library-oriented study. So, this study is concentrated on only those students who are using library frequently. Students, who are not using library, cannot give opinions about activities of library. Two librarians are working in the Vidyanagar College Library. Data or information about library is collected from the librarians by taking interview. Some data were also collected from various registers maintained in this college and library by observation method.

Analysis & Findings

From this study, it is clear that the majority of the respondents/ students spend more time in social media, but in question of reliability, they still depend on newspapers and on TV reports.

They said that they gathered their required information from local club to classroom, from friend circle to library. They enjoy each and every information from all places.

They told that local, regional, national and also international issues attract their attention. Filmy or funny videos also attracted their attention – way to spend leisure time.

They admitted that they mainly expressed their own opinion towards social and political issues. Educational issues and economic issues are neglected.

Most of the all-respondents students think about who created the media story, who will be benefited from this story, etc. during reading media text or story.

Students admitted that they can not always differentiate a particular information reliable or not.

The opinion about incorrect information in media, students express the reasons as hurry to broadcast and political pressure only. They cannot agree to editorial error, error during information collection, etc.

Students also give opinion about media reports, that reports put their own opinion in media stories.

About fake news, students said that they are aware about fake news but can not detect always as it is fake.

Participation in media of the respondents/ students is very low.

Students go with that media literacy training can give them empowerment and help to prepare for the global community.

Lastly, the students said that Vidyanagar College Library gave them training for media literacy.

On the other side, Vidyanagar College Library authority said that they cannot able to arrange or organize regular formal training program about media literacy, but the librarians try to help the students every time during searching.

Practical Implications

From studying this research paper, Vidyanagar College authority and Vidyanagar College Library authority can prepare for taking their next steps for betterment of their services.

Existing students can be known about the full picture about their level of media literacy and how much should be prepared for their future life.

Students also be benefited from this research paper who will be the future students of this college by knowing the activities of the college and college library.

Other academic institutions can be profited from this small effort.

Originality

Vidyanagar College and Vidyanagar College Library are located in rural area of South 24 Parganas, West Bengal and respondent students are coming from rural areas also. Some students resided in coastal areas of Bay of Bengal and bank of meeting point of the Ganga or Hooghly River and Bay of Bengal. So, this will give a partial picture of rural areas of West Bengal. This research helps to Governments or policymakers for taking necessary action for infrastructural development, etc.

Conclusion and Recommendations

Strategies are to be taken by college and college library to raise awareness among students about the importance of media literacy by organising seminars, workshops, etc.

Library should make easy access by growing the number of online resources, and digital infrastructure.

Library should provide regular training programs for enhance technical skill, should aware about media ethics, peoples' rights, etc.

Library should alert the students about wrong application of AI technologies, fake news, deepfake, etc.

Keywords: Library, Media Literacy, Vidyanagar College, Vidyanagar College Library, Print Media, Electronic Media, Social Media

References

- Boruah, M. (2019). *Critical media literacy in Assam: a study on the postgraduate students of media and communication studies in public academic institutions*. Doctoral dissertation. Tezpur, Assam: Tezpur University. Retrieved July 6, 2025, from <https://shodhganga.inflibnet.ac.in/handle/10603/307547>
- Chanda, N. (2021). *Media education and media literacy in public universities in North-East India: an evaluative study*. Doctoral dissertation. Silchar: Assam University. Retrieved July 6, 2025, from <https://shodhganga.inflibnet.ac.in/handle/10603/443728>
- Chaudhuri, A. (2025). *Thought process and media literacy: impacting critical thinking and communication*. Doctoral dissertation. Kolkata: Sister Nivedita University. Retrieved July 6, 2025, from <https://shodhganga.inflibnet.ac.in/handle/10603/650284>
- Dutta, S. (2019). *Digital media literacy among adult users in Assam*. Doctoral dissertation. Guwahati, Assam: Gauhati University. Retrieved July 6, 2025, from <https://shodhganga.inflibnet.ac.in/handle/10603/284998>
- Nongkesh, G. (2023). *Impact of media literacy on media consumption habits among the college students of Shillong: an experimental study*. Doctoral dissertation. Shillong: North-Eastern Hill University. Retrieved July 6, 2025, from <https://shodhganga.inflibnet.ac.in/handle/10603/578958>
- Patil, F. G. (2008). *Impact of electronic media on reading habits in Karnataka State University libraries*. Doctoral dissertation. Karnataka: Mangalore University. Retrieved July 6, 2025, from <https://shodhganga.inflibnet.ac.in/handle/10603/131544>
- Raulo, L. (2024). *Information disorder: role of digital media literacy in countering 'Fake News'*. Doctoral dissertation. Tezpur, Assam: Tezpur University. Retrieved July 6, 2025, from <https://shodhganga.inflibnet.ac.in/handle/10603/643712>
- Sachdeva, P. (2022). *News media literacy: a study of youth in Delhi*. Doctoral dissertation. New Delhi: Guru Gobind Singh Indraprastha University. Retrieved July 6, 2025, from <https://shodhganga.inflibnet.ac.in/handle/10603/459228>
- Sharma, A. (2019). *Evaluating media and information literacy Competency: A Study of Schools in Delhi/NCR*. Doctoral dissertation. New Delhi: IGNOU. Retrieved July 6, 2025, from <https://shodhganga.inflibnet.ac.in/handle/10603/356689>
- Sudha, K. (2014). *Impact of media and rural libraries on information dissemination with special reference to rural areas in Dindigul District*. Doctoral dissertation. Tamil Nadu: Manonmaniam Sundaranar University. Retrieved July 6, 2025, from <https://shodhganga.inflibnet.ac.in/handle/10603/231394>
- Thouba, Z. N. (2024). *Media exposure and media literacy: a study on Meitei Pangal Youths in Thoubal District of Manipur*. Doctoral dissertation. Doimukh, Arunachal Pradesh: Rajiv Gandhi University. Retrieved July 6, 2025, from <https://shodhganga.inflibnet.ac.in/handle/10603/603169>
- Uniyal, N. C. (2018). *Media and information literacy in IITs in North India and analytical study*. Doctoral dissertation. Patiala: Punjabi University. Retrieved July 6, 2025, from <https://shodhganga.inflibnet.ac.in/handle/10603/310652>

Introduction

In retail markets, customer heterogeneity is continually increasing due to diverse demographics, behaviors, and technology usage. Effective marketing requires dividing a broad customer base into coherent segments, allowing each group to be targeted with tailored offers (Smith, 1956). Traditional segmentation (e.g., by demographics or spending) often produces statistical groups; however, recent work emphasizes persona-driven segmentation, which maps segments to archetypal customer profiles that guide strategy (Jansen, Salminen, & Jung, 2020; Syrjälä, Ruiz, Leipämaa-Leskinen, & Luomala, 2025). Personas bridge data and empathy by providing intuitive representations of customer types. In this context, I propose a novel cluster-factor segmentation approach that combines statistical rigor with persona creation: first employing factor analysis to identify latent dimensions of customer attitudes and preferences, then applying clustering algorithms to derive distinct customer segments or personas. This integrated method aims to produce stable, interpretable profiles that reflect both underlying consumer motivations and observable behaviors, filling a gap between traditional clustering and qualitative persona development.

Purpose

This study aims to develop a cluster-factor methodology for retail customer segmentation that directly produces persona-based profiles. Specifically, I seek to (1) combine latent factors (attitudinal dimensions) and observable variables into a single segmentation framework, (2) create meaningful customer personas that reflect both statistical groups and customer stories, and (3) show the marketing value of this method. By combining exploratory factor analysis (EFA) with cluster analysis, the research aims to achieve a richer segmentation than that obtained through raw clustering alone. Factor analysis reduces many survey variables into a few independent factors, and clustering on those factor scores groups customers with similar preferences and technology attitudes. The goal is not just to segment customers, but to create persona profiles that marketing managers can easily understand and utilize. This approach is particularly beneficial for modern retail environments, where digital channels and the adoption of technology also significantly influence consumer behavior.

Literature Review

Customer segmentation is a well-established marketing concept. Segmentation can be understood as the process of dividing a market into meaningful groups or subgroups that share common traits. The foundational view of segmentation (Smith, 1956) considers segments as clusters of consumers with similar demographic, psychographic, or behavioral profiles. Modern, data-driven methods often employ cluster analysis to statistically identify such groups. However, solutions based on raw survey data can face issues with multicollinearity and interpretability. In segmentation, it is common to apply factor analysis to reduce correlated variables into a few independent dimensions. (Ufeli, Sattar, Hasan, & Mahmood, 2025) introduce a hybrid approach that combines Factor Analysis of Mixed Data with k-means and hierarchical clustering to handle diverse retail data, showing that such hybrids produce more

¹ Doctoral Scholar (Marketing), IIM Sambalpur

transparent and more coherent customer segments. Another focus area is persona-based segmentation. (Jansen, Salminen, & Jung, 2020) observe that with the abundance of digital data, personas can evolve from static, qualitative descriptions into dynamic, data-driven tools that aid decision-making. (Syrjälä, Ruiz, Leipämaa-Leskinen, & Luomala, 2025) warn that marketers often confuse customer segmentation with persona creation, but they also view personas as socio-technical assemblages that reflect recurring consumption patterns. The Technology Acceptance Model (TAM) provides a theoretical basis for incorporating technology-related factors into segmentation. TAM's core concepts, perceived usefulness, and perceived ease of use, have been widely used in studying e-commerce and retail technology adoption (Davis, 1989; Fedorko, Bacik, & Gavurova, 2018). These studies suggest that variations in TAM factors align with segment differences, such as those between tech-averse and tech-enthusiast shoppers. In my framework, TAM constructs and related attitudinal measures will be included in the factor analysis, ensuring that technology acceptance profiles help shape the development of the personas.

Methodology

The study was conducted using a structured customer survey and multivariate analysis. First, an exploratory qualitative phase (literature review) identified key basis variables: customer needs, motivations, and attitudes relevant to retail shopping and technology use. These informed the survey questionnaire, which included Likert-scale items on price sensitivity, brand preference, shopping frequency, and technology attitudes, drawing on validated scales. Demographic and usage variables, including age, income, purchase channels, and household size, were also included as descriptors. Hierarchical clustering would identify the initial segment subgroups, and Exploratory Factor Analysis (EFA) would uncover the latent factors underlying each segment. The result is a cluster-factor segmentation, where clustering facilitates segment creation and factor reduction enhances interpretability, operationalized into persona archetypes with both statistical and narrative profiles.

Analysis & Findings (Anticipated)

Although actual results depend on the data, I expect to identify distinct retail customer segments that match specific personas (Khanna & Palepu, 2010). One segment might exhibit high technology adoption and a focus on convenience ("Digital Shoppers"), while another might be highly price-sensitive with low interest in technology ("Bargain Hunters"). A third could emerge as "Brand-Oriented Millennials," characterized by strong brand loyalty and social influence. Each persona will be described by its main factor scores and demographic details, such as age or income level. Each segment (or cluster) will be based on underlying traits rather than just individual items. This approach should reveal detailed patterns, such as segments that differ in perceived ease of use versus perceived usefulness of shopping apps. The cluster-factor method is expected to generate clear, understandable profiles that highlight both psychological motivations and observable behaviors, ready for developing narrative personas.

Practical Implications

Insights from a cluster-factor segmentation have direct applications for retail strategy. Personas characterized by high tech acceptance can be targeted with app-based loyalty programs and digital promotions. Value-seeking personas might receive discount-focused campaigns. Those resistant to technology could be served through enhanced in-store experiences or simplified digital interfaces. Marketing channels and messaging can be tailored: brand enthusiasts might receive early-access offers, while pragmatic shoppers might be reached through convenience-focused communications. In omnichannel environments, understanding the preferences of different personas for online versus in-store shopping helps allocate resources more effectively. Because the approach incorporates TAM constructs, it also informs technology adoption strategies: training or demos can be tailored for segments with low PEOU. At the same time, influencer campaigns can target high-social-influence personas.

Originality

This research uniquely combines factor analysis and clustering to create persona-focused segments. Although both methods are well-established, their systematic integration for developing personas has not been well explored. By extracting hidden attitudinal dimensions after clustering, I ensure that the segments are both statistically robust and easy to understand. Transforming these clusters into narrative personas bridges the gap between quantitative segmentation and qualitative design practices, addressing the need for data-driven personas (Jansen, Salminen, & Jung, 2020; Syrjälä, Ruiz, Leipämaa-Leskinen, & Luomala, 2025).

Conclusion & Recommendations

I suggest a cluster-factor segmentation framework that uncovers hidden attitudes and groups customers into personas for retail marketing. This approach offers more precise segmentation and practical profiles. I recommend that retailers conduct comprehensive surveys, use EFA for data reduction, and perform clustering on the factor scores. The generated personas should guide personalized promotions, loyalty programs, and technology strategies. Future research could test this method across different product categories, incorporate transactional data, and monitor how personas change over time.

Keywords: *customer segmentation, customer personas, cluster analysis, factor analysis, retailing*

References

- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.
- Fedorko, I., Bacik, R., & Gavurova, B. (2018). Technology acceptance model in e-commerce segment. *Management & Marketing*, 13(4), 1242-1256.
- Jansen, B. J., Salminen, J. O., & Jung, S.-g. (2020). Data-driven personas for enhanced user understanding: Combining empathy with rationality for better insights to analytics. *Data and Information Management*, 4(1), 1-17.
- Khanna, T., & Palepu, K. G. (2010). *Winning in emerging markets: A road map for strategy and execution*. Harvard Business Press.
- Smith, W. R. (1956). Product differentiation and market segmentation as alternative marketing strategies. *Journal of Marketing*, 21(1), 3-8.
- Syrjälä, H., Ruiz, C. D., Leipämaa-Leskinen, H., & Luomala, H. T. (2025). From consumers to consumption: The socio-technical assemblage of the persona in market segmentation. *Journal of Business Research*.
- Ufeli, C. P., Sattar, M. U., Hasan, R., & Mahmood, S. (2025). Enhancing Customer Segmentation Through Factor Analysis of Mixed Data (FAMD)-Based Approach Using K-Means and Hierarchical Clustering Algorithms. *Information*, 16(6).

POLITICAL COMMUNICATION IN THE DIGITAL AGE: A CASE STUDY OF TRINAMOOL CONGRESS'S FACEBOOK STRATEGY TO PROMOTE DUARE SARKAR IN WEST BENGAL

Sayantana Ghosh ¹

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

In recent years, social media has become integral to political communication in India. This study investigates how the Trinamool Congress-led West Bengal Government leveraged Facebook to promote the Duare Sarkar scheme among millennials (ages 25–35), considering the growing shift from traditional to digital political communication.

Select Literatures

The paper builds on literature about social media's political function in India (Metkar & Aade, 2020), the influence of Facebook as a communication tool (Waters, 2010), and the growing importance of digital campaigns in state governance (Munshi et al., 2020).

Purpose

To assess the effectiveness of Facebook in creating awareness about the Duare Sarkar scheme among millennials in Kolkata, and to explore how Facebook functions as a medium for targeted government communication.

Theoretical Framework

This study is grounded in Agenda-Setting Theory (McCombs & Shaw, 1972) and Uses and Gratifications Theory (Blumler & Katz, 1974):

- Agenda-Setting Theory suggests that media shapes what the public perceives as important. This is particularly relevant in analyzing how the West Bengal government prioritizes the Duare Sarkar scheme via Facebook posts.
- Uses and Gratifications Theory explains how millennials use Facebook not only for entertainment but also to seek political and civic information. The theory supports the interpretation of millennial engagement patterns with government schemes online.

Methodology

This is a quantitative survey-based study:

- **Sample:** 200 respondents aged 25–35 from Kolkata.
- **Sampling Technique:** Non-probability purposive sampling targeting Facebook users.

¹ Visiting Faculty, St. Xavier's College (autonomous) Kolkata

- **Research Instrument:** A structured questionnaire using Likert scale, binary, and multiple-choice questions.
- **Data Collection Tool:** Google Forms.
- **Analysis Tool:** MS Excel (basic statistical summary and visual charting).
- **Ethical Considerations:** Participants were informed about the academic nature of the study and gave consent.

The methodology is justified as it suits the objective of measuring perceptions and awareness levels statistically among a defined age group.

Analysis & Findings

- 90.9% of respondents were aware of the Duare Sarkar scheme.
- 78.2% learned about the scheme via Facebook.
- 50.9% follow government campaigns on Facebook; 49.1% do not.
- 50.9% reported sharing such content with peers.

These insights demonstrate that Facebook plays a significant — though not exhaustive — role in reaching millennials with welfare scheme information.

Practical Implications

Findings suggest:

- Strong potential for Facebook as a primary information tool.
- Need for enhanced engagement tactics (e.g., reels, interactive posts).
- Government agencies should prioritize audience-specific content delivery on social media.

Originality

This study adds empirical insight into digital governance communication in a state-level Indian context, specifically among a digitally active yet often overlooked demographic — urban millennials.

Conclusion and Recommendations

The West Bengal government's Facebook campaign for Duare Sarkar reached a majority of millennials but revealed untapped scope for deeper engagement. Recommendations include:

- Using data-driven targeting on Facebook.
- Developing interactive, mobile-first campaign content.
- Conducting similar studies in other Indian states for comparison.

References

- Abheeshai, M. R. (n.d.). *Impact Of Social Media On Politics In India*. IJCRT. Retrieved from <https://ijcrt.org/papers/IJCRT2203574.pdf>
- Check, J., & Schutt, R. K. (2012). *Research Methods in Education*. Sage Publications.
- Duare Sarkar. (2023). *Government of West Bengal*. <https://wb.gov.in/duare-sarkar.aspx>
- Lifewire. (2023). *What is Facebook*. <https://www.lifewire.com/what-is-facebook-3486391>
- Metkar, A. B., & Aade, A. (2020). *Role of Social Media in Political Management in India*. SSRN.
- Munshi, A. R., Dave, D., & Sabu, S. A. (2020). *Social Media Consumption Habits During COVID-19 Lockdown*. IJBMI.
- Waters, J. K. (2010). *The Everything Guide to Social Media*. F+W Media.
- Wimmer, R. D., & Dominick, J. R. (2011). *Mass Media Research: An Introduction*. Cengage Learning.

Introduction

India is one of the fastest growing economies in the world. In this growth fast moving consumer goods (FMCG) plays a vital role. FMCG creates those products which fulfil the daily needs of the people. FMCG sector is having very thin margin and highly competitive market, hence every warehousing activities is vital for FMCG organisation to ensure their profitability and market share. As per Venkatesha (2021), in last ten years Indian FMCG sector tripled its size and became fourth largest sector in India.

Green warehousing is a part of Green Supply Chain. Storage of material in a warehouse is a vital part of logistics for any industry. In a warehouse there are many activities which are impacting the environment. Hence measurement of those activities related to the environment and green initiatives for the warehouse related activities will add value in the entire value chain and help to create environment friendly warehouse. This study is focusing on creating activity wise measurement framework for the warehouse related activities and strategies for reducing the environment related impact for bringing the sustainability at warehouses.

Literature Review

As per Singh and Achrya (2013), strength of the FMCG sector is dependent on the strong distribution network. As per Anupama et al. (2022), along with other factor robust logistics facilities gives FMCG sector superiority compared to other industry in India.

Korra and Sadhna (2024), in their study suggested some strategies related to green warehousing which will help in industrial building decarbonisation.

As a part of green initiatives at warehouse Modica et al. (2021), focused their area of study in material handling equipment only and suggested to use lithium-ion battery in the material handling equipment instead of normal battery in electric material handling equipment. By this way we can reduce environmental impact since material handling equipment charging significantly contributing to greenhouse gases emission.

Minashkina and Happonen (2023), focused only on Warehouse Management System (WMS) and environmental sustainability and tried to bridge the gap in the literature related to WMS and sustainability. Their study also helped to map the practical activities which will proactively reduce warehouse operations' environmental and social impacts.

Purpose

Environmental sustainability is very important factor for any logistics related fields. Apart from transportation warehousing is one of major function comes under logistics and its activities having very

¹ Assistant Professor, IISWBM

high impact on our environment. Some of the activities in the warehouse has long term impact on the profitability of the FMCG organizations and competitiveness. Green Warehousing is comparatively new field in the area of research and Indian context the research work is very minimum. The implication of this study is not only applicable to one region, other developing and underdeveloped countries will also have the applicability.

Measurement framework conceptualization will add value to the existing literature. Proposed strategies are not only help in environmental sustainability, it will also help to reduce the distribution related cost, which will help to ensure the profitability of the organisation.

Methodology

Case study-based approach is followed for this study. In this study we have covered Factory based warehouse as well as standalone warehouses across India. Each warehouse related activities are monitored and tried to map it with environment related aspect. Monitoring framework is prepared along with the frequency of measurement. Based on the observation action plans and initiatives are suggested which will help to make warehouses greener compared to earlier stage.

Muttaqin et al., (2022), used SCOR model approach for their study which is related to green warehouse related performance monitoring. We can use similar approach for our study.

Analysis and Findings

During the study it was observed that there is no measurement framework is available to assess the green initiatives at the warehouse. Key performance indicators (KPIs) are not fixed and across the FMCG industry in India no standard is adhered. Initiatives are taken in bits and pieces and not shared across the industry. Hence some Multinational companies (MNCs) gained some benefits but benefits are not spreading across the industry. In this study along with the measurement KPI, some initiatives are shared, which is applicable across the industry and if implemented across the industry whole FMCG sector will get the benefit not only in terms of cost but it will also support the environment and the society.

Practical Implications

This study will help to create measurement framework for the FMCG organization and monitor the performance with respect to the environmental aspect. Some strategies are suggested for implementation at the warehouse to make the warehouse environment sustainable and green. It will give valuable support to the logistics managers to take decisions regarding environmental sustainability.

Originality

This study focusing on the Green Warehousing and gives integrated measurement framework and solutions to support the environment as well as cost. Prior to this, no study was existed which proposed a measurement framework to evaluate the Green Warehousing in Indian context and sharing initiatives to make our warehouses green which was identified as a prominent research gap. This research proposes a precise and effective decision support system for step wise execution of the identified differential strategies to boost Green Warehousing concept for FMCG sector.

Conclusion and Recommendations

Activity wise conceptual measurement framework will help to monitor the performance of warehousing related to environment. This framework will add value to the existing literature. This study will act like a ready reference for the logistics manager to take quick decisions regarding the strategies for environmental suitability in a logistics sector.

Keywords: *Green Warehousing, Green Supply Chain, FMCG, Warehousing, Environmental Sustainability.*

References

1. Anupama, S., Dharmajan, D., Nair, R., (2022), Fast Moving Consumer Goods sector in India – Tending towards oligopoly? Arab Economic and Business Journal. 14(1), <https://doi.org/10.38039/2214-4625.1004>.
2. Minashkina, D.; Happonen, (2023), A. Warehouse Management Systems for Social and Environmental Sustainability: A Systematic Literature Review and Bibliometric Analysis. Logistics, 7, 40.<https://doi.org/10.3390/logistics7030040>
3. Muttaqin, P.S., Margareta, W., Zahir, A.D., (2022), Green warehouse performance monitoring system design using analytical hierarchy process and supply chain operation reference, Applied Engineering and technology, 1(3),146-153, <http://doi.org/10.3176/aet.v1i1.687>
4. Korra, C., Sadhana, V.A., (2024), Green Warehouses: The Benefits, Challenges and Strategies of Industrial Building Decarbonization, International Journal of Innovative Science and Research Technology, 9(3), <https://doi.org/10.38124/ijisrt/IJISRT24MAR1644>
5. Modica, T.; Perotti, S.; Melacini, M. (2021), GreenWarehousing: Exploration of Organisational Variables Fostering the Adoption of Energy-Efficient Material Handling Equipment. Sustainability, 13, 13237. <https://doi.org/10.3390/su132313237>
6. Singh, K.R., Acharya, P., (2013), Identification and Evaluation of Supply Chain Flexibilities in Indian FMCG Sector Using DEMATEL, Global Journal of Flexible Systems Management. 15, 91-100, DOI: 10.1007/s40171-013-0050-9.
7. Venkatesha, G.K., (2021), Trend Forming FMCG sector in India - a Study, International Journal of Multidisciplinary Educational Research, 11(3), DOI: <http://ijmer.in.doi./2021/10.11.56>

Introduction

Media in the contemporary world is the leading force for, grabbing public attention and shaping perceptions, behaviours and social expectations. The consumer base is widespread from children to adults. Media has infiltrated every household may it be through newspapers, television, radio or social media.

In India, media consumption among children is growing rapidly, with local animated shows becoming increasingly popular. However, these narratives often enforce regressive gender stereotypes, boys being portrayed as adventurers and problem-solvers, while girls are shown emotional, secondary, or caregiving figures. Such portrayals not only reinforce patriarchal norms but also fail to provide relatable or empowering female role models for young viewers.

Often, the creators of these shows are males, and lack the knowledge of the women psychology. Hence, the results convey the wrong idea and portrayal of female characters. Historically, women have been portrayed across various platforms as the symbol of sacrifice chastity or suffering. Beginning in Hindu mythological epics to the unending stream of modern-day media portrayals, woman have been viewed through the patriarchal lens. Women are mostly portrayed as romantic interests, devoted wives, self-sacrificing mothers. Contradicting this, women who are shown career centric are depicted to be neglectful towards their family. But in reality, women are thinkers, shapers of change, leaders and creators.

There have been many progressive and regressive shifts in the Indian media landscape pertaining to gender bias and representation of woman. But, who makes this content? who perpetuates it? There is limited research about women writers, directors and animators in the field of children's media content. This imbalance leads to shallow and stereotypical portrayals of the female character on screen. Women from rural spheres and women of colour are also often objectified and tokened under the tags of "diversity" and "inclusivity".

Another overlooked area is how young girls or young boys perceive this content, how does it affect their behaviours? How does it affect their family dynamics? Do they relate to these characters?

This research writes about the representation of women in Indian children's media and examines how these portrayals influence young viewers' understanding of gender roles. It investigates whether female characters are given agency, leadership, and complexity, or whether they continue to remain secondary figures shaped by patriarchal narratives. By comparing Indian portrayals with global examples, the research aims to highlight the gap between real-world women and their fictional counterparts, and to advocate for more responsible, empowering narratives for the next generation.

¹ Department of communication design, Unitedworld Institute of Design, Karnavati university

² Department of communication design, Unitedworld Institute of Design, Karnavati university

Review of Literature:

There has been a limited amount of research in this field. But the scholars have consistently highlighted and stressed on the fact that portrayal of gender roles in children's' media perpetuates and instills association and shapes biased behaviour in their minds. Götz et al. (2008) found that across 24 countries, including India, only about 36% of main characters are female and still had traits that can be traced back to stereotypes.

Indian researchers (Sheikh, 2017; Viji, 2023) conducted critical discourse analyses of animated shows, that revealed that female characters were highly ornamental and in caregiving roles rather than as main characters, actively vocational and opinionated.

Jaggi's in-depth interviews (2017) with Indian children aged 4–14 demonstrated that kids internalize these stereotypes, with girls often being viewed as objects of desire or actively sought after and emotional.

Comparative studies show Indian children's programming lags behind international trends. A Santa Clara study analyzing *Chhota Bheem* versus *Arthur* in the U.S. found significantly higher stereotype frequency and fewer empowered female characters in the Indian show.

Research process

Aim

This research aims to analyze how women are portrayed in children's' media and focuses on the urgent need to create shows that are more inclusive and represent woman as equals and complex characters. It aims to help the young generations perceive women not as ornamental and emotional but leaders and creators.

Methodology

This research adopted a qualitative methodology involving content analysis and comparative observation. A selection of popular Indian kids and animated shows that have been aired since 2015–2025 (*chota bheem*, *mighty raju*,) were analyzed to assess the roles, traits, occupation, number and overall portrayal of female characters. It was keenly observed if women are central, assets to the plot or are authoritative or crucial for decision making and how their narratives are shaped. Additionally, the study also reviewed creator credits to identify gender representation behind the scenes writers, directors, and designers. Perceptual insights were gathered through informal interviews and observation of young girls (ages 8–14) and their responses to female characters, both Indian and global. A survey was conducted of a mixed group and their opinions about portrayal of women on children's' screens. (online) Finally, a comparative framework was used to analyze portrayals to highlight the contrast between Indian and international children's programming.

Findings and analysis

The analysis revealed significant patterns in both **on-screen representation** and **behind-the-scenes gender dynamics** in Indian children's animation from 2015–2025:

1. Underrepresentation of Female Leads

In most Indian children's' shows female characters are rarely depicted as powerful leaders, or decisionmakers and are mostly overshadowed by their male counterparts who “protect them” or are pursuing them.

2. Lack of Diversity in Character Traits

Character traits mostly depict sweet, kind and nurturing nature in contrast to the dominant, bold and assertive male characters. Females are seldom shown as heroic or adventurous. Where as in foreign tv shows like Powerpuff girls, kim possible, women are shown as strong, intelligent and powerful. This highlights the striking contrast and the missed opportunity of Indian media to develop a strong cultural identity and progressive agenda toward portrayal of women.

3. Gender Gaps in Creative Teams

An analysis of creator credits showed that most shows were written, directed, and designed predominantly by men. This imbalance may contribute to the repetitive and limited portrayal of female characters.

4. Audience perception

Informal interviews with young girls revealed the desire for more relatable and realistic depiction of female characters. These girls praised and positively spoke about merida, moana and elsa as their role models and it was noted that the Indian portrayal just felt “performative”, “shallow”.

5. Survey Responses

Survey participants expressed concern about the visibility and depth of women in Indian children’s media. While some appreciated efforts in newer content, most agreed that Indian screens lack empowered, central female characters compared to international media.

Solution:

To improve gender representation, Indian animation studios should prioritize writing strong, complex female characters with leadership roles and diverse personalities. Including more women in creative roles writers, directors, and designers can help shift narratives from stereotypes to empowerment. Collaborations with educators and child psychologists can further shape relatable, aspirational characters that reflect modern Indian girlhood and inspire both boys and girls equally.

Practical Implications

Empowered female representation in children’s media can positively influence young viewers’ self-image, ambitions, and worldview. When girls see diverse and active characters on screen, it fosters confidence, while boys learn to respect women as equals. Integrating inclusive storytelling in school curricula, media literacy programs, and national broadcasting policies can help create long-term cultural change and raise a generation more accepting of gender equality.

Conclusion

This paper addresses the rarely touched issue of portrayal of women in Indian children’s’ media. Consumption of media by children is increasing day by day and it is important that they come across the right kind of representation of the world around them, which will make them better citizens with self-worth and respect towards others in the future.

Keywords: *Misrepresentation, Stereotypes, Gender bias, Portrayal, Children, Media*

References

1. Götz, M., Lemish, D., Aidman, A., & Moon, H. (2008). *Gender in children's television worldwide*. *TelevIZion*, 21(1), 4–9.
2. Jaggi, A. (2017). *Children's perception of gender roles through television content: An Indian perspective*. *International Journal of Communication Research*, 7(1), 55–61.
3. Sheikh, S. (2017). *Gender Stereotyping in Indian Animation: A Content Analysis of Chhota Bheem*. *Journal of Media Studies*, 32(2), 145–160.
4. Viji, R. (2023). *Portrayal of Female Characters in Indian Animated Cartoons: A Critical Discourse Analysis*. *Indian Journal of Media and Communication Studies*, 5(1), 23–34.
5. Santa Clara University. (2019). *Representation of Gender Roles in Global Children's Television: A Comparative Study of Chhota Bheem and Arthur*. Department of Communication Research Papers.
6. Critiques of shows like *Chhota Bheem*, *Little Singham*, and *Shiva* on media literacy blogs (e.g., MediaNama, The Swaddle).
7. Banaji, S. (2011). *Children and Media in India: Narratives of Class, Agency and Social Change*.
8. Khandekar, A. (2020). *Gender Representation in Indian Animation: An Analysis of Female Characters in Popular Shows*. UNESCO & UNICEF Reports on Media & Gender Equality in India

Introduction

Urban areas stand as critical focal points in the global effort against climate change, serving as dynamic centres of economic production and energy consumption. They are responsible for over 70% of global CO₂ emissions, positioning them at the forefront of climate action. Consequently, the calculation of urban carbon footprints has become a cornerstone for climate rankings, sustainability awards, and the allocation of policy funding. However, existing methodologies for assessing city-level carbon footprints exhibit systematic flaws, primarily due to the significant exclusion or severe underestimation of Scope 3 emissions. This omission not only distorts the true environmental performance of cities but also perpetuates inequitable climate narratives, inadvertently penalizing lower-income cities while absolving high-consumption metropolises of their broader global ecological responsibilities. This paper argues for a paradigm shift in urban climate accounting, advocating for the mandatory integration of Scope 3 emissions to achieve more holistic, just, and empirically grounded sustainability metrics.

Select Literatures

This study draws on an expanding body of literature critiquing the limitations of territorial emission accounting and advocating for consumption-based emissions metrics. C40 Cities, the Global Covenant of Mayors (GCoM), and the Carbon Disclosure Project (CDP) have all highlighted the importance of Scope 3 emissions in recent reports. Research by Wiedmann and Minx (2008), Lenzen et al. (2018), and Ramaswami et al. (2012) has established that Scope 3 emissions can account for 60–80% of a city's true carbon footprint. Case studies of cities such as Oslo and San Francisco, known for scoring highly on sustainability indices while outsourcing carbon-intensive production, reinforce the case for reform. Literature on climate justice (e.g., Bulkeley et al., 2014) and emissions outsourcing (e.g., Peters & Hertwich, 2008) further situates this study in the context of ethical urban climate governance.

Purpose

The primary aim of this paper is to critically evaluate the shortcomings of current city-level carbon footprint accounting methodologies, particularly their pervasive failure to adequately incorporate Scope 3 emissions. Building upon this critique, the research seeks to highlight the four major consequences of such methodological exclusions: underreporting of emissions in high-income cities, misleading global city rankings, misattributed emissions responsibility, and policy misalignments. Furthermore, the paper aims to propose a multi-pronged reform roadmap, advocating for hybrid emission accounting models, enhanced data transparency, mandated Scope 3 inclusion in climate disclosures, and the adoption of contextual, equity-informed metrics for city comparisons. Ultimately, the motivation behind this research is to urge a fundamental shift in urban climate policy, ensuring that city-level climate strategies are comprehensive, equitable, and genuinely effective in addressing the totality of a city's environmental impact in an interconnected world.

¹ Post graduate student, Praxis Business School

² Post graduate student, Praxis Business School

Methodology

This research employs a critical analytical approach, drawing insights from an evaluation of existing urban carbon footprint accounting methodologies and a content analysis of city-level Climate Action Plans (CAPs), specifically focusing on examples from Indian cities such as Kolkata, Ahmedabad, and Pune. The methodology involves a systematic examination of how current frameworks, primarily those prescribed by the Global Protocol for Community-Scale GHG Inventories (GPC), address or neglect Scope 3 emissions. This includes scrutinizing the categories of emissions typically tracked (energy use, transport, waste, local industry) and identifying the crucial omissions (e.g., imported building materials, inter-city transport of goods, air travel, embodied energy in consumer products).

To quantify the "missing pieces," the content analysis of published CAP documents is complemented with literature-based footprint estimates. This involves drawing upon studies that quantify the proportion of Scope 3 emissions in a city's total carbon footprint, noting that these often comprise up to half of a city's true carbon footprint. For instance, the analysis considers quantitative insights from studies indicating that consumption-based emissions can significantly exceed territorial totals, potentially undercounting millions of tonnes of CO₂e annually in Indian cities.

The theoretical framework applied to this study is rooted in principles of climate justice and systemic responsibility. It challenges the conventional, territorially-bound accounting methods by highlighting how they lead to misattributed emissions responsibility, particularly from richer cities to poorer regions, and reinforce a climate double standard. The research critically examines how current practices reward cities with "clean" electricity grids and visible public transport systems, even as they maintain high per capita consumption of high-emission goods, using case-based evidence from cities like Oslo, San Francisco, Mumbai, Lagos, and Jakarta to illustrate these distortions. Furthermore, it investigates the "emissions outsourcing" phenomenon, observed in affluent cities globally, including emerging tech-centric Indian cities like Bengaluru and Hyderabad, and its implications for national and city-level carbon inventories. This multi-faceted approach allows for a comprehensive assessment of the methodological flaws and their far-reaching implications for urban climate governance, policy alignment, and global equity.

Analysis & Findings

The analysis reveals a pervasive and critical flaw in current urban carbon footprint accounting: the systemic exclusion or severe underestimation of Scope 3 emissions. This oversight leads to a distorted representation of cities' actual environmental performance and perpetuates inequitable climate narratives. Indian city Climate Action Plans (CAPs), for instance, predominantly track only within-boundary GHG sources (Scope 1 and 2), omitting crucial Scope 3 categories such as emissions from imported building materials, inter-city transport of goods, air travel, and embodied energy in consumer products. These uncounted emissions can constitute up to half of a city's true carbon footprint.

Four major consequences stem from this methodological exclusion:

1. **Underreporting of Emissions in High-Income Cities:** Wealthier, consumption-heavy urban regions, particularly in the Global North and emerging tech-centric Indian cities, benefit from this accounting gap. They appear "cleaner" by outsourcing carbon-intensive production to distant geographies, resulting in artificial reductions in their reported emissions while global emissions continue to rise. This masks the real climate responsibility of affluent regions.
2. **Unfair and Misleading Global City Rankings:** Current frameworks reward cities for local greening efforts (e.g., clean electricity grids, public transport) even if they maintain high per capita consumption of high-emission goods. Conversely, densely populated cities with minimal per capita consumption are penalized for their localized emissions, despite having smaller total ecological

footprints when consumption-based accounting is considered. This distorts city rankings by organizations like CDP, C40 Cities, and GCoM, which are used for funding and accolades.

3. **Misattributed Emissions Responsibility:** The current system reinforces a "climate double standard" where low-income regions are unfairly blamed for emissions produced for global supply chains, while high-income cities receive accolades for appearing green through selective metrics. This distorts policy incentives and international climate negotiations.

4. **Policy Misalignments:** Ignoring Scope 3 emissions leads cities to prioritize "low-hanging fruit" decarbonization pathways, such as transitioning to renewable electricity or expanding public transport, which only address a fraction of the climate challenge.

Quantitatively, studies suggest that city consumption-based emissions can exceed territorial totals by roughly 50%. If applied to Indian cities, this implies CAPs may be undercounting millions of tonnes of CO₂e annually. The net effect of these flawed metrics is a growing disconnect between symbolic green urbanism and real environmental impact, undermining trust in climate governance and delaying necessary systemic transformations.

Practical Implications

The findings of this research carry significant practical implications for urban climate governance, policy development, and the allocation of resources. The most immediate implication is the urgent need for a shift in carbon accounting methodologies. Cities must transition towards a hybrid emission accounting model that integrates territorial emissions (Scopes 1 and 2) with consumption-based accounting (CBA) for Scope 3 emissions. This dual-lens approach is crucial for a comprehensive assessment of both internal decarbonization efforts and broader global impact. International city networks like C40 and ICLEI are already piloting such approaches, and their mainstream adoption should be normalized. For Indian cities, this means expanding CAP inventories to explicitly include major Scope 3 sources, for example, by estimating embodied emissions in significant imported goods or municipal procurement, and developing mitigation actions and targets that reflect full life-cycle footprints.

Furthermore, there is a critical need for enhanced data transparency and methodological innovation. Estimating Scope 3 emissions is challenging due to data gaps in trade flows, supply chains, and consumer behaviour. Cities should collaborate with private sector actors (e.g., retailers, logistics, telecom providers) and leverage emerging technologies like satellite monitoring, machine learning, and input-output life cycle analysis to accurately estimate carbon flows. Transparent data frameworks and open-access city carbon maps can democratize knowledge and foster more equitable climate conversations.

Policy implications extend to mandating Scope 3 inclusion in climate disclosures by major reporting platforms such as CDP, GCoM, and national urban climate frameworks. While initial estimates may be approximate, institutionalizing this reporting requirement will catalyze improved methodologies and better inter-city comparability over time. Finally, urban policy needs to move beyond "low-hanging fruit" interventions like renewable electricity and public transport. While valuable, these are insufficient. Cities must embrace more high-impact interventions, including reducing car ownership, redesigning consumption patterns, regulating construction material supply chains, promoting low-carbon diets, and reducing air travel, despite their perceived complexity or political sensitivity. This requires addressing behavioural changes, systemic inequalities, and global trade dependencies, necessitating transboundary cooperation and innovative governance models.

Value

This paper contributes significantly to the growing discourse on urban climate metrics by providing a focused and critical examination of the systemic flaws in current carbon footprint accounting, particularly

concerning Scope 3 emissions. Its originality lies in clearly articulating the four major consequences of these omissions, moving beyond general acknowledgments of Scope 3 importance to detail the concrete impacts on emissions reporting, city rankings, responsibility attribution, and policy efficacy. The inclusion of specific case-based evidence, contrasting high-consumption Western cities with densely populated, lower-income cities and highlighting the "emissions outsourcing" phenomenon in emerging tech hubs like Bengaluru and Hyderabad, provides novel empirical grounding for the arguments.

The paper's overarching argument for a paradigm shift from territorial compliance to systemic responsibility, and its assertion that integrating Scope 3 emissions is a "moral and political imperative," underscores its significance and relevance to a wide audience, including researchers, urban planners, policymakers, and international climate organizations. By advocating for holistic, just, and empirically grounded urban climate metrics, this research aims to foster more credible, equitable, and effective city-level climate strategies globally, addressing the true ecological entanglement of urban centres.

Conclusion and Recommendations

The current methodologies for calculating city-level carbon footprints are critically flawed due to the systematic exclusion or severe underestimation of Scope 3 emissions. This omission leads to underreporting in high-income cities, misleading global city rankings, misattributed emissions responsibility, and misaligned policy priorities, ultimately undermining genuine climate action. For instance, Indian city CAPs demonstrate a clear blind spot by neglecting major Scope 3 categories, which can constitute up to half of a city's true carbon footprint. The continued adherence to these flawed models risks "greenwashing" and delays the deep, systemic transformation needed to address global warming within critical limits.

To rectify this pressing issue, this research strongly recommends a multi-pronged approach:

1. Adopt Hybrid Emission Accounting Models
2. Enhance Data Transparency
3. Methodological Innovation
4. Mandate Scope 3 in Climate Disclosures
5. Reframing City Comparisons with Contextual Metrics
6. Prioritize High-Impact Policy Interventions

In conclusion, integrating full carbon accounting into urban climate action plans is not merely a methodological refinement but a moral and political imperative for credible, equitable, and effective city-level climate strategy. By aligning urban climate action with global norms of consumption-based accountability, cities can formulate more robust mitigation strategies that reflect the broader footprint of urban lifestyles, thereby ensuring climate goals are met and fostering a truly sustainable and just urban future.

References

- Bulkeley, H., Castán Broto, V., Hodson, M., & Marvin, S. (2014). *Cities and Low Carbon Transitions*. Routledge.
- Lenzen, M., Moran, D., Kanemoto, K., & Geschke, A. (2018). Building Eora: A global multi-region input-output database at high country and sector resolution. *Economic Systems Research*, 25(1), 20–49.
- Peters, G. P., & Hertwich, E. G. (2008). CO₂ Embodied in International Trade with Implications for Global Climate Policy. *Environmental Science & Technology*, 42(5), 1401–1407.
- Ramaswami, A., Hillman, T., Janson, B., Reiner, M., & Thomas, G. (2012). A demand-centered, hybrid life-cycle methodology for city-scale greenhouse gas inventories. *Environmental Science & Technology*, 42(17), 6455–6461.

- Wiedmann, T., & Minx, J. (2008). A Definition of ‘Carbon Footprint’. *Ecological Economics Research Trends*, 1, 1–11.
- C40 Cities. (2021). *Consumption-based GHG Emissions of C40 Cities*.
- Gateway House (2024). *India’s Urban Climate Future: The Scope 3 Blind Spot*.
- Global Covenant of Mayors (GCoM). (2023). *Urban Climate Action Frameworks and Disclosure Standards*.
- Carbon Disclosure Project (CDP). (2022). *Guidance for City GHG Emissions Disclosure*.

Introduction

This study focuses on five leading investment banks —JP Morgan, Goldman Sachs, Morgan Stanley, ICICI Securities, and JM Financial—to analyze their competitive strategies over a five-year period and their impact on market share and profitability.

In today's era of globalization and digitalization, with the ever-growing and dynamic financial sector, investment banks play a critical role in helping companies raise money through various means, including underwriting and the issuance of new securities. Some key functions of investment banking include • Underwriting • Advisory services • Financial intermediation, etc.

In today's competitive world, it has become essential to understand the forces that drive the investment banking sector. Competitive strategies are approaches that enable an organization to sustain a competitive advantage for as long as possible in its industry.

These are the key competitive strategies that have been used in this research:

A cost leadership strategy generally involves attempting to gain a market share by appealing to cost-conscious consumers.

A differentiation strategy refers to creating products that are unique within the industry, thereby achieving a Unique Selling Proposition (USP).

Focus strategy refers to specializing in a particular service or market.

Technological adoption strategy refers to organizations leveraging technological and digital capabilities to stay ahead in the digital world.

Strategic partnerships and alliances strategy refer to organizations partnering with or acquiring business segments from different organizations to gain a larger market share and capitalize on existing opportunities. Both market share and profitability are crucial indicators of an investment bank's overall success and position in the competition.

Literature reviews

1)"Comparative Analysis of Competitive Strategies with BCG Matrix Approach at Regional Development Banks."

¹ Department of Management Studies, St. Xavier's College (Autonomous) Kolkata

² Assistant Professor, Department of Management Studies, St. Xavier's College (Autonomous) Kolkata

Author/Co-Authors: Satria Tirtayasa, Lailan Safina Hasibuan

Year of Publication: 2023

Methodology Used: Analytical study

Key Finding: It indicated how the selected banks occupied different quadrants during different years.

2)"Porter's Generic Competitive Strategies and Their Influence on the Competitive Advantage of Investment Firms in Iraq's Kurdistan."

Author/Co-Authors: Bayad Jamal Ali and Govand Anwar

Year of Publication: 2021

Methodology Used: Primary Data Analysis

Key Finding: It indicates how the cost leadership strategy had the most positive impact.

3) "Effectiveness of Competitive Strategies Adopted by Investment Firms in Kenya"

Author: Francis Ooko Nyangao

Year of Publication: 2018

Methodology Used: Qualitative and quantitative analysis

Key Finding: It indicates the better positioning of firm's adopting differentiation and focus strategy.

Purpose of the research

The investment banking sector has undergone significant changes due to digitalization and globalization, making it crucial to understand how leading banks adapt in this dynamic environment and maintain their core competencies and competitive edge.

The primary objective is to identify the key strategic elements employed by leading investment banks that significantly influence their market share and profitability within the global and Indian investment banking industries, thereby maintaining a distinctive competitive advantage.

It also helps to understand how market trends influence decision-making.

Research methodology

Nature of Research: This paper presents an analytical and Descriptive study, discussing the competing Strategies and their effects on market share and profitability.

Data type: Secondary data-based study

Data Source: Annual financial reports and balance sheets of the five investment banks analyzed, as well as market size reports for market share calculation from financial research websites.

Study period: 5 Years (starting from 2019-20 to 2023-24)

Research tools and research techniques: Analyzed secondary data using trend charts, pie chart and bar graphs showcasing the trends of profitability and ratios of market share over the survey period.

- A Table prepared to conduct ratio analysis.
- A table prepared for the various competitive strategies employed by these five banks over the survey period.

Research Plan: •Conduct trend analysis and ratio analysis. •Emphasizing the competitive strategies that have the most significant impact on market share growth and profitability in the last 5 years. •Aligning both to analyze the extent of impact of competitive strategies on the trend of profitability and capture of market share.

Data analysis and findings

A table is prepared year-wise, showcasing the various competitive strategies employed by the five investment banks over five years (sample survey period). Then, trend analysis is performed using line graphs, bar graphs, and pie charts to showcase each bank's market share and profitability trends over a five-year period. It is analyzed to determine why the market share and profitability have fluctuated/not. Is it due to the impact of competitive strategies adopted in that year/not?

Then, a table performing ratio analysis using the chosen variable is prepared, and it is analyzed to determine why the ratios for certain banks have fluctuated significantly and why for certain banks, the ratio has remained steady with little to no fluctuations. Additionally, which banks have the highest margins based on ratio analysis?

The Key Findings from this analysis have been:

In terms of net profit, JP Morgan and Goldman Sachs top the market position among the global investment banks JP Morgan, Morgan Stanley, and Goldman Sachs. • JP Morgan continues to maintain high margins despite fluctuations. • Goldman Sachs and Morgan Stanley rely on differentiation and diversification, making their net profit margins more variable and fluctuating. • Among the Indian investment banks, ICICI Securities and JM Financials, ICICI Securities shows the highest and most stable net profit margins over the last five years, which indicates strategies focusing on profitability. • JM financials, on the other hand, focuses on a niche and focus strategy rather than a profitability-focused strategy.

Practical implications

This research, which is a case study on leading investment banks, provides crucial insights into how banks maintain the profitability trend and gain market share allowing other firms to identify potential opportunities to improve their strategies widening the scope and helping businesses better understand the factors behind the success in investment banking and also determine the scope for improvement and potential areas for differentiation.

By monitoring the trends, other firms can remain ahead of the curve.

Originality of study

The originality of this research lies in its focused analysis of the competitive strategies adopted by the leading investment banks—JP Morgan, Goldman Sachs, Morgan Stanley, ICICI Securities, and JM Financials—and how these strategies influence their market share and profitability. While prior studies have examined banking performance broadly, this research uniquely combines quantitative methods, such as trend and ratio analysis, with a qualitative comparative analysis to draw insights from secondary

data. It explores strategic differentiation both globally and in the Indian context, making a valuable contribution to the existing literature in financial strategy and investment banking.

Conclusion

Diverse Competitive strategies: While some leading investment banks (JP Morgan, Goldman Sachs and Morgan Stanley) mostly adopt a mix of differentiation, strategic partnerships and alliances, digital innovation and global expansion, other investment banks (ICICI securities, JM financials), mostly adopt cost reduction, focus and digital innovation nowadays to stay ahead in the competitive sector.

Market Share versus Profitability: Some banks prioritize profitability, aiming for higher profitability through differentiation and premium investment services, as seen in the case of Goldman Sachs. Others focus on expanding market share through strategic partnerships and alliances, as exemplified by ICICI Securities.

The future of Digital Transformation: Investment banks investing in digital capabilities and adopting digital transformation strategies, leveraging AI, such as JP Morgan and Morgan Stanley, gain better client acquisition.

Recommendations

Global investment banks should increase their investment in Robo-advisors and AI for enhanced efficiency. Indian investment firms should further integrate their technological adoption strategies.

Hybrid approach: A mixed strategy focusing on increased profitability while expanding market share is ideal for long-term growth.

Global banks should explore emerging markets for expansion, while Indian banks should expand globally to benefit from international strategic partnerships.

Keywords: *Investment banks, competitive strategy, profitability, market share, analysis*

References

- <https://www.investopedia.com/terms/i/investment-banking.asp>
- <https://www.mdpi.com>
- Goldman Sachs: A Comprehensive Overview | by ByteBridge | Medium
- What is Growth Strategy and Future Prospects of JM Financial Company? – CanvasBusinessModel.com
- ICICI Securities
- Morgan Stanley History
- JPMorgan U.S. Equity Strategy | J.P. Morgan Asset Management
- ANNUAL REPORTS:
- Investor Relations | JPMorganChase
- Investor Relations | Goldman Sachs
- Investor Relations | Morgan Stanley
- Investor Relations | About Us | ICICI Bank.com
- Investor Relation - JM Financial
- Anwar, B. J. (2021). Porter's Generic Competitive Strategies and Their Influence on the Competitive Advantage of Investment Firms in Iraq's Kurdistan Region.
- KUSHOKA, D. J. (2020). The influence of competitive strategies on the banking industry of Tanzania.

- NYANGAO, F. O. (2018). Effectives of competitive strategies adopted by investment banks in Kenya.
- Satria Tirtayasa, L. S. (2023). Comparative Analysis of Competitive Strategies with BCG Matrix Approach at Regional Development Banks.

SOCIAL MEDIA ALGORITHMS AND THEIR IMPACT ON CONSUMER PERCEPTION: A CASE STUDY AMONG DESIGN STUDENTS AT UID, KARNAVATI UNIVERSITY

Prashansa Keshri ¹, Sandipan Bhattacharjee ²

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

In the age of algorithm-driven content, social media platforms like Instagram, YouTube, and Pinterest have become key platforms not only for digital consumption but also for creative inspiration. For design students, who are both active creators and discerning consumers, these algorithmic feeds heavily influence aesthetic decisions, lifestyle preferences, and even self-perception. As these platforms personalize content based on user activity and engagement, they subtly shape the way individuals interpret visual culture, often without them realizing it.

Social media algorithms can be defined as automated systems designed to curate, rank, and deliver content tailored to each user's behavior, preferences, and interactions (Bucher, 2017). These invisible mechanisms dictate what users see, how often they see it, and in what order, ultimately shaping online experiences in a highly individualized yet systematized way.

Consumer perception, in this context, refers to the process through which individuals interpret, make sense of, and form opinions about products, content, or ideas based on what they see online (Petrescu & Krishen, 2020). This perception is shaped not only by the content itself but also by how frequently and in what context it appears within an algorithmically curated feed.

This study explores how the continuous exposure to personalized, data-driven content is shaping the visual and consumer behavior of students at the Unitedworld Institute of Design (UID), Karnavati University. By examining their usage patterns, algorithm awareness, and the influence on their design choices, the research aims to understand how creative minds are molded by invisible systems in the everyday digital scroll.

The main objective of this research is to analyze how social media algorithms influence the perception, choices, and visual preferences of design students. It aims to identify specific behavioral shifts and psychological patterns arising from prolonged interaction with algorithm-curated feeds.

Literature Review

The growing influence of algorithmically curated content on user behavior and perception has attracted increasing scholarly attention. This literature forms the theoretical and contextual backbone of the current study.

Bucher (2017) introduces the concept of the “algorithmic imaginary,” which refers to the ways in which users imagine and make sense of the algorithms that structure their online experiences. While users may not understand the technical logic behind content delivery, they develop intuitive understandings of what content is shown and why. These imagined perceptions significantly shape user behavior and trust in

¹ Department of Communication Design, UID, Karnavati University

² Department of Communication Design, UID, Karnavati University

platforms, especially among youth who tend to internalize platform logic in how they create, consume, and interact with content. In the context of design students, this suggests that creative decisions might be subtly aligned with what the algorithm is believed to reward, such as high engagement or visual trends.

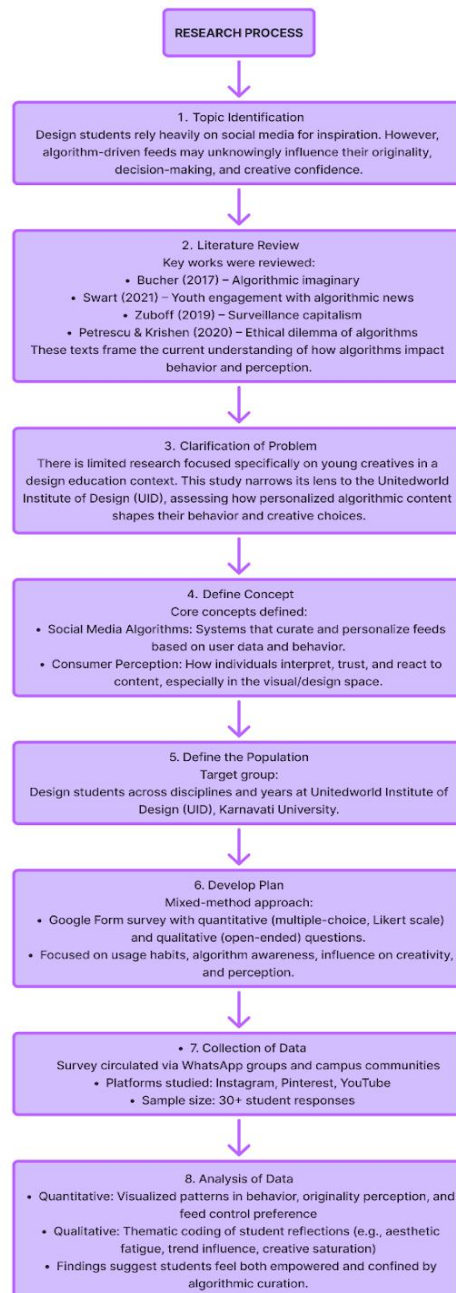
Expanding on this idea of user engagement, Swart (2021) explores how young people relate to algorithmic news feeds. Her study reveals that while many users are aware of algorithmic mediation, they often do not engage with it critically. Instead, they form emotional relationships with the content and tend to accept what the algorithm serves as personalized, relevant, and even “truthful.” This emotional engagement, particularly among younger audiences, may blur the line between algorithmic influence and autonomous choice. For creative students who rely on inspiration from these platforms, this raises concerns about the unconscious standardization of taste, trends, and creative output.

Petrescu and Krishen (2020) highlight the ethical and psychological dilemma posed by social media algorithms. They argue that while algorithms provide personalization and convenience, they also lead to a narrowing of consumer perception. This hyper-targeted content cycle creates a “closed loop” of preferences, where users are repeatedly exposed to similar types of content, reducing diversity in thought and engagement. The concern here is that consumer decisions, including aesthetic choices, are no longer made in an open environment but are instead increasingly shaped by invisible curation mechanisms. This becomes especially pertinent in design education, where originality, exposure, and experimentation are foundational principles.

To contextualize these observations within a broader socio-economic framework, Zuboff (2019) offers a powerful critique through her theory of surveillance capitalism. She posits that social media algorithms are not neutral tools but instruments of economic exploitation, designed to extract behavioral surplus (data) and predict future actions. Within this framework, users are both the product and the target. For design students navigating these systems, their aesthetic preferences, creative practices, and online behaviors become part of a larger data economy, shaped not solely by creativity but also by monetized attention metrics and behavioral nudges.

Together, these works construct a comprehensive lens to understand how social media algorithms impact perception and decision-making. They also provide a foundation to explore how design students, often considered visually attuned and creatively autonomous, may actually be navigating and absorbing influence within algorithmically controlled environments. This literature thus underscores the need for critical media literacy, platform awareness, and reflective creative practices among the next generation of visual thinkers.

Research Process



Methodology

This research employs a mixed-method approach to explore how social media algorithms influence consumer perception among design students at Unitedworld Institute of Design (UID), Karnavati University. A mixed-method strategy was chosen to capture both measurable patterns and experiences, allowing for a more holistic understanding of how algorithmic exposure shapes perception and behavior.

Given the complexity of algorithmic influence, which involves both unconscious behavioral shifts and conscious reflections, a singular approach would not be sufficient. Quantitative data helps in identifying

patterns, frequencies, and general trends across the student population, while qualitative insights capture deeper emotional and cognitive responses that cannot be measured numerically. This blend ensures both breadth and depth in the findings.

The study involved the development and distribution of a structured online survey, shared primarily via Google Forms. The survey was circulated among UID students from various design disciplines and year levels to ensure diversity in response and experience. The goal was to assess both general social media usage and more specific perceptions around content curation, aesthetic influence, and algorithm awareness.

The survey was divided into four key sections:

- i. **Demographics** – to contextualize responses by age, discipline, and year of study.
- ii. **Social Media Usage** – platform preferences, time spent, and types of content consumed.
- iii. **Algorithm Awareness & Perceived Influence** – awareness of algorithmic curation, emotional response to feeds, and perceived control.
- iv. **Creative & Design Impact** – how content on social media affects mood boards, visual preferences, trend adoption, and originality.

Quantitative questions (e.g., multiple choice, Likert scale) were included to:

- Measure platform usage frequency and engagement habits.
- Assess general awareness of algorithms.
- Identify trends in how students perceive influence over their choices.
- Provide data points that can be visualized (charts, percentages).

These questions enabled statistical comparisons and pattern recognition across the sample group.

Open-ended questions were added to:

- Capture individual thoughts, emotions, and perceptions.
- Understand students' own definitions of algorithmic influence.
- Explore real-life examples of how their creativity or behavior has been shaped by algorithmically curated content.

The platforms focused on were Instagram, Pinterest, Spotify, Apple Music and YouTube, selected because of their high relevance to visual and design communities. Each of these platforms uses recommendation algorithms that significantly impact what content users see, making them highly influential in shaping inspiration and taste among young creatives.

Quantitative responses were analyzed using simple statistical techniques to identify dominant trends and patterns. The qualitative responses were coded thematically, allowing common phrases, sentiments, and reflections to be grouped and interpreted. This combination made it possible to map correlations between students' social media habits and their perception or creative decision-making behaviors.

Analysis & Findings (Preliminary)

Social Media Usage Patterns

- Most respondents reported spending **3–4 hours or more daily** on platforms like Instagram, Pinterest, and YouTube.
- Instagram emerged as the most frequently used platform, especially for content like design inspiration, memes, fashion, and lifestyle.

Use of Platforms for Inspiration

- A majority of design students use social media **frequently or occasionally for visual/design inspiration.**
- This confirms that platforms serve as an essential tool for mood boarding, trend-spotting, and aesthetic referencing.

Algorithm Awareness

- While some students were able to define algorithms (e.g., "content based on preferences," "based on what we interact with"), others showed limited or unclear understanding.
- This suggests a gap between usage and awareness, even among digital natives.

Perceived Influence on Creativity

- Many respondents acknowledged that algorithmic content had “influenced their style, mood boards, or creative decisions” to some extent.
- Several reported that they felt their originality was affected, indicating creative convergence due to algorithm-driven repetition.

Feed Control & Perception Shaping

- A significant portion of students expressed a preference for more control over what they see (e.g., return to chronological feed).
- Many believe that their feeds shape what feels popular or trendy, even if they don’t always agree with it.

Behavioral & Psychological Impact

- A large number of students said they had bought something, followed a trend, or changed an opinion because of repeatedly seeing content on their feed.
- Almost all respondents felt that algorithms contribute to information overload or decision fatigue — due to sameness, saturation, or the pressure to keep up.

Qualitative Reflections

- Students described their relationship with algorithms as a “trap,” “loop,” or “distraction,” but also acknowledged how these systems feed them exactly what they want — creating a blend of dependence and discomfort.
- Some noted the risk of becoming creatively “boxed in,” while others found value in discovering new ideas through curated content.

Originality

This research brings a unique perspective to the existing discourse on social media algorithms by placing young design students, both consumers and creators, at the center of investigation. While algorithmic influence has been widely studied in the contexts of news, marketing, and behavioral psychology, its impact on creative identity, aesthetic choices, and originality in design education remains underexplored.

By narrowing the focus to a specific population, students of Unitedworld Institute of Design (UID), the study captures how highly visual individuals interact with platforms like Instagram, Pinterest, and YouTube not just as users but as visual thinkers. The findings uncover how algorithm-driven repetition and curated feeds affect students’ sense of creative autonomy, originality, and even self-expression.

The value of this research lies in its relevance to both design pedagogy and digital media literacy. It emphasizes the need for young creatives to critically engage with the systems that feed their inspiration, and encourages educators to develop reflective practices that safeguard originality in an increasingly homogenized algorithmic landscape.

This study contributes to a deeper understanding of how personalization technologies shape emerging creative cultures, and how, with greater awareness, design students might reclaim agency over their aesthetic decisions in the digital space.

Conclusion

This research set out to explore how social media algorithms influence the perception, behavior, and creative choices of design students at Unitedworld Institute of Design (UID), Karnavati University. The study intended to uncover whether algorithmically curated content affects not just consumption patterns, but also aesthetic direction, design decision-making, and overall creative autonomy among young designers.

The findings indicate that a significant number of students not only rely on social media platforms like Instagram, Pinterest, Spotify, Apple Music, and YouTube for daily inspiration but also internalize the patterns these platforms promote. While most respondents were aware that algorithms shape their feeds, they did not always question the logic behind the content they were repeatedly exposed to. Many acknowledged subtle shifts in their taste, mood board preferences, or adoption of trending visuals, sometimes without conscious realization. These insights support the notion that students, while being creators, are also deeply embedded in systems of content curation that shape their worldview.

However, the study is not without limitations. The sample size was limited to one institution, and responses were self-reported, which may include biases or lack of introspection. Additionally, the absence of in-depth interviews or longitudinal tracking restricts the ability to measure changes in perception over time. Future research could expand the scope by incorporating participants from multiple design schools or by using observational and experimental methods to validate the findings.

Despite these constraints, the research offers valuable practical implications. Design educators could consider integrating modules on algorithm awareness, digital media literacy, and critical consumption into their curriculum. Encouraging students to seek inspiration beyond mainstream feeds, through offline sources, niche platforms, or historical references, may foster greater originality and intentional design thinking. Furthermore, platforms themselves could take a more transparent approach in explaining how their algorithms function, empowering users to engage more consciously with their digital environment.

In conclusion, while social media algorithms are designed to enhance user experience through personalization, they also subtly shape the creative lens through which young designers view the world. With growing awareness and guided reflection, it might be possible to reclaim agency over one's feed, one's choices, and ultimately, one's creative identity.

Keywords: *Social Media Algorithms, Consumer Perception, Design Education, Visual Inspiration, Algorithmic Influence, Creative Originality*

References

- Bucher, T. (2017). The algorithmic imaginary: Exploring the ordinary affects of Facebook algorithms. *Information, Communication & Society*, 20(1), 30–44.
- Petrescu, M., & Krishen, A. S. (2020). The dilemma of social media algorithms and analytics. *Journal of Marketing Analytics*, 8(4), 187–188.
- Swart, J. (2021). Experiencing algorithms: How young people understand, feel about, and engage with algorithmic news selection on social media. *Social Media + Society*, 7(2).
- Zuboff, S. (2019). *The age of surveillance capitalism: The fight for a human future at the new frontier of power*. PublicAffairs.

Introduction

Renewable energy resources such as solar, wind, biomass, and hydropower hold significant untapped potential to address the interlinked challenges of energy poverty and socioeconomic underdevelopment in underserved communities. ‘*Underserved communities*’ include rural residents, low-income households, ethnic minorities, and older adults who face structural and socio-cultural barriers that limit their participation in sustainable energy transitions (Mehl, et. al., 2025). The sustainable resources, which are increasingly cost-effective and technologically viable, remain underutilized in many low-income, remote, and rural regions of the world. Despite widespread global attention to clean energy transitions, millions of households continue to depend on polluting fuels like firewood, kerosene, and coal, leading to severe health, environmental, and developmental consequences.

This gap in adoption highlights the need to identify critical enabling factors that can unlock the use of renewable energy at the grassroots level. These factors are often complex and context-specific, including *community’s awareness-perception-participation, socio-cultural alignment, financial access, technical capacity, and supportive policy frameworks*. Their influence on energy behavior, particularly at the individual household level, must be thoroughly understood to ensure sustainable energy transitions.

Beyond merely providing energy access, renewable energy catalyzes inclusive and sustainable development by enabling improvements in education, healthcare, livelihoods, gender equity, and environmental resilience—key priorities aligned with the United Nations Sustainable Development Goals (SDGs). This study focuses on uncovering the drivers of renewable energy adoption at the household level in underserved regions, with an integrative lens that connects energy access to broader social, economic, and ecological development.

Purpose of the Study

While technological innovation and falling prices have expanded the global availability of renewable energy solutions, actual adoption at the grassroots level remains uneven (Huang, 2025). In low-income or remote areas, households often face specific infrastructural and behavioural challenges that prevent them from accessing and sustaining renewable energy systems (Obuseh et.al., 2025). The primary objective of this study is to identify and critically analyze the enablers of renewable energy adoption at the household level in underserved communities.

The study specifically seeks to explore the enabling factors/ drivers for adoption of renewable energy resources by the underserved communities, such as a) environmental awareness and education, b) socio-cultural alignment and acceptability, c) financial access models (e.g., micro-loans, pay-as-you-go systems), d) technical capacity building, and e) supportive government policy framework. It further

¹ Assistant Professor, Amity Business School, Amity University Kolkata

² *Associate Professor, Amity Business School, Amity University Kolkata (Correspondent)

³ Associate Professor, Amity Business School, Amity University Kolkata

investigates how these drivers interact and reinforce each other in real-world settings (*Saleem et. al., 2025; Agbeti & Adaramola, 2023; Sovacool & Dworkin, 2015*).

This research also positions household-level renewable energy adoption not merely as a technological fix, but as a strategic tool for promoting social empowerment, poverty alleviation, and climate resilience. The findings aim to provide insights that can benefit local governments, NGOs, international donors, and private firms working toward inclusive energy transitions in underserved areas (*Banerjee, Duflo, & Hornbeck, 2021*)

Theoretical Foundation

‘Underserved communities’ often face systemic barriers to renewable energy adoption, equity, and empowerment. The need for context-specific strategies such as improved access, reduced financial/logistical burdens, and culturally sensitive outreach to ensure meaningful participation for energy transitions is a necessity (*Mehl, et. al., 2025*). Renewable energy adoption is a strategic tool for enabling poverty reduction and empowerment. Financial inclusion is a critical enabler of inclusive energy transitions (*Banerjee, Duflo, & Hornbeck, 2021*). The impact of pay-as-you-go (PAYG) solar home systems on energy access in rural India highlights how microfinance models can overcome upfront cost barriers, enabling low-income households to adopt clean energy. The links between energy access and socioeconomic benefits (e.g., improved education, livelihoods) and climate resilience by displacing kerosene use (*Banerjee, Duflo, & Hornbeck, 2021*).

The literature on renewable energy adoption in underserved communities is rich and multidisciplinary. The links between environmental risk perception and renewable energy demand, particularly in climate-vulnerable regions (*Rewald, 2017*). The success of microfinance and pay-as-you-go models in enabling low-income households in India to adopt solar technologies (*Banerjee et al., 2021*). Importance of user-friendly, modular technologies that match the community’s capacity to maintain them (*Sovacool, 2012*). Emphasize gender equity, noting that involving women in energy planning leads to higher adoption and better social outcomes (*Clancy et al., 2019*). Decentralized governance models, such as village energy committees, help in scaling rural electrification (*Bhattacharyya, 2013*).

Together, these works suggest that sustainable adoption depends on a combination of *social awareness and acceptance, affordability, accessibility, and institutional support*.

Methodology

This study employs a qualitative, exploratory approach based on secondary data gathered from published research articles, policy reports, and program case studies. A thematic review method was used to extract common patterns from successful renewable energy adoption experiences in Sub-Saharan Africa, South Asia, and Latin America.

Data was selected based on relevance to household-level adoption, particularly in off-grid and underserved communities. The analysis focuses on three core categories: (1) enabling conditions at the household level, (2) institutional and ecosystem support, and (3) the broader developmental context into which energy access is embedded.

Analysis and Findings

The study identifies eight major drivers that facilitate household-level adoption of renewable energy in underserved communities:

1. **Economic Viability:** Affordability is critical. Financial enablers such as microloans, subsidies, community cooperatives, and PAYG models reduce the upfront cost barrier and improve long-term affordability for low-income households.
2. **Technological Accessibility:** Technologies that are modular, portable, and easy to maintain (e.g., solar lanterns, rooftop panels, biogas units) have higher adoption rates. Local technical training ensures continued system functionality.
3. **Socio-Cultural Acceptance:** Community participation, peer-to-peer learning, and support from local leaders and women's groups are essential for building trust and changing traditional energy behaviors.
4. **Institutional and Policy Frameworks:** Governments that provide targeted subsidies, tax incentives, and support decentralized energy models enable more inclusive adoption.
5. **NGO and Development Sector Engagement:** NGOs and donor agencies play vital roles in raising awareness, piloting technology, facilitating financing, and training users.
6. **Environmental and Climate Awareness:** Communities facing climate-related challenges often perceive renewable energy as a tool for adaptation.
7. **Digital and FinTech Integration:** Mobile-based payments and monitoring, PAYG solar systems, and blockchain-enabled transactions lower barriers to entry and enhance transparency and trust.
8. **Productive Use and Livelihood Linkages:** Energy used for irrigation, cold storage, agro-processing, or small enterprises creates direct income benefits, increasing the perceived value and willingness to invest.
9. These findings confirm that successful household-level adoption emerges not from isolated efforts but from an integrated ecosystem that aligns community needs with technological, financial, and institutional support.

Practical Implications

The findings of this study carry several actionable implications:

- **Policymakers:** Develop inclusive energy policies that target the poorest households, offer decentralized energy governance, and build local entrepreneurship.
- **Financial institutions and FinTech firms:** Design microcredit and PAYG schemes tailored to the income patterns of underserved households.
- **NGOs and development agencies:** Facilitate capacity-building programs and community engagement initiatives that foster local ownership.
- **Technology providers:** Ensure that renewable energy solutions are modular, scalable, and easily repairable with locally available skills and tools.
- **Education and training institutions:** Promote energy literacy and climate awareness at the grassroots level to support long-term behavioral change.

Originality

This study contributes to the renewable energy literature by offering an integrative framework that places household-level adoption at the center of energy access strategies. It highlights the interconnectedness of economic, technical, social, and institutional factors, moving beyond linear or top-down models of electrification.

Its originality lies in its systems-thinking perspective, which recognizes that meaningful adoption results from coordinated action among multiple stakeholders—including end users. By focusing on household-level adoption, the study fills a critical gap in the policy-to-practice continuum and provides a replicable roadmap for inclusive energy access.

Conclusion and Recommendations

Renewable energy adoption in underserved communities is not merely a matter of introducing technology—it requires enabling an ecosystem of trust, accessibility, affordability, and empowerment. The study concludes that:

- Adoption should be approached holistically, incorporating social, financial, and institutional perspectives.
- Gender-sensitive and culturally embedded approaches increase sustainability.
- Localized training and technical support are essential for maintaining long-term adoption.
- Digital tools and FinTech innovations are key to scaling access in remote areas.
- Strong policy support and multilevel collaboration—from local governments to international agencies—are necessary to drive lasting change.

Recommendations include investing in hybrid financing mechanisms, supporting women-led energy enterprises, and integrating renewable energy into broader livelihood strategies. With such targeted, inclusive, and well-supported interventions, renewable energy can act as a powerful enabler of sustainable development in even the most underserved corners of the world.

Keywords: *Renewable Energy, Underserved Communities, Household-level Adoption, Socioeconomic Development Strategies, Energy Access*

References

1. Agbeti, J. O., & Adaramola, M. S. (2023). Drivers and challenges of off-grid renewable energy-based projects in West Africa: A review. *Heliyon*, 9(5), e15125. <https://doi.org/10.1016/j.heliyon.2023.e15125>
2. Banerjee, A., Duflo, E., & Hornbeck, R. (2021). Energy access through innovative finance: Evidence from solar home systems in rural India. *Energy Economics*, 95, 105129.
3. Bhattacharyya, S. C. (2013). *Rural electrification through decentralized off-grid systems in developing countries*. Springer.
4. Clancy, J., Oparaocha, S., & Roehr, U. (2019). Gender equity and renewable energy: Opportunities and barriers in developing countries. *Renewable Energy*, 21(1), 87–93.
5. GCF. (2022). *Supporting transformative energy projects in vulnerable regions*. Green Climate Fund.
6. Glemarec, Y., Bayat-Renoux, F., & Waissbein, O. (2016). *Removing barriers to women's participation in clean energy solutions*. UNDP Discussion Paper.

7. Huang, X. (2025). How is Grassroots Data Openness Possible?. Pressure-Nurging Analysis Based on the "Xiang Yiban" Government Service Platform in District F (April 10, 2025).
8. IRENA. (2021). Renewable energy and jobs: Annual review 2021. International Renewable Energy Agency.
9. Mehl, K. R., Morain, S. R., & Largent, E. A. (2025). The importance of including underserved populations in research. *Pharmaceutical Medicine*, 1-13.
10. Obuseh, E., Eyenubo, J., Alele, J., Okpare, A., & Oghogho, I. (2025). A systematic review of barriers to renewable energy integration and adoption. *Journal of Asian Energy Studies*, 9, 26-45
11. Rewald, R. (2017). Energy and women's empowerment: A qualitative analysis of how renewable energy initiatives impact gender dynamics in energy-poor communities. Oxfam America Research Backgrounder.
12. Saleem, M. Z., Irfan, M., & Hao, Y. (2025). Understanding the adoption of renewable energy technologies by households in South Asia: A theory of planned behavior perspective. *Discover Sustainability*, 6(1), 51. <https://doi.org/10.1007/s43621-025-01051-w>
13. Sovacool, B. K. (2012). Designing energy access for productive use: A key to sustainable development. *Renewable and Sustainable Energy Reviews*, 15(3), 1518–1522.
14. Sovacool, B. K., & Dworkin, M. H. (2015). "Energy Justice: Conceptual Insights and Practical Applications." *Applied Energy*, 142, 435–444.
15. UNDP. (2020). Scaling up off-grid renewable energy: A toolkit for policy makers and development practitioners.
16. World Bank. (2021). State of electricity access report.

Introduction

India's financial landscape is undergoing a dramatic transformation, driven by the rapid rise of Financial Technology (FinTech) startups. These ventures leverage innovative digital solutions—ranging from mobile payments and peer-to-peer (P2P) lending to robo-advisory and blockchain-based services—to challenge the dominance of traditional financial institutions (RBI, 2022). The convergence of high smartphone penetration, affordable data, government initiatives like Digital India and Jan Dhan Yojana, and a youthful population has created a conducive environment for FinTech proliferation (PwC, 2021).

Background and Rationale

India is now home to over 9,000 FinTech startups, making it the third-largest FinTech ecosystem globally (Invest India, 2023). The sector is expected to grow at a compound annual growth rate (CAGR) of 22% and reach a market size of USD 150 billion by 2025 (KPMG, 2022). The FinTech revolution has democratized financial access, especially in rural and semi-urban areas. However, challenges persist in the form of regulatory uncertainty, cybersecurity risks, and infrastructural limitations.

Literature Review

Scholars have extensively examined the role of FinTech in modernizing financial systems. Arner, Barberis, and Buckley (2015) coined the term "FinTech" as a new financial services paradigm, driven by technology rather than traditional banking channels. Gomber et al. (2018) argue that FinTech enhances efficiency and personalization while reducing costs. Meanwhile, Gupta and Dhingra (2021) highlight the sector's role in enhancing financial inclusion among marginalized populations in India.

However, studies also underscore the sector's limitations. Narula and Reddy (2020) note that most FinTech adoption remains concentrated in Tier-1 cities, with rural areas lagging due to low digital literacy and poor internet infrastructure. Regulatory issues also remain critical, with many startups unsure about long-term compliance frameworks (World Bank, 2022).

This study builds on prior literature by offering an empirical analysis of how Indian FinTech startups have disrupted the financial services sector and what structural adjustments are required to integrate them sustainably.

Objectives of the Study

This study aims to:

1. Analyze the growth and impact of FinTech startups in India's financial services ecosystem.
2. Examine the disruption and collaboration dynamics between FinTechs and traditional financial institutions.

¹ Ph.D Scholar, School of Business, Adamas University

² Associate Professor, Department of Management, School of Business, Adamas University

3. Evaluate FinTech's contribution to financial inclusion and service delivery efficiency.
4. Identify key challenges, including regulatory and infrastructural barriers.
5. Provide recommendations for sustainable integration of FinTech into mainstream finance.

Methodology

A mixed-methods approach was used. Primary data was gathered via surveys and interviews with stakeholders including FinTech entrepreneurs, banking professionals, and consumers. Secondary data was drawn from RBI bulletins, industry reports (e.g., NASSCOM, McKinsey), and peer-reviewed journals. Quantitative indicators such as digital transaction volume, customer acquisition cost, and loan disbursement speed were evaluated alongside qualitative metrics like customer satisfaction and regulatory perception.

Key Findings

1. **Disruption and Collaboration:** FinTech startups are redefining financial services by offering faster, cheaper, and more customized solutions. However, many have moved toward collaboration models with banks via APIs and white-label solutions (RBI, 2022).
2. **Financial Inclusion:** FinTechs have significantly improved access to credit, payments, and insurance in underbanked segments. For example, platforms like Paytm and PhonePe have enabled millions to transact digitally, including in rural areas (Gupta & Dhingra, 2021).
3. **Innovation through Technology:** The use of AI, blockchain, and cloud computing has streamlined KYC, credit scoring, and fraud detection mechanisms. Startups such as Zerodha and Razorpay have been instrumental in democratizing investment and payments.
4. **Challenges:** FinTechs face barriers such as cyber threats, funding crunches, and lack of clarity in regulatory compliance (World Bank, 2022). Smaller firms particularly struggle with scalability and customer trust.
5. **Policy and Regulation:** The RBI's regulatory sandbox and SEBI's innovation hubs have facilitated experimentation. Yet, a cohesive national FinTech policy is still evolving (KPMG, 2022).

Conclusion

FinTech startups have played a transformational role in making India's financial services sector more inclusive, agile, and consumer-focused. However, their success is contingent upon regulatory clarity, robust infrastructure, and sustained investor confidence. This study underscores the need for a dynamic policy environment that supports innovation without compromising consumer protection and financial stability. If nurtured properly, Indian FinTechs can serve as a blueprint for emerging economies aiming to digitize their financial services ecosystem.

Keywords: *FinTech, Financial Technology, Financial Inclusion, Digital Banking, Startups, Financial Services, India, Regulatory Framework, Innovation, Digital Payments, Financial Disruption, Financial Sector Reforms, Technology Adoption, RBI, Financial Ecosystem.*

References

1. Arner, D. W., Barberis, J. N., & Buckley, R. P. (2015). *The evolution of Fintech: A new post-crisis paradigm?* Georgetown Journal of International Law, 47(4), 1271–1319.

