



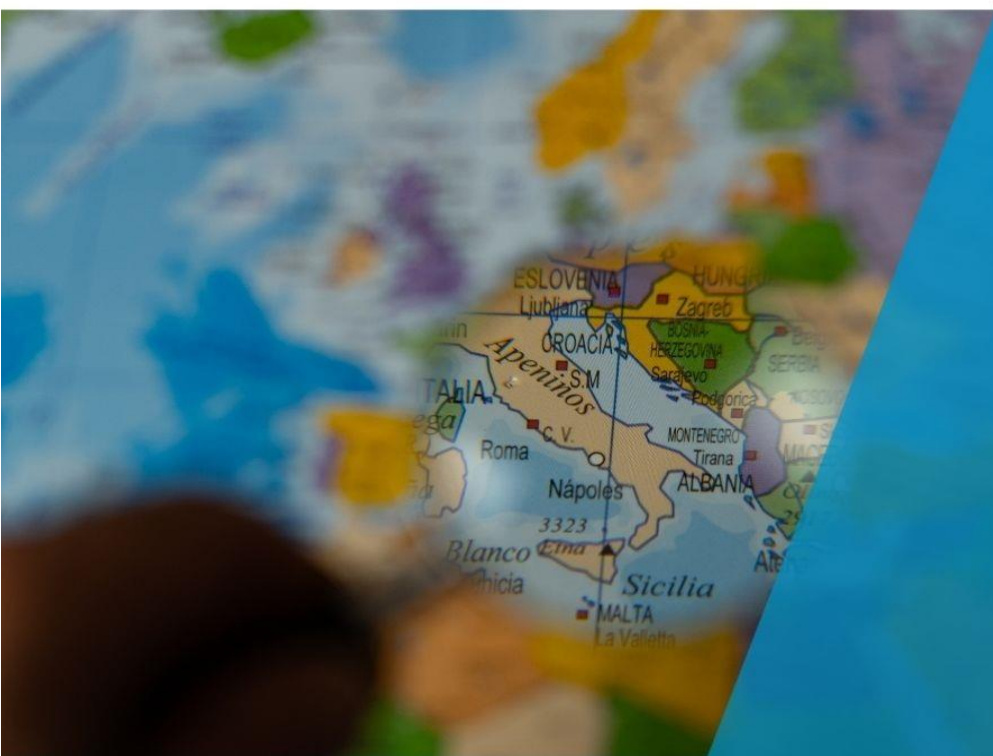
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Founded in **2012**, *Jamshedpur Research Review (JRR)* is a government-registered, peer-reviewed, multi-disciplinary research journal published bi-monthly by the Gyanjyoti Educational and Research Foundation, Jamshedpur. Over the years, JRR has established itself as one of India's consistently published and highly regarded academic platforms, with **74 uninterrupted issues** since inception.

Committed to promoting high-quality, cross-disciplinary research, JRR welcomes scholarly articles, empirical studies, reviews, and conceptual papers from diverse fields—**Social Sciences, Education, Commerce & Management, and Environmental Studies**. The journal reflects the intellectual vibrancy of Jamshedpur and aims to inspire innovative, evidence-based, and socially relevant research.

All submissions undergo a rigorous double-blind peer-review process, ensuring academic integrity and excellence. JRR caters to researchers, academicians, doctoral scholars, and policy thinkers seeking original and impactful insights.

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EDITORIAL

75th Issue — Jamshedpur Research Review (ISSN 2320-2750)

The seventy-fifth issue of *Jamshedpur Research Review* marks a significant milestone in our continuous commitment to fostering rigorous, interdisciplinary scholarship. Since its inception in 2012, the journal has sought to provide an inclusive platform for academics, practitioners, and emerging researchers to engage critically with the social, economic, political, cultural, and technological questions shaping contemporary India and the world. This issue upholds that vision through a compelling collection of papers rooted in empirical inquiry, theoretical advancement, and policy-relevant analysis.

Across diverse disciplines; ranging from political science, economics, sociology, geography, commerce, public policy, development studies, and cultural research, the contributions in this issue illuminate pressing concerns of national and regional significance. The volume begins with a timely reflection on *indigenous food systems* through an examination of Odisha's Millet Shakti Cafés, underscoring the intersection of nutrition security, institutional innovation, and local governance. This orientation toward livelihood, welfare, and community resilience continues in the empirical analysis of MGNREGA's impact on tribal employment trends, providing valuable insights into labour inclusion and rural welfare architecture.

Spatial transformation remains another prominent theme, with research exploring urbanization patterns in North 24 Parganas, the dynamic trajectories of migration in Odisha, and the evolving economics of urban sprawl. These studies highlight how urban and semi-urban regions negotiate the complex interplay of demographic change, infrastructural stress, and policy design.

The issue also carries historically grounded and culturally sensitive scholarship, such as the analysis of the Devadasi system within colonial and postcolonial reforms, a reminder of the enduring entanglement of law, morality, gender, and cultural memory.

From an economic perspective, contributors examine a wide spectrum of contemporary challenges: consolidation in public sector banking, consumer adoption of online food delivery platforms, the strategic potential of India's fruit and vegetable processing industries, and the far-reaching implications of global trade and industrial dynamics on India's iron and steel sector. These articles together reflect the vibrancy and analytical depth of current research in commerce and applied economics.

Several papers engage with India's tribal communities—whether through livelihood pathways, entrepreneurship prospects, resource management, or the conditions of tribal women in specific districts of Jharkhand—thus reaffirming the journal's longstanding commitment to supporting research that foregrounds marginalized voices and regionally grounded knowledge systems.

Contributions in education and public policy explore the reforms associated with the National Education Policy 2020, the challenges of achieving Sustainable Development Goals, and the shifting epistemic and institutional frameworks shaping India's educational landscape. Complementing these are studies on environmental conservation, sustainable tourism, and green finance in Jharkhand, highlighting the urgent need for ecological responsibility in development planning.

The issue further incorporates conceptual explorations on feminism in the twenty-first century, ethnographic methods in political research, and yoga therapy as a response to psychological distress during emergencies, reflecting the journal's multidimensional and human-centric orientation.

In presenting this diverse assemblage of scholarship, the seventy-fifth issue stands as a testament to the intellectual vitality of our contributors and the journal's expanding academic footprint. Each article not only advances disciplinary understanding but also gestures toward actionable knowledge that can inform policy, institutional reform, and participatory development.

We extend our sincere appreciation to the authors, peer reviewers, editorial board members, and institutional partners whose unwavering support enables the journal to maintain its standards of academic integrity and publication excellence. As *Jamshedpur Research Review* enters its next phase, we remain committed to nurturing critical thought, methodological rigor, and interdisciplinary dialogue for decades to come.

— Editor-in-Chief



Dr. Mithilesh Kumar Choubey
Jamshedpur Research Review
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INSTITUTIONALIZING INDIGENOUS CROPS FOR NUTRITION AND FOOD SECURITY: THE CASE OF MILLET SHAKTI CAFÉS IN ODISHA

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Abstract

This paper examines the institutionalization of indigenous millet crops through the innovative Millet Shakti Café initiative under Odisha's Shree Anna Abhiyan (formerly Odisha Millet Mission). The study analyzes how state-led institutional mechanisms can revitalize traditional food systems while addressing contemporary challenges of nutrition security and sustainable agriculture. Through the lens of institutional theory and food systems transformation, this research explores how the integration of women's self-help groups, public-private partnerships, and policy innovation has created a unique model for indigenous crop promotion. The paper argues that the Millet Shakti Café initiative represents a successful case of institutional entrepreneurship that bridges traditional agricultural practices with modern market mechanisms, contributing to both nutritional security and women's economic empowerment. The findings demonstrate how strategic institutionalization can transform marginalized indigenous crops into viable economic and nutritional alternatives, offering lessons for sustainable food system transitions in developing countries.

Keywords: Indigenous crops, food security, institutional theory, millet promotion, women's empowerment, Odisha

1. Introduction

The global food system faces unprecedented challenges stemming from climate change, population growth, and increasing malnutrition rates, particularly micronutrient deficiencies affecting over two billion people worldwide (FAO, 2013). In this context, indigenous crops have emerged as critical components of sustainable food systems, offering climate resilience, nutritional diversity, and cultural preservation opportunities (Pingali, 2012). India's approach to addressing these challenges through the promotion of traditional millets represents a significant policy shift toward recognizing the value of indigenous agricultural systems. The state of Odisha, with its rich tribal heritage and traditional millet cultivation practices, has pioneered an innovative institutional approach through the Shree Anna Abhiyan (formerly Odisha Millet Mission),

launched in 2017. What began as the Odisha Millets Mission (OMM) has now renamed into Shree Anna Abhiyan a flagship initiative of the Government of Odisha aimed at reintroducing millets in both farms and plates. This initiative has created a unique institutional framework that combines agricultural production, market creation, and social empowerment through the establishment of Millet Shakti Cafés operated by women's self-help groups.

The transformation of indigenous crops from subsistence farming to institutionalized market systems requires careful examination of the mechanisms that enable such transitions. North's (1990) institutional theory provides a valuable framework for understanding how formal and informal rules, norms, and enforcement mechanisms shape economic behavior and outcomes. In the context of indigenous crop promotion, institutions play a crucial role in creating market incentives,

reducing transaction costs, and facilitating knowledge transfer between traditional and modern agricultural systems.

This paper contributes to the growing literature on food system transformation by examining how strategic institutionalization can revitalize indigenous crops while addressing multiple development objectives. The research question guiding this study is: How has the institutionalization of millet promotion through Millet Shakti Cafés in Odisha contributed to nutrition security and sustainable livelihoods, and what institutional factors have enabled this transformation?

2. Theoretical Framework

2.1 Institutional Theory and Agricultural Transformation

Institutional theory, as developed by North (1990) and Scott (2001), provides a comprehensive framework for understanding how rules, norms, and cognitive structures shape organizational behavior and social outcomes. The institutionalization of indigenous crops requires the creation of new organizational forms, market structures, and regulatory frameworks that can bridge traditional practices with modern economic systems.

Scott's (2001) three pillars of institutions—regulative, normative, and cultural-cognitive—offer particular relevance for understanding millet promotion in Odisha. The regulative pillar encompasses formal policies, laws, and government programs that create incentives for millet cultivation and consumption. The normative pillar includes social norms, values, and expectations about appropriate behavior regarding food choices and agricultural practices. The cultural-cognitive pillar involves shared beliefs, assumptions, and taken-for-granted meanings that shape how actors understand and respond to institutional pressures.

The concept of institutional entrepreneurship, introduced by DiMaggio (1988) and further developed by Battilana et al. (2009), explains how actors create new institutions or transform existing ones to serve their interests and values. In the case of Odisha's millet mission, state agencies, civil society organizations, and women's groups have acted as institutional entrepreneurs, challenged existing food system norms, and created new organizational forms to promote indigenous crops.

2.2 Food Systems and Nutrition Security

Food systems encompass all activities involved in producing, processing, distributing, and consuming food, as well as the outcomes of these activities in terms of nutrition, health, environment, and socio-economic welfare (Ericksen, 2008). The concept of nutrition security extends beyond food security by emphasizing not just access to sufficient calories but access to diverse, nutritious foods that support healthy and active lives (Barrett, 2010).

Indigenous food systems, characterized by locally adapted crops, traditional knowledge, and community-based resource management, have historically provided both food security and cultural identity for many communities (Kuhnlein & Receveur, 1996). However, the modernization of agriculture and food systems has often marginalized these traditional crops in favor of a few major staples, leading to what Khoury et al. (2014) term "dietary homogenization."

2.3 Women's Empowerment and Collective Action

The role of women in agricultural transformation and food security has gained increasing recognition in development literature (Duflo, 2012). Women's participation in agriculture and food processing can contribute to both household nutrition and economic empowerment, particularly when supported by appropriate institutional mechanisms (Quisumbing et al., 2014).

Collective action theory, as developed by Ostrom (1990) and applied to agricultural contexts by Meinzen-Dick et al. (2004), provides insights into how groups can overcome market failures and coordination problems. Self-help groups (SHGs) represent a particular form of collective action that has been widely used in India for poverty alleviation and women's empowerment (Swain & Wallentin, 2009).

The intersection of women's empowerment and indigenous crop promotion creates opportunities for addressing multiple development objectives simultaneously. Kabeer's (1999) framework of empowerment, emphasizing resources, agency, and achievements, provides a useful lens for analyzing how participation in millet-based enterprises affects women's lives and capabilities.

2.4 Innovation Systems and Knowledge Integration

Agricultural innovation systems theory emphasizes the importance of networks, institutions, and learning processes in driving agricultural transformation (Hall et al., 2006). The integration of traditional knowledge with modern technologies and market systems requires what Klerkx et al. (2012) term "innovation intermediaries" that facilitate knowledge exchange and coordination among diverse actors. In the context of indigenous crop promotion, innovation systems must address the challenge of preserving traditional knowledge while adapting to contemporary market demands and nutritional requirements. This requires what Agrawal (1995) calls the "integration of indigenous and scientific knowledge" through institutional mechanisms that respect both knowledge systems.

3. Historical Context and Policy Evolution

3.1 Traditional Millet Systems in Odisha

Odisha's tribal communities have cultivated various millet species for centuries, developing sophisticated knowledge systems adapted to

local agroecological conditions. Traditionally the highly nutritious millets formed a substantial part of the diets and the cropping system in the tribal areas of Odisha. Millets require less water and are more resilient to climate vulnerability. They are also cultivable in undulating terrain. These traditional systems provided not only food security but also cultural identity and spiritual significance for indigenous communities.

The decline of millet cultivation in Odisha began during the colonial period and accelerated after independence due to several factors. The Green Revolution's focus on rice and wheat, supported by subsidies, credit, and technical assistance, and created strong incentives for farmers to shift away from traditional crops (Pingali, 2012). Paddy gaining prominence in the Public Distribution System (PDS) has resulted in reduced consumption of millets, resulting in extreme cases of nutritional deficiency.

The marginalization of millets had severe consequences for both agricultural sustainability and nutrition security. Studies have shown that the replacement of diverse traditional diets with rice-based diets has contributed to increased rates of micronutrient deficiency, particularly among children and women in tribal areas (Longvah et al., 2017). This created a compelling case for policy intervention to revive traditional food systems.

3.2 Evolution of the Odisha Millet Mission

The Odisha Millet Mission (OMM) was launched in 2017 as a comprehensive initiative to revive millet cultivation and consumption across the state. In phase 2, in 2015, District Collector ... fully nested under state funds and implemented across Odisha. It was institutionalised under state nutrition schemes, and the PDS, to encourage further millet production. The mission adopted a holistic approach that addressed production, processing, marketing, and consumption simultaneously. The recent transformation of OMM into Shree Anna Abhiyan reflects the

program's evolution and expansion. The mission is not just about crops; it's about cultivating hope, resilience, and dignity. This rebranding signifies a broader vision that encompasses not only agricultural production but also cultural pride, women's empowerment, and sustainable development. Recent developments have demonstrated the mission's growing impact and institutional strength. The International Symposium on Shree Anna and Forgotten Foods was held on 10th and 11th November 2024, at the Convention Centre, Lok Seva Bhavan, Bhubaneswar, indicating the mission's growing national and international recognition.

3.3 Integration with National Policy Frameworks

The Odisha initiative aligns with broader national policies promoting indigenous crops and nutrition security. The declaration of 2023 as the International Year of Millets by the United Nations, largely due to India's advocacy, provided additional momentum for state-level initiatives. The National Food Security Act 2013 and various nutrition schemes have created institutional space for integrating millets into public programs. The recent increase in minimum support prices (MSP) for millets demonstrates the government's commitment to creating economic incentives for farmers. Fast forward to 2024-25, the MSP has witnessed a remarkable increase to ₹4290 per quintal, a move that reflects the government's commitment to strengthening rural economies and promoting nutritional security.