2. Gomber, P., Koch, J. A., & Siering, M. (2018). *Digital Finance and FinTech: Current research and future research directions*. Journal of Business Economics, 87(5), 537–580. <https://doi.org/10.1007/s11573-017-0852-x>
3. Gupta, M., & Dhingra, V. (2021). *FinTech and financial inclusion: Evidence from India*. Journal of Risk and Financial Management, 14(6), 277. <https://doi.org/10.3390/jrfm14060277>
4. Invest India. (2023). *FinTech industry in India: Market overview*. <https://www.investindia.gov.in/sector/bfsi-fintech>
5. KPMG. (2022). *Pulse of FinTech H2 2022: Global trends and analysis*. <https://home.kpmg/xx/en/home/insights/2022/02/pulse-of-fintech-h2-2022.html>
6. Narula, S. A., & Reddy, K. P. (2020). *Barriers to FinTech adoption in India: An integrated DEMATEL–AHP approach*. Journal of Modelling in Management, 15(3), 991–1010.
7. PwC. (2021). *Redrawing the lines: FinTech's growing influence on financial services*. <https://www.pwc.com/gx/en/industries/financial-services/publications/fintech.html>
8. Reserve Bank of India. (2022). *Report on Trends and Progress of Banking in India 2021-22*. <https://www.rbi.org.in/Scripts/AnnualPublications.aspx?head=Trends+and+Progress+of+Banking+in+India>
9. World Bank. (2022). *India's digital transformation and financial inclusion: Challenges and way forward*. <https://www.worldbank.org/en/news/feature/2022/04/01/india-financial-inclusion>

Introduction

Creating a safe work environment for employees and establishing well-defined whistleblowing mechanisms are crucial for sustaining ethical and responsible practices in any organization. 'Whistleblowing' indicates employees reporting observed wrongdoing or uncovering unethical or illegal activities to promote transparency to internal (e.g., compliance officers, HR departments) or/and external parties with the intent to safeguard organizational integrity, public trust, and regulatory compliance (Near & Miceli, 1985). It serves as a critical accountability mechanism that helps organizations in identifying and rectifying wrongdoing before it escalates into legal, financial, or reputational harm (Miceli et al., 2008). Employees tend to remain silent due to lack of anonymity or confidentiality, fear of retaliation, distrust in reporting systems, or cultural pressures that discourage speaking up (Rehg et al., 2008; Park & Blenkinsopp, 2009). This study develops a multi-level framework linking individual attributes, organisational culture and practices, and external (legal/social) conditions to contribute towards building safe and ethical workplaces, and protect and encourage whistleblowing behaviour through defined mechanisms.

Purpose of the Study

The study has three interrelated aims:

1. Integrate the dispersed factors - Individual-level, Organization-level and External (Social and Legal), that influence whistleblowing behaviour in the workplace, into a coherent model explaining variation in employees' intentions to report and actual reporting.
2. Assess the interactive effects of **Individual-level factors** (Personal Values & Ethics, Personality traits (Conscientiousness, Neuroticism), Demographic Characteristics; **Organization-level factors** (Perceived peer pressure, Leadership commitment, Reporting mechanisms, Non-retaliation policies, Ethics training; and **External factors** (Legal provisions, Socio-cultural norms).
3. Generate evidence-based recommendations for building and sustaining a non-retaliatory speak-up culture.

Theoretical Background

Research suggests that fostering a safe and supportive workplace environment through strong ethical leadership, non-retaliation policies, and accessible reporting channels significantly increases the likelihood of whistleblowing (Kaptein, 2011; Zhuang, Thomas, & Miller, 2005). Promoting whistleblowing not only protects the organization from reputational and legal damage but also enhances

¹ Ph.D. Scholar, Amity Business School, Amity University Kolkata

² *Associate Professor, Amity Business School, Amity University Kolkata (Correspondent)

³ Assistant Professor, Amity Business School, Amity University Kolkata

internal trust and morale by demonstrating a commitment to justice and accountability (*Jacobs and Karmoker (2025)*). At the organisational level, ethical climate and leadership strongly shape psychological safety. Employees are more likely to report when leaders demonstrate commitment, accountability, and follow-through. Peer pressure can either suppress or enable speaking up depending on group norms (*Olusegun (2024)*). Formal non-retaliation policies, confidential reporting channels, hotlines, and training/awareness programmes increase perceived efficacy and safety of reporting when they are credible and well-communicated (*Hannah et al., 2011*).

Moral identity and personal values can motivate pro-social reporting (*Li et al., 2023*); while self-regarding traits such as neuroticism may dampen concern for organisational welfare (*Kasalak (2019)*); conscientiousness often predicts rule-consistent behaviour (*Priesemuth and Schminke (2024)*). Demographic patterns of the employees like tenure, hierarchical level, gender, and age, have yielded mixed results regarding their behaviour in toxic work situations, suggesting context moderates their influence (*Kasalak (2019)*; *Priesemuth and Schminke (2024)*).

Externally, legal protections, regulatory mandates, professional standards, industry watchdogs, and media scrutiny influence both organisational responses and employee risk calculations (*Bamberger, 2006*; *Chalouat et al., 2019*). Strong statutory protection reduces expected personal cost and can normalise whistleblowing as a civic duty (*Santos and Larasati, 2025*).

Methodology

This study adopts a multi-level framework to understand whistleblowing behavior in the workplace, as a result of the interplay of the following factors that collectively shapes an employee's decision to report wrongdoing.

Individual-level factors (Personal Values & Ethics, Personality traits - Conscientiousness, Neuroticism, Demographic Characteristics)

Organization-level factors (Perceived peer pressure, Leadership commitment, Reporting mechanisms, Non-retaliation policies, Ethics training)

External factors (Legal provisions, Socio-cultural norms)

An explanatory sequential mixed-methods design is proposed:

Phase 1 – Qualitative Exploration: Semi-structured interviews and focus groups with employees, compliance officers, and HR leaders across multiple organisations to surface context-specific deterrents, enablers, and language used for speaking up. Interview coding will refine construct definitions (e.g., how peer pressure manifests; credibility of non-retaliation assurances).

Phase 2 – Survey Study: A multi-industry employee survey measuring (a) personal ethics/value orientation, (b) personality markers (conscientiousness & neuroticism scales), (c) demographic variables, (d) perceived organisational culture & leadership commitment, (e) perceived peer climate, (f) awareness and trust in reporting mechanisms, (g) perceived legal protection, and (h) whistleblowing intention and past behaviour.

Phase 3 – Analysis: Structural equation modelling (SEM) will test direct, mediated, and moderated paths. Multi-group analyses will explore whether legal regime strength or industry regulation changes relationships. Where data structure permits (employees nested in organisations), multilevel modelling (HLM) will partition within- versus between-organisation variance.

Analysis and Findings

Based on the conceptual model and preliminary qualitative insights, we expect:

- Personal ethics/values and conscientiousness to positively predict whistleblowing intention; neuroticism to negatively predict it.
- The effect of individual drivers is amplified in supportive cultures; employees high in moral values are most likely to report when they also perceive credible non-retaliation and leadership backing.
- Perceived peer pressure to conform to suppress reporting unless counterbalanced by strong formal protections.
- Training and awareness programmes to operate indirectly by increasing knowledge of channels and confidence that reports are taken seriously.
- Legal protection to moderate the retaliation calculus, strengthening the link between intention and actual reporting behaviour.

Empirical results will specify effect sizes, mediating pathways (e.g., psychological safety), and the proportion of variance explained at each level.

Practical Implications

Organisations seeking a safe work environment should:

- Embed and publicise clear non-retaliation policies backed by visible enforcement.
- Provide confidential, multi-channel reporting mechanisms (hotline, digital portal, ombuds person) and close the loop with reporters.
- Invest in ethics training and awareness, emphasising real cases and leadership responses.
- Strengthen leadership accountability: senior managers must model responsiveness and protect reporters.
- Monitor peer climate via periodic culture audits to detect silencing norms.
- Align internal policies with external legal protections and, where statutory coverage is weak, offer contractual or insurance-based safeguards.

Originality and Value

This study advances whistleblowing research by integrating individual, organisational, and external determinants in a single empirically testable framework rather than treating them in isolation. It distinguishes intention versus enacted reporting and models how policy credibility and legal context condition that translation. It incorporates personality contrasts (conscientiousness versus neuroticism) rarely examined together in whistleblowing studies. Finally, it provides actionable diagnostics that practitioners can map onto compliance, HR, and risk-management systems.

Conclusion and Recommendations

Creating a true speak-up culture requires alignment across levels: ethically oriented individuals need psychologically safe workplaces, backed by reliable systems and credible external protections. Preliminary evidence and prior scholarship indicate that when leadership commitment, non-retaliation assurances, and accessible reporting channels converge, employees are more willing to surface misconduct early—reducing legal exposure and strengthening organisational integrity. We recommend that organisations (1) audit current whistleblowing infrastructure; (2) benchmark employee perceptions of safety; (3) reinforce policies with training and visible case outcomes; (4) partner with regulators or industry bodies to extend protections; and (5) include whistleblowing metrics in leadership performance evaluations.

Keywords: *Whistleblowing, Factors influencing Whistleblowing, Safe workplace parameters, Employee perception on safe workplace, Non-retaliatory work culture*

References:

1. Bamberger, K. A. (2006). Regulation as delegation: private firms, decisionmaking, and accountability in the administrative state. *Duke LJ*, 56, 377.
2. Chalouat, I., Carrión-Crespo, C., & Licata, M. (2019). Law and practice on protecting whistleblowers in the public and financial services sectors. *International Labour Organization, Working Papers*, 328, 1-61.
3. Hannah, S. T., Avolio, B. J., & Walumbwa, F. O. (2011). Relationships between authentic leadership, moral courage, and ethical and pro-social behaviors. *Business Ethics Quarterly*, 21(4), 555-578.
4. Jacobs, J. R., & Karmoker, B. (2025). Under Pressure: The Relationship Between Cultural Diversity, Peer Pressure & Free-Riding in Swedish Organizations.
5. Kaptein, M. (2011). From inaction to external whistleblowing: The influence of the ethical culture of organizations on employee responses to observed wrongdoing. *Journal of Business Ethics*, 98(3), 513–530. <https://doi.org/10.1007/s10551-010-0591-1>
6. Kasalak, G. (2019). Toxic Behaviors in Workplace: Examining the Effects of the Demographic Factors on Faculty Members' Perceptions of Organizational Toxicity. *International journal of Research in Education and Science*, 5(1), 272-282.
7. Li, R., Yang, F., & Zhu, X. (2023). The Janus face of grandiose narcissism in the service industry: Self-enhancement and self-protection. *Journal of Business Ethics*, 183(3), 909-927.
8. Miceli, M. P., Near, J. P., & Dworkin, T. M. (2008). *Whistle-blowing in organizations*. Routledge.
9. Near, J. P., & Miceli, M. P. (1985). Organizational dissidence: The case of whistle-blowing. *Journal of Business Ethics*, 4(1), 1–16. <https://doi.org/10.1007/BF00382668>
10. Olusegun, O. (2024). *Leaders' Responsiveness to creating ethical climate for whistleblowing and implicit retaliation in the public sector* (Doctoral dissertation, Walden University).
11. Park, H., & Blenkinsopp, J. (2009). Whistleblowing as planned behavior – A survey of South Korean police officers. *Journal of Business Ethics*, 85(4), 545–556. <https://doi.org/10.1007/s10551-008-9788-y>
12. Priesemuth, M., & Schminke, M. (2024). Toxic work climates: An integrative review and development of a new construct and theoretical framework. *Journal of Applied Psychology*, 109(9), 1355.
13. Santos, S., & Larasati, M. (2025). Whistleblowing Intentions of Accountants and Auditors: Evidence from the Philippines and Indonesia. *Salud, Ciencia y Tecnología-Serie de Conferencias*, (4), 40.
14. Zhuang, J., Thomas, S., & Miller, D. L. (2005). Examining culture's effect on whistle-blowing and peer reporting. *Business & society*, 44(4), 462-486.

Introduction

The rise of digital technologies has changed branding, pushing businesses to rethink their strategic goals and operations (Bartoli, 2022). Brands now touch every part of life, extending beyond traditional goods and services to include places, individuals, and even digital entities (Ianenko et al., 2023). This shift requires a deep understanding of how brands and consumers interact online (Pertiwi & Irwansyah, 2020). In the digital age, brands must navigate a complex network of platforms and tools, continuously creating new ideas to stay relevant to target audiences (Rialti et al., 2018). Traditional branding methods are being enhanced or replaced by innovative digital strategies, highlighting the need for businesses to adjust to the changing demands of the digital marketplace (Guan et al., 2023). Companies must understand and respond to the significant changes affecting the business landscape to maintain their competitive edge and ensure long-term success.

Literature Review

The development of branding from basic identification to advanced engagement strategies is well documented, stressing the rising significance of brand perception in competitive markets.

Branding has evolved from merely identifying products to a powerful tool that shapes corporate identity, prompting the creation of brands that inspire consumer participation in digital media (Ahmed et al., 2015). Digitalization empowers consumers to co-create brand stories and experiences, challenging traditional branding methods (Sharma et al., 2024). The idea of "self-branding" has gained traction, as individuals increasingly promote their personal or professional images, reflecting the commercialization of identity in the digital economy (Hu, 2021) (Khamis et al., 2016). This shift marks a move from passive consumption to active involvement, with consumers now central to shaping brand meaning and value (Méndez-Aparicio et al., 2020). The fierce competition in today's fast-changing business environment, along with shifting economic conditions, forces organizations to stand out in order to attract and keep customers, ensuring their relevance and survival (Abioro & Odunlami, 2021). Additionally, startups with limited resources must use innovative branding techniques to effectively reach a wider and more diverse audience, recognizing that digital branding is typically more cost-effective than traditional methods (Sharma et al., 2023). Social media platforms significantly enhance the ability to foster interaction, build loyalty, and turn customers into brand advocates. Brands must also value the skills and intellect of their employees (Zhang, 2022). Employer branding is becoming an essential long-term human resources strategy for attracting and retaining talented workers (Shabanabi & Kesavaraj, 2019). Thus, companies need to enhance their employer branding and improve their reputation as an employer (Shabanabi & Kesavaraj, 2019). A positive company image is crucial to attracting employees (Shabanabi & Kesavaraj, 2019).

¹ Assistant Professor, Marketing Management, Calcutta Business School

Digital Branding Strategies

The rise of digital platforms has changed branding strategies, making it necessary for businesses to adjust to the unique features of the online environment. Companies in this digital age must create and leverage digital strategies to build their brands (Dharmawan & Hendrayati, 2019). The growth of the Internet and electronic products enables brands to share information more quickly and directly (Li, 2021). Content marketing, search engine optimization, social media interaction, and data analysis are vital for brands wanting to create a strong online presence and meaningful relationships with their audiences (Gandini, 2015). A brand's image should reflect current trends, as this leads to improved brand value (Fu, 2022). Social media marketing stands out as one of the most effective strategies for achieving branding goals (Habibi et al., 2014). Through these platforms, companies can engage with customers, connect with loyal followers, and inspire them (Nazir et al., 2020).

Methodology

To thoroughly explore the different aspects of branding in the digital era, we used a mixed-methods approach that blended quantitative and qualitative research techniques. This strategy allowed us to gather a wide range of data for a detailed examination of the research questions. The quantitative phase involved a large survey distributed to a diverse group of consumers to assess their perceptions, attitudes, and behaviors regarding various brands on different digital platforms. The survey included established measures for brand awareness, brand image, brand trust, and brand loyalty, ensuring that the data was valid and reliable. We employed statistical methods, such as regression analysis and structural equation modeling, to find significant relationships among key variables and evaluate the overall impact of digital branding strategies on consumer behavior. For deeper insights into consumer-brand interactions, the qualitative phase consisted of in-depth interviews with a select group of participants. These interviewees represented various demographic backgrounds and levels of engagement with digital media, allowing us to comprehensively explore their experiences and opinions. We designed the interview protocol to gather detailed stories about their online interactions with brands, their views on brand authenticity, and their reasons for engaging with brands on social media.

Results

The quantitative analysis revealed a strong positive link between digital brand engagement and consumer loyalty.

Specifically, brands that actively engage with consumers through social media marketing see significant improvements in brand equity, notably in brand awareness and brand image (Godey et al., 2016). The results show that a solid digital marketing strategy leads to better brand recognition, increased sales, and enhanced customer engagement (Wan, 2023). Additionally, the qualitative data underscored the importance of authenticity and transparency in digital branding.

The findings from this study provide valuable insights into how branding is evolving in the digital era, highlighting the need to adjust strategies to meet the demands of the online environment. By combining branding with social media and online platforms, brands can boost online trust, foster positive attitudes, and create stronger emotional ties with customers, which enhances brand likability (Bhattacharya, 2023). Active online engagement allows brands to build more robust relationships, encourage loyalty, and support business growth. The study reveals that positive offline brand experiences can lead to favorable online interactions, suggesting that consumers are more willing to engage online if they have had good experiences with the brand in the physical world (Paramita et al., 2021). Moreover, the research highlights how brand trust acts as a mediator between creating value and brand loyalty, showing that trust is key in turning customer engagement into lasting brand support (Laroche et al., 2012). Also, findings suggest that brand community activities boost brand passion by fostering strong brand identification and social interactions. By including entertainment and interactivity in advertisements,

decision-makers can effectively grab customer attention and create a positive brand image (Ting et al., 2020).

The rise of digital technologies has marked a significant period for branding, requiring businesses to evolve and innovate to stay relevant and competitive. This study contributes valuable insights by providing evidence of how digital branding strategies influence consumer behavior and brand value (“A Study on the Impact of Social Media on Marketing a Brand,” 2023). The results offer practical advice for marketers looking to improve their digital branding and cultivate stronger ties with their audiences.

Social media can indeed increase brand awareness, allowing companies to connect with and motivate customers (Shojaee & Azman, 2013) (Alhaddad, 2015). Additionally, emotional connections with brands can enhance credibility and acceptance (Dwivedi et al., 2018). Positive online brand experiences significantly relate to customer satisfaction and loyalty (Mustafa et al., 2022). Brands that reflect a consumer's identity foster better interactions and retain customers from diverse backgrounds (Espuela et al., 2023). Digital marketing efforts can greatly improve customer advocacy, where happy customers promote products or brands through digital channels (Setiawan et al., 2022). Furthermore, when brands develop an appealing image, consumers often have positive attitudes toward them, leading to favorable discussions on social media.

Keywords: *brand equity, consumer behavior, digital branding, digital marketing, social media marketing*

References

1. A Study on the Impact of Social Media on Marketing a Brand. (2023). Trends in Finance and Economics, 1(4), 19. <https://doi.org/10.46632/tfe/1/4/3>
2. Abioro, M. A., & Odunlami, S. A. (2021). Implication of Product Branding on Customer Patronage in the Nigerian Consumer Goods Industry. Business Excellence and Management, 11(2), 5. <https://doi.org/10.24818/beman/2021.11.2-01>
3. Ahmed, R. R., Kumar, R., Baig, M. U., & Khan, M. (2015). Impact of Digital Media on Brand Loyalty and Brand Positioning. SSRN Electronic Journal. <https://doi.org/10.2139/ssrn.2708527>
4. Alhaddad, A. A. (2015). The Effect of Advertising Awareness on Brand Equity in Social Media. International Journal of E-Education, E-Business, E-Management and E-Learning, 5(2), 73. <https://doi.org/10.17706/ijeeee.2015.5.2.73-84>
5. Bartoli, C. (2022). Consumer self-concept and digitalization: what does this mean for brands? Italian Journal of Marketing, 2022(4), 419. <https://doi.org/10.1007/s43039-022-00059-8>
6. Bhattacharya, S. (2023). Hows and Whys That Lead to Online Brand Engagement. International Journal of Asian Business and Information Management, 14(1), 1. <https://doi.org/10.4018/ijabim.322388>
7. Dharmawan, F., & Hendrayati, H. (2019). Customer-based Brand Equity in the Digital Age: A Conceptual Approach. KnE Social Sciences, 3(13), 986. <https://doi.org/10.18502/kss.v3i13.4262>
8. Dwivedi, A., Johnson, L. W., Wilkie, D. C. H., & Gil, L. de A. (2018). Consumer Emotional Brand Attachment with Social Media Brands and Social Media Brand Equity. European Journal of Marketing, 53(6), 1176. <https://doi.org/10.1108/ejm-09-2016-0511>
9. Espuela, N. D., Paz, M. D. R., & Sevilla, C. (2023). Social networks and customer loyalty: review of loyalty keys and main social networks publications' characteristics. Frontiers in Psychology, 14. Frontiers Media. <https://doi.org/10.3389/fpsyg.2023.1286445>
10. Fu, L. (2022). A Brand Image Design Service Model Using Visual Communication Technology in the Context of Internationalization. Wireless Communications and Mobile Computing, 2022, 1. <https://doi.org/10.1155/2022/5922967>
11. Gandini, A. (2015). Digital work. Marketing Theory, 16(1), 123. <https://doi.org/10.1177/1470593115607942>
12. Godey, B., Manthiou, A., Pederzoli, D., Rokka, J., Aiello, G., Donvito, R., & Singh, R. (2016). Social media marketing efforts of luxury brands: influence on brand equity and consumer

- behavior. *Journal of Business Research*, 69(12), 5833. <https://doi.org/10.1016/j.jbusres.2016.04.181>
13. Guan, X., Wu, S., & Yin, S. (2023). Navigating the Digital Landscape: Innovative Strategies for Brand Communication Management. In *Advances in Social Science, Education and Humanities Research* (p. 117). https://doi.org/10.2991/978-2-38476-178-4_15
14. Habibi, M. R., Laroche, M., & Richard, M. (2014). The roles of brand community and community engagement in building brand trust on social media. *Computers in Human Behavior*, 37, 152. <https://doi.org/10.1016/j.chb.2014.04.016>
15. Hu, L. (2021). Self as Brand and Brand as Self: A 2x2 Dimension Conceptual Model of Self-Branding in the Digital Economy. *Journal of Internet Commerce*, 20(3), 355. <https://doi.org/10.1080/15332861.2021.1907170>
16. Ianenko, M., Ianenko, M., & Shevchuk, E. (2023). Innovative Promotion Technologies: Brand Management in the Digital Environment. *Platforms*, 1(1), 18. <https://doi.org/10.3390/platforms1010003>
17. Khamis, S., Ang, L., & Welling, R. (2016). Self-branding, ‘micro-celebrity’ and the rise of social media influencers. *Celebrity Studies*, 8(2), 191. <https://doi.org/10.1080/19392397.2016.1218292>
18. Laroche, M., Habibi, M. R., Richard, M., & Sankaranarayanan, R. (2012). The effects of social media-based brand communities on brand community markers, value creation practices, brand trust, and brand loyalty. *Computers in Human Behavior*, 28(5), 1755. <https://doi.org/10.1016/j.chb.2012.04.016>
19. Li, T. (2021). Analysis of Successful Approaches of Classic Luxury Brands’ Marketing Strategies Before and After the Digital Era. *Advances in Economics, Business and Management Research*. <https://doi.org/10.2991/aebmr.k.210803.083>
20. Méndez-Aparicio, M. D., Jiménez-Zarco, A. I., Izquierdo-Yusta, A., & Resino, J. J. B. (2020). Customer Experience and Satisfaction in Private Insurance Web Areas. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.581659>
21. Mustafa, K., Ahmad, F., Qaisar, M. N., Zada, S., Jamil, S., Anwer, N., Khawaja, K. F., Vega-Muñoz, A., Contreras-Barraza, N., Hamid, S. A. R., & Mariam, S. (2022). Brand Love: Role of Online Customer Experience, Value Co-creation, and Relationship Quality. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.897933>
22. Nazir, M., Tian, J., Hussain, I., Arshad, A., & Shad, M. A. (2020). Examining the Relationship Between Online Social Networking Sites’ Activities, Customers’ Brand Choice, and Brand Perception in Health-Related Businesses. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.546087>
23. Paramita, W., Nhu, H. B. C., Ngo, L. V., Tran, Q., & Gregory, G. (2021). Brand Experience and Consumers’ Social Interactive Engagement with Brand Pages: An Integrated Marketing Perspective. *Journal of Retailing and Consumer Services*, 62. 102611. <https://doi.org/10.1016/j.jretconser.2021.102611>
24. Pertiwi, F., & Irwansyah, I. (2020). Personal Branding Ria Ricis on Instagram. *Jurnal Penelitian Komunikasi*, 23(1). <https://doi.org/10.20422/jpk.v23i1.631>
25. Rialti, R., Caliendo, A., Zollo, L., & Ciappei, C. (2018). Co-creation Experiences in Social Media Brand Communities. *Spanish Journal of Marketing - ESIC*, 22(2), 122. <https://doi.org/10.1108/sjme-03-2018-0011>
26. Setiawan, A. I., Hendraningsih, A. P., Rahayu, S., & Dewi, A. S. (2022). The Role of Digital Marketing Strategies in E-Advocacy: A Culinary Business Breakthrough to Counter the COVID-19 Pandemic. *Journal of Indonesian Economy and Business*, 37(2), 201. <https://doi.org/10.22146/jieb.v37i2.3995>
27. Shabanabi, P., & Kesavaraj, G. (2019). Employer Branding: A Literature Survey. *International Journal of Engineering and Management Research*, 9(2), 141. <https://doi.org/10.31033/ijemr.9.2.18>

28. Sharma, A., Sharma, B. K., Rajput, S., Mehra, A., & Gulati, U. (2023). Digital Branding Adoption by Specialty Eatery Start-ups in the Post-Pandemic Environment in India. *Cogent Business & Management*, 10(1). <https://doi.org/10.1080/23311975.2023.2196043>
29. Sharma, D., Yadav, N., Dwivedi, Y. K., & Giannakis, M. (2024). Digital Transformation of Pipeline Firms through Platformization. *International Journal of Electronic Commerce*, 28(2), 186. <https://doi.org/10.1080/10864415.2024.2332047>
30. Shojaee, S., & Azman, A. (2013). An Evaluation of Factors Affecting Brand Awareness in the Context of Social Media in Malaysia. *Asian Social Science*, 9(17). <https://doi.org/10.5539/ass.v9n17p72>
31. Ting, D. H., Abbasi, A. Z., & Ahmed, S. (2020). Examining the Mediating Role of Social Interactivity Between Customer Engagement and Brand Loyalty. *Asia Pacific Journal of Marketing and Logistics*, 33(5), 1139. <https://doi.org/10.1108/apjml-10-2019-0576>
32. Wan, Y. (2023). Investigating the Impact and Effectiveness of Digital Marketing on Brand Awareness, Sales, and Customer Engagement. *Advances in Economics, Management and Political Sciences*, 51(1), 146. <https://doi.org/10.54254/2754-1169/51/20230651>
33. Zhang, W. (2022). Impact of Organizational Brand-Building Strategies on Organizational Brand Equity: A Moderating Role of Brand-Oriented Leadership. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.919054>

Introduction

Meta storytelling is one of the crucial aspects in the field of narratives where a story reflects on itself as a story. This is a technique of storytelling in which self-awareness is applied to understand the phenomena. This is also considered as meta-narratives. Considering different web series on different OTT platforms, meta storytelling can be described as a process where it mainly breaks the fourth wall by allowing characters to directly communicate with the viewers and indirectly acknowledge them as well (Arias López et al., 2023). This study focuses on *Made in Heaven*, a popular web series streaming on Amazon Prime for understanding the narrative reflexivity as well as social commentary considering the meta storytelling in an effective manner.

Literature review

Concept of Narrative reflexivity

It is mainly a technique of storytelling in which the narrator or the storyteller focuses on the expectation of the audience by reflecting on the narrator's own story. In this regard, it has been identified from the study of Yacavone (2021) that it helps in shaping the meaning of a story in a significant manner. The narrative reflexivity is also effective to understand the process of the construction of a story. In the case of web series, the narrative reflexivity helps to understand the ideology behind the story to meet the expectation of the audience. Layered storytelling as well as ironic narration also effectively helps to portray the characters and theme of the story.

Concept of social commentary:

Social commentary is one type of intentional use of different narrative elements like plot, symbols, characters and dialogues for reflecting upon the social values and norms. Additionally, it is also used for criticising injustice in the society through visual approaches. Social commentary is used in web series as well as movies for portraying cultural products to engage viewers with the issues happening in the real world (Gowri et al., 2022). It is also a process of embedding ideological critique within a social product.

Relation between narrative reflexivity and meta storytelling:

Meta storytelling and narrative reflexivity are correlated to each other considering the digital storytelling and contemporary media industry. From the study of Yang (2023), it can be articulated that narrative reflexivity helps to shape the self-aware narrative through visual elements. It is basically a conscious reflection within the narrative on its own process of forming structure, convention as well as process of storytelling. It mainly breaks the fourth wall and reflects the narration on a collective note by drawing attention to the role of story narrator or the perception of the audience. On the contrary, the meta storytelling highlights the process or technique of storytelling itself considering the narrative approaches.

¹ Assistant Professor, NSHM Media School, NSHM College of Management & Technology

² Visiting Research Fellow, Bath Business School, Bath Spa University, UK & Dean and Professor, NSHM Media School, NSHM College of Management & Technology, India

It refers to stories within stories and a thematic description of the approach of storytelling (Jones, 2023). If both are used together, narrative reflexivity becomes a process within the meta storytelling for questioning authenticity, reality and the social constructs by making the narrative as a critique and commentary of social issues.

Genette influential theory:

Applying Genette's influential theory in this study helps to understand the importance of narrative levels of the web series named *Made in Heaven*. The concept of narration as the indispensable part of description is aligned with the process of storytelling in the web series by reflecting on the social aspects (Qiuahua, 2024).

Purpose of the study

The current purpose of this study is to analyse the process of storytelling in Hindi Web series named *Made in Heaven* streaming on Amazon Prime considering the meta storytelling. In this context, it can be said that this series employs the technique of meta storytelling for engaging in narrative reflexivity as well as delivering social commentary on modern Indian society (Herrada Valverde et al., 2025). This study sheds light on the socially conscious media text for reflecting the comments on social norms associated with gender, caste, sexuality, tradition, and class.

Research gap

From the previous literature, it has been identified that meta storytelling considering the narrative reflexivity as well as social commentary is not discussed in an in-depth manner. So this study focuses on the meta storytelling in *Made in Heaven*.

Research Methodology

The current study has focused on the qualitative method to meet the research purpose. Interpretivism philosophy is used in this study for generating an in-depth comprehension about the meta storytelling through the *Made in Heaven* series on Amazon Prime. In addition to this inductive approach is followed in this research for analysing the qualitative data. It can be stated that with the help of an inductive approach, observation of the phenomenon can be done. In this regard, the research explains how the series *Made in Heaven* comments and critiques societal norms related to marriage, hypocrisy and class and so on. This study concentrates both season 1 and season 2 of the mentioned web series to understand the narrative reflexivity and social commentary based on the meta story telling. Here, the researcher has decided to conduct a content analysis. Each episode of this web series is studied and analysed for understanding the meta storytelling considering the social commentary and narrative reflexivity. The researcher has chosen purposive sampling for conducting the content analysis. Total 9 episodes from season 1 and 7 episodes from season 2 are considered here. So, the total sample size is 16 episodes. The unit of analysis of this study are narratives, characters, themes, visual symbols such as costume, set design etc and dialogues.

Analysis and findings

Made in Heaven, created by Zoya Akhtar and Reema Kagti explains a story of a wedding planning agency which is Delhi-based (*Made in Heaven*, 2019). In the story, socio-cultural contradictions in Indian society are clearly seen. Meta storytelling as well as narrative reflexivity are shown in this web series as certain tools for social commentary. Each episode of the mentioned web series is a self-contained story which reflects the meta storytelling. The episodes explore different themes such as sexuality, caste, gender, class and patriarchy. The wedding shown in the web series acts as a microcosm of Indian society (*Made in Heaven*, 2019). The dramatic resolution contrasts with or reflects on personal dilemmas of the

protagonist. It mainly has created a reflexive loop of storytelling by encouraging the audience in questioning the performativity and authenticity of the personal choices and societal rituals.

Boundaries between the political and personal aspects blur furthermore in the second season of the web series as the narrative reflexivity is more apparent here. A character named Karan's struggle with the queer identity as well as legal oppression is the social commentary who tells the story in Indian society (Made in Heaven, 2019). The moral conflict of Tara (another character) points towards the self-awareness of the narrative considering the betrayal, ambition and feminism. In the large social script, each character of this web series reflects on their roles by contradicting the glamorous aspect of Indian wedding.

Application of visual symbols such as cameras as well as mirrors and the use of voice over increase the self-referential tone in the web series. Various intertextual references such as cultural artifacts and news clippings are also helpful to enhance the same (Made in Heaven, 2019). By incorporating flashbacks, the web series uses non-linear narration which portrays the meta storytelling. Through layered narration, this web series critiques the curated and aspirational image of urban India. Amazon Prime streams a socially conscious meta storytelling which challenges the dominant narratives around class, morality, gender and sexuality.

Practical implications

This study portrays that the OTT platforms like Amazon Prime which cater to a vast audience in the digital age can significantly use meta storytelling for addressing gender and cultural bias through narrative reflexivity. Moreover, this study has the scope to identify the preference of the audience in terms of content which combines socio-cultural reflection and entertainment.

Significance of the study

This study is quite significant because it explains how narrative reflexivity through meta storytelling reshape the story for the audience. Additionally, this study has a significant contribution in the field of research as it reveals how meta storytelling becomes a tool for social critique.

Conclusion

It can be concluded that the aforesaid web series is the instance of cultural text which engages the audience by reflecting on societal structure that is quite deeply rooted. Meta storytelling in the OTT platform like Amazon Prime is one of the transformative shifts in narrative practice. However, there is a possibility to evolve the digital storytelling, so meta storytelling functions as a space for critical discourse and creative innovation. This research has focused on the role of web series like Made in Heaven as a mirror to contemporary society.

Keywords: *Meta Storytelling, Narrative Reflexivity, Made in Heaven, Social Commentary, Social Critique*

Reference:

1. Arias López, B. E., Andrä, C., & Bliesemann de Guevara, B. (2023). Reflexivity in research teams through narrative practice and textile-making. *Qualitative Research*, 23(2), 306-312.
2. Gowri, S., Surendran, R., Divya Bharathi, M., & Jabez, J. (2022, March). Improved sentimental analysis to the movie reviews using naive bayes classifier. In *2022 International Conference on Electronics and Renewable Systems (ICEARS)* (pp. 1831-1836). IEEE.

3. Herrada Valverde, G., Herrada Valverde, R. I., & Peña Acuña, B. (2025). Cognition and meta-learning through storytelling in educational technology. *International Journal of Educational Research and Innovation*, (24), 1-18.
4. Jones, S. M. (2021). *Improving collection understanding for web archives with storytelling: shining light into dark and stormy archives*.
5. Made in Heaven (2019), Season 1 and season 2, Retrieved from: <https://www.primevideo.com/detail/Made-In-Heaven/0JP36WERGLAJLNET3SZS9XTXJ1>
6. Qiuhua, X. (2024). A Study on Narrative Time in Sunday in August under Genette's Narrative Theory. *International Journal of Linguistics, Literature & Translation*, 7(6).
7. Yacavone, D. (2021). Recursive reflections: Types, modes and forms of cinematic reflexivity. *Metacinema: The Form and Content of Filmic Reference and Reflexivity*, 85-115.
8. Yang, S. (2023). Storytelling and user experience in the cultural metaverse. *Heliyon*, 9(4).

Introduction

The contemporary workplace is undergoing rapid transformations driven by globalization, digitization, and shifting generational expectations. At the heart of this evolution is Generation Z (Gen Z)—individuals born between 1997 and 2012—who are now transitioning from academic environments into professional careers. This transition is often fraught with challenges such as job uncertainty, performance pressure, work-life imbalance, and mental health struggles. Amidst these concerns, **Adversity Quotient (AQ)**—a psychological measure of an individual's ability to deal with adversities—has emerged as a critical yet underexplored component of employee well-being. Unlike IQ or EQ, AQ focuses on how well individuals cope with setbacks, adapt to change, and persevere under stress. This review paper investigates the rising importance of AQ for Gen Z as they move from academic to corporate life, especially in the context of promoting mental wellness in the workplace.

Selected Literatures

The conceptual foundation of **Adversity Quotient** was laid by **Paul G. Stoltz (1997)**, who introduced AQ as the “science of resilience.” He argued that AQ determines who gives up and who prevails in the face of adversity. Stoltz’s work opened the door for AQ to be recognized alongside IQ (Intelligence Quotient) and EQ (Emotional Quotient). Over time, several scholars have expanded on this framework.

Long (2003) applied AQ in corporate settings, demonstrating its predictive power in identifying leadership potential.

Chong (2007) investigated AQ among college students in Malaysia, suggesting it played a role in academic perseverance and dropout rates.

Rai and Sinha (2020) connected AQ with workplace adaptability and stress management, especially in high-pressure industries.

Nair and Menon (2022) examined the mental health of entry-level employees in India, showing that low AQ correlated with higher burnout and job dissatisfaction.

Despite these valuable contributions, limited studies focus on AQ as a bridge between educational preparation and workplace mental health—particularly for Gen Z. This gap underscores the need for a consolidated framework that blends AQ with mental well-being strategies in organizational contexts.

Purpose

The primary aim of this paper is to explore the significance of **Adversity Quotient** in enhancing mental wellness among Gen Z employees. It emphasizes the psychological and emotional challenges faced

¹ NSHM

during the transition from college to career and highlights AQ as a tool to mitigate those stressors. The review also traces the historical evolution of AQ as a concept, evaluates existing literature, and recommends strategic measures to foster resilience and well-being in professional environments. By consolidating prior research, this paper seeks to build a theoretical framework that positions AQ as a foundational component in Human Resource (HR) strategies for employee well-being.

Methodology

This study follows a **qualitative review methodology**, drawn from various articles, longitudinal studies, organizational reports, and psychological frameworks from the last 25 years. Literature was selected from different scholarly databases. The analysis adopts **Stoltz's CORE model**—Control, Ownership, Reach, and Endurance—as the primary theoretical framework to assess adversity management. Furthermore, the research utilizes the **Person-Environment Fit Theory** and **Job Demands-Resources (JD-R) Model** to interpret how AQ influences well-being outcomes in the workplace.

Analysis & Findings

The review identified the **transition phase from campus to corporate** as one of the most emotionally volatile periods for Gen Z. The sudden shift from flexible, personalized learning environments to rigid, performance-oriented workplace structures often cause cognitive dissonance and anxiety. Key findings include:

1. **AQ as a Buffer Against Burnout:** Studies show that individuals with high AQ are better at managing workplace stress, maintaining motivation, and handling criticism—factors that are strongly tied to mental well-being.
2. **Correlation Between AQ and Employee Engagement:** High-AQ employees display greater commitment, are more likely to seek feedback, and demonstrate a proactive approach to problem-solving.
3. **Gen Z's Unique Stressors:** Social media pressures, unrealistic career expectations, and fear of failure contribute to lower AQ scores among Gen Z compared to previous generations.
4. **Role of Educational Institutions:** Few universities incorporate resilience training into their curriculum, resulting in students entering the workforce without emotional readiness.
5. **Organizational Gaps:** Most HR wellness programs focus on surface-level interventions like counselling or yoga sessions but neglect the deeper psychological construct of AQ that can create lasting resilience.

Practical Implications

This paper offers actionable insights for HR professionals, educators, and organizational psychologists:

- **Embedding AQ in Onboarding and Training Programs:** Companies should assess AQ during recruitment and reinforce it through workshops and simulated adversity training.
- **AQ-Focused Coaching and Mentorship:** Managers and HR leaders can use AQ profiling to tailor coaching strategies and support employee development.
- **University-Corporate Collaboration:** Higher education institutions can collaborate with industries to develop pre-placement resilience modules, preparing students for real-world challenges.

- **Integration into Performance Appraisals:** AQ metrics can be used as a qualitative performance indicator, helping HR evaluate long-term potential beyond technical competence.
- **Mental Health Policy Design:** AQ-informed strategies can help create holistic wellness policies that include emotional strength-building, not just reactive mental health solutions.

Originality

This paper presents a **novel intersection of AQ theory, Gen Z psychology, and HR well-being strategies**, offering a multi-dimensional approach to a growing workplace concern. While earlier studies focused on AQ's application in academic or leadership contexts, this paper uniquely applies AQ as a lens to examine **Gen Z mental health in corporate settings**. It positions AQ not just as a personal trait but as a **strategic organizational capability** that can be developed, nurtured, and measured. This research is timely, considering the rising rates of workplace anxiety and disengagement among younger professionals, especially in the post-pandemic era.

Conclusion and Recommendations

The evolving workforce landscape demands more than academic excellence and emotional intelligence. In a time marked by uncertainty, disruption, and rapid change, **Adversity Quotient stands as a vital tool** in promoting resilience and sustaining mental wellness—especially for Gen Z employees making the leap from campus to corporate.

To conclude:

- Organizations must **institutionalize AQ development** as part of their mental wellness and talent management strategies.
- Higher education institutions should **embed AQ frameworks in student development programs**.
- Policymakers and HR leaders must move beyond reactive well-being solutions and focus on **building psychological immunity** in the workforce through structured AQ programs.

Recommendations include conducting more empirical studies on AQ development in early career stages, creating sector-specific AQ training models, and investing in cross-generational mentorships that enhance adversity handling skills.

Keywords: *Adversity Quotient, resilience in Gen Z, transition to workplace, stress at workplace and mental health in young professionals.*

References

- Chong, W. H. (2007). Adversity quotient and students' academic achievement in a university context. *Educational Psychology*, 27(3), 347–364.
- Nair, R., & Menon, M. (2022). Workplace mental health and resilience: The role of Adversity Quotient among Gen Z employees. *Indian Journal of Occupational Psychology*, 47(2), 89–103.
- Rai, A., & Sinha, P. (2020). Adversity Quotient and its relevance in employee stress management. *Journal of Organizational Psychology*, 20(1), 66–75.
- Stoltz, P. G. (1997). *Adversity Quotient: Turning Obstacles into Opportunities*. New York: John Wiley & Sons.
- Long, C. S. (2003). The relationship between adversity quotient and leadership success in a corporate setting. *Leadership and Organizational Development Journal*, 24(5), 293–298.

- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement. *Journal of Organizational Behavior*, 25(3), 293–315.

Introduction

India's financial sector is growing quickly, but participation isn't equal across all groups. Factors such as peer influence and gender gaps in financial literacy play a significant role. Women often face fewer opportunities due to lower financial literacy, while men tend to face higher financial risks. This study examines the interaction between peer pressure and gender differences in financial knowledge, exploring their combined impact on financial participation in India.

Social groups, colleagues and family influence financial decisions either by promoting prudent behaviour or enhancing behaviour that is not necessarily prudent. The study explores the interplay between peer influence and gender based financial literacy gaps to also comprehend their incidence on financial participation in India and thereby can facilitate understanding and potentials for enhancing financial inclusion strategies.

Although financial literacy programs exist, they often fail to close the gender gap due to social and cultural barriers. Additionally, the role of peers in financial decisions in India remains poorly understood. By examining these issues, the research aims to help policymakers and financial providers develop more effective strategies to promote financial inclusion.

The study focuses on different demographic groups, examines how peers influence their financial choices and investigates changes in financial behaviour following Budget 2025.

Review of literatures

A. Title - "Financial literacy: A systematic review and bibliometric analysis"

Authors - Kirti Goyal, Satish Kumar

Published in - 2021

Literature Review - Financial literacy is not uniform across the population, though financial education programs have been implemented still it hasn't been so effective due to various reasons.

B. Title - "Analysis of parental influence, peer influence, and media influence towards financial literacy at University of Indonesia students"

Authors - Devy Nurfajar Putri, Chandra Wijaya

¹ Student, Department of Management Studies, St. Xavier's College (Autonomous) Kolkata

² Assistant Professor, Department of Management Studies, St. Xavier's College (Autonomous) Kolkata

Published in - 2020

Literature Review - Students relied on peer influence and social media helped in financial awareness but it lacked the direct impact.

C. Title - "Peer effects in financial decision-making"

Authors - Ethan MJ Lieber, William Skimmy-horn

Published in - 2018

Literature Review - Investigated peer effects in financial decision making and how the financial decision of an individual is dependent on their social network.

D. Title - "Attitudinal factors, financial literacy, and stock market participation"

Authors - Sreeram Sivarama-krishnan, Mala Srivastava, Anupam Rastogi

Published in - 2017

Literature Review - Studied if attitudinal and financial literacy factors affect the participation in the Indian stock market.

Purpose

The purpose is to study the role of peer influence in financial decision making among Indians, the role of gender in financial behaviour after Budget 2025, the role of peer pressure in different income groups in terms of financial decision making, to check the shift in financial decisions of respondents after Budget 2025 and to study the gender based financial literacy gaps and their impact on financial participation. Identification of these objectives will take the study one step closer to a more profound understanding of the social and cultural forces behind financial engagement in India and therefore, to the development of financial policies and programs. It can also help us determine financial engagement and help in the development of better policies and interventions.

Research Methodology

Nature of Research - The nature of the research is Descriptive and Exploratory.

The descriptive aspect is providing a clear picture of how peer pressure influences financial decision-making and behavioural changes following Budget 2025.

Data Type - Primary data has been solely used for research

Data Collection Instruments - Primary data is collected through structured questionnaire targeting different demographic groups.

Sample Size - 200 respondents

Sample Area - The target population includes working professionals, students, self-employed individuals, homemakers and retired individuals across India.

Research Tool - Pie charts, Bar Graphs, Pivot Tables, Trend Charts have been used through platforms like Excel and SPSS.

Research Technique - Quantitative analysis using descriptive and inferential statistics has been used like T-Test, Anova and Chi-Square tests.

Research Plan - Conducting surveys, analysing data, interpreting findings, data collection, analysis and report writing. Software such as Excel and SPSS have been used for data analysis.

Analysis and Findings

Statistic	Value
t-statistic	2.45
P-Value	0.015

T-Test Interpretation:

The results show that the p-value is less than 0.05, hence there is a statistically significant difference in spending changes of males and females after Budget 2025. This proves that gender influences spending behaviour.

Hence, we can conclude that gender plays a significant role in Financial Behaviour post Budget 2025, with males spending more and females inclined towards savings.

Chi -Square Test Interpretation:

Since p value is less than 0.05, we reject the null hypothesis (H_0). This indicates a statistical significance of association between peer pressure and financial decisions.

Statistic	Value
Chi-Square	19.84586335
Degrees of Freedom	8
P-Value	0.010935199

Therefore, this leads to the conclusion that peer pressure exists and affects financial decision making.

Anova Test Interpretation:

Statistic	Value
F-statistic	3.35
P-Value	0.011

Since, the p-value is less than 0.05, we rejected the null hypothesis and accepted the alternate hypothesis i.e. individuals in different income groups experience different levels of peer pressure when discussing financial matters.

Graphs:

Graphs have been provided for all the demographic data and wherever it has been required.

Pivot Tables:

The tables show the following and have been interpreted in the paper - the shift in financial decision of respondents post Budget 2025, relationship between occupation and financial knowledge rating and relationship between occupation and peer influence.

Practical Implications

Findings can be used by financial institutions to create financial literacy programs that are gender sensitive and peer-based interventions strategies that would enhance financial inclusion. Insights might be used by the government and regulatory bodies to frame policy aimed at increasing financial literacy education, with a focus on the women, underserved groups. Statistical and qualitative techniques will enhance the financial literacy research. It fills the gap in the literature on how the effects of financial literacy depends on peer influence.

Originality of the study

This study is among the first to explore the interplay between peer pressure and gender-based financial literacy gaps combined, following India's Union Budget 2025 (latest fiscal policy event). It contributes original insights to behavioural finance in India by offering a fresh perspective on financial inclusion research and how demographic, social factors shape financial responses.

Conclusion

Peer Influence has strong Influence on Financial Decisions: The statistical analysis stated that there is a strong relationship between peer influence and financial behaviour changes after Budget 2025. All the individuals exposed to peer pressure have more likely adjusted their spending habits. Spending Behaviour Varied across Groups: There was a noticeable change in spending habits between different age groups and genders. There was a statistically significant difference in spending changes between male and females. The Effect of Peer Pressure was moderated by Financial Literacy: Students are most influenced by peer pressure in financial decision making and self-employed individuals are least influenced. Self-employed individuals show stronger financial literacy compared to students who have moderate financial knowledge hence they depended the least on peer influence.

Recommendations

Institutions should include Peer-led Financial Literacy campaigns. Develop workshops for Gender sensitive financial education. Include behavioural finance in academic curriculum. Including Financial Mentorship in schools and colleges would be quite beneficial for the youth. Choosing Financial Ambassadors to educate neighbourhoods including lower income groups. Integrating Digital Peer Influence Learning on fintech platforms. Providing Budget and policy explainers in local language for every citizen of India.

Keywords: *Peer Pressure, Behavioural Finance, Gender Gap in Financial Literacy, Financial Participation, Budget 2025*

References

1. Bönke, W., & Filipiak, U. (2012). Financial literacy, information flows, and caste affiliation: Empirical evidence from India. *Journal of Banking & Finance*, 36(12), 3399–3414. <https://doi.org/10.1016/j.jbankfin.2012.07.020>
2. Goyal, K., & Kumar, S. (2021). Financial literacy: A systematic review and bibliometric analysis. *International Journal of Consumer Studies*, 45(1), 80–105. <https://doi.org/10.1111/ijcs.12605>
3. Sivaramakrishnan, S., Srivastava, M., & Rastogi, A. (2017). Attitudinal factors, financial literacy, and stock market participation. *International Journal of Bank Marketing*, 35(5), 818–841. <https://doi.org/10.1108/IJBM-01-2016-0009>
4. Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*, 52(1), 5–44. <https://doi.org/10.1257/jel.52.1.5>
5. Agarwalla, S. K., Barua, S. K., Jacob, J., & Varma, J. R. (2015). Financial literacy among working young in urban India. *World Development*, 67, 101–109. <https://doi.org/10.1016/j.worlddev.2014.10.004>

Introduction

The Indian banking sector has experienced profound evolution over the past decade, marked by technological innovations, regulatory reforms, and shifting customer expectations. Public sector banks (PSBs), which constitute a significant share of the Indian financial landscape, play a crucial role in promoting financial inclusion, supporting economic development, and implementing government schemes. However, these institutions face the dual challenge of modernizing their operations while upholding their social mandate. The rapid advancement of digital banking technologies, such as mobile banking, online transactions, and fintech collaborations, has revolutionized the way banks interact with customers and deliver services. To remain competitive and relevant, PSBs have increasingly adopted digital solutions, aiming to enhance operational efficiency, reduce costs, and improve customer experience.

Despite these technological strides, PSBs encounter unique hurdles including legacy systems, bureaucratic structures, and risk management complexities. Balancing innovation with prudence and regulatory compliance remains a key concern. Additionally, customer-centricity is gaining prominence, urging PSBs to shift from traditional product-centric approaches to personalized and accessible services that meet diverse consumer needs. Strengthening risk management practices, especially in the face of emerging cyber threats and credit risks, is also vital for ensuring stability and trust.

This study explores the ongoing modernization of Indian PSBs, emphasizing their adoption of digital banking, customer-focused strategies, and risk management frameworks. By examining these aspects, the research aims to provide insights into how public sector banks can effectively navigate the digital era, enhance operational agility, and sustain their developmental objectives in a rapidly changing financial environment. Ultimately, the study seeks to contribute to a deeper understanding of the transformation processes that are shaping the future of India's public banking system.

Select Literatures:

The study draws on existing literature on banking modernization, digital transformation, and customer-centricity. Key studies have highlighted the importance of technology adoption, process re-engineering, and organizational culture in driving banking modernization (Berger, 2003; Boot, 2017). The study also draws on research on the Indian banking sector, including the challenges faced by PSBs in terms of non-performing assets, governance, and customer satisfaction (Bhide, 2017; Mohanty, 2019).

¹ Research Scholar (Department of Economics & Commerce), Adamas University and College Whole Time Teacher, The Bhawanipur Education Society College

² Research Scholar (Department of Economics & Commerce), Adamas University and College Whole Time Teacher, The Bhawanipur Education Society College

³ Associate Professor, Department of Management, School of Business, Adamas University

Purpose

The purpose of this study is to investigate the current state of modernization in Indian PSBs, identifying the drivers, challenges, and outcomes of their efforts to modernize. The study aims to provide insights into the strategies and practices adopted by PSBs to remain relevant in a rapidly changing banking landscape.

Methodology

The study employs a mixed-methods approach, combining both qualitative and quantitative data collection and analysis methods. A survey of PSB employees and customers will be conducted to gather data on their perceptions of modernization efforts. Additionally, case studies of select PSBs will be undertaken to examine their modernization strategies and practices in-depth.

Analysis & Findings

The study's findings suggest that Indian PSBs are making significant efforts to modernize, driven by technological advancements, changing customer expectations, and regulatory pressures. The adoption of digital banking channels, such as mobile banking and internet banking, has been a key focus area for PSBs. However, the study also identifies challenges, including legacy system constraints, talent acquisition and retention, and cybersecurity risks.

Practical Implications

The study's findings have practical implications for PSBs, policymakers, and regulators. The study highlights the need for PSBs to invest in digital infrastructure, develop customer-centric products and services, and enhance their risk management practices. Policymakers and regulators can use the study's findings to inform policies and regulations that support the modernization of PSBs.

Originality

This study contributes to the existing literature on banking modernization by providing a nuanced understanding of the challenges and opportunities faced by Indian PSBs. The study's mixed-methods approach and focus on PSBs provide a unique perspective on the modernization of the Indian banking sector.

Conclusion and Recommendations

The study concludes that Indian PSBs are making progress in modernizing, but face significant challenges in terms of technology adoption, customer-centricity, and risk management. The study recommends that PSBs prioritize digital transformation, invest in talent development, and enhance their risk management practices to remain competitive in a rapidly changing banking landscape.

Keywords: *Digital Banking, Risk Management, Core Banking System, Cyber Security, Banking Innovation, Digital Transformation, Financial Inclusion, Operational Efficiency, Public Sector Banks.*

References

1. Berger, A. N. (2003). The economic effects of technological progress: Evidence from the banking industry. *Journal of Money, Credit, and Banking*, 35(2), 141-176.
2. Bhide, M. (2017). Non-performing assets in Indian banks: A review. *Journal of Banking and Finance*, 75, 105-115.

3. Boot, A. W. A. (2017). The future of banking: Challenges and opportunities. *Journal of Financial Services Research*, 51(1), 1-13.
4. Mohanty, R. (2019). Customer satisfaction in Indian public sector banks: A study. *Journal of Services Research*, 19(1), 1-15.

Introduction

Immersion technologies like the metaverse, augmented reality, and virtual reality (VR) are changing the face of international travel. With a strong cultural and theological foundation, pilgrimage tourism is currently undergoing a digital revolution in which virtual sacred experiences can either replace or enhance conventional travel. In India, as rural pilgrimage sites like Baidyanath Dham (Jharkhand) and Shantiniketan (West Bengal) work to maintain local economies and conserve cultural heritage, the metaverse presents a novel way to boost tourist participation while tackling sustainability issues. In order to promote sustainable rural pilgrimage tourism in India, this study investigates the viability, perception, and sociocultural ramifications of using the metaverse.

The study's objectives

- To determine the level of knowledge and interest in virtual religious trips among rural communities and visitors.
- To assess stakeholders' adoption of immersive technologies and their level of digital preparedness.
- To determine the main determinants of pilgrimage satisfaction and ethical issues in virtual travel.
- To investigate the metaverse's potential for advancing environmentally friendly rural cultural tourism.

Methodology

A combination of methods was used. For the quantitative component, 200 participants including pilgrims, visitors, temple employees, and rural craftspeople were given formal questionnaires. The qualitative component comprised focus groups and semi-structured interviews with community stakeholders, tourism board representatives, and religious leaders.

Study Area

A rural area steeped in history, Shantiniketan, West Bengal, is well-known for both cultural tourism and Tagore's legacy. Jharkhand's Baidyanath Dham is a significant Hindu pilgrimage site with profound spiritual and rural meaning.

Tools

- 5-point Likert scales are used in structured questionnaires.
- conversations in focus groups.
- Field interviews.

¹ Research Scholar, JIS University, Assistant Professor, Asansol Engineering College

Both convenience and purposeful sampling methods were applied. The information was gathered in 2025 between March and May. Using SPSS 27.0, the data was analyzed with an emphasis on regression analysis, factor analysis (KMO & Bartlett's test, Rotated Component Matrix), reliability tests (Cronbach's Alpha), and descriptive statistics.

Findings

The mean level of respondents' acquaintance with immersive technology was 3.02. The greatest score was for cultural interest (Mean = 3.13), while the lowest score was for virtual sacred experiences (Mean = 2.97). With a mean score of 2.87, ethical concerns about digitizing sacred sites received a moderate rating. The scale requires improvement or item reorganization, as demonstrated by the low internal consistency given by Cronbach's Alpha = 0.012. KMO = 0.494, below the 0.6 cutoff. Bartlett's Test: Sig. = 0.461, df = 28, Chi-Square = 28.058.

Component 1: Strong emphasis on moral issues and community development.

Component 2: Experiences with the metaverse and cultural interaction.

proposes "Cultural Immersion" and "Digital Skepticism" as two hidden notions. The fact that 67% of respondents between the ages of 18 and 35 were familiar with immersive technology suggests that youth-focused treatments may be possible. The metaverse has the potential to be used as a conservation tool due to the strong interest in heritage preservation. There is potential for design and content enhancement, as seen by the neutral satisfaction level with the present digital pilgrimage experiences. Authenticity in ethics and spirituality became important issues, necessitating religious consultations and legislative changes.

Conclusion

The metaverse's revolutionary potential to support environmentally friendly rural pilgrimage tourism is highlighted by this study. To ensure successful implementation, however, technical, cultural, and ethical preparedness must coincide. Virtual holy excursions may preserve the integrity of sacred practices while democratizing access, lowering environmental impact, and providing rural people with alternate sources of income.

Future Scope

Creation of multilingual, regional VR pilgrimage applications. Digital tool training programs for temple employees and rural craftspeople. Policies that guarantee the digitization of sacred content in an ethical manner. Research that follow participants over time to see how virtual pilgrimages affect their spiritual health.

Keywords: *Immersion Technology, Digital Heritage, Sacred Journeys, Rural Culture, Virtual Tourism, and Metaverse*

References

1. Al-Azri, A. K., Jetty, E. R., & Ramachandran, N. (2024). Embracing metaverse towards sustainable tourism in Oman. *Journal of Ecohumanism*, 3(8). <https://ecohumanism.co.uk/joe/ecohumanism/article/view/6397>
2. Buhalis, D., Leung, D., & Lin, M. (2023). Metaverse as a disruptive technology revolutionising tourism management and marketing. *Tourism Management*, 97, 104724. <https://doi.org/10.1016/j.tourman.2023.104724>

3. Cheong, R., & Lee, H. (2021). The application of metaverse in the tourism sector: A case study of the Medieval Museum in Spain. *Sustainability*, 16(16), 6966. <https://doi.org/10.3390/su16166966>
4. Cheongju University, & Siena, W. D. (2024). Cultural tourism metaverse empowering rural revitalization. *Journal of Modern Social Sciences*. <https://www.atrpress.org/index.php/jmss/article/view/101>
5. Fazio, G., Fricano, S., & Pirrone, C. (2024). Evolutionary game dynamics in immersive cultural tourism. *arXiv preprint*. <https://arxiv.org/abs/2409.0672>

Introduction

The paper begins by contextualizing the concept of green finance in global and Indian perspectives. It explores the evolution of green finance, from its origins in climate-focused funds to its current form involving green bonds, ESG (Environmental, Social, and Governance) investing, and sustainable banking practices. It examines key regulatory and policy interventions by the Government of India, including the *National Action Plan on Climate Change (NAPCC)*, *India's Intended Nationally Determined Contributions (INDCs)* under the Paris Agreement, and the role of the *Reserve Bank of India* and *Securities and Exchange Board of India (SEBI)* in promoting green financial instruments. Green finance has emerged as a vital tool in facilitating sustainable economic growth by directing financial flows toward environmentally responsible and climate-resilient projects. This study explores the evolution, implementation, and effectiveness of green finance initiatives in India, a country facing the dual challenge of rapid economic development and environmental degradation.

Literature Review

- **Chattopadhyay (2024)** studied the green finance initiatives of six public sector banks in India and analyses them. These initiatives are also compared with major global public sector banks to identify the complications of implementation.
- **Akomea et.al. (2022)** concluded with that Green finances are of green securities, green investments, climate finance, carbon finance, green insurance, and green credit.
- **Ranjan et. Al. (2021)** indicated their study that while there have been improvements in public awareness and financing options in India, a reduction in asymmetric information through better information management systems and increased coordination amongst stakeholders could pave the way towards a greener and sustainable long term economic growth.
- In India, green financing holds immense potential **Rai et al. (2020)** and ORF (2023). Public sector banks can leverage international strategies, adapting them to suit the Indian context. For instance, adopting concessional interest rates as suggested by **IREDA (2016)** and exploring Green Bonds mentioned by the World Bank (2023) could prove beneficial. Challenges like greenwashing and limited financial literacy require addressing are also emphasized **Ghosh (2022)** and **RBI (2023)**.

Objective of the study

1. To discuss the SBI's green bonds and the Indian Renewable Energy Development Agency (IREDA), which have played instrumental roles in mobilizing green capital.
2. To examine the role of multilateral agencies like the World Bank and ADB in supporting India's green finance ambitions.

¹ Assistant Professor, Department of Commerce, Vidyanagar College

Research Methodology

The study uses a mixed approach involving qualitative analysis of policy documents and quantitative assessment of green finance flows, particularly focusing on green bond issuances, renewable energy investments, and green banking products between 2015 and 2024. Primary data from interviews with policymakers, financial experts, and industry leaders is complemented by secondary data sourced from reports by the World Bank, Climate Bonds Initiative, and Indian government databases.

Key findings

It indicates that while India has made significant progress—becoming one of the largest issuers of green bonds in emerging markets—there are persistent gaps. These include lack of uniform standards for green instruments, limited investor awareness, underdeveloped risk assessment frameworks for green projects, and insufficient private sector participation. Moreover, regional imbalances in green finance allocation, favoring urban over rural areas, highlight the need for inclusive financial planning. The research examines policy frameworks, institutional mechanisms, and financial instruments—such as green bonds, sustainability-linked loans, and ESG investments—that are driving India's green transition. Key government initiatives like the National Action Plan on Climate Change (NAPCC), the Green Climate Fund, and the RBI's inclusion of green finance in its priority lending framework are analyzed for their impact and limitations. The study also highlights the role of public-private partnerships, international collaborations, and technological innovation in scaling green finance. Through qualitative and quantitative analysis, this paper identifies gaps in current practices and suggests policy reforms and strategic interventions to strengthen India's green financial ecosystem. The findings underline that while progress has been made, significant challenges—such as regulatory clarity, risk assessment frameworks, and investor confidence—must be addressed to fully realize the potential of green finance in achieving India's sustainability goals.

Conclusion

It is concluded that for India to meet its net-zero emission targets by 2070, an integrated and scalable green finance strategy is imperative. This includes institutional reforms, fiscal incentives, development of green taxonomies, mandatory ESG disclosures, and greater international collaboration. The research underscores the need for robust public-private partnerships and capacity building to ensure that green finance becomes a mainstream component of India's financial ecosystem. This study also contributes to the growing body of literature on sustainable finance and provides a comprehensive overview of India's green finance architecture, offering insights that are relevant for policymakers, investors, academia, and environmental stakeholders aiming to align economic growth with ecological preservation.

Keywords: *Green Finance, Financial Instrument, Sustainable banking, financial planning.*

References

- Arendt, A., Matik, F., & Wagner, M. (2022). Green finance in China: Opportunities and challenges for European banks. *Journal of International Banking Law and Regulation*, 35(8), 225-235.
- Akomea-Frimpong, I., Adeabah, D., Ofori, D., & Tenakwah, E. J. (2022). A review of studies on green finance of banks, research gaps and future directions. *Journal of Sustainable Finance & Investment*, 12(4), 1241–1264.
- Bhatnagar, M., Taneja, S., & Özen, E. (2022). A wave of green start-ups in India—The study of green finance as a support system for sustainable entrepreneurship. *Green Finance*, 4(2), 253–273.
- Ghosh, A. (2022). Green finance in India: Challenges and opportunities. *Economic and Political Weekly*, 57(39), 22-26.
- IREDA. (2016). Transforming IREDA into India's first green bank.

- [.https://www.researchgate.net/publication/352030007_Green_Finance_in_India_Scope_and_Challenges](https://www.researchgate.net/publication/352030007_Green_Finance_in_India_Scope_and_Challenges)
- ORF. (2023). Financing India's Green Transition.
- Rai, S., Kumar, P., & Kumar, A. (2020). Green finance: Regulatory Interventions and Challenges in India. *Sustainability (Switzerland)*, 12(13), 5306.
- Chattopadhyay. P (2024), Green Finance for Sustainable Development in India, *International Journal for Novel Research and Development*, 9(2).

Introduction

The Indian economy has witnessed a transformative shift over the past decade, largely driven by the rapid evolution of Financial Technology (FinTech). This sector, encompassing digital payments, lending platforms, blockchain solutions, robo-advisory, and insurtech, has not only disrupted traditional financial services but has also acted as a catalyst for financial inclusion, economic efficiency, and innovation. This research explores the multifaceted impact of FinTech on the Indian economy, analyzing its contributions, challenges, and potential for sustainable growth.

Review of Literature

Claessens, Glaessner, & Klingebiel, (2019) in their study provided an overview of the fintech landscape and its impact on financial services. It highlights the potential benefits and risks associated with fintech innovations, including their impact on traditional financial institutions.

Dubey, (2019), discussed the role of Artificial Intelligence, Augmented Reality and Blockchain in Digital Banking. Currently, AR technology is having a vibrational impact in numerous industry sectors. From being deployed in healthcare, oil and gas construction, and retail as well as manufacturing, AR technologies are currently deployed to increase process efficiency.

Huang, Y., & Wang, J. (2019) analysed the impact of fintech on financial inclusion in China. It discusses the role of fintech platforms, such as mobile payment systems and peer-to-peer lending, in expanding access to financial services for underserved populations. This paper also discussed the potential risks and challenges associated with fintech innovations in the Chinese context.

Gomber, P., Koch, J. A., & Siering, M. (2017) discussed the various aspects of fintech, including crowdfunding, blockchain technology, and robo-advisors. This study analyzed the impact of fintech on traditional financial institutions, payment systems, and financial inclusion, and identify the key research gaps in the field. The authors concludes that fintech has the potential to transform the financial industry by improving efficiency, reducing costs, and enhancing financial inclusion.

Ghosh, S., & Sengupta, R. (2015) examined the impact of fintech on consumers and financial institutions. This study also analyzes the challenges faced by traditional financial institutions in adapting to the fintech revolution. The paper concludes that fintech innovations have significantly influenced consumer behavior, leading to increased convenience, efficiency, and access to financial services.

Objectives of the Study

The core objectives of the study are:

- To analyze the growth trajectory of FinTech in India.

¹ Assistant Professor (Stage-II) Department of Commerce, Vidyanagar College

- To assess the sector's impact on GDP, financial inclusion, and employment.
- To identify challenges and future opportunities for FinTech in India.

Research Methodology

This study adopts a mixed-method approach combining:

- **Quantitative analysis:** Secondary data from RBI, NPCI, NASSCOM, and World Bank reports on digital transactions, credit penetration, and sectoral GDP contributions.
- **Qualitative insights:** Expert interviews with FinTech founders, policymakers, and financial analysts.
- **Case studies:** Key players like Paytm, PhonePe, Razorpay, and LendingKart to understand sectoral innovation and scalability.

Key Findings

- **Financial Inclusion:** FinTech has significantly improved access to credit and financial services in rural and underserved areas, aided by mobile penetration, Aadhaar-enabled systems, and UPI. Over 450 million Jan Dhan accounts have been linked to digital services.
- **Digital Payment Ecosystem:** UPI transactions crossed ₹18 lakh crore in monthly volume (as of mid-2025), showcasing the shift from cash-based to digital economies.
- **MSME Empowerment:** Platforms providing alternative credit scoring and digital lending have bridged financing gaps for Micro, Small, and Medium Enterprises, contributing to job creation and entrepreneurship.
- **GDP Contribution:** The FinTech sector is projected to contribute over \$150 billion to India's GDP by 2030, driven by innovation, foreign direct investment, and public-private partnerships.
- **Regulatory Landscape:** While progressive initiatives like IndiaStack and RBI's digital currency (CBDC) pilot projects have fostered innovation, regulatory ambiguity around crypto-assets, data privacy, and cybersecurity remains a concern.

Challenges:

Despite rapid progress, challenges include:

- Low digital literacy in rural areas.
- Cybersecurity threats and data breaches.
- Regulatory inconsistencies and lack of a unified FinTech policy.
- Dependence on urban markets for scale and profitability.

Conclusion

FinTech in India is not merely a sector but a socio-economic enabler. It has reshaped consumer behavior, democratized finance, and enhanced economic resilience, especially post-COVID-19. The paper

concludes that with appropriate policy frameworks, investment in digital infrastructure, and continuous innovation, FinTech can significantly contribute to achieving India's \$5 trillion economy vision. Policy recommendations include the creation of a national FinTech sandbox, strengthening digital literacy programs, and promoting cross-border FinTech collaboration.

Keywords: *FinTech, Digital Payments, GDP, Digital Currency, Credit Penetration, Cyber Security.*

References

1. Ajzen, I. (1991). The Impact of Fintech and Digital Financial Services on Financial Inclusion in India. *Journal of Fintech Research*, 16(2), 122-134.
2. Chouhan, R., Anagnostopoulos, C., Omojolaibi, J., Schuetz, S., & Venkatesh, V. (2021). Technology-based Banking: A Catalyst for Financial Inclusion in India. *International Journal of Finance and Banking Studies*, 9(4), 45-56.
3. Khan, S. (2012). Microcredits for Financial Inclusion in India. *Journal of Economic Development*, 27(3), 78-91.
4. Mader, B. (2018). Inclusive Financial Advances and Poverty Alleviation: A Case Study of India. *World Development*, 36(5), 789-802.
5. Claessens, S., & Van Horen, N. (2018). Foreign banks and trade. *Journal of Financial*
6. *Intermediation*, 45, 100856
7. Gomber, P., Koch, J. A., & Siering, M. (2017). Digital Finance and FinTech: current research and future research directions. *Journal of Business Economics*, 87, 537-580.
8. Chouhan, R., Anagnostopoulos, C., Omojolaibi, J., Schuetz, S., & Venkatesh, V. (2021). Technology-based Banking: A Catalyst for Financial Inclusion in India. *International Journal of Finance and Banking Studies*, 9(4), 45-56.
9. Goldstein, I., Jiang, W., & Karolyi, G. A. (2019). To FinTech and beyond. *The Review of Financial Studies*, 32(5), 1647-1661.
10. Dubey, v. (2019). FinTech Innovations in Digital Banking. *International Journal on Engineering Research and Technology*, 8(10).

Introduction

The rapid growth of digital technology and social media platforms has redefined the way news is gathered, produced, and shared. Among the most prominent developments is *citizen journalism*, also referred to as civic or public journalism. Enabled by the widespread availability of smartphones, internet connectivity, and social media platforms like Facebook, citizen journalism allows individuals to report on events in real time. In India, where media consumption habits are shifting rapidly, this trend has brought about significant implications for mainstream journalism, both in terms of opportunities and challenges. Citizen journalism challenges the dominance of professional newsrooms by decentralising information flow and enabling diverse voices to participate in public discourse. However, concerns over accuracy, credibility, ethical standards, and the potential for misinformation persist. While social media platforms similar to Facebook provide unprecedented reach and immediacy, they also create an environment where the absence of editorial oversight can undermine the reliability of news content.

Despite the visible rise of citizen journalism in India, especially through Facebook, there is limited scholarly work exploring its credibility, ethical implications, and relationship with mainstream journalism over a sustained period. Much of the existing literature is Western-centric, leaving a gap in understanding the Indian context. It remains unclear whether citizen journalism is seen by Indian audiences and professional journalists as a trustworthy and a complementary tool for information dissemination. This research examines the role of social media in shaping citizen journalism in India, with particular focus on its interaction with mainstream media. It seeks to understand whether citizen journalism complements professional journalism, competes with it, or introduces a hybrid model that reshapes the news ecosystem.

Literature Review

A review of literature is an essential component of every research work. Reviewing previous studies sheds light on research issues that haven't been discussed or taken into consideration before. The review of the literature has been conducted thematically and the themes are:

- Understanding Public/ Civic/Citizen Journalism
- Credibility and Trustworthiness
- Citizen Journalism in Practice

The Idea of Citizen Journalism: Citizen Journalism is also known as ‘public’, ‘participatory’, ‘democratic’, ‘guerrilla’ or ‘street journalism’.” (Baase, 2008; Case, 2007 & Tamara, 2007). “The act of a citizen or group of citizens, participating and playing an active role in the process of collecting, reporting, analysing and disseminating news and information can be termed as Participatory Journalism.” (Bowman & Willis, 2003). The social media-driven citizen journalism threatens the hegemony of

¹ PhD Scholar, Maulana Abul Kalam Azad University of Technology, West Bengal, Asst. Professor, iLEAD

² Associate Professor, Future Institute of Engineering and Management

traditional journalism and promotes community engagement, inclusivity, and public participation. The change forces mainstream media to embrace digital and interactive techniques, extending the responsibilities of journalists to include both traditional reporting and active participation on social media. (Pareek, 2018)

Credibility and Trustworthiness: Study claimed that the audience who have higher faith in mainstream media also give them more credibility. The believability assessment of the news piece was greater among participants who were more interested in its subject. This suggests that the material's perceived legitimacy may increase due to audience engagement. (Blaagaard, 2018). While citizen journalism can offer alternate viewpoints and refute false information in the mainstream media, it can also contribute to "populist news agendas" that prioritize drama above factual reporting. This piece considers how citizen journalism affects risk communication and the established news system. (Mythen, 2010). Although citizen reporting has increased thanks to social media, professional journalists still frequently control the narrative. Wall highlights the need for more research on its sustainability, inclusivity, and ethical aspects in his conclusion, which identifies research gaps. (Wall, 2015)

Citizen Journalism in Practice: Websites dedicated to citizen journalism are an important development in the media landscape, offering venues for locally produced news and bridging the gaps left by traditional newspaper reporting. (Stephen Lacy, Margaret Duffy et.al, 2010). The perceived lack of diversity of information necessitates the establishment of new information start-ups such as websites made by web-based citizen journalists. Web-based citizen journalism publications have not been researched on a large scale; however, content differences are due to the perceived differences in their consumers. (Carpenter, 2010) The term "citizen journalism" was first coined in the late 1990s. "Every citizen is a reporter," is the core concept of citizen journalism as popularised by online entrepreneur 'Oh Yeon-ho in 2000 in South Korea'. Korean citizen journalism as a social movement has challenged serious institutional weaknesses of the traditional media and has played an important role in broadening the accessibility of the public sphere for civic groups and ordinary citizens in recent years. (Kern & Nam, 2009).

Purpose

The rise of Citizen Journalism is paradigmatic of how journalism and the media are evolving. "Citizen or Civic Journalism" is a modern form of distributing news through electronic communication (new media), where the media and message both are related to the audience. Social media maintains a journalistic principle of "serving the public interest". The primary aim of this research is to analyse the **impact of citizen journalism on mainstream journalism in India**, with social media as a key factor. This research will be based on the following approaches and objectives.

- To evaluate the **authenticity and trustworthiness** of Citizen or Public Journalism.
- To explore the **various forms of citizen engagement** performed on social media platforms.
- To conduct a **comparative analysis between** Citizen Journalism and traditional journalism in terms of journalistic standards, credibility and trust worthiness, audience reach, and editorial practices.
- To investigate whether **civic journalism can serve as a substitute for professional journalism** or coexist as a different form of reporting in a democratic media ecosystem.

Methodology

A **qualitative research design** supports this study, using **semi-structured interviews** as the primary method of data collection. This approach allows for in-depth exploration of participant perspectives while retaining flexibility to probe emerging themes.

Sampling Strategy:

- **Snowball sampling** (chain-referral) was used to identify respondents, enabling the researcher to access individuals actively engaged with social media-based news sharing.
- The study targeted **urban internet users aged 20–50 years** who actively consume or produce news on Facebook.
- The sample size included **at least 200 respondents** for audience perspectives and **5 professional journalists** for industry insights.

Theoretical Framework

The research draws on **Uses and Gratifications Theory (UGT)** to explain why individuals engage in citizen journalism on social media platforms like Facebook.

Analysis & Findings

The analysis reveals a complex relationship between citizen journalism on social media and India's mainstream media ecosystem. Citizens regard citizen journalism as a source for immediate and hyperlocal coverage of events but are sceptical of its credibility because there is no editorial control. Audiences tend to verify these reports through mainstream sources. Facebook, being one of the central platforms on social media for citizen journalism, it enables instant sharing. It also gives rise to echo chambers and places engagement over correctness. Professional journalists see citizen content as a valuable, supporting tool for breaking news, particularly from inaccessible places. But, they trust the news only after professional verification to avoid misinformation, uphold journalistic ethics, and preserve audience trust. Though citizen journalism provides diversity and rapid, grass root reporting, it does not face challenges from the risk of bias and misinformation. In the end, a interdependent relationship appears most promising, with citizen journalists contributing raw information and mainstream media contributing vital editorial objectivity.

Practical implications

The study's findings offer practical guidance for various sectors. **Mainstream media** should create clear protocols for verifying citizen content to avoid misinformation, sustain journalistic ethics, and preserve audience trust. They can use citizen-generated material strategically for local and human-interest stories. **Social media platforms** need to implement stronger fact-checking tools, be more transparent and prioritize content. For **Citizen journalism** it's vital to gain digital literacy and preserve ethics to encouraging a hybrid approach for reporting. Finally, as the public is both **the producer and the consumer** of information, has to develop a balanced expression with accountability to help people critically evaluate online news.

Originality

This research stands out in several ways:

- The research clearly studies Facebook-based citizen journalism and mainstream media in the Indian context, which is not a very researched area.
- The research seeks to examine audience perceptions of the authenticity and trustworthiness of citizen journalism.
- This study uses the Uses and Gratifications Theory to explain citizen journalism behaviour, offering a fresh perspective on digital news practices in India.
- The study employs coexistence and synergistic collaboration between the traditional and citizen journalism beyond competition.

Conclusion and Recommendations

A significant media revolution has occurred with the rise of citizen journalism on social media (Facebook). Although it gives the news a democratic feel and provides valuable grassroots voices in real time, its inherent lack of editorial control leaves it open to misinformation and issues with reliability. Thus it is difficult for citizen journalism to completely replace professional reporting but serve as a helpful supplementary tool and coexist. The challenge is to maximize its benefits—immediacy and global reach, while minimizing its drawbacks— verification procedures and a clear ethics framework. Before using citizen-generated content, mainstream media outlets must confirm and authenticate the news. Furthermore, collaborative workshops are required to train citizen journalists in fact-checking, ethics reporting, and narrative techniques. It is also recommended that a case study be conducted in which the mainstream and social media coverage of a specific incident is analysed to help us better understand the advantages and disadvantages of each media, leading to the development of a better hybrid model that combines the professionalism of professional reporting with the timeliness of citizen journalism.

Keywords: *Citizen Journalism Social Media, Credibility, Authenticity And Trustworthiness.*

References

- Baase, S. (2008). A Gift of Fire. Prentice Hall. 3rd edition.
- Blaagaard, B. (2018). Citizen Journalism as Conceptual Practice (1st ed.). Rowman & Littlefield International. Retrieved from <https://www.perlego.com/book/743459/citizen-journalism-as-conceptual-practice-postcolonial-archives-and-embodied-political-acts-of-new-media-pdf> (Original work published 2018)
- Bowman, S., & Willis, C. (2003). We Media: How Audiences are Shaping the Future of News and Information. The Media Center at the American Press Institute. 11690 Sunrise Valley Drive Reston, Va. 20191-1498. Retrieved April 12, 2011 from http://www.hypergene.net/wemedia/download/we_media.pdf
- Case, J. A. (2007). Recovering the Radical: Biocybernetic Subversion in Guerrilla Video Primer.
- Kern, T., Nam, S. (2009). The Making of a Social Movement: Citizen Journalism in South Korea. Current Sociology. Vol. 57 (5) p637–660 International Sociological 10.1177/0011392109337649.
- Tamara, W. (2007). Street journalists versus _ailing journalists? Retrieved December 16, 2014 from <http://www.opendemocracy.net/article/streetjournalists-as-an-answer-to-ailing-journalism>
- Lacy, S., Duffy, M., Riffe, D., Thorson, E., & Fleming, D. (2010). Citizen journalism websites complement newspaper. Newspaper Research Journal, 31(2),6, 37-49.
- Mythen, G. (2010). Reframing risk? Citizen journalism and the transformation of news. Journal of Risk Research, 13(1), 45-58. <https://doi.org/10.1080/13669870903136159>
- Pareek, A. (2018). Citizen journalism: A threat to traditional journalism. The IIS University, Jaipur.
- Wall, M. (2015). Citizen journalism: A retrospective on what we know, an agenda for what we don't. Digital Journalism, 3-9. <https://doi.org/10.1080/21670811.2014.1002513>

Introduction

In 2024, India's advertising landscape reflects a major strategic pivot. With more than 820 million internet users (IAMAI, 2024) and an increasingly mobile-first audience, social media platforms such as Instagram, YouTube, and X (formerly Twitter) have become core spaces for brand communication. Notably, a growing number of brands are choosing to execute their advertising campaigns exclusively through social media, bypassing television, print, and outdoor formats altogether (Kantar, 2024).

This development marks a shift from integrated media planning to platform-centric campaign design, where algorithmic relevance, influencer collaboration, and real-time responsiveness are prioritized. This study explores this “new normal” by analyzing how Indian brands in 2024 are structuring and delivering social media-only advertising campaigns, with particular focus on audience targeting, content strategy, and storytelling formats.

Select Literatures

Scholarly literature has consistently acknowledged the shift toward digital in marketing, but most works continue to frame this transition in terms of multi-platform or hybrid advertising models (Tuten & Solomon, 2017). Kaplan and Haenlein (2010) characterize social media as hybrid communication tools, offering two-way interaction and user participation. However, few studies have examined the decision to exclude traditional media altogether, a gap this study aims to address.

In India, studies by Sharma and Dey (2022) and Saxena (2021) note the increasing use of algorithm-aware storytelling, vernacular targeting, and influencer-led promotions, especially on Instagram and YouTube. Kapoor (2021) argue that artificial intelligence, real-time analytics, and personalization are reshaping campaign execution in emerging markets. This research builds on those insights by closely analyzing campaigns that reflect these trends within a single-year timeframe.

Purpose

The purpose of this study is to examine the structure and strategies of major Indian advertising campaigns in 2024 that relied solely on social media. It aims to:

1. Explore how platform-native content formats support engagement and visibility;

¹ Assistant Professor of Media Studies at Institute of Leadership, Entrepreneurship and Development (iLEAD) Kolkata [affiliated to Maulana Abul Kalam Azad University of Technology]

² Assistant Professor of Media Studies at Institute of Leadership, Entrepreneurship and Development (iLEAD) Kolkata [affiliated to Maulana Abul Kalam Azad University of Technology] and Ph.D. Scholar at Amity University, Kolkata.

2. Understand how brands tailor messaging for different digital audiences;
3. Identify the narrative and visual patterns shared by successful campaigns;
4. Contribute to emerging discourse on the digitization of advertising in Global South contexts.

By focusing on publicly available campaigns from the recent year, this study offers an exploratory, qualitative view into how digital-only approaches are being implemented in practice.

Methodology

This is an exploratory qualitative study based entirely on secondary sources, including:

- Publicly available campaign content,
- Media and trade articles,
- Social media archives,
- Platform-based performance insights (e.g., engagement metrics reported by Meta and Google),
- Industry reports from WARC, Kantar, and IAMAI.

Three campaigns from 2024 were selected as case studies based on their visibility, strategic use of social media platforms, and exclusion of traditional media:

1. Spotify India's "Wrapped 2024" – A personalized, data-driven campaign distributed primarily through Instagram and X.
2. Tata Tea's "Jaago Re – 2024" Revival – A digitally reimagined civic engagement initiative focused on election awareness.
3. Zomato's "Zomaland Reimagined" Campaign – A lifestyle-centric promotion led by Instagram Reels and regional influencers.

Each campaign is analyzed through a comparative lens, using content analysis and thematic interpretation to understand their construction, strategies, and reach.

Analysis & Findings

This exploratory analysis highlights several emerging patterns:

1. Platform-Native Content Design: All three campaigns leveraged the affordances of their chosen platforms. Spotify India used short-form, highly visual content optimized for Stories and Reels; Tata Tea deployed narrative video threads; Zomato employed interactive polls and contests.
2. Regional and Cultural Customization: Campaigns used regional languages and festival-specific messaging to broaden appeal (Kantar, 2024).
3. Influencer and User Participation: Influencer-generated and user-generated content were central to virality (Abidin, 2016; Freberg et al., 2011).

4. Narrative Adaptability: Content structures were dynamic, adapting based on trending topics and engagement behavior.

These findings suggest that successful social media-only campaigns are dynamic, hyper-personalized, and culturally contextual.

Practical Implications

This study offers valuable insights for media practitioners and communication scholars:

- Platform-specific creative planning is more effective than repurposed content.
- Hyperlocal and multilingual strategies are essential.
- Campaigns should be participatory ecosystems.
- Real-time content flexibility is crucial.

These findings can guide brand professionals in crafting more relevant, cost-effective digital campaigns.

Originality

This paper contributes original insights into an underexplored area—India’s social media-only advertising model. While much literature explores digital integration, this study uniquely focuses on campaigns that completely excluded traditional media in 2024. The analysis bridges academic and practical domains, offering relevance to marketing researchers and digital strategists.

Conclusion & Recommendations

Advertising in India is increasingly defined by a platform-first orientation. The campaigns analyzed here show that social media-only approaches can be both strategically and culturally impactful.

Future campaigns should:

- Embrace data-driven personalization,
- Build continuous audience engagement loops,
- Center regional diversity,
- Monitor evolving digital behavior to stay relevant.

Further research should assess long-term brand equity, AI personalization, and ethical considerations in such campaigns.

Keywords: Advertising, Social Media, Brand Communication, Digital Marketing, Digital Audience

References

1. Abidin, C. (2016). Aren’t these just young, rich women doing vain things online? Influencer selfies as subversive frivolity. *Social Media + Society*, 2(2), 1–17. <https://doi.org/10.1177/2056305116641342>

2. De Vries, L., Gensler, S., & Leeﬂang, P. S. H. (2012). Popularity of brand posts on brand fan pages: An investigation of the effects of social media marketing. *Journal of Interactive Marketing*, 26(2), 83–91. <https://doi.org/10.1016/j.intmar.2012.01.003>
3. Freberg, K., Graham, K., McGaughey, K., & Freberg, L. (2011). Who are the social media influencers? A study of public perceptions of personality. *Public Relations Review*, 37(1), 90–92. <https://doi.org/10.1016/j.pubrev.2010.11.001>
4. IMAI. (2024). Digital India: Annual Consumer Report 2024. Internet and Mobile Association of India.
5. Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons*, 53(1), 59–68. <https://doi.org/10.1016/j.bushor.2009.09.003>
6. Kapoor, K., Tamilmani, K., Rana, N. P., Patil, P., Dwivedi, Y. K., & Nerur, S. (2021). Advances in artificial intelligence-based marketing: Past, present and future. *Journal of Business Research*, 124, 291–312. <https://doi.org/10.1016/j.jbusres.2020.10.030>
7. Kantar. (2024). The Indian Digital Landscape Report: Q1 2024 Edition. Kantar Media Insights.
8. Saxena, P. (2021). Storytelling in Indian social media advertising: Emotional narratives and platform logic. *Media Watch*, 12(1), 120–135. <https://doi.org/10.15655/mw/2021/v12i1/204360>
9. Sharma, T., & Dey, M. (2022). Microtargeting, consumer profiling and ethics in Indian digital advertising. *Journal of Marketing Insights*, 10(4), 233–247.
10. Tuten, T. L., & Solomon, M. R. (2017). *Social media marketing* (3rd ed.). Sage Publications.
11. WARC. (2024). India Digital Campaign Trends 2024. World Advertising Research Center.

Introduction

Email remains a key communication tool for businesses—used for internal communication, marketing, customer service, and more. However, with the rise in email use, there's also been a surge in **spam**—unwanted or harmful emails.

Spam doesn't just clutter inboxes. Many of these emails are designed to trick users into clicking dangerous links or sharing sensitive information, leading to issues like data breaches, identity theft, or financial loss. They also reduce employee productivity and increase IT costs, as companies must use more resources to process and filter these messages.

Traditional spam filters rely on simple rules—like blocking certain keywords or blacklisted addresses. While useful at first, these methods can't keep up with how quickly spam tactics change. Spammers now use clever tricks to make their emails look real and bypass these basic filters.

To handle this challenge more effectively, many organizations are turning to **machine learning**—specifically, a technique called the **Random Forest algorithm**.

The Random Forest algorithm is a smart system that "learns" how to tell the difference between real emails and spam by analyzing many different email features at once (like sender, content, formatting, etc.). It builds multiple decision trees and combines their results to make accurate predictions. Think of it as getting several expert opinions before making a final call.

This approach is more flexible and accurate than rule-based filters because it can adapt to new patterns of spam and doesn't require constant manual updates.

In short, by using tools like the Random Forest algorithm, businesses can better protect themselves from spam, reduce risks, and save time and money.

Literature Survey

Some exciting research gaps were found in the spam detection and filtering domain by conducting a comprehensive survey of the proposed techniques and spam's nature [2]. This study [3] focuses on using automated ways to detect spam emails written in Urdu. The comprehensive survey [4] paves the way for future research endeavors addressing theoretical and empirical aspects related to intelligent spam email detection. The review aims [5] to systematically identify various ML and DL methods applied for spam detection, evaluate their effectiveness, and highlight promising future research directions considering gaps. Different spam detection solutions have been proposed in the literature, however, Machine Learning (ML) based solutions are one of the most effective [6]. This paper [7] contributes to the field by presenting an optimized, scalable solution that can adapt to emerging cyber threats and enhance

¹ SACT, Vidyanagar College

automated email filtering mechanisms. The spam emails [8] are reduced and this method improves the accuracy of spam email filtering, since the use of NLP makes the system to detect the natural languages spoken by people and the Random Forest approach uses multiple decision trees and uses a random node for filtering the spams. Machine learning algorithms [9] achieve intended to differentiate between spam and non-spam messages by using an automatic and adaptive technique.

Objectives

- Helps to detect whether the mail is spam or not.
- Help employees stay focused by keeping their inboxes free of unwanted and irrelevant messages.
- Use of **Random Forest algorithm** to better identify and block spam emails by learning from patterns in real and spam messages.
- Reduce the load on email servers and the time spent managing spam manually.

Proposed Methodology

This study employs a machine learning–based approach to detect spam emails using the Random Forest algorithm. The methodology consists of the following stages:

1. Data Collection

A publicly available dataset containing labeled email samples (spam and non-spam) is utilized. This ensures a balanced and diverse representation of email types, including various formats, lengths, and content structures.

2. Data Preprocessing

To enhance data quality, the raw emails undergo cleaning and normalization:

- Removal of HTML tags, punctuation, and special characters
- Conversion of all text to lowercase
- Tokenization of sentences into individual words
- Elimination of common stopwords that do not contribute to classification
- Application of stemming or lemmatization to reduce words to their root forms

3. Model Development

The dataset is split into training (80%) and testing (20%) sets. A Random Forest classifier is trained, with hyperparameters (e.g., number of trees, maximum depth) tuned using k-fold cross-validation to optimize generalization performance.

4. Evaluation

Model performance is assessed using:

- Accuracy, Precision, Recall, and F1-score to account for potential class imbalance

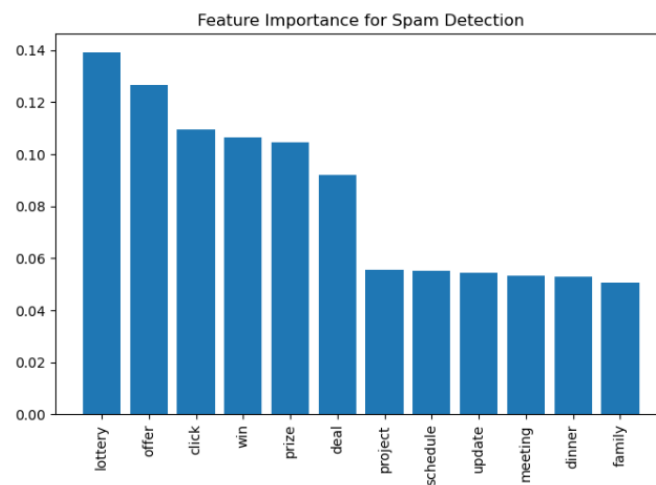
- Receiver Operating Characteristic (ROC) curve and Area Under the Curve (AUC) for overall discriminative ability
- Confusion matrix analysis to identify misclassification patterns

5. Implementation and Future Adaptation

Upon validation, the model is designed to integrate with email systems for real-time spam filtering. To maintain effectiveness against evolving spam patterns, periodic retraining with updated datasets is planned.

Analysis and Results

The dummy spam dataset has been generated using python programming language and saved as csv file to predict spam mail and plot had been explained.



Highest importance features:

- "lottery," "offer," "click," "win," "prize". These are typical spam-related keywords, so the model finds them most useful in distinguishing spam emails.

Moderate importance:

- "deal" also contributes significantly, aligning with spam content.

Lowest importance features:

- "project," "schedule," "update," "meeting," "dinner," "family". These words are usually found in normal (non-spam) communications, so they are less predictive for spam classification.

Interpretation:

- The model likely decides an email is spam if it contains multiple high-importance words like *lottery*, *win*, *offer*, etc.
- Words from regular communication reduce the spam likelihood

Conclusion

The feature importance analysis indicates that the Random Forest spam detection model relies most heavily on terms commonly associated with promotional or fraudulent content, such as “lottery,” “offer,” “click,” “win,” and “prize.” These words strongly signal that a message may be spam. In contrast, terms like “project,” “meeting,” “family,” and “update” are less influential, reflecting their typical presence in legitimate, non-spam communications. This distinction demonstrates that the model effectively differentiates between spam and regular messages based on keyword patterns.

This study demonstrates that a Random Forest-based approach can effectively identify and filter spam emails, thereby maintaining a cleaner and more reliable communication channel. By leveraging machine learning to differentiate between spam and legitimate messages, the proposed system addresses the ongoing issue of unwanted email and enhances overall user experience in digital communication.

Keywords: *E-mail spam detection, Random Forest, machine learning, classification, digital communication, noise reduction*

References

- [1] Oyelakin, A. M., Salau, I. T., Ogidan, B. S., Olufadi, H. I., Yusuf, S. A., & Adeinji, I. A. (2023). Spam email detection scheme based on random forest algorithm. *LAUTECH JOURNAL OF COMPUTING AND INFORMATICS*, 3(1), 87-97.
- [2] Ahmed, N., Amin, R., Aldabbas, H., Koundal, D., Alouffi, B., & Shah, T. (2022). Machine learning techniques for spam detection in email and IoT platforms: analysis and research challenges. *Security and Communication Networks*, 2022(1), 1862888.
- [3] Siddique, Z. B., Khan, M. A., Din, I. U., Almogren, A., Mohiuddin, I., & Nazir, S. (2021). Machine Learning-Based Detection of Spam Emails. *Scientific Programming*, 2021(1), 6508784.
- [4] Karim, A., Azam, S., Shanmugam, B., Kannoorpatti, K., & Alazab, M. (2019). A comprehensive survey for intelligent spam email detection. *Ieee Access*, 7, 168261-168295.
- [5] Tusher, E. H., Ismail, M. A., Rahman, M. A., Alenezi, A. H., & Uddin, M. (2024). Email spam: A comprehensive review of optimize detection methods, challenges, and open research problems. *IEEE Access*.
- [6] Akinyelu, A. A. (2021). Advances in spam detection for email spam, web spam, social network spam, and review spam: ML-based and nature-inspired-based techniques. *Journal of Computer Security*, 29(5), 473-529.
- [7] Yadav, D. K., Raj, A., Rajlakshmi, Kumar, N., & Kumari, R. Enhancing Email Security: A Real-Time Machine Learning-Based Spam Detection System. *Internet Technology Letters*, e618.
- [8] Nivedha, M. A., & Raja, S. (2022). Detection of email spam using Natural Language Processing based Random Forest approach. *International Journal of Computer Science and Mobile Computing*, 11(2), 7-22.
- [9] Dada, E. G., Bassi, J. S., Chiroma, H., Abdulhamid, S. I. M., Adetunmbi, A. O., & Ajibuwa, O. E. (2019). Machine learning for email spam filtering: review, approaches and open research problems. *Heliyon*, 5(6).

Introduction

The rapid growth of e-commerce has transformed consumer shopping behaviour, offering unprecedented convenience and product variety. However, the inability to physically interact with products before purchase often results in hesitation, uncertainty, and anxiety among customers, particularly in categories where tactile evaluation is crucial, such as apparel cosmetics eyewear and home décor this phenomenon, known as online purchase anxiety, has been shown to impact purchase decisions and contribute to high return rates in online retail. Augmented Reality (AR), particularly through virtual try-on technology, offers an innovative solution by enabling customers to visualise products in real time and their context. From trying on apparel and accessories virtually to placing virtual furniture in their living rooms, AR bridges the sensory gap in online shopping. Leading brands such as Lenskart, Nykaa, Sephora, and IKEA have successfully integrated AR tools into their platforms, with reported improvements in customer confidence, conversion rates, and reductions in return rates. This study investigates the role of AR-based virtual Try-on technology in reducing online purchase anxiety with particular emphasis on the psychological mechanisms that drive consumer trust and decision-making.

Select Literature

Several studies have explored consumer hesitation in e-commerce. Pavlou (2003) identified trust and perceived risk as primary barriers to online transactions. Similarly, Li et al. (2022) found that uncertainty about product quality, size, and fit are major contributors to purchase anxiety in online retail.

The role of AR in consumer decision-making has been increasingly studied. Poushneh and Vasquez-Parraga (2017) demonstrated that AR tools enhance product evaluation and engagement. Huang and Liao (2015) showed that AR-based virtual product experiences improve brand perception and willingness to buy. Furthermore, Scholz and Smith (2016) noted that the immersive quality of AR increases emotional connection to products. However, research specifically linking Virtual Try-On Technology to purchase anxiety reduction is still limited. Existing literature has focused on AR's novelty and entertainment value, with fewer studies examining its psychological impact on reducing uncertainty in purchase decisions. This gap highlights the need for deeper exploration into how AR-VTO affects consumer confidence in an online shopping context.

Purpose

The primary objective of this research is to explore how AR-enabled virtual try-on technology impacts consumer perceptions, reduces online purchase anxiety, and enhances purchase intentions. Specifically, this study aims to:

¹ PGDM Student, ISB&M Kolkata

² PGDM Student, ISB&M Kolkata

1. Examine the effectiveness of AR-powered virtual try-on tools in mitigating online purchase anxiety.
2. Analyse consumer perception and behavioural change when interacting with VTO technology
3. Identify whether AR adoption in e-commerce can lead to improved customer satisfaction, trust and purchase intention.
4. Provide actionable recommendations for e-commerce businesses on optimising AR integration.
5. Assess generational differences in AR adoption with a focus on Generation Z as primary users of immersive technologies.

By focusing explicitly on anxiety reduction as a primary variable, this research addresses a gap in existing literature, which often focuses predominantly on novelty or entertainment value of AR without linking it directly to psychological barriers in online shopping.

Methodology

This study adopted a mixed-method approach combining primary and secondary data collection. Primary data was gathered through a survey of 100 respondents across diverse age groups, with a focus on Generation Z (aged 18-27), due to their high adoption of immersive technologies. The survey explored participants familiarity with augmented reality AR experiences with virtual try on tools perceived a deduction in online purchase anxiety and subsequent influence on purchase decisions using both Likud scale and open ended questions to capture quantitative metrics and qualitative insights secondary data was obtained through an extensive literature review and analysis of industry case studies drawing from peer reviewed journals white papers and ecommerce reports Notable examples included Lenskart's facial mapping for eyewear Try on, Nyka's AR makeup integration, Sephora Virtual Artist for shade matching and Ikeas Places AR home furniture placement visualization. This triangulated approach ensured a comprehensive understanding, integrating both academic perspectives and practical applications.

Analysis & Findings

The survey findings reveal that 78% of respondents felt more confident about their purchase decisions after using AR try-on tools, while 65% experienced a notable reduction in uncertainty regarding product fit, appearance, or suitability. Among Generation Z participants 72% considered AR Try ONS very important in influencing their buying decisions. Qualitative feedback emphasised realism, accuracy of product representation, and convenience as the key factors contributing to reduced purchase anxiety. Secondary research aligned with these results, indicating that AR features significantly enhanced purchase intent and lower return rates across industries. For instance, Sephora reported a 20% increase in conversion rates following AR adoption, while IKEA documented substantial improvements in customer satisfaction scores.

Practical Implications

For e-commerce retailers, the findings suggest that AR try-on tools can serve as powerful trust-building instruments rather than mere technological novelties. To maximise their impact, businesses should integrate AR features seamlessly into both mobile and web platforms to ensure accessibility while also educating customers on how to use these tools to drive adoption. Leveraging AR analytics can provide valuable insights for targeted marketing strategies and informed product development. Furthermore, positioning AR as a solution to purchase uncertainty by highlighting its role in reducing returns and boosting buyer confidence can strengthen advertising campaigns and enhance overall customer trust.

Originality

While AR has been widely studied for its entertainment and engagement benefits, this paper provides a unique contribution by examining its role in reducing online purchase anxiety, a psychological barrier with direct commercial implications. This focus on Generation Z also adds value as this demographic represents the future of e-commerce consumption and sets expectations for immersive digital retail experiences.

Conclusion

This study concludes that AR-enabled virtual try-on technology significantly reduces online purchase anxiety by enhancing visualisation, increasing consumer confidence, and fostering trust in product quality. The dual approach of primary survey data and secondary research strengthens the validity of these findings.

Recommendations

E-commerce retailers should prioritise the adoption of AR Tryon tools in high-return product categories where reducing purchase uncertainty can have the most significant financial and customer satisfaction impact. Future research could explore long-term behavioural changes in consumer habits following AR adoption, providing insights into its sustained effectiveness. Additionally, cross-generational studies would help identify adoption barriers among older demographics, enabling the development of tailored strategies to make AR tools more inclusive and widely accepted.

Keywords: *Augmented Reality (AR), Virtual try-on, Online Purchase Anxiety, E-commerce Technology, Consumer Behaviour, Purchase Decision Confidence*

References

- Garbarino, E., & Strahilevitz, M. (2004). Gender differences in the perceived risk of buying online and the effects of receiving a site recommendation. *Journal of Business Research*, 57(7), 768–775. [https://doi.org/10.1016/S0148-2963\(02\)00363-6](https://doi.org/10.1016/S0148-2963(02)00363-6)
- Hilken, T., de Ruyter, K., Chylinski, M., Mahr, D., & Keeling, D. I. (2017). Augmenting the eye of the beholder: Exploring the strategic potential of augmented reality to enhance online service experiences. *Journal of the Academy of Marketing Science*, 45(6), 884–905. <https://doi.org/10.1007/s11747-017-0541-x>
- Javornik, A. (2016). ‘It’s an illusion, but it looks real!’ Consumer affective, cognitive and behavioural responses to augmented reality applications. *Journal of Marketing Management*, 32(9–10), 987–1011. <https://doi.org/10.1080/0267257X.2016.1174726>
- Kim, J., & Forsythe, S. (2007). Adoption of Virtual Try-on technology for online apparel shopping. *Journal of Interactive Marketing*, 22(2), 45–59. <https://doi.org/10.1002/dir.20113>
- Khawla Sekri, Olfa Bouzaabia, Haifa Rzem, & David Juárez-Varón. (2024). Effects of virtual try-on technology as an innovative e-commerce tool on consumers' online purchase intentions. *European Journal of Innovation Management*. <https://doi.org/10.1108/EJIM-05-2024-0516>
- Poushneh, A., & Vasquez-Parraga, A. Z. (2017). Discernible impact of augmented reality on retail customers’ experience, satisfaction and willingness to buy. *Journal of Retailing and Consumer Services*, 34, 229–234. <https://doi.org/10.1016/j.jretconser.2016.10.005>

EXPLORING THE IMPACT OF DIGITAL MEDIA ON BRAND RECOGNITION AMONG GEN Z AND MILLENNIAL DEMOGRAPHICS

Raushan Kumar Saha, Anannya Banerjee, Riya Poddar, Shuvam Saha, Ayush Sen ¹

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

Businesses have come to understand the value of social media as a marketing and promotion tool over time. We now have access to marketing, which is no longer limited to our doorsteps. The rise of social media and the Internet has drastically changed how consumers make decisions.

Today, businesses rely on platforms such as Facebook, WhatsApp, Instagram, Snapchat, YouTube, and Twitter to market their products and services. These platforms allow users to create and share information within their social networks. When promotional activities are conducted through such platforms, they are referred to as social media marketing. Organisations prefer social media marketing over traditional approaches because it not only helps them retain customers but also enables direct and improved interaction. Moreover, it allows businesses to introduce new products directly to consumers' screens, thereby attracting new customers.

These days, companies market their goods and services using social media sites like Facebook, Instagram, Snapchat, YouTube, Twitter, and WhatsApp. Users can produce and distribute content within their social networks using these platforms. Social media marketing is the term used to describe promotional activities carried out through these platforms. Businesses favour social media marketing over conventional strategies because it allows for better and more direct communication with customers while also assisting in customer retention. Additionally, it enables companies to launch new goods straight onto consumers' screens, drawing in new clients. Due to social media's profound impact on the market, it is now more difficult to retain customers as they have grown more picky and resistant to influence. Customers now have more control over their preferences and expectations thanks to social media.

The use and acceptance of social media, however, differ across generations. Generation X (1965–1977): Global thinkers who value diversity and view technology as a tool for enhancing literacy. As long as it encourages greater engagement and active participation, social media marketing is thought to be very successful at attracting and retaining customers. Although earlier research has looked at how social media marketing affects Gen X and Gen Y (Williams et al., 2010), little attention has been paid to Gen Z, who are the largest group of online shoppers (Priporas, Stylos, & Fotiadis, 2017). In light of this disparity, the current study attempts to examine how social media marketing affects Gen Z's purchase intentions.

Review of Literature

The changing global environment with the technological advancements incorporates online marketing as an essential component of the promotional mix. Social networking sites make it easier to create, modify

¹ PGDM Students, ISB&M Kolkata

and exchange information about various products and services. Convenience of the user is the major reason for these marketing strategies to gain popularity (Kitchen & Proctor, 2015). Being creative on the social media sites can help retailers to improve the awareness of their brands. It also lead to spread of positive word of mouth driving to purchases (Husain & Ghufra, 2016). Social media marketing also plays a huge role in upgrading the brand's goodwill. Ismail (2017) provides that the loyalty of the customer towards a brand grows through marketing done through social media. The empirical literature identifies social media marketing as a promotional tool and establishes its relationship with advertising, sales and public relations. Deshmukh (2013) suggests managers to have proper strategies before marketing their products and services through social media to ensure higher success rate and to help the company to have a personal relationship with the customers. The influence of social media enables companies to increase their customer loyalty and brand performance. Rapp & Beitelspacher (2013) identify that the effect of the supplier's social media usage on the consumer's social media usage varies by the reputation of the brand. Das & Mandal (2016) further emphasize that the loyalty of the young customers towards a brand influences their purchase intention. Studies are analysing the strategies to be adopted in social media marketing to enhance customer reach and thereby to increase their intention to purchase a product/service. For instance, Constantinides (2014) compares two strategies of social media marketing viz. The active approach, where social media acts as a public relations channel providing a platform for product personalisation and customer-driven innovations and the passive approach, where the social media define the market intelligence and customer voice. From a financial perspective, Wiesel et al. (2018) suggests that if the budget of a firm is reallocated to online activities, the profits after marketing costs can be improved. User-generated and marketer-generated contents are identified to affect the repeated purchase behaviour of the customers.

Purpose

This study uses regression analysis and joint significance testing to investigate how social media marketing affects Generation Z's purchase intentions. The study specifically aims to ascertain whether social media marketing initiatives have a statistically significant and significant effect on Gen Z consumers' purchasing decisions. By doing this, the study hopes to add to the body of knowledge on digital marketing while also assisting companies in creating more successful marketing campaigns aimed at this demographic.

Research Methodology

The study adopts a quantitative research design using a self-administered questionnaire distributed among respondents belonging to Gen Z (18–27 years) and Millennial (28–43 years) cohorts. The instrument consisted of Likert-scale questions measuring variables such as social media marketing effectiveness, traditional marketing effectiveness, brand awareness, brand recognition, brand loyalty, purchase intention, product perception, and customer-based interaction.

A stratified sampling approach was used to ensure balanced representation of both generations. The collected data were analyzed through Independent Samples t-tests to compare generational differences, and Multiple Linear Regression analysis to examine the impact of digital media marketing and traditional marketing on brand recognition and related outcomes. Reliability and validity checks were performed to ensure robustness of the instrument.

Analysis and Findings

The results show that social media marketing is significantly more effective than traditional marketing for both generations, with Gen Z displaying higher engagement and responsiveness compared to Millennials. Independent t-tests revealed that Gen Z respondents scored higher on variables such as brand awareness, brand recognition, purchase intention, and customer-based interaction.

Regression analysis further confirmed that perceived effectiveness of social media marketing positively influences brand recognition, and this effect extends to enhancing brand loyalty, product perception, and purchase intention. Traditional marketing showed a relatively weaker impact once digital media variables were accounted for.

Overall, the findings highlight that social media platforms play a critical role in shaping consumer behavior, with a stronger effect observed among Gen Z. This underscores the growing importance of digital-first marketing strategies for building brand recognition and fostering long-term customer relationships.

Practical Implications

The findings suggest that companies should prioritize social media marketing strategies over traditional media to effectively reach and engage younger consumers. For Gen Z, interactive and visually driven content (e.g., reels, stories, short videos) is most effective in building brand awareness and recognition, whereas Millennials respond better to a blend of digital and selective traditional channels.

Marketers can leverage these insights by:

- Investing in platform-specific strategies (Instagram, TikTok, YouTube for Gen Z; Facebook, LinkedIn for Millennials).
- Designing campaigns that encourage customer-based interaction (likes, shares, comments, co-creation) to strengthen brand loyalty.
- Using social media analytics to personalize brand communication and monitor real-time consumer engagement.
- Reducing reliance on cost-intensive traditional media, redirecting resources to targeted digital campaigns with measurable ROI.

In sum, the study highlights that digital media is not just supplementary but central to brand-building, especially for Gen Z, and firms that adapt quickly will achieve stronger recognition, loyalty, and purchase intention in competitive markets.

Originality

This study examines how digital media affects brand recognition among Millennials and Generation Z, two groups that predominate in today's online consumer environment. This study adopts a comparative and integrative approach to comprehend how both generations respond to digital media in shaping brand recognition, whereas previous research has frequently examined these cohorts independently or narrowly focused on purchase intention.

Quantitative rigor: The study offers statistically validated insights by using regression analysis and testing the joint significance of variables, as opposed to depending only on descriptive findings. By addressing a gap in empirical cross-generational analysis of digital media's role in brand recognition, the study broadens the body of knowledge for scholars. The findings are extremely pertinent to practitioners, particularly marketers and brand managers, as they highlight the necessity of customizing digital media strategies to better target Gen Z and Millennials and enhance brand positioning in hypercompetitive digital marketplaces.

Conclusion

According to the study, both Gen Z and Millennials' brand recognition is greatly influenced by digital

media. Gen Z is more impacted by visually appealing, interactive, and socially conscious content than Millennials, who place a higher value on authenticity and educational content. Though their engagement patterns and motivations vary, both groups mainly rely on digital platforms for brand discovery.

Tailored Content Strategies: Focus on interactive, visual, and trend-driven content for Gen Z while developing genuine, educational campaigns for Millennials. Platform-Specific Methods For Gen Z, give priority to Instagram, YouTube, and TikTok; for Millennials, use Facebook.

Interactive Campaigns: To increase active participation, particularly among Gen Z, use polls, challenges, gamified advertisements, and user-generated content.

Consistency and Transparency: To improve long-term recognition across generations, uphold brand authenticity and transparency.

References

1. Carlson, A., & Superior, L. (2015). Followership and social media marketing. *Academy of Marketing Studies Journal*, 19(1), 80–102.
2. Chaney, D., Touzani, M., & Slimane, K. Ben. (2017). Marketing to the (new) generations : summary and perspectives. *Journal of Strategic Marketing*, 25(3), 179–189.
3. Constantinides, E. (2014). Foundations of Social Media Marketing. *Procedia - Social and Behavioral Sciences*, 148, 40–57.
4. Das, P., & Mandal, S. (2016). Evaluating the influence of social media on brand sacralization. *South Asian Journal of Global Business Research*, 31(5), 469–479.
5. Deshmukh, S. (2013). Social media marketing : the next generation of business. *International journal of management research and review*, 3(2), 2461–2469.
6. Duffett, R. G. (2015). Facebook advertising's influence on intention-to-purchase and purchase amongst Millennials. *Internet Research*, 25(4), 498–526.
7. Duffett, R. G. (2017). Influence of social media marketing communications on young consumers' attitudes. *Young Consumers*, 18(1), 19–39.

BREAKING THE GLASS CEILING: IDENTIFYING BARRIERS AND ENABLERS FOR WOMEN'S CAREER PROGRESSION IN THE TOURISM INDUSTRY WITH RESPECT TO NORTH-EASTERN STATES

Ms. Tanisha Mukherjee ¹

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

Tourism industry has seen a notable growth in the recent fast changing business environment. It is considered as one of the largest employments generating industrial sector. Even in this century, the persistence of gender glass ceiling has result in slow progression of women workforce in the tourism industry even after the various role they play in within the tourism industry. This gap still exists and with changing societal gender definition has a significant potential to contribute in socio-economic growth of the country. Women are considered to contribute a major portion in socio-economic growth of this tourism sites in North eastern states through community services, entrepreneurship roles. Even though few states like Meghalaya (Khasi, Jaintia hills, Garo tribes), Nagaland is gynocentric in nature , women faces various challenges to establish themselves in various leadership roles with respect to tourism industry within the society. Challenges like lack of professional trainings, women centric governmental schemes, societal stigma, gender stereotyping often influences women workforce to go back foot or are less accepted by the prevailing societal structure.

Selected Literature

(Wanjama et al., 2025) The study highlights women owned enterprises faced highest challenges in the tourism industry during the Covid 19 pandemic with limited access to resource, financial support pertaining to Keney's tourism sector. The study states the need of women empowerment initiative, cushion funding and amalgamation of taxes creating a strong tourism pathway. **(Obradović Stráľman & Stojanović, 2025)** highlights the contribution of women-based enterprise in sustainable tourism development and SDG -5 goal attainment. The finding of the study states the need to reframe polices to reduce gender biases in the tourism sector. **(Visiana, 2025)** The study highlights the community economic empowerment and sustainable tourism by bringing in locally crafted experiences , like culinary traditions etc. It also states how women community are enhancing and expanding these sector through their skills , breaking the stereotyping believe that women community are not only made for household chores but also wider community like MSME's in tourism **(Sawangchai et al., 2025)** The author highlights the how women entrepreneurs in tourism sector portrays a strong coping strategies with the help of innovative trade practices overcoming gender biases and challenging tradition gender role. The paper also states the important role of Governmental and non-governmental bodies to strengthen this breaking the community stigma and amplify the women-based workforces.

¹ Assistant Professor, Department of the Management, Sharda School of Business Studies (SSBS), Sharda University Agra

Purpose

The study aims to understand and examine the various factors that impacts or hinders the growth women empowerment. The finding of the study shall be contributing in understanding new dimension of breaking the glass ceiling prevailing within the society pertaining to women role in tourism industry

Methodology

A structured questionnaire has been used to collect the primary data. Secondary data sources are also used.

Analysis and Findings

A qualitative analysis has been deployed to understand the factors that act as barriers in women empowerment and the enablers if implemented that can create a significant impact in ensuring the growth of women-based tourism enterprises. The major finding states that even though North-eastern states have women centric tourism activities ,very few have the access to top managerial position or leadership roles. Socio -cultural baies still strongly contributes in hindering women advancement in organisation in this sector. Government should take strong policy reforms in providing the women workforce in regards to safety , salary and diverse managerial roles for all, not only few selected women communities.

Practical Implications

The research states the need of practical implication of the various schemes that targets women skill development with relation to tourism industry. It also highlights the need to break the socio-cultural barriers by bringing in awareness among the women and society large with the support of collaborative efforts from Government policies , NGO's aligning women empowerment with tourism development in the north-easter states.

Originality

As the research highlights the various challenges and opportunities that influences the women empowerment, the findings of the same shall contributing in eradicating the glass ceilings that hinders their growth. This is an original work conducted for the academic purpose.

Conclusion and Recommendations

The study reveals that despite being gynocentric society the women workforce still faces a strong disparity in the tourism sector where they are confined to specific stereotypic roles. The north eastern states should come up with more gender-neutral role in tourism and hospitality sectors like home-stays, local culinary workshops, crafting experiences, driven by women population. The NGO's and governmental bodies should promote more women centric activities to break the glass ceiling in the industry and society at large.

Keywords: *Women empowerment, tourism industry, gendered workforce, tourism.*

References

Obradović Strålman, S., & Stojanović, V. (2025). Breaking boundaries: Empowering women for sustainable tourism in Bačko Podunavlje biosphere reserve. *Environment, Development and Sustainability*. <https://doi.org/10.1007/s1asmita0668-025-06067-w>

- Sawangchai, A., Khalid, R., Ivascu, L., Raza, M., & Artene, A. (2025). We Can and Must Empower Women to Thrive Through Destination Crisis: A Study of Women's Entrepreneurial Resilience in the Tourism Sector. *Sustainability*, 17(6), 2389. <https://doi.org/10.3390/su17062389>
- Visiana, K. (2025). The Role of Women in Community Economic Empowerment and Tourism through Women's Knowledge-Based MSMEs. *Saudi Journal of Business and Management Studies*, 10(02), 64–74. <https://doi.org/10.36348/sjbms.2025.v10i02.001>
- Wanjama, L., Munyiri, E., Etyang, M., Okeri, S., Mbuthia, A., & Kamiti, R. (2025). Empowering Women in Tourism in Kenya Through Policy. *KENYATTA UNIVERSITY WOMEN'S ECONOMIC EMPOWERMENT (KU-WEE) JOURNAL*, 1(1), 202–216.

THE ROLE OF RELIGIOUS AND CULTURAL GATHERINGS ON THE INDIAN ECONOMY WITH REFERENCE TO TOURISM, HOSPITALITY, AND TRANSPORTATION SECTOR – A DESCRIPTIVE STUDY

Drimit Das ¹

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

India, a land of profound spiritual and cultural diversity, hosts a spectrum of vibrant religious and cultural events that attract millions each year. Festivals such as the Kumbh Mela, Durga Puja, Ganesh Chaturthi, and the Amarnath Yatra are not only expressions of faith and heritage but also powerful economic drivers. These mass gatherings generate substantial economic activity across tourism, hospitality, and transport sectors by drawing both domestic and international visitors.

These gatherings act as economic engines that stimulate multiple sectors simultaneously. They draw millions of domestic pilgrims and an ever-growing number of international visitors, driving up demand for accommodation, food services, transport, retail, and cultural products. The ripple effect extends beyond immediate revenue generation, influencing employment patterns, small-scale entrepreneurship, and even long-term infrastructure planning.

Yet, the economic gains the rising scale of such events, however, brings with it logistical challenges overcrowded infrastructure, waste management issues, and the need for sustainable event planning. This study aims to understand these dynamics by examining how these gatherings stimulate economic growth, create employment, and impact regional development, while also shedding light on the areas requiring systemic improvement and policy intervention.

This research investigates these interlinked realities, combining empirical evidence with sectoral insights to better understand how religious and cultural gatherings shape India's economic landscape.

Select Literatures

Existing scholarship confirms that religious and cultural events have significant economic implications. Studies by the Ministry of Tourism (2022) estimate that religious tourism constitutes nearly 60% of India's domestic travel market, making it one of the most influential forces in shaping local and national economies. Sharma (2023) highlighted the Kumbh Mela's monumental scale, where the 2019 edition generated an estimated ₹4,200 crore in revenue, benefitting both formal sectors (hotels, transport) and informal ones (street vendors, artisans).

Mukherjee (2022) discussed the infrastructural transformations that occur in preparation for these gatherings temporary roads, sanitation facilities, and public utilities many of which leave lasting benefits for host cities. Similarly, Gautam and Pandey (2019) emphasized the role of such events in sustaining seasonal employment and boosting regional commerce.

¹ MBA Student, MCKV Institute of Engineering

However, Verma and Singh (2020) cautioned that without adequate planning, the very scale of these gatherings can overwhelm local resources, resulting in crowd management failures, environmental degradation, and uneven distribution of economic gains. International frameworks, such as those proposed by Getz (2008) in event tourism studies, point to the necessity of balancing cultural authenticity with economic optimization.

Despite the growing body of work, there remain clear research gaps. Few studies have explored the cross-sectoral impacts of these events holistically. Most focus on tourism alone, neglecting how hospitality and transport dynamics interlock with the larger economic cycle. The role of digital platforms such as online booking, e-ticketing, and real-time crowd monitoring in shaping economic outcomes during these gatherings is also under-researched. This study addresses these omissions by bringing together sectoral analyses, first-hand survey data, and cross-sector linkages into a single narrative.

Purpose

This research explores the intricate relationship between religious and cultural gatherings and their economic implications for three core sectors: tourism, hospitality, and transportation. The primary objective is to quantify and interpret the positive economic contributions while also recognizing the logistical and infrastructural strains that accompany these events.

Methodology

This research employed a descriptive design, integrating both primary data collection and secondary source analysis. A sample of 75 individuals from diverse socio-economic backgrounds participated in a structured online survey. The data collected focused on their experiences, expenditures, and observations related to religious and cultural gatherings. Convenience sampling was used due to time and access limitations. Quantitative data was analyzed using descriptive statistics, with support from Microsoft Excel. In parallel, secondary sources such as government reports, scholarly journals, and case studies were reviewed to supplement the findings.

Analysis & Findings

- The study's data revealed a clear economic uplift during religious and cultural events:
- **Tourism Surge:** Over 85% of participants agreed that such gatherings drive increased tourist inflow to host cities. Events like the Durga Puja in Kolkata or Ganesh Chaturthi in Mumbai were cited as major crowd-pullers.
- **Hospitality Upswing:** Nearly 99% rated their accommodation and food service experience as satisfactory or better. Notably, mid-tier hotels and homestays saw the most footfall.
- **Transport Overload:** Trains were the most used mode of transport (73.3%), followed by private vehicles and buses. More than 80% acknowledged facing delays and congestion, indicating overburdened infrastructure.
- **Spending Patterns:** A large segment of respondents spent ₹1,000–₹3,000 on accommodation and ₹500–₹2,500 on travel, suggesting that while these gatherings are inclusive of lower-income groups, they also attract higher-spending travelers.
- **Local Economy Boost:** Over 80% purchased local food, crafts, or souvenirs, reinforcing the significance of micro-businesses and street vendors in the overall economic chain.

Practical Implications

The findings of this study translate into several actionable strategies that can be implemented by policymakers, urban planners, and industry stakeholders to maximize the benefits of religious and cultural gatherings. First, it is essential for policymakers to treat these events as recurring, long-term economic assets rather than one-off spectacles. By integrating them into regional and national economic planning, governments can channel investments towards sectors that directly benefit from these gatherings, such as tourism, hospitality, transportation, and local artisanal industries.

Urban planning must also evolve to account for the predictable surges in visitor numbers during festival periods. This requires targeted infrastructure upgrades, such as expanding public transport capacity, improving road networks, and ensuring adequate public amenities, including toilets, waste disposal units, and rest areas. Event organizers, in partnership with municipal authorities, should place stronger emphasis on safety, hygiene, and crowd management protocols to enhance visitor satisfaction and protect the reputation of host cities. Investments in modern solutions such as mobile sanitation units, cashless and digital ticketing systems, and temporary pop-up marketplaces can further streamline logistics while boosting local economic activity. Additionally, regional governments can create interconnected cultural tourism circuits that link lesser-known destinations with major festival hubs, ensuring that economic gains are distributed more evenly across urban, semi-urban, and rural areas. This not only reduces pressure on overburdened cities but also promotes inclusive growth and cultural preservation.

Originality

This study stands out by adopting a cross-sectoral lens that seamlessly connects tourism, hospitality, and transportation, recognizing them as interdependent components of a single economic ecosystem. Unlike prior research that often isolates these industries, this approach highlights the chain reaction that large-scale religious and cultural gatherings trigger where increased tourist arrivals fuel higher demand for accommodation, which in turn drives transport usage and related services. By mapping these interlinkages, the study offers a more holistic and realistic picture of how such events generate both immediate economic activity and long-term developmental impacts.

What further sets this research apart is its integration of grassroots perspectives alongside quantitative analysis. By incorporating insights from event attendees, local vendors, service providers, and small business owners, the study moves beyond abstract numbers to reveal the lived realities behind the statistics. These personal accounts add cultural, emotional, and practical depth, capturing sentiments about affordability, pride in local traditions, and challenges in infrastructure readiness. This combination of hard data and human narratives ensures that the findings are not only academically rigorous but also highly relevant for policymakers, planners, and industry stakeholders seeking inclusive and sustainable economic strategies.

Conclusion and Recommendations

Religious and cultural gatherings are more than spiritual congregations they are catalysts of short-term economic vibrancy and long-term regional development. However, the benefits are not without cost. Strains on public transport, sanitation, and emergency services during these gatherings expose the need for better resource planning.

To ensure sustainability and inclusive development:

- Host cities should invest in permanent infrastructure such as parking zones, public toilets, and transport links.

- Authorities must develop fair pricing mechanisms to avoid excessive surge pricing in travel and accommodation.
- Organizers should prioritize eco-friendly event planning and actively involve local communities.
- Public-private partnerships (PPP) can unlock new avenues for responsible tourism marketing, better logistics, and technology integration.

With strategic investments and community-centric policies, these gatherings can continue to enhance India's global reputation as a center for cultural richness and economic potential.

Keywords: *Religious Gathering, Cultural Gatherings, Indian Economy, Tourism Sector, Hospitality Sector, Transportation Sector.*

References

- Anderson, L. (2023). Mobility Patterns and Festival Travel in India. *Indian Tourism Review*.
- Gautam, R. & Pandey, S. (2019). Local Business Impact During Religious Gatherings. *Journal of Urban Economics*.
- Getz, D. (2008). Event Tourism: Concepts and Approaches. *International Journal of Tourism Research*.
- Ministry of Tourism, Government of India. (2022). *Annual report 2021–22*. Ministry of Tourism.
- Mukherjee, A. (2022). Temporary Infrastructure and Long-Term Urban Benefits. *Journal of Public Planning*.
- Rajan, P. (2022). Inclusive Tourism and Regional Equity in India. *Journal of Policy Research*.
- Sharma, A. (2023). Economic Contribution of Religious Tourism in India. *The Tourism Economist*.
- Throsby, D. (2010). *Economics and Culture*. Cambridge University Press.
- Verma, P. & Singh, R. (2020). Sustainability Challenges in Event Tourism. *Environment & Development Studies*.

Introduction

The healthcare ecosystem in India is evolving at a faster rate which requires health technology converging into business sustainability and ethical marketing approach at the core, to ensure long term growth. The healthtech sector has simultaneously grown especially post Covid19 pandemic, as India emerged as the world's third largest startup economy (Khandelwal et al., 2022). According to Startup India report, the number of health-tech startups recognize by the Department for Promotion of Industry and Internal Trade (DPIIT) grown at a compound annual growth rate (CAGR) of 127% between 2016 and 2023, with over 10,000 startups. This exceptional growth looks to combine with increasing need which suggests that ethical marketing practices and sustainable business models are not only for regulatory requirements but are needed for long term success and impact in society (Cosenz et al., 2024). The rise of healthcare expenditure due to the ever growing population which is exceeding 1.4 billion, leads to growing demand for both affordable and accessible healthcare services (Singh & Kumar, 2017). The characteristics of Indian population are unique with socio-economic challenges, great geographic diversity, a clear urban-rural divide and complexities in regulatory systems. Healthtech solutions like AI based healthcare, telemedicine, health information system etc., have appeared as absolute tool to overcome these challenges (Narayan et al., 2024). Healthtech startups need to handle the complex intersection between ethical consideration, sustainability and technological capability, to make the healthtech innovations successful.

Select Literatures

The theoretical framework highlights a number of aspects from scholarly literature. Joyce & Paquin (2016) developed the Triple Layered Business Model Canvas (TLBMC) framework that provides a foundation to the understanding of business models by integrating the economic, social and environmental dimensions (Joyce & Paquin, 2016). The TLBMC adds on to the original business model canvas by adding the environmental and social aspects thereby providing a framework for organizations to generate multiple forms of value at the same time (Joyce & Paquin, 2016). This framework is relevant to healthtech startups as these startups creation of value goes beyond economic aspects only. Cosenz et al. (2020) on the other hand introduced the Dynamic Business Modeling for Sustainability (DBMfS) by integrating economic, social, and environmental aspects in healthcare firms, thus making it a holistic approach (Cosenz et al., 2024). Chakraborty et al. (2021, 2023) developed the literature of the critical success factors (CSF) thereby identifying the major reasons for success in the healthtech domain. The research papers found out five areas like the adoption of technology, electronic health services, frameworks of business planning, psychographics and regulation aspects (Chakraborty et al., 2021).

¹ PhD Scholar, Symbiosis Centre for Management Studies, Noida, Symbiosis International (Deemed University), Pune, Assistant Professor, Meghnad Saha Institute of Technology, Kolkata

² Associate Professor, Symbiosis Centre for Management Studies, Noida, Symbiosis International (Deemed University), Pune

Ethical marketing in healthcare contexts has gained significant scholarly attention, particularly in digital health environments. Ethical marketing in Indian healthtech startups involves integrating social and environmental concerns into their products and practices to generate consumer interest and build strong customer relationships (Awasthi et al., 2020). These startups face difficulties in maintaining transparency, following regulatory guidelines and maintaining a balance between growth with ethics (Jasrotia et al., 2025). Responsible digital health ecosystem requires customer centric approach and ethical governance to grow (Owoyemi et al., 2025). The evolving digital health policies and gaps in the data protection systems within the regulatory landscape, creates complexities for the practice of ethical marketing in (Jain, 2023).

Purpose

The aim of the paper is to examine the interconnection between ethical marketing practices and business sustainability by review of academic literature focusing on the Indian healthtech ecosystem. This paper addresses three research questions.

1. How sustainable business models contribute to healthtech startups' viability in the long term?
2. What is the role of ethical marketing practices in developing trust and responsible innovation in healthtech space?
3. How healthtech startups can achieve competitive advantage through the integration of sustainable principles and ethical marketing practices?

The objective is to develop a conceptual framework by integrating both business sustainability and ethical marketing practices which can demonstrate economic success as well as a positive health outcome. This research paper contributes to the entrepreneurship literature focusing on healthcare as well as provides valuable insights for startups, investors, stakeholders, policymakers operating in this domain.

Methodology

The theoretical foundation of this research combines number integrations like, triple layered business model canvas for inclusion of sustainability parameters, critical success factors for healthtech startups, ethical marketing framework for healthcare and policy ecosystem analysis which includes the Indian regulatory and institutional environment. This approach helps develop an interconnection between business sustainability and ethical marketing in the healthtech domain by drawing literature from healthcare, management and entrepreneurship literature and using data bases like Scopus, PubMed etc. to study high impact research articles for the study. The data collected from peer-reviewed literature focusing on the Indian healthtech context to identify the empirical research, theoretical context and policy documents that are relevant to the studies relevant to healthtech entrepreneurship, sustainability in healthcare, and ethical marketing practices.

Analysis & Findings

The integration of points between business sustainability and ethical marketing practices in the healthtech context is revealed in the analysis, where sustainable value proposition design is identified as an important requirement that demonstrate the capacity to combine economic viability with social and environmental perspective (Baldassarre et al., 2017; Javanmardi et al., 2024). Increase in cost effectiveness, reducing waste and improving operational efficiency can be attained by healthcare startups using sustainable business models while providing social wellbeing (Cosenz et al., 2024).

It is identified that regulatory compliance and ethical standards can act both as constraints and competitive advantage (Bird & Park, 2016) as the analysis reveals that the proactive involvement of

startups to protect data privacy, informed consent and transparent communication systems leads to achievement of smooth regulatory approvals and better market trust (Jain, 2023). The ABDM's Health Data Management Policy creates requirement for compliance and builds trust for startups, thereby suggesting that the data shall not be shared without the consent of the individual.

Long term sustainability as compared to pure profit driven approach is led by strategies that gives importance to patient-centricity and community health (Adeogun & Faezipour, 2025). The research identifies successful healthtech startups as those implementing inclusive management approaches that take sustainability into core strategies (Javanmardi et al., 2024).

Practical Implications

Integration of sustainability principles like Triple Layered Business Model Canvas and ethical marketing practices like transparency, data privacy, and evidence-based claims, can be integrated by healthtech startups from the inception. This integration helps not only in compliance practices but also in long term strategic outcome, thereby building patient trust and easing regulatory approvals (e.g., via ABDM policies), may attract investors focused on Environmental, Social, and Governance (ESG) focused healthtech firms.

Originality

The research combines business sustainability, ethical marketing and healthtech entrepreneurship within the Indian context, which is rarely used in academic literature to identify the interconnections among the same. Earlier studies have worked on these area separately, thus this research brings a novel perspective through the interconnections by drawing from the concept of triple layered business model canvas, thereby finding how sustainability and ethical practices combine to create value.

Conclusion & Recommendations

This research demonstrated that long term viability, competitive advantage and stakeholder trust in healthtech startups are driven by sustainable business models and ethical marketing practices, thereby making the integration of these approaches important to address India's complex healthcare challenges and building a economically viable business which can contribute to social wellness.

Table 1: Recommendations

Recommendations for startups	Policy recommendations
1. Sustainability integration at early stage using frameworks like TLBMC	1. Investment in digital infrastructure for healthtech adoption
2. Ethical marketing practices focusing on transparency and patient safety	2. Standardized guideline for ethical marketing practices
3. Engagement with regulatory framework like ABDM	3. Incentivize sustainable practices and develop supportive regulatory framework
4. Stakeholder centric approach that balances economic & social outcome.	4. Public-private-partnership for healthtech innovation and fulfilling public health objective

Future Research Direction:

1. Use of longitudinal studies that can track the long term performances that integrate business sustainability and marketing ethics of startups at large and healthtech in specific.
2. Methodologies to access impact of social and environmental outcome for healthtech startups

3. Studying emerging economies and conducting comparative analysis of different regulatory approaches of countries related to healthcare technology startups.

Keywords: *Healthtech Startups, Ethical Marketing, Sustainable Business, Business Model, Healthcare Ecosystem, India.*

References:

1. Awasthi, Y., Kakkar, B., &Uppal, A. (2020). Ethics of advertisement and marketing policies: an Indian perspective. *Rupkatha Journal on Interdisciplinary Studies in Humanities*, 12(1), 1-8.
2. Bird, R. C., & Park, S. K. (2016). Turning corporate compliance into competitive advantage. *U. Pa. J. Bus. L.*, 19, 285.
3. Chakraborty, I., Ilavarasan, P. V., &Edirippulige, S. (2021). Health-tech startups in healthcare service delivery: A scoping review. *Social Science & Medicine* (1982), 278(113949), 113949. doi:10.1016/j.socscimed.2021.113949
4. Chakraborty, I., Ilavarasan, P. V., & Edirippulige, S. (2023). Critical success factors of startups in the e-health domain. *Health Policy and Technology*, 12(3), 100773. doi:10.1016/j.hlpt.2023.100773
5. Cosenz, F., Noto, G., Cavadi, G., Bivona, E., & Scirè, G. (2024). Pursuing sustainable performance in healthcare organizations: a sustainable business model perspective. *Journal of Health Organization and Management*, 38(5), 741–759. doi:10.1108/JHOM-12-2023-0369
6. Cosenz, F., Rodrigues, V. P., &Rosati, F. (2020). Dynamic business modeling for sustainability: Exploring a system dynamics perspective to develop sustainable business models. *Business Strategy and the Environment*, 29(2), 651-664.
7. Jain, D. (2023). Regulation of Digital Healthcare in India: Ethical and Legal Challenges. *Healthcare*, 11(6), 911. <https://doi.org/10.3390/healthcare11060911>
8. Jasrotia, S. S., Kamila, M. K., Chib, S., & Raj, V. A. (2025). BYJU’S–The Indian edtech giant under dark skies: Can they survive? *Journal of Information Technology Teaching Cases*, 20438869251347635.
9. Javanmardi, E., Maresova, P., Xie, N., &Mierzwiak, R. (2024). Exploring business models for managing uncertainty in healthcare, medical devices, and biotechnology industries. *Heliyon*, 10(4), e25962. doi:10.1016/j.heliyon.2024.e25962
10. Joyce, A., & Paquin, R. L. (2016). The triple layered business model canvas: A tool to design more sustainable business models. *Journal of cleaner production*, 135, 1474-1486.
11. Narayan, A., Bhushan, I., & Schulman, K. (2024). India’s evolving digital health strategy. *Npj Digital Medicine*, 7(1), 284. doi:10.1038/s41746-024-01279-2
12. Owoyemi, A., Arthur, E., Ladi-Akinyemi, T., Babalola, Y., & Eke, D. O. (2025). Trustworthy AI in Healthcare: Exploring Ethics in Digital Health Technologies in Nigeria. In *Trustworthy AI: African Perspectives* (pp. 193-206). Cham: Springer Nature Switzerland.
13. Baldassarre, B., Calabretta, G., Bocken, N. M. P., & Jaskiewicz, T. (2017). Bridging sustainable business model innovation and user-driven innovation: A process for sustainable value proposition design. *Journal of cleaner production*, 147, 175-186.
14. Adeogun, A., &Faezipour, M. (2025, January). Patient-centric paradigm: a systems thinking approach to enhance healthcare. In *Healthcare* (Vol. 13, No. 3, p. 213). MDPI.
15. Khandelwal, R., Kolte, A., & Rossi, M. (2022). A study on entrepreneurial opportunities in digital health-care post-Covid-19 from the perspective of developing countries. *foresight*, 24(3/4), 527-544.
16. Singh, P., & Kumar, V. (2017). The rising burden of healthcare expenditure in India: a poverty nexus. *Social Indicators Research*, 133(2), 741-762.

Tama Dwibedi ¹, Dr. Mainak Chakraborty ², Dr. Debashis Batabyal ³

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

Pilgrimage tourism, religious tourism, spiritual tourism, faith tourism is interlinked with each other maintaining a fine line of difference. All these themes and subthemes are practiced from ancient time of India and now our country is witnessed a fast growing form of these tourism. India is well-known for its assorted range of religious practices by its citizen and West Bengal is not the divergent one for adopting the diversity of the country. The motive or intention of a tourists is categorised into two groups, one group of pilgrimage tourists who want to fulfil their spiritual wish by visiting these scared sites, touch the deity. In the contrary, the other want to visit these sites for non-religious purposes that is for attraction of artefacts, monuments, heritage building and sightseeing purpose. By spotting the light into the first category, we can depict the case of West Bengal. Kankalitala of Birbhum district of West Bengal is itemised among the most prominent temples of Sati Peethams. Myth logically, the trace of the tragic tale of Sati, the daughter of the king Dakshya and first consort of lord Shiva. Sati was married Shiva against her father's wishes and the king Dakshya insulted Shiva deliberately during the time of grand yagna. The king Dakshya deliberately excluded him from the sacrificial ritual. Unable to bear the humiliation, Sati immolated herself into sacrificial fire. By seeing Sati's death, Lord Shiva was consumed by grief and rage, he began to perform the Tandava, the cosmic dance of the destruction, which threatened to destroy the whole universe. To recover the universe from the Tandava of Shiva, Lord Vishnu used his Sudarshan Chakra to dismember Sati's body which scattered across various locations. Sati's body was mutilated into 51 pieces and fell into 51 different places on globe. Eventually these 51 places became known as the Sati/ Shakti Peethams. Apart from India, Bangladesh, Pakistan, Sri Lanka, Tibet are holding some of the Sati Peethams. These scared sites are very popular to the devotees can connect with the divine feminine magical energy of the goddess. The purpose of this study is to identify the motivational parameters of the devotees and investigate their behavioural pattern of the pilgrims at Kankalitala, one of the major Sati Peethams in west Bengal. To achieve this objective 20 religious motivational items are identified based on the existing literatures. This motivational parameters are subject to exploratory factor analysis (EFA) and followed by confirmatory factor analysis (CFA). Broadly the motivational parameters can be categorised into three sub themes namely religious strong belief & wish fulfilment, temple service quality and lastly temple architectural view, heritage and rich cultural aspect of religious sites. The analysis of data for these three motivational parameters are collected as responses given by the respondents or sometime stakeholders of the specified study area Kankalitala. The findings of the study reveals that temple service quality is the primary motivational factor affecting the behavioural pattern of the pilgrims. Though the study area has an esteemed heritage and culture backed by the temple's architectural view but devotees pay more attention to the service quality given by the temple authority. By summarising the study we can recommends that the service providers need to pay more attention about their service quality to enrich their religious product potential.

¹ Research Scholar, School of Business, Adamas University, State Aided College Teacher, Vidyanagar College

² Associate Professor, Department of Management, School of Business, Adamas University

³ Associate Professor of Amity University

Map of Sati Peethams of West Bengal:



Sati Peethams are widespread throughout the cross geographical border of the state West Bengal. In this paper we are concentrating about the socio-economic development of the local inhabitants through religious tourism. This motive of discussing religious tourism is to answer of the three research question. These are:

RQ1: Is there any socio-economic development through Sati Peethams destinations?

RQ2: What are the yardsticks for measuring the socio-economic development of the studied area?

RQ3: What are the promotional tools used for socio-economic development of the Sati Peethams?

Literature Reviews

Maximum of the Sati Peeths in Indian Subcontinent are prominent 'religious tourism hubs. The economies of many backward regions all over India have been thriven due to the presence of such Sati Peeths. In all the places animistic origin of worship are apparent in spite of the existence of idols which are the later addition by Hinduism which has taken over the indigenous deity in its stronghold. The legend associated with Sati Peeths draws the attention of pilgrims as well as international cultural tourists to these religious centres. Most of the Sati Peeths in Indian Subcontinent are eminent 'religious tourism hubs. The economies of many backward regions all over India have been flourished due to the presence of such Sati Peeths. In all the places animistic origin of worship are evident in spite of the presence of idols which are the later addition by Hinduism which has taken over the aboriginal deity in its stronghold. The legend associated with Sati Peeths draws the attention of pilgrims as well as international cultural tourists to these religious centres. Sinha & Murdia (2018) concentrates about the contribution of local inhabitants of the cultural tourism platter of Murshidabad district in West Bengal. Batabyal & Das (2018) describes the domestic tourism and its scope. . Shinde (2018) gives an idea of Governance and management of religious tourism. Sengupta (2018) examines the feminine cult and tantric practice in Kamakhya. . Jacob (2019) reflects the black magic effect in religious tourism. Bona Kim (2019) describes the effect of personal values and experiences on the religious tourism. Aguilar (2019) discusses about the attachment of ritual purity and Kalighat temple of Kolkata. Venugopal (2019) describes the e-

marketing promotion concept in religious tourism platform. Iqbal (2019) draws the connexion between local economy and religious tourism in Dakshineswar and Adyapith in West Bengal. Puri & Singh (2020) measures the service quality and tourists' satisfaction in tourism industry. Sofique & Rani (2020) identifies the problems and challenges of Bakreshwar temple. Reddy (2021) invents the applicability of GIS based interactive maps technology for religious tourism geography. Mahato & Jana (2021) discusses about the geo-tourism concentration in Rarh Bengal. Mandal (2021) discusses about the effect of seasonality in tourism. Dileep (2021) stresses on the drivers of spiritual tourism. Vinodan (2021) shares his views regarding the women experience in the Sabarimela pilgrimage in Kerala. Majumdar (2021) explains the effect of worshipping Durga idol in West Bengal. Sikdar (2020) explores the desirability & portrayals of women's 'Self' as 'Shakti and how West Bengal influenced by the Shakti Peeth culture. Sheeba & Thankachan (2022) focusses on the tantra and ritual practices of Kamakhya and Chinnamasta temple. Batabyal, Das, Sen, Porya (2022) explains the concentration of Sati Peeths and dark tourism culture in South East Asia.

Objectives

For answering the aforesaid research questions stated I have to point out the gap in the existing literatures and focused about the objectives. The objectives are stated as below:

- i. Explore the socio-economic development of the Kankalitala
- ii. Find out the tourists' motivation about the study area.
- iii. Promotional tools used to promote the study are

Research Design

- Drafting of Primary Questionnaire Survey sheet about Kankalitala.
- Collect primary data from the respondents and summarises these in a tabular format.
- Analyses the data and interpreting the results.

Practical Implication

After collecting the primary responses from the respondents I have to compile the effective parameters relating to these study. We can use exploratory factor analysis and in a more precise way we can move to confirmatory factor analysis technique with these common factors. The goal is to study about the motivational factors of the pilgrims in this Sati Peetham Kankalitala of the Birbhum district of West Bengal.

Originality of the Paper

As the existing literatures is concerned in this area of religious tourism more specifically Sati Peeths, this paper has an authentic view to represent the motivational impact of the pilgrims covering religious tourism in a combinational of rural as well as cultural tourism as the nearest tourist hub Bolepur is a combination of both the three.

Conclusion

An analysis of the perception of local folks shows that the people living in village with higher engagement in tourism activities have more positive attitude (Brunt and Courtney 1999) towards the changes that have taken place in the last 10 years due to tourism development. The house live in the

village where people are mostly engaged in tourism activities perceive that development of tourism has improved the water supply, power supply, road and transportation, job and employment opportunities and their overall living conditions of the study area. However, there are some negative externalities which have also grown with the development of tourism, such as pollution, crime etc. So, there can be a measurement of both positive as well as negative impact by studying the motivational impact of the pilgrims.

Keywords: Religious tourism, motivation, behavioural intention, circuit development, socio-cultural development.

References:

1. Ali, S., Maharani, L., & Untari, D. T. (2019). Development of religious tourism in Bandar Lampung, Indonesia. *African Journal of Hospitality, Tourism and Leisure*, 8(5), 1-8.
2. Barua, A. (2015). Elements of Magic, Esotericism, and Religion in Shaktism and Tantrism in Light of the Shakti Pitha Kāmākhya. *Pomegranate*, 17.
3. Balakrishnan Nair, B., & Dileep, M. R. (2021). Drivers of spiritual tourism: A destination-specific approach. *International Journal of Religious Tourism and Pilgrimage*, 9(5), 2.
4. Kumar, A. (2017). Cultural and heritage tourism: A tool for sustainable development. *Global Journal of Commerce & Management Perspective*, 6(6), 56-59.
5. Bandyopadhyay, R., Morais, D. B., & Chick, G. (2008). Religion and identity in India's heritage tourism. *Annals of Tourism research*, 35(3), 790-808.
6. Batabyal, D., Halam, H., Sen, S. K., Chakma, M. K., Sinha, R., & Selem, K. M. (2023). Circuit development approach to geotourism and geoparks in Northeast India. *GeoJournal*, 88(6), 6161-6173.
7. Bezborah, C. J. Exploring The Impact Of Sustainable Practices On The Preservation Of Cultural Heritage Sites In Assam'S Tourism Industry.
8. Kim, B., & Kim, S. S. (2019). The effect of religious tourism experiences on personal values. *International Journal of Religious Tourism and Pilgrimage*, 7(2), 9.
9. Sofique, M. A., & Rani, R. PROBLEMS AND PROSPECTS OF RURAL TOURISM IN BAKRESHWAR AND NEARBY TOURIST SITES IN BIRBHUM, WEST BENGAL, INDIA-WITH REFERENCE TO THE TYPOLOGY OF TOURISTS IN THE REGION.
10. Kundu, S. K. (2012). Economic empowerment through rural tourism: The case of Tarapith–A religious tourism destination in Birbhum District of West Bengal, India. *Geografia*, 8(7).
11. Alecu, I. C. (2010). Epistemological aspects of religious tourism in rural areas. *International Journal of Business, Management and Social Sciences*, 2(3), 59-65.
12. Ray, N., & Das, D. K. (2011). Marketing Practices for Promotion of Rural Tourism: A Study on Kamarpukur, India. *Journal of Business and Economics*, 2(5), 382-396.
13. Ray, N., Dash, D. K., Sengupta, P. P., & Ghosh, S. (2012). Rural tourism and it's impact on socioeconomic condition: Evidence from West Bengal, India. *Global Journal of Business Research*, 6(2), 11-22.

Introduction

Digital marketing involves the adoption of marketing tools such as the internet, social media, mobile, video, content, and search engine optimization. It has the potential to boost the tourism performance of the country as a source of competitive advantage for hospitality by successfully drawing a wide range of tourists, domestic as well as foreign. But, not many studies have been conducted about the adoption and use of digital marketing especially during the covid-19 pandemic and its impact on organizational performance and economic development.

Select Literature

Digital marketing uses electronic media, wireless media and digital databases on customers (Farrel, 2017). Digital marketing makes use of tools such as electronic billboards, videos, mobile phones and internet when marketing (Kariru, Kambona and Odhuno, 2017) that offer attractive visual displays and speedy communication while targeting wide audience bases (Khan and Nawaz, 2021). In today's world, digital marketing has emerged as an essential component of organizational growth (Junaedi and Edmond, 2024). As connectivity is supremely important now, the tourism industry is exploiting the power of digital marketing to engage with travelers, shape perceptions, and drive economic growth (Kamsar et al., 2023).

Purpose

This review paper tries to explore ways and means of adoption and use of digital marketing by the hospitality sector. It also tries to unravel whether digital marketing affects the hospitality sector performance and ultimately contributes towards the growth of the tourism industry. Finally, it also attempts to find whether digital marketing can contribute to the attainment of sustainable development goals.

Methodology

The impact of digital marketing in the hospitality sector is examined in this review article. Exploring how the facilities can embrace and apply digital marketing tools, figuring out how it can affect the firms' performance, and highlighting how it can support sustainable development goals are the objectives of the review. The study scans secondary data from books, journal articles, newspapers, and conference papers in addition to drawing on the author's expertise, insights, and experiences in digital marketing in the hospitality sector.

¹ Asst. Professor, Dept. of Business Administration, Siliguri Institute of Technology, Salbari, Sukna, Siliguri, West Bengal, India

² Asst. Professor, Dept. of Business Administration, Siliguri Institute of Technology, Salbari, Sukna, Siliguri, West Bengal, India

³ Asst. Professor, Dept. of Business Administration, Siliguri Institute of Technology, Salbari, Sukna, Siliguri, West Bengal, India

Analysis & Findings

Digital marketing tools include website, social media, search engine optimization, email, content and mobiles (Kaur, 2017). Parvez, Meyenudin, Aruns and Janahan (2018) found that hotels have deployed social media marketing, search engine optimization, video marketing and property management systems (PMS) embracing social media such as Twitter, Facebook and Trip Advisor following advances in marketing trends (Kariru, Kambona and Odhuno, 2017).

The Covid-19 pandemic affected the marketing of hospitality companies worldwide during and global tourist numbers and travel dropped (UNWTO, 2020). Saha and Kar (2020) found that most respondents used digital marketing to acquire new products during lockdown. Kumar (2020) similarly found that digital marketing is imperative during the pandemic as it enhanced safety and trust. Oliveira, Santos, Sousa and Lopes (2021) found that the firms had embraced both digital and traditional marketing during the pandemic. Digital marketing is required for business sustainability (Kaur, 2017) and especially important for hotels (Kumar and Syed, 2021). It can be used to attract new customers and retain old ones thus ensuring constant business for the facility.

The United Nations (UN) came up with the sustainable development goals (SDG) on the 25th of September 2015. The sustainable development goals (SDG) were developed to protect the natural and manmade resources including products and destinations on which the tourism and hospitality industries thrive while addressing the needs of the host communities in the areas where tourism is practised (United Nations, UN, 2017). The goals proposed by the United Nations, UN (2017) include No Poverty, Zero Hunger, Gender Equality, Industry, Innovation and Infrastructure etc.

Practical Implications

In most parts, this paper reports secondary data on the espousal and use of digital marketing and the association between digital marketing, organizational performance and economic development. Some observations were based on the authors' knowledge and experiences. Parlov et al. (2016) likewise looked at new trends in tourism destination branding, digital marketing by reviewing literature and secondary sources of data.

All stakeholders of the tourism industry, hospitality firms, their customers, travel agents and tour operators have started extensively using digital marketing (Kaur, 2017) nowadays in their hospitality dealings, transactions and communication. This has been facilitated by the fact that coupled with visual appeal and widespread internet connectivity, digital marketing can be very effectively used to remind, educate and encourage customers to consume hospitality products at a fraction of a cost compared to traditional marketing such as brochures, sales promotions and personal selling.

Adopting digital marketing when promoting India can provide avenues to attractively and quickly present information on tourism products and destinations in interactive platforms such as social media, mobile phones, videos and internet. Digital marketing, when used in hospitality industry, can help in realizing sustainable development goals (SDG) as employment opportunities can open up for local populace armed with knowledge and skills in digital marketing promoting economic growth. The engaging nature and large audience reach of digital marketing can ensure higher footfall of tourists to popular destinations thereby positively affecting tourism development.

Originality

This paper investigated digital marketing in the hospitality industry in light of performance of hospitality sector and its contribution towards economic development.

Conclusion and Recommendations

The review found that hospitality facilities have embraced digital marketing tools including internet, viral and content marketing. The facilities use these tools to communicate, educate and inform their stakeholders. The findings show that digital marketing can impact non-financial and financial performance and positively contribute to India Vision 2030 and sustainable development goals (SDG).

Keywords: *Communication, Digital, Hospitality, India, Marketing, Tourism.*

References

1. Farrel, R. (2017). *Digital marketing*. Retrieved on 28th June 2025 from <https://www.tutorialspoint.com/digital-marketing/tutorial>
2. Kariru, A. N., Kambona O. and Odhuno E. (2017). Enhancing competitiveness through guests' experiences: A typology of customer experiences in upscale hotels. *International Journal of Hospitality Administration* 18 (4), 361-392
3. Kaur, G.(2017).The importance of digital marketing in the tourism industry. *International Journal of Research*5(6),72-78
4. Khan, R. Z. and Nawaz, H. (2021). Impact and challenge of digital marketing during covid-19 pandemic. *Gorteria Journal* 34, (8) 31-38
5. Kumar, R. (2020). Impact of covid-19 on digital marketing in India: Opportunities and challenges. *International Journal of Multidisciplinary Educational Research* 9, (12), 77-80
6. Kumar, A. and Syed, A. A. (2021). Digital marketing effectiveness study: A special focus on prominent futuristic tools of digital marketing for Indian hotels. *Journal of Research* 13 (3)
7. Oliviera, M., Santos, T., Sousa, M. and Lopes, J. M. (2021). Covid 19 impacts on digital marketing strategies. The case of catering SME'S in Portugal. *Academy of Entrepreneurship Journal* 27, (5), 1-9
8. Parlov, N., Perkov, D., and Sicaja, Z. (2016). New trends in tourism destination branding by means of digital marketing. *Acta Economica Et Turistica* 2 (2), 101-109
9. Parvez, S.J., Meyenudin, H.M, Arun, S., and Janahan, S.K.(2018).Digital marketing in hotel industry. *International Journal of Engineering and Technology* 2(21), 288-290.
10. Saha, A., and Kar, D. (2020). Digital marketing during a pandemic: A study on impact of digital marketing on consumer perception during lockdown in Guwahati City. *International Journal of Commerce and Management Research* 6, (4), 18-22
11. United Nations. (2017).*United Nations Sustainable Development Goals*. Retrieved on 29th June 2025 from <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>
12. United Nations World Tourism Organization-UNWTO. (2020). *Impact Assessment of the Covid-19 Outbreak on International Tourism*. Retrieved on 3rd June, 2025 from <https://www.unwto.org>
13. Junaedi, S. R. P., & Edmond, D. (2024). Successful digital marketing techniques for business development. *Startupreneur Business Digital (SABDA Journal)*, 3(1), 19-25.
14. Kamsar, K., Alim, I., Akbar, M.R., & Mone, A. (2023). Bira Beach Tourism Governance Through Digital Marketing Communication Strategies. *Kybernology: Journal of Government Studies*, 3(1), 62-77.

Theoretical Background

Marketing Library and Information Services (LIS) had proven difficult in a conventional context. Librarians and information professionals now have more ways to promote library and information services because to social media (SM). Academic libraries and information services can be effectively promoted through social media. Libraries can more successfully connect with researchers, faculty, and students by utilizing social media sites like Facebook, Instagram, LinkedIn, and Twitter (X). Through these platforms, libraries can promote workshops, showcase new resources, disseminate updates, and provide research advice in interesting and dynamic ways.

Key Objectives

This study looks at how social media is used to market academic library resources and services in India and examines the variables that affect the use of social media apps for academic library marketing. This paper aims to investigate the ways in which libraries and information centers use social media applications to promote their services globally. In addition to discussing the most popular social media tools and reviewing their usage for marketing. The study also examines general principles for the use of social media apps in libraries and information centers. Lastly, a paradigm for the effective development and use of social media applications in marketing libraries and information centers is presented in this paper as well.

Discussion and Analysis

Social media promotes user interaction, raises visibility, and fosters a feeling of community. Book spotlights, live Q&A sessions, and video lessons are examples of creative material that can improve user experience and promote academic success. Strategic use of social media makes the academic library a vibrant, easily accessible, and user-focused environment outside of its physical boundaries.

Academic libraries are no longer limited to physical locations and printed items in the digital age. They have developed into vibrant information centers that offer a variety of services and online materials to aid in research, teaching, and learning. Social media has become a potent tool for marketing library services and encouraging user involvement as academics and students increasingly rely on digital platforms for networking, communication, and information sharing. Academic libraries may increase their reach, enhance service quality, and solidify their standing in the academic community by utilizing social media strategically.

- Social Media's Significance in Academic Libraries:

Students, teachers, and academics utilize social media sites including Facebook, Instagram, LinkedIn, YouTube, TikTok, and Twitter (now X) extensively. With the use of these platforms, academic libraries may communicate with their audiences in real time, give timely updates, and advertise their resources

¹ Librarian, Vidyanagar College

and services in a way that is easy for users to understand and utilize. Libraries can use social media to announce future events, workshops, training sessions, database subscriptions, new book arrivals, and changes to their hours of operation. More significantly, it gives patrons a way to learn about the many services the library offers, including digital collections, reference services, interlibrary loans, research assistance, and information literacy training.

- The advantages of social media use in academic libraries:

1. Greater Accessibility and Visibility: Social media makes it possible for libraries to stay active and visible online, increasing user accessibility. For remote researchers and distance learners in particular, it fills the gap between virtual and physical library services.

2. Interaction and User Engagement: Social media promotes two-way communication, in contrast to conventional communication techniques. Through interactive posts, polls, direct messages, and comments, libraries can interact with their patrons. Users feel heard and appreciated as a result, and a sense of community is fostered.

3. Marketing of Resources and Services: Academic libraries offer a wide range of services that many faculty members and students are not aware of. Less well-known services like subject guides, institutional repositories, special collections, and citation help can be promoted on social media.

4. Prompt Communication: Social media can be used by libraries to promptly announce significant updates, such changes to the schedule, system outages, or emergency closures. This guarantees that users are informed and current at all times.

5. Assistance with Education and Research: Libraries can distribute helpful materials including citation styles, research advice, academic writing manuals, and connections to pertinent scholarly sources. This establishes the library as a resource for academic assistance rather than merely a place to check out books.

- Common Social Media Sites and How They Are Used

Facebook: Great for sharing articles, photo albums, service updates, and event announcements. It also encourages the formation of communities and groups within libraries.

Twitter (X): Ideal for live-tweeting classes or events, sharing links, and providing brief updates. Content can be categorized with hashtags for increased visibility.

Instagram: Helpful for engaging campaigns, promoting new arrivals, showcasing behind-the-scenes library activities, and telling visual stories.

LinkedIn: Good for showcasing institutional partnerships, promoting research publications, and establishing connections with academic professionals.

YouTube: Good for posting recorded webinars, virtual tours, and video courses.

TikTok: A new platform for entertaining and imaginative material that aims to attract younger users, particularly college students.

Academic libraries now depend heavily on social media as a communication and engagement tool. Strategic utilization can boost academic success, increase user engagement, and dramatically increase the visibility of library services. Academic libraries can establish themselves as essential, adaptable, and progressive elements of the academic environment by creating a well-thought-out social media strategy, posting pertinent and interesting content, and encouraging two-way conversation. Libraries must adopt

these technologies as people's digital habits continue to change if they want to remain relevant and flourish as vibrant hubs of community, innovation, and information.

Keywords: *Social media, Library and Information Services, Academic Libraries*

Introduction

In the rapidly evolving landscape of Indian commerce, digital and social media marketing have emerged as transformative forces reshaping business operations, customer engagement, and market outreach. This paper investigates the multifaceted impact of digital and social media marketing on business growth in India, a country with a burgeoning internet user base, increasing smartphone penetration, and a vibrant digital ecosystem. It explores how businesses—ranging from multinational corporations to micro, small, and medium enterprises (MSMEs)—are leveraging digital platforms to reach diverse customer segments, improve brand visibility, and drive sales. This study explores the transformative impact of digital and social media marketing on business performance in the Indian context, with a focus on small and medium enterprises (SMEs), startups, and traditional businesses transitioning online. By integrating quantitative data analysis and qualitative insights, this research assesses the effectiveness of digital marketing tools such as search engine optimization (SEO), email marketing, influencer marketing, and social media platforms like Facebook, Instagram, LinkedIn, and YouTube in reaching target audiences and generating business outcomes.

Review of Literature

India has witnessed exponential growth in digital users, with over 850 million internet users as of 2024 (TRAI, 2024). Businesses are leveraging digital platforms like Google, Facebook, Instagram, YouTube, and WhatsApp for targeted marketing and customer engagement.

Kaur and Singh (2020) noted that the rise in digital consumers in India has shifted marketing budgets from traditional to digital platforms. They highlight the cost-effectiveness and reach of digital campaigns compared to conventional media.

Choudhury and Harrigan (2021) observed that social media marketing (SMM) significantly influences consumer engagement through personalized communication, influencer marketing, and interactive content. Businesses have reported improved customer relationships and loyalty.

Mehta (2022) highlighted how these initiatives offer digital training and infrastructure support, especially to startups and MSMEs.

Rathore and Ilavarasan (2021) found that digital platforms allow SMEs to reach a wider audience, collect feedback, and improve customer service.

Gupta and Tyagi (2019) emphasized the use of analytics and performance metrics in digital campaigns. ROI measurement is easier in digital marketing due to tools like Google Analytics, Meta Insights, etc.

Kapoor et al. (2021) studied how Indian consumers trust social media influencers more than celebrities. Brands that collaborate with niche influencers see higher conversions.