4. The Millet Shakti Café Model: Institutional Innovation

4.1 Conceptualization and Design

The Millet Shakti Café initiative represents a unique institutional innovation that combines several development objectives within a single organizational form. Millet Shakti is a collaborative initiative between the Shree Anna Abhiyan and Mission Shakti, aimed at

promoting millet entrepreneurship, awareness campaigns, and the consumption of millets through women self-help groups (WSHGs) in Odisha. This collaboration demonstrates the power of inter-institutional coordination in addressing complex development challenges. The conceptual foundation of Millet Shakti Cafés rests on three pillars: economic empowerment of women, promotion of nutritious indigenous foods, and creation of sustainable market systems. By entrusting café operations to women's self-help groups, the initiative creates direct economic opportunities while leveraging women's traditional knowledge of food preparation and community networks. The financial commitment to this initiative reflects its strategic importance.

4.2 Operational Framework

The operational model of Millet Shakti Cafés integrates various institutional mechanisms to ensure sustainability and effectiveness. The Millet Shakti Cafe will provide a wide range of millet-based products to the consumers in the form of breakfast or snacks items. It will also provide quality millet grains, ready to eat (RTE), and ready to cook (RTC) products. This diverse product portfolio addresses different consumer needs and preferences while maximizing revenue potential. The establishment process involves careful selection and training of women's groups. To set up a cafe, each SHG received about Rs 20 lakh, representing a significant investment in local entrepreneurship. The training component includes both technical skills in food processing and business management capabilities, ensuring that the cafés can operate as viable commercial enterprises. The institutional support system extends beyond initial setup to include ongoing technical assistance, quality control, and market linkages. In addition, they will also be sent to CSIR-CFTRI for advanced training, demonstrating the integration of scientific institutions into the support ecosystem.

4.3 Scaling and Impact

The expansion of Millet Shakti Cafés across Odisha demonstrates the scalability of this institutional model. The efforts of the Odisha Millet Mission have borne fruit, with a notable presence of 156 Millet Shakti tiffin centers, 4 mobile Millet Shakti outlets, 7 Millet Shakti Cafes, and 6 Millet Shakti outlets across the state. This diverse portfolio of outlets ensures broad geographic coverage and multiple access points for consumers. The economic impact of these enterprises is substantial. Each Millet Shakti outlet boasts an impressive turnover of at least one lakh rupees per month, indicating strong market demand and viable business operations. The planned expansion reflects the initiative's success and potential for further growth.

5. Institutional Mechanisms and Innovations

5.1 Governance Structure

The governance structure of the Shree Anna Abhiyan reflects a multi-level institutional arrangement that facilitates coordination between various stakeholders. At the state level, the mission operates under the aegis of the Department of Agriculture and Farmers' Empowerment, ensuring high-level political support and policy coherence. District-level implementation involves collectors and district administration, creating accountability mechanisms and local adaptation capacity. The integration with Mission Shakti, Odisha's women's empowerment program, represents a strategic institutional innovation. This partnership leverages existing organizational infrastructure while creating synergies between gender empowerment and agricultural development objectives. Community-level governance involves self-help groups and their federations, creating democratic participation mechanisms and ensuring local ownership. The three-tier structure of SHGs, village organizations, and cluster-level federations provides multiple levels of collective action and mutual support.

5.2 Financial Mechanisms

The financial architecture of the Millet Shakti initiative demonstrates innovative approaches to funding social enterprises. The combination of government grants, bank credit, and community contributions creates a blended finance model that reduces risks while ensuring ownership. The substantial initial investment per café reflects the commitment to creating viable enterprises rather than token interventions. The integration with formal banking systems through linkages with various financial institutions ensures access to working capital and expansion funds. The use of SHG networks facilitates financial inclusion and reduces transaction costs for rural women entrepreneurs. Market-based revenue generation ensures long-term sustainability while government support provides necessary initial capital and risk mitigation. This balance between public support and private enterprise creates incentives for efficiency and innovation.

5.3 Knowledge Systems

The institutional approach to knowledge integration represents a sophisticated understanding of the challenges involved in reviving traditional crops. The collaboration with research institutions like CSIR-CFTRI ensures that traditional knowledge is enhanced with modern food science and technology. This integration addresses quality, safety, and shelf-life concerns that are crucial for market acceptance. The training and capacity building components go beyond technical skills to include business development, marketing, and financial management. The documentation and dissemination of best practices through various platforms ensures organizational learning and continuous improvement. The emphasis on recipe development and product innovation demonstrates the dynamic nature of tradition-based enterprises.

6. Impact on Nutrition Security and Food Systems

6.1 Nutritional Outcomes

The promotion of millets through institutional mechanisms like Millet Shakti Cafés addresses critical nutritional challenges in Odisha's tribal and rural populations. Millets are recognized as "nutritional powerhouses" due to their high content of protein, fiber, minerals, and vitamins compared to rice and wheat (Saleh et al., 2013). A systematic review has shown that a millets-based diet can lead to a significant improvement in the growth of children when compared to a rice-based diet.

The institutional approach to nutrition security goes beyond individual consumption to address systemic issues in food availability and access. By creating market demand for millets through cafés and restaurants, the initiative incentivizes production and ensures consistent supply chains. This market-based approach to nutrition is more sustainable than purely subsidy-driven interventions. The emphasis on dietary diversity is particularly important given the micronutrient deficiency challenges facing Odisha's population. The integration of various millet species and traditional recipes ensures that consumers have access to a wide range of nutrients and flavors, making nutritious eating more appealing and culturally appropriate.

6.2 Food System Transformation

The Millet Shakti initiative represents a comprehensive approach to food system transformation that addresses production, processing, distribution, and consumption simultaneously. Unlike conventional agricultural programs that focus primarily on production, this initiative recognizes that sustainable change requires intervention at all levels of the food system. The market creation aspect is particularly innovative, as it addresses the common challenge of lack of demand for traditional crops. By establishing dedicated outlets and creating consumer awareness, the initiative has generated market pull that

incentivizes production and investment in the entire value chain. The integration with public nutrition programs and educational institutions creates institutional demand that provides stability and predictability for producers and processors. This integration demonstrates how public procurement can be used strategically to support indigenous crops and nutrition objectives.

1.3 Climate Resilience and Sustainability

The promotion of millets contributes to climate resilience and environmental sustainability in multiple ways. Millets are naturally drought-tolerant and require fewer inputs than conventional crops, making them suitable for climate-vulnerable regions like Odisha. The institutional support for millet cultivation helps farmers adapt to changing climatic conditions while maintaining productivity. The emphasis on indigenous varieties preserves genetic diversity and traditional knowledge systems that have evolved over centuries to deal with local environmental conditions. This preservation is crucial for long-term food security and agricultural sustainability. The reduced environmental footprint of millet production, particularly in terms of water usage and pesticide requirements, aligns with sustainable development goals and climate change mitigation objectives.

7. Women's Empowerment and Social Change

7.1 Economic Empowerment

The Millet Shakti Café initiative has created significant opportunities for women's economic empowerment through entrepreneurship and employment generation. The women operating these cafes serve delectable millet delicacies that promote dietary diversity and nutritional security, demonstrating how women's traditional knowledge and skills can be leveraged for economic gain.

The substantial investment in women-led enterprises represents a departure from conventional approaches that often limit

women to low-value activities. The financial support of Rs 20 lakh per café enables women to establish substantial businesses that generate meaningful income and create employment for others in their communities. The integration with self-help group networks provides social capital and peer support that are crucial for entrepreneurial success. The collective action approach reduces individual risks while creating opportunities for learning and mutual assistance.

7.2 Social and Cultural Dimensions

The involvement of women in promoting traditional foods has important cultural and social dimensions. Women are often the custodians of traditional food knowledge and practices, making them natural leaders in efforts to revive indigenous food systems. The institutional recognition and support of this role enhances women's status and influence within their communities. The public nature of café operations provides women with visibility and recognition that can translate into broader social and political participation. The success of women entrepreneurs challenges traditional gender roles and creates positive role models for other women and girls. The emphasis on cultural pride and identity through the promotion of traditional foods resonates with broader movements for cultural preservation and indigenous rights. Women's leadership in this area positions them as cultural ambassadors and community leaders.

7.3 Capacity Building and Skill Development

The comprehensive training and capacity building components of the initiative go beyond immediate business needs to enhance women's overall capabilities and confidence. The exposure to modern food processing techniques, business management, and market systems provides skills that are transferable to other economic activities. The networking opportunities created through café operations and training programs expand women's social capital and create new relationships and partnerships. These networks can be valuable

for accessing information, resources, and opportunities beyond the immediate scope of the café business. The involvement in policy discussions and program planning gives women experience in advocacy and public engagement that can enhance their broader civic participation and leadership capabilities.

8. Conclusion

The institutionalization of indigenous crops through the Millet Shakti Café initiative in Odisha represents a significant innovation in addressing the complex challenges of nutrition security, sustainable agriculture, and women's empowerment. This comprehensive analysis reveals how strategic institutional design can create synergies between multiple development objectives while respecting cultural traditions and building on local knowledge systems. The success of the Shree Anna Abhiyan demonstrates that the revival of traditional food systems requires more than nostalgic appeals to cultural heritage; it demands sophisticated institutional mechanisms that can create market incentives, reduce transaction costs, and facilitate knowledge integration. The multi-stakeholder approach, combining government agencies, women's organizations, research institutions, and market actors, has created a robust institutional ecosystem that supports indigenous crop promotion at multiple levels.

The institutionalization of indigenous crops for nutrition and food security is ultimately about more than food; it is about creating institutional arrangements that honor the past while building the future, that empower marginalized communities while serving broader social goals, and that demonstrate the possibility of development approaches that are both economically viable and culturally meaningful. The Millet Shakti Cafés of Odisha provide a compelling example of how this vision can be translated into practical reality through thoughtful institutional design and sustained commitment to transformative change.

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WORK, WELFARE, AND LIVELIHOOD: THE IMPACT OF MGNREGA ON INDIA'S TRIBAL EMPLOYMENT TRENDS

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Abstract

India's tribal communities, which comprise around 8.6% of the nation's population, nonetheless confront socioeconomic challenges like poverty, unemployment, and marginalisation in spite of several development initiatives. One important piece of legislation designed to solve these problems is the Mahatma Gandhi National Rural job Guarantee Act (MGNREGA), which was signed into law in 2005 and offers guaranteed job possibilities. This study examines the impact of MGNREGA on tribal employment patterns across India using comprehensive secondary data analysis from government publications, census data, academic literature, and implementation reports from 2019-20 to 2024-25.

The study concludes that MGNREGA has emerged as a transformative intervention for tribal communities, providing crucial employment opportunities, infrastructure development, and social empowerment benefits. However, realizing its full potential requires addressing implementation challenges through increased funding, streamlined payment systems, enhanced asset quality, strengthened social audit mechanisms, and greater community participation in program governance. The findings contribute to policy discourse on rural development and tribal welfare, offering evidence-based recommendations for enhancing program effectiveness in marginalized communities.

Keywords: MGNREGA, Scheduled Tribes, Tribal employment, rural development, poverty alleviation, Asset Creation, livelihood security, Social Empowerment, Rural Infrastructure

Introduction

India's tribal populations, commonly called Scheduled Tribes (STs), constitute an essential part of the nation's rich diversity, comprising roughly 8.6% of the overall population—over 104 million individuals according to the latest figures. These communities primarily reside in remote, hilly, and forested areas in states like Jharkhand, Chhattisgarh, Odisha, Madhya Pradesh, and some regions of the Northeast, where daily life revolves around customary pursuits like subsistence farming, harvesting forest products, and seasonal labour. The major issues in these places, such as inadequate infrastructure, limited market accessibility,

drought or flooding, and a lack of current skills, lead to high unemployment and poverty rates. In certain tribal areas, over 40% of households live below the poverty line, which is significantly higher than the national average, even if the majority of occupations are low-paying and informal. As a result, many people—especially young men and women—are forced to move to cities in search of work, which causes family dissolution and threatens societal cohesiveness.

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), which was established in 2005, is a crucial instrument for tackling these problems. By

2025, every rural household willing to work will have at least 100 days of unskilled wage labour annually under this demand-responsive program, with a minimum salary established by the states that varies between Rs 220 and Rs 350 per day. MGNREGA aims to enhance agricultural practices and water security by constructing vital rural infrastructure, including roads, check dams, ponds, and plants, in addition to generating jobs. This is crucial for tribal areas since it prioritises underprivileged groups like STs, provides extra funding for underdeveloped regions, and makes particular allowances for projects on tribal territory. It has evolved throughout time to incorporate elements for skill development and connections to other programs, solidifying its position as a pillar of rural welfare.

MGNREGA has had a major impact on employment patterns in tribal communities. For instance, the program grew to record person-days—309 crore countrywide in 2023–24, with STs accounting for around 17–20% of that total, although making up just 8% of the population, during the COVID-19 epidemic years, when many migrants returned home without work. It produced over 290 crore person-days overall in the fiscal year 2024–2025, indicating robust tribal engagement in areas such as Odisha, where districts like Sundargarh saw a rise in participation rates. According to research, it has raised household incomes by 20–30% in certain places, empowered women (who now make up over 58% of the workforce) through fair compensation and decision-making possibilities, and decreased distress migration by offering local jobs. For example, it has led to social participation and economic stability for tribes in Kerala's Idukki district, reducing poverty and improving access to healthcare and education. Similar to this, Jalpaiguri in West Bengal has increased wages and rehired some migrants, although its efficacy has been hampered by problems like late payments.

However, the consequences differ depending on the region. In states like Bihar and Jharkhand, where tribal workers deal with poor asset quality, underpaid salaries, and a lack of

awareness of their rights, disparities persist. Nationally, just 4–5% of households receive 100 days of work, with families averaging 45–50 days in 2024–2025. In tribal areas, where seasonal job disparities are more noticeable, this is insufficient. With the largest budgetary allocation to date of Rs 86,000 crore for FY 2025–2026, MGNREGA is still developing. However, there are also questions about how well it will work in the long run to help tribes move from sporadic work to steady incomes.

MGNREGA has developed into an essential support network for many indigenous families throughout the years. They have been able to reduce their dependency on exploitative revenue streams, earn with dignity, and support community development. The program's impact varies by location, though; some have had favourable results, while others face problems including poor awareness, inefficient execution, and delayed payments. This study looks into how employment trends in tribal areas have changed as a result of MGNREGA. It looks at whether the initiative has actually helped to lower unemployment, increase income, and provide a stronger basis for indigenous communities' future.

Literature Review

Mishra (2011) conducted an empirical study in three Madhya Pradesh districts to assess the efficacy of asset development under MGNREGA. The study sought to get beyond the conflicting debates about the program, which has been praised for reducing poverty and criticised for producing unfruitful results. Employing a field-based assessment method, the study investigated the longevity and usefulness of various types of assets generated under the initiative. The results show that while MGNREGA has offered a consistent source of employment and aided in reducing poverty, the quality and long-term effectiveness of the assets varied considerably from one location to another. Certain assets, such as water-harvesting systems and soil conservation structures, were found to enhance agricultural productivity, while others, like inadequately designed roads or drainage systems, did not

provide lasting benefits. The research emphasizes that the success of asset creation is heavily influenced by local planning, technical implementation, and community engagement, highlighting the necessity for more robust institutional frameworks to ensure sustainable and beneficial outcomes from MGNREGA investments (Mishra, 2011).