¹ Associate Professor, Department of Commerce, Vidyanagar College

Saxena and Pandey (2020) argue that while urban businesses adapt well, rural businesses still lag due to limited infrastructure and awareness.

Objectives of the study

- To know the importance of social and digital marketing in India.
- To examine the effect of social and digital media marketing to enhance business

Research Methodology

The research adopts a mixed-method approach, combining quantitative data from surveys conducted across key urban and semi-urban markets with qualitative insights from interviews with marketing professionals, business owners, and digital strategists. The study evaluates the effectiveness of various digital marketing tools such as search engine optimization (SEO), pay-per-click (PPC) advertising, content marketing, influencer collaborations, and data-driven customer targeting on platforms like Facebook, Instagram, YouTube, and WhatsApp. Special attention is given to how regional content, vernacular language marketing, and mobile-first strategies are tailored to Indian audiences.

Observation

The paper examines the digital behavior of Indian consumers, the penetration of mobile and internet technology, and the cultural dynamics influencing content consumption and brand interaction. A mixed-methods approach is used: a survey of 300 business owners across diverse sectors (retail, services, manufacturing, education, etc.) is combined with in-depth interviews with 15 digital marketing professionals. The findings highlight a significant positive correlation between digital marketing investments and key business metrics such as lead generation, brand visibility, customer acquisition, and sales conversion. Furthermore, the study identifies that social media platforms serve as not only promotional tools but also channels for real-time customer service, brand loyalty, and community building.

Conclusion

The research also delves into the challenges faced by Indian businesses, including digital skill gaps, platform algorithm complexity, fluctuating ad costs, and trust issues in online transactions. Despite these, the scalability, cost-effectiveness, and measurable ROI of digital marketing are driving factors for its adoption. The paper concludes with strategic recommendations for businesses to optimize digital marketing practices, emphasizing data-driven decision-making, localized content strategies, and the integration of AI tools for automation and personalization. This study contributes to the growing literature on digital transformation in emerging markets and provides actionable insights for entrepreneurs, marketers, and policymakers aiming to harness the full potential of digital and social media marketing to fuel India's business ecosystem.

Keywords: *Digital marketing, Social media, Indian business, Online advertising, Consumer engagement, SMEs, Brand awareness, Digital transformation, Marketing strategy, ROI*

References:

- Kaur, P., & Singh, R. (2020). The Role of Digital Marketing in the Growth of Small Businesses in India. *Journal of Business and Management*, 22(3), 45-52.
- Mehta, P. (2022). Role of Government Initiatives in Boosting Digital Marketing in India. *Economic and Political Weekly*, 57(16), 35-40.
- Saxena, R., & Pandey, D. (2020). Barriers to Adoption of Digital Marketing in Rural India. *Journal of Rural and Industrial Development*, 6(1), 12-19.

- Gupta, A., & Tyagi, M. (2019). Digital Marketing Performance Metrics and ROI in India. *International Journal of Marketing and Technology*, 9(5), 112-128.
- Rathore, A., & Ilavarasan, P. V. (2021). Adoption of Digital Marketing by Indian MSMEs. *Journal of Small Business and Enterprise Development*, 28(2), 205-222.
- Choudhury, N., & Harrigan, P. (2021). Social Media Marketing and Customer Engagement in Emerging Markets. *Journal of Retailing and Consumer Services*, 59, 102384.
- Kapoor, K., Dwivedi, Y. K., Piercy, N. F., & Kumar, V. (2021). Influencer Marketing: A Review and Research Agenda. *Journal of Business Research*, 135, 123–140

Introduction

Tourism as a global contributor in economic development, cultural enrichment and societal transformation. Among the various clusters of tourism, religious tourism is contributing effectively on the socio economic development. This study is based on the transformative potential of smart tourism technologies to improve pilgrims' experiences on holy pilgrimage area based on Birbhum district, West Bengal. The specified area of the study is the Shakti Peethas situated at Birbhum district. The use of digital tools, such as wearable health technology, virtual and augmented reality (VR/AR), mobile applications, GPS navigation, and AI-powered services, presents new chances to enhance accessibility, safety, personalisation, and engagement as pilgrimages continue to draw millions of spiritual travellers worldwide. The study looks at how these developments can enhance spiritual and cultural immersion in addition to facilitating informed travel and logistical efficiency. The risks of cultural dilution, data privacy, technical over-reliance, and the difficulties of digital adoption are all covered in the study. It ends by suggesting a fair, inclusive strategy that embraces the advantages of a smart tourism framework while preserving the holy spirit of pilgrimage.

Select Literature Review

Mahadevan, P., Das, T., & Mahesh, G. (2023), This paper's abstract, highlights the substantial influence of digital innovations on tourism, with a particular emphasis on the interpretation of pilgrimage and heritage sites. It draws attention to how technology has the power to change how people view and interact with these websites

Khalilov, K. K. (2023), This paper's presents tourism area model created especially for creating pilgrimage site clusters. In order to accomplish a number of important goals, this model combines the unique features of pilgrimage destinations with the concepts of SMART tourism.

Vij, S., Singh, P., & Kulshrestha, R, 2023, This chapter offers a thorough examination of the ways in which technology is changing religious travel. It explores contemporary patterns and actual situations to show how technological developments affect pilgrimages to sacred sites.

Younis, M. I., & Abdulkareem, M. H. (2020), The study essentially suggests an Internet of Things (IoT)-driven system that uses RFID, ZigBee, and IPv6 to improve pilgrim safety and management by offering real-time tracking and resolving a number of operational issues with an inexpensive, low-power solution.

Ramos, C. M. Q., Henriques, C., & Lanquar, R. (2016), The paper's main focus is on itineraries and routes related to religion and spirituality. It seeks to provide a template for experiences related to religious tourism. The concept incorporates a technological architecture that is shown on individual mobile devices

¹ PhD Scholar in JIS University, Assistant Professor, Asansol Engineering College, Asansol WB

and makes use of intelligent human-computer interactions. This strategy aims to provide visitors with more information on cultural and religious heritage.

Niyogi, R., Misra, M., Kulshrestha, T., & Patel, D. (2017), With a special emphasis on pilgrim safety in smart environments, the abstract of the paper "Smart pilgrim: A mobile-sensor-cloud based system to safeguard pilgrims through smart environment" presents a novel approach to managing big gatherings. The necessity of effectively managing pilgrims' locations data and monitoring and controlling their actions is the main issue addressed.

Objectives

The study is guided by the following objectives:

1. To identify the opportunities for integrating smart technologies in sacred sites.
2. To understand the pilgrim expectation and satisfaction related to digital service.
3. To recommend strategies for sustainable smart tourism development in rural religious areas.

Methodology

A mixed –method research design has been adopted from this study, by focusing both on quantitative and qualitative approach. The primary data has been collected through field survey, face-to-face interviews and observational methods. Approx. 210 responses has been gathered. Secondary data were gathered from academic journals, state govt. tourism books & report, and relevant literature on pilgrim tourism.

Data were analyzed using statistical tools such as the Kaiser-Meyer-Olkin (KMO) test, factor analysis, and multiple linear regression to identify key determinants and measure the impact of smart technologies on pilgrim tourism of Birbhum district.

Findings

The study revealed the below points:

1. **Technology adoption among pilgrims:** As per the feedback received from the pilgrims reveals that there a minimum scope to use technology at the select areas.
2. **Technology adoption among the local businessman:** The local businessman of some area are also not aware of the technologies that can be used for the betterment of the overall journey of the pilgrims.
3. **Enhanced Safety & Crowd Management:** The smart technologies can help to manage the crowd and also enhance the safety measures.
4. **Cultural & Spiritual Engagement:** Sometimes the pilgrims can also engages themselves in different types of cultural and spiritual activities among the pilgrims area.

Implications

The findings underscore the need for sustainable pilgrim tourism practices to maximize benefits while minimizing adverse impacts. Key implications include:

- **Policy Recommendations:** Governments should promote smart technologies for the promotions of the host area, which will help to improve the footfalls of pilgrims.

- **Tourism Education:** Training programs should be introduced to equip local communities with the skills needed for entrepreneurial ventures and hospitality management.
- **Community Involvement:** Active participation of local stakeholders in tourism planning and execution is essential for long-term success.

Conclusion

Pilgrim tourism in Birbhum district shows a potential of rural tourism to drive socio-economic development while preserving the cultural heritage of Birbhum District. Out of the total 51 Shakti Peethas in all over the world, 39 is situated in India and in West Bengal the number is 13 and specially in Birbhum district 5 Shakti Peethas are there. There a huge potential to attract more pilgrims among the Shakti Peethas. This study suggests the proposed strategy that how can we improve the number of footfalls among the select spots.

Keywords: *Tourism, Pilgrim Tourism, Technology, Shakti Peethas Birbhum.*

References

- Mahadevan, P., Das, T., & Mahesh, G. (2023). Use of Technology in Interpretation of Pilgrim Centres (pp. 122–140). IGI Global. <https://doi.org/10.4018/979-8-3693-1414-2.ch010>
- Khalilov, K. K. (2023). A “smart” tourist area (destination) model of forming a cluster of pilgrimage sites. *The American Journal of Management and Economics Innovations*. <https://doi.org/10.37547/tajmei/volume05issue09-03>
- Vij, S., Singh, P., & Kulshrestha, R. (n.d.). Technology-Powered Pilgrimage Innovations. <https://doi.org/10.4018/979-8-3693-7898-4.ch023>
- Younis, M. I., & Abdulkareem, M. H. (2020). Pilgrims tracking and monitoring based on IoT. *1530(1)*, 012015. <https://doi.org/10.1088/1742-6596/1530/1/012015>
- Ramos, C. M. Q., Henriques, C., & Lanquar, R. (2016). Augmented Reality for Smart Tourism in Religious Heritage Itineraries: Tourism Experiences in the Technological Age (pp. 245–272). IGI Global. <https://doi.org/10.4018/978-1-5225-0435-1.CH010>
- Niyogi, R., Misra, M., Kulshrestha, T., & Patel, D. (2017). Smart pilgrim: A mobile-sensor-cloud based system to safeguard pilgrims through smart environment. *International Conference on Contemporary Computing*, 1–6. <https://doi.org/10.1109/IC3.2017.8284304>

Introduction

Healthcare service delivery in metropolitan cities like Kolkata is experiencing growing scrutiny regarding service quality and patient satisfaction. With increasing health awareness, competitive medical markets, and rising patient expectations, healthcare institutions are compelled to evaluate their service delivery from a patient-centric perspective. While advanced medical technology and infrastructure form the backbone of quality healthcare, patient perceptions are often shaped by intangible service components such as empathy, communication, and responsiveness. This study seeks to examine how these service quality dimensions affect patient satisfaction in Kolkata's healthcare system, providing insights into areas for service improvement. The quality of healthcare services significantly influences patient satisfaction and their continued engagement with healthcare providers. In urban healthcare systems such as Kolkata, where public and private healthcare facilities coexist, understanding the determinants of patient satisfaction is crucial for both policy reform and operational improvement. This study investigates the relationship between service quality dimensions and patient satisfaction within selected healthcare institutions in Kolkata. Employing the SERVQUAL model as the theoretical framework, the research evaluates how tangibles, reliability, responsiveness, assurance, and empathy impact overall patient satisfaction. Primary data were collected using structured questionnaires administered to 200 patients across public and private hospitals in Kolkata. The findings indicate a strong positive correlation between responsiveness and empathy with patient satisfaction, suggesting that interpersonal aspects of care significantly shape perceptions of quality. The study concludes with recommendations for healthcare managers to enhance patient-centered care by improving service responsiveness and empathetic communication.

Literature Review

Patient satisfaction is a significant indicator of healthcare service quality and is increasingly emphasized in healthcare management research. The SERVQUAL model, developed by Parasuraman et al. (1988), has emerged as a leading framework for evaluating service quality, encompassing dimensions such as tangibles, reliability, responsiveness, assurance, and empathy. Studies by Andaleeb (2001) and Padma et al. (2010) demonstrate that both tangibles (e.g., hospital environment) and intangible aspects (e.g., staff empathy and assurance) markedly influence patient satisfaction. Research comparing public and private healthcare facilities in India suggests divergent patient priorities: while public hospitals often face resource constraints affecting tangibles, private hospitals are usually evaluated more strictly on personalized care and assurance (Ravichandran et al., 2010). Understanding these drivers in the context of Kolkata aids in identifying improvement areas tailored to local expectations.

Objectives of the Study

1. To evaluate the relationship between key service quality dimensions and patient satisfaction in healthcare services in Kolkata.

¹ PhD Scholar, Faculty of Management, JIS University

2. To identify the most influential service quality components that drive patient satisfaction across public and private healthcare facilities.

Methodology

- Research Design: Descriptive and exploratory in nature.
- Population: Patients availing services from selected private and public hospitals in Kolkata.
- Sample Size: 200 respondents (100 from private and 100 from public hospitals).
- Sampling Technique: Stratified random sampling to ensure representation from different hospital types.
- Data Collection Tool: Structured questionnaire based on the SERVQUAL model.
- Data Analysis Techniques: Descriptive statistics, correlation analysis, and multiple regression analysis were used to interpret the data using SPSS software.

Theoretical Framework

This study is grounded in the SERVQUAL model developed by Parasuraman, Zeithaml, and Berry. The model evaluates service quality based on five dimensions:

1. Tangibles – Physical facilities, equipment, and appearance of personnel.
2. Reliability – Ability to perform the promised service dependably and accurately.
3. Responsiveness – Willingness to help and provide prompt service.
4. Assurance – Knowledge and courtesy of employees and their ability to inspire trust and confidence.
5. Empathy – Caring and individualized attention provided to patients.

This framework serves as a lens to measure perceived service quality and its impact on patient satisfaction in healthcare settings.

Findings of the Study

- Responsiveness and empathy emerged as the most significant predictors of patient satisfaction in both public and private hospitals.
- Tangibles and reliability had a moderate impact, particularly in private healthcare settings where infrastructure plays a more visible role in patient perceptions.
- Assurance, though important, was less influential compared to the emotional and interactional dimensions of care.
- Patients in private hospitals reported higher overall satisfaction levels than those in public hospitals, primarily due to shorter wait times and better staff behavior.

Conclusion

The study highlights the critical role of interpersonal and emotional aspects of healthcare delivery in shaping patient satisfaction in Kolkata. While tangible factors remain important, it is the responsiveness and empathy of healthcare providers that resonate most with patients. These findings suggest that healthcare institutions, particularly in the public sector, must prioritize staff training in communication, empathy, and responsiveness to improve patient experiences. The study offers valuable insights for hospital administrators and policymakers to enhance service quality and foster a more patient-centered healthcare environment.

Keywords: *Patient satisfaction, healthcare service quality, SERVQUAL, public healthcare, private healthcare, Kolkata, tangibles, assurance, empathy.*

References

- Andaleeb, S. S. (2001). Service quality perceptions and patient satisfaction: A study of hospitals in a developing country. *Social Science & Medicine*, 52(9), 1359-1370.
- Padma, P., Rajendran, C., & Sai Lokachari, P. (2010). Service quality and its impact on customer satisfaction in Indian hospitals: Perspectives of patients and their attendants. *Benchmarking: An International Journal*, 17(6), 807-841.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multi-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12-40.
- Ravichandran, N., Bhojan, K., & Arun Kumar, S. (2010). Service quality in health care: A study of corporate hospitals in India. *International Journal of Health Care Quality Assurance*, 23(6), 658-673.

Introduction

In recent years, the digital commerce sector in India has witnessed rapid growth, due to widespread use of smartphones, growing consumer interest in global products, improvements in digital infrastructure, supportive government policies, and the COVID-19 pandemic. Rising competition and swift technological advancements are prompting ecommerce businesses to pool resources and strengthen capabilities through strategic collaborations. Mergers and acquisitions (M&As) as a key strategic approach aims to broaden the companies' market reach, diversify their offerings, and improve operational efficiency. Among the key players in online food delivery platforms, Zomato stands out for its strategic transformation from a restaurant discovery platform to a full-fledged food delivery. Zomato's acquisition of Blinkit helped the company to enter into quick commerce business. Zomato is a powerful case study because it represents the intersection of e-commerce, digital innovation, customer service, and strategic acquisitions. It is an empirically rich and contextually relevant example for analysing the real impact of M&As in India's fast-paced online economy. During post-merger integration it is absolutely necessary to monitor improvements in financial indicators to analyse the outcome of M&A. But the customer-focused aspect especially in terms of service quality often receives limited attention in post-merger assessments. This study investigates both financial performance and service quality in the aftermath of Zomato's strategic transformation through acquisitions.

Select Literature

Recent studies have increasingly explored the outcomes of mergers and acquisitions (M&As) in the digital commerce sector. Bhatia and Jain (2023) examined Indian e-commerce firms' post-merger and found that while service efficiency and system availability improved, customer satisfaction related to fulfilment significantly declined. Similarly, Patel and Mehta (2021) studied the Flipkart–Myntra integration and reported that customers faced initial confusion due to overlapping brand identities and changes in the user interface, despite faster delivery services. In the financial domain, Kumar and Sengupta (2022) assessed the post-merger financial health of tech-based start-ups in India, revealing a dip in short-term profitability but gradual recovery and long-term stability. Jadhav and Sinha (2021) conducted a financial statement analysis of five listed Indian e-commerce companies and observed a notable improvement in Return on Equity (RoE) and Net Profit Margin two years post-merger.

On the operational front, Singh and Verma (2022) evaluated the impact of M&A on logistics-based digital firms such as Delhivery and highlighted that while operational efficiency improved, customer satisfaction remained volatile during the integration phase. Lee and Park (2020) also emphasized the role of technology integration in service delivery post-merger, noting that while automation improved accuracy and speed, it raised new concerns around customer data privacy. In the context of app-based services, Rao and Deshmukh (2023) conducted a case study on the Zomato–Blinkit merger and discovered short-term user experience disruptions due to interface changes, but increased satisfaction

¹ Research Scholar, School of Management Studies, JIS University, Kolkata, India

over time due to the convenience of quick-commerce integration. Nykaa's post-merger acquisition of content-driven platforms was evaluated by Mehra and Kaur (2022), who found that while the financial synergy was realized through cross-selling and increased engagement, customers expressed concerns about platform clutter and lack of personalization.

Purpose

The main objectives of this research are to analyse Zomato's financial performance in pre- and post-acquisition period using relevant financial indicators. The study also evaluates customer satisfaction using service quality dimensions in post-acquisition period. After assessing outcomes insights are provided on integration challenges and performance metrics.

Research Methodology

This study adopts a mixed-method research design, combining primary data (for customer satisfaction analysis) and secondary data (for financial performance assessment). A case study approach is used to provide in-depth analysis. The primary data for the research were collected from customers who actively use services from Zomato. Purposive sampling was conducted and as a tool of data collection, a well drafted and structured questionnaire with five-point Likert scale was used. Questionnaire was based on the E-S-QUAL model covering the dimensions like Efficiency, Fulfillment, System Availability, Privacy.

Secondary data sources are company filings from Zomato websites and financial statements from NSE filings. As Zomato is a listed company, its financial reports are audited and publicly disclosed. Relevant ratios are calculated to know the profitability, liquidity, solvency positions of the company. Ten financial metrics namely PBDIT Margin, ROCE, Return on Assets, Return on Networth/Equity, Debt/Equity Ratio, Current Ratio, Interest Coverage Ratio, Operating Cash Flow to Total Assets, Operating Cash Flow to Total Liabilities, EPS were compared to evaluate shifts in financial performance indicators.

Statistical software SPSS & AMOS were used for data analysis. This study adopts the E-S-QUAL model as its theoretical framework to evaluate service quality perception among customers of Zomato. Synergy Theory explains how strategic mergers and acquisitions aim to improve operational efficiency and financial returns through integration. Analysis of this study aligns with the idea of identifying synergy-driven gains or inefficiencies.

Analysis & Findings

Data collected through a structured questionnaire were first tested for reliability. Cronbach's alpha values for each dimension exceeded the recommended threshold, indicating strong internal consistency and reliability of the measurement scales. To confirm whether the items group into the expected four E-S-QUAL factors Exploratory Factor Analysis was conducted. Composite scores were then computed for each E-S-QUAL dimension by averaging the responses of the corresponding items. Mean scores for E-S-QUAL dimensions are compared to identify the strength and weakness of service quality. The financial performance of Zomato was evaluated by comparing key financial ratios over the pre- and post-merger periods. Zomato's ROE pattern reveals the high cost of growth and acquisition in early years, followed by improved financial performance post-mergers. The shift from deeply negative to stable and positive ROE reflects better equity utilization and operational efficiency, especially after absorbing UberEats and Blinkit. The analysis focused on other financial indicators also and noticed whether the changes in indicators are statistically significant or not, by using pair t- test.

Practical Implications

From a customer-centric perspective, the integration of quick-commerce services added value by expanding product offerings and reducing delivery time. However, disruptions in order tracking, app interface adjustments, and fulfilment consistency during the initial post-merger phase led to temporary declines in customer satisfaction. On the financial front, the outcomes indicate that strategic mergers in the digital food and commerce space require careful cost control, capital deployment, and operational optimization during the transition phase.

Originality

Using Zomato's acquisition of Blinkit as the focal case, this research applies a mixed approach that combines quantitative financial ratio analysis with customer satisfaction assessment. By analyzing Zomato, a publicly listed company with transparent financial disclosures the study enhances the reliability and applicability of its findings within the broader Indian e-commerce context. This case-based contribution helps build a more comprehensive understanding of post-merger dynamics in fast-evolving digital economies.

Conclusions and Recommendations

The study revealed that while such strategic mergers may yield long-term financial benefits such as improved return on assets, enhanced profit margin, and operational efficiency, they often come with short-term challenges, including liquidity pressures and rising integration costs. From the customer perspective, the findings highlighted that service quality perceptions, particularly in the dimensions of fulfilment and privacy, were temporarily disrupted post-merger, even though areas like efficiency and system availability showed improvement or remained stable. To ensure successful post-merger outcomes, e-commerce firms like Zomato should regularly monitor customer satisfaction, along with gradual operational integration. Aligning financial goals with customer-centric approach is essential for long-term success in digital mergers.

Keywords: *Strategic Transformation, Digital Commerce, Customer Satisfaction, Financial Indicators, Post-Merger Integration, Quick Commerce*

References

- Bhatia, R., & Jain, S. (2023). Post-merger service quality assessment in Indian e-commerce firms using E-S-QUAL. *Journal of Digital Business Research*, 12(1), 45–60.
- Jadhav, A., & Sinha, V. (2021). Profitability analysis of listed Indian e-commerce companies post-merger. *Indian Journal of Corporate Finance*, 8(2), 23–38.
- Kumar, A., & Sengupta, R. (2022). Financial performance and synergy realization in Indian tech start-ups post-M&A. *South Asian Journal of Finance and Strategy*, 9(1), 14–29.
- Lee, J., & Park, M. (2020). Technology integration and service delivery in digital mergers. *Journal of Service Innovation and Strategy*, 7(3), 77–91.
- Mehra, K., & Kaur, P. (2022). Strategic acquisition and customer engagement: A case of Nykaa's content-driven expansion. *Journal of Retail and E-Commerce Innovation*, 11(2), 54–70.
- Patel, D., & Mehta, A. (2021). Post-merger brand perception in digital commerce: The case of Flipkart–Myntra. *Asian Journal of Marketing Insights*, 6(4), 101–115.
- Rao, K., & Deshmukh, A. (2023). Zomato and Blinkit: Evaluating post-merger customer experience and operational integration. *Journal of Digital Commerce Studies*, 13(1), 33–48.
- Singh, R., & Verma, S. (2022). Post-merger logistics and customer satisfaction in Indian digital delivery firms. *Operations and Logistics Review*, 9(3), 58–73.

Introduction

The gig economy – covering ride- hailing, delivery, freelancing and digital content- offers flexibility and accessibility but raises concerns over job security, income stability and social protection. Permanent employees enjoy fixed hours and benefits, while gig workers often face irregular earnings, long hours and no grievance redressal.

The International Labour Organization (ILO) notes that millions of workers globally engage in gig work, with Asia and Africa showing the fastest rates due to mobile penetration and urbanization. The Indian gig workforce has exploded in recent years due to increased internet and smartphone penetration, the rise of digital platforms, a preference for flexible work, and a growing demand for

on- demand services. These workers are classified as independent contractors and hence remain outside the purview of most labour protections. As per the NITI Aayog's 2022 report, India had around 7.7 million gig workers, expected to grow to 23.5 million by 2030. The surge in gig work in India is particularly visible in delivery services, transportation and digital freelancing. The gig economy in India has been criticized for long working hours, income instability, lack of insurance, and no formal avenues for grievance redressal. While platforms and governments are often viewed as the primary agents of change, the role of consumers- arguably the most influential stakeholders - has remained underexplored. This paper aims to investigate how consumer awareness, attitudes, and actions can significantly influence the wellbeing and rights of gig workers, especially in India.

Literature Review

Existing research highlights multiple challenges in the gig economy, including informality, algorithmic control, and lack of legal recognition (Kuek et al.,2015; Duggan et al.,2020). Studies such as those by Berg et al. (2018) and Srnicek (2017) underline the platform- centric nature of power, often sidelining both workers and consumers. Research by Zervas, Proserpio and Byers (2015, USA) on Airbnb shows that online review systems strongly influence consumer choices but can also be biased. Similarly, Trebor Scholz (2016, USA and Europe) highlights how rating mechanisms in the gig economy can reinforce power imbalances, giving consumers disproportionate influence over workers' livelihoods. A common pattern is the 'ethical blind spot' – even when aware of poor working conditions, most consumers still pick the cheapest, fastest option. Recent works, however, are beginning to acknowledge the critical role consumers can play as enablers of ethical labour practices (Rani and Dhir,2020). Indian studies (Mehrotra et al., 2022; Niti Aayog, 2022) indicate growing public support for fair treatment of gig workers but lack an integrated model for consumer engagement. This paper builds upon these gaps and introduces global fair work principles to assess consumer roles and responsibilities.

¹ Assistant Professor, Seth Soorajmull Jalan Girls' College

Purpose

The primary aim of this study is to propose a consumer-centric framework to support and empower gig workers in the digital platform economy. It investigates the transformative potential of consumer-driven initiatives such as ethical consumption, platform accountability, and participatory feedback. It emphasizes the idea that everyday choices by consumers can drive systemic improvements in the gig economy.

Methodology

This descriptive, conceptual paper uses secondary research from peer-reviewed journals, Government policy documents, ILO reports, Fairwork studies, worker charters, and advocacy literature. A comparative framework evaluated Indian gig platforms i (Swiggy, Zomato, Urban Company, Ola) against global examples (Uber, TaskRabbit Deliveroo) on transparency, feedback systems and ethical consumption, integrating Fairwork 's 5 principles – to assess consumer influence.

Analysis and Findings

Since 2018-19, the Fairwork India project has rated gig platforms on fair pay, conditions, contracts, management and representation. By 2024 only Bigbasket and Urban Company paid above the minimum wage, some improved safety, contracts and management, but none met the living wage or recognized worker collectives.

Compared with global platforms like Uber, TaskRabbit and Deliveroo, Indian platforms such as Swiggy, Zomato, Urban Company and Ola show weaker transparency on pay and rights, less robust feedback systems for reporting mistreatment and largely informal ethical consumption models.

The ILO's 2021 and 2022 reports on India's gig economy note low pay, poor protection and long hours. They urged a multi-stakeholder approach, where informed consumers and public support push platforms toward fairer, safer and more ethical work.

NITI Aayog's 2022 report calls for a multi-stakeholder approach, including consumers, to promote fairer gig work. Rajasthan's 2023 Act and Karnataka's 2025 Ordinance fund gig-worker welfare through a cess on each transaction, shared by platforms, workers and consumers.

Building on these insights, consumers have untapped potential to help make the gig economy fairer. The Key areas of Consumer influence are-

1. Volume of work- Consumer demand determines the availability and frequency of gig work, directly influencing income opportunities for workers.
2. Ratings and Feedback- Ratings are used by platforms to allocate work, calculate incentives, and in some cases, penalize workers. Unfair ratings- often based on factors outside the worker's control- can significantly reduce earnings or result in job loss. Objective, constructive feedback – rather than impulsive reactions- ensures that performance evaluations remain fair and reflective of actual service quality.
3. Ethical Platform Preferences- Choosing platforms that offer worker protections (eg, insurance, fair pay, and grievance mechanisms) encourages responsible business practices.
4. Service expectations- Unrealistic or last-minute demands (e.g., expecting faster delivery during bad weather) can create stress for workers. Delays may be due to platform pressures, traffic

congestion extreme weather, or insufficient rest periods enforced by platform algorithms. Viewing these circumstances with empathy helps foster a respectful interaction.

5. Cultural respect- Consumers shape social perceptions of gig work. Showing patience and courtesy and acknowledging the human effort behind services helps restore dignity to undervalued labour.
6. Tipping practices- Tips often serve as a vital supplement to low platform wages. Consistent and thoughtful tipping practices can greatly ease financial pressure for workers.
7. Respect for time and boundaries- Avoiding last- minute cancellations, providing accurate instructions, and being ready at the scheduled time help reduce wasted trips, fuel costs, and unpaid labour.
8. Public Advocacy- Consumers have the power to influence corporate and public policy through social media, petitions, and collective feedback. Highlighting poor practices or supporting reform campaigns can catalyze change at scale.

Globally, consumers have supported gig workers through actions like UK's 2021 #Uber Fair Pay, 2019 Ethical Eats for fair- pay delivery, US's 2018 Just Uber for driver rights, the 2020 Covid-19 tipping drive and Australia's 2022 Deliveroo protest. In India, Zomato's 2022 delivery – time dispute and Swiggy's 2023 Hyderabad strike drew similar support, though large- scale action is rare.

Applying Fairwork's Five Principles to consumers means choosing fair- pay platforms, tipping, demanding safety, pushing for clear contracts, ensuring fair management and supporting worker organization.

Practical Implications

This paper proposes actionable consumer- driven strategies to support gig workers, like-

- 1.Promote ethical consumer labels for gig platforms (similar to 'Fairtrade')
2. Enable feedback on not just service quality but working conditions.
3. Advocate for platforms to publish gig worker welfare audits.
4. Encourage consumers to tip fairly, especially during high- demand hours.
5. Design awareness campaigns in collaboration with civil society organizations and consumer forums. Such interventions can shift market dynamics and compel platforms to prioritize fair work principles.

Originality

Unlike most research that focuses on policy or platform accountability, this paper foregrounds consumer responsibility and power in shaping labour rights. By viewing consumers as active agents- especially in India, where legal protections are limited, it opens new possibilities for participatory economic justice.

Conclusion and Recommendations

Consumer behaviour drives the gig economy more than regulations or platforms. Empowering gig workers is a multifaceted challenge, but involving consumers as stakeholders may offer a practical and scalable approach. This study recommends other steps -

1. Integrating consumer education on fair gig work practices through apps and digital campaigns.
2. Mandating consumer transparency tools on platforms (eg., fair work scorecards)
3. Collaborating with labour unions to amplify worker stories through consumer channels. This will create a feedback loop between consumers and platform ethics , which in turn may ensure a more just and sustainable gig economy ecosystem.

The gig economy thrives on an intricate relationship between platforms, workers and consumers. While technological convenience has redefined service delivery, it is essential to acknowledge the human effort behind each task. Consumers are not passive beneficiaries – they are active participants whose choices and attitudes can either perpetuate exploitation or foster dignity, fairness and sustainability. By blending empathy with informed action, consumers can help shape a gig economy that values both efficiency and equity.

Keywords: *Gig Economy, Digital Platforms, Consumers, Ethical Consumption, Fair Work Principles, Feedback, Rating, Algorithmic Control*

References

1. International Labour Organization (2021) World Employment and Social Outlook 2021 : The role of digital labour platforms in transforming the world of work <https://www.ilo.org/global/research/global-reports/weso/lang--en/index.htm>
2. NITI Aayog (2022, June 27) India's booming gig and platform economy: Perspectives and recommendations on the future of work. Government of India https://www.niti.gov.in/sites/default/files/2023-06/Policy_Brief_India%27s_Booming_Gig_and_Platform_Economy_27062022.pdf
3. Fairwork India (2023) Fairwork India ratings 2023: Labour standards in the platform economy. International Institute of Information Technology Bangalore & University of Oxford. <https://fair.work/en/fw/publications/fairwork-india-ratings-2023-labour-standards-in-the-platform-economy/>
4. Oxfam India (2022, September 28) India Discrimination Report 2022 <https://www.oxfamindia.org/press-release/oxfam-india-discrimination-report-2022>
5. Kuek, S. C., Paradi- Guilford, C. Fayomi, T., Imaizumi, S., Ipeirotis, P., Pina, P., & Singh, M (2015). The global opportunity in online outsourcing. World Bank. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/138371468000900555/the-global-opportunity-in-online-outsourcing>
6. Scholz, T. (2016) Platform cooperativism: Challenging the corporate sharing economy. Rosa Luxemburg Stiftung <https://rosalux.nyc/rosalux-resource/platform-cooperativism-challenging-the-corporate-sharing-economy/>
7. Proserpio, D., Zervas, G., & Byers, J.W. (2021) A first look at online reputation on Airbnb, where every stay is above average. Marketing Letters, 32(1), 1-16 <https://doi.org/10.1007/s11002-020-09546-4>
8. Mehrotra, S., Rani, U., & Dhir, R (2022) Fairwork India ratings 2022: Labour standards in the platform economy. International Institute of Information Technology , Bangalore and University of Oxford. <https://fair.work/en/fw/publications/fairwork-india-ratings-2022-labour-standards-in-the-platform-economy/>
9. Fairwork India ratings 2024: Labour standards in the platform economy. International Institute of Information Technology, Bangalore and University of Oxford. <https://fair.work/en/fw/publications/fairwork-india-ratings-2024-labour-standards-in-the-platform-economy/>
10. International Labour Organization (2021) World Employment and Social Outlook 2021: The role of digital labour platforms in transforming the world of work <https://www.ilo.org/global/research/global-reports/weso/2021/lang--en/index.htm>

11. International Labour Organization (2022) World Employment and Social Outlook 2022: The role of digital labour platforms in transforming the world of work <https://www.ilo.org/global/research/global-reports/weso/2022/lang--en/index.htm>
12. Government of Rajasthan (2023). The Rajasthan Platform Based Gig Workers (Registration and Welfare) Act, 2023. Government of Rajasthan <https://labour.rajasthan.gov.in/content/dolab/en/acts--rules/state-acts/rajasthan-platform-based-gig-workers-act--rules.html>
13. Government of Karnataka (2025). Karnataka Platform- Based Gig Workers' (Social Security and Welfare) Ordinance, 2025 <https://labour.karnataka.gov.in/>
14. BBC News (2021, March 23) Uber drivers in UK win workers' rights in landmark case, BBC <https://www.bbc.com/news/business-56241594>
15. Ethical Consumer (2019, October 16) Ethical Eats campaign for fair pay in food delivery. Ethical Consumer <https://www.ethicalconsumer.org/food-drink/ethical-eats-campaign>
16. The Guardian (2018, May 8) Just Eat, Uber Eats and Deliveroo couriers strike over pay. The Guardian <https://www.theguardian.com/business/2018/may/08/just-eat-uber-eats-deliveroo-couriers-strike-pay>
17. The New York Times (2020, April 1) Amid pandemic, customers tip more for delivery workers The New York Times <https://www.nytimes.com/2020/04/01/business/coronavirus-tips-delivery.html>
18. The Hindu (2022, August, 11) Zomato revises delivery time policy after backlash. The Hindu <https://www.thehindu.com/business/zomato-revises-delivery-time-policy-after-backlash/article65761624.ece>
19. ABC News Australia (2022, October 21). Deliveroo riders strike in Australia over pay and conditions ABC News <https://www.abc.net.au/news/2022-10-21/deliveroo-riders-strike-over-pay/101560948>
20. The Times of India (2024, January 23) Swiggy delivery executives strike in Hyderabad over pay cuts. The Times of India <https://timesofindia.indiatimes.com/city/hyderabad/swiggy-delivery-executives-strike-in-hyderabad-over-pay-cuts/articleless/97305568.cms>

“ENHANCING WORKFORCE EFFICIENCY THROUGH EFFECTIVE TRAINING AND INDUCTION PROGRAMS”: A CASE STUDY OF BRAKES INDIA PVT. LTD. SHOLINGHUR

Dr S K Gurumoorthi ¹

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

The manufacturing sector shows a significant contribution to the economic development of the country in terms of Gross Domestic Product (GDP), employment generation, capital formation, and research and development. The industry is marked by technological change, increasing customer expectations, and intense competition. Manufacturing and other industries face continuous challenges related to product quality, productivity, and operational efficiency. In response to these challenges, companies are increasingly investing in human capital by providing training and development programs. These programs are designed to enhance employee skills and adaptability in the evolving work environment (Herjuna 2024). Training and development help bridge the gap between job requirements and the current capabilities of staff. It requires a certain level of time, energy, and financial investment. Training is an effective strategy to improve employee performance, productivity, and retention by offering career growth opportunities and long-term job satisfaction (Topno, H).

Literature Review

Goldstein(1980) emphasized that training is a significant tool for acquiring and sustaining the knowledge, essential skills, and defined attitudes necessary for employees to perform tasks effectively and enhance their performance in a corporate environment.

Olusegun, J (2024) outlined that employee efficiency, inspiration, and organizational performance are directly connected to a high-performance work culture. Competence is measured by skills, job knowledge, and caliber, which help individuals perform their work efficiently. Among these, motivation is the most significant inherent factor in achieving results. Both motivation and competencies are essential in sustaining a culture of excellence and supporting overall company performance.

Jayashree (2025) stated that periodic training programs increase work efficiency, understanding of job techniques, and employee competency. Employees agree that training improves productivity, adaptation to innovative technologies, and career opportunities. Overall, training and development programs help reduce absenteeism and boost professional activity and growth. Additionally, training plays a mediating role in enhancing job performance and career development.

The primary goal of various corporate training programs is to align with the organization's objectives, and this is achieved by adapting to the organization's culture Jehanzeb, K., & Bashir, N. A. (2013).

Khan, R. A. G., Khan, F. A., & Khan, M. A. (2011) emphasized Human resources are the most important and foundational component of every company. As a significant organizational asset, companies invest heavily in human resources to enhance employee performance, which directly impacts overall organizational success. Achieving strong corporate performance is a key goal for most organizations,

¹ Professor, Department of Management studies, GRT Institute of Engineering and Technology

and improved employee performance is essential for meeting strategic objectives. Among the various factors contributing to performance, training stands out as one of the most critical tools.

Topno, H. (2012) points out that training and development tasks begin with identifying poor employee performance and arranging suitable training programs, ultimately ending with the evaluation of the training. This process ensures that employees undergoing training are able to improve their performance in their assigned work and regular tasks.

Kum, F. D. (2014) Asserted that the primary reason for investing in human capital development is to enhance long-term productivity through increased employee commitment. Training focuses on employees' current tasks while also preparing them for future roles. This enables management to maintain the right number of skilled personnel and adequately replace those who leave the organization, supporting succession strategies. Training is further reinforced by the adoption of new technologies and machinery, helping to ensure sufficient human resources for future projects and growth prospects. The impact of training and development programs includes successful execution of new projects, reduction in project failures, decreased employee turnover, minimized need for constant leadership direction, and improved employee commitment and performance.

Fajarsyah, R., & Okfernando, R. (2025) said that Training and development activities play a vital role in enhancing employee skills, improving job efficiency, and supporting career growth. The effectiveness of these programs depends on various factors such as the quality of training content, training methods, trainer competency, and the availability of supporting facilities. The author also emphasized that training programs enhance both technical and interpersonal skills, thereby improving employment prospects. Additionally, employee commitment tends to increase after training, and job retention levels also improve.

Jan (2025) highlighted that job satisfaction refers to an employee's positive or negative impression regarding their job responsibilities and duties. It is an instinctive belief about work, and the level of satisfaction may vary from one employee to another. Job satisfaction is considered a vital factor in an employee's emotional well-being and is recognized as an important indicator of job performance, satisfaction, and retention. The research identifies several key factors influencing satisfaction, including the workplace environment, timely compensation and fringe benefits, interpersonal relationships with colleagues, and opportunities for career growth and development.

Statement of The Problem

Despite the recognized importance of staff induction and training programs in shaping employee performance, many organizations in the manufacturing and automotive sectors struggle to accurately measure their impact on employee efficiency. New hires often face challenges in adapting to job roles and organizational culture due to inadequate onboarding, while existing training modules may fail to address evolving skill requirements. Consequently, inefficiencies, low morale, and high turnover continue to pose significant challenges. This study aims to examine how well-designed induction and training programs contribute to enhancing employee efficiency, supporting adaptation to organizational culture, and improving overall workplace productivity.

Objectives of The Study

- To assess employees' perceptions regarding the relevance and effectiveness of training modules.
- To identify the relationship between training programs and employee retention rates.
- To explore the role of continuous learning opportunities in enhancing workplace productivity.

Research Methodology

Research is the systematic and scientific process of finding the right solutions to both defined and undefined problems within the workplace and societal environment Kapur, R. (2018). A research design helps guide this process by outlining what data need to be collected, which instruments should be used, and what statistical tools are appropriate for analysis. In this study, a descriptive research design was employed to explain the content and scope of the research. The random sampling method was used, as it provides equal chances of selection to all individuals in the population. Brakes India Private Limited has a total of 843 employees, and using a sample size determination formula, 156 employees were selected for the study. Both primary and secondary data collection methods were utilized. A survey method was finalized, and a structured questionnaire was developed with the help of a literature review. The questionnaire consisted of closed-ended questions based on a Likert scale, covering various sections such as job roles, training, skill enhancement, motivation, and overall satisfaction.

Analysis And Interpretation

Respondents' Age Distribution Table

S.NO	Particulars	No of respondents	Percentage
1	18-25	86	55.1
2	26-35	41	26.3
3	36-45	21	13.5
4	above45	8	5.1
Total		156	100

Sources: primary data collection

Interpretation

The age distribution of respondents indicates that the majority (55.1%) fall within the 18–25 age range, reflecting a predominantly younger workforce. The 26–35 age group comprises 26.3% of the respondents, followed by 13.5% in the 36–45 category. A smaller proportion, 5.1%, is aged above 45. This demographic structure suggests that the organization primarily employs younger professionals, with a declining representation of older employees.

Gender Distribution of the Respondents

S.NO	Particulars	No of respondents	Percentage
1	Male	113	72.4
2	Female	43	27.6
Total		156	100

Sources: primary data collection

Interpretation

Based on the above data, the majority of respondents (72.4%) are male, indicating a male-dominated sample. This suggests that men represent a larger portion of the workforce or group surveyed. In contrast, female respondents comprise 27.6% of the sample, reflecting a smaller but still significant presence of women in the population.

Adaptation to Company Culture through Induction: A Tabular Overview

S.NO	Particulars	No of respondents	Percentage
1	Strongly disagree	15	9.6
2	Disagree	23	14.7
3	Neutral	42	26.9
4	Strongly agree	53	34.0
5	Agree	23	14.7
Total		156	100

Sources: primary data collection

Interpretation

The induction process had a mixed impact on employees' adaptation to the company's culture and values. While 34.0% of respondents "strongly agree" and 14.7% "agree" that the process helped them—totaling 48.7% positive responses—a notable 26.9% remained "neutral," suggesting uncertainty or partial effectiveness. Meanwhile, 14.7% "disagree" and 9.6% "strongly disagree," indicating that, for some employees, the process did not sufficiently support cultural adaptation.

Improvement in Job Knowledge and Skills after Training

S.NO	Particulars	No of respondents	Percentage
1	Strongly agree	41	26.3
2	Agree	69	44.2
3	Neutral	36	23.1
4	Strongly disagree	6	3.8
5	Disagree	4	2.6
Total		156	100

Sources: primary data collection

Interpretation:

The training provided during induction was largely effective in enhancing employees' job knowledge and skills. A significant 44.2% of respondents "agree" that the training improved their capabilities, while 26.3% "strongly agree," indicating strong positive feedback. However, 23.1% remained "neutral," suggesting that some employees may not have experienced noticeable skill enhancement. Meanwhile, 3.8% "strongly disagree" and 2.6% "disagree," highlighting a small portion who felt the training did not contribute to their development.

Correlation Coefficient**Analysis 1**

Null Hypothesis(H0): There is no significant correlation between satisfaction with the training programs and the content of the training material.

Alternative Hypothesis(H1): There is a significant correlation between satisfaction with the training Programs and the content of the training material.

Correlation

		Are you satisfied with the training programs Offered by the Organization.	Are you satisfied with the Content of the training material.
Are you satisfied with the training programs offered by the organization	Pearson Correlation	1	.540**
	Sig. (2-tailed)		0.000
	N	156	156
Are you satisfied with the content of the training material	Pearson Correlation	.540**	1
	Sig. (2-tailed)	0.000	
	N	156	156

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

Interpretation

There is a moderate positive correlation ($r = 0.540$) at the 0.01 significance level (2-tailed), indicating a positive relationship between satisfaction with the training programs and the content of the training material. This suggests that employees who are satisfied with the training are more likely to be committed to staying longer in the organization.

Analysis 2

Null Hypothesis (H₀): There is significant relationship between training programs helps solves challenges and problems and the commit towards stay longer with the company.

Alternative Hypothesis (H₁): There is no significant relationship between training programs helps solves challenges and problems and the commit towards stay longer with the company.

Correlation

		The training programs offered by the organization motivate me to stay longer with the company.	The training helped me handle challenges and solve problems at work effectively.
The training programs offered by the organization motivate me to stay longer with the company.	Pearson Correlation	1	.507**
	Sig. (2-tailed)		0.000
	N	156	156
The training helped me handle challenges and solve problems at work effectively.	Pearson Correlation	.507**	1
	Sig. (2-tailed)	0.000	
	N	156	156

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

Interpretation

There is a moderate positive correlation ($r = 0.507$) at the 0.01 significance level (2-tailed), indicating a positive relationship between the perception that training programs help employees face challenges and problems, and their commitment to stay longer with the company.

Analysis of Variance (ANOVA)

Analysis 3

Null Hypothesis (H0): There is no significant difference among groups in their perception of how training has enhanced their job knowledge and skills.

Alternative Hypothesis (H1): There is a significant difference among groups in their perception of how training has enhanced their job knowledge and skills.

The training provided has enhanced my job knowledge and skills.					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.371	4	1.593	1.874	.118
Within Groups	128.315	151	.850		
Total	134.686	155			

Interpretation

The ANOVA test result shows an F-value of 1.874 and a p-value of 0.118, which is greater than the 0.05 significance level. Since the p-value exceeds 0.05, we fail to reject the null hypothesis. This suggests that there is no statistically significant difference among the groups in their perception that the training has enhanced their job knowledge and skills.

Conclusion

Training plays a significant role in the development of human skills and the overall performance of an organization. In this context, the study focused on the effectiveness of training programs, employee retention levels, and productivity efficiency. The empirical analysis shows a direct positive correlation between satisfaction with training activities and the quality of training content. This level of satisfaction is strongly linked to employees' commitment to organizational success. Furthermore, the findings indicate that training programs are highly effective in helping employees overcome workplace challenges, perform their jobs accurately, and improve productivity. Therefore, staff induction and training programs significantly enhance employee performance at Brakes India Pvt. Ltd., Sholinghur.

Keywords: *Training and development, Retention, Satisfaction*

References

1. Herjuna, S. A. S., Marhaeni, V. F., Alvira, M., Putri, F., & Anastasya, F. (2024). *Impact of training and development programs on employee performance in the manufacturing sector*. Acta Psychology, 3(3), 140–151. PELNUS | Pen en Light for Natural Union of Science. ISSN: 2962-6080 (Print), 2962-4304 (Online)
2. Olusegun, J. (2024, January). *The role of continuous learning and development in sustaining employee competence and high performance*. Ladoke Akintola University of Technology.

3. Jayashree, R. (2025). The impact of training and development on employees in Coimbatore's IT industry. *IPE Journal of Management*, 15(13), 153. ISSN 2249-9040.
4. Jehanzeb, K., & Bashir, N. A. (2013). Training and development program and its benefits to employees and organizations: A conceptual study. *European Journal of Business and Management*, 5(2), 243–252. ISSN: 2222-1905 (Print), 2222-2839 (Online)
5. Khan, R. A. G., Khan, F. A., & Khan, M. A. (2011). Impact of training and development on organizational performance. *Global Journal of Management and Business Research*, 11(7), 1–7. Print ISSN: 0975-5853.
6. Topno, H. (2012). *Evaluation of training and development: An analysis of various models*. IOSR Journal of Business and Management (IOSR-JBM), 5(2), 16–22. ISSN: 2278-487X.
7. Kum, F. D. (2014). *The impact of training and development on employee performance: A case study of Escon Consulting*. Singaporean Journal of Business Economics and Management Studies, 3(3), 72–105. ISSN: 2301-3621.
8. Fajarsyah, R., & Okfernando, R. (2025). *The impact of training and support satisfaction on employment outcomes: A case study of the Global Skills Training Program 2024 in South Sumatra Province, Indonesia*. *Journal of Educational Research and Practice (JERP)*, 3(1), March. E-ISSN 3062-7602, P-ISSN 3062-7613.
9. Pentury, L. A., Tanuwijaya, J., & Gunawan, A. W. (2024) The influence of training & development and transformational leadership on job performance: Mediated by job satisfaction of banking employees. *Journal of Economic Resources*, 7(2) ISSN: 2620-6196
10. Jan, M. T. (2025) *Job satisfaction influenced by training satisfaction: An empirical study of university employees*. *Review of Integrative Business and Economics Research*, 14(2), ISSN: 2304-1013 (Online), 2304-1269 (CD-ROM), 2414-6722 (Print)
11. Kapur, R. (2018, April) *Research methodology: Methods and strategies*. University of Delhi.
12. Rienda, L., Claver, E., & Quer, D. (2011). Doing business in India: A review of research in leading international journals. *Journal of Indian Business Research*, 3(3), 172–190 ISSN: 1755-4195

EXPLORING THE FACTORS AFFECTING ORGANIZATIONAL CITIZENSHIP BEHAVIOR AMONG ACADEMICIANS IN HIGHER EDUCATIONAL INSTITUTES: A STUDY IN KOLKATA

Pankhuri Sharma ¹, Prof. (Dr.) Soma Sur ²

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

Organizational Citizenship Behavior (OCB) refers to discretionary workplace actions that are not part of formal job roles but contribute significantly to organizational effectiveness (Organ, 1988). In Higher Educational Institutes (HEIs), OCB holds critical value as academicians extend beyond their prescribed roles to support institutional development, student mentoring, knowledge sharing, and administrative functioning. However, the academic setting in India—particularly in cities like Kolkata—has seen relatively limited empirical inquiry into the antecedents and manifestations of OCB. This study explores the personal, organizational, and psychological factors that influence OCB among academicians. The constructs examined include Organizational Commitment (OC), Workplace Spirituality (WPS), and Self-Transcendence (ST)—all rooted in emotional and moral engagement. These variables have gained renewed significance post-pandemic, as institutions struggle to restore employee commitment, community values, and purpose-driven engagement (Naseer et al., 2023; Rathi & Gupta, 2021).

Recent Literature and Conceptual Framework

Recent studies have emphasized the significant role of emotional and value-based factors in promoting Organizational Citizenship Behavior (OCB) in academic settings. Workplace spirituality enhances job satisfaction and OCB (Kim & Lee, 2020), while organizational commitment mediates the impact of ethical leadership on citizenship behavior (Afsar & Masood, 2021). Emotional wellness and meaningful engagement also drive faculty involvement in OCB (Rathi & Gupta, 2021). Leadership rooted in self-transcendence fosters psychological safety and prosocial motivation, further encouraging OCB (Garg et al., 2022; Naseer et al., 2023). Spirituality-based development programs additionally strengthen collaboration and trust (Tan & Sivanand, 2024). Based on these insights, the proposed model identifies **Organizational Commitment** and **Workplace Spirituality** as key drivers of OCB, with **Self-Transcendence** acting as a **moderating variable**. **Individual traits**, such as emotional intelligence and institutional alignment, are also seen as influential in shaping OCB expression among academicians.

Research Objectives

- To explore the relationship between organizational commitment and OCB among academicians in HEIs in Kolkata.
- To investigate the influence of workplace spirituality on OCB in the academic context.
- To examine the role of self-transcendence in enhancing or moderating OCB among academicians.

¹ Assistant Professor (OB and HR) in Army Institute of Management, Kolkata, Ph.D Scholar at St Xavier's University Kolkata

² Professor & Former-Dean, Xavier' Business School, St. Xavier's University, Kolkata

Research Methodology

This study is grounded in a qualitative research design, aimed at capturing the lived experiences, values, and institutional dynamics that influence OCB through rich, narrative-based inquiry. Five senior OB professors from reputed institutions participated in the initial phase and recommended conducting open-ended, interview-style questionnaires to explore the constructs in depth.

Data Collection and Analysis

Twenty academicians, ranging from Professors to Assistant Professors across various HEIs in Kolkata, participated in in-depth interviews. The data was analyzed using ORANGE software with techniques like TF-IDF, RAKE, and cosine similarity to identify key themes. Interpretative Phenomenological Analysis (IPA) was used to explore how faculty members experience commitment, spirituality, and OCB.

Key Findings from Qualitative Study

The qualitative analysis revealed rich insights into the constructs shaping Organizational Citizenship Behavior (OCB) among academicians.

Workplace Spirituality (WPS) was associated with keywords such as *completeness, fulfilment, considered, incorporated, and support*. These reflect a sense of emotional and spiritual alignment with the institution, where faculty members feel valued, supported, and part of a meaningful academic environment.

Organizational Commitment (OC) emerged through terms like *emotion, importance, standards, commitment, and considered*. These indicate a strong emotional bond with the institution, grounded in shared values and a desire to uphold its goals and standards.

Organizational Citizenship Behavior (OCB) was linked with *empathy, helping, loyalty, trust, balanced, and considered*. These highlight the relational and prosocial nature of OCB, often expressed through voluntary support for colleagues and students, and maintaining trust within teams.

Self-Transcendence (ST) surfaced as a key theme influencing deeper levels of engagement and altruistic behavior. Participants reflected values such as *purpose, contribution, and service beyond self*, indicating that those who perceive their academic role as part of a larger mission are more likely to engage in meaningful, value-driven OCB.

Lastly, **emergent themes** from RAKE-based extraction—such as *crucial, culture, contributed, empathy, difference, effect, and departmental*—further emphasized the importance of institutional culture and individual values in shaping discretionary behaviors across departments

Implications and Conclusion

This study highlights that emotional connection, spiritual fulfilment, and a sense of moral purpose significantly influence Organizational Citizenship Behavior among academicians. Institutions can foster such behavior by creating supportive, value-driven environments, recognizing extra-role efforts, and offering development opportunities like emotional intelligence training and mindfulness sessions. Encouraging participative leadership and integrating human-centric performance metrics can further strengthen engagement. The proposed model offers a practical framework for HEIs to cultivate OCB, with scope for future research across diverse academic settings.

Keywords: *Academicians, Higher Educational Institute, Organizational Citizenship Behavior, Organizational Commitment, Workplace Spirituality, Self-Transcendence.*

References

- Afsar, B., & Masood, M. (2021). Ethical leadership, work engagement, and organizational citizenship behavior: The role of organizational identification and moral attentiveness. *Journal of Business Ethics*, 170(2), 263–284. <https://doi.org/10.1007/s10551-019-04370-1>
- Garg, N., Punia, B. K., & Jain, S. (2022). Self-transcendent leadership and organizational citizenship behavior: A study of public university faculty in India. *Journal of Leadership & Organizational Studies*, 29(1), 32–44. <https://doi.org/10.1177/15480518211041634>
- Kim, J., & Lee, H. (2020). Workplace spirituality and organizational citizenship behavior: The role of organizational identification and perceived organizational support. *Sustainability*, 12(19), 8030. <https://doi.org/10.3390/su12198030>
- Naseer, S., Fatima, T., Syed, F., & Khan, M. (2023). The role of prosocial motivation in the relationship between self-transcendence and OCB: A study in nonprofit educational institutions. *Nonprofit Management & Leadership*, 33(3), 567–585. <https://doi.org/10.1002/nml.21490>
- Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington Books.
- Rathi, N., & Gupta, M. (2021). Spirituality at work and employee engagement: The mediating role of psychological capital. *Journal of Indian Business Research*, 13(3), 364–380. <https://doi.org/10.1108/JIBR-09-2020-0286>
- Tan, L. H., & Sivanand, M. (2024). Integrating spirituality-based interventions in faculty development: Impact on team dynamics and trust in Malaysian universities. *Journal of Educational Administration*, 62(1), 98–115. <https://doi.org/10.1108/JEA-10-2023-0198>
- Wang, Z., & Wu, X. (2020). Organizational culture, organizational commitment and organizational citizenship behavior: Evidence from Chinese universities. *Asian Journal of Business Ethics*, 9(1), 87–105. <https://doi.org/10.1007/s13520-020-00107>
- Yaseen, Z., Qamar, M., & Sharif, S. (2015). Impact of organizational culture on organizational citizenship behavior: A study of universities. *Journal of Business and Management*, 17(1), 1–6. <https://doi.org/10.9790/487X-17120106>

WORK AFTER WORK: A DESCRIPTIVE STUDY ON THE GROWING TREND OF MOONLIGHTING AMONG THE TEACHERS

Priya R ¹, Savitha M S ²

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

Abraham Maslow, in his theory about the hierarchy of human needs, clearly explained the five levels as the main reasons for a person to work [16]. In today's global economic landscape of employment, employees can't handle their basic needs with just the income they earn from their primary job, and have evolved to look for job opportunities beyond their day jobs. Dissatisfaction in the salaries are considered as the main reason for seeking additional employment activities by the employees [15].

Teaching profession is considering to be the most significant and noble in our country. Yet many teachers are facing financial strains due to the low pay scales they receive [1, 2, 3]. The employees in the teaching profession face high economic challenges both directly and indirectly. To balance their financial crises many teaching professionals seek employment outside their teaching roles [4]. Teacher moonlighting refers to taking on additional jobs or employing others outside their primary teaching role. It can be either during leisure times, weekends, holidays, and vacations, such as tutoring, free lancing, training, or coaching [5]. sometime employees also indulge in some side jobs, part time jobs or indulge in small business for an additional financial support this is termed as double jobbing [12].

Review of literature:

Parham and Gordon (2011) is a teacher-centered exploration of moonlighting across U.S. K-12 educators. This study exhibits the financial motivations and professional consequences due to holding of secondary employment. Their study reports that nearly 50 % of teachers who moonlight are primarily driven by **low salaries and poor working conditions**, this can be a challenge for the teaching morale [6]. The author also find that the moonlighting also directly influence the regular classroom routine. This also increase the teachers stress, frustration over the pay disparities [6].

Harris et al. (2019) studied how the misalignments among the teachers, administrators and policymakers perceive the working environment [1]. By using both qualitative and quantitative methods, the author conclude that teachers attrition is not just because of dissatisfaction, but also due to the lack of shared views among the key education stakeholders. He also concluded saying Teachers reported that they felt dissatisfied, unsupportive and overworked. They also stated that they lack recognition [1].

Nguyen et al. (2023) rigorously presented and studied the relevant policy of how school finance reforms (SFRs) influence the salary of teachers and turnover in the U.S districts. This paper highlights how funding policies enhance the workforce stability. In simple words, higher salary can reduce the teacher's turnover [2].

Steiner and Woo (2021) delivers timely and critical examination of the teachers (U.S. K-12 teacher workforce, mainly during the COVID -19. Nearly 78% stated job stress, and 25% showed signs of

¹ Assistant Professor, GRT Institute of Engineering and Technology, Thiruthani,

² Assistant Professor, MBA Department, Jaya Arts And Science College

depression, this is higher than the general working population. The author connects the teacher's attrition, especially among the black teachers and thus balancing the responsibilities at home [3].

Klungseth and Anderson (2024) provide a well focused investigation among the K-12 teachers in South Dakota. In his survey conducted from the educators of face book groups, the low teacher's payment is the primary reasons for secondary employment that teachers involve during evenings, holidays or weekends [12].

Soumyaja and Nourah (2025) focused on moonlighting practices based on gender and how relevant they achieve Sustainable developmental Goals(SDGs) ie., gender based equality and economic inclusion. Based on qualitative literature, this study highlights that married men and unmarried women are more likely to do additional paid jobs compared to unmarried men and married women.[11]

Mittal and Kaur (2018) In their study *"Moonlighting Practices: A Study of Government and Private School Teachers,"* investigated the prevalence, motivations, and impact of moonlighting among teachers in India's Tricity region. In their survey of 150 teachers, they found that **moonlighting is more likely to happen among the private school teachers** compared to government school teachers, mainly due to **lower wages and job insecurity**. This study also enlightens that teachers lack time for their self and family care. The author recommended improvement in pay, working conditions and career growth opportunities can reduce secondary employment [17].

Who moonlight?

Teachers those who often face financial constrain have interest towards career development, or personnel who motivated to do multiple jobs are found to often involve themselves in moonlighting. After their regular school works, many teachers involve themselves in private tuitions, online coaching, freelance classes or part time jobs in other fields to earn some penny.

Moonlighting is found to be more common among the young blood, sole breadwinners, married males; unmarried women [10]. some people who wanted to enhance their skills and stay updated to the current technological trends and practices, to remain stayed with the industry or to explore the entrepreneurial path also found to moonlight. [4] Gender, age, marital status and working experience also influence the moonlighting practices [9]

Why do they moonlight?

Most of the middle-class salary seekers get struck with their financial responsibilities and gets locked in the EMI trap. **Teachers often moonlight due to the same financial burden.[13] A part from monetary commitments they also have professional, and personal reasons.** In most cases, their primary salary is insufficient to meet rising living costs, family expenses, or repayment of loans, which prompt them to seek additional income sources [11].

Apart from financial needs, some teachers indulge in moonlight to gain exposure in different fields, upgrade their skills, or some also pursue their passions such as content writing, video making, consulting, or online education. [8] Some teaching employees may view moonlighting as a way to make their free hours more productive or to prepare themselves for a a future career transition. Moonlighting also provides an opportunity for the teachers to expand their income and experience, even though it requires effective time management and a meticulous planning to avoid problems in both profession [14].

How do they moonlight?

Most of Teachers in both private and public sector fall in the middle class subset. They moonlight **by taking up extra paid jobs or freelance work apart from their regular teaching hours, most**

commonly in the evenings, or weekends, or during any holidays [8]. Some of the Common ways include taking private tuition, instructing online courses, educational content writing, working as part-time lecturers in other institutions, or involving in freelance roles like editing, content production, or consulting services [8].

Some also include non-academic avenues like working in retail jobs, operating small businesses, or coaching in extracurricular activities like music or sports [17]. The growth of digital platforms, has laid flexible opportunities for the teachers to find remote areas and earn additional income without compromising their primary job [17]. People who successfully moonlight should have effective time management and planning skills to maintain work-life balance and teaching performance [14].

Impacts of Teacher Moonlighting

The impact of moonlighting by teachers on educational outcomes plays a lesser level itself. Often the teachers gets over burden and they get fatigue certainly this reduce the institutional quality thus affecting the students outcome. [4] The teacher moonlighting, especially among the schools may need more leaves to balance their day and moonlight jobs this leads to the teacher absenteeism was considered as a huge problem in most educational institutions.

The moonlighting poses both positive and negative impacts. The additional financial supports, especially when the salary received from their primary work place are insufficient to meet their expenses. The other motivating factors for teachers moonlight is enhancement of their skills and building their professional networks [7]. Involving in different job roles may offer various new career opportunities for the teachers apart from their main role [17].

One of the most negative impacts is physical and mental fatigue as the teacher juggle between their regular class room responsibilities along with their additional works, which eventually increase their work burden resulting to cause exhausted and over stressed [6,17]. There is a notable decline in the teaching quality and preparation of class notes. The student's outcomes obviously get compromised. Due to over burden, prolonged works the teacher- student's relationship gets affected. Added workloads eventually acts as a barrier for work life balance[6].

Objectives

- To study the moonlighting practices among the teachers.
- To explore the key factors that drives the teachers to take up secondary jobs.
- To investigate the impact of moonlighting on the job performance of the teachers.

The Hypothesis

- There is significant relationship between the salary of the primary job the and moonlighting practices among the teachers.
- There is a significant relationship between the performance outcome and the moonlighting practices.

Research Methodology

The above study is a descriptive research design that explores the moonlighting trend among the teachers, focusing on the reason and impact of the practices. Qualitative analysis of secondary data from academic

journals, government and institutional reports, newspaper articles and credible online materials were used.

Purposively the relevant materials were reviewed for the moonlighting within the teaching professions. Specific research questions like “who moonlight, why do they moonlight, how do they perform were tried to address thematically by the collected data.

Results and Findings

- Based upon the studies the moonlighting was found to be common practice among the middle class employee subset. The teaching professional in the private institutions was found to be less paid comparing to the public sector. Thus private institution teachers indulge more in moonlighting for additional payments.
- Apart from financial payments, young teaching professionals also seek for career growth and up skilling their knowledge, which induce them in moonlighting.
- How much ever, effectively the teaching professionals plan and manage their time, they face more work burden, high stress, fatigue, and eventually resulting in imbalance of work life.
- In addition to this, the student’s educational outcome in most educational institution gets lesser because of the teacher involving themselves in additional job roles. The teacher- students bonding also gets reduced.

Conclusion

Rather than being a choice, moonlighting among the teaching professional has become a necessity. In spite of offering short- term financial benefits, this habit can affect the performance outcome, health and the personal life. The root cause for these problems includes the minimum pay and the slow career growth opportunities. The management of many educational institutions and the policy makers can try to satisfy the employee’s financial needs and provide growth opportunities to reduce their involvement in the secondary jobs, thus they can ensure a more sustainable and productive outcome.

Recommendations

The key factor for moonlighting was found to be the less pay or financial insufficiency especially among the private school teachers, if the management tries to fix their salary to meet their expectations, they can see many teaching professionals not indulging in moonlighting activities.

Some academic professionals also seek career growth and extra skills learning for their knowledge enhancement. The management can focus to provide the teaching aspirants with updated knowledge and techniques.

Limitations of the Study

A qualitative study was conducted by using the available secondary resources and this study includes moonlighting among the teaching professional between 2020 to 2025. It does not focus upon employees of any other industries.

Keywords: *Additional employment, Moonlighting, stagnant salaries, private tutoring, freelancing, absenteeism.*

References

1. Harris, S. P., Davies, R. S., Christensen, S. S., Hanks, J., & Bowles, B. (2019). Teacher attrition: Differences in stakeholder perceptions of teacher work conditions. *Education Sciences*, 9(4), 300.
2. Nguyen, T. D., Anglum, J. C., & Crouch, M. (2023). The Effects of School Finance Reforms on Teacher Salary and Turnover: Evidence from National Data. *AERA Open*, 9. <https://doi.org/10.1177/23328584231174447> (Original work published 2023)
3. Steiner, E. D., & Woo, A. (2021). Job Job-related stress threatens the teacher supply.Rand Corporation.
4. Brown, S. A., Sullivan, S., & Maninger, B. (2019). Moonlighting and Morale: The Impact on Educators Who Moonlight and How Classroom Teaching Suffers. *The Journal of Multidisciplinary Graduate Research*, 1(1). <https://jmgr-ojs-shsu.tdl.org/jmgr/index.php/jmgr/article/view/20>.
5. Garcia, E., & Weiss, E. (2019). Low relative pay and high incidence of moonlighting play a role in the teacher shortage, particularly in high-poverty schools. Economic Policy Institute. <https://www.epi.org/publication/low-relative-pay-and-high-incidence-of-moonlighting-play-a-role-in-the-teacher-shortage-particularly-in-high-poverty-schools-the-third-report-in-the-perfect-storm-in-the-teacher-labor-market>.
6. Parham, J. & Gordon, S. (2011). Moonlighting: A harsh reality for many teachers. *Phi Delta Kappan*.92(5), 47-51. Retrieved from <http://www.kappanmagazine.org/content/92/5/47.full>
7. Smith, D. M. & Cooper, B. (2018). A study of moonlighting by public school teachers. In E. J.
8. Brown, L., & Roloff, M. (2011). Extra-role time, burnout, and commitment: The power of promises kept. *Business Communication Quarterly*, 74(4), 450-474. doi: 10.1177/1080569911424202
9. Malodia, L., & Butail, P. K. (2024).*Impact of job satisfaction on moonlighting intentions: A study on IT professionals of Tricity*. *Gyan Management Journal*, 18(2), 22–25. <https://doi.org/10.48165/gmj.2023.conf4>
10. Narasimha, M. S. L. (2024). *Impact of employee moonlighting on organizational performance: Risks and resolutions*. *International Research Journal of Modernization in Engineering, Technology and Science*, 6(12), 1563–1565.<https://www.irjmets.com>.
11. Soumyaja, D., & Nourah, K. B. H. (2025).*Moonlighting patterns and gender: Implications for achieving Sustainable Development Goals*. *International Journal of Research in Commerce and Management Studies*, 7(3),25–31. <https://doi.org/10.38193/IJRCMS.2025.7302>
12. Klungseth, S., & Anderson, K. (2024). Teaching by day, moonlighting by night: Moonlighting as a response to low teacher pay. *American Journal of Educational Research*, 12(2), 38–43. <https://doi.org/10.12691/education-12-2-2>
13. Kraft, M. A., & Lyon, M. A. (2024). *The rise and fall of the teaching profession: Prestige, interest, preparation, and satisfaction over the last half century* (NBER Working Paper No. 32386). National Bureau of Economic Research. <https://www.nber.org/papers/w32386>
14. Priya, S. J. (2022). Moonlighting by employees—Is it an organizational problem or is it economic slowdown? *International Journal of Engineering Technology and Management Sciences*, 6(6), 203–208. <https://doi.org/10.46647/ijetms.2022.v06i06.031>
15. Ara, K., & Akbar, A. (2016). A study of impact of moonlighting practices on job satisfaction of the university teachers. *Bulletin of Education and Research*, 38(1), 101–116.
16. Ghaleb, B. D. S. G. (2024). Towards a dynamic model of human needs: A critical analysis of Maslow's hierarchy. *International Journal of Multidisciplinary Approach Research and Science*, 2(3), 28-46. <https://doi.org/10.59653/ijmars.v2i03.674>
17. Mittal, E., & Kaur, P. (2018). Moonlighting practices: A study of government and private school teachers. *The Research Journal of Social Sciences*, 9(12), 114–121. Retrieved from <https://www.researchgate.net/publication/374108405>

Introduction

In global entrepreneurial periphery, gender-specific disparity in participation is a common fact where women are found in lesser than their counter-part due to some exogenous and endogenous causes (Morris, 2006; Goswami et al., 2019). The socio-economically deprived gender group due to their lesser physical strength, though having equal intelligence with men prefer to participate in soft and easy to handle entrepreneurial activity for which they are ever found in some sectors like Handlooms etc. (Goswami et al., 2019; NABARD, 2022-23; Stenberg et al., 2025). It is evidenced in developing countries that more than 73000 startups have at least one woman director, highlighting the rise of women entrepreneurs and generating 16.6 lakhs direct employment (<https://www.pib.gov.in>). As per the Global Entrepreneurship Monitor (GEM) Report and in reference to Alderfer's Existence, Relatedness and Growth (ERG) Theory it can be detected that the factors motivating an individual differ as per one's socio-demographic feature mainly gender where men are motivated to become an entrepreneur to avail growth i.e. salary, promotion, opportunity for advancement etc, while the women counter-part for relatedness i.e. social reputation, supportive working environment, work flexibility considering 'existence' as a common feature (Goswami et al., 2019; Nagpal et al., 2024; Stenberg et al., 2025). Hence, to substantiate the theory of Alderfer's ERG on handloom women entrepreneurs, the study wants to trace out its answer to questions like 'What factors cause entrepreneurial participation of women in Handloom sector in compliance with Alderfer's ERG Theory?'

Review of Literature

The participation of women as entrepreneurs positively depends on their motives as well as on human needs (Varsha et al., 2022; Xiaotong et al., 2024). The motives of entrepreneurs are bifurcated into pull and push factors, which facilitate the success of women entrepreneurs' businesses. The pull factors are a combination of psychological, personal, and social motives (personal growth, improving one's skill, being a leader, being independent, competing with others and proving to be best, have own preferred work style, rewards, profit and fulfillment of personal requirements) and it is seen as positive drivers in the success of a business run by women. The latter is related to external factors, which seem to be negative conditions (unemployment, job loss, divorce, widowed, economic necessity) that drive the running of women's businesses (Morris et al., 2006; Roomi et al., 2009; Rey-Marti et al., 2015; Heriberta et al., 2024; Nagpal et al., 2024). These motivational factors are directly based on the hierarchy of human needs and thus, different motivational theories based on the human need influence the participation of entrepreneurs. Amongst the motivation theories, Existence, Relatedness and Growth needs (ERG) theory is significantly connected with the literature of entrepreneurs (Varsha et al., 2022; Arunarjun, 2024) where Existence needs are related to need to survive in the ecosystem reflects monetary needs, good working environment, security for life and job; Relatedness needs are connected with interpersonal relationships

¹ Assistant Professor in Commerce, The University of Burdwan

² Research Scholar, Department of Commerce, The University of Burdwan

in society, social status of individual and Growth needs are found in association with needs of self-development i.e. the realization and reflection of one's full potential and best version.

Purpose of the study

The study primarily aims at (i) revealing the gender-wise entrepreneurial difference in response pattern on the motivational factors behind participating in handloom sector, (ii) identifying and validating the motivational factors in compliance with Alderfer's ERG Theory and (iii) revealing the chance of women participation in handloom sector based on the motivational factors.

Methodology

Data Collection

To fulfil the objectives, the study collected data from both primary and secondary sources. For the primary survey, conducted from November 2024 to March 2025, it conveniently chose Kalna I block of East Burdwan and Bishnupur and Sonamukhi blocks of Bankura District of West Bengal. For secondary data, it uses information from Government reports (Report of 3rd and 4th handloom census; Additional Director of Textiles, Directorate of Textiles 2023-24), articles, newspaper reports and other sources.

Sampling and Sample:

The study conveniently selected the state of West Bengal where it chose purposively two districts East Burdwan and Bankura due to their significant roles in handloom product manufacturing and handloom weavers participation (third and fourth positions in the State, Additional Director of Textiles, Directorate of Textiles, 2023-24). 430 handloom weavers both men and women were randomly selected (120 from Bishnupur block, 70 from Sonamukhi block, 240 from Kalna I block) from two districts of West Bengal. 30 responses were rejected due to incomplete responses in the survey.

Tools for data collection:

A total of 26 items were included in the questionnaire of the field survey from the selected literature (Stefanovic et al., 2010; Arunarjun, 2024) to collect the perception on motivation for participation in the handloom sector. Apart from the structured questionnaire, the study also opts for unstructured interviews for illiterate/low literate respondents.

Strategy of the Analysis:

The first stage of the study considered Exploratory Factor Analysis (EFA) using SPSS version 20, in order to group the observed variables into latent variables (Arunarjun, 2024). For the identification of differences in response patterns of latent variables, the Mann-Whitney Test was considered. The second stage of the study considered the binary logistic regression model $\log[p(X) / (1-p(X))] = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k$ for estimating the chance of participation of women as entrepreneurs in the handloom sector. This could estimate the maximum likelihood of women's participation in the handloom sector (Women entrepreneurs participants in handloom sector = 1, Men entrepreneurs participants in handloom sector = 0) was the dependent variable and motivational factors were the independent variables.

Analysis and Findings

Result of Exploratory Factor Analysis:

The result of Principal Component Analysis (PCA) reveals the 21 significant items (factor loading above 0.8) out of 26 total motivational items. These 21 motivational items were grouped into four Factors,

namely Security and Recognition (Factor 1), Development of Enterprise (Factor 2), Self-Efficacy (Factor 3) and Time Management (Factor 4), collectively explaining the 89.697 percent variation of the motivation of entrepreneurs in the participation in the handloom sector. The Factor1: Security and Recognition (Eigen value 7.591) comprised the motivational items Regular Job Not Easy, To meet emergencies, Unemployment of Spouse, To supplement the income of family, Better utilization of skills and family resources, Feeling of financial security, To get recognition in the family/society, Commitment towards the society; Factor2: Development of Enterprise (Eigen value 4.993) included Profitability of Enterprise, Demand of the Product, Availability of raw materials, Training Facility, Helpful Governmental Scheme, No/Low competition in the market; Factor 3: Self-Efficacy (Eigen value 4.438) taking Self Esteem, To be Independent, To have control over money, Family Background, To be powerful; Factor 4: Time Management (Eigen value 1.814) taking To utilize free time, Easy availability of loan. The Kaiser-Meyer-Olkin (KMO) test for sample adequacy of factor analysis (0.848) and Bartlett's test of sphericity (chi-square value 6953.999, p-value < 0.001) represented the significant results.

Gender wise response pattern of motivational factors

The gender wise inter-group comparison reveals significant variation in responses on Factor 1 (Security and Recognition), Factor 2 (Development of enterprise) and Factor 3 (Self-Efficacy). The women entrepreneurs were favourably responsive to participating in the handloom sector for Factor 1 (Security and Recognition) and Factor 2 (Development of enterprise), while men employers of handloom were found to have more favourable responses for Factor 3 (Self-Efficacy). The items like 'Use of acquired Knowledge', 'Get to know more people', 'Risk Orientation', 'Motivation by family members' and 'Gain in Knowledge' were found without notable responses. The response of Women entrepreneurs represented the main motives for family earning/ income i.e. financial need (Rathna et al.,2016; Sinha, 2003), better utilization of their acquired skills and knowledge (Richardson et al., 2004; Nagpal et al.,2024) and the desire to be self-employed (Dissanayake, Parera, & Wanniarachchi, 2017) as compared to the favourable response of men entrepreneurs for financial achievement and control, power and self-esteem from business ownership (Orhan & Scott, 2001; Sinha, 2003). 71% responses of women entrepreneurs towards participation in the handloom sector were opined for Unemployment of their spouse, compelling the women entrepreneurs to contribute all of their earnings in support of their families, whereas the maximum responses of men entrepreneurs (78%) represented self-efficacy as a symbol of their social prestige and respect.

Chance of Women participation as entrepreneurs

For estimating the chance of women participation in the handloom sector as Entrepreneurs, a logistic regression was performed to ascertain the relationship between men-women participation as entrepreneurs and motivational factors behind joining in handloom sector.

The result shows that that there is no difference in the observed and predicted model. The significant results were found for Factor 1 (Security and Recognition) and Factor 3 (Self-Efficacy). It reflected that the likelihood of women's participation in the handloom sector as entrepreneurs was 2.101 times higher than their men counterparts for Security and Recognition (Factor:1), while the chance of men participants as entrepreneurs was 0.436 times higher than the women participants in the handloom sector for the Self-Efficacy (Factor:3).

Linking with Alderfer's ERG Theory:

The motivational items of the recognition and security represented the associated with the Existence and Relatedness needs, while the items like Time management and Self-Efficacy represent the linkage with the Growth needs of entrepreneurs. The items in the Growth/Development of the enterprise constitute the achievement of full potential of an entrepreneur in form of higher profitability and scaling of

enterprise which proves an association with the Growth need of ERG theory. In this context, the motivation of women entrepreneurs and their participation in the handloom sector are highly dependent on their Existence and Relatedness needs (security and recognition) as compared to men entrepreneurs. While the men entrepreneurs were highly motivated for participation in the handloom sector based on their Growth need. Thus, the variation in the chances of gender participation was significant for their Existence and relatedness need as compared to growth need.

Practical implication

The present study highlights on the voice of the deprived gender class, women, for participating in entrepreneurship in Handloom Sector which in its presence claims special significance. For substantiating theoretical application, the study adopts Alderfer's ERG Theory which makes it more adoptable and applicable. Moreover, the study is based on the micro empirical analysis which seems very effective in framing policy than that of any theoretical structure. Hence, it proves its significance in front of policymakers, lawmakers, entrepreneurs and academicians.

Originality/Value

The study is dedicated to analyse the motivational factors for significant participation of women entrepreneurs in the handloom sector. Again, the chance factor of for the participation of women entrepreneurs in the handloom sector and the application of ERG theory attach valuable insights in the present study.

Conclusion and Recommendation

The present study concluded that the participation of entrepreneurs in the handloom sector was influenced by various motivational factors, where gender is an important factor in deciding the intensity of motivation factors for participation of entrepreneurs. The study frames four groups of motivational items (Security & Recognition; Development of enterprise; Self-Efficacy; Time management) in the handloom sector, which helps in relating the needs of entrepreneur participation. The unemployment of spouse, better utilization of skill and resources of the family, and job scarcity are the main motives behind the participation of women entrepreneurs in the handloom sector, whereas the motives for powerful, independent and self-esteem are motivated men entrepreneurs. The participation of women entrepreneurs depends on their existence and relatedness needs, while the men entrepreneurs are motivated by growth needs. It also concluded that the chance of participation for security and recognition is high for women entrepreneurs as compared to men entrepreneurs, but in the case of self-efficacy, the chance of men's participation is high. Hence, the study suggested that policymakers frame policies and programs for education and training of nascent entrepreneurs so that they are efficient in balancing the basic need fulfillment and the growth and development of the enterprise. Additionally, the study is based on the micro-empirical analysis of the handloom sector of two important districts of West Bengal, proposes to extend its dimension with a large sample size in other districts and in other industries, or other aspects related to the motivation of entrepreneurs.

Keywords: Entrepreneurship, Motivation, Women, Binary Logistic Regression, ERG Theory

Reference

- Alderfer, C. P. (1969). An empirical test of a new theory of human needs. *Organizational Behavior and Human Performance*, 4(2), 142–175.
- Caulton, J. R. (2012). The development and use of the theory of ERG: A literature review. *Emerging Leadership Journeys*, 5(1), 2–8.