A review study was carried out by Rajalakshmi and Selvam (2017) to evaluate the effects of MGNREGA on women's empowerment, as well as the challenges and issues encountered during the implementation of the scheme from 2005 to 2015. The research analyzed secondary data and existing literature to assess the program's impact on women's participation and empowerment results within its first decade. The findings indicated that women made up nearly 80% of all beneficiaries, showcasing a significant level of female involvement in the scheme. The review emphasized that MGNREGA not only offered financial stability through wage employment but also improved women's self-worth, independence, and ability to make decisions. In Tamil Nadu, decentralized planning further enhanced women's participation in the program, leading to greater social acceptance of women's empowerment. The study concluded that MGNREGA has had a transformative effect on elevating the economic status of rural women and enhancing their quality of life, while also highlighting gaps and challenges that should be explored in future research (Rajalakshmi & Selvam, 2017).

A study conducted by Fatima (2024) analyzed how microfinance serves as a key driver for financial inclusion and economic advancement in India, particularly in Bihar. The paper investigated the idea of microfinance, the operation and outreach of Microfinance Institutions (MFIs), and their social and economic effects on rural families. The results indicated that over the past thirty years, nearly 100 million rural households have seen enhancements in their living conditions due to the availability of microfinance. The study pointed out that the small loans given by MFIs, particularly to marginalized individuals without

access to collateral, have played a crucial role in reducing poverty, creating jobs, and promoting sustainable development. Additionally, it noted that India's microfinance sector is diverse, including various types of institutions such as banks, Small Finance Banks (SFBs), Non-Banking Financial Companies (NBFCs), and non-profit MFIs, each functioning under different regulatory structures. Specifically regarding Bihar, the research highlighted the sector's potential in tackling entrenched socio-economic issues while also emphasizing the significance of regulation and government initiatives in fostering the sector's growth and effectiveness (Fatima, 2024).

A case study conducted by Datta (2021) assessed the execution of government-sponsored programs aimed at tribal communities in the Mal Block of Jalpaiguri District, West Bengal. The study framed tribal development within India's constitutional context, focusing specifically on the provisions outlined in the Fifth and Sixth Schedules, and examined development initiatives from the First Five-Year Plan to current efforts. The research pointed out that while central and state governments have launched various programs addressing housing, income generation, and education, these benefits have not been evenly distributed among tribal groups. The findings underscored that the success of these programs significantly hinges on the proactive involvement and cooperation of local administrative bodies working alongside tribal communities. The study concluded that despite ongoing policy efforts, considerable gaps persist in converting developmental schemes into real improvements in the socio-economic conditions of the tribal population in the Mal Block (Datta & Mahavidyalaya, 2021).

A review conducted by Lakshmi and Paul (2019) examined the socio-economic circumstances of tribal groups in Telangana and Andhra Pradesh, placing particular emphasis on the challenges they encounter and the government initiatives aimed at their welfare. The study pointed out that tribal communities continue to be one of the most marginalized

groups in Indian society due to various factors, such as geographical and cultural isolation, insufficient healthcare access, low education and skill levels, malnutrition, inadequate housing, lack of safe drinking water and sanitation, and limited political engagement. These vulnerabilities are further aggravated by restricted access to resources and assets, along with exposure to shocks, violence, and crime. The review stressed that these systemic disadvantages significantly obstruct the ability of tribal communities to enhance their living standards. To tackle these challenges, both state governments have implemented several welfare programs designed to improve education, health, livelihood opportunities, and infrastructure. The study concluded that while these efforts represent progress toward inclusive development, there are still considerable deficiencies in ensuring equitable access and the effectiveness of the programs across various tribal groups (Lakshmi & Paul, 2019).

An empirical investigation was conducted by Bebarta (2013) to assess the effects of MGNREGA on tribal households in the Rayagada block of Gajapati district, Odisha. The study utilized a random sample of 50 tribal families and adopted a descriptive research design to evaluate both the awareness level regarding MGNREGA provisions and the actual outcomes of the scheme. The results indicated that MGNREGA significantly contributed to improving livelihood security, creating sustainable assets, and enhancing agricultural productivity within tribal communities. Additionally, the study pointed out its favorable impacts on diminishing distress migration and fostering social empowerment by engaging marginalized groups in the decentralized planning process. In summary, the research emphasized the significance of MGNREGA not just as a means of providing wage employment but also as a catalyst for long-lasting socio-economic advancements within tribal communities (Bebarta, 2013).

A study focused on policy was carried out by Mallik and Paltasingh (2024) to evaluate the

impact of MGNREGA on the socio-economic challenges faced by tribal communities in India. Utilizing secondary data, the research examined how the program helps alleviate livelihood insecurity, which is particularly severe among tribal groups reliant on forests, agriculture, and related activities. The research highlighted that tribal households encounter ongoing difficulties such as poverty, exploitation, unemployment, lack of education, displacement, and migration, all of which contribute to their marginalization. The findings indicated that MGNREGA functions as a vital safety net by creating job opportunities, broadening income sources, fostering financial inclusion, and improving skills for tribal workers. Nevertheless, the paper pointed out that the overall impact of the scheme on tribal communities is still restricted, particularly regarding structural issues. The authors concluded with suggestions aimed at enhancing the reach and effectiveness of MGNREGA to better address the long-term development needs of tribal populations (Mallik & Paltasingh, 2024).

A research study conducted by Kaushal and Singh (2016) aimed to investigate the involvement of women in MGNREGA, particularly in Himachal Pradesh. The paper pointed out that the Act, which requires at least 33% of participants to be women, has become a crucial tool for fostering gender equality and economic empowerment in rural India. By analyzing comparative data from various states, the study found that women's participation at the national level increased from 47.07% in 2012–13 to 50.24% in 2014–15. Tamil Nadu was identified as the top state for women-generated persondays, followed by Andhra Pradesh and Rajasthan. In Himachal Pradesh, women's participation was significantly high, making up 58.09% of all workers involved in MGNREGA in 2014–15. The state saw a rise in persondays produced from 118.8 lakh in 2011–12 to 176.60 lakh in 2013–14, with Mandi district leading the contributions, followed by Kangra. The results highlighted that women are increasingly taking on household financial responsibilities thanks to MGNREGA.

earnings, which benefits both family welfare and women's societal status. Nonetheless, the study also pointed out issues like lack of awareness and delayed wage payments, suggesting enhancements in these aspects to increase the scheme's effectiveness in empowering women (Kaushal & Singh, 2016).

An empirical investigation was carried out by Varghese (2019) to examine the effects of policies aimed at empowering women politically, specifically focusing on the Idukki district in Kerala. The research evaluated the execution of the 1992 Panchayati Raj Institutions (PRIs) Act, which required a 50% reservation of seats for women in local self-government bodies, thus increasing their opportunities for political involvement. Utilizing primary data gathered from elected female representatives, the study explored how this policy intervention improved women's roles in local governance and welfare initiatives. The results indicated that the reservation policy markedly enhanced women's political visibility and engagement, allowing them to impact decision-making processes and take on leadership roles within their communities. The research concluded that such institutional frameworks are vital in reinforcing women's political legitimacy and representation, thereby advancing broader gender equality and empowerment within Kerala's society (Varghese, 2019).

An empirical investigation was carried out by Ananda (2020) to assess the effects of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) on the socio-economic status of Scheduled Tribes (STs) in Karnataka. Tribals, who make up 7.6% of the state's population, continue to confront issues such as poverty, unemployment, malnutrition, illiteracy, and limited job opportunities. The research underscored that historical structural and systemic barriers have consistently marginalized tribal communities from mainstream development, highlighting the essential nature of government-sponsored poverty alleviation and employment generation programs for their welfare. The findings indicated that MGNREGS has been crucial in

improving livelihood security for underprivileged groups, specifically STs, by ensuring guaranteed unskilled jobs. The program was shown to decrease distress migration, provide protection from exploitation, and enhance income stability for tribal households. Nevertheless, the research also pointed out various obstacles that impede effective participation, such as administrative inefficiencies and a lack of awareness. The author suggested the inclusion of more tribal-friendly initiatives within the scheme to foster greater inclusion and lasting socio-economic advantages for Scheduled Tribes in Karnataka (Ananda, 2020).

Research Gap

The effect of MGNREGA, microfinance, and other government programs in improving the socioeconomic circumstances of rural and tribal communities has been the subject of several studies. These studies emphasise both the positive aspects, such as women's engagement, asset growth, and employment development, as well as the negative aspects, such as poor performance, late payments, and ignorance. Nevertheless, a significant amount of the research is either restricted to a certain region or focusses on a single subject (e.g., livelihood security, women's empowerment, or asset development). Additionally, there is a lack of research that combines diverse data from across states to examine how these efforts affect underprivileged populations, such as Scheduled Tribes and rural women. This limitation makes it more challenging to make generalisations about the overall effectiveness of these initiatives at the national level.

Research Objective

1. To investigate state-by-state tribal participation in MGNREGA.
2. To assess the impact of MGNREGA on tribal income and livelihood.
3. To ascertain the ways in which MGNREGA has aided indigenous communities' infrastructure development, asset creation, and social empowerment.

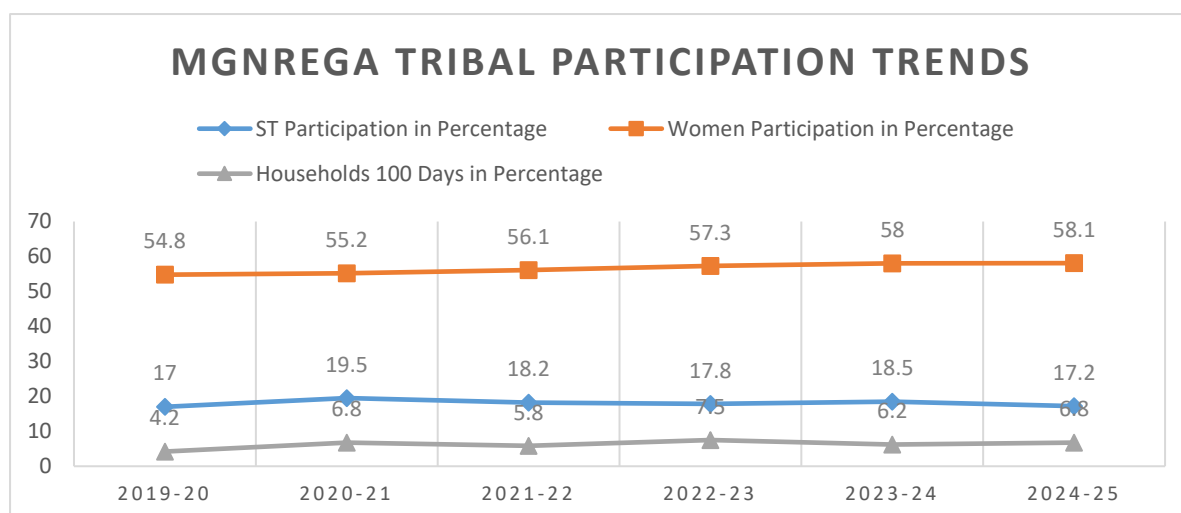
Methods of Research

This study makes use of secondary data gathered from several trustworthy sources. The information has been compiled from a variety of sources, including as government publications, census data, NSSO surveys, scholarly books and articles, and documents related to MGNREGA and tribal development. The use of policy papers and reports from non-governmental organisations has further enhanced the study. Since field surveys are not included, the study concentrates on assessing earlier research, identifying gaps, and identifying recurring themes. This approach tackles the ongoing challenges in executing MGNREGA and aids in understanding its impact on the socioeconomic status of Scheduled Tribes and rural women.

Tribal Involvement in MGNREGA

Tribal membership in MGNREGA demonstrates both significant participation and persistent variations across many regions and historical eras. The MGNREGA produced a record 309 crore person-days nationwide in 2023–2024, during the COVID-19 pandemic years, when many migratory workers returned to their towns without employment prospects. Even though they only make up 8% of the nation's population, Scheduled Tribes made up between 17 and 20% of all participants. This very high participation rate demonstrates the program's critical importance for indigenous communities with few employment alternatives.

Figure 1: MGNREGA Tribal Participation Trends



Sources: Primary Census Abstract: Scheduled Tribes. Office of the Registrar General & Census Commissioner (India, 2011; India., 2024)

According to the temporal study, Scheduled Tribe engagement fluctuated from 17.0% in 2019–20 to a peak of 19.5% in 2020–21, before levelling out at 17–18% in the following years. Women's involvement has steadily increased, rising from 54.8% in 2019–20 to 58.1% in 2024–25, demonstrating MGNREGA's effectiveness in advancing job prospects that are inclusive of both genders. Most families

only receive 45–50 days of work each year, and the number of households that complete the required 100 days of employment is still a dismal 4.2%–7.5%, depending on the year.

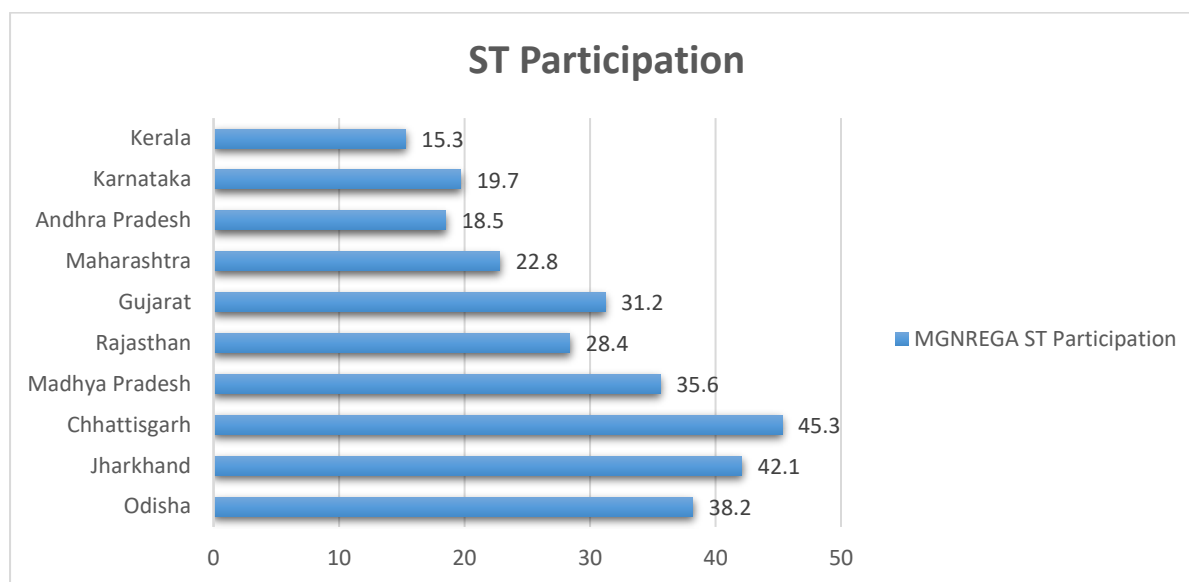
Regional Variations in Implementation

Significant differences in tribal involvement rates are seen by state, with states with larger

Scheduled Tribe populations often showing higher levels of engagement. In these tribal-majority areas, Chhattisgarh leads with 45.3% ST involvement, followed by Jharkhand with 42.1% and Odisha with 38.2%. This is a result of both population concentration and focused

implementation efforts. On the other hand, lower participation percentages are found in states like Kerala (15.3%), Andhra Pradesh (18.5%), and Karnataka (19.7%), which are frequently associated with smaller tribal communities and distinct economic options.