- Morris, M. H., Miyasaki, N. N., Watters, C. E., & Coombes, S. M. (2006). The Dilemma of Growth: Understanding Venture Size Choices of Women Entrepreneurs. *Journal of Small Business Management*, 44(2), 221–244. <https://doi.org/10.1111/j.1540-627X.2006.00165.x>
- Nagpal, P., Pawar, A., & Sanjay, H. M. (2025). Analysis of entrepreneurial motivation on entrepreneurial success in SMEs. In *Sustainable smart technology businesses in global economies* (pp. 149–162). Routledge. <https://www.taylorfrancis.com/chapters/edit/10.4324/9781003616306-16/analysis-entrepreneurial-motivation-entrepreneurial-success-smes-pooja-nagpal-avinash-pawar-sanjay>
- Saikia, P. (2017). Motivational factors and empowerment of women entrepreneurs in Assam: An exploratory study. *Indian Research Journal of Extension Education*, 17(4), 87–92.

HOW JOB SATISFACTION IS ASSOCIATED WITH DECENT WORK AMONG WOMEN BRICKFIELD WORKERS? THE MEDIATING ROLE OF MENTAL-HEALTH WELLBEING

Manidipa Das Gupta, Ph.D ¹, Sumanta Majumder ²

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

Workplace decent work environment tuning with the health-safety promotion, fair wages, good work-life balance, sense of job security, healthy relationship with supervisors and peers etc., is supposed to be the pre-requisite of maintaining the workers' health wellbeing specially the mental one which circumstantially causes their job satisfaction (Ferreira et al., 2019; Wan & Duffy, 2022; Sönmez et al., 2023; Inegbedion, 2024). Nevertheless, negligence in maintaining workforce health-safety promotion is a common phenomenon in any enterprise mainly from unorganised sector as validated by the ILO's recent report (2022) with 2.78 million deaths and 374 million injuries from occupational fatal accidents. In this severity, amongst other unorganised sectors like mines, construction, brickfield manufacturing can firmly be mentioned due to its inherent hazardous working environment, extreme workload, tough working schedule, heat stress, dust exposure, ergonomic issues etc, (Das, 2015; Kumari, 2018; Bajracharya et al., 2021; Bansal et al., 2022) which result feeble and fragmented health status of the workforce there. In this context, women brickfield workers should specially be addressed due to their socio-economic deprivation, exclusion, more prone to health hazards and extreme pressure to maintain work-life balance (Peterson, 2004; Belwal & Belwal, 2014; Uddin, 2021; Khairy & Ghoneim, 2023). All these thus somehow violate their mental health wellbeing and resultantly job satisfaction. To substantiate previous literature and to find out special reflection of those on brickfield women workers, the study hence makes its effort to trace the answer to the question like 'Is there any linkage between decent work and job satisfaction considering the mediating role of mental health wellbeing of women brickfield workers?'

Literature

An unsafe working environment, in relation to the job content or work schedule, workplace characteristics, working situations, lack of structural support in the workplace etc., generates "psychosocial illbeing" to the workforce (WHO & ILO, 2022). In this regard, the effective safety and health measures while positively influence the workers' mental wellbeing (Mbakaya et al., 1999; Chen et al., 2017; Bayram, 2019; Mujtaba & Kaifi, 2023), the harsh, negative working environment connected with *unfriendly policies, unsupportive peers etc.*, induce *negative effect on their performance and mental health* (Monteiro & Joseph, 2023). Further, literature (Arends et al., 2014; Oswald et al., 2015; Bubonya et al., 2016; Modini et al., 2016; Auten & Fritz, 2019; Hennekam et al., 2021; Motro et al., 2021; Lu et al., 2022; Oliveira et al., 2023; Erwanto et al., 2024) argue that the distressed mental health i.e. a state of emotional suffering characterized by symptoms of depression (e.g., loss of interest; unhappiness; desperateness), anxiety (e.g., restlessness; tiredness and fatigue, feeling tense) (Belay et al., 2021) etc. is responsible for lower workers' participation, productivity and absenteeism at work which result higher job insecurity and dissatisfaction (Jones et al., 2016; Lukasik et al., 2019; Abe et al., 2021; Nowrouzi-Kia et al., 2022; Gunnarsson et al., 2023). Substantiating the fact addressed by previous literature (Sheraz

¹ Assistant Professor, Department of Commerce, The University of Burdwan.

² Assistant Professor, Department of Commerce, Bhatler College, Dantan.

et al., 2014; Hoboubi et al., 2017; Singh et al., 2019; Ghawadra et al., 2019; Stefanovska et al., 2021; Jaafar et al., 2021; Catherine and Fonceca, 2022; Schnettler et al., 2024), it can be established that a positive work environment with decent work features get impactful in generating job satisfaction i.e. the degree of pleasures or happiness that an individual feels in their job (Fisher, 2010; Martínez-Martí & Ruch, 2017; Eckhaus, 2021) which protects workers from stress, low productivity and employee turnover (Hoboubi et al., 2017; Baluyos et al., 2019; Inayat & Khan, 2021; Katebi et al., 2022).

In the unorganized sector, job insecurity, workplace abuse, and a bad workplace culture push employees to serious occupational health issues primarily associated with anxiety, depression, and other ill-health conditions (Mark et al., 2024; Luu et al., 2024). In this respect, women workers face severe health issues related to their jobs which may be associated with their internal and external causes (ibid). The women workers are more likely to suffer from mental depression due to insensitive work environment and their inherent physical limitations (Chant, 2013; Mark et al., 2024; Luu et al., 2024).

Purpose

The study primarily aims at detecting the relationship between workplace decent work (workplace policy and culture, safety measures and health and hygiene practices) and job satisfaction of the brickfield women workers considering the mediating role of mental health wellbeing.

Methodology

The present cross-sectional empirical study used both primary and secondary sources of data. For secondary data, it adopts information from Government Reports (Ministry of Law and Justice), Reports from international organizations (ILO, WHO etc.), unpublished dissertations, articles, newspapers, etc. For primary data collection, the study collected data purposively from four districts of the western part of West Bengal (Bankura, Purulia, West Midnapore and Hooghly) covering 70% of Brick kilns of the state at the bank of the Darakeswar River. The primary field survey was conducted from September 2024 to October 2024. Before that, a pilot survey was conducted on 50 respondents of Bankura district in August, 2024 to finalise the questionnaire. For secondary data, it adopted information from Government Reports, Reports from international organizations etc. From the four districts, five blocks viz. Kotulpur and Joypour (Bankura); Hura (Purulia); Garhbeta-1 (West Midnapore) and Arambagh (Hooghly) were selected conveniently. From the selected blocks, 281 brickfield workers (all fulltime) from 30 units were selected randomly. Primary data were collected through a structured questionnaire where a total of 18 items were used to capture the perception of brick field workers regarding workplace policy and culture, workplace safety measures, workplace health and hygiene practices and workers' health status through the established scale of The National Institute for Occupational Safety and Health Worker Well-Being Questionnaire (NIOSH WellBQ, 2021). Apart from structured questionnaire, the study also opted for unstructured interviews as many of the respondents did not have adequate literacy level. To satisfy the objectives of the present study, Structural Equation Modelling (SEM) method was used with AMOS (Version 23). Under this study, items on mental health (problems in decision-making, work stress, sadness) were clubbed to get a composite mean score denoted as a single variable as mental health and job satisfaction was measured with 5-point Likert Scale (Highly dissatisfied to Highly satisfied).

Analysis & Findings

The value of coefficient regression job satisfaction and decent work derived mental health wellbeing (MH) is found 0.269 (p value 0.000) while the standard estimated value is 0.082. The values reflect that workplace decent work derived mental health wellbeing has a positive significant relationship with women workers' job satisfaction at workplace. Results indicate that 1% change in decent work derived mental health wellbeing can generate 27% change in job satisfaction. In this respect, Policy & Culture, Safety Measures and Health & Hygiene Practice are found significantly associated with mental health wellbeing of the workers.

Practical implications

The study can help in identifying, preventing and reducing indecent work environment associated with the unorganised sectors, like the brickfield. Awareness of working environment may help in improving workers' health wellbeing and thus can reduce their absenteeism in the workplace. It alongside provides proper insight into the major components related to mental health wellbeing of workers which is found associated with their job satisfaction also. The study, moreover, is based on the micro empirical analysis which seems very effective in framing policy than that of any theoretical structure. Hence, it proves its multidimensionality and significance in front of the policymakers, lawmakers, entrepreneurs and academicians.

Originality

Considering the previous literature (Sheraz et al., 2014; Singh et al., 2019; Stefanovska.,2020; Jaafar, 2021; Catherine and Fonceca, 2022; Schnettler et al., 2024), it could be found that many of them made their effort to trace out the effect of mental health wellbeing on job satisfaction. But though, nominal of them (Sönmez et al., 2022) focused on the relationship amongst decent work, job satisfaction, physical and mental health, no study till reviewed, took its attempt to assess the relationship between decent work and job satisfaction taking the mediating role of mental health wellbeing. Further, although some studies traced the fact on organised sector, no study is found to address the unorganised risk-prone sector like brickfield etc. In addition, thereto, not a single study as the knowledge goes considered women workers group in assessing the said relationship. Hence, the study pretends its novelty by detecting relationship between decent work and job satisfaction taking the mediating effect of mental health wellbeing of the women brickfield workers.

Conclusion and Recommendations

Relationship between decent work environment and job satisfaction taking the mediating role of mental health wellbeing of workers, is confirmed in the present study on the basis of the perception of the women brickfield workers. A safe, healthy and hygienic working environment ensures positive influence on workers' job satisfaction. Decent work environment thus can increase the positive perception of the job among the workers mainly women and is indirectly responsible for decreasing the risk of high employee turnover. Hence, the policymakers and organizations should provide health-safety resources for implementing decent work environment in view of reducing workers' mental stress and for improving workers' productivity and job satisfaction.

Keywords: *Decent work; Mental health; Job satisfaction; Women workers; Brickfield; SEM*

References:

- Catherine, A. V., & Fonceca, C. M. (2022). Employee stress and its impact on their job performance. *Journal of Academia and Industrial Research (JAIR)*, 10(3), 34-38.
- Ghawadra, S. F., Abdullah, K. L., Choo, W. Y., & Phang, C. K. (2019). Psychological distress and its association with job satisfaction among nurses in a teaching hospital. *Journal of clinical nursing*, 28(21-22), 4087-4097.
- Jaafar¹, S. B., Hassan, H. M., & Zambi, N. M. (2021). The relationship between stress and job satisfaction. *International Journal of Business and Management*, 5(1), 08-12.
- Schnettler, B., Miranda-Zapata, E., Orellana, L., Saracostti, M., Poblete, H., Lobos, G., ... & Reutter, K. (2024). Intra-and inter-individual associations of family-to-work conflict, psychological distress, and job satisfaction: gender differences in dual-earner parents during the COVID-19 pandemic. *Behavioral Sciences*, 14(1), 56.

- Sheraz, A., Wajid, M., Sajid, M., Qureshi, W. H., & Rizwan, M. (2014). Antecedents of Job Stress and its impact on employee's Job Satisfaction and Turnover Intentions. *International Journal of Learning & Development*, 4(2), 204-226.
- Singh, M. M., Amiri, M., & Sabbarwal, S. (2019). Role of job stress on job satisfaction. *International Journal of Management Studies*, 6(4), 57-60.
- Stefanovska-Petkovska, M., Stefanovska, V. V., Bojadjieva, S., & Bojadjiev, M. I. (2021). Psychological distress, burnout, job satisfaction and intention to quit among primary healthcare nurses. *Health Services Management Research*, 34(2), 92-98.

UNDERSTANDING THE IMPACT OF PERCEIVED WORKPLACE INCLUSION ON TURNOVER INTENTION: A DEI PERSPECTIVE FROM KOLKATA'S PRIVATE HOSPITALS

Ms. Debattri Das ¹

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

In the contemporary organizational landscape, diversity, equity, and inclusion (DEI) have emerged as essential components of strategic human resource management, particularly within dynamic and socially complex sectors like healthcare. As hospitals and healthcare institutions worldwide continue to diversify their workforce in response to demographic shifts and globalization, the importance of fostering inclusive environments has become more pronounced. Inclusion in the workplace refers not just to numerical diversity but to creating a culture where individuals from different gender identities, ages, ethnic backgrounds, socio-economic classes, and language groups feel respected, valued, and fully integrated into the fabric of the organization. In India, where social structures are often shaped by deep-rooted cultural norms, caste hierarchies, and linguistic divisions, the concept of workplace inclusion takes on unique contextual significance. Despite the growing emphasis on equitable practices in policy discourse, many healthcare professionals still report experiences of exclusion based on identity-related factors, leading to feelings of marginalization, reduced job satisfaction, and emotional exhaustion. These negative experiences can directly influence an individual's turnover intention—the cognitive process wherein an employee begins contemplating leaving their current organization.

In Kolkata's competitive private healthcare sector, where retention of skilled professionals is vital to operational continuity and patient care quality, understanding how perceived inclusion affects turnover intention becomes not only a moral imperative but also a strategic priority. This study seeks to explore this relationship in depth, aiming to provide empirical insight and actionable recommendations for fostering inclusive, equitable, and retention-friendly workplaces within Kolkata's private hospital ecosystem.

Select Literatures

This study builds on multiple bodies of literature. The foundational framework draws from Social Identity Theory (Tajfel & Turner, 1986), which posits that individuals derive part of their identity from group affiliations and may disengage from environments that marginalize those identities. Further support comes from Organizational Inclusion Theories (Mor Barak, 2000), which define inclusion as employees' perception of being treated as insiders, with access to decision-making and equitable treatment. Studies like Shore et al. (2011) and Nishii (2013) highlight that inclusive workplaces are positively correlated with engagement and negatively correlated with turnover. However, most of this literature is based in Western contexts, with little empirical evidence from Indian healthcare, especially Kolkata, where regional language, caste, and gender intersect to shape workplace dynamics.

¹ Research Scholar, Dept of Management Studies, JIS University and Assistant Professor, Dept of Hospital Management, GNIT

Purpose

The primary aim of this study is to investigate the correlation between perceived workplace inclusion and employee turnover intention among healthcare professionals in Kolkata's private hospital sector. The research seeks to determine how feelings of exclusion—based on gender, age, ethnicity, language, and socio-economic identity—contribute to withdrawal intentions. The study is motivated by the urgent need for evidence-based retention strategies that go beyond surface-level diversity representation and address deeper issues of psychological safety, fairness, and inclusion.

Methodology

A mixed-methods approach was adopted to comprehensively explore the phenomenon:

Quantitative Component: A structured questionnaire was distributed to 250 healthcare workers across 10 private hospitals in Kolkata. The instrument included:

- Perceived Inclusion Scale (Mor Barak et al., 1998)
- DEI Policy Perception Index
- Turnover Intention Scale (TIS-6)
- Demographic Profile Section

Statistical analyses (descriptive statistics, Pearson correlation, multiple regression) were performed using SPSS v26.

Qualitative Component: 25 semi-structured interviews were conducted with a demographically diverse sample (by age, gender, job role, and linguistic background). These interviews probed deeper into daily workplace experiences of inclusion and exclusion. Thematic analysis was used to identify recurring patterns, using NVivo software. Codes were grouped into major themes such as language-based exclusion, perceived favoritism, gender bias in leadership, and organizational responsiveness to inclusion complaints.

Analysis & Findings

The quantitative analysis revealed a strong negative correlation between perceived inclusion and turnover intention ($r = -0.61$, $p < 0.01$), confirming that employees who feel included are less likely to want to leave. Key demographic predictors of exclusion included:

- **Gender:** Young female nurses reported lower inclusion scores and higher turnover intent.
- **Age & Hierarchy:** Younger workers felt less involved in decision-making.
- **Language & Ethnicity:** Employees from non-Bengali speaking backgrounds faced subtle exclusion in team communication.

Regression analysis found that inclusion predicts 37% of the variance in turnover intention, even after controlling for pay, workload, and tenure. The model confirmed inclusion as an independent and significant predictor of retention.

The qualitative data enriched these findings with lived examples:

- Some nurses described being "left out of team rounds" or having their opinions overlooked, especially in male-dominated departments.
- Junior administrative staff shared that "language politics" sometimes made them feel "invisible," especially when team communication predominantly occurred in Bengali.
- Several respondents reported inconsistent grievance redressal mechanisms, which led to perceptions of organizational apathy.
- In contrast, hospitals with robust DEI initiatives (e.g., anonymous grievance platforms, inclusive leadership training, multilingual signage and policy documents) showed markedly lower reports of exclusion and higher job satisfaction.

Interviewees also highlighted the emotional toll of exclusion, linking it to stress, burnout, and absenteeism. Some stated that they would consider leaving their jobs not due to salary or workload, but because of feeling "unheard" and "unseen."

Practical Implications

This research underscores the strategic value of embedding inclusion into HR practices. Hospitals can no longer afford to treat DEI as a performative checkbox or limited to recruitment quotas. Instead:

- Leadership development programs must focus on inclusive behaviors, such as active listening, participatory management, and bias awareness.
- Language-neutral communication protocols (e.g., use of English or multilingual support during team meetings) can help minimize bias in mixed-linguistic teams.
- Promotion transparency and equitable task distribution must be institutionalized, especially in nursing and allied health departments.
- HR should conduct regular inclusion audits and link findings to retention KPIs, ensuring accountability and progress monitoring.

Given the acute attrition issues in healthcare post-COVID, these actions are essential for workforce stability and patient care continuity.

Originality

This study contributes original insights by contextualizing inclusion within the urban Indian healthcare ecosystem, an area seldom studied in mainstream DEI literature. By incorporating intersectional variables (gender, age, region, language), the research expands traditional inclusion frameworks. It also blends quantitative rigor with qualitative nuance, offering an empirically grounded roadmap for improving retention. The findings are relevant for:

- Hospital administrators seeking to enhance staff engagement and reduce turnover.
- DEI consultants designing context-sensitive interventions.
- Policymakers advocating for healthcare workforce reforms.

Moreover, this study adds to the broader discourse on organizational behavior in non-Western, multicultural environments where traditional hierarchies and social dynamics significantly influence workplace culture.

Conclusion and Recommendations

The study concludes that perceived inclusion plays a decisive role in shaping turnover intentions. When employees feel marginalized due to their identity, they are more likely to disengage and eventually leave. Conversely, inclusive work environments foster trust, loyalty, and psychological well-being.

Recommendations include:

- Developing DEI dashboards to monitor inclusion metrics and present real-time insights to leadership.
- Conducting bias training for all managerial staff, with a focus on unconscious bias, microaggressions, and inclusive leadership.
- Implementing reverse mentoring to bridge generational and cultural gaps and empower younger employees to contribute perspectives.
- Engaging frontline staff in co-designing inclusion policies, ensuring that these reflect on-the-ground realities rather than top-down assumptions.

Inclusion is no longer a ‘soft’ agenda; it is a retention imperative for healthcare institutions striving for excellence. The future of resilient healthcare delivery in Kolkata and similar urban centers hinges on embracing and institutionalizing inclusive practices as a core element of organizational success.

Keywords: *Perceived Workplace Inclusion, Turnover Intention, Diversity, Equity & Inclusion (DEI), Inclusive Leadership, Employee Retention, Identity and Workplace Belonging.*

References:

1. Mor Barak, M. E. (2000). "Beyond Affirmative Action: Toward a Model of Diversity and Organizational Inclusion." *Administration in Social Work*, 23(3-4), 47-68.
2. Tajfel, H., & Turner, J. C. (1986). "The social identity theory of intergroup behavior." In S. Worchel & W. G. Austin (Eds.), *Psychology of Intergroup Relations*, 7-24.
3. Shore, L. M., et al. (2011). "Inclusion and diversity in work groups: A review and model for future research." *Journal of Management*, 37(4), 1262-1289.
4. Nishii, L. H. (2013). "The benefits of climate for inclusion for gender-diverse groups." *Academy of Management Journal*, 56(6), 1754-1774.
5. Roberson, Q. M. (2006). "Disentangling the meanings of diversity and inclusion in organizations." *Group & Organization Management*, 31(2), 212–236.

Introduction

In the rapidly developed landscape of healthcare, especially within the urban private sector, the intersection of organizational culture and job satisfaction has emerged as an important field of study. Since the expansion of the private healthcare industry continues in cities such as Kolkata, human resource dynamics are becoming increasingly complicated, requiring a deep understanding of behaviour environment, within which healthcare is operated by professionals. Organizational culture-values, criteria, communication styles, leadership and workplace defined by morality-how employees see their roles, their performances, and their long-term commitment to the organization.

Select Literatures

Koppala and Chatterjee (2024) looked into how organizational culture resilience is connected to employees' feelings of happiness in the insurance industry. They found that when an organization has a resilient and flexible culture, it helps employees feel more emotionally stable and satisfied, even when things are tough. Their research suggests that applying a similar cultural approach in healthcare could help workers stay emotionally balanced and more committed to their jobs.

Bardhan and Haque (2023) did a study on healthcare organizations in West Bengal and found that how engaged employees are is closely tied to the type and strength of the organizational culture. Their research pointed out that when a culture is open and involves everyone, it encourages good behavior among employees, improves teamwork, and leads to better healthcare results. This shows that matching the culture with what employees need is key to keeping them motivated and loyal.

Murtiningsih (2020) looked at how pay, training, and organizational culture affect job satisfaction and how long people stay in a job. While money and learning opportunities matter, the study found that culture has a bigger and longer-lasting effect on keeping employees. This supports the idea that job satisfaction comes from more than just money—it also depends on things like being recognized and feeling trusted in the workplace.

Ratnasari, Sutjahjo, and Adam (2020) studied how organizational culture, job satisfaction, and leadership influence employee performance. They discovered that how well employees perform is greatly affected by how leaders act and the culture of the workplace. When leaders create an environment of trust and inclusiveness, employees are more likely to perform well and stay loyal to their organizations.

Premesti and Yuniningsih (2023) examined how organizational culture and job satisfaction affect employee performance. They found that job satisfaction acts as a middle step between culture and performance, meaning a positive culture leads to higher satisfaction, which then leads to better

¹ Research Scholar, Department of Management Studies, JIS University,

performance. Their research suggests that private hospitals should focus on building a strong organizational culture as a way to improve the quality of their services.

Idyah and Setiawati (2020) looked at how organizational culture and employee engagement affect employee performance in their article titled "Influence of organizational culture and employee engagement on employee performance: job satisfaction as intervening variable," which was published in the Review of Integrative Business and Economics Research. They discovered that job satisfaction plays a key role in connecting culture and engagement to performance. This means that even though culture and engagement directly influence performance, their full effect is only seen when employees are happy with their jobs. The study suggested that companies that create a culture that is engaging and values-driven tend to have better performance results because satisfied workers are more willing to give their emotional and intellectual effort to their work.

Virgana, Suendarti, Lapasau, and Hasbullah (2022) wrote a study titled "Measuring the effects of adversity quotient, organizational culture and job satisfaction on special school teachers' organizational commitment," which was published in the International Journal of Educational Management and Development Studies.

Their research investigated how emotional resilience, workplace culture, and job satisfaction influence teachers' long-term commitment to their institutions. The researchers found that organizational culture and job satisfaction had a bigger impact than adversity quotient alone. Their findings suggest that in emotionally demanding jobs like teaching or healthcare, a supportive and empathetic culture helps workers feel more connected and less likely to leave their jobs.

Ahmed and Wiadi (2022) looked at how job satisfaction and organizational culture affect performance in the auto finance industry in their paper "The effect of job satisfaction and organizational culture on employee performance in autofinance business: the mediating role of organizational commitment," published in Management.

They found that while both job satisfaction and culture significantly influence performance, their full effect is felt when employees also strongly commit to their organization. This commitment acts as a psychological link between the cultural experience and the actual work output. For healthcare organizations, this means creating a culture that builds trust and aligns with employees' values can strengthen loyalty and improve the quality of care given to patients.

Syardiansah, Latief, Daud, Windi, and Suharyanto (2020) did a study titled "The Effect of Job Satisfaction and Organizational Culture on Employee Performance of the Royal Hotel in East Aceh District," which was published in the Budapest International Research and Critics Institute-Journal (BIRCI-Journal).

Their research was focused on the hospitality industry and found that job satisfaction and organizational culture are important factors that affect employee performance. They discovered that when employees work in environments where communication is open, values are shared, and achievements are acknowledged, their performance improves. Although their study was set in the hotel industry, many of the findings relate to healthcare, especially when it comes to dealing with the emotional demands of customer or patient interactions.

Jigjiddorj, Zanabazar, Jambal, and Semjid (2021) presented a conference paper titled "Relationship between organizational culture, employee satisfaction and organizational commitment," at SHS Web of Conferences.

Their research showed a clear connection between these three factors. They found that organizational culture directly influences employee satisfaction, which then affects how committed employees are to

the organization. When cultures are inclusive, clear, and based on strong ethical values, employees tend to be more satisfied and more willing to stay with the company. This study supports the idea that culture is not just a backdrop but a key factor that can greatly influence the success of an organization.

Purpose

The purpose of this review-based research is to find out the behavioural relationship between organizational culture and employee job satisfaction in private healthcare institutions in Kolkata. It draws on secondary data, examines a wide range of literature to synthesize the major insight into organizational behaviour, health management, and human resources. The study does not include primary data collection, but focuses on analyzing existing knowledge to identify patterns, intervals and practical implications for healthcare administrators and HR professionals working in high pressure, service-oriented environment.

Methodology

The purpose of this review-based research is to find out the behavioural relationship between organizational culture and employee job satisfaction in private healthcare institutions in Kolkata. It draws on secondary data, examines a wide range of literature to synthesize the major insight into organizational behaviour, health management, and human resources. The study does not include primary data collection, but focuses on analyzing existing knowledge to identify patterns, intervals and practical implications for healthcare administrators and HR professionals working in high pressure, service-oriented environment.

Analysis & Findings

Kolkata, one of the major healthcare hubs of India, has seen fast privatization and institutional development in the last two decades. Along with infrastructural progression, human capital challenges appear more - including increasing attention rates, employee dissatisfaction, and workplace tension. In this context, organizational culture not only plays an important role in shaping the experiences of healthcare workers, but also determines how effectively they are engaged with patients, colleagues and institutional values. Job satisfaction in healthcare settings is naturally versatile. It is not only affected by salary and publicity, but is also affected by the degree of alignment between psychological security, recognition, autonomy and personal values and organizational ethos. In institutions where communication is open, leadership is sympathetic, and teamwork is encouraged, employees report a strong sense of high morale and belonging. In contrast, rigorous hierarchy, bureaucratic hurdles, and exclusion from decision-making processes can contribute to disappointment, burnout and dissolution. This study identifies several major dimensions of organizational culture that directly affect job satisfaction. They have leadership style, mutual trust, employee recognition, fairness in work allocation, and professional development opportunities. In Kolkata's private healthcare sector, these factors are particularly important, with the nature of the work demand and the responsibilities of patient-affected responsibilities often given the emotional burden on employees. The review also indicates that the workplace culture is not a fixed unit-it develops with change in leadership, change in policy and comprehensive socio-economic trends. For example, with the growing digitalization of healthcare and the emergence of new management models, traditional power structures are being challenged, leading to both opportunity and conflict within organizations. In such dynamic settings, an inclusive, transparent and reaction-oriented culture can serve as a stable force for employees navigating rapid changes. Another important behaviour aspect highlighted by review is the role of psychological welfare in determining job satisfaction. In healthcare, emotional labor is more, and without adequate institutional support systems without consultation access, work-life balance initiative, or stress management program-employees may be unsafe for mental fatigue. Culturally sensitive and emotionally intelligent workplace, therefore, is required not only for job satisfaction, but also for permanent workforce management.

Practical Implications

From the perspective of HR strategy, study culture audit, employee satisfaction survey and the value of the structured response system. These devices help to highlight the emerging stress points within the maligned, stated and practiced values and emerging stress points within the teams. Especially in the competitive private healthcare market of Kolkata, where the retention is a growing challenge, the cultural alignment provides a long-term solution for the formation of flexible, high-performing teams. It is also clear from the review that generational expectations are rebuilding how employees see organizational loyalty. Young healthcare professionals prioritize rapid price-operated work environment, professional honour, meaningful recognition and flexibility. If private hospitals want to remain competitive employers, they have to adapt their internal culture to accommodate these shifting preferences. This includes not only HR intervention, but also the leadership commitment to promote fairness, openness and mutual respect.

Originality

The conclusions further indicate that the external image of an organization is often a reflection of its internal culture. Hospitals that treat their employees develop a reputation for moral care, which attracts both patients and top talents. In contrast, institutions neglecting employees often struggle with public criticism, poor staff reviews and high turnover. In a city like Kolkata, where the reputation of the word-mouth is heavily weight, the organizational culture can directly affect the institutional stability. Finally, this review-based behaviour study establishes a clear relationship between organizational culture and job satisfaction in the private healthcare sector of Kolkata. Although it does not include empirical fieldwork, the synthesis of existing research provides a strong ideological structure to understand the dynamics of behaviour within the hospital environment. This emphasizes that the satisfaction of the employee is not only a by-product of the HR policy, but also a strategic result of well-designed, inclusive and values-operated organizational culture.

Keywords- *Organizational Culture, Job Satisfaction, Private Healthcare, Employee Behaviour, Workplace Environment*

Conclusion and Recommendations

By adopting culture-sensitive strategies, the Healthcare Institutes, including the-open communication, leadership development, mental welfare support, and recognition systems, can create environment where employees feel valuable, supported and inspired to make a meaningful contribution. In areas as human centenary as healthcare, where the quality of service is directly related to the engagement of employees, investing in organizational culture is not just a moral imperative-it is a business requirement. This study also encourages future research that combines both qualitative and quantitative approaches to detect specific cultural challenges within individual hospitals in Kolkata. In doing so, institutes can move from theory to action, more responsive, employee-friendly and permanent healthcare can build workplaces. This study not only confirms the behaviour link between workplace culture and employee satisfaction, but also opens new avenues for organizational introspection within private health care systems. As the healthcare institutions continue to expand and diversity in Kolkata, it becomes necessary to understand the human aspects of organizational functioning. By recognizing the culture as a dynamic and strategic resource - instead of a background variable - hospitals can unlock more employee capacity, reduce burnouts, and eventually increase the patient's quality. In addition, this reviews encourage policy makers, hospital administrators and human resource professionals to behave as an ongoing process as an ongoing process, which must be constantly evaluated and the expectations of the workforce should be changed. The creation of a strong internal culture is no longer alternative - it is an integral part of organizational development, retention of employees and healthcare excellence. Research also asks for deep, interdisciplinary exploration that mixes behavioural science, healthcare management, and strategic HR to create a model to create actionable models in line with Kolkata's specific socio-cultural context. As

future studies include both qualitative interviews and data-operated insights, a more complete picture will emerge-one that can guide not only institutional policies, but sector-wide reforms. In this sense, the study serves as both a reflective mirror and a forward-looking lens-helps help healthcare institutions in Kolkata to help where they stand and where they need to go. In addition, as the healthcare area becomes rapidly corporate and competitive, employees are no longer service providers - they are brand ambassadors, internal stakeholders and strategic assets. Ignoring the cultural welfare of these employees can lead to invisible costs, such as disintegration, silent, mutual conflict and decline in service sympathy. Especially in high-touch areas such as healthcare, such a decline in internal morale essentially spreads to the patient's experience. Kolkata's unique urban socio-cultural fabric requires a localized approach to understand organizational behaviour. Unlike the generalized national model, this study emphasizes the need for reference-sensitive strategies reflecting regional values, expectations and communication norms. A size-fit-All HR model is unlikely to be successful in a setting as a healthcare landscape of Kolkata and varied. This research also keeps organizational culture as a promoter of moral rule and institutional trust. When employees feel honoured, heard and supported, they are more likely to maintain moral standards, report misconduct and contribute to a transparent service environment. Thus, the culture is not only about "how to feel things" - it becomes a system of internal investigation and balance that strengthens institutional integrity.

Conclusions can serve as a practical guide to design more human resource departments of the hospital to design more human resources, practical informed policies. From recruitment to perception, from onboarding to grievance redressal-culture-sensitive practices can help create a psychologically safe environment that promotes both personal growth and organizational flexibility. Finally, this review determines the foundation for future interdisciplinary research that brings together organizational psychology, health administration and labor economics together to re -connect working strategies in Indian healthcare. By starting this conversation in the context of private hospitals in Kolkata, the study expects to inspire extensive institutional introspection in similar urban centres.

References

1. Koppala, S., & Chatterjee, S. (2024). Organizational Culture Resilience and Subjective Happiness among Insurance Employees. *International Journal for Research in Applied Science and Engineering Technology*, 12, 722-728.
2. Bardhan, S., & Haque, S. (2023). Is Employee Engagement Related to Organizational Culture and Organizational Citizenship Behaviour: Empirical Investigation from Healthcare Organizations of West Bengal. *Sustainable Excellence: A Contemporary Business Perspective*, 125.
3. Murtiningsih, R. S. (2020). The Impact of Compensation, Training & Development, and Organizational Culture on Job Satisfaction and employee Retention. *Indonesian Management and Accounting Research*, 19(1), 33-50.
4. Ratnasari, S. L., Sutjahjo, G., & Adam, A. (2020). The effect of job satisfaction, organizational culture, and leadership on employee performance. *Annals of Tropical Medicine & Public Health*, 23.
5. Premesti, A. D., & Yuniningsih, Y. (2023). The Employee Performance Analysis: The Role of Organizational Culture and Job Satisfaction. *Golden Ratio of Human Resource Management*, 3(1), 14-22.
6. Fidyah, D. N., & Setiawati, T. (2020). Influence of organizational culture and employee engagement on employee performance: job satisfaction as intervening variable. *Review of Integrative Business and Economics Research*, 9(4), 64-81.
7. Virgana, V., Suendarti, M., Lapasau, M., & Hasbullah, H. (2022). Measuring the effects of adversity quotient, organizational culture and job satisfaction on special school teachers' organizational commitment. *International Journal of Educational Management and Development Studies*, 3(2), 21-44.

8. Ahmed, A., & Wiadi, I. (2022). The effect of job satisfaction and organizational culture on employee performance in autofinance business: the mediating role of organizational commitment. *Management*, 26(2), 86-119.
9. Syardiansah, S., Latief, A., Daud, M. N., Windi, W., & Suharyanto, A. (2020). The Effect of Job Satisfaction and Organizational Culture on Employee Performance of the Royal Hotel in East Aceh District. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, 3(2), 849-857.
10. Jigjiddorj, S., Zanabazar, A., Jambal, T., & Semjid, B. (2021). Relationship between organizational culture, employee satisfaction and organizational commitment. In *SHS Web of Conferences* (Vol. 90, p. 02004). EDP Sciences.

Introduction

Creativity can be defined as the way new products, ideas and behaviour are generated, and these in turn fuel innovation (Amabile, 1996, p.11). And creative leadership is about how teams are inspired, innovation fostered and collaborative and learning environments catalysed (Puccio et al., 2011, p.17). One often cited definition of creative leadership is, “leading others towards the attainment of a creative outcome.” (Mainemelis et al., 2015, p.393). This research is based on the author’s 35-year experience in the Indian media, and it aims to examine how individual creative leadership practice translates into organisational leadership in the Indian OTT and traditional TV space. (Van Manen, 1990, p.9; Roy, 2020, p.47). The study attempts to understand how innovation is inspired by the creative expression of the creative leader, the dynamics of the team and strategies of leadership (Mumford et al., 2002, p.707; Sternberg, 2006, p.89; Shalley and Gison, 2004, p.35). What is also examined is India’s unique media landscape and challenges, and how creative leadership practices work in tandem with the creative industries (Athique, 2019, p.945).

Literature Review

The origins of leadership writing are as old as ancient civilisations. Plato, Sun Tzu, Confucius and Chanakya examined strategy, governance and ethics, and their writings hold great relevance even today. Chanakya’s Arthashastra advised kings to delegate to able and trusted advisors, embrace strategic planning and hold themselves to the highest ethical standards. In India, though the British Raj may not have agreed, Mohandas Gandhi practised his own unique brand of creative leadership, leading India’s independence movement, with integrity, non-violence and empathy and succeeding in galvanising millions to the cause. Closer to the present, India’s former President, the late A.P.J. Kalam, when he wrote about creative leadership, spoke about the use of a coaching style over commanding people and the need for empowerment, vision and passion.

Leadership literature goes back several centuries, but Western scholars like J.C. Rost have used 1910 as the year to start their leadership studies and found that 60% of authors have failed to define leadership adequately. In 1978, J.M. Burns wrote that although leadership studies had proliferated, a unified theory seemed elusive. W. G. Bennis spoke about how a proliferation of theories, like the Great Man Theory (1841), Trait Theory (1948), the Systems Theory (1990), the list goes on, had been advanced, but found lacking in adequately describing leadership. Although it does seem apparent that creativity is vital for effective leadership, a paradox presents itself in the fact that Implicit Leadership Theories don’t centre stage creativity. Firms tend to favour and promote risk-averse managers (Bassadur and Bassadur, 2011).

It is easier to describe what creative leadership does than define how it achieves what it does. It essentially does not rely so much on power as it does on catalysing and finding a way of balancing creativity with the needs of the organisation (Mumford et al., 2002). Riggio (2008) points to how creative leadership builds bonds between leaders and followers and inspires teams. Harvard’s Teresa Amabile presented the componential theory of creativity that she and her co-authors have updated to the present based on new research. Mihalyi Csikszentmihalyi advanced a systems view of creativity, seeing it as an interplay

¹ Professor, Srishti Manipal Institute of Art Design and Technology

between domain experts, the culture of the organisation and the individual. Mainemelis et al (2015) have outlined three ways in which creative leadership tends to be practised:

1. **Directing:** Driven, top-down, as by orchestra conductors or by leaders driving organisational change.
2. **Facilitating:** This occurs when creative leaders facilitate and inspire creative output in others/their teams
3. **Integrating:** In this form of creative leadership, leaders create a fusion of creative output from many creative practitioners, as in filmmaking, theatre and television.

Findings

- **Historical Background:** Leadership literature goes back centuries. Early insights still hold relevance today
- **Creative Leadership in India:** Gandhi, Kalam and many other Indian authors underscore adaptability and empathy, and some highlight cultural specifics relevant to India.
- **Theoretical Frameworks:** Rost and Burns explain why leadership theory has failed to capture all the dimensions and nuances of leadership, and that the search for a unified theory is ongoing
- **Creative Leadership, as opposed to Leadership in general:** Inspiration, not authority, guides the leadership process, but not all corporate structures are comfortable with all creative leadership practices.

Research Gap

- Arguably, more studies could examine and trace the history of creative leadership to the present from the standpoint of challenges and evolution from a conceptual perspective.
- Creative leadership is certainly innovative, but it would find it difficult to find adherents in settings that are averse to risk.
- Although academic literature about creative leadership is replete with descriptions of “what” it is, just “how” it’s practised in different industries and cultures needs closer examination, certainly in India.

Methodology

There is no doubt that, though traditional TV remains popular, creative leadership has been upended by the OTT landscape. Traditional TV serves conservative fare, is fuelled by advertiser-led structures and predictable schedules, while OTT garners audiences through algorithms, a global footprint and content that makes viewers binge and consume all released content in one go. Although there are differences in the models, a small group of creative leaders navigate, in a sense, both spaces. Laura Nader’s seminal work motivated scholars to shift their research focus from the periphery to those who sit atop power pyramids and whose decisions impact and influence millions. This research seeks to turn its attention to a select, powerful and influential group of India’s top creative leaders(TV and OTT). Using the qualitative research lens in general and narrative research in particular, this study will study not only how individual creative leaders lead but also how they have grown and evolved over time as they have moved across industries, companies and roles, by asking them to share and tell their stories.

Inclusion Criteria

- Creative Leadership experience of at least 20 continuous years in the Indian industry.
- A mix of men and women in creative leadership roles.
- A mix of generalists and specialists. Generalists are creative leaders who catalyse and supervise creative output for their companies at the macro level. Specialists, on the other hand, are creative leaders, honed and known for their specialised skills- direction, editing, shooting, etc.
- Creative Leaders, who are generalists, should be chosen from a mix of OTT, traditional TV, and mainstream and regional platforms, and these companies need to be justified as leading, legitimate choices in terms of their turnover and market position.

Conclusion

India's traditional TV and OTT industry provides a suitable canvas for the study of creative leadership in what are considered "creative industries", by examining and evaluating how that leadership is practised at senior levels. Research tends to support creative leadership that is inspirational and innovative, but the darker facets need study too- financial risks, environments that are highly pressured, competition that is intense and the threat of burnout. Academic literature from around the world on creative leadership is monumental in scope and research, but studies with specific reference to India's TV and OTT industries are hard to come by. There's certainly a research gap in the understanding of how individual creative leadership practice influences team performance in these industries. Many research avenues present themselves. For example, a multi-disciplinary lens that examines creative leadership theory, studies in creativity and the psychological makeup of individual creative leaders could offer unique insights. Qualitative research involving case studies, observation, narrative research, and in-depth interviews with industry leaders could also provide valuable learning about the practice of creative leadership. Many gaps in knowledge could thus be bridged, and the challenges and strengths of creative leadership in India's rapidly evolving OTT and TV ecosystem studied in ways they haven't been studied before.

Keywords: Creative Leadership, Individual creative leadership practice, creative industries, Indian TV industry, Indian OTT industry, entertainment.

References

1. (1993). Judgements of originality and appropriateness as predictors of creativity. **Personality and Individual Differences**, 15(5), 537–546.
2. (2010). Divergent thinking, creativity, and ideation. In J. C. Kaufman & R. J. Sternberg (Eds.), **The Cambridge handbook of creativity** (pp. 413–446). Cambridge University Press.
3. Amabile, T. M. (1982). Social psychology of creativity: A consensual assessment technique. **Journal of Personality and Social Psychology**, 43(5), 997–1013. <https://doi.org/10.1037/0022-3514.43.5.997>
4. Amabile, T. M. (1983). The social psychology of creativity: A componential conceptualisation. **Journal of Personality and Social Psychology**, 45(2), 357–376. <https://doi.org/10.1037/0022-3514.45.2.357>
5. Amabile, T. M., & Pratt, M. G. (1988). The dynamic componential model of creativity and innovation in organisations: Making progress, making meaning.
6. Avolio, B. J., Reichard, R. J., Hannah, S. T., Walumbwa, F. O., & Chan, A. (2009). A meta-analytic review of leadership impact research: Experimental and quasi-experimental studies. **The Leadership Quarterly**, 20(5), 764–784. <https://doi.org/10.1016/j.leaqua.2009.06.006>

7. Bakhshi, H., Freeman, A., & Higgs, P. (2013). *A dynamic mapping of the UK's creative industries* [Report]. NESTA. <https://www.nesta.org.uk/report/a-dynamic-mapping-of-the-uks-creative-industries/>
8. Ballnatt, A. (n.d.). *Science and research methods: Qualitative, follow-up* [PDF]. Berlin School of Creative Leadership.
9. Bryman, A., & Bell, E. (2018). *Social research methods* (5th Canadian ed.). Oxford University Press.
10. Burkeman, O. (2021). *Four thousand weeks: Time management for mortals*. Farrar, Straus and Giroux.
11. Christensen, C. (2010, July–August). How will you measure your life? *Harvard Business Review*.
12. Coyle, D. (2009). *The talent code: Greatness isn't born, it's grown. Here's how*. Bantam Books.
13. Creswell, J. W., & Creswell, D. J. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
14. Csikszentmihalyi, M. (1997). *Creativity: Flow and the psychology of discovery and invention*. Harper Collins.
15. Dwyer, R. (2010). Bollywood's India: Hindi cinema as a guide to modern India. *Asian Affairs*, 41(3), 381–398. <https://doi.org/10.1080/03068374.2010.508231>
16. Flick, U. (2014). *An introduction to qualitative research*. SAGE Publications.
17. Goleman, D. (2020). *The focused leader*. In *Emotional Intelligence Series*. Harvard Business Review Press.
18. Harrison, S. H., Rouse, E., Fisher, C. M., & Amabile, T. M. (2022). The turn toward creative work. *Academy of Management Collections*, 1(1), 1–15. <https://doi.org/10.5465/aml.2021.003>
19. House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., & Gupta, V. (Eds.). (2004). *Culture, leadership, and organisations: The GLOBE study of 62 societies*. SAGE Publications.
20. Hutchison, G. (2020). *Future fit*. Bloomsbury Publishing.
21. Levitt, T. (2002, August). Creativity is not enough. *Harvard Business Review*.
22. Lubart, T. I. (1994). Creativity. In R. J. Sternberg (Ed.), *Thinking and problem solving* (pp. 289–332). Academic Press.
23. Lutgendorf, P. (2006). Is there an Indian way of filmmaking? *International Journal of Hindu Studies*, 10(3), 227–256.
24. Mainemelis, C., Kark, R., & Epitropaki, O. (2015). Creative leadership: A multi-context conceptualisation. *The Academy of Management Annals*, 9(1), 393–482. <https://doi.org/10.1080/19416520.2015.1024502>
25. Mallia, K. L. (2019). *Leadership in the creative industries: Principles and practice*. Wiley & Sons.
26. McChrystal, S., Eggers, J., & Mangone, J. (2018). *Leaders: Myth and reality*. Portfolio.
27. Mishra, N., Aithal, P. S., & Iyer, A. (2023). A study of the changing trends in the television industry. *International Journal of Case Studies in Business, IT, and Education (IJCSBE)*, 7(2), 333–347. <https://doi.org/10.5281/zenodo.8019405>
28. Mumford, M. D., & Gustafson, S. B. (1988). Creativity syndrome: Integration, application, and innovation. *Psychological Bulletin*, 103(1), 27–43. <https://doi.org/10.1037/0033-2909.103.1.27>
29. Nader, L. (1969). Up the anthropologist: Perspectives gained from studying up. In D. Hymes (Ed.), *Reinventing anthropology* (pp. 284–311). Random House.
30. Pradeep, K. D. (2021). *A short handbook of qualitative research*.
31. Premuzic, T. (2017, September–October). Could your personality derail your career? *Harvard Business Review*.
32. Runco, M. A. (1993). Creativity, causality and the separation of personality and cognition. *Psychological Inquiry*, 4(3), 221–234.
33. Runco, M. A. (2004). Creativity. *Annual Review of Psychology*, 55(1), 657–687. <https://doi.org/10.1146/annurev.psych.55.090902.141502>
34. Salmen, K. (n.d.). *Social research methods: Session 1*. Berlin School of Creative Leadership.

35. Sinek, S. (2009). **Start with why: How great leaders inspire everyone to take action**. Portfolio.
36. Slocum, D. (n.d.). **Edu Bite Series 2: Leading self, leading others, leading organisations** [Video series]. Berlin School of Creative Leadership.
37. Slocum, D. (n.d.). **Micro Bites 1–12: Fundamentals of leadership**. Berlin School of Creative Leadership.
38. Thackara, J. (2015). **How to thrive in the new economy**. Thames & Hudson.

Introduction

Workplace gender discrimination is still a problem that has an impact on employee morale, organizational culture, and overall productivity. The nature and frequency of gender-based biases in the workplace are examined in this study, along with how they affect worker motivation. Women and gender minorities are disproportionately affected by discrimination, which can take many different forms, such as unequal compensation, few opportunities for promotion, biased performance reviews, and exclusion from decision-making processes. This study illustrates how discriminatory practices result in lower job satisfaction, lower engagement, higher turnover rates, and psychological distress among impacted employees through a review of recent research and case studies. The study goes on to address how inclusive leadership and organizational policies can lessen these impacts and promote a more just and driven workforce. The results highlight how crucial it is for employers to identify and actively address gender discrimination in order to maintain an equitable, effective, and empowering workplace. A major obstacle to attaining equity and inclusivity in contemporary organizational structures is gender discrimination in the workplace. Discriminatory practices continue to exist across industries and occupational hierarchies despite institutional and legislative efforts to advance gender equality. This study looks at the different types of gender discrimination and assesses how they affect employee motivation. These include wage differences, occupational segregation, biased hiring, promotion, and harassment practices. The study illustrates how gender-based disparities lower intrinsic and extrinsic motivation in workers, especially those from marginalized gender groups, by drawing on psychological frameworks, organizational behavior theories, and empirical research. Reduced organizational commitment, decreased job satisfaction, poorer performance, and a rise in turnover intentions are some of the repercussions. Additionally, the study investigates how leadership and organizational culture can act as moderators in either perpetuating or mitigating these effects. The study makes a strong connection between gender discrimination and lower employee motivation, underscoring the necessity of putting in place fair policies, diversity education, and accountability systems to improve worker satisfaction and organizational efficacy. This section on research methodology is appropriate for the scholarly work "Gender Discrimination at the Workplace and Its Impact on Employee Motivation."

Literature Review

The literature reveals that gender-based workplace discrimination significantly affects employee motivation, well-being, and organizational performance. Scholars such as Acker (2006) and Heilman (2012) highlight how structural inequalities, stereotypes, and biased practices persist despite legislative reforms. Discrimination manifests in unequal pay, limited career advancement, and exclusion from leadership roles, particularly impacting women and gender minorities. Psychological theories like Deci and Ryan's Self-Determination Theory emphasize how such biases erode intrinsic and extrinsic motivation. Research also underscores the role of inclusive leadership and organizational justice in

¹ Research Scholar, ICFAI Business School, The ICFAI University Dehradun

² Assistant Professor, ICFAI Business School, The ICFAI University Dehradun

mitigating these effects, pointing to the importance of institutional accountability and equitable workplace policies.

Acker, J. (2006) Acker's seminal work introduces the concept of "inequality regimes" and explores how organizational structures embed gender, race, and class discrimination, offering a foundational framework for understanding systemic gender bias in workplaces. **Heilman, M. E. (2012)** This paper discusses how gender stereotypes lead to biased evaluations and hinder women's advancement in professional settings, directly supporting the discussion on biased performance reviews and promotion barriers. **Deci, E. L., & Ryan, R. M. (2000)** This theory explains how environments that thwart autonomy, competence, and relatedness—common in discriminatory workplaces—reduce intrinsic and extrinsic motivation among employees. **Kalev, A., Dobbin, F., & Kelly, E. (2006)** This empirical study evaluates the effectiveness of diversity policies in reducing workplace discrimination and supports the argument for institutional accountability and structured interventions. **Moss-Racusin, C. A., et al. (2012)** This study reveals how implicit biases among professionals' disadvantage women, even in merit-based environments, reinforcing the need to address unconscious discrimination in hiring and evaluations.

Purpose

The purpose of this research is to examine the prevalence, forms, and impact of gender-based workplace discrimination on employee motivation, particularly within higher education institutions. It aims to explore how discriminatory practices such as unequal pay, biased promotions, and exclusion from decision-making affect motivation, job satisfaction, and turnover intentions. By integrating quantitative and qualitative methods, the study seeks to identify effective organizational strategies and leadership roles that can mitigate these effects and promote a more equitable and inclusive work environment.

Research Methodology

This study employs a mixed-methods research design to examine the relationship between gender discrimination and employee motivation. A cross-sectional approach was used to collect data from various sectors, including education, corporate, public administration, and healthcare. Quantitatively, a structured survey incorporating the Workplace Gender Discrimination Scale (WGDS) and the Work Extrinsic and Intrinsic Motivation Scale (WEIMS) was administered to 300 employees via stratified random sampling. Qualitatively, semi-structured interviews with 20 individuals provided deeper insights into personal experiences. Quantitative data were analyzed using SPSS, while qualitative data underwent thematic analysis using NVivo, ensuring a comprehensive understanding of the issue.

Analysis & Findings

- **Prevalence of Gender Discrimination:** A significant portion of respondents (approximately 62%) reported experiencing or witnessing some form of gender discrimination, including unequal pay, limited promotion opportunities, biased evaluations, or exclusion from decision-making processes.
- **Impact on Motivation** Statistical analysis revealed a strong negative correlation between perceived gender discrimination and employee motivation ($r = -0.61$, $p < 0.01$). Employees who reported higher levels of discrimination also reported lower levels of both intrinsic and extrinsic motivation.
- **Gender Differences** Female and non-binary employees reported significantly higher levels of discrimination compared to their male counterparts. These groups also demonstrated greater declines in job satisfaction, engagement, and commitment due to discriminatory experiences.
- **Turnover Intentions** Over 45% of employees who experienced gender discrimination indicated a high likelihood of leaving their organization within the next 12 months. Turnover intention was significantly associated with perceived discrimination and reduced motivation.

- **Organizational Response:** Employees working in organizations with active diversity, equity, and inclusion (DEI) policies reported lower levels of discrimination and higher motivation, suggesting the protective effect of inclusive workplace cultures.

Practical Implications

The findings of this study have several important implications for organizations, HR practitioners, and policymakers aiming to foster equitable and productive workplaces.

1. *Policy Development and Enforcement:* Organizations must implement clear, enforceable policies against gender discrimination. This includes transparent mechanisms for reporting and addressing grievances, equal pay audits, and regular reviews of promotion and hiring practices.
2. *Inclusive HR Practices:* Human resource departments should integrate gender equity into recruitment, performance evaluation, and career advancement frameworks. Gender-sensitive training and awareness programs can help reduce unconscious biases in managerial decision-making.
3. *Leadership and Organizational Culture:* The study highlights the role of leadership in shaping workplace culture. Leaders must actively promote inclusivity and serve as role models for respectful, non-discriminatory behavior. Encouraging open dialogue and diversity in leadership roles can foster greater trust and motivation among employees.
4. *Employee Engagement and Retention:* Reducing gender discrimination contributes to higher levels of employee motivation, job satisfaction, and organizational commitment. Companies that address these issues proactively may benefit from lower turnover rates, improved performance, and enhanced reputation as equitable employers.
5. *Training and Development:* Regular workshops and gender-sensitivity training can help employees and managers recognize and challenge discriminatory behavior. Equipping staff with conflict resolution and empathy skills supports a more collaborative and motivated workforce.
6. *Data-Driven Decision Making:* Organizations should collect and analyze data on gender representation, pay equity, and employee feedback to monitor progress and make informed decisions about interventions. This fosters accountability and continuous improvement.

Value: Ethical Considerations

This paper uniquely integrates mixed-methods research to examine gender discrimination across diverse sectors, including education, healthcare, and corporate settings. Its inclusion of non-binary perspectives and focus on motivation outcomes offers fresh insights. The findings emphasize the critical role of inclusive policies and leadership in fostering equitable, motivated workplaces.

Conclusion & Recommendation

According to the study's findings, gender discrimination is still a major problem in contemporary workplaces and directly lowers employee motivation, especially for women and members of gender minorities. In addition to undermining worker well-being, discriminatory practices reduce organizational effectiveness by raising turnover, dissatisfaction, and disengagement rates.

The results highlight how urgently organizations must prioritize gender equity through employee education, leadership accountability, and policy reforms. In addition to being morally required, fostering

an environment that is equitable, courteous, and inclusive is strategically necessary to improve employee motivation, output, and the long-term viability of the company.

References

1. Acker, J. (2006). *Inequality regimes: Gender, class, and race in organizations*. *Gender & Society*, 20(4), 441–464. <https://doi.org/10.1177/0891243206289499>
2. Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: W.H. Freeman.
3. Deci, E. L., & Ryan, R. M. (2000). *The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior*. *Psychological Inquiry*, 11(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01
4. Heilman, M. E. (2012). *Gender stereotypes and workplace bias*. *Research in Organizational Behavior*, 32, 113–135. <https://doi.org/10.1016/j.riob.2012.11.003>
5. Kalev, A., Dobbin, F., & Kelly, E. (2006). *Best practices or best guesses? Assessing the efficacy of corporate affirmative action and diversity policies*. *American Sociological Review*, 71(4), 589–617. <https://doi.org/10.1177/000312240607100404>
6. Moss-Racusin, C. A., Dovidio, J. F., Brescoll, V. L., Graham, M. J., & Handelsman, J. (2012). *Science faculty's subtle gender biases favor male students*. *Proceedings of the National Academy of Sciences*, 109(41), 16474–16479. <https://doi.org/10.1073/pnas.1211286109>
7. Shin, Y., & Konrad, A. M. (2017). *Causality between high-performance work systems and organizational performance*. *Journal of Organizational Behavior*, 38(6), 809–828. <https://doi.org/10.1002/job.2151>

EXPLORING THE DETERMINANTS OF TECHNOLOGY ACCEPTANCE AMONG STUDENTS OF HIGHER EDUCATION INSTITUTIONS IN WEST BENGAL: A CRITICAL REVIEW

Ms. Sumana Biswas ¹, Dr. Sudipta Majumdar ²

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

Digital technologies have reshaped higher education worldwide, enabling flexible, interactive and data-rich learning. In India—and in West Bengal in particular—adoption has been accelerated by national policy priorities, expanding internet access, and institutional modernisation. Yet uptake remains uneven across regions and student groups because of infrastructure gaps, variable digital literacy and differing attitudes toward technology. The Technology Acceptance Model (TAM) has been widely used to explain why learners adopt educational technologies, but most applications focus on functional beliefs alone. They tend to underplay the emotional and cultural dimensions that matter in diverse Indian settings, such as enjoyment, anxiety, peer expectations and local relevance. Responding to this gap, the present study tailors TAM to West Bengal's higher-education context by incorporating social influence, perceived enjoyment, self-efficacy and cultural fit alongside perceived usefulness and perceived ease of use. The objective is not only to predict behavioural intention and actual use, but also to inform context-aware design and implementation of digital learning tools.

Select Literatures

TAM posits that adoption is driven primarily by perceived usefulness (PU) and perceived ease of use (PEOU) (Davis, 1989). In higher education, numerous studies show that students are more likely to engage with tools they find instrumentally helpful and easy to navigate (e.g., Birch & Burnett, 2019; Choi & Chung, 2017). Later extensions argue that social and affective processes matter as well. Venkatesh et al. (2003) emphasised social influence, finding that peers and instructors can shape intention through norms and expectations. Self-efficacy—the belief that one can successfully use a system—has been shown to boost confidence and persistence, improving both intention and actual usage (Teller, 2019). Perceived enjoyment captures intrinsic motivation; when platforms feel engaging or playful, students adopt them even beyond instrumental needs (Gong & Yu, 2021). The pandemic period further complicated acceptance. Emergency remote teaching accelerated digital exposure but surfaced technostress, fatigue and privacy worries. Studies of AI-supported learning during and after COVID-19 report that, alongside usefulness, trust, compatibility with existing study habits, and visibility of outcomes influence intention to use (e.g., Patel & Joshi, 2023; Li, 2023). Context also matters. Mobile learning adoption is highly sensitive to interface simplicity and micro-learning design, particularly where bandwidth is limited (Muller et al., 2021). Blended and distributed learning models can amplify benefits but often encounter anxiety and support constraints (Al-Rahmi et al., 2018). Cross-cultural reviews suggest that the relative weight of PU and PEOU varies with language, pedagogy and local norms (Davis et al., 2021), underscoring the need for culturally responsive models. Despite this progress, three gaps persist. First, many studies remain cross-sectional; we know less about how acceptance evolves as systems and skills mature. Second, emotional responses—enjoyment, anxiety and trust—are not consistently integrated with functional beliefs in predictive models, even though they are central to

¹ Research Scholar, School of Business, Adamas University

² Associate Professor, School of Business, Adamas University

voluntary use. Third, there is comparatively little evidence from less-resourced and linguistically diverse Indian contexts. By embedding social influence, enjoyment, self-efficacy and cultural fit into the core TAM pathway (PU → intention/use; PEOU → PU and intention), the present study offers a theoretically grounded and context-aware account of student acceptance in West Bengal.

Purpose

This study seeks to explain variation in students' acceptance of educational technologies in West Bengal using an extended TAM. The specific purposes are to: (a) quantify the direct effects of perceived usefulness and perceived ease of use on behavioural intention and actual use; (b) test whether perceived enjoyment and self-efficacy mediate the link between functional beliefs and intention; (c) examine whether social influence and cultural fit moderate these relationships across demographic segments (discipline, gender, rural–urban background); and (d) generate actionable guidance for educators, platform designers and policymakers to improve equitable adoption. Together, these aims move beyond a one-size-fits-all account of technology acceptance and foreground the emotional and contextual factors that shape adoption in Indian higher education.

Methodology

This study's methodology centres on a structured literature review undertaken to identify determinants of technology acceptance relevant to higher education, with a focus on the Indian context. Academic databases such as Scopus, Web of Science, Google Scholar, and ERIC were searched for publications from 1995 to 2025 using keywords including 'Technology Acceptance Model,' 'higher education,' 'India,' 'AI adoption,' 'blended learning,' and 'mobile learning.' The inclusion criteria required peer-reviewed studies with empirical evidence and clear use of TAM constructs or extensions, while purely technical system-design papers without adoption metrics were excluded.

From the review, recurring patterns emerged: (a) Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) consistently predicted behavioural intention, (b) social influence and self-efficacy were frequently added to extended TAM models, (c) emotional factors like enjoyment and anxiety were gaining attention, and (d) cultural fit, including local language adaptation, influenced adoption but remained underexplored in Indian contexts. Research gaps identified include the lack of integration of emotional and cultural variables in TAM studies in states like West Bengal, limited demographic-specific analyses, and underuse of mediation/moderation testing. Contradictory findings on gender and discipline effects were also noted.

Practical Implications

For educators, structured peer mentoring, low-stakes practice tasks and light gamification can elevate enjoyment and reduce anxiety, while course policies that normalise ethical use of AI tools can harness social influence positively. For developers, simplifying onboarding, offering multilingual interfaces and surfacing transparent privacy controls will improve ease of use and trust. For institutional leaders and policymakers, investments in campus connectivity, device access schemes and targeted digital-skills workshops can narrow structural gaps, especially for rural and first-generation learners. Designing with cultural fit in mind—examples, cases and interfaces that reflect local contexts—can raise perceived usefulness by making benefits more tangible. Together, these interventions map directly onto the extended TAM levers identified here, providing a practical blueprint for inclusive technology adoption.

Originality

This study contributes a context-sensitive extension of TAM that systematically integrates emotional (enjoyment, anxiety) and cultural factors with the canonical functional beliefs. Focusing on West Bengal fills a geographic and socio-linguistic gap in the literature and yields evidence that can travel to similar

settings in India and beyond. Methodologically, the use of mediation and moderation within SEM provides a more nuanced explanation of how and for whom technologies are adopted. Practically, the model links directly to implementable levers—skills, design, culture and norms—thereby supporting more equitable digital transformation in higher education.

Conclusion

Technology acceptance among students is shaped by more than utility and ease. Emotions, confidence, peer norms and cultural resonance also determine whether tools are tried, trusted and sustained. Extending TAM with these dimensions delivers a better fit to the realities of West Bengal's higher-education landscape and generates clearer lines of action. We recommend that universities localise content and interfaces, scaffold digital-skills development, create peer-supported practice spaces, and adopt transparent data-privacy standards. Future research should track cohorts over time to observe how beliefs and behaviours evolve with exposure, and compare patterns across Indian states to identify scalable design principles. By aligning design and policy with students' lived contexts, institutions can convert access to technology into durable, meaningful learning gains.

Keywords: *Technology Acceptance Model (TAM), Higher Education, Student Perceptions, Cultural Factors, Digital Learning Adoption.*

References

- i) Birch, D., & Burnett, B. (2019). Acceptance of e-learning tools in university students. *British Journal of Educational Technology*, 50(3), 786–801.
- ii) Choi, G., & Chung, H. (2017). TAM for mobile technologies in education. *Telematics and Informatics*, 34(2), 234–250.
- iii) Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
- iv) Gong, M., & Yu, Y. (2021). Extended TAM for virtual learning environments. *Journal of Management Information Systems*, 38(2), 156–178.
- v) Li, K. (2023). Determinants of college students' actual use of AI-based systems: An extension of TAM. *Sustainability*, 15(2), 567.
- vi) Muller, M., et al. (2021). Mobile learning acceptance: A TAM perspective. *Telematics and Informatics*, 39(4), 234–256.
- vii) Patel, A., & Joshi, R. (2023). AI adoption in education: Extending TAM. *Journal of Educational Technology Systems*, 52(1), 45–63.
- viii) Teller, C. (2019). Self-efficacy and LMS acceptance. *British Journal of Educational Technology*, 51(1), 321–336.
- ix) Venkatesh, V., Morris, M., Davis, G., & Davis, F. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425–478.

DIGITAL PRESENCE AND BRAND COMMITMENT AS DRIVERS OF TALENT ATTRACTION AND RETENTION: AN EMPIRICAL STUDY

Titly Dhar ¹, Dr. Soma Bose Biswas ², Dr. Supti Mandal ³

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

The accelerated digital transformation of workplaces and the intensifying global competition for talent have forced organizations to revisit their Human Resource Management (HRM) practices. Traditional recruitment and retention strategies are no longer adequate to meet the expectations of digitally native generations Millennials and Generation Z. These cohorts rely heavily on digital platforms, including LinkedIn, Glassdoor, Instagram, and organizational websites, to assess employer attractiveness. Consequently, digital employer branding has shifted from being a marketing initiative to a strategic HR priority.

The research problem addressed in this study is the limited understanding of how an organization's digital presence (visibility, interactivity, and credibility online) and brand commitment (emotional and psychological attachment of employees to the employer brand) jointly influence two critical behavioural outcomes: intention to apply and intention to stay. Although existing literature has examined employer branding, the specific integration of digital cues with brand commitment in shaping attraction and retention remains underexplored.

Literature Review

Employer branding is widely recognised as the organizational promise of value to employees (Ambler, 1996); (Backhaus, 2004). Digital presence, manifested through online communication channels and reviews, plays an increasingly central role in shaping employer attractiveness (Lievens, 2016); (Sivertzen, 2013). Studies suggest that interactive and authentic digital communication enhances trustworthiness and employer appeal (Kissel, 2015).

Brand commitment, understood as employees' emotional and psychological attachment to the brand (King, 2012); (Punjaisri, 2007), has been linked to job satisfaction, loyalty, and organizational citizenship behaviours. However, its combined effect with digital cues in predicting behavioural intentions remains underexplored.

Intention to apply is influenced by employer signals communicated via digital platforms (Allen, 2007); (Highhouse, 2003), while intention to stay is more closely tied to perceived support, value congruence, and organizational commitment (Hom, 2017). The Signalling Theory (Spence, 1978) and Social Exchange Theory (Blau, 1964) provide theoretical grounding for understanding how digital cues and relational bonds influence job-seeker and employee decisions.

¹ Assistant Professor, Institute of Engineering and Management (IEM), University of Engineering and Management, Kolkata

² Associate Professor, Techno International New Town, Kolkata

³ Professor, Post Graduate Institute of Hospital Administration, Kolkata

Purpose

The primary aim of this study is to investigate the extent to which digital presence enhances employees' commitment to the employer brand and how both these factors predict employees' intention to apply for jobs and remain with the organization. This dual examination of attraction and retention bridges a critical gap in employer branding research, offering actionable insights for HR strategists seeking to build sustainable employer value propositions in the digital era.

Methodology

The study employed a quantitative research design. Primary data were collected from 345 Millennial and Gen Z working professionals using a structured questionnaire distributed through LinkedIn, WhatsApp, and professional email networks between January and May 2025. The snowball sampling method was adopted.

Measurement instruments:

- Digital Presence (14 items): assessed online visibility, interactivity, and employer credibility (adapted from (Collins, 2002); (Kissel, 2015); (Schaarschmidt, 2020).
- Brand Commitment (8 items): measured emotional and psychological attachment to the employer brand (King, 2012); (Cook, 1980).
- Intention to Apply (3 items) and Intention to Stay (4 items): adapted from (Gomes, 2011); (Helm, 2013); (Firth, 2004).

Reliability tests showed strong internal consistency with Cronbach's alpha values above the recommended threshold (Digital Presence = 0.889; Brand Commitment = 0.801; Intention to Apply = 0.726; Intention to Stay = 0.704).

Data analysis was conducted using IBM SPSS 25. Descriptive statistics, inter-item correlation, and multiple regression analyses were performed to test hypotheses regarding the predictive relationships among constructs.

Analysis & Findings

The findings confirm that:

Digital Presence significantly predicts Brand Commitment ($\beta = 0.609$, $R^2 = 0.37$, $p < 0.001$). This suggests that robust online visibility fosters emotional attachment to the employer brand.

Digital Presence and Brand Commitment significantly predict Intention to Apply ($\beta_{DP} = 0.427$; $\beta_{BC} = 0.372$; $R^2 = 0.514$, $p < 0.001$). Together, they explain over 51% of the variance, indicating that digital branding and emotional attachment strongly influence application decisions.

Digital Presence and Brand Commitment significantly predict Intention to Stay ($\beta_{DP} = 0.324$; $\beta_{BC} = 0.278$; $R^2 = 0.292$, $p < 0.001$). While still significant, the variance explained for retention is lower than that for attraction, highlighting a possible gap between pre-employment digital impressions and post-employment experiences.

Overall, the results validate the hypotheses and demonstrate that both digital presence and brand commitment play critical roles in shaping behavioural intentions. However, sustaining retention requires authentic alignment between digital messaging and actual employee experiences.

Practical Implications

Organizations should invest in a strong and authentic digital footprint across social media, career portals, and review sites to enhance employer attractiveness. To ensure retention, alignment between external digital messaging and internal organizational culture is crucial. Overpromising in recruitment campaigns without delivering internally risks higher attrition. HR strategists should integrate digital analytics with internal branding efforts, ensuring that real-time feedback loops inform both recruitment and retention strategies. Building emotional attachment through recognition systems, transparent communication, and value alignment strengthens brand commitment and reduces turnover intentions.

Originality

This research is among the first to empirically examine the combined role of digital presence and brand commitment in influencing both intention to apply and intention to stay. It extends employer branding research by integrating Signalling Theory (explaining attraction through digital cues) with Social Exchange Theory (explaining retention through reciprocal relationships). The originality lies in revealing that while digital presence is powerful in attracting talent, sustained retention depends on authenticity, internal culture, and fulfilment of the employer's brand promise.

Conclusion and Recommendations

The study concludes that digital employer branding has transitioned into a strategic HR imperative. Digital presence significantly enhances brand commitment and influences both application and retention behaviours. However, the stronger predictive power for attraction compared to retention indicates that organizations must go beyond digital visibility to ensure authenticity and employee experience alignment.

Recommendations include:

Align employer branding messages with lived employee experiences to close the gap between external promise and internal reality. Regularly monitor and adapt digital communication strategies based on analytics and employee feedback. Integrate HR, marketing, and communication functions to ensure consistent brand messaging across touchpoints. Foster a workplace culture that reinforces digital brand signals, thereby strengthening long-term commitment.

Keywords: *Digital Presence; Employer Branding; Brand Commitment; Intention to Apply; Intention to Stay*

References

- Allen, D. G. (2007). Web-based recruitment: Effects of information, organizational brand, and attitudes toward a Web site on applicant attraction. *Journal of applied psychology*, 92(6), 1696.
- Ambler, T. &. (1996). The employer brand. *Journal of Brand Management*, 4(3), 185-206.
- Backhaus, K. &. (2004). Conceptualizing and researching employer branding. *Career development international*, 9(5), 501-517.
- Blau, P. M. (1964). Justice in social exchange. *Sociological inquiry*, 34(2).
- Collins, C. J. (2002). The relationship between early recruitment-related activities and the application decisions of new labor-market entrants: A brand equity approach to recruitment. *Journal of applied psychology*, 87(6), 1121.
- Cook, J. &. (1980). New work attitude measures of trust, organizational commitment and personal need non-fulfilment. *Journal of occupational psychology*, 53(1), 39-52.
- Firth, L. M. (2004). How can managers reduce employee intention to quit? *Journal of managerial psychology*, 19(2), 170-187.

- Gomes, D. &. (2011). Organizational attractiveness and prospective applicants' intentions to apply. *Personnel Review*, 40(6), 684-699.
- Helm, S. (2013). A matter of reputation and pride: Associations between perceived external reputation, pride in membership, job satisfaction and turnover intentions. *British journal of management*, 24(4), 542-556.
- Highhouse, S. L. (2003). Measuring attraction to organizations. *Educational and psychological Measurement*, 63(6), 986-1001.
- Hom, P. W. (2017). One hundred years of employee turnover theory and research. *Journal of applied psychology*, 102(3), 530.
- King, C. G. (2012). Employee brand equity: Scale development and validation. *Journal of brand management*, 19, 268-288.
- Kissel, P. &. (2015). Using social media to communicate employer brand identity: The impact on corporate image and employer attractiveness. *Journal of Brand Management*, 22, 755-777.
- Lievens, F. &. (2016). Employer image and employer branding: What we know and what we need to know. *Annual review of organizational psychology and organizational behavior*, 3(1), 407-440.
- Punjaisri, K. &. (2007). The role of internal branding in the delivery of employee brand promise. *Journal of brand management*, 15(1), 57-70.
- Schaarschmidt, M. &. (2020). Social media-driven antecedents and consequences of employees' awareness of their impact on corporate reputation. *Journal of Business Research*, 117, 718-726.
- Sivertzen, A. M. (2013). Employer branding: employer attractiveness and the use of social media. *Journal of Product & Brand Management*, 22(7), 473-483.
- Spence, M. (1978). Job market signaling. In *Uncertainty in economics*, (pp. 281-306). Academic Press.

Introduction

The work culture is changing and the present nature of work includes the work outside the boundaries of standard employment which is described as ‘Gigs’ (De Stefano, V. 2015). This type of ‘On-demand’ or ‘Platform work’ or ‘Contingent Work’ provides some facilities like convenience, flexibilities, higher unit pay on the number of deliveries etc. and such work is transacted in the digital platform (Tran M., 2017). Work on demand involves work that are organized through online system but requires local human resources for completion of the work. Such types of work include ride hailing, food delivery, cleaning services etc. Examples of such include Zomato & Swiggy in India, transport services provided by Ola & Uber, e-commerce services by Amazon & Flipcart (Aloisi. A, 2015; De Stefano. V, 2015, Mehta. B., S 2023). Such category of workers enjoys flexibility and choice of labour, ability to hold multiple jobs, guaranteed payment & heightened earnings etc. In such economy the delivery partners are armed with internet enabled smartphone and a tangible asset like motorbike or motorcycle or intangible skills of cooking or plumbing (Sundaranjan, 2016; Raman & Kulkarni, 2021). The workers are paid at piece rate (per task) and are said as ‘Independent Contractors’. A gig worker joins sharing economy either for the sake of money (extrinsic motivation) or by the distinct features of the job that motivates them to join and the most important predictor of joy for work is autonomy (Zaman. U; 2020).

Selected Literatures

Motivations of the gig workers towards work engagement in the gig platform, effects their ‘task performance’ and ‘work life balance’. The factors of motivation may include a desire for financial gain, achievement, praise, job satisfaction etc (Hieu *et al.*, 2020). The study shall take into consideration both extrinsic & intrinsic factors of motivation that impacts continuous engagement of independent workers in the gig economy platform. Extrinsic motivation drives the gig workers to work to preserve their socio-economic status and in the competitive market they constantly work hard to acquire engagement and earnings (Henley; 2021). Intrinsic motivation for the gig worker is driven by the task at hand; as workers with high task motivation are less driven by commission rate which may be reduced at any time. Various aspects on such work sphere by the gig workers like financial instability, work insecurity, range of risk associated with the method of delivery affects their motivation (Gregory, K 2021). An increase in freelancers’ labour supply will decrease sales performance overall. Risk aversion will increase labour supply, and a negative sales performance will affect the workers’ motivation. Performance pay and intrinsic motivation can act as a substitute rather than a complement (Butschek. S; *et al.*, 2022).

¹ Research Scholar (Commerce), Postgraduate and Research Department of Commerce, St. Xavier’s College (Autonomous), Kolkata

² Assistant Professor, Postgraduate and Research Department of Commerce (M. Com), St. Xavier’s College (Autonomous), Kolkata

Purpose

Food delivery workers suffer a great problem of lack of socialisation and they also face a problem of having quality interaction with their family members. These workers also don't enjoy autonomy as they have no role in determining the prize that is charged to the customers and even, they are not allowed to discuss with their managers about various matters like wages, incentives or their nature of the work, (Benanav, 2019). The basic purpose of the study is to observe the factors of motivation that influence the food delivery gig workers employed in the platform economy for two app-based companies, Swiggy and Zomato. The study is necessary to evaluate the important components that motivate the continuous engagement of gig workers in the gig economy. The study shall also aim to find out the constraints faced by those food delivery gig workers with special reference to South and Central Kolkata.

Methodology

The qualitative data analysis research technique has been adopted in this paper. Structured questionnaire & recorded interviews with their permission have been collected from the food delivery workers in South and Central Kolkata. A small sample of fifteen platform workers used in this study. The period of study lies between October 2024 to January 2025. Nvivo software have been used for word cloud creation, and sentiment analysis have been done to find out the frequency and relevancy of the text data and to study the emotions of the Gig Workers.

Analysis & Findings

The main purpose for the work was to identify the motivational factors that motivate them to continue for the job in spite of the various problem faced by them. The interviewees have mentioned challenges like Job Insecurity, Tiredness, Hypertension, Unstable income, Unsound sleep, not able to take food on time, Huge body pain, High dependency of family. Among all the above job insecurity and hypertension are the most important challenges for the existence of the gig workers, which has been studied by the researchers earlier (Campbell, I. and Burgess, J . 2018). (Bulut & Yesilyurt, 2023) have pointed out that the gig workers suffer through tensions in everyday lives relating to encounters with customers, geographical problems relating to delivery and encounters with others in Traffic. The second part of the study shows sentiment profile for motivation among gig workers with deep-rooted dissatisfaction and emotional strain that are faced in their day-to-day work experiences. Gig workers are experiencing demotivation which is driven by emotional and structural stressors. The high level of anger and negative sentiment signals an urgent need for platforms to improve work conditions, offer psychosocial support, and communicate value and fairness to workers.

Practical implications

The food delivery workers have very limited social protection, particularly unemployment benefits, health care benefits and many costs are not covered by the platform such as smart phones, internet facilities and other costs like insurance, fuel, maintenance which erodes their earnings (Groen. D *et al.*, 2018). We from our study are likely to explore what motivates them to stay in this platform economy. The sentiment analysis for the Gig workers shows that the workers feel demotivating and high level of negative sentiments arises from income insecurity, physical safety, recognition, and career pathways which if provided could help shift sentiment toward positivity and retention.

Conclusion & Recommendations

Motivation for the gig worker is driven by the task at hand; as workers with high task motivation are less driven by commission rate, which may be reduced at any point of time. The motivation of an individual comes from inner satisfaction. The distinct features of the job that motivate them to join, and the most important predictor of joy for work is autonomy.

Originality

The study discusses the motivational factors that continuously engage gig workers to stay connected in the online platform in spite of non standardized contract of employment.

Keywords: *Gig Workers, Intrinsic Motivation, Extrinsic Motivation, Engagement, Employment Terms*

References

1. Aloisi, A. (2015). Commoditized workers the rising of on-demand work, A case study research on a set of online platforms and apps. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2637485>
2. Benanav, A. (2019). Automation and the Future of Work, *New Left Review*, 5:19
3. Butscheck.S; Amor. R.g; Kanpkatter.P; Sliwka.D (2022_). Motivating Gig Workers- Evidence from a field experiment; Elsevier. *Labour Economics* 75 (2022)
4. Bulut & Yesilyurt (2023), 'Delivery workers' visibility struggles: weapons of the Gig, (extra) ordinary social media, and strikes', *The International Journal of Research into New Media Technologies* 2023, Vol 0(0) 1-21
5. Campbell, H. (2018) *The rideshare guide*. New York, NY: Simon & Schuster.
6. De Stefano, V. (2015). The rise of the "just-in-time workforce": On-demand work, crowd work and labour protection in the "gig-economy.". *SSRN Electronic Journal*, 71. <https://doi.org/10.2139/ssrn.2682602>
7. De Groen, W. P., Kilhoffer, Z., Lenaerts, K., & Mandl, I. (2018). Employment and working conditions of selected types of platform work. *Digital Commons*
8. Gregory, K. (2021) "My life is more valuable than this": understanding risk among on-demand food couriers in Edinburgh. *Work, Employment and Society*, 35(2), 316–331.
9. Hieu, V. M., Pham, & Cham, P. T. (2020). Examining the impact of the employee motivation to the organisational commitment in general insurance corporations in Ho Cin Minh City, Vietnam. *International Journal of Psychosocial Rehabilitation*, 24(07), 84354850. <http://doi.org/10.37200/IJPR/V2417/PR270821>
10. Henley, A. (2021). The rise of self-employment in the UK: Entrepreneurial transmission or declining job quality? *Cambridge Journal of Economics*, 45(3), 457–486. <https://doi.org/10.1093/cje/beab007>
11. Mehta.B.S (2023)., 'Changing Nature of Work and the Gig Economy: Theory and Debate' *FIIB Business Review* 12(3) 227-237, 2023
12. Raman, A & Kulkarni, A. (2021). Women in the Driving Seat: Studying the interplay between gender and asset ownership in the platform economy. March 2021. https://olawebcdn.com/olainstitute/women_asset_ownership_platform_economy.pdf
13. Sundaranjan, A. (2016). *The Sharing Economy: The End of Employment and the Rise of Crowd-Based Capitalism*. The MIT Press
14. Tran M, Sokas RK. The Gig economy and contingent work: an occupational health assessment. *J Occup Environ Med* 2017;59:e63–6.
15. Umer Zaman, Shahid Nawaz, Areesha Javed & Tareq Rasul | (2020) Having a whale of a time: Linking self- determination theory (SDT), job characteristics model (JCM) and motivation to the joy of gig work, *Cogent Business & Management*, 7:1, 1807707, DOI: 10.1080/23311975.2020.180770

Introduction

Women's entrepreneurship has emerged as a paradigm of global development activity because of its potential to reduce poverty, promote inclusive growth, and ensure gender equality. Women entrepreneurs in low-income settings, though are confronted with daunting obstacles - not just financial, but also structural, social, and psychological. Although microfinance has long been regarded as an essential instrument to redress such gaps by enhancing credit access, this strategy is increasingly recognized as incomplete on its own. Empirical observations indicate that financial capital, without more, does not necessarily equate to sustainable entrepreneurial success. There must be a more integrated understanding that brings women's access to an increased range of livelihood capitals—human, social, physical, and natural— together with their inner entrepreneurial impulses of motivation, confidence, and perceived control.