Figure 2: State-wise ST Participation in MGNREGA



Sources: MGNREGA implementation statistics: State-wise participation data(India., 2024)

States differ greatly in the degree of implementation, with some areas seeing success and others continuing to face difficulties. Participation rates have been gradually rising in the Sundargarh area of Odisha, indicating successful local implementation and community involvement. Similar to this, the Idukki district of Kerala has seen significant progress in tribal empowerment, which has led to greater access to healthcare and education, economic stability, and a decrease in poverty. States like Bihar and Jharkhand, however, are still dealing with issues including delayed salary payments, low-quality assets, and a lack of knowledge among tribal workers about their rights.

Economic Impact and Livelihood Enhancement

Tribal family economics and livelihood patterns have benefited greatly from

MGNREGA. According to research, participating households saw improvements in family income of 20–30%, with other studies reporting even greater gains in particular geographic areas. The program has successfully reduced distress migration by providing local employment opportunities, allowing families to maintain their communities while earning a livable wage. This decrease in migration has a substantial influence on social stability, cultural preservation, and communal cohesion among tribal groups.

Beyond only generating income, the impacts on employment also include economic variety, skill development, and financial inclusion. Because of MGNREGA's initiatives, many indigenous families have been able to learn new skills, use formal banking services, and reduce their dependence on exploitative sources of income. Recipient women report increased financial independence, social status, and

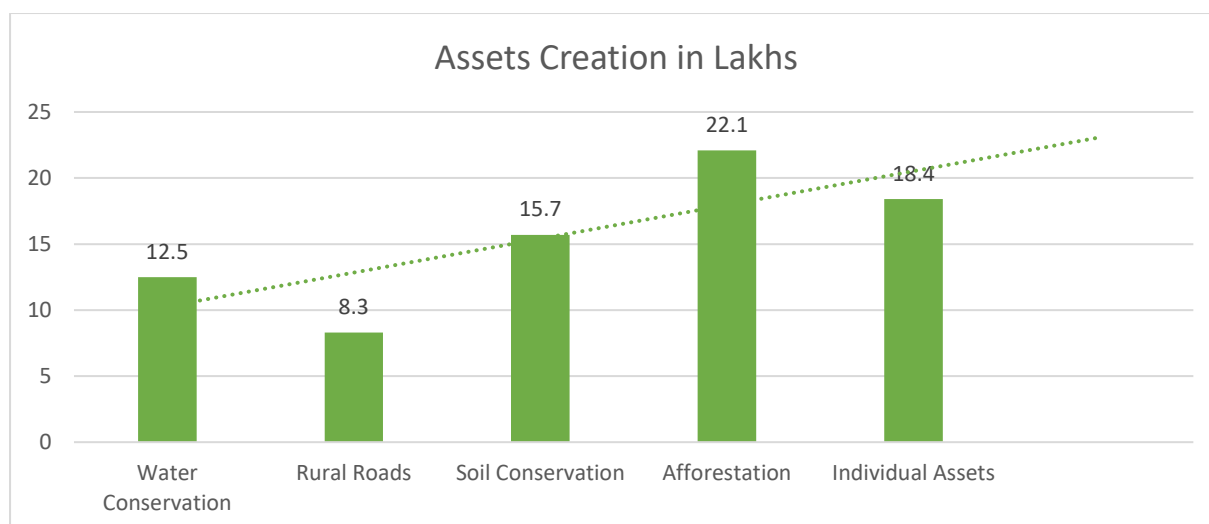
control over household decisions—all of which are in line with broader objectives for female empowerment.

Building Infrastructure and Creating Assets

One of MGNREGA's most significant contributions to the development of tribal areas has been the construction of millions of productive assets since its inception. Water conservation projects, such as irrigation

systems, check dams, and ponds, account for a sizable portion of generated assets; 68.2% of these projects are located inside tribal boundaries. Participants reported 12% increases in rice and wheat yields, 16–17% increases in the production of coarse grains and pulses, and an astounding 28% rise in vegetable cultivation, demonstrating the quantifiable gains in agricultural productivity brought about by these expenditures.

Figure 3: Asset Creation in MGNREGA

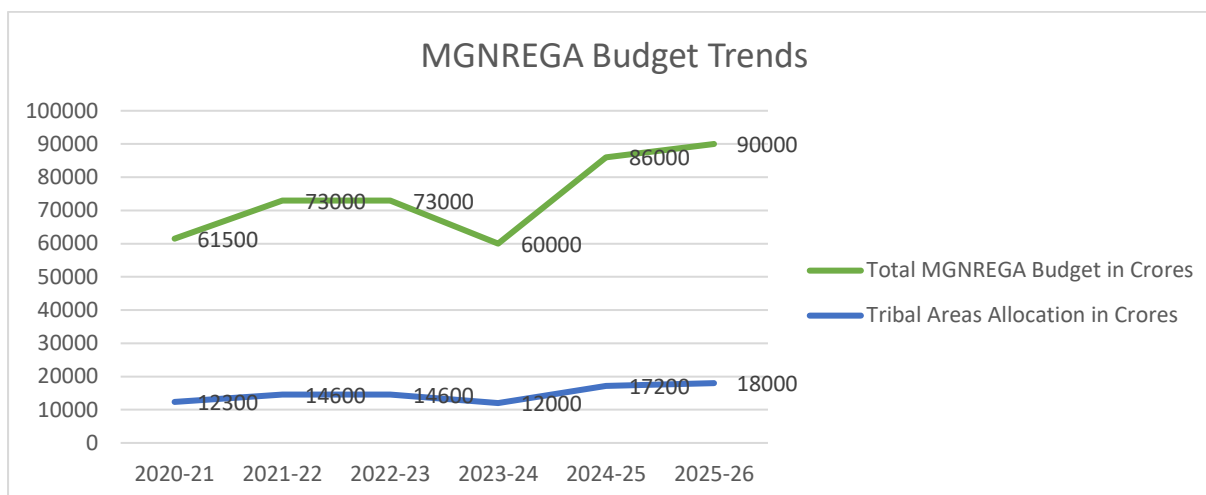


Sources: MGNREGA Asset Creation Statistics. Government of India (Ministry Of Rural Development 2024).

Afforestation projects exhibit the strongest tribal area focus at 78.5%, supporting environmental conservation goals while supporting traditional tribal livelihoods centred on forest resources; individual assets, such as farm ponds, cattle sheds, and agricultural infrastructure, account for 62.8% of tribal area investments, directly benefitting participating households through increased agricultural productivity and income diversification opportunities; and soil conservation measures, another major asset category, exhibit an even higher concentration in tribal regions at 72.1%, reflecting both ecological needs and employment generation priorities in these areas.

Budget Allocation and Financial Trends

Due to shifting governmental objectives and economic conditions, MGNREGA funding allocation has varied significantly in recent years. In FY 2024–2025, the program was given its largest budget of Rs 86,000 crore, which was a considerable rise from Rs 60,000 crore the year before. Forecasts show sustained expansion, with an expected FY 2025–2026 allocation of Rs 90,000 crore. Approximately 20% of the MGNREGA money is regularly allocated to tribal regions, which translates to Rs 17,200 crore in 2024–2025 and an expected Rs 18,000 crore in 2025–2026.

Figure 4: MGNREGA Budget Trends

Sources: Demand for Grants 2024-25: Rural Development. Government of India(Finance, 2024)

- Research indicates that present funding levels are still insufficient to satisfy the need for full employment in indigenous regions, even with these significant commitments. In contrast to the current levels of about 0.2-0.41% of GDP, research indicate that budget allocations of 1.2-1.5% of GDP would be required to achieve the best impact. Due to the increasing need for assured labour opportunities during agricultural off-seasons caused by seasonal job fluctuations, tribal groups are particularly affected by this financial disparity.

Challenges and Implementation Issues

- Despite notable achievements, persistent barriers to MGNREGA's implementation in tribal areas limit its revolutionary potential. Payment delays are a significant issue that affects household financial stability and program credibility. An review of 31.36 million pay cheque transactions shows that the Union government owes MGNREGA workers at least Rs 39 crore in overdue pay compensation. Tribal people are particularly impacted

by procedural inefficiencies. These delays have been made worse by the implementation of caste-based payment segregation in 2021; Scheduled Tribe employees now often encounter payment delays of 23 days instead of the legally required 15 days.

- However, administrative inefficiencies hinder effective implementation, particularly in remote tribal areas with limited institutional capability. Poor asset creation, a lack of community participation, and inadequate technical monitoring all contribute to subpar outcomes that don't fully maximise program benefits. Many tribal workers find it challenging to demand accountability and efficient performance since they are not completely aware of their benefits and rights.
- Due to low literacy rates, rural locations, and a poor civil society presence, social auditing processes are challenging to implement in tribal areas, even though they are mandated under MGNREGA. Despite being set up in several states, social audit units' efficacy varies greatly, and many of them fall short in addressing systemic

implementation gaps or effectively including Native people.

Social Empowerment and Community Development

- Apart from its monetary benefits, MGNREGA has significantly aided social empowerment and community development in indigenous areas. The program's focus on democratic decision-making and participatory planning has improved the political involvement and collective action capacity of tribal communities. Women have challenged gender conventions, increased their public visibility, and been given greater opportunities to lead local groups as a result of participating in MGNREGA activities.
- The initiative has increased communal cohesion by promoting inclusive development practices that respect tribal cultural values, reducing caste-based discrimination through equal pay regulations, and providing shared spaces for cooperative ventures. Asset development programs often combine traditional knowledge systems with community objectives to build infrastructure that meets local needs and environmental conditions.

Recommendations and Policy Implications

- A thorough examination of MGNREGA's effects on tribal employment trends yields some important suggestions for improving the program's efficacy:
- The budget should initially be greatly increased in order to meet the requirement for full employment, with particular attention given to tribal areas where seasonal work shortfalls are most apparent.
- Payment processing mechanisms must be enhanced to prevent delays. Resolving technical problems with digital payment systems that

disproportionately affect indigenous workers is one aspect of this.

- Sustainability and productive value should be given top priority in asset creation through improved technical supervision, community participation in design and implementation, and collaboration with other development projects.
- To guarantee that indigenous people can take part in program governance and are fully aware of their rights, efforts to raise awareness and develop capacity should be reinforced.
- Social audit mechanisms need to be strengthened in order to effectively offer community monitoring of program success.
- Social audit mechanisms need to be strengthened via better training, resource allocation, and institutional support in order to effectively offer community oversight of program success.
- Lastly, program design should be more adaptable to seasonal fluctuations, traditional livelihood systems, and tribal cultural practices while maintaining the values of accountability and transparency.

Conclusion

- MGNREGA has revolutionised tribal communities by giving one of India's most marginalised tribes vital job opportunities, infrastructural development, and social empowerment advantages. The program's continued relevance and capacity to lower rural poverty and unemployment are demonstrated by its accomplishments in increasing household incomes, producing valuable assets, and obtaining significant tribe engagement. However, if MGNREGA is to realise its full revolutionary potential, enduring issues like payment delays, administrative inefficiencies, and insufficient funds must be addressed immediately.

- According to the research, MGNREGA may be a pillar of tribal development, promoting social empowerment, environmental preservation, poverty reduction, and inclusive growth with the right reforms, more funding, and improved implementation procedures. Effective governance structures, sufficient funding, sustained political commitment, and significant community involvement in program design and execution are all necessary for success. MGNREGA's role in ensuring that no group is left behind is more important than ever as India continues on its path of development, especially for tribal people who have traditionally experienced systematic exclusion from mainstream economic prospects.

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SPATIAL ANALYSIS OF URBANIZATION IN NORTH 24 PARGANAS DISTRICT, WEST BENGAL

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Abstract

Spatial analysis of urbanization in North 24 Parganas district reveals a rapid and uneven urban growth pattern, with western parts of the district showing the highest urbanization due to urban sprawl, urban agglomeration and connection with the Kolkata metropolitan area. The present study aims to assess the spatial growth of urban centres of North 24 Parganas District in West Bengal. The overall spatial urbanization shows that urban growth of the study area is not compact in nature. The study estimates that urban expansion has occurred mainly in western parts of the district (Barrackpore I, Barrackpore II and Rajarhat area) of the district. The outcome of this study can best be utilized for effective urban planning and management. This paper concludes with policy suggestions for balanced spatial urban development and urbanization in the district.

Keywords: Urban Agglomeration, Urbanization, Urban Growth, Urban Development, Urban Expansion.

Introduction

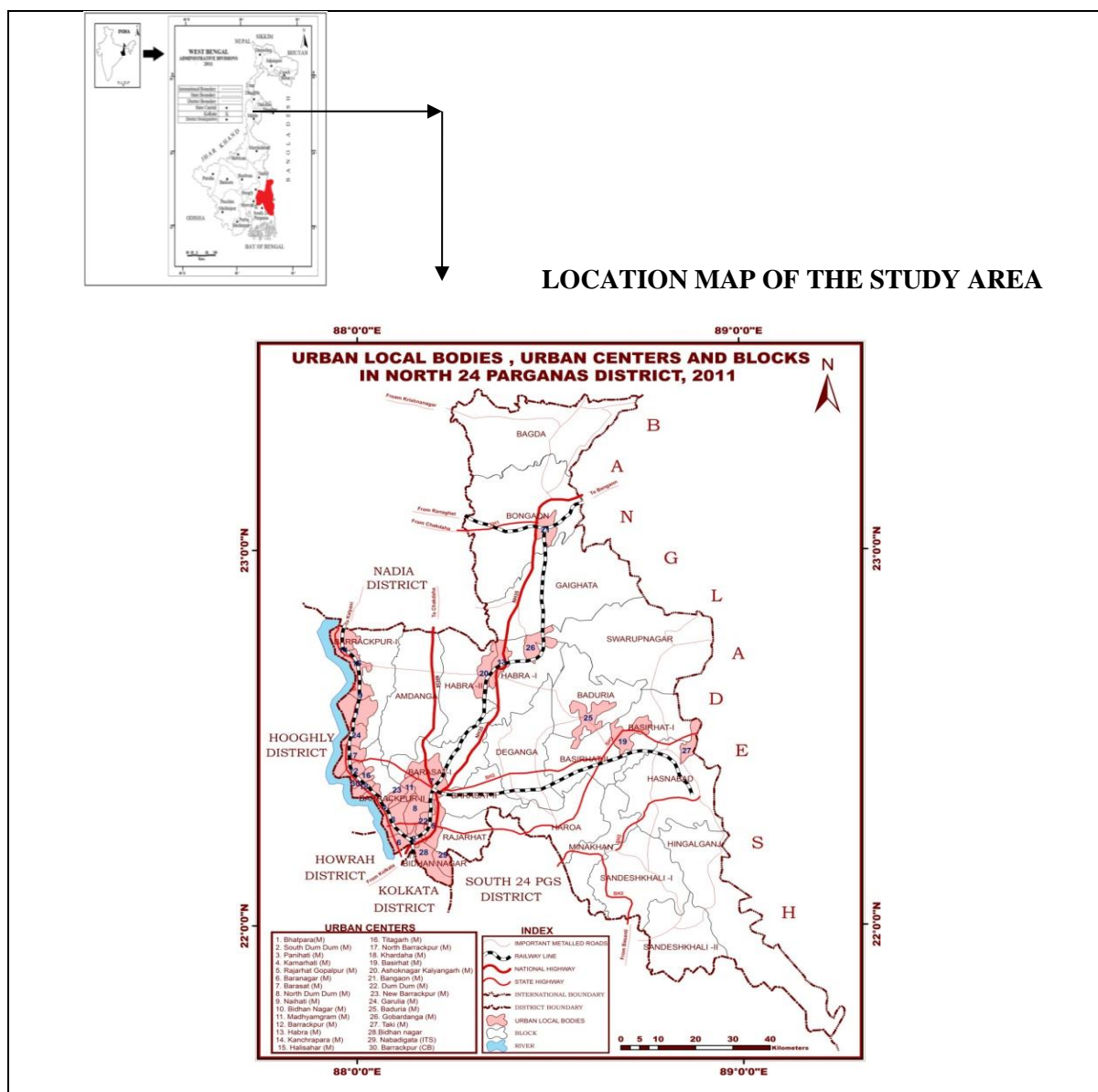
Urbanization is a progressive concentration of urban population (Davis, 1965), where traditional rural economies are transformed into the modern industrial economies (Datta, 2012). According to United Nations, 2003, the world population has doubled within a few decades and 50 percent world populations are living in urban areas. India has been considered as one of the major contributor for this urban explosion due to growth of population and rural to urban migration (Kundu, 2011).