The current paper suggests an integrated conceptual framework that relocates microfinance from being just a source of finance to a platform of development. Building on three well established theoretical lenses - the Sustainable Livelihoods Framework (SLF), the Theory of Planned Behaviour (TPB), and the Resource-Based View (RBV)—the framework connects capital access to entrepreneurial intent and integrates microfinance credit delivery (MFCDD) as a moderating and mediating influence. The objective is to analyze how internal drivers and capital access intersect in facilitating sustainable female owned businesses.

Select Literatures

The suggested conceptual model derives legitimacy from an emerging set of interdisciplinary literature that highlights the interdependence of structural capital, internal psychological motivators, and facilitating institutions in promoting women entrepreneurship. Principal theoretical contributions and empirical research corroborate every aspect of the posited framework.

The Sustainable Livelihoods Framework (SLF), as defined by Scoones (1998), has played a key role in identifying how women access various types of capital—financial, human, social, physical, and natural—to construct sustainable livelihood strategies. Empirical advances of SLF in recent years in the context of entrepreneurship research, for example, by Hendratmi et al. (2022), reiterate that access to varied capitals facilitated women micro-entrepreneurs in being resilient in times of crises like the COVID-19 pandemic, thereby vindicating the role of livelihood capitals in the framework.

At the same time, the Theory of Planned Behaviour (TPB), developed by Ajzen (1991), remains a core framework explaining entrepreneurial intention. Empirical evidence by Vamvaka et al. (2020) and Chhabra et al. (2020) confirms that women's attitudes, subjective norms, and perceived behavioural

¹ ICFAI University Jharkhand

² ICFAI University Jharkhand

control are strong predictors of their entrepreneurial intentions. These intrapersonal drivers, however, remain neglected in conventional microfinance or capital-driven models of development.

The Resource-Based View (RBV) provides the strategic foundation to the framework by highlighting the importance of internal capabilities and mobilization of resources to attain competitive advantage (Barney, 1991). For women's entrepreneurship, Duong & Vu (2024) established that entrepreneurial self-efficacy and human capital formation were instrumental drivers of women's intention and action.

The literature further increasingly criticizes microfinance as a stand-alone intervention. Researchers such as Gatto & Sadik-Zada (2022) and Nkote & Jakweyo (2024) posit that the effectiveness of microfinance depends on the delivery channels, whether complementary services such as training are available, and whether it can facilitate both capital formation and psychological empowerment. Amjad & Danish (2024) empirically demonstrate that microfinance initiatives have the ability to strongly increase entrepreneurial intention through building confidence and perceived agency.

All these literatures collectively contribute solid theoretical and empirical bases for combining access to capital, psychological preparedness, and delivery systems in an overarching model. They confirm that sustainable women entrepreneurship arises from synergy between concrete resources and abstract motivations, developed through contextually appropriate microfinance mechanisms.

Purpose

The purpose of this study is to develop a novel conceptual framework for women entrepreneurship development through microfinance. It explores how different forms of capital and entrepreneurial intent interact, and positions microfinance as both an enabler and a mediator in this process.

Women who belong to disadvantaged groups face various systemic barriers—constrained mobility, gender stereotypes, and marginalization from markets and formal institutions. Developmental interventions that target only access to credit do not address these complex issues. Numerous women withdraw from entrepreneurial activities because of internal barriers like low self-efficacy, risk aversion, and absence of support.

Although earlier studies have looked at capital access and entrepreneurial motivation in isolation, few have integrated these threads under a single explanatory framework. Additionally, microfinance is often conceptualized as an either-or intervention—being either there or not there—without recognizing delivery platforms, psychological reinforcement, or ecosystem enablers. This paper bridges that gap by suggesting a conceptual framework where MFCD serves a dual purpose: facilitating women to mobilize diversified livelihood resources and boosting entrepreneurial disposition.

Methodology

This paper takes a conceptual theory-building approach with a structured literature review and combination of empirical and theoretical literature in the period between 2015–2025. An extensive review was conducted through academic databases like Scopus, JSTOR, and Web of Science. The methodological guidance is based on Jaakkola's (2020) conceptual contribution model in management research and Whetten's (1989) theoretical clarity criteria. The framework is established through five stages: outlining objectives, selecting applicable theories, executing structured literature review, constructing the framework, and specifying theoretical and practical implications.

Analysis & Findings

The theorized framework places Women Entrepreneurship Development (WED) as the dependent result, influenced by two major antecedents: Livelihood Strategies (LS) and Entrepreneurial Intent (EI).

Microfinance Credit Delivery (MFCD) is placed both as a moderator between LS and WED, and as a mediator between EI and WED.

Proposition 1: Livelihood strategies—termed as availability of financial, human, social, physical, and natural capital—positively affect WED.

Proposition 2: Entrepreneurial intention, which is influenced by personal beliefs and feelings of mastery, has a positive influence on WED.

Proposition 3: Availability of livelihood capitals impacts the development and intensity of entrepreneurial intention.

Proposition 4: MFCD moderates livelihood strategy and WED relationships by facilitating or impeding the effective application of capital.

Proposition 5: MFCD mediates entrepreneurial intention and WED relationships by increasing psychological preparedness and practical usability.

This model provides a holistic framework for assessing the way in which structural resources and psychological preparedness cross-influence the entrepreneurial experience of women.

Livelihood Capitals:

- Financial Capital: While elementary, its influence is constrained by procedural constraints, aversion to risk, and lending discrimination based on gender.
- Human Capital: Training in skills, literacy in information and communication technologies, and confidence in self-efficacy are essential facilitators, frequently undersupplied.
- Social Capital: SHGs and support from family groups affect access to resources and emotional coping.
- Physical Capital: Infrastructure and access to equipment are necessary to convert intent into enterprise action.
- Natural Capital: Particularly pertinent in agrarian and artisanal economies; land rights and climate risk issues are key.

Entrepreneurial Intent and Behavioural Drivers

Empirical research from around the world reveals that entrepreneurial success is not only a function of resource access but also psychological enablers such as motivation, self-confidence, and opportunity identification. These tend to be influenced by educational exposure and cultural norms.

Microfinance Role

Microfinance affects WED in several different ways:

- It increases income and business sustainability.
- It leads to psychological empowerment.
- It can also create debt burdens.

Continued decrease in poverty rate is a desirable feature of developing world. Microfinance's potency is greatly enhanced when paired with training, mentorship, and social support systems.

Identified Research Gaps

- Excessive dependence on microfinance as an independent credit tool.
- Under-emphasis on psychological intent in entrepreneurship models.
- Under-explored roles of natural and physical capital.
- Absence of holistic models that integrate SLF, TPB, and RBV.
- Limited investigation of MFCD as a moderator and mediator.

These gaps point to the necessity of a multi-dimensional perspective to research women's entrepreneurship in vulnerable contexts.

Practical Implications

Academic Contribution

The model adds to the entrepreneurship literature by combining structural and behavioural approaches under one model. It fills the gap between access (structure) and action (intent) and reframes microfinance as both catalyst and enabler.

Policy and Practice

For microfinance institutions and NGOs, the framework implies that programs need to go beyond loan disbursement. Successful MFCD would involve psychological reinforcement, ecosystem integration, and user-centred delivery. Policymakers can apply this framework to craft gender-sensitive, capital-integrated entrepreneurial ecosystems. Academic institutions and CSR efforts can utilize it to craft capacity-building interventions that take a whole-person approach to meeting women entrepreneurs' needs.

Originality

This paper contributes a novel conceptual model by integrating structural and psychological dimensions and repositions microfinance from a financial product to a strategic enabler of women's entrepreneurial ecosystems.

Conclusion and Recommendations

This extended abstract proposes a novel framework to understand women entrepreneurship development in microfinance-enabled environments. It diverges from credit-focused models in embracing an integrated vision of capital access, psychological intent, and institutional delivery mechanisms. In recognizing the dynamic relationship between external enablers and internal drivers, the framework provides a solid foundation for both scholarly investigation and policy intervention. In the end, it encourages a paradigm shift: from microfinance as a financial product to microfinance as a life-changing developmental tool.

Keywords: Women Entrepreneurship, Microfinance, Livelihood Strategy, Entrepreneurial Intent

References

1. Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.
2. Amjad, S., & Danish, M. (2024). Effectiveness of microfinancing on women's entrepreneurial intentions through structural equation modeling in Balochistan, Pakistan. *Human Systems Management*, 43(6), 1062-1081.
3. Chhabra, S., Raghunathan, R., & Rao, N. M. (2020). The antecedents of entrepreneurial intention among women entrepreneurs in India. *Asia Pacific Journal of Innovation and Entrepreneurship*, 14(1), 76-92.
4. Duong, C. D., & Vu, N. X. (2024). Entrepreneurial education and intention: fear of failure, self-efficacy and gender. *Journal of Small Business and Enterprise Development*, 31(4), 629-654.
5. Gatto, A., & Sadik-Zada, E. R. (2022). Access to microfinance as a resilience policy to address sustainable development goals: A content analysis. *Heliyon*, 8(10).
6. Hendratmi, A., Agustina, T. S., Sukmaningrum, P. S., & Widayanti, M. A. (2022). Livelihood strategies of women entrepreneurs in Indonesia. *Heliyon*, 8(9).
7. Nkote, I., & Jakweyo, C. (2024). Do government support correlates enhance financial performance? Rural microenterprises perspectives. *Journal of Money and Business*, 4(1), 91-106.
8. Scoones, I. (1998). Sustainable rural livelihoods: a framework for analysis.
9. Vamvaka, V., Stoforos, C., Palaskas, T., & Botsaris, C. (2020). Attitude toward entrepreneurship, perceived behavioral control, and entrepreneurial intention: dimensionality, structural relationships, and gender differences. *Journal of Innovation and Entrepreneurship*, 9(1), 5.

Introduction

Cryptocurrency has emerged as a disruptive force in global finance, challenging traditional systems of monetary exchange and value storage. In India, the rapid rise of digital currencies such as Bitcoin and Ethereum has sparked a complex debate involving regulatory, technological, and economic dimensions. This study investigates the multifaceted issues and challenges surrounding cryptocurrency adoption, regulation, and implementation in India.

Through a mixed-methods approach, the research analyzes primary data from a structured survey of investors and financial professionals, alongside secondary data sourced from legal, policy, and economic documents. The study examines major concerns including regulatory ambiguity, cybersecurity threats, financial volatility, lack of consumer awareness, and the potential for misuse in illegal activities.

Literature Review

The literature on cryptocurrency in India reflects a tension between innovation and regulation. Nakamoto (2008) laid the foundation with the concept of decentralized digital currency. Narayanan et al. (2016) explored the technical mechanics of blockchain, the underlying technology. In the Indian context, Chakrabarty (2018) highlighted the Reserve Bank of India's concerns regarding financial stability and illicit usage.

Aggarwal and Mittal (2021) examined public perception and found a strong correlation between awareness and adoption. Singh and Jain (2022) focused on legal challenges, identifying loopholes in the existing IT Act and lack of a cohesive crypto-specific regulation. Meanwhile, Gupta and Bansal (2023) assessed the economic impact, suggesting that cryptocurrencies could aid in financial inclusion if regulated prudently.

Objective of the study

- To understand the growth and adoption of cryptocurrency in India.
- To analyze the legal and regulatory environment surrounding digital currencies.
- To identify key issues and challenges faced by Indian stakeholders.
- To suggest recommendations for future cryptocurrency governance in India.

Research Methodology

This is a qualitative study based on secondary data collected from:

¹ Assistant Professor, Department of Commerce, Vidyanagar College

- Government publications and notifications (RBI, Finance Ministry)
- Reports by financial institutions (IMF, WEF, etc.)
- News articles and industry insights

Current Scenario

The advent of cryptocurrency marks a pivotal shift in financial technology. It offers a decentralized and transparent mechanism for value transfer. In India, despite regulatory ambiguity, the adoption of cryptocurrency has surged among retail investors. However, concerns related to misuse, price volatility, legal uncertainty, and lack of consumer protection persist.

2013: RBI issued its first caution against virtual currencies.

2018: RBI banned banks from facilitating crypto transactions.

2020: Supreme Court of India lifted the RBI ban.

2022: Government introduced 30% tax on crypto gains and 1% TDS.

2023–2025: Introduction of Central Bank Digital Currency (CBDC) as a regulated digital alternative.

Conclusion

Findings reveal a growing interest among Indian youth and tech-savvy investors, but also a significant knowledge gap and apprehension among the general population. The study further explores government interventions, such as the RBI's evolving stance, the introduction of the Digital Rupee, and proposed legislation including the Cryptocurrency and Regulation of Official Digital Currency Bill. Comparative analysis with global practices indicates India's cautious yet evolving approach toward digital assets. This paper contributes to the discourse by presenting a comprehensive framework of challenges — technological, legal, and societal — and suggesting potential pathways for a balanced regulatory mechanism. Recommendations include investor education programs, secure blockchain infrastructure, and the creation of a central regulatory authority.

Keywords: *Cryptocurrency, Blockchain, India, Regulation, Financial Technology, RBI, Digital Currency, Crypto Challenges*

References

- Aggarwal, R., & Mittal, S. (2021). Public perception and adoption of cryptocurrencies in India. *Journal of Financial Innovation*, 3(2), 45-59. <https://doi.org/10.1016/j.fininnov.2021.02.003>
- Chakrabarty, K. C. (2018). *Cryptocurrency: Regulatory concerns in the Indian context*. Reserve Bank of India Bulletin, 72(5), 12-18.
- Gupta, A., & Bansal, M. (2023). *Cryptocurrency and economic inclusion: Prospects for India*. *Economic and Political Weekly*, 58(9), 24-30.
- Nakamoto, S. (2008). *Bitcoin: A peer-to-peer electronic cash system*. Retrieved from <https://bitcoin.org/bitcoin.pdf>
- Narayanan, A., Bonneau, J., Felten, E., Miller, A., & Goldfeder, S. (2016). *Bitcoin and cryptocurrency technologies: A comprehensive introduction*. Princeton University Press.
- Singh, T., & Jain, R. (2022). Legal ambiguities and regulatory challenges of cryptocurrencies in India. *Indian Journal of Law and Technology*, 18(1), 55-76.

EVALUATING THE FINANCIAL HEALTH OF LEATHER MANUFACTURING UNITS: AN EMPIRICAL STUDY OF FIRMS IN WEST BENGAL

Athar Jamal ¹, Dr. Mainak Chakraborty ²

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

The leather and leather goods industry in West Bengal is a cornerstone of the state's manufacturing sector, contributing significantly to employment, exports, and industrial growth. With hubs such as Bantala Leather Complex in Kolkata, South 24 Parganas, and Howrah, the region has emerged as a major player in both domestic and international leather markets. However, recent challenges—ranging from environmental regulations to post-pandemic disruptions—have cast doubt on the long-term financial sustainability of many leather manufacturing units. This study seeks to evaluate the financial health of selected leather manufacturing firms in West Bengal, focusing on liquidity, solvency, and profitability to understand systemic vulnerabilities and recommend appropriate interventions.

Review of Literature

National and International Context

Financial health analysis of small and medium enterprises (SMEs) remains a crucial theme in global finance literature. Altman (1968) pioneered the Z-score model for bankruptcy prediction, which has since been adapted by Tulsian (2014) for Indian SMEs. Beck and Demirguc-Kunt (2006) underscore access to credit as a key determinant of SME growth in emerging economies. In India, firms operating in traditional manufacturing sectors face unique financing constraints (Padachi, 2006).

Sectoral and Regional Studies

In the leather sector, financial health is influenced by working capital management, regulatory costs, and export volatility. Ghosh and Chatterjee (2020) noted that MSMEs in India face profitability challenges due to delayed receivables and low bargaining power. Banerjee (2021) examined leather MSMEs in eastern India and found that environmental compliance, especially under the Ganga Action Plan, affected cash flow stability.

Routh and Majumder (2018) studied the leather sector in Kolkata and found that outdated financial practices, coupled with minimal digitization, restricted access to formal credit. In West Bengal, the Bantala Leather Complex has been the focus of industrial development, but studies show that infrastructure bottlenecks and limited financial literacy impede performance (Das & Halder, 2019).

Objectives of the Study

- To assess the financial health of leather manufacturing units in West Bengal using empirical tools and ratio analysis.

¹ Research Scholar, School of Business, Adamas University

² Associate Professor, Department of Management, School of Business, Adamas University

- To analyze solvency, profitability, and liquidity positions over a five-year period.
- To explore how environmental compliance, working capital dynamics, and policy support affect financial outcomes.
- To suggest strategies for improving the financial sustainability and competitive edge of leather MSMEs in West Bengal.

Research Methodology

Research Design

This study employs a descriptive and analytical design, integrating quantitative ratio analysis with qualitative field insights.

Sampling and Area Selection

- Sample of 30 leather manufacturing MSMEs drawn from Bantala, South 24 Parganas, and Howrah districts.
- Firms were selected from the Council for Leather Exports (CLE) database and West Bengal MSME directory.
- Purposive sampling ensured inclusion of tanners, footwear producers, and finished goods manufacturers.

Data Sources:

- Primary Data: Structured interviews with business owners, finance managers, and field officers.
- Secondary Data: Audited financial statements (2018–2023), CLE reports, SIDBI-MSME credit reports, WBIDC reports.

Tools and Techniques:

- Financial Ratios: Current ratio, quick ratio, debt-equity ratio, net profit margin, return on assets (ROA), interest coverage ratio (ICR).
- Software: MS Excel and SPSS for statistical analysis (mean, standard deviation, correlation).

Results and Analysis

Liquidity Position

- Average current ratio across firms was 1.29, reflecting tight liquidity. Tanners in Bantala exhibited the highest stress due to delayed receivables and high inventory turnover time.
- Over 60% of sampled firms operated below the desirable current ratio benchmark of 1.5.

Solvency Position

- Debt-equity ratios ranged from 1.8 to 3.2 in small units, revealing high dependence on informal loans and NBFCs.

- Government credit schemes (e.g., CGTMSE, PMEGP) were underutilized due to cumbersome processes.

Profitability Indicators

- Net profit margins averaged 4.1%, with tanneries showing lower margins due to rising chemical and effluent treatment costs.
- ROA remained low across all firms (avg. 3.7%), indicating under-utilization of capital assets and poor cost control mechanisms.

Interest Coverage and Capital Efficiency

- Over 40% of firms had ICR < 1.5, posing risks to debt servicing and refinance eligibility.
- Capital inefficiency was linked to low adoption of automated cutting/stitching units and delays in product dispatch.

Discussion

Financial Vulnerabilities

Leather MSMEs in West Bengal are financially fragile, operating under liquidity pressure and overexposed to informal credit sources. Several firms maintained weak financial discipline due to lack of training in accounting and budgeting.

Structural and Policy Gaps

Despite the existence of cluster-based development initiatives, a disconnect persists between government support programs and on-ground implementation. Many firms are unaware or unable to access MSME credit programs or SIDBI's refinance support.

Environmental Compliance and Finance

Compliance with CETPs (Common Effluent Treatment Plants) has increased operating costs, which are not always compensated by higher selling prices. This results in cash flow mismatches and weak profitability

Recommendations

Enterprise-Level Interventions

- Adoption of cloud-based accounting and cost-tracking software.
- Financial management training for owner-managers and staff.
- Pooling of resources through cooperative financing or leather producer organizations.

Institutional and Policy Measures

- Simplify MSME credit procedures and link CETP-compliant units with priority lending status.
- Create credit scorecards and subsidized insurance for micro leather units.

- Promote digital finance adoption with incentives in semi-urban and peri-urban clusters.

Research and Innovation

- Establish a Leather Financial Health Index (LFHI) for regular benchmarking.
- Fund research on low-cost, biodegradable chemical alternatives to reduce compliance burdens.

Conclusion

The leather manufacturing sector in West Bengal stands at a critical juncture. While it holds the promise of inclusive industrial growth, poor financial health threatens its sustainability. This study finds that unless liquidity and solvency are improved through policy reform, digitization, and capital efficiency, many firms may not withstand future shocks. Revitalizing the financial backbone of leather MSMEs is essential for realizing their full potential in regional and national economic development.

Keywords: *Financial Health, Leather Industry, MSMEs, West Bengal, Bantala, Solvency, Profitability, Liquidity, Ratio Analysis, Environmental Compliance*

References:

- Banerjee, R. (2021). Financial management practices among MSMEs in India: Evidence from manufacturing units. *Journal of Small Business Finance*, 7(2), 101–118.
- Beck, T., & Demirguc-Kunt, A. (2006). Small and medium-size enterprises: Access to finance as a growth constraint. *Journal of Banking & Finance*, 30(11), 2931–2943.
- Das, M., & Halder, P. (2019). Leather cluster development in West Bengal: An analysis of infrastructure and policy challenges. *Economic Development Quarterly*, 15(3), 78–89.
- Ghosh, M., & Chatterjee, S. (2020). Financial challenges of traditional MSMEs in India: A case study approach. *Asian Economic Review*, 62(4), 589–612.
- Padachi, K. (2006). Trends in working capital management and its impact on firms' performance: An analysis of Mauritian small manufacturing firms. *International Review of Business Research Papers*, 2(2), 45–58.
- Routh, S., & Majumder, R. (2018). Financial inclusion and MSME growth in Eastern India: A focus on the leather industry. *Journal of Regional Economic Studies*, 5(1), 66–83.
- Srivastava, A., & Dasgupta, P. (2022). Profitability analysis of Bengal's tanneries: A micro-structural review. *Indian Journal of Finance and Economics*, 19(2), 51–63.

Introduction

The increased digitisation of financial services in India has significantly improved accessibility and convenience for millions of customers. However, this digital revolution has always been accompanied by a significant rise in cyber fraud targeting banking customers, regardless of their background. As digital transactions become the norm, fraudsters exploit psychological and behavioural patterns to manipulate customers, mostly through social engineering techniques. While regulatory authorities and banks have launched awareness campaigns and security measures, cyber fraud remains an evolving and persistent threat. The fraudsters are always ahead of the technology that is evolving. This research aims to investigate the intersection of technology, user behaviour, and susceptibility to fraud, particularly among urban IT professionals who are paradoxically both digitally literate and vulnerable. The study also emphasises the need for a human-centred design approach to cyber fraud prevention, recognising human behaviour as a central variable in financial cybersecurity.

Literature Review

The theoretical ground of this research comes from interdisciplinary sources including criminology, behavioural science, and design. Routine Activity Theory (Cohen & Felson, 1979) explains that crimes occur when a motivated offender and a suitable target converge in the absence of a guardian. Situational Opportunity Theory (Clarke, 1995) builds on this idea by suggesting that altering environmental or situational factors can reduce crime opportunities. From the behavioural design perspective, “The Cyber Profile: Determining Human Behavior through Cyber-Actions” helped in understanding the cyber profile of humans. Studies on cybersecurity behaviour (Redmiles, 2018) reveal that individuals often rely on mental shortcuts, prior experiences, or trust in interfaces while interacting with digital systems—factors frequently exploited in cyber fraud by fraudsters.

Objective

The primary aim of this research is to investigate how behavioural patterns and situational factors contribute to the occurrence and subsequent success of cyber fraud in the Indian banking ecosystem. The study focuses specifically on digitally aware urban professionals to understand how their cognitive and emotional responses are manipulated by fraudsters. The motivation behind the research is to uncover the underpinnings of vulnerabilities and needs of humans that made them susceptible to a cyber fraud also to design a preventive service experience that empowers users to identify fraud attempts early and respond with informed decision-making. With human-centred design (HCD) methodology, this research proposes a user-friendly and behaviourally aligned intervention—CyberSuraksha—as a potential solution to this growing challenge.

¹ Srishti Manipal Institute of Art, Design and Technology, MAHE

² Srishti Manipal Institute of Art, Design and Technology, MAHE

Methodology

This study adopted a mixed-methods design research approach, combining qualitative and quantitative methodologies to explore the interconnectedness between user behaviour and cyber fraud vulnerability in the context of digital banking. The research unfolded in distinct phases, each designed to deepen the understanding of the problem space and guide a human-centered intervention.

1. Secondary Research

The inquiry began with an extensive review of existing literature, reports, and case studies related to cyber frauds in India. This phase helped contextualise the problem, map the digital fraud landscape, and identify gaps in existing prevention strategies. Key themes emerged around behavioural manipulation, trust deficits, and gaps in user awareness—particularly among digitally literate individuals.

2. Primary Research – Qualitative Exploration

To ground the study in real-world experience, qualitative semi-structured interviews were conducted with key stakeholders:

- **Cybercrime Branch Officials:** These interviews explored prevalent fraud typologies, patterns in victim profiling, operational challenges in tracing cybercriminals, and systemic gaps in redressal.
- **Bank Branch Officials:** Discussions focused on the role of financial institutions in fraud detection, customer complaints, and institutional efforts in awareness campaigns.
- **Victims and Witnesses of Cybercrime:** A sample of affected users shared their experiences. These narratives provided emotional, behavioural, and contextual insights into how fraudsters exploit cognitive and emotional senses, even in informed users.

Insights from these conversations revealed common psychological triggers and behavioural patterns that leave users vulnerable—such as convenience bias, misplaced trust, and lack of awareness about digital red flags.

3. Quantitative Study – Sustained Behavioural Experiment

Building on the qualitative insights, a sustained intervention was designed in the form of a survey-based experiment to assess the impact of awareness on user perception and behaviour.

- **Pre-Intervention Survey:** Participants were asked about their comfort with sharing personal information online, their digital behaviours, levels of trust across platforms, and general awareness about fraud. This helped establish a baseline.
- **Engagement Video (Intervention):** Participants were then shown an engaging informational video that featured real-life examples of cyber fraud incidents. The video was designed to be emotionally resonant and educational, highlighting how easily personal data can be misused and the cascading consequences of misplaced trust online.
- **Post-Intervention Survey (Impact Assessment):** Immediately after the video, participants completed a follow-up survey to assess any shifts in their perceptions. The goal was to measure whether sustained, contextually relevant exposure to fraud scenarios could meaningfully influence awareness, caution, and decision-making patterns.

The result of this research was a prototype of CyberSuraksha—a web-based intervention offering scenario-based learning, suspicious activity recognition training, and interactive simulations replicating real-life fraud attempts.

Analysis & Findings

According to the qualitative analysis, users tend to ignore their own vulnerability even though they are generally aware of cyberthreats. User defence mechanisms are significantly weakened by behavioural triggers such time-bound warnings, trusted logos or caller IDs, and the threat of account suspension. The study also identifies a phenomenon of “interface-induced trust,” where users fail to critically evaluate messages or prompts that mimic the communication style of their bank .

One of the key findings was the lack of contextual decision support at the time of fraud. When confronted with dubious requests, users do not receive prompt actionable help. Furthermore, they lacked prior experience with real-world scam scenarios, making them more vulnerable to manipulation. The findings emphasise the importance of proactive and engaged user education through experiential design, rather than one-way awareness efforts.

The sustained exposure through a video was tested through moderated sessions with 20 participants. All participants reported increased awareness of scam cues and expressed a higher level of confidence in handling fraud attempts after being educated through short video clips. Participants appreciated the real-life scenarios and suggested such education can help them navigate probable cyber threats in future.

Practical Implications

This research provides a strong case for incorporating human-centered preventive features into banking applications and various communication channels. The CyberSuraksha offers a scalable framework that banks and fintechs can adapt to enhance safety for their customers. By transforming slow awareness into active learning, the intervention can reduce vulnerability among high-risk user groups.

Financial institutions can adopt similar experiential learning modules as part of their customer onboarding or fraud alerts. Regulatory bodies such as RBI and NPCI can integrate such tools into national cybersecurity strategies to foster behavioral resilience. Furthermore, service designers can use the insights to build fraud-awareness interfaces with built-in suspicion alerts, conversational nudges, and friction-based checkpoints in risky user flows.

Originality

This research uniquely combines theories of criminology, behavioral science, and service design to create a novel intervention in the cybersecurity domain. It shifts the conversation from reactive fraud response to proactive empowerment for users. Unlike conventional fraud detection systems that operate post-incident, CyberSuraksha addresses the psychological and contextual factors that make fraud successful in the first place. The value of this work lies in its user-first approach, making cybersecurity more accessible, relatable, and actionable for the average banking customer.

Conclusion and Recommendations

The rise of cyber fraud in India requires a paradigm shift from awareness-based prevention to behaviorally informed design solutions. This study concludes that a significant reduction in fraud risk can be achieved by understanding users’ behavioral patterns and designing interventions that simulate real-world scenarios. It is recommended that banks integrate behavioral simulations into customer journeys, adopt interface elements that trigger suspicion at the right time, and offer ongoing scenario-based micro-learning to customers.

Keywords: *Cyber fraud, Indian banking, behavioural triggers, service design, user vulnerability, cybersecurity, human-centered design, Routine Activity Theory, digital literacy, social engineering*

References

1. <https://www.hindustantimes.com/business/financial-fraud-top-cyber-crime-in-india-upi-e-banking-most-targeted-study-101695036325725.html>)
2. <https://www.statista.com/statistics/875887/india-number-of-cyber-crimes-related-to-onlinebanking/#:~:text=In%202022%2C%20there%20were%20over,3%2C223%20banking%20frauds%20that%20year.>)
3. An Investigative Study of Banking Cyber Frauds with Special Reference to Private and Public Sector Banks <https://www.isca.me/IJMS/Archive/v2/i7/4.ISCA-RJMS-2013-062.pdf>
4. A Technical Review Report on Cyber Crimes in India <https://ieeexplore.ieee.org/abstract/document/9167567>
5. A Novel Behaviour Profiling Approach to Continuous Authentication for Mobile Applications <http://hdl.handle.net/10026.1/20458>
6. Harshita Singh Rao. (2019). "CYBER CRIME IN BANKING SECTOR." *International Journal of Research-Granthaalayah*, 7(1),148-161.<https://doi.org/10.5281/zenodo.2550185>
7. Wilcox, Pamela, and Francis T. Cullen. "Situational opportunity theories of crime." *Annual Review of Criminology* 1 (2018): 123-148.
8. Miró, Fernando. "Routine activity theory." *The encyclopedia of theoretical criminology* (2014):1-7.
9. Bhardwaj, Garima, Ruchika Gupta, Arun Pratap Srivastava, and S. Vikram Singh. "Cyber Threat Landscape of G4 Nations: Analysis of Threat Incidents & Response Strategies." In *2021 2nd International Conference on Intelligent Engineering and Management (ICIEM)*, pp. 75-79. IEEE, 2021.
10. Sutter, Owen W. "The Cyber Profile: Determining Human Behavior through Cyber-Actions." PhD diss., Capitol Technology University, 2020.

BETWEEN FEAR AND FINANCE: A CROSS-REGIONAL EXAMINATION OF TERRORISM RISK AND DIGITAL-PAYMENT ADOPTION

Mr. Indrayudh Sen De ¹, Dr. Sovik Mukherjee ²

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

Digital payment platforms are transforming commerce worldwide, yet their adoption remains uneven from one region to the next. It is often suggested that people facing insecurity will flock to electronic channels for their traceability and safety. Still, to date, no research has systematically examined this claim using region-level terrorism and fintech data. This paper fills that gap by pairing the Global Terrorism Index with FinDex usage figures across world regions. Our analysis examines whether a higher terrorism risk prompts greater digital payment adoption or whether instability undermines the very infrastructure and trust that fintech relies on. By grounding our study in cross-regional evidence, namely South Asia, East Asia and Pacific, Europe and Central Asia, Latin America and Caribbean, Middle East and North Africa, North America and Sub-Saharan Africa, we provide fresh insights for policymakers and industry leaders seeking to develop payment systems that are both inclusive and resilient in the face of security challenges.

Select Literature Review

Digital-payment adoption has been shown to enhance financial inclusion and resilience, most notably in Jack and Suri's (2011) study of M-PESA in Kenya, where mobile money transformed access for the unbanked. Fabe, Toledo, and Laksmi (2022) highlight that Indonesia's FinTech surge — especially in digital wallets and peer-to-peer lending—creates inadvertent channels for terrorist financing, prompting recommendations for stronger KYC protocols and real-time monitoring alongside innovation sandboxes. Gradzi (2020) observes that payment cards, internet-enabled bank accounts, and PayPal dominate electronic transactions; however, rapid digitization has outpaced regulatory frameworks, necessitating ongoing updates to address virtual-currency risks and prevent de-risking. At the firm level, Karolyi and Martell (2010) employ event studies to demonstrate that terrorist attacks result in an average 0.83 percent decline in stock prices, with human capital losses driving larger market reactions than physical damage. Bonekamp and van Veen (2017) extend this work to broader financial markets, finding modest declines in equity and safe-haven inflows into government bonds following attacks. Chesney, Reshetar, and Karaman (2011) demonstrate that nonparametric event-study methods are most reliable in detecting these shocks and recommend integrating terrorism risk into portfolio diversification and risk-management strategies. Although tangential to our core study, recent Asian research indicates that regulation, technology, and transnational links collectively shape the security–fintech balance—sometimes accelerating, and sometimes inhibiting digital payment growth. In Malaysia, Lim and Yazdanifard (2025) find that rigorous AML/CFT rules preserve integrity but increase onboarding costs for small e-money firms; RegTech and risk-based supervision could mitigate this trade-off. A World Bank–ASEAN report highlights tiered KYC, streamlined e-money licences, and cross-border QR standards as catalysts for inclusion, especially among the unbanked in Cambodia, Laos, and Myanmar, proving flexible AML/CFT

¹ PG Final Year Student, Department of Commerce (Morning Section), Faculty of Commerce and Management, St Xavier's University, Kolkata.

² Assistant Professor in Economics, Faculty of Commerce and Management, St Xavier's University, Kolkata.

beats one-size-fits-controls. In Indonesia, Akmal (2025) shows extremist networks shifting from hawala to cryptocurrencies, using mixers and peer-to-peer swaps to obscure donors; without stronger blockchain analytics, this “dark fintech” could erode trust in mainstream platforms. Finally, Soliev (2023) traces Central-Asian jihadists who crowdfund online, vet donors via encrypted chats, and route money through diaspora hubs in Russia and Turkey, exploiting patchy AML enforcement. Collectively, these cases reveal how policy design, innovation, and cross-border actors can either fortify or fracture digital-payment ecosystems under security pressure.

Purpose

The rapid proliferation of digital-payment platforms has reshaped how individuals conduct transactions; yet, their adoption remains uneven across regions, often influenced by the socio-economic and security environments. This paper investigates whether heightened terrorism risk, as measured by the Global Terrorism Index (GTI), encourages or hinders digital payment adoption at the regional level. By examining cross-regional data on GTI scores and FinDex usage rates, our goal is to understand whether populations in higher-risk regions turn to digital channels as a safer alternative to cash, or conversely, whether insecurity undermines the infrastructure and trust necessary for fintech adoption. Through a series of correlation and regression analyses, we test the prevailing assumption that instability accelerates digital-finance penetration, challenging it against empirical evidence. The study’s motivation lies in bridging the gap between security studies and financial inclusion research: while government and industry stakeholders often cite crisis resilience as a driver of digital-payment growth, there is scant quantitative evaluation of this claim. Unpacking this relationship has important implications for policymakers, financial institutions, and development agencies designing interventions that promote inclusive, secure, and resilient payment ecosystems. Ultimately, our findings aim to inform targeted strategies that enhance both security readiness and fintech infrastructure, ensuring that digital payment solutions deliver tangible benefits even in the most challenging environments.

Methodology

The study employs a quantitative, panel data design, drawing on region-level data for 2021-2024 to explore the link between terrorism risk and digital payment adoption. We first compiled average Global Terrorism Index scores and FinDex usage rates for each region, then mapped these onto a unified dataset. Using Pearson correlation, we assessed the direction and strength of their association, interpreting the coefficient's significance through t-tests. Moving on, we employ a fixed-effects panel data model that incorporates the focus variables in the presence of controls, including GDP per capita, internet penetration, and regulatory quality.

Analysis & Findings

The preliminary cross-regional analysis reveals a modest inverse association between terrorism risk and digital payment adoption, indicating that the regions scoring higher on the Global Terrorism Index generally tend to report lower FinDex usage rates. This supports the hypothesis that terrorism risk discourages digital financial behaviour, likely due to perceived insecurity, disruption of infrastructure, or institutional instability. Control variables exhibit expected signs and significance. GDP per capita and internet penetration both positively influence digital payment adoption, aligning with prior research that highlights economic capability and digital infrastructure as key enablers. Notably, regulatory quality also shows a significant positive impact, underscoring the importance of trust in institutions and digital governance frameworks in shaping consumer adoption of fintech.

Practical Implications

The analysis suggests that security and fintech strategies must be pursued simultaneously. For policymakers, this means integrating digital-inclusion programs with efforts to strengthen regional

security infrastructure — investing in resilient telecom networks, regulatory sandboxes, and cyber-physical safeguards in areas prone to unrest. Financial institutions can leverage these insights by prioritizing mobile-agent networks and user education in lower-security zones, ensuring that digital payment platforms remain reliable even during disruptions. Development agencies should tailor funding models to support both community-level trust-building and technology rollout, for example, by co-financing biometric authentication kiosks in high-risk districts. By aligning risk-management protocols with fintech deployment plans, practitioners can foster robust payment ecosystems that withstand instability while expanding access and boosting economic resilience.

Value

This paper's originality lies in its fusion of security studies with financial inclusion research, as it is the first to systematically pair regional terrorism risk metrics with digital payment adoption rates. Rather than treating fintech uptake solely as an economic or technological phenomenon, we introduce instability as a contextual driver, revealing counterintuitive patterns that challenge standard diffusion models. For scholars, this opens a new interdisciplinary avenue, inviting further inquiry into how risk environments shape financial behavior. For policymakers and industry leaders, the findings underscore the necessity of co-designing security and digital finance initiatives, ensuring that investment in one domain supports resilience in the other. By offering a novel analytical lens and actionable insights, the paper equips decision-makers with evidence to craft more robust and inclusive payment strategies in volatile settings.

Conclusion And Recommendations

The findings of this study indicate that elevated terrorism risk does not encourage the use of digital payment systems; rather, it often deters adoption. Regions with higher Global Terrorism Index (GTI) scores consistently display lower FinDex usage levels, suggesting that insecurity weakens infrastructure, erodes public trust, and undermines the institutional stability required for fintech to flourish. This outcome challenges the common belief that security threats naturally push consumers toward digital alternatives and highlights the need for a balanced strategy that addresses both security and financial inclusion simultaneously.

Governments should focus on reinforcing telecommunications and banking infrastructure, enhancing cybersecurity systems, and strengthening regulatory oversight, particularly in vulnerable regions. Financial institutions can complement these initiatives by extending mobile-agent networks, educating customers on safe usage, and developing backup mechanisms to maintain service continuity during crises. Development agencies should also combine community trust-building programs with digital payment rollouts to ensure inclusivity and reliability.

Further studies should explore country-specific and multi-year data, incorporating variables such as financial literacy, political stability, and cultural perceptions of technology to better understand causal relationships. Aligning fintech development with security measures will be essential to building payment ecosystems that are resilient to shocks and capable of promoting lasting financial inclusion.

Keywords: *Digital-payment adoption, Global Terrorism Index, Security environments, Fintech deployment, Cross-regional analysis*

References

1. Akmal, J. (2025, June 10). *Mapping the money trail: The evolution of terrorist financing networks in Indonesia*. GNET Insights.
2. Bonekamp, B., & van Veen, T. (2017). *Terrorist attacks and financial markets* (No. 6324). CESifo Working Paper.

3. Chesney, M., Reshetar, G., & Karaman, M. (2011). The impact of terrorism on financial markets: An empirical study. *Journal of banking & finance*, 35(2), 253-267.
4. Fabe, A. P., Toledo, J. A., & Laksmi, S. (2022). The growth of financial technology in Indonesia: implications for terrorism financing. *International Annals of Criminology*, 60(2), 162-181.
5. Gradzi, D. (2020). Fintech/Regtech. The risk of money laundering and terrorist financing resulting from new technologies in the area of electronic payments. *Przegląd Bezpieczeństwa Wewnętrznego*, 12(22), 213-235.
6. <https://www.worldbank.org/en/publication/globalindex/Data>
7. <https://www.visionofhumanity.org/wp-content/uploads/2022/03/GTI-2022-web-04112022.pdf>
8. Jack, W., & Suri, T. (2011). *Mobile money: The economics of M-PESA* (No. w16721). National Bureau of Economic Research.
9. Karolyi, G. A., & Martell, R. (2010). Terrorism and the stock market. *International Review of Applied Financial Issues and Economics*, 2(2), 285.
10. Lim, K. K., & Yazdanifard, R. (2025). *A review paper: Anti-money laundering / countering financing of terrorism (AML/CFT) and its effect on the adoption of online payment in Malaysia. Journal of Information Systems Engineering & Management*, 10(56 s), 990–1005.
11. Soliev, N. (2023, April). *The digital terror financing of Central Asian jihadis. CTC Sentinel*, 16(4).
12. World Bank Group & ASEAN Working Committee on Financial Inclusion. (2019). *Advancing digital financial inclusion in ASEAN: Policy and regulatory enablers*.

IMPACT OF WORKING CAPITAL COMPONENTS ON PROFITABILITY: A PANEL DATA ANALYSIS OF INDIAN STEEL AND IRON INDUSTRY COMPANIES (2020–2024)

Amit Kundu ¹, Ranjit Saibya ²

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

Efficient working capital management is essential for financial stability and operational efficiency, especially in capital-intensive industries like steel and iron. In India, where economic volatility, raw material price fluctuations, and supply chain disruptions are common, managing current assets and liabilities effectively is crucial. Between 2020 and 2024, the steel and iron sector faced challenges from COVID-19, policy shifts, and global competition, impacting liquidity and profitability. Despite existing studies, limited empirical research focuses on this sector's working capital dynamics using recent data. This research bridges the existing gap by examining the impact of inventory turnover, accounts receivable, accounts payable, and the cash conversion cycle (CCC) on Return on Assets (ROA) and Return on Equity (ROE).

This study empirically investigates the impact of key working capital components—Current Ratio (CR), Cash Conversion Cycle (CCC), Current Assets to Total Assets (CATA), and Current Liabilities to Total Assets (CLTA)—on profitability measures such as ROA and ROE for 12 listed Indian steel and iron companies. The objective is to provide insights for optimizing working capital strategies to enhance financial performance and managerial decision-making in the capital-intensive steel sector.

Literature Review

Existing literature underscores the criticality of working capital management in manufacturing sectors. Dey and Jana (2024) highlighted the adverse effect of prolonged CCC on profitability. Kumar and Sahu (2023) emphasized inventory turnover as a pivotal profitability driver. Other studies (Singh & Jain, 2021; Verma & Yadav, 2022) revealed that sector-specific capital requirements shape the working capital–profitability nexus, underscoring the need for industry-specific empirical analysis.

Methodology

The study utilizes annual data from 12 publicly traded firms over 2020–2024, yielding a balanced panel of 60 observations.

Variables

Dependent Variables: ROA and ROE.

Independent Variables:

¹ Associate Professor, Department of Commerce, Cooch Behar Panchanan Barma University, Cooch Behar, West Bengal, India.

² Assistant Professor, Department of Commerce, Mathabhanga College, Cooch Behar, West Bengal, India & Research Scholar, Cooch Behar Panchanan Barma University, West Bengal, India.

- CR (liquidity measure)
- CCC (working capital efficiency)
- CATA (investment in current assets)
- CLTA (short-term financing proportion)

Model Specification:

The following linear panel regression models are used:

$$ROE_{it} = \alpha + 1CR_{it} + 2CCC_{it} + 3CATA_{it} + \epsilon_{it}$$

$$ROA_{it} = \alpha + 1CR_{it} + 2CCC_{it} + 3CATA_{it} + \epsilon_{it}$$

i = firm (cross-section)

t = time (year)

ϵ_{it} = error term

Estimation Techniques

Panel data methods applied include:

- Pooled OLS
- Fixed Effects Model (FEM)
- Random Effects Model (REM)
- Hausman Test
- Panel-Corrected Standard Errors (PCSE) for autocorrelation or heteroscedasticity concerns.

Hypotheses

H0: Working capital components have no significant impact on profitability.

H1: Working capital components significantly affect profitability.

Analysis and Findings

Pooled Regression (ROE)

The pooled regression reveals CCC, CATA, and CLTA significantly influence ROE. CATA positively impacts profitability, while CCC and CLTA have negative effects. The model explains 39% of ROE variation ($R^2 = 0.3909$) and is statistically significant ($p < 0.01$). The Durbin-Watson value of 1.479 indicates mild positive autocorrelation.

Fixed Effects Model (ROE)

The FEM explains 60% of ROE variation ($R^2 = 0.5967$, $p < 0.01$). CLTA significantly negatively impacts profitability, while CCC and CATA are statistically insignificant. FEM effectively controls for firm-specific effects with no autocorrelation.

Random Effects Model (ROE)

REM explains 38% of ROE variation ($R^2 = 0.3783$, $p < 0.01$). CATA positively impacts profitability, while CCC and CLTA have significant negative effects. The Durbin-Watson value of 1.597 suggests mild autocorrelation.

Hausman Test (ROE)

The Hausman Test (Chi-square = 9.50, $p = 0.0497$) favours FEM, indicating firm-specific effects correlate with regressors, making REM inconsistent.

Pooled Regression (ROA)

The pooled model for ROA shows a high explanatory power ($R^2 = 0.9977$). CR and CLTA have significant negative effects, while CATA positively impacts ROA. CCC shows marginal significance ($p = 0.0794$). The Durbin-Watson statistic (0.978) indicates positive autocorrelation, signalling model limitations.

Fixed Effects Model (ROA)

The FEM explains 99.92% of ROA variation ($R^2 = 0.9992$). CLTA and CR exert strong negative impacts on ROA, while CATA positively influences it. CCC is statistically insignificant. The Durbin-Watson statistic (2.03) confirms no autocorrelation.

Random Effects Model (ROA)

REM explains 99.87% of ROA variation ($R^2 = 0.9987$). CR and CLTA negatively affect ROA, while CATA positively impacts it. CCC is statistically insignificant. The Durbin-Watson value of 1.65 indicates mild autocorrelation.

Hausman Test (ROA)

The Hausman Test (Chi-square = 7.87, $p = 0.0963$) suggests REM is appropriate, though CR ($p = 0.0363$) and CCC ($p = 0.0335$) show endogeneity concerns between fixed and random estimates.

The overall Summary of the analysis reveals that CLTA negatively impacts ROA and ROE, while CATA enhances profitability. CCC reduces ROE but is less significant for ROA. Excess liquidity (CR) hampers ROA. Fixed Effects Model suits ROE analysis, whereas Random Effects Model fits ROA, despite potential endogeneity concerns

Practical Implications

Financial managers should optimize current asset allocations (CATA) and limit short-term liabilities (CLTA) to enhance profitability. Excess liquidity (CR) needs to be monitored to avoid inefficiency. Policymakers must consider these findings when framing sector-specific liquidity regulations, ensuring firms maintain financial stability without operational slackness.

Originality

This study bridges a significant research gap by providing contemporary, sector-specific empirical evidence on working capital's impact on profitability in India's steel and iron industry, using advanced panel data techniques. The dual analysis of ROA and ROE offers comprehensive insights into operational and shareholder returns—often overlooked in prior studies.

Conclusion and Recommendations

The study concludes that excessive liquidity (CR) and high short-term obligations (CLTA) detract from ROA, whereas efficient asset allocation (CATA) enhances profitability. CCC plays a more critical role in influencing ROE, emphasizing the importance of capital structure and operational timing.

Key Recommendations:

- Maintain optimal liquidity levels to avoid idle resources.
- Minimize short-term liabilities (CLTA) to improve financial health.
- Prioritize effective current asset allocation strategies (CATA).
- Align capital structure strategies to enhance ROE outcomes.
- Optimize working capital cycle management for sustainable profitability.

Keywords: *Working Capital Management, Panel Data Analysis, ROA, ROE, Hausman Test*

References

1. Dey, P. K., & Jana, D. (2024). Working capital management and firm performance: Evidence from Indian manufacturing sector. *Journal of Financial Management and Research*, 16(1), 45–60.
2. Kumar, R., & Sahu, P. (2023). Inventory management and profitability: A study of Indian steel companies. *International Journal of Business and Management Research*, 21(2), 88–97.
3. Chakraborty, S., & Sharma, A. (2022). Accounts receivable and firm profitability: Evidence from NSE-listed manufacturing firms. *Journal of Financial Economics and Management*, 14(3), 112–124.
4. Verma, M., & Yadav, S. S. (2022). Working capital dynamics and financial performance: A study of Indian capital-intensive industries. *Indian Journal of Accounting and Finance*, 18(4), 67–79.
5. Rath, B. N., & Tripathy, S. (2021). Does working capital impact profitability? An empirical analysis from Indian manufacturing firms. *Asian Journal of Accounting and Economics*, 13(2), 102–115.
6. Singh, H., & Jain, P. (2021). Empirical study on working capital management and profitability: Evidence from Indian iron and steel sector. *Journal of Business and Economic Studies*, 12(1), 55–68.

Introduction

Micro, Small, and Medium Enterprises (MSMEs) are the key foundations of India's economic structure, making a substantial contribution towards employment generation, innovation, and regional development. MSMEs, in West Bengal, have a key role to play in livelihood sustenance, entrepreneurship promotion, and localized economic growth both in the urban and rural sectors (Ministry of MSME, 2023). Yet, in a more globalized and competitive world, the ability of these firms to adapt and survive is as much based on their operational strategies as on the cultural foundations that govern organizational behaviour and willingness to accept and adapt to change.

Organizational culture, or the common beliefs and values, assumptions, and norms affecting workplace conduct, is at once an impetus and a hindrance to change. Cultural dynamics in MSMEs tend to be more personalized and embedded in local socio – economic contexts as opposed to large corporations. Such dynamics may either support change, adaptability, and development or perpetuate resistance to change and thus affect organizational performance. In West Bengal, where cultural diversity converges with distinct socio-political experiences and economic contexts, insights into how cultural dimensions affect change processes in MSMEs are especially pertinent.

Organizational change, whether progressive or transformational, frequently results from market forces, technological innovation, policy changes, or crisis. The effectiveness or failure of these changes is the result of an interaction between cultural dynamics and change management practices. Although there is increasing attention to organizational culture and change management, empirical research at the level of MSMEs in regional settings such as West Bengal is inadequate. Most current research has been found to project conclusions from large firms or MSMEs in more developed states, and thus a contextual knowledge gap remains.

This research aims to fill this gap by examining the interaction between cultural dynamics and organizational change among MSMEs in West Bengal. Based on both qualitative and quantitative data, it strives to reveal how deeply rooted cultural characteristics impact strategic decision-making, flexibility, and resilience in these businesses. By placing the study in the socio-economic context of West Bengal, this paper adds to the larger discussion on organizational development in emerging economies, providing implications for policymakers, practitioners, and scholars working towards developing sustainable and adaptive MSME ecosystems.

Select Literatures

1. *Impact of Business Environment, Entrepreneurial Orientation and Innovation Capability on the success of Handicraft Enterprises in West Bengal, India*, Dibyendu Bikash Datta (2024)

¹ Assistant Professor, The Heritage Academy, Kolkata, Research Scholar, JIS University

² Assistant Professor, JIS University

The author investigates how three key factors—business environment, entrepreneurial orientation (EO), and innovation capability—affect the success of handicraft-based MSMEs in West Bengal, using Confirmatory Factor Analysis (CFA) on a sample of 100 enterprises.

2. *Nurturing Sustainability Commitment: Exploring the Nexus of Employee Relations, Human Resource Management (HRM) and Micro, Small and Medium Enterprises (MSME) Sectors*, Sudipta Adhikary, Arpita Das (2023)

The research explores how Indian MSME industries assess their sustainability commitment through employee relations and HRM practices. It introduces a framework called "awareness, action, comprehensiveness, and excellence (AACE)" to understand how industrial relations and HRM practices foster sustainability commitment. The study found that informal leadership towards workers is crucial for a company's commitment to sustainability.

3. *Organizational Culture and its Effectiveness - A Study on Small Business in West Bengal*

Dr.Pradyumna Kumar Tripathy and Jagannath Koley (2019)

This research study investigates the organizational culture of small- scale industries in West Bengal, focusing on its effectiveness. Out of 177 registered units, 50 units were randomly selected and surveyed using a five-point Likert Scale questionnaire. The findings suggest that these firms have a rich human resource development-centric organizational culture, which improves performance.

4. *Assessing Influence of Organizational Culture on Employee Commitment*, Sinha et al. (2019)

Survey of 242 employees across ten heterogeneous companies including West Bengal by using reliability and exploratory factor analysis (SPSS). Dimensions such as training & development, rewards, teamwork, communication significantly influence employee commitment.

5. *Impact of Organizational Values, Compassion, and Well-Being on Industrial Disputes*, Biswas & Chakraborty (2019)

Cross-sectional descriptive survey in manufacturing firms of West Bengal by using structural equation modelling and confirmatory factor analysis. Compassion and shared organizational values reduce industrial disputes via positive culture and well-being.

Research Problem

While West Bengal's MSMEs make important contributions to employment and economic growth, their capacity to continue to grow in a fast-changing market setting is frequently limited by strongly ingrained cultural patterns. These cultural forces—based on local norms, leadership, and interpersonal relations—are capable of facilitating as well as retarding organizational change. Past literature primarily focuses on change management in large-scale firms or in MSMEs that are situated in more developed areas, with scarce empirical data from the socio-cultural and economic setting in West Bengal. This lack of knowledge limits policymakers, entrepreneurs, and researchers from comprehensively grasping how cultural elements affect adaptability and change in these firms.

Purpose

The aim of the present research is to analyse how cultural dynamics influence organizational change in MSMEs of West Bengal, with an emphasis on understanding how cultural characteristics influence change readiness, strategic choice, and resilience. By blending theoretical concepts in organizational culture and change management with empirical research evidence from the regional MSME sector, this

study seeks to create practical insights usable in developing effective change approaches, increasing competitiveness, and facilitating sustainable growth among MSMEs in similar socio-economic conditions.

Research Design & Methodology

This study has adopted a mixed-methods research design, combining qualitative and quantitative approaches to comprehensively examine the interplay between cultural dynamics and organizational change in Micro, Small, and Medium Enterprises (MSMEs) in West Bengal. The purpose is to capture qualitative insights from interviews and case studies as well as measure quantifiable trends in organizational change. The research would be exploratory - to identify cultural factors that influence change as well as descriptive - for mapping organizational change patterns.

The research is grounded in two theoretical frameworks – a) Hofstede's Cultural Dimensions Theory – to capture broader, value-based cultural orientations such as power distance, individualism–collectivism, uncertainty avoidance, and long-term orientation as they manifest in MSME contexts. b) Denison's Organizational Culture Model – to examine organizational traits (involvement, consistency, adaptability, and mission) that are empirically linked to performance and change capability

A structured survey using Likert-scale scores (1-5) was administered to MSME owners across selected districts in West Bengal to collect primary data. Data were analysed for reliability, correlation analysis, and multiple regression models to identify significant cultural predictors of change readiness and success. Qualitative data were gathered through semi-structured interviews which were coded thematically, allowing for triangulation with quantitative findings.

Secondary Data were collected from Government reports of MSME Ministry, NABARD reports, West Bengal Industrial Development Corporation, Industry reports on West Bengal's MSME sector and existing literature on organizational culture and change.

Analysis

Organizational culture and its effect on change processes is an established field of study in management, with prevailing paradigms being Hofstede's cultural dimensions (national values) and Denison's organizational culture model (organizational characteristics associated with effectiveness). Empirical research using Denison's tools in India validates the model's applicability in examining culture–performance relationships but validates most studies conducted on larger or formal organizations and not on micro, small, and medium enterprises (MSMEs).

Regionally oriented research indicates that West Bengal's MSME sector is sectorally and spatially diverse and a key driver of state jobs and exports; government and industry reports highlight structural bottlenecks (infrastructure, access to capital, and uneven district development) and mention the importance of building entrepreneurial culture and managerial skills for expansion. However, these policy reports rarely disentangle the micro-level cultural drivers within firms influencing adoption of change.

Academic research carried out in West Bengal and similar Indian contexts offers helpful but weak evidence. A few local surveys and studies suggest that numerous small businesses in West Bengal exhibit human-resource-based cultures (e.g., close supervisor-worker relationships, family pressures) that can aid performance but could also perpetuate informal mechanisms that are resistant to systematic change. Majority of these articles are qualitative, on the basis of single-industry or single-district samples, and employ cross-sectional survey research designs. Recent MSME studies have started to analyze modern-day change drivers like digitalisation, market liberalisation, and COVID-19—but few of them go along with an in-depth evaluation of internal cultural dynamics in MSMEs.

Comparative research in other Indian regions and cities indicates that culture impacts adaptability and performance, but it is uncertain how transferable this is to West Bengal due to the state's distinct socio-political history and district-level heterogeneity. This study aims to uncover how culture really affects day-to-day change practices, decisions, and resistance mechanisms.

Findings

The relationship between collectivist values and high involvement cultures boosts employee solidarity and morale but, centralised decision-making inhibits acceptance of change. Flexibility is vital for successful change, and a critical requirement for innovation. Moreover, cultural obstacles—most notably high -power distance and preference for tradition—constrain proactive change, particularly in the adoption of technology.

The study also discovered that traditional sectors like handicrafts and textiles show higher cultural resistance due to deeply rooted practices. Whereas, emerging sectors or tech-based MSMEs exhibit greater adaptability due to younger, more flexible workforces.

Practical Implications

This study provides a guideline for MSMEs in West Bengal to manage cultural resistance to change effectively, by implementing change without disturbing the core values. The study establishes that MSMEs that align culture with change will survive and sustain all kinds of changes. It discusses the importance of balancing tradition with innovation. MSME owners can implement the findings of this study to develop change management strategies.

Significance of The Study

This research is a valuable contribution to the understanding of how cultural forces direct organizational change in the MSME sector of West Bengal. Small and medium enterprises constitute the economic backbone but constantly grapple with challenges in the face of market uncertainty, technological upswing, and changing consumer attitudes. By blending quantitative indicators and qualitative accounts, the study transcends general organizational change models to reflect the subtle relationship of local cultural characteristics—like flexibility, power distance, and mission clarity—with useful change management results. The significance of this research is found in its immediate implications for policymakers, development agencies, and MSME proprietors looking for culturally based solutions to build resilience and competitiveness. Its novelty lies in placing organizational change analysis in the context of the unique socio-cultural weave of West Bengal's MSMEs, integrating statistical rigour with close contextual understanding—something rarely attempted in current Indian MSME research.

Conclusion

This research analyzed the influence of cultural dynamics on change in MSMEs in West Bengal through a mixed-methods approach of surveys, interviews, and case studies. Results bring forth that:

- Cultural dimensions (power distance, uncertainty avoidance, collectivism) bear a significant impact on change readiness.
- Sectors like handicrafts and textiles experience greater resistance than tech-innovative MSMEs.
- Managerial style and worker participation have crucial roles in effective transitions.
- Institutional support and government policies can either facilitate or slow down change adoption.

- The research verifies that inattention to cultural context results in reform failure, while culturally centred approaches are what promote adaptability and development.

Keywords: MSME, Organizational Change, Organizational Culture, West Bengal, organizational performance

References

1. Adhikary, S., & Das, A. (2023). Nurturing Sustainability Commitment: Exploring the Nexus of Employee Relations, Human Resource Management (HRM) and Micro, Small and Medium Enterprises (MSME) Sectors. *Advancement in Management and Technology (AMT)*, 4(2), 1-11. <https://doi.org/10.46977/apjmt.2023.v04i02.001>.
2. Biswas, S., & Chakraborty, [Initials]. (2019). Impact of organizational values, compassion, and well-being on industrial disputes. *Prabandhan: Indian Journal of Management*, 12(1), ISB SIMR
3. Dibyendu Bikash Datta. *Impact of Business Environment, Entrepreneurial Orientation and Innovation Capability on the success of Handicraft Enterprises in West Bengal, India. Asian Journal of Management*. 2024;15(2):93-8. doi: 10.52711/2321-5763.2024.00016
4. Denison, D. R. (1990). *Corporate culture and organizational effectiveness*. Human Resource Management.
5. Saha, K. (2024, August). MSMEs in West Bengal: A case study of the MSMEs in the district of Howrah. *EPH – International Journal of Humanities and Social Science*, 10(3). <https://doi.org/10.53555/eijhss.v10i3.216>
6. Sharda, D. (2024, January 8). Stagnation of MSMEs in West Bengal: Analysing the wicked problem. *Center for Development Policy & Practice*.
7. Sinha, A. K., Guha, B., Sengupta, P. P., & Bandyopadhyay, G. (2019). Assessing the influence of organizational culture on employee commitment using reliability and factor analysis: Evidence from ten heterogeneous companies operating in different states in India. *Indian Journal of Science and Technology*, 12(14), 1–11. <https://doi.org/10.17485/ijst/2019/v12i14/110838> SRS Journal
8. Tripathy, P. K., & Koley, J. (2019). Organizational culture and its effectiveness: A study on small business in West Bengal. [ijrar_issue_20542884, VOLUME 6 I ISSUE 1 I JAN.– MARCH 2019] E ISSN 2348 –1269, PRINT ISSN 2349-5138.
9. Ministry of Micro Small and Medium Enterprises, Annual Report 2023-24, <https://msme.gov.in/sites/default/files/FINALMSMEANNUALREPORT2023-24ENGLISH.pdf>
10. Official Website of NABARD, NABARD Annual Report, <https://www.nabard.org › nabard-annual-report-2023-24>

Introduction

In today's rapidly evolving economic environment, technology has reshaped taxation systems worldwide. Traditional, manual tax processes were prone to delays, errors, and inefficiencies. The introduction of digital reforms such as e-filing, GST portals, and Aadhaar-PAN integration has significantly impacted compliance behavior and administrative efficiency.

Selected Literatures

Previous studies, including Alm and McClellan (2012), OECD (2020), Bhura and Kumar (2021), and Kumar, Malhotra, and Agarwal (2022), emphasize that technological interventions such as e-filing systems, real-time data sharing, and integrated tax portals like GSTN can enhance compliance, streamline processes, and improve collection efficiency. However, challenges such as initial adaptation difficulties, digital literacy gaps, and uneven infrastructure continue to affect the overall effectiveness of these reforms.

Purpose

The study aims to investigate the role of technology in improving tax compliance, assessing both its benefits and challenges. It seeks to evaluate whether digitalization has simplified processes, enhanced transparency, and fostered trust among taxpayers.

Methodology

The research adopts a primary data approach using a structured questionnaire administered to 167 respondents between May and June 2025. The analysis incorporates descriptive statistics and graphical representation (pie charts) to evaluate patterns in technology adoption for tax compliance. The study is grounded in a conceptual framework that combines national and international taxation trends.

Analysis & Findings

Findings reveal that most respondent's especially salaried employees aged 31–50 prefer digital platforms for tax filing. Many perceive these tools as simplifying compliance, though reliance on tax consultants persists among individuals lacking digital skills. Challenges identified include data security concerns, system complexity, and limited awareness. Overall, technology was found to increase accuracy, reduce compliance burdens, and improve taxpayer satisfaction.

Practical Implications

The study suggests that enhancing digital literacy, improving infrastructure, and simplifying user interfaces can significantly increase the adoption of digital tax tools. Policymakers and tax authorities can leverage these insights to design inclusive, secure, and efficient tax systems.

¹ Bachelor of Commerce (Honours), Shri Shikshayatan College

Originality

This paper uniquely combines primary data with a review of global literature to provide an integrated perspective on technology-driven tax compliance in the Indian context. It offers actionable recommendations tailored for both policymakers and practitioners.

Conclusion & Recommendations

Technology has emerged as a catalyst for efficient and transparent tax administration. To ensure equitable adoption, initiatives should focus on capacity building, continuous platform upgrades, and robust cyber security measures. The research concludes that sustained government support and taxpayer education are critical for maximizing the benefits of digital tax reforms.

Keywords: *Technology, taxation compliance, GST, PAN-Aadhar integration, digital literacy, automated tax system, GSTN Portal.*

References

- Alm, J., & McClellan, C. (2012). Tax morale and tax compliance from the firm's perspective. *Kyklos*, 65(1), 1–17.
- OECD. (2020). Tax Administration 2020: Comparative information on OECD and other advanced and emerging economies. <https://www.oecd.org/tax/forum-on-tax-administration/publications-and-products/tax-administration-2020.htm>
- Bhura, P. K., & Kumar, M. (2021): Role and consequences of Goods & Services Tax (GST) on the Indian economy. *International Journal of Financial Management and Economics*, 4(1), 85–88.
- Kumar, R., Malhotra, R. K., & Agarwal, P. (2022): Analysis of GST impact on Indian economy after 5 years of its implementation. *Rabindra Bharati Journal of Philosophy*, 23(13), 43–48. ISSN 0973-0087.

GREENING THE WARDROBE: THE IMPACT OF ENVIRONMENTAL CONCERN AND GREEN CONSUMPTION VALUE ON GREEN PURCHASE BEHAVIOUR

Pousali Banerjee ¹

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

A global mass movement called Mission 'LiFE' (Lifestyle for Environment), which was introduced by India, aims to promote eco-friendly practices and sustainable lifestyles. Due to rapid industrialisation particularly in urban areas, pollution has become a threat to our planet Earth (Sulaymon et al., 2020). Thus, in most of the developing industrialised nations, the percentage of green consumption has been increasing day by day (Kumar and Yadav, 2021). Green consumers are individuals who adopt behaviours that not only help the environment and society but also enhance their own well-being (White et al., 2019). Today, an increasing percentage of consumers are becoming aware of ecological issues and are willing to make sustainable purchases; furthermore, they expect to find sustainable products at discounted prices (Van Doorn & Verhoef, 2015).

Literature

When the whole world was fighting against the COVID-19 pandemic, the quality of the environment improved, hence proving that human actions are the chief determinant for environmental damage. (Nittala & Moturu, 2021). In the process of promoting sustainable consumption, environmental concern is one of the important and direct factors (Felix et al., 2018; Hao et al., 2019). Environmentally concerned individuals can be defined as those who are always apprehensive about the issues of the environment, who use natural resources frequently, and who consider themselves, societies, and future generations answerable for their actions (Ibnou Laaroussi et al., 2020). As consumer behaviour is one of the major causes of multiple environmental obstacles, most businesses globally, and consumers in particular, face challenges of protecting and conserving the environment. (Naalchi Kashi, 2020). Green consumption value can be defined as the "tendency to express the value of environmental protection through one's purchases and consumption behaviors" (Haws et al., 2014). Green consumption values play a crucial role in shaping our consumer behaviour such as encouraging individuals to choose eco-friendly products more frequently (Kim & Moon, 2012; Nguyen et al., 2016). As a result, these consumers place more emphasis on their purchasing habits, which are less harmful towards the environment (Varshneya et al., 2017; Wang & Lin, 2017). A study conducted by Chaudhary (2018) revealed that both consumers' purchase intention and actual purchase behaviour were significantly influenced by their values of green products. Green purchase behaviour refers to those behaviour which demonstrate concern for the environment by buying the products that are recyclable in nature. (Mostafa, 2007). As in present days, many scholars have explored that there are significant barriers to green purchase behaviour; therefore, it is necessary to explore which factors contribute more to green purchase behaviour. (Crane, 2000; Mintel, 1995; Wong, Turner, & Stoneman, 1996). Previous research revealed that green purchase behaviour significantly influenced by lifestyles, values, norms, and concern for the environment (Jansson et al., 2010).

¹ Research Scholar, Department of Applied Psychology, University of Calcutta, and State Aided College Teacher Category-1, Department of Psychology, Seth Anandram Jaipuria College, West Bengal, India

Purpose

The Global Sustainability Study (2021) showed how significant global changes lead to consumers' willingness to perceive environmental issues and to pay more for eco-friendly products and services. Previous research showed that in recent years India has become a mandatory target for fashion companies for multiple reasons, such as tech-savvy consumers, a powerful manufacturing sector, and a growing body of middle-class populations. Thus, the present study highlights the importance of sustainable consumption, specifically green purchase behaviour and how environmental concern and green consumption value influenced green purchase behaviour in the realm of the green clothing industry. Also, the present study focuses on undergraduate students who belong to Generation Z, as they are observed to exhibit greater environmental concern and higher levels of environmental awareness that will lead to sustainable consumption (Song et al., 2020).

Methodology

Hypotheses:

H01: There is no significant difference between men and women undergraduate students of Kolkata in terms of their Green Purchase Behaviour for green clothing.

H02: There is no significant relationship between Environmental Concern and Green Purchase Behaviour for green clothing among undergraduate students of Kolkata, irrespective of their gender.

H03: There is no significant relationship between Green Consumption Value and Green Purchase Behaviour for green clothing among undergraduate students of Kolkata, irrespective of their gender.

H04: Green Purchase Behaviour for green clothing cannot be predicted on the basis of Environmental Concern, and Green Consumption Value, among undergraduate students of Kolkata, irrespective of their gender.

Variables under study:

-Independent variable

Demographic Independent variable

-Gender (Men and Women)

Psychological Independent Variables

-Environmental Concern

-Green Consumption Value

Dependent Variable

-Green Purchase Behaviour.

Sample

For the present study, 300 undergraduate students of Kolkata were selected through multistage stratified random sampling from the different streams of study (B.A./B.Sc./B.Com.), where 166 were men and 134 were women.

Inclusion criteria:

- Age: 19-21 years
- Nationality: Indian
- Education: undergraduate (must be enrolled in college)
- Residential area: urban and sub-urban- Residing in West Bengal
- Socio-economic status: middle socio-economic status on the basis of Updated Kuppuswamy socioeconomic scale 2024.
- Location: Co-ed colleges located in radius of south, north, central and east Kolkata
- Employment status: Unemployed
- Marital status: Unmarried.
- Language: Those who have studied English as language subject at least up to 12th grade.
- Those who have purchased green (ecofriendly) clothing in the past were included in the study.
- Environmental science: Those who have studied it as a subject in school or college.
- Participants with a low score (0-4) as assessed by GHQ 28 were included in the study.

Tools:

Informed consent form. Information Schedule was prepared to gather data on gender, socioeconomic status, marital status, nationality, residence type etc. and other demographic information.

Modified Kuppuswamy scale for the year 2024 (Mandal I, and Hossain SR 2024) and ***General Health Questionnaire-28*** by Goldberg, D.P. and Hiller, V .F. (1979) were used as screening tools.

Environmental concern: The scale is adopted by Sharma, K. Aswal, C (2017) from the original scale of Kilbourne et al. (2008), and Dunlap and Van L, iere (1978). The scale consists of 8 items measured on a 7- point Likert scale from (1) strongly disagree to (7) strongly agree. Cronbach alpha =0.83. Cronbach's alpha reliability was calculated for the present sample and was found to be .85.

Green consumption value (GREEN scale): The scale was developed by Haws, et al (2014). The scale consists of 6 items measured on a 7-point Likert scale (1) strongly disagree to (7) strongly agree. Cronbach alpha Reliability on adult sample= 0.95. Cronbach's alpha reliability was calculated for the present sample and was found to be .87.

Green Purchase Behaviour- The scale was adopted by Kumar (2012) from the original scale of Schlegelmilch et al. (1996). The scale consists of 6 items measured on 5-point Likert scale where (1) strongly disagree to (5) strongly agree. Cronbach alpha= 0.87. Cronbach's alpha reliability was calculated for the present sample and was found to be .82.

Ethical consideration:

The present research followed ethical guidelines, and results were reported honestly and accurately.

Statistical analyses:

Descriptive statistics were done. Independent sample t-test, Pearson product moment correlation, and multiple linear regression analysis were calculated to verify the proposed hypotheses.

Analysis & Findings

Table 1: Independent sample t-test between men and women undergraduate students of Kolkata in terms of their Green Purchase Behaviour

	Group	N	Mean	SD	Levene's Test for equality of variance		t-test for Equality of Means		
Green Purchase Behaviour	Men	166	22.24	3.87	F	Sig.	t	df	p value
					2.20	.139	3.79	298	p<.001
	Women	134	20.64	3.25					

Table 2: Pearson Product Moment Correlation between Environmental Concern, Green consumption Value and Green Purchase Behaviour

Green Purchase Behaviour		Environmental Concern	Green Consumption Value
	Pearson Correlation	.20	.32
	p value	p<.001	P<.001
	N	300	300

Table 3 and Table 4: Multiple linear regression analysis predicting Green Purchase Behaviour on the basis of Environmental Concern and Green Consumption Value

Table:3

R	R square	Adjusted R square	F	df	P value
.35	.12	.12	20.69	2,297	P<.001

Table:4

Predictors	Unstandardized Coefficients		Standardized Coefficients Beta	t	P value
	B	Std. Error			
Environmental Concern	.15	.06	.14	2.42	P=.016
Green Consumption Value	.32	.06	.29	5.23	P<.001

Discussion

It is clearly evident from the results of the present study that men and women undergraduate students of Kolkata differ significantly in their green purchase behaviour, where mean scores of the men are comparatively higher than women. Based on identity-based motivation theory, it has been revealed that when social identity was salient, men increased their green consumption behaviour to the same level as women. (Oyserman, 2009a, 2009b) which lends support to the present findings.

From the correlation matrix, it is seen that there is a significant positive correlation between environmental concern and green purchase behaviour for green clothing among the undergraduate students of Kolkata. The present findings are corroborated by the earlier researches by Shen et al. (2012), which revealed that environmentally concerned individuals are more into green purchase behaviour, especially they want to purchase green clothing that are recycled, organic, or made of biodegradable materials. The present study also shows that green consumption value is positively related to green purchase behaviour which was supported by the previous research done by De Groot and Steg (2015). They found that individuals who are committed towards their green purchasing behaviour have high values.

From the regression analysis, it has been clearly evident that environmental concern and green consumption value significantly predict green purchase behaviour for green clothing among undergraduate students of Kolkata. Several past researches, like Gifford and Nilsson (2014), Candan & Yildirim (2013), and Gonçalves et al. (2016), identified that environmental concern and green consumption value significantly predicted green purchase behaviour. For example, people who are environmentally concerned and who have high green consumption values are more likely to buy eco-friendly products, which corroborates the present findings well. Thus, all the proposed hypotheses have been rejected.

Practical Implications

The present study's findings highlight the importance of sustainable consumption in the realm of green clothing. The fashion industry is one of those sectors often criticised for contributing to excessive waste, high carbon emissions, and significant water usage (Claudio, 2007). In present times, especially Generation Z places increasing demands on these businesses; their growing environmental concerns and values are pushing up the demand for sustainable practices, pressing industries like fashion to adopt more sustainable and ethical approaches (Han et al., 2017). Keeping this in mind, this present study will help marketers and policymakers design campaigns that emphasise sustainability, reduced environmental impact, and social responsibility to foster engagement.

Originality

This study adds originality by examining the factors predicting green purchase behaviour in the realm of green clothing among undergraduate students in Kolkata, a demographic and geographic area rarely addressed in other sustainability research.

Conclusion and Recommendations

The present study's findings confirm that there is a significant difference in green purchase behaviour for green clothing between men and women undergraduate students. Further, it reveals that environmental concern and green consumption values are significantly correlated with green purchase behaviour. Also, it is seen that both environmental concern and green consumption values are positive predictors for green purchase behaviour for green clothing among undergraduate students of Kolkata. Though limited to a small sample from Kolkata, the study provides valuable insights into youth green purchase behaviour in sustainable fashion. Its findings can help government policy on sustainable consumption, with future research needed for broader generalisability.

Keywords: *Green, Sustainable, Eco-friendly, Green Products, Environment, Concern, Value Purchase Behaviour*

References

- Candan, B., & Yildirim, S. (2013). Investigating the relationship between consumption values and personal values of green product buyers. *International Journal of Economics & Management Sciences*, 2(12), 29–40.
- Chaudhary, R., & Bisai, S. (2018). Factors influencing green purchase behavior of millennials in India. *Management of Environmental Quality: An International Journal*, 29(5), 798–812. <https://doi.org/10.1108/MEQ-02-2018-0023>
- Claudio, L. (2007). Waste Couture: Environmental Impact of the Clothing Industry. *Environmental Health Perspectives*, 115(9), A448-A454.
- Costa Pinto, D., Herter, M.M., Rossi, P. and Borges, A. (2014) 'Going green for self or for others? Gender and identity salience effects on sustainable consumption', *International Journal of Consumer Studies*, Vol. 38, No. 5, pp.540–549.

- Crane, A. (2000). Marketing and the natural environment: What role for morality? *Journal of Macromarketing*, 20(2), 144–154.
- de Groot, J. I. M., & Steg, L. (2015). Value orientations to explain beliefs related to environmental significant behavior: How to measure egoistic, altruistic, and biospheric value orientations. *Environment and Behavior*, 40(3), 330–354. <https://doi.org/10.1177/0013916506297831>
- Dunlap, R. E., & Van Liere, K. D. (1978). The “New Environmental Paradigm.” *The Journal of Environmental Education*, 9(4), 10–19. <https://doi.org/10.1080/00958964.1978.10801875>
- Felix, R., Hinsch, C., Rauschnabel, P. A., & Schlegelmilch, B. B. (2018). Religiousness and environmental concern: A multilevel and multi-country analysis of the role of life satisfaction and indulgence. *Journal of Business Research*, 91, 304–312. <https://doi.org/10.1016/j.jbusres.2018.06.017>
- Gifford, R., & Nilsson, A. (2014). Personal and Social Factors That Influence Pro-Environmental Concern and Behavior: A Review. *International Journal of Psychology*, 49(3), 141–157.
- Goldberg DP, Hillier VF. A scaled version of the General Health Questionnaire. *Psychol Med*. 1979 Feb;9(1):139-45. <https://doi.org/10.1017/s0033291700021644>. PMID: 424481
- Gonçalves, H. M., Lourenço, T. F., & Silva, G. M. (2016). Green buying behavior and the theory of consumption values: A fuzzy-set approach. *Journal of Business Research*, 69(4), 1484–1491. <https://doi.org/10.1016/j.jbusres.2015.10.129>
- Han, J., Seo, Y., & Ko, E. (2017). Staging luxury consumers’ purchase intention to experiences for understanding sustainable apparel products: Exploring sustainable fashion consumption: A consumer “attitude–behavioral balance theory application. *Journal of intention” gap. Sustainability Business Research*, 74, 162–167. (Switzerland), 12(5), 1–14. <https://doi.org/10.1016/j.jbusres.2016.1> <https://doi.org/10.3390/su120517700.029>
- Hao, Y., Liu, H., Chen, H., Sha, Y., Ji, H., & Fan, J. (2019). What affect consumers’ willingness to pay for green packaging? Evidence from China. *Resources Conservation and Recycling*, 141, 21–29. <https://doi.org/10.1016/j.resconrec.2018.10.00>
- Haws, K. L., Winterich, K. P., & Naylor, R. W. (2014). Seeing the world through GREEN-tinted glasses: Green consumption values and responses to environmentally friendly products. *Journal of Consumer Psychology*, 24(3), 336–354.
- Ibnou Laaroussi, S., Rjoub, H., & Wong, W. K. (2020). Sustainability of green tourism among international tourists and its influence on the achievement of green environment: Evidence from North Cyprus. *Sustainability*, 12(14), 5698. <https://doi.org/10.3390/su12145698>
- Jansson, J., Marell, A. and Nordlund, A. (2010), “Green consumer behavior: determinants of curtailment and eco-innovation adoption”, *Journal of Consumer Marketing*, Vol. 27 No. 4, pp. 358-370
- Kilbourne, W. &. (2008). How materialism affects environmental beliefs, concern and environmental responsible behaviour. *Journal of Business Research*, 61, 885–893.
- Kim, K., & Moon, S. G. (2012). Determinants of the pro-environmental behavior of Korean immigrants in the US. *International Review of Public Administration*, 17(3), 99.
- Kumar, B. (2012), Theory of Planned Behaviour Approach to Understand the Purchasing Behaviour for Environmentally Sustainable Products, *Research and Publications*, WP no. 2012-12-08, IIM, Ahmedabad.
- Kumar, S., Yadav, R., 2021. The impact of shopping motivation on sustainable consumption: a study in the context of green apparel. *J. Clean. Prod.* 295, 126239.
- Mintel. (1995). The second green consumer report. London: Mintel.
- Mandal I, Hossain SR. Update of modified Kuppaswamy scale for the year 2024. *Int J Community Med Public Health* 2024;11:2945-6.
- Mostafa, M. (2007). A hierarchical analysis of the green consciousness of the Egyptian consumer. *Psychology & Marketing*, 24(5), 445–473. doi: 10.1002/mar.20168
- Naalchi Kashi, A. (2020). Green purchase intention: A conceptual model of factors influencing green purchase of Iranian consumers. *Journal of Islamic Marketing*, 11(6), 1389–1403. <https://doi.org/10.1108/JIMA-06-2019-0120>

- Nguyen, T. N., Lobo, A., & Greenland, S. (2016). Pro-environmental purchase behavior: The role of consumers' biospheric values. *Journal of Retailing and Consumer Services*, 33, 98–108.
- Nittala, R., & Moturu, V. R. (2021). Role of pro-environmental post-purchase behaviour in green consumer behaviour. *Vilakshan - XIMB Journal of Management*, 20(1), 82–97. <https://doi.org/10.1108/xjm-03-2021-0074>
- Oyserman D. (2009a) 'Identity-based motivation: implications for action-readiness, procedural-readiness, and consumer behavior', *Journal of Consumer Psychology*, Vol. 19, No. 3, pp.250–260.
- Oyserman D. (2009b) 'Identity-based motivation and consumer behavior', *Journal of Consumer Psychology*, Vol. 19, No. 3, pp.276–279.
- Schlegelmilch, B.B., Bohlen, G. M., & Diamantopoulos, A. (1996). The link between green purchasing decisions and measures of environmental consciousness. *European Journal of Marketing*, 30 (5), 35 – 55
- Sharma, K. Aswal, C. (2017). "Green Purchase Intentions, Collectivism and Materialism: An Empirical Investigation". The Delhi University. *Journal of the Humanities and the Social Sciences* 4: 33-50
- Shen, B., Wang, Y., Lo, C. K. Y., & Shum, M. (2012). The Impact of Ethical Fashion on Consumer Purchase Behavior. *Journal of Fashion Marketing and Management*, 16(2), 234-245.
- Song, Y., Qin, Z., & Qin, Z. (2020). Green marketing to gen Z consumers in China: Examining the mediating factors of an eco-label-informed purchase. *Sage Open*, 10(4). <https://doi.org/10.1177/2158244020963573>
- Sulaymon, I. D., Mei, X., Yang, S., Chen, S., Zhang, Y., Hopke, P. K., Schauer, J. J., & Zhang, Y. (2020). PM_{2.5} in Abuja, Nigeria: Chemical characterization, source apportionment, temporal variations, transport pathways and the health risks assessment. *Atmospheric Research*, 237. <https://doi.org/10.1016/j.atmosres.2019.104833>
- Van Doorn, J., & Verhoef, P. C. (2015). Drivers of and barriers to organic purchase behavior. *Journal of Retailing*, 91(3), 436–450.
- Varshneya, G., Pandey, S. K., & Das, G. (2017). Impact of social influence and green consumption values on purchase intention of organic clothing: A study on collectivist developing economy. *Global Business Review*, 18(2), 478–492
- Wang, E. S., & Lin, H. C. (2017). Sustainable development: The effects of social normative beliefs on environmental behavior. *Sustainable Development*, 25(6), 595–609.
- White, K., Hardisty, D.J., Habib, R., 2019. The elusive green consumer. *Harv. Bus. Rev.* 11 (1), 124–133.
- Wong, V., Turner, V., & Stoneman, P. (1996). Marketing strategies and market prospects for environmentally friendly consumer products. *British Journal of Management*, 7(3), 263–281.