This paper has made an attempt to assess the spatio-temporal growth of urban centres situated within 5 Subdivisions, 22 Community Development blocks, 27 municipalities, 01 Cantonment Board, 01 Industrial Township and 78 Census Towns. Total urban population of the district is 5,732,162 that is 57.27 percent

urban populations. The density of population (2445 persons/ sq.km.) is much higher than the state average of 1029 population per sq.km, and it ranks 3rd in terms of population density (According to census 2011). The spatial aspect of urbanization (where growth happens, how fast, in what form) is crucial for planning sustainable urban regions.

Study Area

The district North 24 Parganas forms the south-eastern part of the West Bengal and lies between 22°8' N to 23°16' N latitude and 88°18'E to 89°04' E longitude. The district is bordered by the districts of Nadia in north, South 24 Parganas and Kolkata in the south, Howrah, Hooghly and Hooghly River in the west. Bangladesh forms the eastern border of the North 24 Parganas district.



Source: Prepared by Author

MAP- 1

Objectives

1. To analyse the temporal trend of urbanization in the district (population, number of urban centres)
2. To examine the spatial pattern of urban growth within the district.
3. To identify **drivers** and **consequences** of the spatial urbanization process.
4. To provide policy implications for spatial planning and management of urban growth in the district.

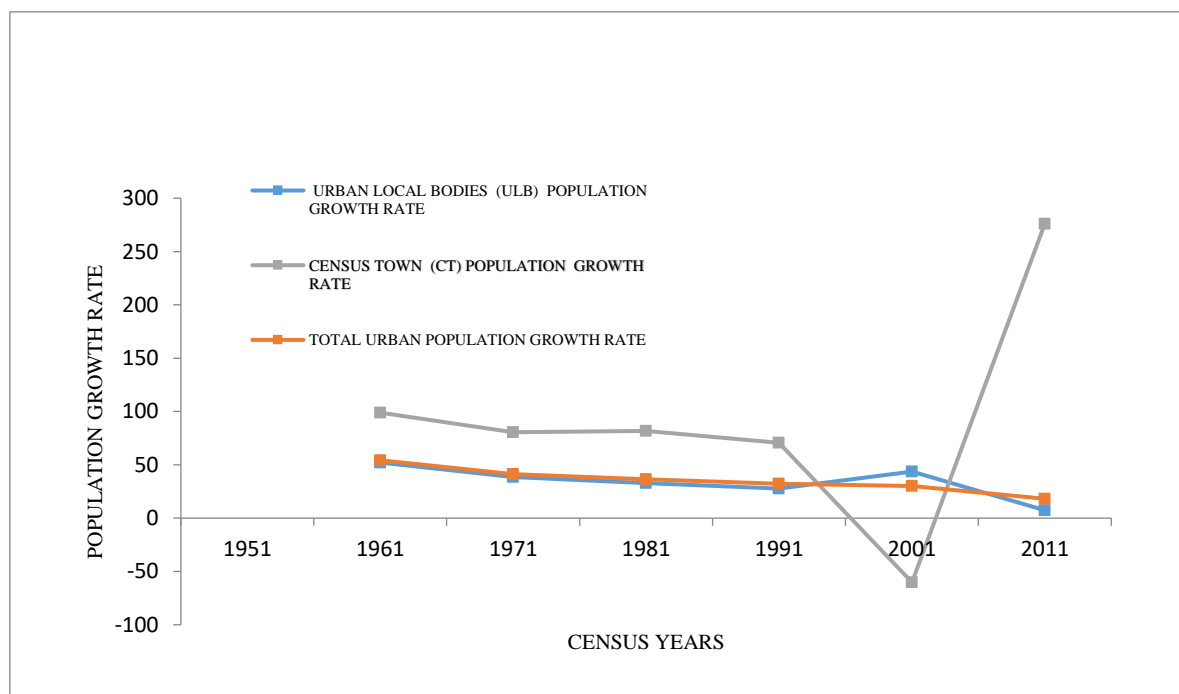
Data Base and Methodology

The study is based on secondary sources of data. Secondary sources of data are mainly various Census Publications, Block Development Offices, Municipal Statistics of West Bengal and District Statistical Hand Book. The simple statistical techniques like Residual Analysis, level of Correlation Coefficient have been applied for analysing this paper. Geographic Information System (GIS) techniques used to analyze the urban spatial nature in the district.

TABLE 1: Growth Rate of Urban Area and Urban Population of Urban Centres in North 24 Parganas District (1951–2011)

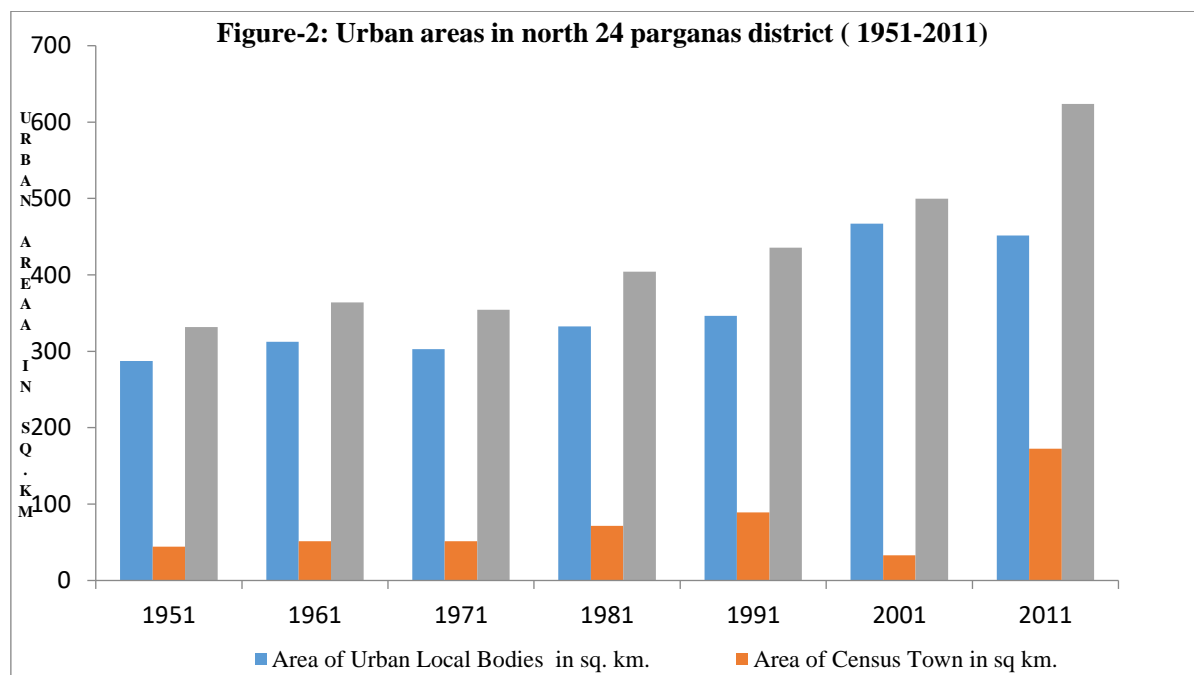
| Indicators | 1951 | 1961 | 1971 | 1981 | 1991 | 2001 | 2011 |
|-------------------------------------|---------|-----------|-----------|-----------|-----------|-----------|-----------|
| Number of Urban Local Bodies | 23 | 26 | 26 | 27 | 27 | 28 | 29 |
| Population of Urban Local Bodies | 905,427 | 1,377,174 | 1,909,047 | 2,535,493 | 3,242,414 | 4,656,718 | 5,001,716 |
| Area of Urban Local Bodies (sq. km) | 287.13 | 312.35 | 302.90 | 332.35 | 346.55 | 467.10 | 451.43 |
| Number of Census Towns | 13 | 14 | 14 | 19 | 32 | 20 | 78 |
| Population of Census Towns | 43,816 | 87,093 | 157,219 | 285,873 | 487,886 | 194,229 | 730,446 |
| Area of Census Towns (sq. km) | 44.45 | 51.57 | 51.57 | 71.68 | 89.04 | 32.80 | 172.48 |
| Number of Urban Out-Growths | 0 | 0 | 0 | 13 | 11 | 7 | 4 |
| Total Number of Urban Centres | 36 | 40 | 40 | 59 | 70 | 55 | 111 |
| Total Urban Area (sq. km) | 331.58 | 363.92 | 354.47 | 404.03 | 435.59 | 499.90 | 623.91 |
| Total Urban Population | 949,243 | 1,468,398 | 2,125,002 | 2,821,366 | 3,730,300 | 4,850,947 | 5,732,162 |

Source: Compiled by Author from Different Census Reports (1951–2011)

FIGURE-1: Population Growth Rates Of Urban Local Bodies,Census Towns And Total Urban Population In North 24 Parganas District In (1951-2011)

The *Census Towns* (CT) is first recognized by the census of India in 1971. The *census towns* are administered by Gram Panchayat, but their physical character is like an urban areas. After independence of India, influx of huge refugees from neighbouring country, industrialization, improvement of civic amenities and other pull factor of urban centres which lead to rapid growth of Census Towns. As a result number of Census Towns increased from 13 in 1951 to 78

in 2011. Population of census towns are gradually increasing from 4.62 percent in 1951 to 12.74 percent in 2011. So, the role of Census Towns on urbanization is very much important in the district. The balanced urbanization and urban growth may be achieved by promoting and acknowledging Census Towns near the larger urban centres and by reducing the population pressure over the larger urban centres.



The spatial extent of urbanization in the North 24 Parganas district has undergone significant transformation over the sixty-year period from 1951 to 2011. As presented in Table-1, the total urban area increased from 331.58 sq km in 1951 to 623.91 sq km in 2011, registering an overall growth of approximately 88%. This expansion reflects both administrative and functional urbanisation, influenced by Kolkata's metropolitan dominance and the district's industrial and transport linkages. The area under Urban Local Bodies rose steadily from 287.13 sq km in 1951 to 451.43 sq km in 2011, with only minor fluctuations. The most prominent phase of growth occurred between 1991 and 2001, when the urban area expanded substantially due to municipal boundary extensions and urban agglomeration around major urban centres such as Barasat,

Barrackpore, and Kamarhati. The area under Census Towns showed a more erratic pattern. Between 1951 and 1991, it increased modestly from 44.45 sq km to 89.04 sq km. A sharp decline to 32.8 sq km in 2001 indicates the conversion of several census towns into statutory municipalities. However, the period 2001–2011 witnessed an unprecedented surge to 172.48 sq km, demonstrating the rapid rural-to-urban transformation and proliferation of new census towns under the influence of Kolkata's suburban expansion. This phase reflects the emergence of peri-urban landscapes, where formerly rural settlements have acquired urban characteristics. The total urban area expanded continuously, although the rate varied across decades. The growth was modest in the early decades (1951–1981), accelerated between 1981 and 2001, and

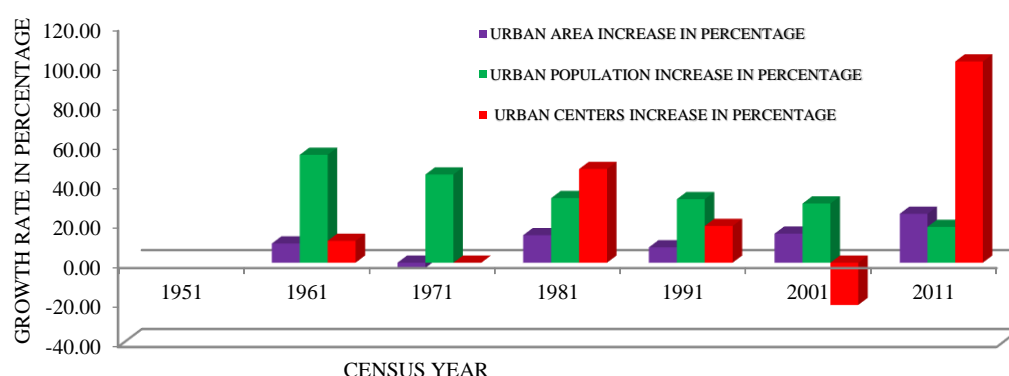
peaked during 2001–2011 with a growth rate of about 24.8%. This pattern aligns with the post-liberalization period of economic growth, real estate development, and infrastructural improvement in West Bengal.

Spatial Implications

The spatial pattern of urban expansion in North 24 Parganas reflects a decentralized and

diffused urbanisation process rather than a compact one. The dominance of census towns in recent decades indicates that urban growth is no longer confined to municipal areas but has diffused into the rural hinterland. Consequently, the district exhibits a transitional landscape characterized by mixed land use, peri-urban settlements, and metropolitan sprawl.

Figure 3: Growth Rates Of Urban Area , Urban Population And Urban Centers Of North 24 Parganas District (1951-2011)



During the past 60 years, 1951-2011, urban area increased from 331.58 Sq.km to 623.91 sq.km and number of urban centres also increased from 36 in 1951 to 111 in 2011 (including urban out-growth).

But in 2001, the urban centres decreased by – 21.42 percent. The number of urban centres was 70 in 1991 and 55 in 2001. As some census towns have been merged to nearby municipality and some urban outgrowths also merged with municipality and then converted to census towns. This reduction of urban centres occurred due to declassification and reclassification of towns. The urban population density was 2862.8 person/Sq.km in 1951 and 9187 person/Sq.km in 2011. During from 1951 to 1971, the district had at high levels of urbanization; between 1971-2001 levels of urbanization was slow but steady. The increase of urban population in percentage, number of urban

centres, urban rural ratio, urban population density, and percentage increase urban centres, all show steady pace of urbanization in every census year from 1951 to 2011 (Table- 1).