Introduction

Apiculture, or beekeeping, plays a vital role in enhancing agricultural productivity and conserving biodiversity. South 24-Parganas, a district in the Indian state of West Bengal, is rich in ecological and agricultural diversity, encompassing regions like the Sunderbans—one of the world's largest mangrove ecosystems. This study examines the role of apiculture as a tool for sustainable agricultural development and biodiversity conservation in this ecologically sensitive region.

Literature Review

Apiculture has been globally acknowledged as an integral component of sustainable agriculture (Bradbear, 2009). It supports crop pollination, increases agricultural productivity, and promotes biodiversity by maintaining the reproductive cycle of various flowering plants (Klein et al., 2007).

In India, several studies (Sarkar & Ghosh, 2014; Sinha et al., 2020) have identified apiculture as a low-input, high-output farming practice that enhances rural incomes and contributes to environmental sustainability. The National Bee Board (NBB) and the Ministry of Agriculture have launched programs like the National Beekeeping and Honey Mission (NBHM), reinforcing its importance in the rural economy.

Specific to West Bengal, Dey and Halder (2017) highlighted how the unique ecological setting of South 24-Parganas offers an ideal environment for honeybee foraging due to the abundance of mangrove and agricultural flora. Beekeeping here is not just a livelihood activity but also an ecosystem service.

Furthermore, studies (Parthasarathy et al., 2019) show that pollinator services can increase yields of crops like mustard, sunflower, and fruits—staple cultivars in the district. Moreover, the conservation of pollinator species contributes to maintaining ecosystem services in climate-vulnerable zones like the Sunderbans (Ghosh et al., 2021).

Objective of the study

- To know the assessment of contribution by domesticated honey bee *Apis mellifera* and *Apis serena indica* in crop pollination and silviculture of Sundarban Biosphere reserve.
- To find the economic improvement of local people through apiculture as honey, bee wax and bee venom have high price in national and international market.

¹ Assistant Professor (Stage-II) Vidyanagar College

Analysis and Observation

The research explores the traditional and modern practices of beekeeping adopted by local farmers, particularly in the semi-urban and rural blocks of the district. The integration of apiculture with crop farming enhances pollination services, thereby improving crop yields without chemical interventions. Additionally, it provides supplementary income, fostering rural livelihoods and empowering women.

The study uses field surveys, interviews with local beekeepers, and secondary data to analyze the socio-economic and ecological impact of apiculture. It also investigates the mutual benefits of plant-bee interactions and how apiculture helps conserve native plant species and promotes ecological balance. Challenges like climate change, pesticide use, and habitat degradation are also addressed.

It also indicates that apiculture in South 24-Parganas contributes significantly to sustainable agriculture, livelihood generation, and biodiversity conservation, making it a viable model for rural development in ecologically fragile zones.

Key Findings

- Apiculture in South 24-Parganas enhances crop productivity through improved pollination.
- It supplements rural income, especially benefiting women and marginalized communities.
- Beekeeping supports the conservation of floral and faunal diversity.
- The practice mitigates environmental stressors by reducing the reliance on chemical fertilizers and pesticides.
- Challenges include climate change, monoculture practices, and lack of training/infrastructure for modern beekeeping.

Keywords: Apiculture, sustainable development, biodiversity, agricultural development.

References

1. Bradbear, N. (2009). *Bees and Their Role in Forest Livelihoods: A Guide to the Services Provided by Bees and the Sustainable Harvesting, Processing and Marketing of Their Products*. FAO.
2. Klein, A. M., et al. (2007). Importance of pollinators in changing landscapes for world crops. *Proceedings of the Royal Society B: Biological Sciences*, 274(1608), 303-313.
3. Sarkar, A., & Ghosh, P. (2014). Role of Apiculture in Rural Development. *Indian Journal of Agricultural Economics*, 69(3), 405-414.
4. Sinha, R., Singh, R., & Tiwari, S. (2020). Apiculture and its scope in India. *International Journal of Science and Research*, 9(5), 1934-1938.
5. Dey, R., & Halder, B. (2017). Apiculture in South 24 Parganas: A Socioeconomic Study. *Journal of Rural and Agricultural Research*, 17(2), 45-49.
6. Parthasarathy, D., et al. (2019). Urbanization and its impact on pollinator diversity: A case study from West Bengal. *Urban Ecosystems*, 22(4), 659-671.
7. Ghosh, D., Chatterjee, S., & Das, P. (2021). Biodiversity Conservation through Pollination Services in the Sundarbans. *Ecological Perspectives*, 15(1), 27-35.
8. National Bee Board (2020). *Guidelines on Scientific Beekeeping Practices*. Ministry of Agriculture and Farmers Welfare, Government of India.

Introduction

Digitalization is the need of the hour worldwide as the global economy has made rapid upgradations and advancement in the field of technology. Innovation and creativity are being promoted all around the world in every aspects of the economy. Digitalization leads to cost efficiency, reduce communication barriers, enhance accountability and transparency and increase potential resource allocation towards production process, hence raising the welfare of the nation.

India has experienced transformation in the occupational structure since the inception of economic planning in 1951. Gradually it has witnessed decreasing trend in employment in agricultural sector while rising trend in non-agricultural sector. But still a lion's share of the rural population is engaged in agriculture consisting of disguised unemployment. Hence labour mobility between the sectors becomes highly desirable choice for the policymakers, in order to raise the economic growth of the nation.

Recently the policymakers are aware of framing the policies in sake of raising employment especially in rural India. Moreover, with the advent of the AI era, the nature and pattern of jobs has undergone alterations that have influenced the scope of employment in India. Hence, there is a need to examine the impact of digitization in the occupational structure in rural India, and frame policies as per the changing scenario of employment.

Select Literatures: Impact of digitalization on world economy is extensive (Brynjolfsson & McAfee, 2014) in terms of socio-economic and cultural factors. Quality of life, per capita income, efficiency in agricultural, industrial and service sectors can touch new heights as the nation follows the path of automation. Digitalization has resulted, increase in efficiency and levels of output in various sectors of the economy (Suntsova, 2023). Digitalization acts as a catalyst in boosting up the national income, job opportunities, efficiency, innovation and creativity (Kaggwa, 2023).

Chen and Wellman (2004) has highlighted that the impact of digitalization hasn't been the same all around the world. This digital era has boosted the capital intensive economies more, thus making the economic power concentrated among fewer nations. Especially the underdeveloped nations lag behind in terms of huge capital investment, lack of expertise in adopting advance technologies, and ease of doing business, thus get trapped in the conventional structure of a backward economy.

Hence, it becomes very necessary for the underdeveloped nations, like India, to adopt technological advancement and enter the world of automation, which would pave the way towards sustainable development. With the advent of digitalisation, the Indian economy has faced radical transformation in the way of operation in all the sectors of the economy, which in turn enhanced job creation, increased production efficiency and overall development (Shukla and Bose, 2017). Clark (1941) pointed out that the rapid modernisation of economy has led to the shifting of occupational structure from agriculture to

¹ Assistant Professor, Department of Commerce, Khandra College

² Assistant Professor, Department of Economics, Khandra College

non-agricultural sectors, such as industry and service sectors. India's service sector has improved leaps and bounds after digitalisation in terms of efficiency (Maiti and Kayal, 2017).

Purpose

This study focuses on the extent of digitalisation among the rural sectors of various states of India. Moreover, here we have attempted to examine the impact of digitalisation on occupational shift in rural India. This paper tried to justify the need of digitalisation for sustainable development.

Methodology

It is an empirical study with the help of secondary data where the researchers have constructed Composite Index of Digitization (CID) for measuring the extent of digitization in a region using the concept of Human Development Index (1990). The study also attempted to empirically examine the impact of digitization on the scope of employment in rural India. For such purpose we have used multivariate regression model, taking banking awareness index using credit from Regional Rural Banks (RRBs) and infrastructural index by length of roads constructed through Pradhan Mantri Gram Sadak Yojana (PMGSY), as the other controlled variables. We have considered rural parts of 15 major states of India. The year 2024-25 is taken as the period of study.

Analysis and Findings

The study has observed huge disparity in the intensity of digitization in terms of percentage of people using own mobile phones across the rural areas of different states of India ranging from about 50 percent to 90 percent. The rural Kerala encountered highest percentage of population using their own mobile phones, whereas, rural parts of Odisha experience the lowest figure. In Haryana, Kerala, Assam, and Punjab, about 90 percent of the rural households have access to internet facility within their premises. Rural counterparts of Andhra Pradesh and Tamil Nadu experience weaker accessibility to internet facility. Taking into consideration the aspect of availability of digital tools, combining with the other aspect of expertise in handling digital tools, the Composite Digitalization Index (CID) has been calculated in the study for the rural parts of the major states of India. High disparity has been observed in terms of digitization among the rural counterparts of the states. Moreover, we have attempted to examine the impact of digitization on transformation of occupational structure in rural India. The study has interestingly noted that digitization has positive and significant impact on migration of labourers from agriculture to the non-agricultural sector in rural India. Also, it has noted from the study that more the credits disbursed from the Regional Rural Banks (RRBs), there is lesser occupational shift towards non-agricultural sector. This may be contributed due the reason that more credits from RRBs are channelised to the farmer accounts which benefits them with high income through investment in agriculture. Again, it has been observed in the study that higher construction of roads through PMGSY higher is the transformation of labour from agricultural sector to non-agricultural sector. This may be due to the fact that increasing construction of roads involves more labourers, hence there is a positive impact on occupational shift towards non-agricultural sector.

Practical Implications

Interestingly, we have observed here that there is wider dispersion among the rural areas of various Indian states. We have noticed that there is significant impact of digitalization on transformation of occupational structure and mobility of labour witnessed from agricultural to non-agricultural sector in rural parts of India.

Originality

In order to measure the digitization in rural, in this study we have constructed a composite index of digitization (CID) where we have taken into consideration both the aspects of availability of digital technologies and expertise in coping up with the new technology. But the rural parts of different states have showed wider disparity in terms of adopting the modern technology. This study aims to create awareness among the policymakers so that policies in rural India are framed for the sake of adopting new technologies and upgrade their skills in order to compete in the age of automation.

Conclusions and Recommendations: Digitization boosts up the mobility of labour from unproductive to productive sector in rural economy that contributes towards economic growth which in turn promises sustainable development. The government should therefore focus on ensuring a digital rural economy. The Skill India Campaign launched in 2015 should be more inclusive and should encompass the rural sector of the nation. The Government can therefore increase the technological awareness, giving subsidies on the digital equipments, hence making the digital infrastructure stronger, thus enhancing the scope for universal digital literacy and Viksit Bharat 2047 for the sake of sustainable development.

Keywords: *Digitization, Occupational Structure, Agriculture, Non-Agriculture, Rural Development, Sustainable Development.*

References

1. Brynjolfsson, E., & McAfee, A. (2014). *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*. W.W. Norton & Company.
2. Suntsova O.O. (2024). Role of blockchain technology in changing the structure of a country's monetary base and GDP. *Financial and Credit Systems: Prospects for Development*, 2024. No. 1(12). P. 24-36. DOI: <https://doi.org/10.26565/2786-4995-2024-1-03>.
3. Kaggwa, S., Akinwolemiwa D., Dawodu, S., Uwaoma, P.U., Akindote, O J. and Eloghosa, S O (2023). Digital transformation and economic development: A review of emerging technologies' impact on national economies. *World Journal of Advanced Research and Reviews*, 20(03), 888–905.
4. Chen, W and Wellman, B (2004). The Global Digital Divide – Within and Between Countries. *IT&SOCIETY*, VOLUME 1, ISSUE 7, SPRING/SUMMER 2004, PP. 39-45. <http://www.ITandSociety.org>.
5. Shukla, M. & Bose, S. (2017). Impact of Digitalization in Economy and the Effects of Demonetization. *ELK Asia Pacific Journals*. 978-93-855537-02-2. NMC-2017.
6. Maiti, Moinak & Kayal, Parthajit (2017). Digitization: Its Impact on Economic Development and Trade. *Asian Economic and Financial Review*, 7(6), 541.

Introduction

The rapid urbanization of Bengaluru, India's "Silicon Valley," has transformed its landscape from a city of lakes to a metropolis grappling with severe water scarcity (Ramachandra et al., 2016). Once sustained by an intricate network of lakes and groundwater recharge systems, Bengaluru now faces a crisis marked by depleting aquifers, polluted water bodies, and an over-reliance on distant river sources (Ghosh, 2021). The city's population, projected to exceed 20 million by 2050, exacerbates demand, with current freshwater consumption at 2,632 million Liters per day (MLD) but supply lagging at 1,450 MLD from the Cauvery River and 700 MLD from borewells (Kulranjan et al., 2023). This imbalance underscores the urgent need for a circular water economy (CWE), a paradigm shift from linear "extract-use-discharge" models to closed-loop systems emphasizing reuse, recycling, and resource recovery (Morseletto et al., 2022).

Bengaluru's water crisis is compounded by urbanization-driven environmental degradation. Between 1973 and 2016, built-up areas expanded by 1005%, while lakes shrank by 79% and green cover by 72% (Ramachandra et al., 2016). Unchecked groundwater extraction (52% of supply) has led to a 54% depletion of aquifers (CGWB, 2019). Meanwhile, socio-economic disparities skew access: affluent households consume 102 Liters per capita daily (LPCD), while low-income areas receive just 81.9 LPCD (Joseph, 2024; Shaban & Sharma, 2007). These challenges mirror global urban water stresses, as seen in Cape Town's "Day Zero" crisis, where wealthier residents exacerbated shortages through overconsumption (Savelli et al., 2023).

Transitioning to water circularity offers a sustainable pathway. The 6R framework: Reduce, Reuse, Recycle, Reclaim, Recover, and Restore can mitigate scarcity by treating wastewater as a resource (Kakwani & Kalbar, 2020). For instance, Bengaluru generates 1,494 MLD of wastewater, yet only 23 MLD from centralized plants and 47 MLD from decentralized systems are reused (Kuttuva et al., 2018). Singapore's success in meeting 40% of demand through reclaimed water (NEWater) demonstrates the potential of technological and behavioral integration (Kog, 2020). However, Bengaluru's adoption faces hurdles: public resistance (the "yuck factor"), compliance in treating and reuse of treated water, infrastructural gaps, and fragmented governance (Msaki et al., 2022). This paper examines how Bengaluru can harness circular economy principles through secondary data to achieve water sustainability, where water demand-supply is reduced, with the scope of green jobs and a viable market to sell recycled water.

Literature Review

1. Urbanization and Water Scarcity: A Vicious Cycle

Bengaluru's water crisis is rooted in unplanned urban expansion. The city's horizontal sprawl and vertical densification have disrupted hydrology, reducing groundwater recharge and increasing flood risks (Kollarath, 2024). Once central to water management, traditional lake systems are now encroached

¹ Ph.D Scholar, Srishti Manipal Institute of Art, Design and Technology, MAHE-Bengaluru

or polluted, and only 17 of 285 lakes remain functional (Ramachandra et al., 2016). Studies link this degradation to: Land-use changes: Conversion of wetlands to IT parks and residential zones (Sen et al., 2022). Groundwater overexploitation: 400,000 illegal borewells exacerbate depletion (Gogol Dutta, 2020). Climate change: Erratic monsoons reduce surface water availability (UNESCO, 2020).

2. Economic Growth and Water Demand

Bengaluru's IT-driven economy has amplified water demand, with commercial and industrial sectors consuming 80 MLD and 19 MLD, respectively (Apoorva et al., 2021). Further, urbanization leads to excessive water consumption, where the demand is not only for sanitation but also for meeting lifestyle needs. The city's water-use efficiency lags global benchmarks; for example, leakage rates exceed 40%, compared to Tokyo's 3%. In the linear water economy, 80% of untreated wastewater intensifies stress (Voulvoulis, 2018).

3. Circular Water Economy Frameworks

The theoretical foundations of urban water circularity integrate multiple disciplinary perspectives to create robust management systems. **The 6Rs framework** (Reduce, Reuse, Recycle, Recover, Reclaim, and Regenerate) (Kakwani & Kalbar, 2020) provides a comprehensive approach to water resource management (Ghisellini et al., 2016). Applied specifically to Bengaluru's context:

1. **Reduce** focuses on demand management through water-efficient technologies and leakage reduction in distribution networks (Rupiper et al., 2022). Smart metering and pressure management could potentially decrease system losses by 15-20% (Meyer et al., 2023).
2. **Reuse** emphasizes direct application of treated wastewater for non-potable purposes. Studies indicate Bengaluru's commercial sector could substitute 60-80 MLD of freshwater with treated greywater for landscaping and cooling towers (Abou-Shady et al., 2023).
3. **Recycle** involves advanced treatment processes like reverse osmosis and membrane bioreactors to produce high-quality recycled water. The Koramangala-Challaghatta Valley project demonstrates potential for 380 MLD recycling capacity (Pardikar, 2023).
4. **Recover** targets resource extraction from wastewater, including energy generation through biogas and nutrient recovery for fertilizers (Rey-Martínez et al., 2024). Bengaluru's sewage contains sufficient organic load to generate power for self-powered plants potentially. (Vivan, 2025)
5. **Reclamation** treated wastewater for applications outside the loop or process. It focuses on treating wastewater to a high standard and using it for other purposes (Kakwani & Kalbar, 2020; Ravishankar et al., 2018).
6. **Restore** focuses on restoring watershed health through lake rejuvenation and aquifer recharge, critical for Bengaluru's long-term water security (Yuan et al., 2017).

The Circularity framework relied on integrating technological solutions with appropriate governance structures and economic incentives (Kakwani & Kalbar, 2020). Successful implementation requires overcoming barriers related to infrastructure costs, institutional fragmentation, and public acceptance of recycled water (Nemeroff et al., 2021).

Methodology

This research reviews secondary data and Information related to Bengaluru Water challenges to analyse the water crisis through the lens of circular water economy principles, focusing on the economic viability

of Sewage Treatment Plants (STPs) and water pricing models. The study integrates secondary data from academic literature, government reports, and newspaper articles to assess the interplay between urbanization, water scarcity, and sustainable solutions.

Theoretical Framework: IPAT Equation

The study adopts the IPAT model (Chertow, 2000; Commoner, 2020; Holdren & Ehrlich, 1974). To contextualize Bengaluru's water stress as Environmental Impact (I) and within the dynamics of Population (P), Affluence (A), and Technology (T):

- Environmental Impact (I): Measured through loss of water bodies, declining water quality, and supply-demand gaps (Ramachandra et al., 2016).
- Population (P): Rising urban population (projected 20 million by 2050) exacerbating water demand (Hossain et al., 2022).
- Affluence (A): Increased per capita water consumption due to economic growth, particularly in domestic, industrial, and construction sectors (Minamino, 2005).
- Technology (T): STPs and decentralized water reuse systems as mitigative technologies (Ravishankar et al., 2018).

Data Collection & Analysis

1. Urbanization & Water Scarcity:

- Geospatial analysis of land-use changes (1973–2020) shows a 1,005% increase in built-up area and a 79% loss of water bodies. Rainfall and water yield data to quantify supply gaps (14.80 TMC yield vs. 20.05 TMC demand) (Ramachandra et al., 2016).

2. Circular Water Solutions:

- STP Integration: Evaluation of cost savings from reduced freshwater dependence (e.g., Cauvery River supply) and revenue potential from treated water sales.
- Economic Modelling: Comparative analysis of water pricing under linear vs. circular systems, emphasizing long-term sustainability gains.

Analysis and Findings

1. Structural Failures in Bengaluru's Water Governance

Bengaluru's water crisis is multifaceted as it stems from systemic urban planning, governance, and long-term vision failures. The city's excessive reliance on the Cauvery River, reflected in the Stage 5 expansion and plans for further extensions, reflects an outdated, linear water management model (extract-use-dispose). This approach is unsustainable for a city prides itself as India's technological capital. Also, economically reckless, as it perpetuates high infrastructure costs that are incurred to find new freshwater resources, and environmentally destructive, with the loss of lakes, high pollutant levels mainly because of uncontrolled and untreated wastewater discharge to natural water bodies. The BWSSB's continued dependence on river water highlights an institutional resistance to modern treatment technologies, despite their proven potential to replace freshwater in non-potable sectors.

2. Untapped Potential of Treated Wastewater

Treated wastewater could significantly offset freshwater demand in multiple sectors, including:

- Domestic use (toilet flushing, cleaning, gardening, vehicle washing),
- Public space maintenance (landscaping, parks),
- Construction activities (currently reliant on groundwater).

However, Bengaluru globally positions itself as a city with the largest number of decentralized Sewage Treatment Plants (STPs), about 2,700. Yet there is limited use of treated water, and the causes could be unrealistic BWSSB mandates of 100% reuse. It fails to consider that treated water has a limited shelf-life and storage infrastructure takes time to build. Also, water infrastructure is a capital investment (treatment plants, pipelines), but long-term returns justify the expenditure. Existing water supply and sewer lines and stormwater drains, many of which have served the city for decades, demonstrate the durability of such investments. However, the BWSSBs mandate for 100% on-site reuse in residential complexes is unrealistic, given the limited shelf-life of treated water. Instead, a phased approach where RWAs, institutions, and tech parks gradually adopt storage and redistribution systems would be more practical.

3. Creating a Circular Water Economy

Despite having the highest number of STPs, the city has failed to create a market where treated water is sold and bought in place of groundwater. Also, having STPs is not enough. Bengaluru must create systems to ensure every drop treated is a drop reused. To foster such systems and create a viable market, the water board, in alliance with government departments, RWAs, Institutions, and Industries, will create mechanisms for:

- Selling surplus treated water to construction companies and government for irrigation, rejuvenation, and reducing reliance on freshwater. It also caters to restoring natural water sources and recharging groundwater.
- Strict penalties on groundwater extraction for non-potable uses, incentivizing recycled water adoption.
- Economic viability in transportation, which could diminish the dominance of private water tankers supplying groundwater and nudge them towards supplying treated water.

Expanding treatment infrastructure can also generate green jobs in plant operation, maintenance, and quality monitoring. These roles offer stable employment, aligned with SDG targets for water sustainability and urban resilience.

Practical Implications

Bengaluru's water crisis demands both urgent and long-term, sustainable action. However, the solutions framed by the government or BWSSB could be seen as a response to the crisis rather than a means of securing city water. So, by critically looking at the secondary data, this review paper presents several practical interventions such as

1. Revising STP mandates and replacing unrealistic goals such as a 100% reuse rule with tiered compliance targets.

2. Incentivising reuse markets to introduce treated water trading policies, allowing treatment plants to sell excess treated water to construction firms or municipal bodies. Also, strict fines should be imposed on builders using fresh water for non-potable or construction projects.
3. Green Job creation: Train and employ through capacity building for STP operation and maintenance, water audits, and reuse logistics.

Originality:

1. STP paradox

Despite Bengaluru hosting about 2,700 decentralized and 35 BWSSB-monitored STPs, this review paper reveals their underutilization. Highlighting the infrastructure alone will not suffice in establishing reuse systems. This nuanced critique challenges policymakers to move beyond token promises.

2. Water Circularity

The Circular Economy concept is novel in its application. Moreover, its water research based on local challenges remains insufficient. So, this review paper expands the paradigm to Bengaluru city and proposes a market-driven approach and integration of urban economics (e.g., green jobs) with environmental goals.

Conclusions:

The coexistence of extensive STP infrastructure with limited water reuse exposes deeper institutional and behavioral barriers of decision makers and political motives. Short-term plans can nudge voters more than long-term plans, where treated water gets accepted to meet growing demands. With respect to Bengaluru's situation suggests that technological solutions alone cannot solve water crises. They must be accompanied by:

- Achievable policy targets
- Market incentives for treating water and
- Effective governance mechanisms
- Public awareness campaigns

The city is currently at a crossroads, and it must choose between its unsustainable dependence on distant water sources or move to leverage its technological prowess and harness the resourceful nature of wastewater. The choice will determine whether Bengaluru's goal is to become a water-secure and resilient city or a city searching for new freshwater resources.

Keywords: Circular Water Economy, Urban Water Scarcity, Wastewater Reuse, Rapid Urbanization, Bengaluru Water Crisis.

References

- Abou-Shady, A., Siddique, M. S., & Yu, W. (2023). A Critical Review of Recent Progress in Global Water Reuse during 2019–2021 and Perspectives to Overcome Future Water Crisis. *Environments*, 10(9), Article 9. <https://doi.org/10.3390/environments10090159>
- Chertow, M. R. (2000). The IPAT Equation and Its Variants. *Journal of Industrial Ecology*, 4(4), 13–29. <https://doi.org/10.1162/10881980052541927>

- Commoner, B. (2020). *The Closing Circle: Nature, Man, and Technology*. Courier Dover Publications.
- Educational, U. N., & Organization (UNESCO), S. and C. (2020). *Water and climate change*. UNESCO. <https://repository.unescap.org/handle/20.500.12870/7402>
- Ghosh, P. (2021). Water Stress and Water Crisis in Large Cities of India. In R. K. Mishra, R. B. Singh, & A. Dubey (Eds.), *Sustainable Climate Action and Water Management* (pp. 131–138). Springer Singapore. https://doi.org/10.1007/978-981-15-8237-0_11
- Gogol Dutta. (2020, October 2). Transition Theory and India's Groundwater Management Systems. *Economic and Political Weekly*, Vol. 55,(40). <https://www.epw.in/journal/2020/40/special-articles/transition-theory-and-indias-groundwater.html>
- Holdren, J. P., & Ehrlich, P. R. (1974). Human Population and the Global Environment: Population growth, rising per capita material consumption, and disruptive technologies have made civilization a global ecological force. *American Scientist*, 62(3), 282–292.
- Joseph, K. K. (2024). *Water supply inequalities in a large Indian city* [[Master's thesis].].
- Kakwani, N. S., & Kalbar, P. P. (2020). Review of circular economy in urban water sector: Challenges and opportunities in india. *Journal of Environmental Management*, 271, 111010. <https://doi.org/10.1016/j.jenvman.2020.111010>
- Kog, Y. C. (2020). Water Reclamation and Reuse in Singapore. *Journal of Environmental Engineering*, 146(4), 03120001. [https://doi.org/10.1061/\(ASCE\)EE.1943-7870.0001675](https://doi.org/10.1061/(ASCE)EE.1943-7870.0001675)
- Kollarath, R. M. (2024). Review of Traditional Systems of Water Management in the Bengaluru Region for Clues to Mitigate Present-Day Urban Flooding. In *Future is Urban*. Routledge.
- Kulranjan, R., Palur, S., & Nesi, M. (2023). *HOW WATER FLOWS THROUGH BENGALURU: Urban Water Balance Report* (p. 66). Water, Environment, Land and Livelihoods (WELL) Labs at Institute for Financial Management and Research. <https://welllabs.org/bengaluru-urban-water-balance-report-well-labs/>
- Kuttuva, P., Lele, S., & Mendez, G. V. (2018). Decentralized Wastewater Systems in Bengaluru, India: Success or Failure? *Water Economics and Policy*. <https://doi.org/10.1142/S2382624X16500430>
- Meyer, D. D. J., Singh, S., Singh, J., Kumar, M., & He, M. (2023). Learning from intermittent water supply schedules: Visualizing equality, equity, and hydraulic capacity in Bengaluru and Delhi, India. *Science of The Total Environment*, 892, 164393. <https://doi.org/10.1016/j.scitotenv.2023.164393>
- Moharaj, P., Rana, S., Sahoo, D., Kiran Kumar, K., Nagaraj, G., Borah, N., & Utagi, S. (2025). Dynamics of Water Stress in Bangalore, India: Exploring the Confluence of Geopolitical, Climatic, and Anthropogenic Factors. *Journal of Asian and African Studies*, 00219096251336374. <https://doi.org/10.1177/00219096251336374>
- Morseletto, P., Mooren, C. E., & Munaretto, S. (2022). Circular Economy of Water: Definition, Strategies and Challenges. *Circular Economy and Sustainability*, 2(4), 1463–1477. <https://doi.org/10.1007/s43615-022-00165-x>
- Msaki, G., Njau, K., Treydte, A., & Lyimo, T. (2022). Social knowledge, attitudes, and perceptions on wastewater treatment, technologies, and reuse in Tanzania. *WATER REUSE*, 12(2), 223–241. <https://doi.org/10.2166/wrd.2022.096>
- Pardikar, R. (2023, July 17). *The Koramangala Challaghatta Valley project provides a lesson in successful wastewater management*. Frontline. <https://frontline.thehindu.com/environment/a-study-highlights-the-positive-outcomes-of-karnatakas-koramangala-challaghatta-valley-project-for-wastewater-management/article67075475.ece>
- Ramachandra, T. V., Varghese, S., & Aithal, B. H. (2016). WATER SITUATION IN BENGALURU. *ENVIS Technical Report: 114, 114*.
- Ravishankar, C., Nautiyal, S., & Seshiah, M. (2018). Social Acceptance for Reclaimed Water Use: A Case Study in Bengaluru. *Recycling*, 3(1), 4. <https://doi.org/10.3390/recycling3010004>
- Rey-Martínez, N., Torres-Sallan, G., Morales, N., Serra, E., Bisschops, I., van Eekert, M. H. A., Borràs, E., & Sanchis, S. (2024). Combination of technologies for nutrient recovery from wastewater: A review. *Cleaner Waste Systems*, 7, 100139. <https://doi.org/10.1016/j.clwas.2024.100139>

- Rupiper, A., Weill, J., Bruno, E., Jessoe, K., & Loge, F. (2022). Untapped potential: Leak reduction is the most cost-effective urban water management tool. *Environmental Research Letters*, 17(3), 034021. <https://doi.org/10.1088/1748-9326/ac54cb>
- Savelli, E., Mazzoleni, M., Di Baldassarre, G., Cloke, H., & Rusca, M. (2023). Urban water crises driven by elites' unsustainable consumption. *Nature Sustainability*, 6(8), 929–940. <https://doi.org/10.1038/s41893-023-01100-0>
- Sen, A., Dechamma, C. S., & Nagendra, H. (2022). Chapter 12 - Resilience and conservation of urban commons: Lessons from three community-restored lakes in Bengaluru. In A. Colucci & G. Pesaro (Eds.), *[ECO]systems of Resilience Practices* (pp. 213–227). Elsevier. <https://doi.org/10.1016/B978-0-12-819198-9.00004-1>
- Shaban, A., & Sharma, R. N. (2007). Water Consumption Patterns in Domestic Households in Major Cities. *Economic and Political Weekly*, 42(23), 2190–2197.
- Vivan, S. (n.d.). *Green technology at STPs to focus on sustainability*. Bangalore Mirror. Retrieved July 21, 2025, from <https://bangaloremirror.indiatimes.com/bangalore/civic/green-technology-at-stps-to-focus-on-sustainability/articleshow/122803729.cms>
- Voulvoulis, N. (2018). Water reuse from a circular economy perspective and potential risks from an unregulated approach. *Current Opinion in Environmental Science & Health*, 2, 32–45. <https://doi.org/10.1016/j.coesh.2018.01.005>
- Yuan, J., Van Dyke, M., & Huck, P. (2017). Identification of critical contaminants in wastewater effluent for managed aquifer recharge. *CHEMOSPHERE*, 172, 294–301. <https://doi.org/10.1016/j.chemosphere.2016.12.120>

Introduction

The global ecological crisis has prompted designers and material scientists to explore sustainable alternatives to the dominant “take-make-dispose” industrial paradigm (Braungart & McDonough, 2002). Among these alternatives, growing design represents a shift from fabrication to cultivation, where materials are not constructed from inert matter but grown with the aid of living organisms such as fungi, algae, or bacteria (Karana et al., 2018). This approach emphasizes collaboration with biological processes to create regenerative, biodegradable products. Mycelium, the root-like structure of fungi, has become emblematic of this shift. When cultivated on agricultural waste, mycelium can produce durable, compostable materials that exemplify cradle-to-cradle design thinking (Alemu et al., 2022).

This study situates mycelium biofabrication within the broader framework of the circular economy and green living. Specifically, it investigates how growing design practices can contribute to sustainable production and material innovation in decentralized settings. A home-based pilot study was conducted to evaluate the viability of cultivating a mold-free, rigid mycelium block from paddy straw using oyster mushroom spawn.

Literature Review

The **circular economy (CE)** offers a regenerative model for production and consumption that contrasts sharply with the dominant linear model of “take-make-dispose.” In the context of **product design and sustainable materials**, CE promotes resource efficiency, biodegradability, and restorative design principles (Ellen MacArthur Foundation, 2013). Products are ideally created from renewable inputs, used for as long as possible, and then returned safely to natural or industrial loops through reuse, remanufacture, or biodegradation (Braungart & McDonough, 2002). In this space, **growing design**—which employs biological processes like fungal growth to “cultivate” materials has emerged as a transformative approach that fits squarely within CE principles.

Mycelium-based biofabrication exemplifies circular material strategies by utilizing **agricultural residues** (e.g., paddy straw, sawdust, rice husk) as feedstock for fungal growth, turning waste into a new resource. This aligns with **cradle-to-cradle design**, where products safely biodegrade at the end of their life cycle, enriching the environment rather than polluting it (Braungart & McDonough, 2002). Mycelium composites are fully biodegradable, energy-efficient to produce, and can displace petroleum-based materials in packaging, construction, and consumer products (Alemu et al., 2022).

Material behavior plays a pivotal role in enabling or constraining CE adoption. The properties of mycelium composites such as porosity, compressive strength, water absorption, and thermal resistance are shaped by variables like fungal species, substrate composition, growth time, and drying methods (Islam et al., 2017; Appels et al., 2019). Studies by Appels et al. (2019) have shown that modifying

¹ Ph.D Scholar, Srishti Manipal Institute of Art, Design and Technology, MAHE-Bengaluru

growth conditions and post-processing (e.g., hot pressing, oven drying) can significantly alter these mechanical and moisture-related properties, making mycelium more suitable for different CE applications.

Moreover, **current literature** underscores the growing role of mycelium in the **green product innovation ecosystem**. Karana et al. (2018) emphasize that mycelium, as a “living material,” invites designers to rethink agency and control, supporting more adaptive, decentralized material cultures. Meyer et al. (2020) highlight industrial-scale efforts to create scalable fungal materials that support CE through renewable input sourcing, minimal energy use, and end-of-life compostability.

Purpose

This study investigates the potential of growing design with mycelium to support circular economy (CE) principles and green business models, particularly in decentralized and resource-constrained settings. It aims to demonstrate how home-scale mycelium biofabrication using agricultural residues can serve as a practical and scalable solution for eco-friendly material innovation and product design.

Design of Experiment (DoE) as a Methodology

A home-based pilot study was conducted to assess the feasibility of growing a rigid, mold-free mycelium composite using locally available paddy straw and *Pleurotus ostreatus* spawn.

Design of Experiment (DoE) is a systematic, statistical approach used to plan, conduct, and analyze controlled tests to evaluate the effects of multiple variables on a desired outcome. In the context of mycelium biofabrication, DoE is especially valuable in optimizing the growth parameters such as temperature, humidity, substrate composition, spawn ratio, and drying time that influence the mechanical and aesthetic properties of the final material.

Materials and Tools:

- Paddy straw (500 g)
- Oyster mushroom spawn (200 g)
- Polypropylene (PP) bags
- Induction cooktop
- Weighing scale
- Mesh tray
- Oven (110°C setting)
- Clean cotton cloth
- Safety pins

Procedure:

1. The paddy straw was soaked overnight, drained, and pasteurized at 120°C for 30 minutes.
2. After cooling and drying for 36 hours, the straw was inoculated with oyster spawn and packed into PP bags.
3. The bags were incubated for 4–5 weeks at ambient temperatures (28–30°C).
4. Fully colonized blocks were removed and dried at 110°C in two stages: 3 hours initially and 12 hours subsequently.

Data Logging:

- Growth observations were recorded daily.
- Temperature and time logs were maintained during pasteurization and drying.

- The final block was weighed and evaluated qualitatively for integrity, mold resistance, and usability.

Results/ Analysis and Findings

The mycelium block successfully colonized the paddy straw and formed a lightweight, cohesive structure. It exhibited strong internal bonding, retained its shape after drying, and resisted mold when thoroughly dehydrated. The block's texture was foamy yet rigid, suitable for use in packaging or product prototyping.

The initial drying period of 3 hours was insufficient, as minor mold appeared; however, a second cycle of 12 hours effectively sterilized the block. The final product remained stable over several weeks of observation. The process validated that low-cost, accessible techniques can yield functional mycelium materials, suggesting potential for adoption in small-scale green enterprises.

Practical Implications

The findings demonstrate that home-grown mycelium composites can serve as sustainable material alternatives in low-cost settings. This may open up opportunities for farmer producer organizations (FPOs), self-help groups (SHGs), and rural entrepreneurs to adopt eco-friendly biofabrication. Local availability of substrates like paddy straw makes this technique both regionally relevant and scalable. Additionally, the method supports circular business models where waste is converted into value-added products, with minimal energy inputs and no toxic outputs.

Originality/Value

This paper contributes original empirical data from a practice-based mycelium cultivation pilot in India. Most existing literature focuses on industrial or lab-scale fabrication; in contrast, this research explores low-tech, decentralized production models that are inclusive and replicable. The study's emphasis on growing design as a philosophy, where materials are co-created with living systems—offers a critical rethinking of linear design paradigms.

Discussion and Conclusion

This study demonstrates that growing design with mycelium aligns with circular economy objectives by utilizing waste as a resource, requiring minimal energy, and returning safely to the earth post-use. The success of this low-tech method opens possibilities for decentralized biofabrication in India, particularly in regions rich in biomass waste like paddy straw.

From a business perspective, the material's light weight, compostability, and safety profile make it ideal for eco-packaging and interior applications. Challenges such as drying, moisture resistance, and standardization remain, but they are surmountable through iterative prototyping and community engagement.

Future work will focus on mechanical testing, substrate comparisons, and co-design workshops with local communities. By situating growing design within a circular and decentralized innovation framework, this research contributes to a future where materials are cultivated, not manufactured—supporting both ecological resilience and inclusive entrepreneurship.

Keywords: *Mycelium Biofabrication, Circular Economy , Growing Design , Environmental Sustainability, Low-Tech Production, Green Business Models, Material Behavior*

References

- Alemu, D., Tafesse, M., & Mondal, A. K. (2022). Mycelium-based composite: The future sustainable biomaterial. *International Journal of Biomaterials*, 2022, Article ID 8401528. <https://doi.org/10.1155/2022/8401528>
- Appels, F. V. W., Camere, S., Montalti, M., Karana, E., Jansen, K. M. B., Dijksterhuis, J., & Wösten, H. A. B. (2019). Fabrication factors influencing mechanical, moisture- and water-related properties of mycelium-based composites. *Materials & Design*, 161, 64–71. <https://doi.org/10.1016/j.matdes.2018.11.027>
- Braungart, M., & McDonough, W. (2002). *Cradle to cradle: Remaking the way we make things*. North Point Press.
- Islam, M. S., Ahmed, S., Simmons, B., & Ragauskas, A. J. (2017). Morpho-mechanical behavior of mycelium-based composites. *Materials & Design*, 115, 9–20. <https://doi.org/10.1016/j.matdes.2016.11.012>
- Karana, E., Blauwhoff, D., Hultink, E. J., & Camere, S. (2018). When the material grows: A case study on designing (with) mycelium-based materials. *International Journal of Design*, 12(2), 119–136.
- Meyer, L., Klein, B., & Zucchelli, E. (2020). Growing a circular economy with fungal biotechnology. *Fungal Biotech White Paper*.

Introduction

NEP 2020 aims to redefine the way education is conceived, delivered, and assessed. It also aims to boost the education industry and its related sectors (Aithal & Aithal, 2020; Verma & Kumar, 2021; Reddy et al., 2023). The nation's education department bears the obligation of enhancing gross enrolment ratio (GER) to encompass all its citizens to easily access higher education opportunities. Hence, the policy seeks to provide liberal education which is both transdisciplinary as well as interdisciplinary to each and every individual who aspires to pursue higher education. Through a series of fundamental reforms, it aims to redefine the way education is conceived, delivered, and assessed. It also aims to boost the education industry and its related sectors (Aithal & Aithal, 2020; Verma & Kumar, 2021; Reddy et al., 2023).

Select Literature

Verma & Kumar (2021), delved into some challenges as well as opportunities associated with implementing NEP 2020. They highlighted that education being a concurrent matter, cooperation among the states is essential. Further, the policy's objectives pave the way for enhancement of quality and relevance in education by emphasising on vocational training, upsurge in funding for research, and autonomy for universities. But authors suggested that, in order to attain these opportunities, adequate investment in infrastructure development, political drive, and coordination between central and state governments is needed.

Kumar & Chander (2023), focused on how implementation of NEP 2020 in Himachal Pradesh, India poses various challenges. Author pointed out some grave issues like lack of infrastructure and capacity building, financial constraints, language barriers, grassroots level implementation, resistance to change, deficient data and monitoring system, rural-urban divide, and dearth of inclusive education. Among these, financial constraints pose a major obstacle and to overcome this challenge, a groundbreaking funding mechanism is needed to meet the investment targets of NEP 2020.

Purpose

All stakeholders including educators, students, policymakers, parents, and the general public have a shared responsibility for NEP 2020's success (Roy & Swargiary, 2023). Evidently, during the course of this study, we primarily seek to capture the opinions, concerns, and preparedness of the administrators regarding the implementation of NEP 2020.

¹ Assistant Professor, Department of Commerce, Vivekananda Mission Mahavidyalaya

² Assistant Professor, Department of Commerce, Vivekananda Mission Mahavidyalaya

Methodology

The objectives of the study are

- To investigate the challenges and opportunities facing institutional management and administrators in implementing the NEP 2020
- To assess the preparedness of HEIs to adapt to the policy requirements and administrative hurdles (if any) encountered by them.

The allocation of colleges for each state was based on population density, resulting in estimates of 46 for West Bengal, 20 for Jharkhand, 19 for Assam, and 15 for Tripura amounting to 100 colleges. A simple random sampling approach was employed representing both urban and rural areas.

The perception of administrators has been formulated into four variables such as, general awareness, resource availability and action plan and overall preparedness. Equal probability index has been calculated to formulate the values of all the above-mentioned variables.

The following OLS regression has been applied to identify whether general awareness, resource availability and action plan can predict the preparedness of administrators regarding NEP 2020 on overall data as well as across states.

preparedness of Admin = $\alpha + 1\text{genaware} + 2\text{resavail} + 3\text{actionplan}$ eq(1)

In the next step, by using Kruskal Wallis test, whether perception of administrators on overall preparedness, general awareness, resource availability and action plan are significantly different across states has been tested.

We also used Relative Important Index to identify and rank challenges and opportunities faced by administrators.

Analysis & Findings

- a. Resource availability and action plan are important factors in determining the preparedness of HEIs. General awareness is not a significant factor because even if they are aware of the policy, the lack of resource availability or proper action plan to materialize the provisions will lead to under preparedness.
- b. There is a significant difference in perception of administrators across states wrt general awareness, resource availability and action plan.
- c. The post hoc analysis to identify the area where the state wise difference lies reveals that Jharkhand is significantly different in terms of perception about preparedness and action plan. Since, the NEP 2020 has been implemented earliest in Jharkhand in the year 2022, they are better prepared for meaningful implementation of the policy.
- d. In terms of General awareness, administrators of Tripura have a different perception as compared to the other three states.
- e. The perception of administrators of West Bengal is different from the other three states in terms of resource availability. The administrators of West Bengal are very much concerned about resource constraint as there is no specific government fund allocated for the implementation of NEP.

- f. Administrators consider financial constraints to be the biggest challenge. There is a paucity of classrooms and physical infrastructure such as adequate number of computers, books on new variety of subjects that have been introduced, seating arrangements etc.
- g. Administrators consider curriculum enrichment and pedagogy as the greatest opportunity. The introduction of ability enhancement courses and skill enhancement courses will equip the students to be industry ready. The introduction of multidisciplinary courses will lead to the holistic development of the students

Practical Application

The interaction with administrators revealed the following findings

- a. Almost all administrators across the four states agreed to the substantial infrastructure and resource gaps in HEIs, indicating the need for increased investment to meet the requirements set by NEP 2020.
- b. Many administrators are of the opinion that any transformation of this scale requires time and hence they will be able to develop a clear picture of NEP only after one cycle of 4 years i.e. when the first batch of students graduates under NEP.
- c. the rural colleges have certain unique issues like lack of proper books for subjects like yoga, disaster management and cyber defence, limited access to internet facilities, lack of industries in close proximity for internship which are to be addressed separately.

Originality

Administrator exuberance was noticed while obtaining the data regarding the NEP 2020. Such exuberance has to be matched by proper infrastructure and human resource support for a smooth transition into NEP 2020; otherwise, there will be loopholes in the full-fledged implementation of the provisions of NEP 2020.

Conclusion and Recommendations

On the basis of the derived results, the following policy recommendations are made:

Short-term Recommendations

1. Renovation/Upgradation of already Existing Infrastructure: It is hereby suggested to give priority in renovation of the current infrastructure along with the unused and underused infrastructure available with HEIs as per the basic structure of NEP 2020.

2. Digitalization of HEIs: It is mandatory to ensure the development of adequate digital infrastructure, libraries possessing computers, internet and uninterrupted electricity facility, to all colleges, be it urban or rural.

3. Industry-collaboration Mandatory: The need for industry-academia collaboration is strongly recommended to ensure industry training, identification of emerging skills and ensure students are adequately prepared as future workforce.

4. Avenues for Internships:

It is recommended that the colleges in each state collaborate with Industrial Training Institutes and polytechnic colleges to provide industry training at the local level and at a sustainable low cost. Internships can be arranged in offices where there is a dearth of human resources, such as at BDO offices or hospitals and educational institutions.

5. NEP Implementation Tailored Regionally: Since each region has a different socio-economic environment, it is recommended to provide a specific framework and implementation strategy, particular to each region, so that NEP-2020 fits in with the environment and tackles the issues that are unique to it.

6. Uniform Policy: we recommend that the states with multiple universities have uniform policy to provide a level playing platform for all students in the state.

7. Specific Scholarships: It is recommended to issue debit cards with no cash withdrawal facilities. In order to maintain financial control, students may only use the card to sign up for various accredited courses on SWAYAM/MOOCs and other platforms, to recharge their internet, and to make payments for educational resources only when they purchase them online.

Medium-term Recommendations

1. Greater Autonomy for HEIs: With the passage of time, it is recommended that HEIs be provided with greater autonomy in terms of curriculum planning and delivery, undertaking collaborative projects, research activities, and internship programmes, as well as the generation of more financial resources.

2. Local Resource Pooling: Considering the lack of manpower and the rising enrolment of students in HEIs, it is recommended to pool in manpower resources from the local societies who get both trained and earn experience as field interns at least at the non-teaching support levels.

Long-term Recommendations-

1. Infrastructure Development: Considering the paucity of classrooms to accommodate the growing number of subjects and students under NEP-2020, there is a need to sanction funds for building more classrooms in each college.

2. Special Learning centres: Each HEI needs to be converted into learning centres that are specialised in a few industry-required capability. For the same, appropriate funds, adequate manpower, sufficient training and necessary physical infrastructure is recommended.

Keywords: NEP 2020, North Eastern Region India, Administrator, OLS, Relative Strength Index

References

- Aithal, S., & Aithal, S. (2020). Analysis of the Indian National Education Policy 2020 towards Achieving its Objectives. *International Journal of Management, Technology, and Social Sciences*, 5(2), 19-41. <https://dx.doi.org/10.2139/ssrn.3676074>
- Arun-Kumar, S., & Praseeda, C. (2023). The National Educational Policy 2020- A Comparative Review. *YMER*, 22(01), 722-731.
- Chaturvedi, A.P., & Lakra, A.P. (2022). A Survey of College Students Attitude towards National Education Policy 2020. *International Journal for Innovative Research in Multidisciplinary Field*, 8(8), 47-50. <https://doi.org/10.2015/IJIRMF/202208006>

- Dominic-Amalan, A., Aute, K., Yadav, N., Gajbhiye, C., & Lakhera, P. (2023). Challenges & Opportunities in New Education Policy in India-A Study. *European Economic Letters*, 13(3), 709-718.
- Gupta, M., Rao, V., & Nawathe, A. (2022). New Education Policy- Challenges Opportunities in Higher Education. *Utkal Historical Research Journal*, 35(I), 53-60.
- Indhu, T.R. (2022). National Education Policy 2020: Impact on Higher Education based on Theoretical Analysis. *Kerala Economy*, 3(4), 84-90. Jain, N. (2023). NEP 2020- A Mechanism of Skill Development through Vocational Education. *International Journal of Creative Research Thoughts*, 11(7), 753-762.
- Kumar, A. (2021). New Education Policy (NEP) 2020: A Roadmap for India 2.0. In James, W.B., Cobanoglu, C., & Cavusoglu, M. (Eds.), *Advances in Global Education and Research* (pp. 1-8). USF M3 Publishing, LLC.
- Kurien, A., & Chandramana, S.B. (2020, November). Impact of New Education Policy 2020 on Higher Education. <https://doi.org/10.6084/m9.figshare.13332413.v1>
- Mandal, A.A. (2023). A Critical Analysis of the National Education Policy 2020: Implications and Challenges. *International Journal of Research Publication and Reviews*, 4(7), 1971-1978.
- Maurya, A., & Ahmed, A. (2020). The New Education Policy 2020: Addressing the Challenges of Education in Modern India. *International Journal of Multidisciplinary Educational Research*, 9(12), 31-38.
- Muralidharan, K., Shanmugan, K., & Klockhov, Y. (2022). The New Education Policy 2020, Digitalization and Quality of Life in India: Some Reflections. *Education Sciences*, 12(75), 1- 21. <https://doi.org/10.3390/educsci12020075>
- Nandi, A. (2023). National Education Policy 2020- Challenges and Opportunities on the Educational System. *International Journal for Multidisciplinary Research*, 5(3), 1-11.
- Pallathadka, H., Manoharmayum, D.D., Pallathadka, L.K., & Makki, V.R.R. (2021). Journey through the India's National Education Policy-Previous and the Present. *Journal of Contemporary Issues in Business and Government*, 27(3), 272-279. <https://doi.org/10.47750/cibg.2021.27.03.039>
- Rani, R. (2022). National Education Policy-2020: Issues and Challenges. *Journal of Research in Humanities and Social Science*, 10(2), 6-9.
- Rathod, F.D., & Shrivastava, P. (2021). Prospects and Implementation of NEP-2020: Competency Based Education for Employability. *International Journal of Social Impact*, 6(4), 104-111. <https://doi.org/10.25215/2455/0604008>
- Reddy, M.V.B., Rao, P.B., & Keerthi, G. (2023). Issues and Emerging Challenges for NEP 2020. *International Journal of Scientific Research in Engineering and Management*, 7(5), 1- 11. <https://doi.org/10.55041/IJSREM20290>
- Roy, K., & Swargiary, K. (2023). *Transforming Education: The National Education Policy of 2020*. LAP LAMBERT Academic Publishing.
- Sarna, K.K., Puri, S., & Kochar, K.S. (2021). National Education Policy-2020: A Critical Review. *Hans Shodh Sudha*, 1(3), 8-14.
- Shaikh, F.S., & Prajapati, S. (2022). National Education Policy (NEP 2020): An Equitable and Inclusive Quality Education for all in Question. *International Journal of Advanced Research in Science, Communication and Technology*, 2(5), 88-94. <https://doi.org/10.48175/IJARST3565>
- Umare, M., Shende, A., Ganorkar, S., & Tekade, S. (2022). Impact of National Education Policy in Higher Education: An Empirical Study in the Changing Academic Environment. *Humanities and Social Sciences*, 82(2), 31-40.
- Verma, H., & Kumar, A. (2021). New Education Policy 2020 of India: A Theoretical Analysis. *International Journal of Business and Management Research*, 9(3), 302-306. <https://doi.org/10.37391/IJBMR.090308>

Acknowledgement: This paper is part of the project funded by the ICSSR.

A PRISMA REVIEW OF EXPLORING THE WORK LIFE BALANCE CHALLENGES AMONG FEMALE SCHOOL TEACHERS: A COMPREHENSIVE PERSPECTIVE

Mrs. Rupa Saha ¹, Prof. (Dr.) Subhasish Chatterjee ²

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

In today's fast-paced world, women face a significant challenge in maintaining a healthy work-life balance. With the increasing number of women in various professions, such as teaching, it is essential to establish a balance between personal and professional life. Work-life balance is crucial for minimizing stress, enhancing mental and physical well-being, and improving human performance.

To achieve this, women need a comprehensive support network, including relatives who can help care for children and handle domestic chores. Organizations play a significant role in creating a good organizational culture, allowing flexibility in timing and formulating policies that enable women to balance their productivity and loyalty with their time dedicated to organizational commitments. Work-life balance extends beyond domestic concerns for female employees, as they contribute economically to the welfare of the family. Organizations should offer transport, residential facilities, day care, and flexible working hours to help women manage their lives comfortably. Work-life balance involves focusing on achievement and enjoyment, which are critical components for career advancement and job satisfaction. This study examines the workload and work-life balance challenges faced by women schoolteachers, focusing on the PRISMA criteria. It examines the imbalance between work and personal life due to heavy family obligations, rigid job tasks, societal norms, and outdated gender roles.

Literature Review

10 literature out of 53 literature review.

Sr. No.	Authors	Year of Publication	Source of Research	Type of Research	Summary of Findings
1.	Chauhan, Sharma & Vidani	2024	Research Gate	Descriptive Research Design	This paper highlights the different factors which creates so many hurdles in balancing work and family life and how their productivity and growth get affected from imbalance work life.
2.	Kaviya M & Priya R	2025	Google	Quantitative Research	The major finding in this paper is most of the women school teachers were facing problem in managing work and family together due to long working hours, stress related health

¹ Research Scholar, The ICFAI University, Tripura

² Dean-Academic Affairs, The ICFAI University, Tripura

					issue and lack of proper support system in life.
3	Adel Ismail Al-Alawi, Eman Al-Saffar, et.al.	2021	Google Scholar	Quantitative Research Method	The result shows that how family – work conflict will directly affect performance of the employee whereas work – family conflict doesn't have direct effect or negative impact on employee's life.
4	Rahim Uddin, Mohammad Ahshanul , et.al.	2013	Google Scholar	Quantitative Research Method	The life of female school teacher in Bangladesh is average, it needs to be improved with the support of the organization by developing policies like flexible working time, crash for childcare, transport facility, residential facility etc.
5	K. Agha, F. T. Azmi, and A. Irfan	2017	Research Gate	Quantitative Research Method	The research finds out that work and personal life conflict reduces job role and teaching role satisfaction, if organization take work life balance initiative, then both the side improve.
6	Palanivelu & Mujeeb	2019	Research Gate	Quantitative Research Method	As per this study majority (55%) working women were satisfied with current working policies but still 45% working female wants more and more support from organization so that they can balance their work life easily.
7.	Farhana , Fahmida, et.al.	2024	Research Gate	Quantitative Research Method	This study revealed that working ladies of Bangladesh were suffering from physical and mental stress because of imbalance of work and family. Fulfilling both place requirements become difficult task for them. Reducing work load and spending more time in family can only help them out from a stressful life.
8.	Rajesh Raj Joshi	2024	Google Scholar	Quantitative Research Method	Most of the female teachers of private school faces a huge workload pressure by the management and due to accomplishing organization requirements they work hard in office and can't give more time to family, if family

					members and workplace support together then only she will be able to justify work life balance.
9.	Tejashwini K C, & Someshwari Mudda	2024	Research Gate	Quantitative Research Method	The study found that co - worker support, job enlargement and family member support will enhance the work life balance of female teacher.
10.	Allam Joseph & Praveen Kuma	2017	Google	Descriptive Research Design	This study found that working ladies are in more stress because of time management. Teachers working time never ever finish, they have to work in their home, in holidays also which affects their personal life.

Purpose

Explore the challenges faced by female teachers in maintaining a work-life balance, considering factors like family responsibility and social expectations, and to understand the physical, psychological, and emotional impacts of this imbalance.

Research Methodology

This systematic review examines the challenges of work-life balance faced by female school teachers, utilizing various databases and tools, including Google Scholar, ResearchGate, Scopus, and Academia.edu.

- **Inclusion Criteria**

The review's quantitative component included all case studies or prospectively published articles in English literature. Primary literature refers to original research articles published in peer-reviewed journals.

- **Exclusion Criteria**

Reports lacking the term “Work-life balance” were excluded due to vague reasoning behind the balance. The review also applied broader exclusion criteria, as in other studies that were similarly excluded.

Information Sources and Search Methodology

The systematic review adhered to the PRISMA framework (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) for systematic reviews and meta-analyses. Literature searches were conducted according to the outlined criteria, with a cut-off date of July, 2025, excluding the canvassed study reference list and the dataset of potentially eligible studies.

Analysis & Findings

The meta-analysis indicates female teachers' work-life challenges are intertwined with larger structural and sociocultural frameworks. Given these findings, it can be recommended that greater sensitivity towards women's needs focus on institutional change, including adjustable hours, improved task framing, enhanced supervision, and holistic wellness frameworks that promote balance between professional and personal life, as well as the well-being and efficiency of the institution.

Practical Implication

This paper highlights the cause and factors of imbalance work – life of women school teachers which creates mental stress, health issues, low concentration in work and low performance. The institution has to implement work life balance policies which will motivate them to balance all the roles in life.

Originality

This meta-analysis examines the intensified and miscellaneous factors of work-life imbalance for female school teachers within a professional setting. It integrates findings from several empirical studies to illustrate how a combination of rigid institutional frameworks, socio-cultural norms, and normative gender roles creates obstacles to balancing work and personal life among women educators

Conclusion

The work-life challenges faced by female teachers are intertwined with larger structural and sociocultural frameworks. Greater sensitivity towards women's needs should focus on institutional change, including adjustable hours, improved task framing, enhanced supervision, and holistic wellness frameworks that promote balance between professional and personal life, as well as the well-being and efficiency of the institution.

Keywords: PRISMA, Work-Life-Balance, Review, Challenges, Women, School teacher

Recommendation”-

References:

1. Chauhan, S., Sharma, S., & Vidani, J. (2024). Work-life balance. *Journal of Advanced Research in HR and Organizational Management*, 11(1–2), 38–45. <https://doi.org/10.24321/2454.3268.202403>
2. Kaviya, M., Mohana Priya, R., & Lekshmi, R. S. (2025). A study on work-life balance of women school teachers working in private schools. *European Economic Letters*, 15(1), 955–964. <https://doi.org/10.52783/eel.v15i1.2471>
3. Al-Alawi, A. I., Al-Saffar, E., AlmohammedSaleh, Z. H., Alotaibi, H., & Al-Alawi, E. I. (2021). A study of the effects of work-family conflict, family-work conflict, and work-life balance on Saudi female teachers' performance in the public education sector with job satisfaction as a moderator. *Journal of International Women's Studies*, 22(1), Article 39. <https://vc.bridgew.edu/jiws/vol22/iss1/39>
4. Uddin, M. R., Mamun, A. M. A., Hoque, N., & Uddin, M. S. (2013). Work-life balance: A study on female teachers of private education institutions of Bangladesh. *European Journal of Business and Management*, 5(13). <http://www.iiste.org/Journals/index.php/EJBM/article/view/7164>
5. Agha, K., Azmi, F. T., & Irfan, A. (2017). Work-life balance and job satisfaction: An empirical study focusing on higher education teachers in Oman. *International Journal of Social Science and Humanity*, 7(3), 164–171. <https://doi.org/10.18178/IJSSH.2017.7.3.813>

6. Palanivelu, V. R., & Mujeeb, M. (2019). A study of women work-life balance in education field. *IMPACT: International Journal of Research in Humanities, Arts and Literature*, 7(2), 292–297. <https://www.researchgate.net/publication/344402703>
7. Wohid, F., Eme, F. W., Fahim, I. H., Mim, M., & Ferdaus, F. (2024). Work-life balance and its influence on physical and mental health among female teachers of public university in Bangladesh. *Asia Pacific Journal of Medical Innovation*, 1(2), 68–75. <https://doi.org/10.70818/apjmi.2024.v01i01.011>
8. Joshi, R. R. (2024). Stress and support: Determinants of work-life balance for women teachers in private schools. *Journal of Musikot Campus*, 2(1), 193–218. <https://doi.org/10.3126/jmc.v2i1.70845>
9. Tejashwini, K. C., & Mudda, S. (2024). Factors affecting work-life balance among female teachers in Davangere District: An empirical study. *Iconic Research and Engineering Journals*, 7(7), 1–10. <https://www.researchgate.net/publication/377355986>
10. R, D. S. (2020). Work-life balance of women employees of teaching faculties in Karnataka State. *Journal of Management and Science*, 10(4), 40–42. <https://doi.org/10.26524/jms.10.9>

Introduction

Financial inclusion has increasingly been recognized as a critical enabler of inclusive economic growth and resilience, particularly during periods of systemic crisis such as the global financial recession and the COVID-19 pandemic. Broadly defined as the access to and usage of essential financial services—such as savings, credit, insurance, and digital payments—financial inclusion ensures that individuals, households, and businesses can participate actively and securely in the financial system. This, in turn, strengthens their capacity to withstand economic shocks and contributes to more equitable development outcomes (5).

The past decade has seen significant technological transformation, including the widespread adoption of digital financial services (DFS), which has altered how financial systems operate globally. As economies navigate post-pandemic recovery, inflationary pressures, and shifting digital paradigms, the relevance of financial inclusion in supporting economic stability and resilience has become more pronounced than ever. DFS platforms such as mobile money, digital wallets, and agent banking have played a transformative role, particularly in regions with historically limited banking infrastructure (2).

This study explores the longitudinal trajectory of financial inclusion between 2011 and 2021, using a comparative framework that examines changes across income groups and geographic regions. Leveraging data from the World Bank's Global Findex Database and the International Monetary Fund (IMF), the research evaluates the extent to which financial inclusion has evolved and how digital innovations have contributed to this change. It particularly focuses on regional disparities, demographic divides—especially those related to gender and age—and the broader influence of financial access on economic resilience.

By combining empirical data with analytical tools, this study aims to provide a comprehensive assessment of financial inclusion as both a developmental goal and a mechanism for economic fortification in the face of global disruptions.

Select Review of Literature

Financial inclusion is increasingly regarded as a key driver of economic development, poverty reduction, and financial stability. A growing body of literature establishes a strong connection between inclusive financial systems and economic resilience, especially during crises. The World Bank (5) asserts that access to financial services—such as savings, credit, insurance, and digital payments—enables individuals to build financial buffers and invest in long-term security. Beck et al. (1) similarly argue that economies with strong financial infrastructure recover more swiftly and sustainably from downturns, highlighting the systemic importance of inclusive finance.

¹ Ph.D. Research Scholar, Adamas University; State-Aided College Teacher, Vidyanagar College

The rise of digital financial services (DFS) has significantly advanced inclusion efforts over the past decade. Studies by Klapper et al. (4) and Chen et al. (2) emphasize the transformative role of digital tools such as mobile money, agent banking, and digital wallets in bridging service gaps in regions like Sub-Saharan Africa and South Asia. These platforms have expanded access for historically marginalized populations—including women, youth, and rural communities—contributing not only to household-level financial stability but also to broader economic resilience.

Despite these gains, persistent barriers hinder universal financial access. Demirgüç-Kunt et al. (3) identify key challenges, including weak infrastructure, low financial literacy, and socio-cultural constraints, particularly affecting rural and low-income populations.

While the literature affirms the positive impact of financial inclusion on resilience, much of the existing research is limited to specific countries or short-term analyses. A significant gap remains in long-term, global comparative studies. This research addresses that void by offering a decade-spanning, multi-regional analysis of financial inclusion trends from 2011 to 2021, with particular emphasis on the role of digital financial services in enhancing economic resilience across diverse income and demographic groups.

Purpose of the Study

The study aims to understand the long-term relationship between financial inclusion and economic resilience.

Key objectives include:

- Evaluating progress in financial inclusion across regions and income levels from 2011 to 2021.
- Assessing the role of DFS in enhancing inclusion and resilience.
- Extracting policy insights for improving equitable access to financial services, especially in marginalized regions.

Methodology

A mixed-method quantitative approach underpins this study:

- **Data Sources:** World Bank Findex (2011, 2021) and IMF datasets.
- **Key Variables:** Account ownership, credit access, DFS usage, demographic segmentation.
- **Tools Used:**
 - o Descriptive statistics to map trends.
 - o Principal Component Analysis (PCA) to determine key influencing factors.
 - o Regression analysis to establish correlations between inclusion and resilience.
 - o Visualizations to illustrate disparities and growth.

Analysis and Findings

5.1 Regional Disparities in Financial Inclusion

- **High-Income Regions:** Scored highest with 17,754.23 in 2021.
- **East Asia & Pacific:** Achieved significant progress (14,247.46) but experienced internal gaps.
- **Sub-Saharan Africa:** Despite gains, remained lowest at 6,749.93, reflecting structural exclusion.
- **Low-Income Countries:** At 1,163.58, continued to lag due to infrastructural and systemic limitations.

5.2 Gender and Age Inclusion Trends

- Women: In low-income countries, account ownership rose from 8.9% (2011) to 32.9% (2021); in high-income countries, from 82.2% to 95.1%.
- Youth (15–24): Increased from 7.3% to 35.3% in low-income regions.
- Older Adults (25+): Inclusion grew from 13.2% to 39.1% in low-income areas, yet remained lower than the 96.3% in high-income areas.

5.3 Credit Access: Institutional vs. Informal

- Formal Borrowing: Still limited in low-income countries (4.7% to 8.4%), while high-income nations rose from 13.1% to 46.9%.
- Demographics: Youth and the unemployed had lower access, while older adults in high-income regions reached a borrowing rate of 29.8%.

5.4 Informal Credit (Store-Based)

- Global store-based borrowing increased from 8.8% to 12.3%. Though often excluded from official strategies, it remains vital in informal economies.

5.5 Digital Payments Revolution

- Global Trends: o Low-income countries rose from 10.2% to 31.5%.
- Lower-middle-income from 18.6% to 37.2%.
- High-income countries reached 90.8%, indicating near-universal adoption.
- Demographic Patterns: o Gender: Men consistently outpaced women in DFS usage.
- Urban vs. Rural: Urban usage reached 80.3% by 2021.
- Employment Status: Even the out-of-labor-force population in high-income areas had DFS adoption rates up to 84.2%.

Practical Implications

This study holds significant relevance for diverse stakeholders:

- Policy Makers: Can design more inclusive, gender-sensitive financial strategies.
- Development Agencies: Insights guide donor investments in digital infrastructure and education.
- Financial Institutions: Encourages innovation in products suited to low-access markets.
- Social Planners: Data informs welfare programs aimed at women, youth, and informal workers.

Originality and Value

This research offers distinct contributions:

- A rare longitudinal analysis spanning a full decade of global data.
- Comparative focus on DFS adoption across income levels, gender, and employment.
- A unique integration of financial inclusion and economic resilience, a relatively under-studied link.

Conclusion and Recommendations

The decade from 2011 to 2021 witnessed substantial progress in financial inclusion, especially driven by DFS. However, disparities persist across regions, demographics, and service types. Strong correlations between inclusion and resilience highlight the need for targeted reforms.

Key Conclusions:

- DFS is the most influential driver of financial inclusion growth.
- Gaps in borrowing and financial access remain acute for rural, female, and low-income groups.
- Inclusion is integral to building resilience during global shocks.

Policy Recommendations:

1. Scale DFS Infrastructure: Support agent banking, mobile money, and digital wallets in underserved regions.
2. Boost Financial Literacy: Tailored financial education for rural and underbanked communities.
3. Invest in Infrastructure: Develop digital and physical banking services in remote areas.
4. Target Gender Gaps: Promote female-centric financial instruments and tackle sociocultural barriers.
5. Support Youth & Non-Workers: Provide accessible savings and credit tools for the unemployed and young populations.

In essence, closing the inclusion gap is crucial for bolstering economic resilience in an increasingly digital and uncertain global economy.

References

1. Beck, T., Demirgüç-Kunt, A., & Levine, R. (2014). *Financial institutions and markets across countries and over time: The updated financial development and structure database*. *The World Bank Economic Review*. <https://doi.org/10.1093/wber/lht020>
2. Chen, M., Luthria, M., & Ratha, D. (2020). *Digital financial services in Sub-Saharan Africa: Current trends and future outlook*. World Bank Group. <https://openknowledge.worldbank.org/handle/10986/33483>
3. Demirgüç-Kunt, A., Klapper, L., & Singer, D. (2018). *Financial inclusion and inclusive growth: A review of recent empirical evidence* (Policy Research Working Paper No. 8040). World Bank. <https://doi.org/10.1596/1813-9450-8040>
4. Klapper, L., El-Zoghbi, M., & Hess, J. (2016). *Achieving the sustainable development goals: The role of digital financial services* (CGAP Working Paper). Consultative Group to Assist the Poor (CGAP). <https://www.cgap.org/research/publication/achieving-sustainable-development-goals-role-digital-financial-services>

5. World Bank. (2020). *The Global Findex Database 2017: Measuring financial inclusion and the fintech revolution*. Washington, DC: World Bank. <https://globalfindex.worldbank.org/>

Introduction

Credit creation lies at the heart of banking operations. The ability of banks to lend effectively and recover loans on time determines not only their profitability but also the stability of the broader financial ecosystem. Unlike other industries, where products are tangible, the “product” of a bank is trust—trust that depositors’ money will be safeguarded, and that borrowers will repay obligations responsibly. Therefore, the culture of credit within the banking system is a vital determinant of financial health.

Over the past few decades, banking systems across the world have undergone significant transformation. Liberalization, technological innovation, and globalization have expanded the credit base and increased accessibility to financial services. While this democratization of credit has spurred economic growth, it has also exposed banks to heightened risks. The global financial crisis of 2008 serves as a cautionary tale, where unchecked lending practices, weak regulation, and inadequate risk assessment triggered systemic collapse. In emerging markets like India, challenges have manifested in the form of rising NPAs, frauds, willful defaults, and delays in loan recovery. These issues highlight the urgency of reforming credit practices and embedding a stronger culture of discipline and accountability in the system.

The concept of credit culture encompasses the norms, values, and practices that shape how lending decisions are made, monitored, and enforced within banks. A strong credit culture emphasizes due diligence, transparency, accountability, and a long-term perspective, whereas a weak culture is characterized by short-term gains, political influence, and tolerance for defaults. Reforming credit culture, therefore, is not only about improving technical risk models but also about altering organizational behavior, borrower attitudes, and regulatory frameworks.

In the Indian context, the problem of stressed assets has been one of the most persistent challenges in recent decades. According to the Reserve Bank of India (RBI), gross NPAs in scheduled commercial banks crossed ₹10 lakh crore in 2018, a figure that reflected both structural weaknesses and governance lapses. While measures such as the introduction of the Insolvency and Bankruptcy Code (IBC) and stricter provisioning norms have improved the situation, the underlying issues of weak appraisal systems, lack of accountability, and borrower complacency remain. Unless these structural deficiencies are addressed, the cycle of bad loans is likely to re-emerge.

Literature Review

Several scholars have examined the determinants of credit culture and proposed reforms.

- **Reddy (2018)** argues that India’s weak credit discipline stems from a combination of structural issues (priority sector mandates, political interference) and organizational weaknesses (poor risk

¹ Research Scholar, Department of Commerce, Chaudhary Devi Lal University, Sirsa

management, lack of accountability). He suggests that reforms must focus on depoliticizing credit decisions and strengthening internal governance of banks.

- **Sharma (2020)** emphasizes the importance of post-disbursement monitoring, arguing that Indian banks often fail to track borrower performance after loans are sanctioned. His study finds that effective monitoring can reduce default probability by 30–40%.
- **Laeven & Valencia (2018)**, in their global study of financial crises, highlight that poor credit practices and regulatory forbearance are leading causes of systemic banking failures. They advocate for early recognition of bad loans and strict resolution mechanisms.
- **Gupta (2021)** evaluates the performance of IBC and concludes that while it has improved recovery rates, delays and litigation reduce its effectiveness. He stresses the need for strengthening institutional capacity to speed up resolutions.
- **World Bank (2021)** underscores that financial inclusion policies must be balanced with strong risk assessment mechanisms. Unchecked credit expansion, even when aimed at development, can create long-term instability if repayment culture is weak.
- **Frost (2020)** examines how FinTech innovations in credit appraisal can transform risk assessment, particularly for underserved populations. However, he warns of systemic risks if digital lending is left unregulated.

Objectives of the Study

Every research endeavor is guided by a set of objectives that define its scope, focus, and contribution. This study aims to explore the weaknesses in existing credit practices of banks, analyze the systemic and behavioral causes of poor credit culture, and suggest reforms to strengthen the financial ecosystem. The specific objectives are as follows:

1. To examine the concept of credit culture and its relevance to the stability of the banking system and broader financial ecosystem.
2. To critically evaluate the Indian banking industry's credit practices, with particular reference to non-performing assets (NPAs), regulatory interventions, and governance issues.
3. To propose a set of comprehensive reforms—policy, institutional, technological, and borrower-focused—that can strengthen credit culture and ensure long-term sustainability of the financial ecosystem.

Through these objectives, the study seeks to bridge the gap between theoretical insights, regulatory frameworks, and practical reforms, offering a holistic pathway to credit culture transformation.

Research Methodology

The methodology of this study is primarily descriptive and analytical, relying on secondary data sources. Given the complexity of credit practices and the limitations of primary data collection in this context, the research draws upon published reports, scholarly articles, and regulatory documents to arrive at insights.

Research Design

The study employs a qualitative research design, focusing on content analysis of academic literature, policy documents, and industry reports. A comparative approach is used to evaluate credit practices across different countries, with India as the central case study.

Data Sources

1. Secondary Data:

- **Regulatory Reports:** Reserve Bank of India (RBI) circulars, annual Financial Stability Reports, Basel Committee on Banking Supervision (BIS) publications, and World Bank reports.
- **Scholarly Research:** Peer-reviewed articles, working papers, and case studies from databases such as JSTOR, ResearchGate, and Google Scholar.
- **Industry Reports:** Annual reports of major public and private sector banks, reports by rating agencies (CRISIL, Moody's), and consultancy firms (PwC, Deloitte).
- **Legislative Documents:** Insolvency and Bankruptcy Code (2016), SARFAESI Act (2002), and related amendments.

2. Comparative Case Studies:

- Advanced economies (e.g., Canada, Sweden) are studied for their conservative credit practices.
- Emerging economies (e.g., Brazil, China) are examined to understand the balance between financial inclusion and credit discipline.
- India is analyzed as the focal case, with emphasis on NPAs, IBC outcomes, and recent regulatory reforms.

Method of Analysis

The analysis is conducted through thematic content analysis, identifying recurring patterns and themes in the literature:

- Weaknesses in credit appraisal and monitoring.
- Institutional and cultural factors influencing repayment behavior.
- Impact of regulatory interventions on credit quality.
- Technological innovations in credit risk management.

Additionally, comparative analysis is used to highlight differences between countries with strong credit cultures and those struggling with defaults and instability. This enables identification of global best practices relevant to India.

Scope and Limitations

The scope of this study is restricted to **commercial banks**, with limited focus on non-banking financial institutions (NBFCs). While secondary data offers rich insights, the absence of primary surveys limits

the ability to capture borrower-level attitudes in real time. Moreover, since credit culture is a dynamic phenomenon influenced by evolving economic conditions, the findings must be interpreted as context-specific rather than universally applicable.

Findings and Discussion

The analysis of credit practices in both global and Indian contexts reveals multiple weaknesses that undermine financial stability. The findings are organized into six broad themes: (1) weaknesses in current credit practices, (2) causes of non-performing assets (NPAs) and systemic failures, (3) regulatory and governance challenges, (4) borrower behavior and cultural dimensions, (5) role of technology and innovation, and (6) comparative global insights.

1. Weaknesses in Current Credit Practices

a) Overemphasis on Collateral-Based Lending

One of the most significant weaknesses observed in banking systems, particularly in emerging economies like India, is the reliance on collateral-based lending. Banks often sanction loans primarily against tangible assets—land, property, or machinery—without adequately assessing the borrower's future income streams. This practice ignores the fundamental principle of cash-flow-based lending, which evaluates repayment capacity in terms of business viability rather than collateral value. When collateral prices decline, as witnessed in India's real estate sector, banks are left with insufficient recovery options.

b) Inadequate Credit Appraisal

Credit appraisal frameworks in many banks lack depth and rigor. While financial ratios and balance sheets are assessed, qualitative factors such as management integrity, market risks, and sectoral vulnerabilities are often overlooked. This has led to several high-profile loan defaults in India, where corporates obtained large loans despite weak fundamentals. Cases like Kingfisher Airlines and IL&FS underscore the consequences of inadequate due diligence.

c) Evergreening of Loans

The practice of “evergreening,” where banks extend fresh loans to defaulting borrowers to avoid classifying accounts as NPAs, has been widely documented in India (RBI, 2018). While this temporarily conceals the problem, it worsens long-term financial health by increasing the size of unviable exposures.

d) Weak Post-Disbursement Monitoring

A recurring issue across many studies (Sharma, 2020) is the lack of effective post-disbursement monitoring. Once loans are sanctioned, banks often fail to track borrower performance, leading to delays in identifying stress signals. This is particularly evident in large infrastructure loans, where cost overruns, project delays, and regulatory clearances affect repayment ability but remain unnoticed until defaults accumulate.

2. Causes of NPAs and Systemic Failures

a) Macroeconomic Shocks

Economic downturns, policy changes, and external shocks significantly impact repayment capacity. For instance, the slowdown in India's infrastructure sector post-2012 resulted in large-scale defaults among power and steel companies, contributing to the NPA crisis. Similarly, the COVID-19 pandemic caused repayment delays in MSME and retail sectors.

b) Governance Failures

Poor governance in banks contributes to weak credit culture. Public sector banks (PSBs) in India, which dominate lending, are particularly vulnerable to political interference in credit decisions. Studies by Reddy (2018) show that loans sanctioned under political pressure often bypass proper risk assessment, leading to high default rates.

c) Information Asymmetry

Despite improvements in credit bureaus such as CIBIL, information asymmetry persists. Borrowers can often obtain loans from multiple banks without full disclosure, resulting in over-leverage. This is compounded by weak inter-bank data sharing and lack of real-time monitoring systems.

d) Cultural Attitudes Toward Default

In India and many emerging economies, default is not always viewed as a serious breach of contract. Large corporates often treat defaults as negotiable, using legal delays and restructuring as bargaining tools. This erodes repayment discipline and creates moral hazard, where borrowers take risks knowing they can renegotiate or escape obligations.

e) Delays in Resolution

Before the Insolvency and Bankruptcy Code (IBC), loan recovery in India was painfully slow, with cases dragging on for years in Debt Recovery Tribunals (DRTs) and courts. Even under IBC, delays due to litigation reduce the effectiveness of recovery, undermining credit discipline.

Suggestions for improve credit culture

1. Shift to cash-flow-based lending and strengthen insolvency resolution (IBC).
2. Introduce accountability and incentive structures for bank officials.
3. Enhance post-disbursement monitoring with data-driven early warning systems.
4. Leverage AI, big data, and real-time credit bureaus for better appraisal.
5. Differentiate between genuine vs. willful defaulters; reward disciplined borrowers.
6. Improve legal enforcement and coordination between regulators.
7. Adopt global best practices while tailoring them to India's socio-economic context.
8. Promote financial literacy and borrower accountability at the grassroots level.