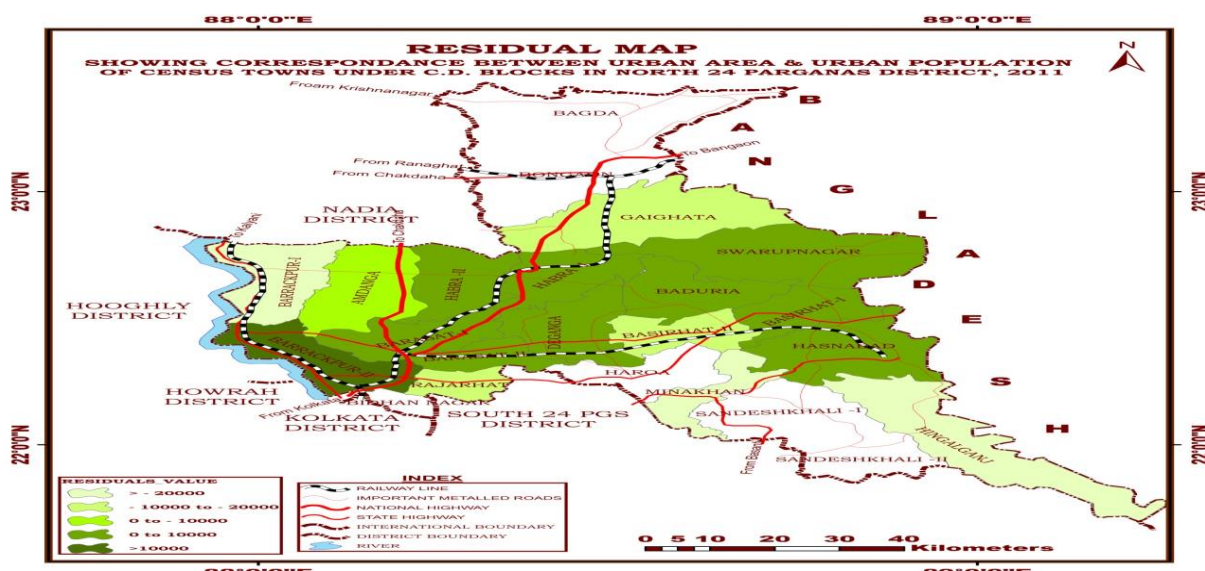
Correlation between Urban Population and Urban Areas of Cts under C.D. Blocks In the District by Residual Analysis

Residual analysis and residual map shows the spatial corresponding between two variables. Here the two corresponding variables are urban population and urban areas of CTs in the district. The residuals values have been analysed for the correlation between urban population and urban areas of CTs in the district. The following Table-2 and Map-2 have been shown the residual analysis of Census Towns under C.D. blocks in North 24 Parganas district, 2011.

Table- 2 Residual Analysis of Census Towns under C.D. Blocks In North 24 Parganas District, 2011

| Sl.No. | C.D. Block | Area (sq. km.) in 2011 (X) | Urban Population in 2011 (Y) | X ² | XY | Y _c = a+bx (Expected Urban Population) | Residuals Value = Y-Y _c |
|--------|-----------------|----------------------------|------------------------------|----------------|-------------|---|------------------------------------|
| 1 | Hingalganj | 9.07 | 15076 | 82.32 | 136786.06 | 37756.24 | -22680.24 |
| 2 | Minakhan | 7.23 | 7111 | 52.30 | 51424.62 | 27919.79 | -20808.79 |
| 3 | Barrackpur – I | 22.37 | 88567 | 500.20 | 1980809.81 | 108759.86 | -20192.86 |
| 4 | Rajarhat | 24.07 | 100286 | 579.32 | 2413793.76 | 117862.34 | -17576.34 |
| 5 | Gaighata | 17.04 | 64761 | 290.21 | 1103242.49 | 80290.57 | -15529.57 |
| 6 | Basirhat – II | 8.01 | 17290 | 64.23 | 138563.79 | 32099.24 | -14809.24 |
| 7 | Amdanga | 3.65 | 6659 | 13.33 | 24312.67 | 8792.82 | -2133.82 |
| 8 | Habra – I | 10.67 | 49549 | 113.93 | 528871.16 | 46306.37 | 3242.63 |
| 9 | Habra - II | 7.99 | 35815 | 63.77 | 286015.01 | 31948.60 | 3866.40 |
| 10 | Hasnabad | 2.17 | 6248 | 4.71 | 13553.16 | 876.76 | 5371.24 |
| 11 | Barasat - I | 23.31 | 119402 | 543.13 | 2782675.55 | 113781.18 | 5620.82 |
| 12 | Deganga | 2.74 | 9663 | 7.50 | 26469.86 | 3922.14 | 5740.86 |
| 13 | Baduria | 2.26 | 7275 | 5.13 | 16469.87 | 1382.64 | 5892.36 |
| 14 | Swarupnagar | 1.59 | 4360 | 2.53 | 6934.14 | -2215.09 | 6575.09 |
| 15 | Basirhat - I | 4.70 | 21093 | 22.13 | 99219.36 | 14416.70 | 6676.30 |
| 16 | Barasat – II | 2.55 | 11994 | 6.48 | 30537.92 | 2890.10 | 9103.90 |
| 17 | Barrackpur - II | 21.41 | 165297 | 458.37 | 3538942.65 | 103655.74 | 61641.26 |
| | Total | 170.83 | 730446 | 2809.58 | 13178621.90 | 901817.79 | |
| | | | | b=5341.832 | | a=-10710.74 | |

Source: Compiled by Author from Census, 2011



Source: Prepared by Author

MAP-2

The Figure-4 has been shown the relationship between urban population and urban area of

Census Towns under C.D. blocks in North 24 Parganas district, 2011.

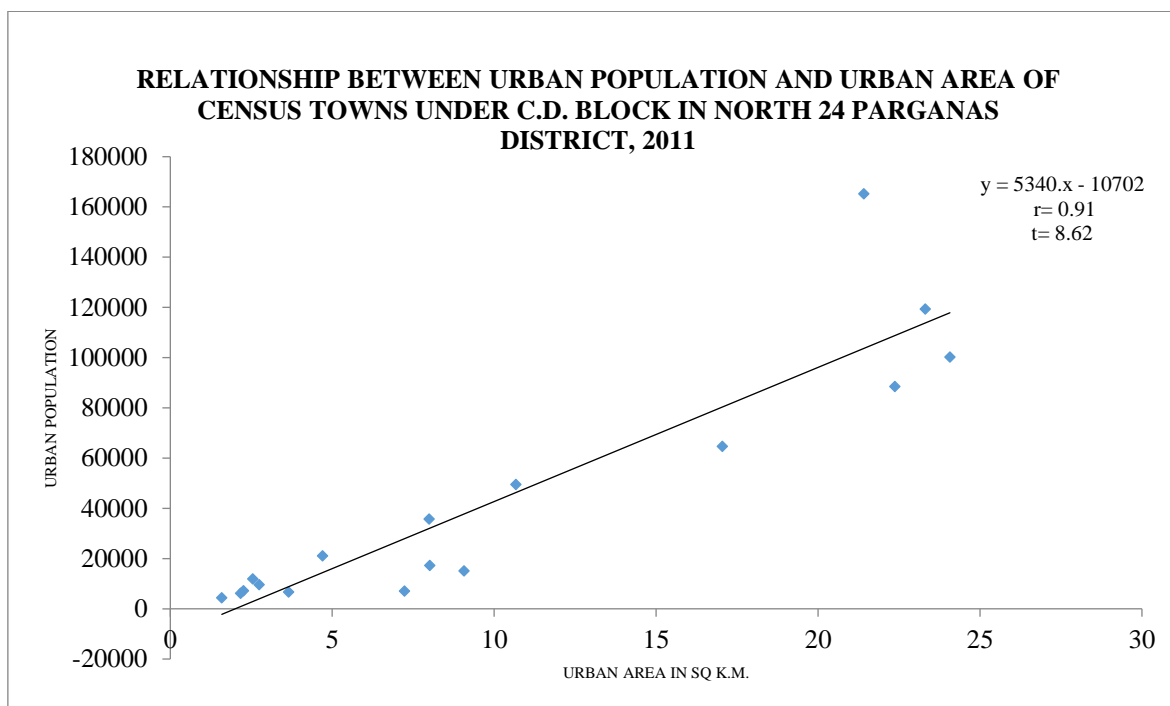


FIGURE-4

The positive residuals are found in C.D. Blocks namely, Barrackpur-II, Barasat-II, Bashirhat-I, Swarupnagar, Baduria, Deganga, Barasat-I, Hasnabad, Habra-II and Habra-I respectively (Map-2). The towns under these C.D. Block are highly populated and congested towns. These towns have high potentiality for further growth. So, the sufficient infrastructural development and public amenities are to be provided for solving the urban problems and the balanced urbanization.

On the other hand, rest of the Census Towns under C.D. Blocks are Amdanga, Bashirhat-II, Gaighata, Rajarhat, Barrackpur-I, Minakhan, and Hingalganj respectively having negative residuals. These towns are comparatively less congested, so there are further potentialities of urban growth. So, these towns under C.D. Blocks needed the proper planning for urbanization and development. The relationship between urban area and urban population of Census Towns under C.D. Block is very highly positive, where the correlation co-efficient (r) is 0.91 and computed value of t

is 8.62 (Figure- 4). The significance level of Correlation Coefficient (r) can also be tested with the help of a test statistic of *Student's t value*. The t values are computed by the formula, $t = \sqrt{(r^2 (n-2) / (1-r^2))}$. Where n = Degree of Freedom, r = Correlation Coefficient, t = t test. (Sarkar Ashis-1997, pp. 113-114). Here the tabulated value of t for 15 (17-2) degree of freedom is 2.95 at 1% level of significance (**Critical Values of Student's t, Significance Level**). The computed value of t is 8.62 greater than at 1% tabulated value of t hence, the correlation coefficient is significant at 1% significant level. So, the very positive relation between urban area and urban population is significant and the urban area and population are highly positive in order in each corresponding CTs within the district.

Correlation between urban population and urban areas of ulbs in the district by residual analysis

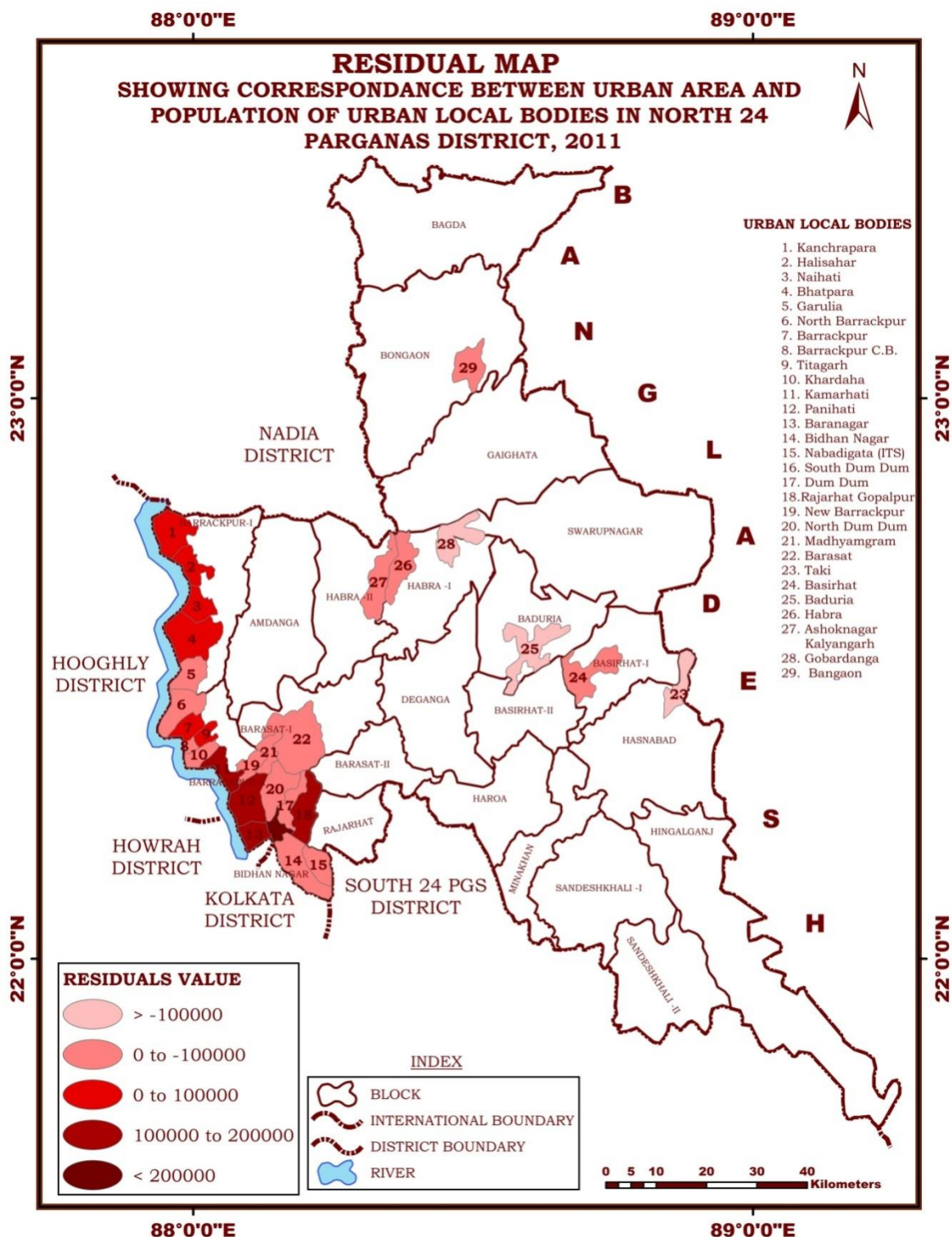
Residual analysis and residual map shows the spatial corresponding between two variables. Here the two corresponding variables are urban

population and urban areas of ULBs in the district. The residuals values have been analysed for the co-relation between urban population and urban areas of ULBs in the district. The following table, figure and map have been shown the residual analysis of ULBs in North 24 Parganas district, 2011.

Table-3 Residual Analysis Of Urban Local Bodies In North 24 Parganas District, 2011