Conclusion

The health of any financial system depends fundamentally on the strength of its credit culture. In recent decades, the global banking industry—India included—has been repeatedly tested by credit crises, surges in non-performing assets (NPAs), and failures in corporate governance. These challenges highlight that reforming credit practices is not simply a regulatory obligation but a structural necessity for ensuring long-term financial stability and economic growth. In conclusion, a healthier financial ecosystem can only be achieved when all stakeholders—banks, regulators, borrowers, and policymakers—collaborate to strengthen credit culture. Reforming credit practices is not a one-time event but a continuous journey, requiring vigilance, adaptation, and cultural transformation. By institutionalizing discipline, embracing innovation, and prioritizing transparency, the banking industry can fulfill its role as the backbone of economic growth, both in India and across the globe.

References

1. Acharya, V. V., & Richardson, M. (2009). *Restoring Financial Stability: How to Repair a Failed System*. Wiley Finance.
2. Basel Committee on Banking Supervision (BCBS). (2019). *Basel III: Finalising Post-Crisis Reforms*. Bank for International Settlements.
3. BIS. (2019). *Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems*. Bank for International Settlements.
4. Frost, J. (2020). *The Impact of FinTech on Financial Services: Opportunities and Risks*. BIS Working Papers, No. 838.
5. Gupta, S. (2021). *Effectiveness of the Insolvency and Bankruptcy Code in India: A Critical Analysis*. Journal of Financial Regulation and Compliance, 29(2), 145–160.
6. Honohan, P., & Beck, T. (2007). *Making Finance Work for Africa*. World Bank.
7. Laeven, L., & Valencia, F. (2018). *Systemic Banking Crises Revisited*. IMF Working Paper WP/18/206.
8. Reddy, Y. V. (2018). *Indian Banking: Reform, Challenges, and Financial Stability*. RBI Occasional Papers.
9. Reserve Bank of India (RBI). (2018). *Financial Stability Report, December 2018*.
10. Reserve Bank of India (RBI). (2022). *Digital Lending Guidelines and Regulatory Framework*.
11. Sharma, R. (2020). *Post-Disbursement Monitoring in Indian Banks: Strategies and Challenges*. International Journal of Banking and Finance, 17(3), 45–62.
12. Stiglitz, J. E. (2010). *Freefall: America, Free Markets, and the Sinking of the World Economy*. W.W. Norton & Company.
13. World Bank. (2021). *Global Financial Inclusion and Credit Risk Management Report*.
14. PJ Nayak Committee. (2014). *Report on Governance of Public Sector Banks*. Government of India, Ministry of Finance.
15. Laeven, L., & Levine, R. (2009). *Bank Governance, Regulation, and Risk Taking*. Journal of Financial Economics, 93(2), 259–275.
16. European Central Bank (ECB). (2020). *Financial Stability Review*.
17. Moody's Investors Service. (2021). *Global Banking Outlook and Credit Risk Analysis*.
18. King, R. G., & Levine, R. (1993). *Finance and Growth: Schumpeter Might Be Right*. Quarterly Journal of Economics, 108(3), 717–737.
19. World Bank. (2019). *FinTech and Inclusive Lending: Emerging Trends and Regulatory Challenges*.
20. RBI. (2020). *Annual Report on Trends and Progress of Banking in India*.

Ritika Singh, Abhishek Singh, Vaibhav Raj, Ashish Kr. Jha, Khyati Shukla, Raushan Kumar ¹

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Background and Purpose

In today's digital era, social media has become one of the most influential platforms for marketing and influencing consumer decision-making. With the rapid proliferation of platforms such as Instagram, YouTube, Twitter, and Facebook, consumer behaviour is significantly shaped by peer reviews, influencer marketing, and online brand interactions. This study examines the impact of social media on consumer attitudes, motivations, and purchasing intentions, with a particular focus on urban consumers in Kolkata.

Literature Review

Understand which type of consumers are influenced mostly by Social Media.

Nowadays, consumers are playing a significant role in the marketplace phase. Simply, they can be defined as actors on the marketplace phase or individuals who purchase or consume products and services either online or offline. One of the variables that has been reported as a significant variable influencing consumers is demographic variables. For example, the number of male and female users has dramatically increased during the last years (Park and Jun, 2003). In terms of online segmentation, there is a slight difference. This is because there are two main online segments we can refer to, which are "*Online Insiders*" and "*Social Clickers*" (Riegner, 2007).

Consumers who actually buy online (Online Insiders)

Online Insiders are very active users on the internet and highly influential online shoppers in using different Social Media to buy and sell (Pookulangara and Koesler, 2011). Usually, consumers' choices are influenced heavily by online brands, and consumers can influence each other. This kind of event usually affects the repurchase process as a result. Therefore, Consumers are increasingly turning to Social Media in order to get more information on which to base their decisions (RAMSUNDER, NOVEMBER 2011). For instance, it can be noticed that most of the online shoppers tend to be younger, wealthier, better educated, more computer literate, and more likely to spend time on the internet, and shop online (Levin et al., 2005).

Consumers who browse the internet without buying online (Social Clickers)

Social Clickers are daily active people who tend to use the internet for different purposes, such as getting news, doing different research for different subjects, sharing information, and communicating with other users and from other cultures (Lee, 2013). They are heavy online communicators, but the most participatory ones tend to be younger and less affluent. These younger Social Clickers may not be influencing purchase decisions today, but could become strong influencers in the future (Vinerean et al., 2013).

¹ PGDM Students, ISB&M Kolkata

Understand why consumers use Social Media to purchase

The important elements of visiting websites are to help consumers communicate with other users in order to accomplish their purposes. Interaction with other users can affect buyers by many factors, which play a critical role in enabling consumers to have clear ideas about unfamiliar products (Constantinides, 2004). Using SM has become one of the necessities these days that affects consumers

in several ways. These factors can be classified as Design Factors, Information Factors, Product Factors, Psychological Factors, and Cultural Factors (Constantinides, 2004):

1. *Information Factors:* Consumers will be willing to buy online if a variety of products and information are provided sufficiently. Also, offers, warranties, and guarantees that are provided along with products will encourage consumers to shop online (Limayem et al., 2000).
2. *Design Factors:* Usually, consumers are affected by the design characteristics of a web page. If the website is well-designed and frequently updated, consumers will be more attracted to buy online. In addition, the way of designing is affected by detailed information provided about several products and the display of sites' themes (e.g., colours, icons, links, images...)
3. *Psychological Factors:* These factors affect consumers' attitudes towards online buying. For instance, if consumers build trust in a website, they will be willing to buy online comfortably and reduce uncertainty towards a product. Moreover, consumers may be influenced by their friends and relatives who affect their attitudes toward using SM.
4. *Cultural Factors:* Consumers can be affected by other cultures in choosing and making decisions about certain products. Also, it can affect consumers' lifestyles in interacting and communicating with new technologies (Pookulangara and Koesler, 2011).

Which products are most suitable for Social Media?

Many studies have made lots of analyses to recognize and predict the relationship between the product and shopping behavior. Their analysis helped them to make a list of products that would be suitable to be sold via the internet. The list is as follows (Miller and Lammas, 2010):

1. *Intangible Products (Information) Category:* products that provide information to consumers, such as online videos, music, computer software, stock market, financial reports, and weather information.
2. *Tangible Products (High Differentiation) Category:* products that have variety classes, such as automobiles, electronic devices, books, clothes, accessories, flowers, and jewellery.

Type of Social Media mostly used by consumers

The most common SM that are mostly used by consumers for different purposes are: *Facebook, Twitter, and Instagram*. A study by Miller (2010) has found that over 11 million consumers use more than 70% of social media to purchase different products and services, to provide rich information about certain products, and to share comments with other consumers (Miller and Lammas, 2010).

Facebook has more than 6 million consumers who registered to buy and share information about products (Scott, 2013). A study showed that 60% of Facebook users say that they are more able to recommend a product or service to their friends after following that brand on SM (Parson, 2013). Facebook has reached 51% of users who buy different products through it (Kunkel, 2013).

Twitter has recorded 800,000 followers who showed their appreciation for the provided services of the products. The same study has indicated that written blogs have increased from 54% to 77% in two years, and watching several videos related to different products has increased from 32% in 2006 to 83% in 2008 (Miller and Lammas, 2010). Another study indicated that 79% of Twitter users say they are more able to recommend a product or service to their friends after following that brand on SM (Parson, 2013). Also, 64% of users use Twitter to buy different products (Kunkel, 2013).

Instagram has been spreading widely in the past two years because of active users who share and upload different kinds of photos. Based on the activities provided by users who use Instagram, the results showed more than 16 billion photos were shared among users (Krieger, 2012). Phil Gonzalez, the founder of Instagrammers (Instagram users), was interviewed to recognize the increase in Instagram users. He stated in the interview that the number of users who log in to Instagram increased in less than two years to 100 million users in more than 60 countries around the world. (Gonzalez, 2013). Because of the new adoption of Instagram, there is a lack of information about the use of Instagram as a tool in online purchasing.

Research Objectives

The study aimed to:

1. Examine consumer attitudes toward online shopping.
2. Identify the motivational factors influencing purchases through social media platforms.
3. Evaluate the extent to which social media impacts consumer decision-making compared to offline markets.

Methodology

A **descriptive research design** was adopted. Data were collected using a **structured online questionnaire** via Google Forms, selected through **simple random sampling**. Both primary data (questionnaire responses) and secondary sources (literature, articles, and journals) were used. Descriptive statistics and hypothesis testing (z-tests) were applied to analyse the influence of social media marketing on consumer behaviour.

Key Findings

- **Platform Usage:** 100% of respondents used at least one social media platform; Instagram (24.1%), YouTube (31.8%), and others (38.2%) were the most influential, while Facebook and blog posts had a negligible impact.
- **Shopping Preferences:** 52.7% preferred online shopping, while 47.3% favoured offline shopping.
- **Influence of Social Media:** Purchases were influenced at varying degrees – 29% (5–25% influence), 39.1% (25–50%), 31.4% (50–75%), and 0.6% (75–100%).
- **Engagement Patterns:** Respondents actively engaged with brand content—reading posts, sharing updates, participating in contests, and purchasing products directly through social media links.
- **Demographics:** Majority were aged 25–35 years, predominantly middle-class, with a balanced gender distribution (55.6% male, 44.4% female)

Discussion

The findings highlight that **peer recommendations, influencer content, and online reviews strongly shape purchase decisions**, making social media a more trusted medium than traditional advertising. Consumers actively search, compare, and validate product details on social platforms before purchase. While online shopping offers convenience and a broader reach, some consumers still value offline purchases for product assurance.

Implications

- For businesses: Enhancing customer interaction via targeted social media campaigns can increase purchase intent.
- For consumers: Access to peer-driven, transparent information empowers informed decision-making.
- For researchers: Future studies could explore cross-regional comparisons and the role of emerging platforms such as TikTok.

Conclusion

The study concludes that **social media has a profound and statistically significant impact on consumer behaviour**, altering how individuals search for information, evaluate options, and finalise purchases. Businesses must therefore integrate social media strategies into their marketing mix to remain competitive, focusing on personalised engagement, transparency, and consumer trust building.

Keywords: Social Media, Consumer Behaviour, Digital Marketing, Online Reviews, Influencer Marketing, Word-of-Mouth, Purchase Decision, Customer Engagement

References

- Arekar, K. (2019). The impact of social media on the effectiveness of consumer buying behaviour for electronics goods. *the electronic journal of information system evaluation* .
- Armstrong, K. a. (2014). Principles of marketing. *Peason Education, London*.
- C R KOTHARI, G. G. (2020). *RESEARCH METHODOLOGY METHODS AND TECHNIQUES*. NEW AGE INTERNATIONAL PUBLISHERS.
- E., C. (2004). Influencing the online consumer's behaviour: the web experience. *Internet research*.
- Gul., M. S. (2004). The relationship of social media with fashion consciousness and consumer buying behaviour. *Journal of Management information*.
- Gupta, D. S. (2019). *ADVANCED STATISYICS*. AGRA: SAHITYA BHAWAN PUBLICATIONS.
- K.KOESLER, S. &. (2011). Cultural influence on consumers' usage of social networks and it's impact on online purchase intentions. *Journal of Retailing and Consumer services*.
- Klieb, D. V. (2018). Impact of social media and consumer behaviour. *international journal information and decision sciences*.
- Kumar, N. (2004-2005). Consumer Search Behaviour in Online Shopping Environment. *Environment Indian University Press*.
- Manju Ahuja et al. (2003). An empherical investigation of online consumer purchasing behaviour. *Commu. of the ACM*.
- MILLER, R. &. (2010). Social media and its implication for viral marketing. *Asia Pacific Public Relations Journal*.
- Misbah, G. A. (2018). Impact of social media marketing on consumer buying behaviour. *research review international journal of multidisciplinary*.

- Mukhaini, E. A. (2014). The impact of social media on consumer buying behaviour. *Sultan Qaboos*.
- Naidu, G. (2013). A study on impact of social media in buying behaviour of consumer/ customer. *Journal of Harmonized Research in Applied Sciences*.
- Putter, M. (2017). Impact of social media on consumer buying intention. *journal of international business research and marketing*.
- RAMSUNDER, M. (2011). The impact of social media marketing on purchasing decisions.
- RIEGNER, C. (2007). Word of mouth on the web: impact of web 2.0 on consumer purchase decisions. *Journal of Advertising Research*.
- S., V. (2013). The effects of social media marketing on online consumer behaviour. *International journal of Business and Management*.
- Verma, C. (2018). Impact of social media on consumer behaviour in Indian context. *International journal of scientific engineering & research (IJSER)*

Introduction

The COVID-19 pandemic has pushed the world's economies into recession and ignited financial market turmoil on a scale unseen since the Great Depression and 2008 Financial Crisis (Sharif et al., 2020). This record crisis has brought unprecedented challenges, increased uncertainty, and necessitated hard choices, with far-reaching global effects having deep negative impacts on local markets and livelihoods (Goodell, 2020; (Hussain & Mukherjee, 2025)). The magnitude of the outbreak, both globally and domestically, also increased market volatility (Albulescu, 2020; Onali, 2020; Zhang et al., 2020; Baker et al., 2020). Studies by Onali (2020) and Al-Awadhi et al. (2020) illustrated that COVID-19 cases and deaths affected market performance worldwide, rather than only at the epicenter of the virus.

Objective

To examine whether the COVID-19 pandemic changed the commonality in volatility within the sample Countries and to examine the structural stability of GARCH-type models throughout the sample period. The study explores the effect of the COVID-19 pandemic on stock market volatility in three nations—India, Singapore, and the USA—using GARCH-type models, such as GARCH (1,1), T-GARCH, and E-GARCH, on daily stock index data from January 1, 2018, to December 31, 2022.

Research Methodology

This part outlines the econometric procedures that were applied in this study to analyse the volatility of stock returns. These methods include assessing volatility using GARCH (1, 1), T- GARCH, E-GARCH and extracting returns from stock price data. To understand the structural breakdown in the phase we have employed CUSUM and CUSUMSQ test

We used daily closing prices of STI for Singapore, Dow Jones for USA and BSE Sensex for India from 1st Jan 2018- 31st Dec 2022, where Period 1 is denoted as pre-covid-19 phase and Period 2 is considered as covid- 19 phase. The entire data has been collected from respective stock markets website as well as from yahoofinance.com.

Analysis & Findings

The study analyzes shifts in volatility patterns prior to and during the pandemic and tests the structural stability of volatility models through CUSUM and CUSUMSQ tests. Results indicate strong clustering of volatility across markets, and E-GARCH as the most appropriate model for modeling asymmetry and long-run volatility effects. Although government interventions during the pandemic had differential impacts on market behavior, sometimes boosting investor sentiment, in others, especially in the U.S., strict measures heightened the volatility. The research emphasizes flexible economic policy and investor-

¹ Research Scholar (Ph.D-SRF), Department of Commerce, University of Calcutta

² Research Scholar (Ph.D-SRF), Department of Commerce, University of Calcutta

informed policies in risk management during public health emergencies. The findings provide crucial information for policy makers and portfolio managers dealing with uncertain financial markets.

Conclusion

The pandemic's effects on the economy and markets have highlighted the value of flexibility and preventative strategy. Apart from mass consumption, there are also beneficial potential when social, economic, environmental, and institutional policies are integrated (Spangenberg, 2010). Fiscal and monetary policy measures throughout the pandemic are also reflected in the stock market's robust response to the COVID-19 crisis. Investigational opportunities were created by voluntary social separation and government-imposed limitations (Baker et al., 2020). The stock market continues to be an important social instrument, reflecting the actions of different organizations and people under unpredictable and changing circumstances. The market provides tangible insights into the state of the economy through its underlying movements. The COVID-19 pandemic affected investor psychology and behaviour and greatly increased uncertainty, far more than conventional risk variables (Wagner, 2020).

Keywords- *COVID-19, Volatility clustering, GARCH Models, CUSUM, CUSUMSQ*

Introduction

SMEs known as small and medium enterprises play an important role in national economy in India with their various contribution in employment, industrial output, production and exports (Yadav & Tripathi, 2018). But most of the small and medium industries are struggling while doing their business operation in India and particularly in remote areas of NER (Barman & Das, 2013). These difficulties are in reaching to big cities and international market due to transportation and distribution issues, location of the market, space unavailability and poor connectivity etc (Singh et.al. 2015). These challenges can be overcome with an efficient smart technologies and digital tools such as e-commerce, e-marketing (Eid & El-Gohary, 2011). Hence, this paper aims to identify the challenges that is faced by the SMEs of remote regions of India. It also suggest different opportunities of online digital tools to connect SMEs with global world in different marketing activities.

Literature

SMEs is one of the prominent sector in most of the countries and becoming more important and appropriate way to promote entrepreneurial and managerial skills (Agarwal, 1988; Bharti, 1978). In India, these small enterprises contribute in economic development by providing flexibility, creating employment opportunity, innovation through entrepreneurship and increase international trade by varied economic condition for rural and urban population (Hussain et.al. 2009). Wani et al., (2003) mentioned that it is because of SMEs contribution, India has been performed consistently with average GDP rate worldwide (Sudan, 2005). Despite of SMEs significance to the economy, most Small and medium firms of India are not able to sustained in the era of globalization, mainly because of limited geographical reach (Singh & Sinha, 2016). With the use of the Internet, SMEs have the capability to increase geographic coverage of an organization's beyond its traditional heartland (OECD, 2004). The online medium such as online marketing provides many opportunities for the customer by creating loyalty that make easier for offline business by providing sale services through the Web (Van Riel et.al. 2004).

Online Marketing is considered as an indispensable technique in marketing environment and is changing the shape and nature of its business all over the world. It helps to create lot of opportunity and can able to eliminate threats especially for SMEs by giving the chance of using electronic marketing (El-Gohary, 2012).

Despite of many advantages provided by online marketing, SMEs sector in India are still lack behind of adopting new technology and failed to incorporate online marketing. Particularly, SMEs of north eastern region are facing huge challenges in latest technological, marketing competitions, skilled manpower likes & dislikes of consumer, infrastructure and inadequate of funds (Singh et.al. 2015) and SMEs of this region need a proper environment, encouragement, awareness, trainings and cost effective solution which would help them to use online medium for their marketing activities.

North–Eastern Region (NER) of India consists of eight states namely- Auranchal Pradesh, Assam, Manipur, Sikkim Meghalaya, Nagaland, Mizoram and Tripura which covers 263179 Km² of area (Bhattacharjee, 2017). It is considered as industrially backward region and the contribution of NER is

¹ Assistant professor, Techno India University

much lower than the contribution of other parts of the country to the national economy. SMEs is the dominating industrial sector of NER due to the absence of large industries.

Purpose

This study is mainly based on the SMEs of remote areas of India such as north eastern region of India. It contributes to provide a different dimension to small and medium enterprises and communities of north-east to promote their online business in the local and foreign markets.

Methodology

The present study being exploratory in nature, a questionnaire was designed based on an initial set of variables that are chosen based on their relevance and contribution to online and social media marketing. The questions that were qualitative in nature and were presented in five points Likert scale (5 for highly satisfied, 4 for satisfied, 3 for neither satisfied nor dissatisfied, 2 for dissatisfied, and 1 for highly dissatisfied). Then to verify the construct of the designed questionnaire, pilot testing was carried out by distributing the questionnaire to ten numbers of small and medium enterprises of Assam, and subsequently, necessary changes were incorporated into the questionnaire. Finally, this modified questionnaire was distributed to the sample respondents through e-mail and personal visits to the SMEs.

Analysis and Findings

The different challenging variables for offline marketing of SMEs are identified from the secondary literature (models, theories, other empirical studies, annual report etc) and then appropriate statistical analysis is carried out to identify the major significant variables responsible for growth of SMEs. The result indicated that the major challenging variables are technological, marketing issue and financial issue. Therefore online factors should be adopted by the SMEs to expand their business in an efficient and effective way.

Implications

The factors which were identified for marketing challenging and online marketing are in the context on SMEs of North-East and hence these cannot be generalized to India or to any developing countries. Hence future study should emphasize for generalization of such factors.

Keywords: *SMEs, impacts, digital tools, online marketing (OM), social media marketing (SMM)*

References:

- Agarwal, A. K. (1988). North Eastern Economy-Problems and Prospects. Mittal Publication, Delhi.
- Barman, K & Das, B (2013). A Study of Micro Enterprises in Hajo Development Blocks, Kamrup (Assam). *Journal of Rural Development*, 32(3).
- Bharti, R. K. (1978). Industrial Estate in Developing Economies. National Publishing House, New Delhi.
- Bhattacharjee, R. (2017). *Mainstreaming the Northeast in India's Look and Act East Policy*. Singapore: Springer publications, 323-338.
- Eid & El-Gohary (2011). E-marketing in developed and developing countries: Emerging Practices. *International Journal of Online Marketing and Applied Polymer Science*, 119 (2), 709-718.
- El-Gohary, H.(2012). Factors affecting E-Marketing adoption and implementation in tourism firms: An empirical investigation of Egyptian small tourism organizations. *Tourism Management*, 33(5), 1256-1269. DOI: 10.1016/j.tourman.2011.10.013.
- Hussain, I., Hussain, M., Hussain, S., & Si, S.(2009). Public Private Partnership and SMEs Development: The Case of AJ&K Pakistan. *International Review of Business Research Papers*, 5(5), 37-46.
- OECD. (2004). ICT, E-business AND SMEs organisation for economic co-operation and development. OECD Publications France, 2-46.

- Singh, D., Khamba, J.S., & Nanda, T. (2015) .Role of Technological Innovation in Improving Manufacturing Performance: A Review. *International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, 9(1), 398 -402.
- Singh, P. & Sinha, S. (2016). E-commerce embracement by micro, small and medium enterprises expediting the economic development. *IJER Serials Publications*, 13(1), 1-6.
- Sudan, F. K. (2005).Challenges in Micro and Small Scale Enterprises Development: Some Policy Issues.*Journal of IT and Management*, 3(2), 67-81.
- Van Riel, A., Semeijn, J., Birgele, M.V. & Streukens, S. (2004). E-services and physical fulfillment: How e-loyalty is created. University of Liège at Sart Tilman, Belgium, 2-21.
- Wani, V. P., Garg, T. K., & Sharma, S. K. (2003). The role of technical institutions in developing a techno-entrepreneurial workforce for sustainable development of SMEs in India. *International Journal of Management and Enterprise Development*, 1(1), 71-88.
- Yadav, S., & Tripathi, V.(2018). Challenges and obstacles faced by micro, small, and medium sized enterprises (MSMEs) in India. *International Journal of Business and Management Invention (IJBMI)*, 7(4), 48-54.

Introduction

This literature review critically examines the intersection of scientific temper, reflective thinking, and Indian traditional knowledge systems in the context of commerce and management education. Building on the National Education Policy (NEP) 2020's vision for holistic and multidisciplinary learning, it synthesizes scholarly works that advocate for the development of critical reasoning, ethical decision-making, and inquiry-led learning. Drawing from classical Indian epistemological frameworks such as *Nyaya Shastra* (logic and reasoning), *Prashnottara Vidhi* (question-and-answer method), and *Shastrartha* (structured debate), the review identifies five pedagogical pillars: critical thinking, problem-solving and innovation, data-driven decision-making, ethical business practices, and lifelong reflective learning.

Furthermore, the review systematically incorporates insights from existing literature on scientific temper and reflective thinking, predominantly researched in school education and other disciplines such as science, technology, and humanities. It analyzes how these established pedagogical approaches—such as reflective journals, structured debates, and inquiry circles—can be effectively adapted to commerce and management education. By contextualizing these approaches within business decision-making, strategic thinking, and ethical leadership, the review highlights pathways to foster graduates who are analytically competent, ethically grounded, and socially responsible. This integrative perspective offers a transformative andragogical framework that combines classical Indian wisdom with modern educational goals, preparing learners for responsible leadership in a complex global economy.

Literature Study Objectives:

The primary objective of this research is to explore how **classical Indian epistemological traditions** can be meaningfully integrated into modern commerce and management education. Specifically, it examines the pedagogical contributions of:

- **Nyaya Shastra** (logic and reasoning),
- **Prashnottara Vidhi** (question-and-answer method), and
- **Shastrartha** (structured debate).

Building upon these traditions, the review identifies **five Key Focus Areas**:

1. Critical thinking and Reasoning effects framework with that of traditional and current practices intersection

¹ Assistant Professor, Department of Management Studies, SA Engineering College, Poonamallee-Avadi Road, Thiruverkadu, Chennai

² Associate Professor, Department of Commerce, Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya, Enathur, kanchipuram

2. Innovative Delights analysis with respect to intersection
3. Data-driven futurology
4. Ethical Leadership practices, and
5. Continuous reflective learning cycles

The purpose is to establish a **transformative andragogical framework** that synthesizes ancient Indian wisdom with contemporary global business education.

Literatures Selected

The Review of Literatures selected based on three topics

1. Scientific Temper – Extensively studied in the contexts of school education, science, and technology, focusing on fostering inquiry, skepticism, and rational problem-solving. Extension analysis of the transformation levels in colleges.
2. Reflective Learning – Exploring feedback mechanisms and critical analysis through reflective journals, inquiry circles, and structured debates as catalyst for critical and deep learning.
3. Indian Knowledge Systems – Extraction and analysis based on the classical epistemological frameworks and their pedagogical practices, particularly their relevance to structured reasoning, ethical inquiry, and intellectual debate.

Methodology

This review adopts a systematic and integrative methodology. It critically evaluates existing scholarship on reflective practices and scientific temper, while also drawing insights from classical Indian epistemology. Rather than employing a purely descriptive stance, the methodology emphasizes comparative synthesis, supported by tools such as thematic analysis, conceptual mapping, and cross-disciplinary comparison. These tools help identify points of convergence between modern reflective pedagogy and traditional frameworks of reasoning and debate. This analytical approach enables the construction of a multidisciplinary framework suited for the unique demands of commerce and management education.

Analysis and Findings

The review highlights three significant insights emerging from the synthesis of existing scholarship and classical epistemological traditions.

1. Adaptability of Reflective Practices

Reflective learning tools such as journals, inquiry circles, and structured debates are extensively applied in disciplines including education, humanities, and professional training. These demonstrate strong potential for adaptation within commerce and management education. When contextualized to business environments, these practices foster deeper engagement with decision-making, strategic planning, and ethical reasoning, thereby cultivating reflective and analytically capable graduates.

2. Relevance of Classical Traditions

Indian epistemological frameworks, particularly Nyaya Shastra (logic and reasoning) and Shastrartha (structured debate), provide time-tested methods of inquiry that resonate with contemporary pedagogical imperatives of critical thinking and structured problem-solving. Their emphasis on systematic reasoning and dialectical engagement offers a culturally grounded yet globally relevant pedagogical foundation for management education.

3. Pedagogical Pillars as Outcomes

The integration of reflective practices with classical traditions consolidates into five key focus areas: Critical thinking and Reasoning effects framework, Innovative Delights, data-driven futurology, ethical leadership practices, and lifelong reflective learning. Together, these pillars enable the development of graduates who are:

- Analytically competent – demonstrating critical reasoning and innovative problem-solving skills,
- Ethically grounded – exhibiting sensitivity to social, moral, and organizational responsibilities, and
- Socially responsible – embracing leadership that transcends profit motives toward sustainable and inclusive growth.

Collectively, these findings underscore that the convergence of reflective thinking and Indian epistemological traditions offers a unique, integrative, and transformative model for commerce and management education, aligning with the holistic vision of the National Education Policy (NEP) 2020.

Practical Implications

The review highlights significant practical applications:

- Curriculum Innovation: Embedding reflective journals, debates, and inquiry-driven projects in commerce and management programs.
- Pedagogical Reform: Designing courses that encourage data-driven yet ethically guided decision-making.
- Leadership Development: Cultivating managers and entrepreneurs who integrate analytical rigor with ethical reasoning.
- Global Relevance: Aligning Indian-rooted pedagogical traditions with international educational priorities, thereby operationalizing NEP 2020's call for globally competent yet culturally grounded graduates.

Keywords: *Scientific Temper, Commerce and Management Education, Indian Knowledge Systems, Nyaya Shastra, Prashnottara Vidhi, Shastrartha, Critical Thinking, NEP 2020, Reflective Thinking, Ethical Business Practices, Inquiry-Led Learning.*

EXAMINING THE GROWTH OF E-COMMERCE AND DIGITAL MARKETING IN RURAL AREAS: TRENDS, CHALLENGES, AND OPPORTUNITIES

Tanya Agarwal, Ritobina Chatterjee, Anubhuti Kedia, Raima Vidya ¹

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

INTRODUCTION

E-commerce (electronic commerce) is the activity of electronically buying or selling of products on online services or over the Internet. E-commerce (electronic commerce) is the activity of electronically buying or selling of products on online services or over the Internet. Electronic commerce draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection systems. E-commerce is in turn driven by the technological advances of the semiconductor industry, and is the largest sector of the electronics industry.

Digital marketing is often referred to as 'online marketing', 'internet marketing' or 'web marketing'. The term digital marketing has grown in popularity over time, particularly in certain countries. The supreme purpose of the digital marketing is concerned with consumers and allows the customers to intermingle with the product by virtue of digital media.

The digital revolution has brought about transformative changes across various sectors, and one of the most significant shifts has been in the way businesses market their products and deliver services. Digital marketing and e-commerce have emerged as essential tools for reaching customers, enabling even small businesses to tap into broader markets. While these trends have been well established in urban areas, recent developments show a growing influence of digital platforms in rural regions, where traditional marketing and retail infrastructure have historically been underdeveloped.

With increasing internet penetration, widespread smartphone usage, and various government initiatives such as Digital India, rural populations are becoming more digitally connected than ever before. This connectivity is opening up new avenues for online shopping, digital payments, and targeted marketing, thereby bridging the gap between rural consumers and mainstream markets.

However, the adoption of digital marketing and e-commerce in rural areas also presents unique challenges. Issues such as low digital literacy, limited awareness, language barriers, unreliable logistics and delivery systems, and trust deficits in online transactions continue to hinder widespread adoption. Despite these hurdles, many rural entrepreneurs and small businesses are beginning to explore digital tools to promote their products, access wider audiences, and increase profitability.

Electronic commerce draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection systems. E-commerce is in turn driven by the technological advances of the semiconductor industry, and is the largest sector of the electronics industry.

¹ PGDM Students, ISB&M Kolkata

Digital marketing is often referred to as 'online marketing', 'internet marketing' or 'web marketing'. The term digital marketing has grown in popularity over time, particularly in certain countries. The supreme purpose of the digital marketing is concerned with consumers and allows the customers to intermingle with the product by virtue of digital media.

The digital revolution has brought about transformative changes across various sectors, and one of the most significant shifts has been in the way businesses market their products and deliver services. Digital marketing and e-commerce have emerged as essential tools for reaching customers, enabling even small businesses to tap into broader markets. While these trends have been well established in urban areas, recent developments show a growing influence of digital platforms in rural regions, where traditional marketing and retail infrastructure have historically been underdeveloped.

With increasing internet penetration, widespread smartphone usage, and various government++t initiatives such as Digital India, rural populations are becoming more digitally connected than ever before. This connectivity is opening up new avenues for online shopping, digital payments, and targeted marketing, thereby bridging the gap between rural consumers and mainstream markets.

However, the adoption of digital marketing and e-commerce in rural areas also presents unique challenges. Issues such as low digital literacy, limited awareness, language barriers, unreliable logistics and delivery systems, and trust deficits in online transactions continue to hinder widespread adoption.

LITERATURE REVIEW

The expansion in internet and digital technology penetration has revolutionized business ecosystems, as rural markets increasingly become key hubs for digital marketing and e-commerce. Researchers contend that rural entrepreneurs are embracing methods like social media, mobile marketing, and search engine optimization to target large markets, but adoption is not even because rural entrepreneurs face barriers of digital literacy, trust, and limited expertise in sophisticated strategies (Goel, Veluri, & Mishra, 2024). Research emphasizes that usage of digital tools is contingent on perceived usefulness, cultural appropriateness, and the perceived relevance of marketing messages to local customers (Ravi & Rajasekaran, 2024). Consumer behavior studies in rural India reveal that price sensitivity, word-of-mouth, product quality, and affordability are still more influential than aspirational branding, with price being a determining factor of online shopping and after-sales service (Yadav & Thomas, 2025; Kumar & Singh, 2023). Aside from consumer decisions, rural e-commerce has also been associated with broader socio-economic impacts. China's evidence shows that engagement in digital platforms improves employment quality, income diversification, and intermediary reduction, while Indian evidence records similar trends among farmers and artisans who have more market access through online marketing (Zhao et al., 2022; Bhatia-Kalluri, 2021).

However, such benefits tend to stay among digitally literate communities with more infrastructure, revealing inequities in inclusivity. Sustained issues of unstable internet connection, power outages, and device cost are among the causes of rural-urban digital disparities (Sharma et al., 2021). Closing these inequities is demonstrated by interventions such as ITC's e-Choupal, Internet Saathi, and community-owned initiatives like eSamudaay, where context-specific innovations enhance adoption and foster trust in e-commerce in rural areas. Comparative African and Namibian perspectives also further emphasize that localized approaches, such as mobile-money integration and training, are essential for long-term adoption (Ndume et al., 2021). In general, digital marketing and e-commerce have transformative potential for rural development but are sustainable if they can address infrastructural issues, elevate digital skills, and support inclusive participation.

OBJECTIVES OF THE STUDY

The objective of the study is to aim the explore the potential and challenges of e-commerce in rural markets, with a particular focus on how the rapid growth of digital marketing is impacting the market structure and how the new market structure is affecting the market as well as the consumers and how it

is minimizing the gap between the consumer need and market supply. As ecommerce is a platform which connects directly to consumer needs and resolving their problem in a quick span

Understanding market structure and consumer behavior still remains the main motive for this study and consumer market is very huge and diverse entering into market is a strong competition for any sector so through this study we analyze how ecommerce and digital marketing has made its space in the market creating a huge market cap with large no of customers

Furthermore, it aims to understand the factors driving adoption, the barriers that still exist, and the long-term implications of digital transformation for sustainable development in rural markets and how small business owners are affected in this ecommerce era market . This study is conducted with the help of raw data collection, literature reading and our analysis on the data collected.

RAW DATA COLLECTION AND ANALYSIS

In order to collect raw primary data a structured survey was conducted on a sample of 50 people respondents residing in a rural area. The participants were selected to represent the targeted demographic profile and the following questionnaire was administrated to them.

1. Name
2. Age
3. Gender
4. Occupation
5. How often do you use e-commerce?
6. Which mode do you prefer more for shopping? (e-commerce,in-store)
7. Which Social media platforms do you use the most?
8. Do you trust online advertisement?
9. Which mode of payment do you prefer? (Cash, UPI)
10. Which type of ads catch your attention?
11. Have you ever made a purchase after seeing an AD on social media?

As per the data collected from public there are 40% majority of group who uses e-commerce on a weekly basis. Which means that e-commerce plays an important role in daily life. And 50% of the responder prefers e-commerce for shopping mostly through Instagram pages, and then Flipkart and then Amazon.

Moving towards the digital marketing aspect very a smaller number of people gets influenced by the social ads as per the data collected only 12% of the responders are affected by the ads on digital platform i.e. Instagram ads Facebook ads and all other websites but only sometimes only by getting attracted by discounts and offers. As very huge percentage gets influenced by the ads to purchase any item. For the payment UPI is the most used method

Overall as per the data collected from public we can say that ecommerce is playing an important role in life of rural sector with the help of digital marketing strategies as we see a huge growth of ecommerce in the life of rural sector and how with time people are getting dependent on the ecommerce platform and they are getting more attracted toward the digital marketing strategy adopted by various platforms.

CONCLUSION

The research points out that e-commerce and online marketing are not limited to only urban markets anymore but are increasingly influencing consumer behaviour and business prospects in rural areas. The

research affirms that consumers in rural areas are increasingly using e-commerce platforms, inspired by growing internet penetration, smartphone adoption, and a digital push from the government. A good part of the rural population today is dependent on web-based shopping and electronic payment mechanisms, indicating that e-commerce is assuming a fundamental role in their lives

Simultaneously, the study finds that rural consumers are actively engaged on platforms such as Instagram, Flipkart, Amazon, and online advertisements have minimal impact, with a minority directly making decisions from online advertisements, rather than affordability, discounts, and convenience being more influential. This reveals that companies need to craft context-based digital marketing that they can popularize with rural values and requirements.

Nonetheless, issues like low levels of digital literacy, infrastructural constraints, truth deficit, and language problems still limit the widespread adoption of digital platforms

Overcoming these challenges with an interventionist measure designed according to one's needs- like vernacular content, training initiatives, efficient logistics, and awareness programs – will prove key to sustained growth

REFERENCES

1. Bhatia-Kalluri, A. (2021). E-commerce for rural micro-entrepreneurs: Mapping restrictions, ecologies of use and trends for development. arXiv. <https://arxiv.org/abs/2108.09759>
2. Goel, R., Veluri, K. K., & Mishra, S. (2024). Understanding the use of digital marketing by rural micro-entrepreneurs of India: A systematic literature review. *Educational Administration: Theory and Practice*, 30(5). <https://doi.org/10.53555/kuey.v30i5.4217>
3. Kumar, P., & Singh, R. (2023). Serving rural market via e-commerce: A study for consumer durables. *Management Theory and Studies for Rural Business and Infrastructure Development*, 45(1), 109–118. <https://doi.org/10.15544/mts.2023.15>
4. Ndume, M., Kapolo, R., & Amadhila, E. (2021). An exploration of factors influencing the adoption of ICT-enabled entrepreneurship applications in Namibian rural communities. arXiv. <https://arxiv.org/abs/2108.09789>
5. Ravi, S., & Rajasekaran, S. R. C. (2024). A perspective of digital marketing in rural areas: A literature review. *Journal of Business Review*, 9(2), 112–122. <https://openaccesssojs.com/JBReview/article/view/1388>
6. Sharma, P., Singh, R., & Gupta, A. (2021). A survey on rural internet connectivity in India. arXiv. <https://arxiv.org/abs/2111.10219>
7. Yadav, N., & Thomas, M. K. (2025). The impact of digital marketing on rural Indian markets: A study on consumer behavior and market reach. *International Journal of Scientific Research in Engineering and Management (IJSREM)*, 9(6). <https://ijsrem.com/download/the-impact-of-digital-marketing-on-rural-indian-markets-a-study-on-consumer-behavior-and-market-reach>
8. Zhao, Y., Liu, J., & Wang, H. (2022). Digital economy, rural e-commerce development, and farmers' employment quality. *Sustainability*, 14(7), 2949. <https://doi.org/10.3390/su14052949>

Introduction

Healthcare organizations are complex systems where the quality of services depends significantly on the performance, satisfaction, and well-being of their workforce on the customers or patients. Unlike many other industries, hospitals are highly human-resource intensive, requiring the coordinated efforts of professionals from multiple disciplines such as doctors, nurses, radiology technicians, administrative staff, clinical staff and support personnel. Managing such a diverse workforce is a challenge, especially in India where healthcare institutions are embedded in traditional socio-cultural frameworks that often sustain gender stereotypes and exclude marginalized groups.

Gender and diversity management has emerged as a crucial dimension of Human Resource (HR) strategy across the world. Hospitals that promote inclusive HR practices create an environment of trust, fairness, and mutual respect, which directly influences job satisfaction, reduces attrition, and enhances performance. Despite its importance, diversity management in Indian hospitals is often underdeveloped, fragmented, and overshadowed by operational priorities. Issues such as unequal pay, lack of maternity and paternity support, underrepresentation of women in leadership, and absence of LGBTQ+ inclusion policies continue to persist in the hospital sector in India.

This study examines how gender and diversity management in hospital HR policies affects employee satisfaction, retention, and performance. It explores the challenges hospitals face in implementing inclusive HR strategies and identifies opportunities for developing sustainable frameworks.

Purpose

The purpose of this study is to analyze the relationship between inclusive HR practices and employee outcomes within India Indian hospitals. The study aims to:

1. Investigate how gender and diversity-sensitive HR practices influence employee satisfaction in their workplace.
2. Assess the effect of inclusive policies on staff retention and organizational commitment.
3. Explore the impact of inclusivity on employee performance and productivity.
4. Identify the key challenges of implementing gender and diversity management in Indian hospitals.
5. Provide practical recommendations for hospital administrators to enhance inclusivity in HR systems.

Literature Review

Theoretical and empirical research highlights the critical role of diversity management in organizational success. Cox (2001) emphasizes that multicultural organizations harness creativity and innovation by

¹ MHA, Swami Vivekananda University, Barrackpore

valuing employee differences. Shore et al. (2011) propose that inclusive workplaces enhance trust, engagement, and team cohesion, which reduce turnover.

In healthcare, Betancourt (2016) demonstrates that culturally competent organizations improve both employee outcomes and patient satisfaction, creating a direct link between HR inclusivity and healthcare quality. However, studies in the Indian context suggest that while hospitals are modernizing technologically, HR systems remain conservative (Kundu & Mor, 2017). They point to issues such as gender inequality in promotions, stereotypes in recruitment, and weak frameworks for supporting marginalized employees.

Thomas and Ely (1996) argue that managing diversity is not only an ethical necessity but a performance driver. They highlight how those organizations ignore inclusivity and risk reduced employee morale and productivity. Within hospitals, this risk is magnified, as disengaged employees can directly impact patient care.

Despite international evidence, Indian hospitals remain under-researched in this area, creating a gap that this study aims to address.

Methodology

A mixed-method approach was employed to capture a holistic picture of diversity management in hospitals.

Quantitative Data Collection: A structured questionnaire was distributed to 120 employees across three hospitals in Kolkata, including clinical (doctors, nurses, radiology technicians), diagnostic, and administrative staff. The questionnaire measured perceptions of inclusivity in HR practices, satisfaction levels, intention to stay with the organization, and self-reported performance indicators. All the data were analyzed using descriptive statistics, correlation, and regression analysis.

Qualitative Data Collection: In-depth interviews were conducted with 10 HR managers and department heads to understand organizational perspectives on diversity. Thematic coding was applied to extract insights on challenges, best practices, and opportunities for policy enhancement.

This dual approach allowed the study to validate findings from different sources, increasing reliability and depth of analysis.

Analysis and Findings

The significance of this study insights into the role of gender and diversity management in Indian hospitals.

1. Impact on Job Satisfaction

A strong positive correlation was found between inclusive HR practices and employee satisfaction. Employees who reported working in departments with gender-sensitive policies, such as equal pay structures and transparent promotion mechanisms, expressed higher job satisfaction. Benefits like maternity and paternity leave, flexible working hours, and supportive supervisors/managers further enhanced morale.

2. Impact on Retention

Retention was strongly linked to inclusivity. Employees who perceived fairness and inclusivity in HR practices were more likely to stay within the organization for the long time, reducing turnover rates. This finding is critical, as hospitals often struggle with high attrition, particularly among nurses and mid-level staff.

3. Impact on Performance

Inclusive policies improved teamwork, communication, and motivation, directly enhancing staff performance. Employees reported feeling more valued and respected, leading to increased commitment and productivity.

4. Challenges Identified

Gender stereotypes: Women remained underrepresented in leadership roles.

Bias in recruitment: Selection processes often reflected unconscious bias.

Limited LGBTQ+ support: Hospitals lacked formal policies for transgender and non-binary employees.

Resistance to change: Senior administrators often viewed diversity initiatives as secondary to financial and operational efficiency.

5. Opportunities

Adoption of gender-neutral recruitment and appraisal systems.

Regular diversity training and sensitization programs.

Establishment of mentorship or leadership programs for women and marginalized groups.

Policy reforms to support transgender and LGBTQ+ employees.

Practical Implications

The findings highlight that hospitals need to institutionalize gender and diversity management in their sector as soon as possible. Practical steps include:

Designing bias-free recruitment systems with gender-neutral job descriptions.

Incorporating gender equity in leadership development and promotions.

Providing gender-neutral facilities such as washrooms and rest areas.

Expanding parental leave policies to include both maternity and paternity leave.

Conducting regular training on unconscious bias, cultural sensitivity, and workplace inclusivity.

Establishing formal grievance redressal mechanisms for employees facing discrimination.

By implementing these measures, hospitals can reduce attrition costs, enhance employee satisfaction, and improve the overall quality of patient care.

Originality

This study contributes to the limited body of research on diversity management in Indian hospitals. While most diversity literature focuses on corporate organizations, this research provides healthcare-specific insights. It is original in integrating both employee and HR manager perspectives, thereby bridging the gap between policy design and employee experiences.

The study highlights that inclusivity is not merely a symbolic commitment but a strategic imperative for hospitals aiming to achieve excellence in both workforce management and patient outcomes.

Conclusions and Recommendations

The research concludes that gender and diversity management significantly enhances employee satisfaction, retention, and performance in Indian hospitals. Inclusivity is therefore both an ethical responsibility and a strategic necessity for healthcare organizations.

Key Recommendations:

1. Adopt formal diversity and inclusion policies in HR manuals to institutionalize inclusivity.
2. Introduce transparent appraisal systems that minimize bias in promotions and salary decisions.
3. Conduct mandatory sensitization training for all staff, including senior management.
4. Support marginalized employees by establishing LGBTQ+ friendly policies and gender-neutral facilities.
5. Promote women in leadership roles through mentorship and leadership development programs.

Hospitals that embrace these recommendations can transform diversity challenges into opportunities, creating equitable workplaces that improve both employee well-being and patient satisfaction.

References

- Betancourt, J. R. (2016). Improving quality and achieving equity: The role of cultural competence in reducing racial and ethnic disparities in health care. The Commonwealth Fund.
- Cox, T. (2001). Creating the Multicultural Organization: A Strategy for Capturing the Power of Diversity. Jossey-Bass.
- Kundu, S. K., & Mor, A. (2017). Workforce diversity and organizational performance: A study of Indian organizations. *Employee Relations*, 39(2), 160–183.
- Shore, L. M., et al. (2011). Inclusion and diversity in work groups: A review and model for future research. *Journal of Management*, 37(4), 1262–1289.
- Thomas, D. A., & Ely, R. J. (1996). Making differences matter: A new paradigm for managing diversity. *Harvard Business Review*, 74(5), 79–90.
- World Health Organization (2020). Gender and Health Workforce Statistics. WHO Publications.

A CASE STUDY ON CONSUMER BEHAVIOUR TOWARDS CONSUMING FOOD PRODUCTS ACROSS CULTURAL BOUNDARIES WITH SPECIAL REFERENCE TO WEST BENGAL

Anjana Roy ¹, Sumedha Majumder ², Dr. Dilip Barik ³

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction

Consumer buying behavior is shaped by a complex interplay of various factors, among which culture plays a critical and often dominant role, particularly in the context of food consumption. Culture encompasses shared beliefs, values, norms, customs, and traditions that influence individuals' perceptions and choices. Food, being deeply embedded in cultural identity and daily practices and becomes a strong reflection. Different cultures exhibit varying preferences for taste, ingredients, preparation methods, and even eating habits and rituals, all of which significantly impact purchasing decisions. Consumers tend to favor foods that align with their cultural background, values, and beliefs. For instance, in some cultures, certain ingredients or dishes may be considered sacred or symbolic, while in others, specific cooking methods or presentation styles are preferred. Cultural festivals and celebrations also play a role, with traditional foods being an integral part of these events. Moreover, cultural exchange and migration have led to the fusion of different cuisines, creating new flavors and preferences. Globalization and increased migration have led to greater cultural diversity in markets, compelling food brands and retailers to understand and adapt to these cultural nuances to meet consumer expectations effectively.

In the era of global village every country experiencing migration across different parts of the world. West Bengal also have the different communities in its demographic pattern. In recent days West Bengal also showing a full of diversified small scale business patterns especially on food joints. In this regard this research article highlights how the diversified community-based influences consumer buying behavior especially on food products in West Bengal.

Literatures

Roudsari, Amiri and et al. (2017) conducted a qualitative study to examine the psychological, social, and cultural determinants of food preferences in Iran. Their findings identified five key themes influencing food choices: cultural context and patterns, information sources and media, social structures and norms, family structure, and transition in nutritional practices.

Ndlovu and Ojong (2018) used a qualitative research design to explore food as a medium of cultural exchange and tourism experience. Their study revealed a positive link between diverse cultural cuisines and the growth of the tourism sector. They also examined how Indian identity in South Africa is expressed and maintained through food practices.

Dhar, Oita and Matsubae (2021) investigated how nitrogen and phosphorus levels are influenced by religious dietary practices across different cultures and the result show that there have some Socio-

¹ Full time Faculty, Department of Commerce, THK Jain College

² Assistant Professor, Department of Commerce, Kabi Sukanta Mahavidyalaya

³ Associate Professor, Department of Commerce, Lalbaba College

economic factors, behavioral factors as well as the factors associated with cultural and religious which have an effect over the dietary food consumption consists of nitrogen and phosphorus.

Lalnuntluangi and Das (2025) conducted a descriptive study exploring the interrelationship between food, culture and religion. Their findings indicate that diverse cultural food practices can have a positive influence on mental health, high lighting the psychological benefits of engaging with foods from various cultural backgrounds.

Jayasinghe, Byrne, and Hills (2025) explored the global diversity of food cultures, highlighting both the similarities and differences shaped by heterogeneous dietary practices. Their study distinguished between "cultural food" and "food culture," emphasizing how these concepts influence dietary behaviors across different cultural groups. The research underscores the complex interplay between cultural identity and food consumption, offering insights into how cultural contexts shape nutritional choices.

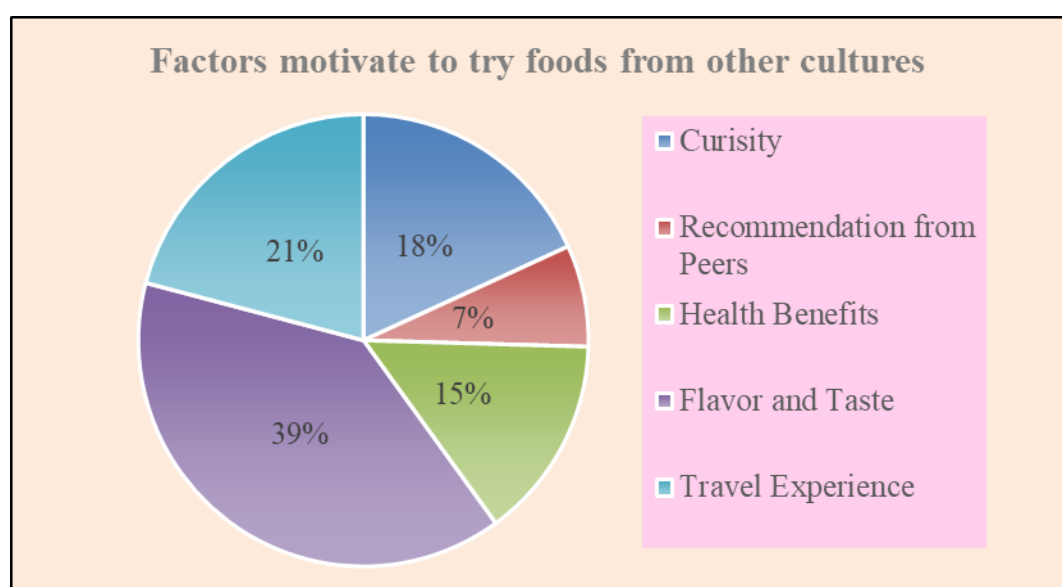
Purpose

The study focuses on the diversified cultural factor in West Bengal and also how this factor influences consumers' buying behavior regarding their food preferences. The study also considers other demographic factors like age, education, income etc. on consumers buying behavior.

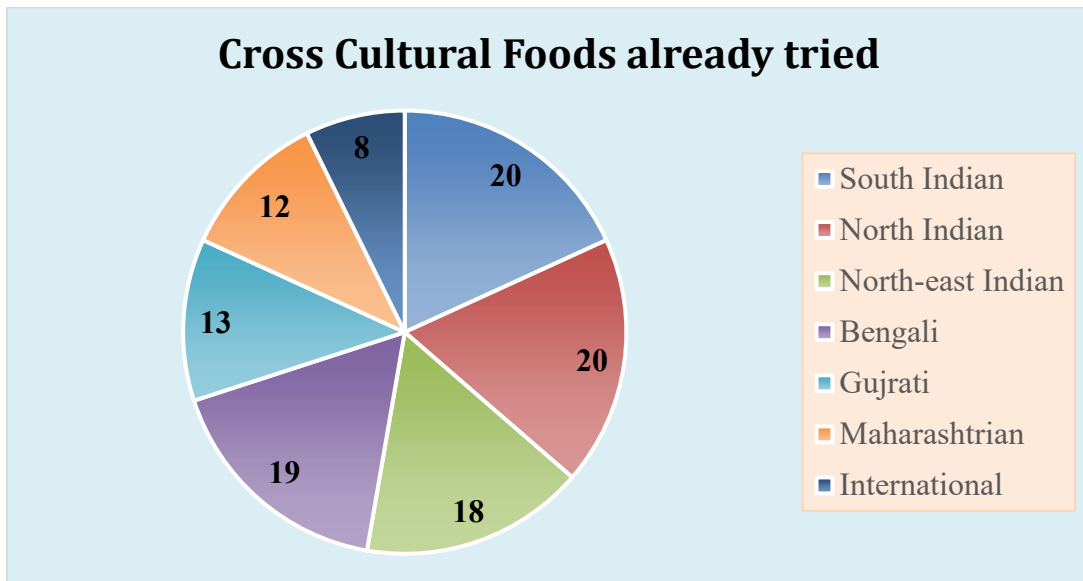
Methodology

The study uses primary and secondary data and most of the secondary data collected through online content. Primary survey was conducted to get an overall picture on consumers buying behavior which may influences by diversified cultural components. Structured Questionnaire were framed based on the literature support. To conduct perception study, the study uses binary logistic regression analysis in SPSS. In this analysis, the main dependent variable as 'cultural diversity influences your buying behavior'. Mostly three demographic factors like gender, educational level and residence of respondents are taken as independent variables.

Analysis & Findings



Out of total 110 respondents, major i.e. 39% people are motivated due to flavor and taste of the other cultural foods and 7% people are habituated with the cultural foods as they got the recommendations from peers.



As per our study, the people already tried the several cultural foods like south Indian, Gujarati, international north Indian etc.

RESULT OF BINARY LOGISTIC REGRESSION

Variables	B	Sig	Exp(B)
Residence	-.098	.814	.907
Gender	-.166	.681	.847
Educational Level (No. of years)	-.072	.131	.931

(Source: Author's interpretation based on survey data)

Interpretation:

The above table shows the very interesting result. In all aspect the significant value is insignificant. It means that whether any person resides in urban or rural area its does not make any importance on diversified cultural impact on buying behavior. Various food joints are also in semi urban and rural areas in West Bengal. So, there is no significant difference between rural and urban areas on this aspect. Simultaneously, gender also showing this same kind of result. It also may be because of present busy life schedule of male and female of our society. Moreover, here educational level focuses on the traditional bookish education. So, it's definite that cultural aspect is far beyond the formal education. So overall result depicts that cultural diversity on consumer buying behavior is wider aspect and it's may depend on the very crucial aspect like values of consumers, execution of community traditional practice and so on.

Conclusion

The study revealed that most of the consumer of West Bengal prefer diversified food items across the different part of the state. The result also highlights that uniqueness of every culture attracts most of the consumer to consume varied food products. This result may help the young business mind to think about their new food joint in West Bengal.

Recommendations

The study reveals that consumers across all over west Bengal are very much influenced by cultural diversity on their buying behavior. Accordingly, day by day number of Momo outlets, south Indian food joints etc. are increases in West Bengal (Source: <https://www.scrapehero.com/location-reports/Wow%20Momo-India/>). So, there is a huge chance of business aspect on traditional foods like 'Pithe', 'Narkol Naru', traditional Bengali dresses and so on.

Limitations

Due to time constraint mostly, data may be the skewed in nature. Only specified places of West Bengal were considered for this research work.

Keywords: *Culture, West Bengal, Food Products, Consumer Behavior, Consumer.*

References

1. Lalnuntluangi, C., & Das, A. K. (2025). The Philosophy of the Plate: Food, Culture, and the Quest for Identity in Northeast India. *Philosophy*, 17(1), 85-104.
2. Ndlovu, J., & Ojong, V. B. (2018). Understanding India-South Africa tourism: the impact of food tourism on the socio-cultural and economic fabrics in Durban. *African Journal of Hospitality, Tourism and Leisure*, 7(1), 1-15.
3. Jayasinghe, S., Byrne, N. M., & Hills, A. P. (2025). Cultural influences on dietary choices. *Progress in Cardiovascular Diseases*.
4. Roudsari, A. H., Vedadhir, A., Amiri, P., Kalantari, N., Omidvar, N., Eini-Zinab, H., & Sadati, S. M. H. (2017). Psycho-socio-cultural determinants of food choice: A qualitative study on adults in social and cultural context of Iran. *Iranian journal of psychiatry*, 12(4), 241.
5. Dhar, A. R., Oita, A., & Matsubae, K. (2021). The effect of religious dietary cultures on food nitrogen and phosphorus footprints: a case study of India. *Nutrients*, 13(6), 1926.

A STUDY OF REPORTING THE EXTENT OF CASH FLOW DISCLOSURE BY COMPANIES LISTED IN INDIAN STOCK EXCHANGE

Debalina Chattopadhyay ¹

ISBN: 978-1-257842-98-8 | DOI: 10.25215/1257842986

Introduction:

This paper tries to study the measure the extent of disclosure practices in relation to Cash Flow Disclosure given in the annual reports of the companies in India. The study examines annual reports for the accounting year 2017-18 of a sample of 5 top companies and 5 bottom companies listed in National Stock Exchange (NSE) of India.

In any kind of industry i.e. manufacturing or service, there are several departments which function every day to achieve organizational goals. These departments functioning may or may not be interdependent, but all are connected to one common thread- Accounting & Finance department. Each department records its accounting and financial aspects on a daily basis, and these are reported to various stakeholders. These reporting are important and are integral part of Accounting & Reporting system of an organization. Financial Reporting is very important and critical task of an organization as it involves stakeholders and other regulatory requirements.

Financial Statements are the formal records of the business activity in written form to convey financial position and performance of the company. The objective of financial statements is to provide information about: -

- i. **The Financial Position (Balance sheet):** It represents the financial position of an enterprise for the year ended. The entire information is shown into general classification of assets, liabilities and equity. The classification of items within the assets and liabilities are shown in their order of liquidity.
- ii. **The Financial Performance (Income Statement):** It shows the financial performance of a company. It shows with sales and then subtracts out all expenses incurred during the period to get net profit/ loss. It states the Company's income, expenses and profit/ loss for the period. It represents the information on the operation of the company.
- iii. **Changes in Financial Position (Statement of cash flow):** This reveals the inflows and outflows of cash which is experienced by an enterprise during the reporting period. It is represented into three classifications, which are operating, investing and financing activities. It helps in analyzing the ability of the enterprise to generate cash & cash equivalents. Not only the evaluation of cash generation done but also helps in assessing the changes made in financial position to see how the entity uses the cash flows.
- iv. **Statement of Changes in Equity:** this document shows all the changes made in equity during the period. The changes like issuance, dividend paid, purchase of shares and profit & losses.

¹ Research Scholar, St. Xavier's University, Kolkata

All these documents are presented as a financial statement followed by number of footnotes disclosures attached to them. These additional notes are used to clarify certain summary level information which is presented in the financial statements.

The assumptions under which the financial statements are prepared are: -

- a. **The accruals basis** – according to this basis of accounting an entity should recognize the effects of transactions and other events when they occur and not when they are paid or when cash is received in settlement.
- b. **The going concern basis** – if financial statements are prepared on a going concern basis, which assumes that the entity will continue in operation for the foreseeable future. This informs the users that the entity neither intends to liquidate or materially curtail the scale of operations.

The extent of disclosure was measured by unweighted disclosure indices that comprises 16 information items based on the disclosure requirements of Indian Accounting Standard (Ind AS) 7 Statement of Cash Flows. The investigation reveals that the average level of disclosure is 98.92% for the 5 Top Companies; 98.46% for 5 Bottom Companies and 97.69% at a combined level of the Companies which means 'Good' disclosure level (90% or more).

Based on empirical study the result concludes that the disclosure practices of cash flow by both the top and bottom companies were more or less satisfactory. However, the companies having disclosure score less than 100 should try to reveal clearer picture of the annual report as statement of cash flow is not only necessary to be prepared but compulsory for the listed companies in India as per the Companies Act, 2013. The implementation of Ind AS 7 is followed by all the Companies in India with compliance to Companies Act, 2013. The study suggests that the disclosure practices of Companies in India to improve the quality of disclosure which will help in achieving the objectives of harmonisation, transparency of Indian Accounting Standards with global accounting Standards.

The cash flow statement is characterized by identifying and documenting what effectively enters and exits the business, such as sales income or the payment of accounts (disbursements). The term 'profit' or 'loss' is not used in cash flow statement as it is not related to income statement.

Cash flow statement is important as it shows the inflows and outflows of cash as well as the state of cash & cash equivalents available to the enterprise as profit do not mean an enterprise will have cash. So, it is very important to understand the difference between having profit and having cash for liquidity purpose.

Purpose: The study has set the following purposes for addressing the research objective. To measure the extent of mandatory cash flow disclosure in annual reports of companies listed in National Stock Exchange. To check whether there is a significant difference between the top companies and that by bottom companies in the measurement of the extent of mandatory cash flow disclosure by listed in Indian Stock Exchanges.

Methodology: For the study of this topic some literature survey regarding the topic and related concepts has been done. I have used secondary data inclusive quantitative and qualitative data by referring annual report of the listed companies in India in National Stock Exchange. The information has been collected from various sources including books, research papers and websites for the purpose of the study.

Analysis and Findings: In this Study we have measured the extent of cash flow disclosure by preparing a disclosure checklist, examined the annual reports of the sample companies listed in Stock Exchange in India. For the survey of the study annual reports for the year 2017-18 of 5 Top Companies and 5 Bottom Companies ranked on the basis of Net Sales. The name of the companies is taken from list of National Stock Exchange (NSE), 2018.

Practical Implications: The analysis of the study observed that with an extremely high level of mean (97.2%) and a low level of Standard Deviation (4.217), cash flow reporting of mandatory information by

top companies in India, is satisfactory. On the other hand, Cash flow reporting by bottom companies, with mean (98.6%) and a low level of Standard Deviation (3.443) is very satisfactory and is better than top companies. However, it is observed that there is no significant difference between the extent of mandatory cash flow disclosure of top and bottom companies listed in Indian.

Originality: The report recommends that Indian companies' disclosure processes be improved to enhance the quality of disclosure, which will aid in accomplishing the goals of transparency and harmonization of Indian accounting standards with international accounting standards.

Conclusions and Recommendations: The analysis of the study observed that with an extremely high level of mean (97.2%) and a low level of Standard Deviation (4.217), cash flow reporting of mandatory information by top companies in India, is satisfactory.

On the other hand, Cash flow reporting by bottom companies, with mean (98.6%) and a low level of Standard Deviation (3.443) is very satisfactory and is better than top companies.

However, it is observed that there is no significant difference between the extent of mandatory cash flow disclosure of top and bottom companies listed in Indian. The paper “A study of Reporting the Extent of Cash Flow Disclosure by Companies Listed in Indian Stock Exchange” has been conducted with the help of secondary data with the sample size of 10 companies (5 Top Companies and 5 Bottom Companies) from name list of 100 companies listed in National Stock Exchange. Due to insufficient of time the sample size has been taken small, the sample can have some limitations, and conclusion can vary if the sample size would have increased.

Keywords: Cash Flow Disclosure, Ind AS 7, Companies Act, 2013, Listed Companies.

References:

1. [http:// www.moneycontrol.com](http://www.moneycontrol.com).
2. Gelda B. Kalpesh and Dr. Dodiya M. Bhavsinh, (2015), “*A comparative study on cash flow statements of Tata Chemicals Ltd. and Pidilite Chemical Ltd.*”.
3. Paliwal G. Ajay, Ashirra B. Mukesh and Rana V.S. (2015), “*Cash Flow Statement: Comparative Analysis of Operating, Investing and Financing Activities*”.
4. Kusuma Hadri, Australia (1999), “*The Information Content of Cash Flow Statement: An empirical Investigation*”.
5. Dorina Popa, Melinda Kiss and Klara Sziki (2012), “*Contemporary approaches of company performance analysis based on relevant financial information*”.
6. Ashrafuzzaman Mohammad and Islam- Ul- Tanim – Md., (2015), “*Statement of Cash Flows Disclosures: A study on listed Financial Institutions in Bangladesh*”.

Introduction

As environmental awareness continues to reshape consumer preferences, urban India has observed reusable water bottles moving beyond their simple functionality, positioning themselves as strong indicators of environmental and social identity driven through specific choices in packaging design and branding, and this trend reflects a wider movement towards conscious consumption that allows product designs and overall brand presence to send a message. Their role is changing as diverse elements—shape, material, color, and an option for customization—help young eco-aware Indians signal their identity through design, and this has an impact on how products are perceived and utilized (Norman, 2013). You will notice that these design elements are actively chosen by companies. By drawing on frameworks such as neuromarketing (Plassmann et al., 2012) and social signaling theory (Berger & Heath, 2007; Plassmann et al., 2010), the process has uncovered that design and branding shape consumer choices on a daily basis, and the process has been informed by existing evidence indicating these symbolic objects can serve to communicate specific values within peer networks. There is an intention to move beyond traditional branding research. In India, studies have not often explored the symbolic role that everyday objects—including water bottles—play. Design choices can address this gap (for example, Hydro Flask and Stanley, where bottles act as visible markers of personal preference; Schrank, 2021). Intentional design choices that foster social affiliation among India's youth are highlighted in the study, and the importance of this process is discussed in terms of its potential to bridge what has otherwise been a gap in observations related to symbolic consumption patterns.

Literature Review

Neuromarketing makes use of tools such as eye-tracking and biometric analysis in order to study the effects that packaging design elements—including color, texture, and branding—have on the ways in which people respond to advertisements (Green Campaign India, 2025). While these products are manufactured, the intention is to appeal to consumers who care about ecological matters. This approach is growing rapidly. The ethical issues raised by practices such as greenwashing, which is practiced in societies where the authenticity of brands is considered important (Financial Express, 2024), can, in some circumstances, lead to increased skepticism with the recognition of manipulative strategies. Packaging affects perception. Among the youth in India, reusable water bottles have become regarded as a symbol of commitment towards environmental responsibility, although adoption rates can vary widely. Social signaling theory suggests that a peer group, which is particularly evident in younger demographics (Donath, 2007), perceives products as carrying meanings sometimes beyond their direct functional use. The Myrtico bottles clearly promote the use of bottles, and their design was thus positioned as an indicator of both social position and ecological concern. Customizable packaging, which is frequently adopted across settings such as fitness centers or universities, enhances peer group recognition and strengthens group status (Chaturvedi et al., 2019), while adaptation is empowering. According to Tan

¹ Department of Communication Design, Karnavati University, UID

² Department of Communication Design, Karnavati University, UID

(2015), a “say-do gap” exists because what youth say about wanting to choose sustainable products does not always get reflected in their observable behavior. Peer influence endures.

Material and aesthetic considerations can be emphasized by employing sustainable options such as bamboo fiber, rice husk, as well as BPA-free plastics, which reflects a broader trend in the industry towards solutions that reduce environmental impact (Confederation of Indian Industry, 2024); attention to the blending of style is also shown when Eha Eco (2025) relies on minimalist labels and earthy colors so that design fuses with environment to make brands visually stand out by letting consumers personalize their items (Economic Times, 2024). Those practices are done by companies to match eco-identity and green signaling. Consumers, motivated by wanting to give back, are influenced by group expectations and social pressure (Griskevicius et al, 2010; Peattie, 2010). Good design increases both usability and visual attraction. Consumer perception is shaped by those qualities (Norman, 2013). Hydro Flask, by adopting bright and adaptable packaging alongside environmental activism campaigns, was transformed into a marker among youths. Environmental activism among college students is widespread (The Harvard-Westlake Chronicle, 2024; Marshall & Schrank, 2021), and Stanley's aesthetically appealing containers use social media channels to promote sustainability (Eater, 2024; Forbes, 2024). Peer validation and branding act as strong forces in steering youth behavior, a pattern which applies to the Indian context also (Ailawadi et al, 2001; WPIC – Creative Labs, 2024). Little research exists, however, about how brands can overcome this missing element by focusing mainly on design-driven evaluation. Packaging, visibility, and peer networks have a combined impact.

Aim

To explore how packaging design and branding, informed by neuromarketing, position eco-conscious water bottles as tools for social signaling and identity expression among Indian youth.

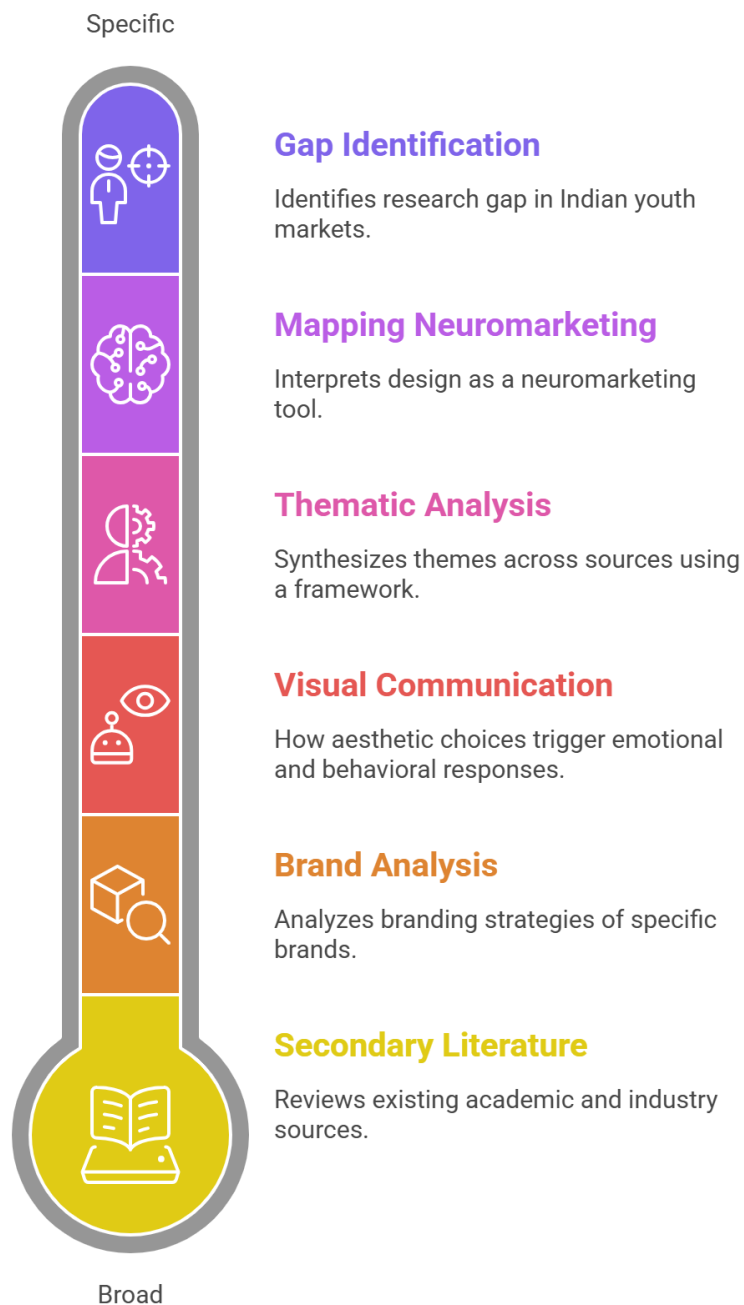
Methodology

Qualitative thematic analysis is used by this study to explore the symbolic function of reusable water bottle package design and branding, as described by the designer as fitting for addressing the research focus. The research places particular focus on visual communication and time constraints that shape packaging that plays a role in social signaling and environmental identity expression.

The research involved:

A review of the literature has been conducted on neuromarketing, providing a theoretical basis for the investigation, and the examination was supported by focusing on key consumer product brands such as Hydro Flask, Stanley, Wahter, and Borosil. The brands were focused on elements that make up visual identity; practical and theoretical implications are synthesized. Brands are analyzed through both visual and material categories. The study links design features to neuromarketing effects and engagement among youth. This research addresses a range of design factors, especially through visual elements. It has attempted to merge practical findings with established theory, drawing from visual communication research outlined by Braun & Clarke (2006) for methodological direction and contemporary practice in the field. The absence of original data limits the research; this limitation is acknowledged directly. However, a framework has been set out for further empirical studies with focus on India.

Research Process



Findings

There has been a growing trend of integrating purpose-driven branding with aesthetic appeal which reflects a broader cultural shift in India, where youth appeal to everyday product choices which has social meaning in it. Products are seen more than just tangible items, but as a sense of belonging in eco-conscious movements, although actual behaviour may not reflect their environmental stance.

By triggering subconscious emotional responses through engaging design and purposeful brand values, leading water bottle brands have been able to transform passive observers into active participants in their campaigns. This amalgamation of emotion-driven marketing and social purpose doesn't just promote sales; it sparks action and sustained engagement. Such campaigns become cultural touchpoints, integrating brands deeply in the lifestyles of eco-conscious youth.

Conclusion

Among Indian youth, reusable water bottles communicate both visual and conceptual designs and branding which connect the product with the values of the young generation, as has been indicated by researchers (Griskevicius et al., 2010; Marshall & Schrank, 2021), while sustainable material and minimalist aesthetic are often preferred for having a positive association with the aesthetic preferences of youths and reinforcing their identity effectively. Neuromarketing has been used to adjust the mindset of youths towards the benefits of reusable water bottles and environmental values, and minimalist visual styles have been employed to attract them, yet empirical studies focused on the Indian context have been limited so far. It has been observed that branding featuring eco-conscious messages connects with current global patterns (Chaturvedi et al., 2019); this paper creates a base for design-driven innovation. It could become important for future research to further test how design-driven innovation works; a more granular empirical approach will be needed.

Keywords: *Reusable products, environmentally conscious branding, water bottle packaging design, social signalling, Indian youth, neuromarketing*

References:

1. Ailawadi, K. L., Neslin, S. A., & Gedenk, K. (2001). Pursuing the value-conscious consumer: Store brands versus national brand promotions. *Journal of Marketing*, 65(1), 71–89. <https://doi.org/10.1509/jmkg.65.1.71.18132>
2. Berger, J., & Heath, C. (2007). Where consumers diverge from others: Identity signaling and product domains. *Journal of Consumer Research*, 34(2), 121–134. <https://doi.org/10.1086/518952>
3. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
4. Campaign India. (2025). *Neuromarketing: Game changer or gimmick for Indian brands?* <https://www.campaignindia.in/article/neuromarketing-game-changer-or-gimmick-for-indian-brands/500521>
5. Chaturvedi, R., Kulshreshtha, K., & Tripathi, R. (2019). A study on green packaging and its effect on consumer buying behavior in India. *International Journal of Research and Analytical Reviews*, 6(2), 778–785.
6. Confederation of Indian Industry. (2024). *Sustainable materials in Indian consumer goods: Trends and innovations*. <https://www.cii.in/sustainability-report-2024>
7. Donath, J. (2007). Signals in social supernets. *Journal of Computer-Mediated Communication*, 13(1), 231–251. <https://doi.org/10.1111/j.1083-6101.2007.00394.x>
8. Eater. (2024). *The Hydro Flask water bottle as a status symbol*. <https://www.eater.com/hydro-flask-status-symbol-2024>
9. Economic Times. (2024). *Wahter bottle branding and design*. <https://www.economictimes.com/industry/wahter-branding-design-2024>
10. Eha Eco. (2025). *Product catalogue and material innovation whitepaper*. Eha Eco Innovations. <https://www.ehaeco.com/whitepaper-2025>

11. Financial Express. (2024). *The why, what, and how of leveraging neuromarketing for sustainable growth*. <https://www.financialexpress.com/business/brandwagon-the-why-what-and-how-of-leveraging-neuromarketing-for-sustainable-growth-3702016/>
12. Forbes. (2024). *Water bottle brands compete for attention on social media*. <https://www.forbes.com/water-bottle-brands-social-media-2024>
13. Griskevicius, V., Tybur, J. M., & Van den Bergh, B. (2010). Going green to be seen: Status, reputation, and conspicuous conservation. *Journal of Personality and Social Psychology*, 98(3), 392–404. <https://doi.org/10.1037/a0017346>
14. Hydro Flask. (2024). *Corporate responsibility report*. <https://www.hydroflask.com/corporate-responsibility-report-2024>
15. Johnstone, L., & Tan, L. P. (2015). Exploring the gap between consumers' green intention and behavior: Role of resource availability. *International Journal of Consumer Studies*, 39(4), 400–406. <https://doi.org/10.1111/ijcs.12206>
16. Marshall, J., & Schrank, J. (2021). The reusable water bottle as a youth cultural accessory: Eco-consciousness, status, and peer influence. *Youth & Society*, 53(6), 852–870. <https://doi.org/10.1177/0044118X20987829>
17. Mintel & Indira Gandhi Institute of Development Research. (2023). *Consumer packaging behavior reports for Indian youth markets*. Mintel Group.
18. My Water Bottle Project. (2022). *Youth engagement campaign promoting reusable bottle culture*. My Water Bottle Project India. <https://www.mywaterbottleproject.org/report-2022>
19. Norman, D. A. (2013). *The design of everyday things*. Basic Books.
20. Peattie, K. (2010). Green consumption: Behavior and norms. *Annual Review of Environment and Resources*, 35, 195–228. <https://doi.org/10.1146/annurev-environ-032609-094328>
21. Plassmann, H., Ramsøy, T. Z., & Milosavljevic, M. (2012). Branding the brain: A critical review and outlook. *Journal of Consumer Psychology*, 22(1), 18–36. <https://doi.org/10.1016/j.jcps.2011.11.010>
22. The Harvard-Westlake Chronicle. (2024). *Hydro Flask and youth identity*. <https://www.hwchronicle.com/hydro-flask-youth-identity-2024>
23. WPIC – Creative Labs. (2024). *Hydro Flask branding case*. <https://www.wpic-creativelabs.com/hydro-flask-case-2024>



Conference E-Abstract Proceedings
3rd International Conference on

EMERGING SOCIO-ECONOMIC TRENDS & BUSINESS STRATEGY

ABOUT THE EDITORS



Sourav Kumar Das

Mr. Sourav Kumar Das is an Assistant Professor of Accounting and Finance at International School of Business and Media Kolkata. Prior to joining at ISB&M Kolkata, he worked at iLEAD, Kolkata and Adamas University, Kolkata. He has completed his M.Com. and M.Phil. from University of Calcutta. Presently, he is pursuing his doctoral research from the Department of Commerce of University of Calcutta. He has also cleared UGC-NET in Commerce. He has published more than 30 research articles and book chapters in leading National and International Journals of repute. He has also been associated as Editor, Associate Editor and Reviewer in several publications including IGI Global, Apple Academic Press, Taylor & Francis Group, etc. He has also been associated as Reviewer in several journals. He has also presented research papers in different National and International conferences in India and Bangladesh. His key areas of interest are Taxation, Cost and Management Accounting and Investment Management. He is the Annual Member of Kolkata Bidhannagar Society for Academics Advancement (KBSAA), Life Member of Indian Accounting Association South Bengal Branch and Indian Academic Researchers' Association. He has more than nine years of teaching experience in different reputed colleges in Kolkata.



Dr. Prithvish Bose

Dr. Prithvish Bose is currently a Professor of Marketing and the Program Director – PGDM at International School of Business & Media Kolkata.

A B.Tech from, IIT Dhanbad, he completed his Post graduation in Business Management from XLRI, Jamshedpur in 1984, and later his doctoral qualification in 2017 from the same institution. He has worked in several multinational organisations including Fortune 500 companies, as well as top Indian business houses, and has wide exposure to the Indian IT, Office Automation, Paints, and Telecom industries, including the IT Services market in the Asia-Oceania region. He has three decades of industry experience in strategic planning, business development, and strategic alliances, and has played leading roles in implementing quality systems such as Malcolm Baldrige National Quality Awards and TQM. After switching over to academics, Dr. Bose has taught in several well-known management institutes and universities in India. His research interests are in the area of consumer behaviour and he has published research papers in these areas in reputed journals and conferences. He has been a part of the senior academic administration in these institutions, and has been a driving force in organizing several academic events.

red'shine
PUBLICATION
L O N D O N

RED'SHINE PUBLICATION
232, Bilton road, Perivale,
Greenford-UB6 7HL London, UK
Call : +44 7842 336509
Website: www.redshine.co.uk
Email : info@redshine.co.uk

ISBN 978-1-257842-98-8

UK £ 15.00



9 781257 842988