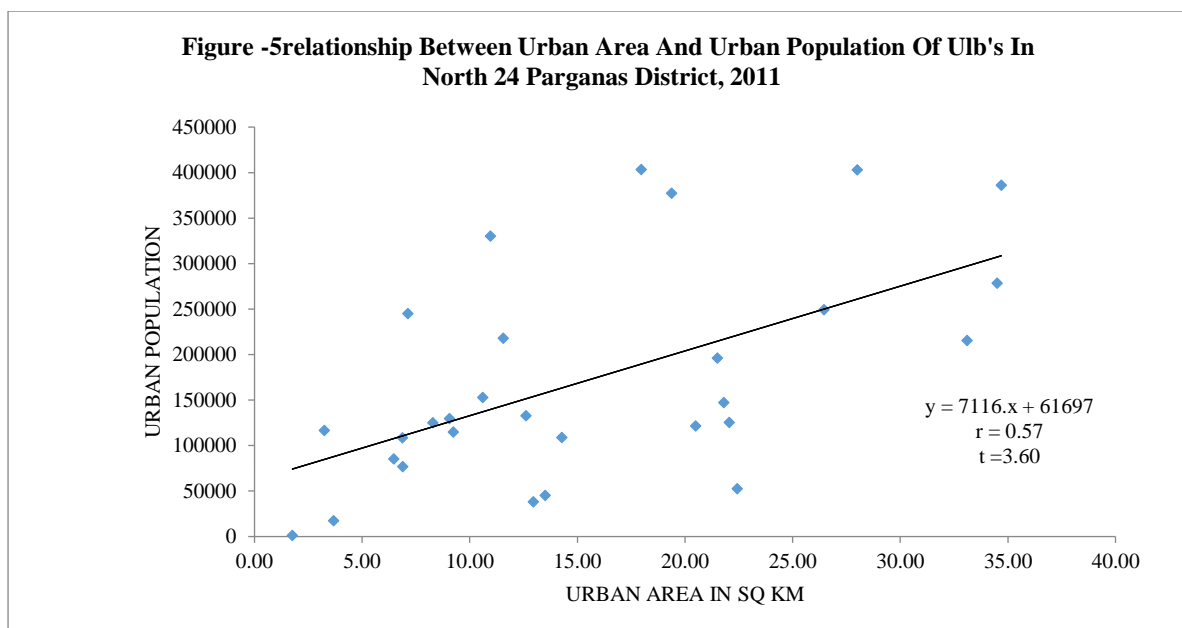
| SL NO. | Urban Local Bodies | Area (sq. km.) in 2011 (X) | Urban Population, 2011 (Y) | X ² | XY | Yc= a+bx (Expected urban population) | Residuals value = Y- Yc |
|--------|---------------------------------|----------------------------|----------------------------|----------------|-----------|--------------------------------------|-------------------------|
| 1 | Baduria (M) | 22.43 | 52493 | 503.1049 | 1177418 | 221315.16 | -168822.17 |
| 2 | Taki (M) | 12.96 | 38263 | 167.9616 | 495888.48 | 153924.02 | -115661.02 |
| 3 | Gobardanga (M) | 13.5 | 45377 | 182.25 | 612589.5 | 157766.81 | -112389.81 |
| 4 | Basirhat (M) | 22.05 | 125254 | 486.2025 | 2761850.7 | 218610.98 | -93356.98 |
| 5 | Ashokenagar Kalyangarh (M) | 20.5 | 121592 | 420.25 | 2492636 | 207580.75 | -85988.75 |
| 6 | Bidhannagar (M) | 33.1 | 215514 | 1095.61 | 7133513.4 | 297245.84 | -81731.85 |
| 7 | Nabadiganta Industrial Township | 1.76 | 1095 | 3.0976 | 1927.2 | 74221.713 | -73126.71 |
| 8 | Barrackpur Cantonment (CB) | 3.68 | 17380 | 13.5424 | 63958.4 | 87884.966 | -70504.97 |
| 9 | Habra (M) | 21.8 | 147221 | 475.24 | 3209417.8 | 216831.91 | -69610.91 |
| 10 | Bangaon (M) | 14.27 | 108864 | 203.6329 | 1553489.3 | 163246.34 | -54382.34 |
| 11 | New Barrackpore (M) | 6.89 | 76846 | 47.4721 | 529468.94 | 110728.21 | -33882.22 |
| 12 | Barasat (M) | 34.5 | 278435 | 1190.25 | 9606007.5 | 307208.63 | -28773.64 |
| 13 | Garulia (M) | 6.47 | 85336 | 41.8609 | 552123.92 | 107739.38 | -22403.38 |
| 14 | North Barrackpore (M) | 12.61 | 132806 | 159.0121 | 1674683.7 | 151433.32 | -18627.32 |
| 15 | Madhyamgram (M) | 21.5 | 196127 | 462.25 | 4216730.5 | 214697.02 | -18570.03 |
| 16 | Dum Dum (M) | 9.23 | 114786 | 85.1929 | 1059474.8 | 127380.30 | -12594.31 |
| 17 | Khardah (M) | 6.87 | 108496 | 47.1969 | 745367.52 | 110585.89 | -2089.89 |
| 18 | North DumDum (M) | 26.45 | 249142 | 699.6025 | 6589805.9 | 249922.60 | -780.6 |
| 19 | Kanchrapara (M + OG) | 9.06 | 129576 | 82.0836 | 1173958.6 | 126170.53 | 3405.46 |
| 20 | Halisahar (M) | 8.29 | 124939 | 68.7241 | 1035744.3 | 120691.01 | 4247.99 |
| 21 | Barrackpore (M) | 10.61 | 152783 | 112.5721 | 1621027.6 | 137200.76 | 15582.23 |
| 22 | Titagarh (M) | 3.24 | 116541 | 10.4976 | 377592.84 | 84753.80 | 31787.2 |
| 23 | Naihati (M) | 11.55 | 217900 | 133.4025 | 2516745 | 143890.06 | 74009.93 |
| 24 | Bhatpara (M + OG) | 34.69 | 386019 | 1203.3961 | 13390999 | 308560.72 | 77458.27 |
| 25 | Baranagar (M) | 7.12 | 245213 | 50.6944 | 1745916.6 | 112364.96 | 132848.04 |
| 26 | Rajarhat Gopalpur (M) | 28 | 402844 | 784 | 11279632 | 260952.83 | 141891.17 |
| 27 | Panihati (M) | 19.38 | 377347 | 375.5844 | 7312984.9 | 199610.52 | 177736.48 |
| 28 | Kamarhati (M) | 10.96 | 330211 | 120.1216 | 3619112.6 | 139691.46 | 190519.53 |
| 29 | South DumDum (M) | 17.96 | 403316 | 322.5616 | 7243555.4 | 189505.40 | 213810.59 |
| | Total | 451.43 | 5001716 | 9547.3673 | 95793620 | 3274198.16 | |
| | | b=7116.3 | | a=61697.066 | | | |

Source: Compiled by Author from Census, 2011



Source: Prepared by Author

MAP-3



The towns having are observed positive residuals in ULBs, like South Dum Dum, Kamarhati, Panihati, Rajarhat Gopalpur, Baranagar, Bhatpara, Naihati, Titagarh, Barrackpore, Halisahar, and Kanchrapara (Map-3). These towns are highly populated and congested towns. These towns have potentiality for further growth. So, the sufficient infrastructural development and public amenities are to be provided for future urban development. On the other hand, rest of the 18 towns having negative residuals (Map-3). These towns are comparatively less congested. So, there are scopes for potential for urban growth. So, towns have to provide proper infrastructural facilities for urban development. The highly negative residuals towns are found namely Baduria, Taki, Bashirhat, Nabadiganta, Barrackpore Cantonment, Gobardanga and Ashoknagar Kalyanagarh respectively, need to have proper plan for further urbanization. The relationship between urban area and urban population of ULBs is moderately positive (Figure-5). Where the correlation co-efficient (r) is 0.57 and computed value of t is 3.60. The significance level of Correlation Coefficient (r) can also be tested with the help of a test statistic of *Student's t value*. The t values are computed by the formula, $t = \sqrt{(r^2(n-2) / 1 - r^2)}$. Where n = Degree of Freedom, r = Correlation

Coefficient, $t = t$ test. (Sarkar Ashis-1997, pp. 113-114). Here the tabulated value of t for 27 (29-2) degree of freedom is 2.77 at 1% level of significance (Critical Values of Student's t , *Significance Level*). The computed value of t is 3.60 greater than at 1% tabulated value of t hence, the correlation coefficient is significant at 1% significant level. So, the moderate positive relation between urban area and urban population is significant and the urban area and population are positive in order in each corresponding ULBs within the district.

Findings

- **Uneven Spatial Urbanization:** Urbanization is not uniform across the district; the western part is highly urbanized due to its connection with the Kolkata metropolitan area.
- Barrackpore Industrial Belt area shows high urbanization rates because of its favourable geo-economic conditions and expansion of road and rail networks.
- **Land cover conversion:** The expansion has converted significant amounts of agricultural, vegetational, and wet fallow land into urban settlements.
- The **number of urban centres** increased from 36 in 1951 to 111 in 2011 (including outgrowths).

- **Urban area** expanded from **331.58 sq km** in 1951 to **623.91 sq km** in 2011—an 88% increase.
- **Urban population density** rose from 2,863 persons/sq km (1951) to 9,187 persons/sq km (2011).
- The number of Census Towns increased dramatically from **13 (1951)** to **78 (2011)**.
- These CTs account for a growing share of urban population—from **4.62%** in 1951 to **12.74%** in 2011.
- They reflect rural-to-urban transformation, forming peri-urban zones that link rural areas to larger municipal towns.
- Urbanization has become decentralized and diffused, no longer confined to statutory municipalities.
- **Peri-urban landscapes and mixed land use zones** are emerging, especially along transport corridors.

Conclusion

This paper has provided a spatial analysis of urbanization in North 24 Parganas District, West Bengal. The evidence suggests that the district has reached a high level of urbanization, shaped by its proximity to the Kolkata metropolitan region, transport linkages, migration and real-estate development. However, the spatial patterns are uneven, with western blocks being far more urbanized than eastern ones, and built-up growth showing signs of sprawl. The consequences for infrastructure, environment and balanced spatial development are significant.

This study has presented a spatial-temporal overview of urbanisation in North 24 Parganas District. The district shows a high level of urbanisation but with declining growth rate and marked spatial variation. Urbanisation is strongest in the western, metropolitan-adjacent blocks; built-up surface growth has resulted in land-cover transformation and environmental pressure. To ensure sustainable and equitable growth, planning must emphasise spatial balance, infrastructure adequacy and environmental protection.

The growth impetus for the sub-centres like Rajarhat, Barasat, Barrackpur I and II, due to

better transport facilities and well connected by railway network. With high level of urbanization, disparities among urban sub-centres also increase. Barrackpore I, Barrackpore II and Rajarhat shows very high spatial growth and diversity growth patterns which may become a big challenge for the district authority to control this unplanned urban growth and may possess a threat to the urban system as well as urban environment. On the other hand, Gaighata, Habra I, Basirhat, doesnot show much urban growth as that of the above stated three. Finally, the study concludes very useful to assessing and monitoring urban patterns and growth in the district for holistic urban development. The study emphasizes the need for balanced spatial urban planning—especially to: Develop infrastructure in congested areas, Encourage planned urban growth in less developed blocks, Manage peri-urban expansion to avoid unplanned sprawl. Overall, effective urban policy intervention and spatial planning strategies are essential for sustainable and balanced urban development in the district.

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EMERGING TRENDS OF MIGRATION IN ODISHA

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Abstract:

(Although the state of Odisha is rich in natural and mineral resources its fruit is not being utilized properly and as a result of which it becomes a one of the main source areas for the procurement of labours, mostly for unskilled and semi-skilled workers. Food uncertainty and job uncertainty is one of the major problems of the state. Hence, distress seasonal migration is found in the districts like Bolangir, Nuapada, Koraput, Kalahandi, Ganjam and Gajapati. Most of the people of these districts are migrated to Kerala, Andhra Pradesh, Telengana, Gujarat, Tamil Nadu and Jammu and Kashmir to work in the construction sites, labourers in spinning mills, working in brick kilns, loaders in warehouses, etc. In this context, the objective of this research article is to find out the merging issues of migration in the state of Odisha)

Key Words: (Human migration, seasonal migration, Distress migration, Labour, migration, Internal Migration)

Migration is not a recent phenomenon; rather it is prevalent since ancient past. It is true that human migration occurred due to in search of a better standard of life. Hence, it is mainly related to the broader range of global economic, social, political and technological revolutions encompassing a wide range of policy issues. It is widely acknowledged that human migration is nothing but a people's mobility from one place to another with a basic purpose of inhabiting, permanently or temporarily, at a new location or geographic region. Similarly, mobility over long distances place and from one country to another is known as international migration. When people migrate within the territory of the country it is known as internal migration. Many factors like, food insecurity, economic insecurity, etc. prompted the people to take a bold decision to migrate with a hope of better standard of life.

Given the importance of the issue, the study has been undertaken to investigate why distress seasonal migration is a regular practiced even more than four decades in Odisha and it is

found, more specifically in northern part i.e., in KBK districts of Odisha. Despite the governmental intervention such type of migration is found repeatedly in this region. In this context, it is pertinent to know the emerging issues of migration particularly in the context of Odisha.

A Brief Profile of Odisha:

Odisha is situated on the eastern coast of India and it lies in the tropical zone from 17.49N to 22.34N latitude and from 81.27E to 87.29E longitude having a land area of 1, 55,707 Sq.Km. Its borders are adjoined with West Bengal in North-East, Bihar in the North, Madhya Pradesh in the West and Andhra Pradesh in the South and the Bay of Bengal in the East. The state of Odisha is the ninth largest state by area in India and eleventh largest by population. In ancient period Odisha was popular in the name of Kalinga, Utkal or Odradesha whose existence was believed to have flourished over two thousand years ago. Odisha emerged as an autonomous political and

geographical entity in 1936. The state possesses a rich cultural and natural wealth with beautifully built temples, colorful handicrafts, intricately hand-woven fabrics, and breath taking tourist spots. The Jagannath Temple of Puri, the Sun Temple of Konark, the Lingaraj

temple of Bhubaneswar, the Barabati fort of Cuttack are the places of ancient archaeological

Table No. 1: Brief Profile of Odisha

| Sl. No. | Particulars | Figures |
|---------|--|---------------------|
| 1 | Total Area (Sq. Km) | 1,55,707 |
| 2 | Number of Districts | 30 |
| 3 | Number of Sub-Divisions | 58 |
| 4 | Number of Tahasils | 317 |
| 5 | Number of Gram Panchayats | 6,232 |
| 6 | Number of Blocks | 314 |
| 7 | Total Number of Villages | 51,313 |
| 8 | Total Population | 4,19,74,218 |
| 8(a) | Total Male | 2,12,12,136 |
| 8(b) | Total Female | 2,07,62,082 |
| 9 | Decadal Growth Rate (2001–2011) | +14.00% |
| 10 | Population Density (per Sq. Km) | 270 |
| 11 | Sex Ratio (Females per 1,000 males) | 979 |
| 12 | Child Sex Ratio (Girls per 1,000 boys) | 941 |
| 13 | Total Urban Population | 70,03,656 |
| 13(a) | Urban Male | 36,25,933 |
| 13(b) | Urban Female | 33,77,723 |
| 14 | Total Rural Population | 3,49,70,562 |
| 14(a) | Rural Male | 1,75,86,203 |
| 14(b) | Rural Female | 1,73,84,359 |
| 15 | Total Literates & Literacy Rate | 2,67,42,595 (72.9%) |
| 15(a) | Male Literates & Literacy Rate | 1,50,89,681 (81.6%) |
| 15(b) | Female Literates & Literacy Rate | 1,16,52,914 (64.0%) |
| 16 | Scheduled Caste Population (2011) | 71,88,463 (17.1%) |
| 16(a) | Urban SC | 9,69,821 |
| 16(b) | Rural SC | 62,18,642 |
| 16(c) | Urban Male (SC) | 4,90,089 |
| 16(d) | Rural Male (SC) | 31,27,719 |
| 16(e) | Urban Female (SC) | 4,79,732 |
| 16(f) | Rural Female (SC) | 30,90,923 |
| 17 | Scheduled Tribe Population (2011) | 95,90,756 (22.8%) |
| 17(a) | Urban ST | 5,95,789 |
| 17(b) | Rural ST | 89,94,967 |
| 17(c) | Urban Male (ST) | 2,99,210 |
| 17(d) | Rural Male (ST) | 44,28,522 |
| 17(e) | Urban Female (ST) | 2,96,579 |

| | | |
|-------|-------------------------------------|-------------|
| 17(f) | Rural Female (ST) | 45,66,445 |
| 18 | Life Expectancy at Birth | 67 years |
| 19 | Maternal Mortality Rate | 258 |
| 20 | Infant Mortality Rate | 61 |
| 21 | Total Workers | 1,75,41,589 |
| 21(a) | Urban Workers | 24,37,875 |
| 21(b) | Rural Workers | 1,51,03,714 |
| 22 | Total Male Workers | 1,19,02,655 |
| 23 | Total Female Workers | 56,38,934 |
| 24 | Total Main Workers | 1,07,07,543 |
| 25 | Female Main Workers | 73.9% |
| 26 | Total Marginal Workers | 68,34,046 |
| 27 | Total Cultivators | 41,03,989 |
| 28 | Total Agricultural Labourers | 67,39,993 |
| 29 | Household Industry Workers | 7,83,080 |
| 30 | Other Workers | 59,14,527 |
| 31 | Organized Sector Employment | 7.22 lakh |
| 32 | Women Employees in Organized Sector | 1.2 lakh |

Source: Census Report 2011, Government of Odisha.

Development Indicators of Odisha

The various statistical data shows that Odisha is one of the high growth states in India in the last decade. So far as the growth rate of Odisha is concerned it is more than 7%. As per Odisha Economic Survey 2019-20, the Per Capita Income (GSDP) of Odisha is more than 1.16 lakh, which 24th rank across states of India. It is surprising to note that Odisha's sectoral composition from industry and service sector contribute 40% each and 20% coming from the agricultural sector. Odisha is a poverty stricken state. In the poverty eradication, the intervention mechanism of government is very encouraging and remarkable among the states of India. Rangarajan Committee Poverty Report-2013 states that percentage of the population under BPL has declined from 57.2% in 2004-05 to 32.6% in 2011-12, around 24% decline in BPL percentage. Out of 29 states of India, the rank of Odisha in BPL population is 24 in chronological order.

But it would be very interesting to see; How far this growth of the economy replicates in the development indicators of Odisha? It is observed that the SDG (Sustainable

Development Goal) report of NITI Ayog (2018), Odisha, stands in 25th position out of 29 states of India. Further, in most SDG indicators, Odisha positions in the worst ten preferring states, except Gender Inequality and Life & Land indicators. Now-a-days, the Human Development Index (HDI) is another variable to measure economic, education, and health indicators. It is interesting to note that the value of HDI has been increasing between 1990 and 2018; however, Odisha's relative position has not shown much development. Among the 29 states of India, Odisha's rank in Human Development Index (HDI) was third lowest in 1990, which declined to second last in 2000 (HDI Report, 2004). However, in the recent period, Odisha rank in Human Development Index (HDI) among 29 states of India has improved to the fifth-lowest position. It is surprising to note that in the hunger index, the rank of Odisha had declined from 5th to 12th among major 17 states of India from 1993 to 2009. Further, it had declined to 23rd rank in the Zero Hunger Indicator of SDG index in 2018. So far as Multi-Dimensional Poverty Index is concerned, which is another measurement of development indicator, the rank of Odisha had declined from 23rd to 24th

position among India's 29 states from 2005 to 2015. In all the economic indicators including GSDP growth and poverty eradication, Odisha performs substantively, but this economic development does not replicate in other development indicators. Odisha is lagging behind from all the states of India across variety of development indicators. Its position is very measurable and it ranks consistently in the worst five states of India in most development indicators in the last two decades.

Migration Scenario in Odisha

Migration is associated with the process of movement of people from one place to another in search of livelihood. In different circumstances like, frequently visited by flood, famine, shortage of water to irrigate their crop land, rigorous seasonal unemployment which affects their livelihood and in such a situation the people are forced to migrate to safest places. Livelihood uncertainty is a very crucial factor where the people are decided to migrate from their home place to other. Further, there are different kinds of migrations depending on the flow, number of people involved and the reasons for their movement. It is widely believed that migration is regarded as a male phenomenon and therefore always considered to be the gender neutral. But, so many studies reveal that both male and female communities are closely associated with migration although the nature of job is quite different. The

migration statistics points out that presently the women are being migrated at par with male and they are doing almost same work with male communities in their destination.

Odisha is one of the states which experiencing high cyclical migration in India. As per the data of the NSS 64 the round, around 5.1% of the working-age individuals were engaged in cyclical migration in rural Odisha in 2007-08. Further, this cyclical migration was contributing alternative source of income for 18.6% of rural households of Odisha. There are thirty districts in Odisha. The migration rate is very high among the southern districts than the north and coastal districts.

The district-wise migration rate from the 64th round NSS, 2007-08 has been reflected in **the Table 2**. The 64th round NSS data reveals that the percentage of working-age individuals engaging in seasonal and semi-seasonal and semi-permanent migration is 2 and 5.1% respectively in rural Odisha. Further, the percentage of individuals engage in cyclical migration is 7.1%. Interestingly, the data indicates that the percentage of individuals engage in cyclical migration is 7.1%. The percentage of households depending on seasonal and semi-permanent migration is 5.4% and 14.4% respectively in rural Odisha. As a whole, around one-fifth household of rural Odisha have been dependent on cyclical migration for their livelihood.

Table 2: District-wise Migration Rate in Odisha (Rural)

| District | Seasonal Migration Rate (Individual) | Semi-Permanent Migration Rate (Individual) | Cyclical Migration Rate (Individual) | % of HH Engage in Seasonal Migration | % of HH Engage in Semi-Permanent Migration | % of HH Engage in Cyclical Migration |
|---------------|--------------------------------------|--|--------------------------------------|--------------------------------------|--|--------------------------------------|
| Baleswar | 0.70 | 4.50 | 5.20 | 4.6 | 15.0 | 19.4 |
| Bhadrak | 0.00 | 9.60 | 9.60 | 0.1 | 33.8 | 33.9 |
| Kendrapara | 0.40 | 13.00 | 13.40 | 2.2 | 35.9 | 38.1 |
| Jagatsinghpur | 0.40 | 7.30 | 7.60 | 2.5 | 22.2 | 22.2 |
| Cuttack | 0.50 | 6.70 | 7.20 | 2.3 | 20.5 | 22.6 |
| Jajpur | 0.40 | 8.50 | 8.80 | 1.5 | 26.9 | 28.2 |
| Nayagarh | 1.10 | 10.00 | 11.10 | 5.9 | 27.7 | 33.6 |
| Khordha | 0.80 | 6.00 | 6.80 | 1.9 | 17.6 | 19.6 |
| Puri | 0.80 | 9.80 | 10.60 | 3.2 | 22.6 | 24.8 |
| Ganjam | 3.30 | 10.00 | 12.90 | 10.4 | 20.4 | 29.7 |

| | | | | | | |
|---------------------|-------------|-------------|-------------|------------|-------------|-------------|
| Gajapati | 1.90 | 2.50 | 4.40 | 3.9 | 7.1 | 10.0 |
| Kandhamal | 4.20 | 1.50 | 5.80 | 19.1 | 4.1 | 23.2 |
| Boudh | 3.10 | 0.50 | 3.60 | 9.4 | 1.8 | 11.2 |
| Sonepur | 0.20 | 1.40 | 1.70 | 0.9 | 5.1 | 6.0 |
| Bolangir | 12.80 | 4.60 | 17.40 | 19.4 | 8.4 | 27.8 |
| Nuapada | 2.40 | 2.10 | 4.40 | 7.1 | 5.8 | 12.7 |
| Kalahandi | 2.80 | 1.00 | 3.80 | 6.9 | 3.0 | 9.9 |
| Rayagada | 5.10 | 1.30 | 6.40 | 11.6 | 3.8 | 15.4 |
| Nabarangpur | 1.50 | 1.20 | 2.70 | 4.0 | 3.9 | 7.9 |
| Koraput | 3.60 | 1.00 | 4.60 | 11.8 | 3.4 | 15.3 |
| Malkangiri | 3.40 | 0.00 | 3.40 | 9.1 | 0.0 | 9.1 |
| Bargarh | 5.20 | 1.00 | 6.30 | 7.9 | 2.7 | 10.6 |
| Jharsuguda | 4.20 | 2.20 | 6.40 | 15.6 | 7.5 | 23.1 |
| Sambalpur | 1.10 | 2.40 | 3.30 | 3.6 | 6.1 | 9.5 |
| Debagarh | 0.00 | 2.90 | 2.90 | 0.3 | 10.7 | 10.9 |
| Sundargarh | 1.00 | 3.50 | 4.50 | 2.5 | 10.1 | 12.6 |
| Kendujhar | 0.10 | 3.30 | 3.40 | 0.3 | 10.1 | 10.2 |
| Mayurbhanj | 0.10 | 3.20 | 3.30 | 0.7 | 9.9 | 9.9 |
| Dhenkanal | 0.00 | 9.30 | 9.30 | 0.0 | 30.4 | 30.4 |
| Anugul | 1.20 | 2.80 | 4.00 | 1.8 | 8.7 | 10.5 |
| Rural Odisha | 2.00 | 5.10 | 7.10 | 5.4 | 14.4 | 19.5 |

Source: Calculated by the researcher using Unit Level Data, NSS 64th Round (2007–08).

The above Table. 2 clearly reveals that the percentage of working-age individuals engaging in seasonal migration in Bolangir district is 12.8%, which is also highest rate of seasonal migration across all the district of Odisha. Further, around one-fifth of rural households of Bolangir district have been dependent on seasonal migration. The semi-permanent migration rate is higher in the coastal part of Odisha. The same is highest in Kendrapara followed by Ganjam and Nayagarh. Moreover, one-third households of

Bhadrak and Kendrapara district have been dependent on remittance of semi-permanent migration and it is one-fifth of households in Ganjam district. It is also found that the cyclical migration rate is highest in Bolangir district, and Ganjam, is in the third position in the cyclical migration rate. However, the migration rate of Baleswar district is similar as compared to aggregate average of rural Odisha.

The report of the 64th round of National Sample survey data 2007-2008 revealed that 28.3% of the workforce in India is migrants. Recently, a survey conducted by Aajeevika

Bureau, Centre for Migration and Labour Solutions regarding the status of migration in

Odisha which identified that 94,495 rural households and 25,590 urban households are migrated families. Further, in rural areas alone, the total number of migrants comes to 88 lakh persons. Hence, the migration of labourers has assumed a critical proportion in the state of Odisha. The issue of migrant labour is a matter of great concern in Odisha, particularly in KBK district of Odisha. Recently, in October 2019, a Full Bench of the Odisha Human Rights Commission (OHRC) took suo motu cognizance of distress labour migration from the State and directed the Labour Secretary to file a comprehensive report on the issue. Now, the government of Odisha is also taking active interest to make remedial measures to curb the distress migration from Western Odisha as well as from the migration prone KBK districts of Odisha. Odisha is an agrarian state with 70% of the State's population depending on agriculture and allied sector. Out of the total geographical area of the state, about 39.69% consists of land under cultivation. Increasing agricultural production and productivity is

necessary for ensuring food security, livelihood security, and nutritional security.

It is a matter of great surprise that rainfall patterns in Odisha have been more erratic since 1960s, with below-normal rainfall across all districts being recorded for most years. The “normal” 120 days of monsoon rain has shrunk to 60-70 days, and unusual spikes in rainfall with torrential rainfall of over 200-250 millimeters/day, are more frequent during the monsoon, frequently resulting in floods. All these unnatural phenomena affect the agricultural production of the state. It becomes a greater obstacle for the overall development of the state. Poverty and migration are the root cause which is observed in Odisha and it is more vigorously observed in western part as well as in KBK districts. Although the state of Odisha is rich in natural and mineral resources its fruit is not being utilized properly and as a result of which it becomes a one of the main source areas for the procurement of labours, mostly for unskilled and semi-skilled workers. Food uncertainty and job uncertainty is one of the major problems of the state. Hence, distress seasonal migration is found in the districts like Bolangir, Nuapada, Koraput, Kalahandi, Ganjam and Gajapati. Most of the people of these districts migrated to Kerala, Andhra Pradesh, Telengana, Gujarat, Tamil Nadu and Jammu and Kashmir to work in the construction sites, labourers in spinning mills, working in brick kilns, loaders in warehouses, etc. Further, it is observed that migration of people for these destinations are mostly long term, ranging from more than six months to one to two years. The migrated people very often encountered malnutrition, stunted growth among children, deprivation of schooling, and denial of PDS

facilities which make life miserable to the families.

Seasonal Migration in Odisha

Odisha witnessed the seasonal migration in all the KBK districts. Generally, seasonal migration is seen in a region where production of one or two agricultural output takes place with varying labour requirements over the course of the year, which thereby force the local labour force to search for jobs elsewhere at regular intervals. According to Kundu (2007), persons who have gone to any other place for 60 days or more during the last six months from the date of survey and returned may be termed as seasonal or short-duration migrants. In the words of Hugo (1982), “circular /seasonal migration includes a wide variety of movements usually short-term, repetitive or cyclical in nature, but all having in common the lack of any declared intention of permanent or long-lasting change in residence”.

Recently, the scholars of migration study are giving more attention to seasonal migration which is found most of the provinces of India. It is very often observed that migration, particularly of poor, is seasonal, temporary and most of which remains within rural areas. The income of the migrants at the destination place slightly increase which is marginally higher, migrants undertake this migratory work to improve their economic conditions. Now a days, seasonal labour migration is an increasingly important aspect of rural livelihood in underdeveloped regions of Odisha, Bihar, Jharkhand, Chhattisgarh, Madhya Pradesh, and Andhra Pradesh.

Table 3: Seasonal Migrants by Social Category, Odisha (Rural)

| Social Category | Percentage (%) |
|----------------------------|----------------|
| Scheduled Caste (SC) | 40.83 |
| Scheduled Tribe (ST) | 23.58 |
| Other Backward Class (OBC) | 23.49 |
| Others | 12.11 |
| Total | 100.00 |

Source: Unit Level Data, NSSO, 64th Round, 2008.

Table 4: Seasonal Migration, Region-wise, Odisha (Rural)

| Sex | Coastal (in %) | Southern (in %) | Northern (in %) | Total (in %) |
|--------|----------------|-----------------|-----------------|--------------|
| Male | 11.76 (97.37) | 72.72 (84.11) | 15.51 (68.66) | 100 (82.55) |
| Female | 1.50 (2.63) | 64.99 (15.89) | 33.50 (31.34) | 100 (17.45) |
| Total | 9.97 (100) | 71.38 (100) | 18.65 (100) | 100 (100) |

Source: Unit Level Data, NSSO, 64th Round, 2008.

The 64th round NSSO data reveals that the percentage of short-term migrants is found to be low at 1.7% in India. In Odisha, it is 1.34%, where the percentage of short-term migration of males is higher at 2.3% than that of females, which is only 0.5% as shown in (Tables No.3.9.2 &3.9.3). Region wise, the highest percentage of short-term migration in Odisha is found in Southern Region at 71.4% (Table No-3.9.4) for its highest incidence of poverty among rural regions in India. The data clearly shows about the characteristics of the population engaged in seasonal migration which is livelihood centric.

The KBK region of Odisha has dry and infertile land. The irrigation facilities are very low. Most of the time for cropping the farmers depends on rain water. Hence, there is single cropping pattern in this area. After one seasonal cropping the people become unemployed and search for employment for their livelihood. During this lean agricultural period without getting employment the people of this area migrate to neighboring state for earning their livelihood. Thus, distress or seasonal migration is found in KBK district of Odisha.

Recommendations:

Considering the gravity of the situation and its deep impact on the everyday lives of marginalized communities in Odisha, particularly in the KBK region, several corrective measures are urgently required from both the Government and civil society. First, there is a clear need for strong and comprehensive migration policies that protect migrants through robust social security provisions, human rights safeguards, and

effective labour law enforcement. To secure the future of the youth in these districts, it is equally important to promote region-specific apprenticeships, vocational training programmes, and internship opportunities that align with local socio-cultural realities.

A national migration registry should be developed to systematically track migrant workers across the country, ensuring better connectivity and support. Migrants must also be made aware of labour laws and legal services so that they are empowered to respond to violations of their rights at destination locations. Given the high vulnerability of women in migration cycles, efforts should be made to reduce their reliance on labour migration by integrating them into Self-Help Groups (SHGs), enabling them to become financially independent while contributing to household income.

Since nearly eighty percent of the population in the KBK districts depends on agriculture, immediate government interventions are required to strengthen irrigation facilities and ensure robust social protection for migrant households. Migration policies must also address food and health security, while placing substantial emphasis on strengthening village-level livelihoods to reduce distress migration. Broader pro-poor development strategies—supported by effective land and water management—are essential to prevent recurring drought-like situations. In this context, expanding irrigation and infrastructure projects becomes crucial for limiting seasonal migration.

The successful implementation of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) is another key requirement, as it can provide stable employment to rural communities across Odisha. In addition, promoting dairy farming in drought-prone areas of the KBK region can create sustainable supplementary income for poor households, while encouraging vegetable cultivation during lean agricultural seasons can further support household earnings.

For meaningful poverty alleviation, government programmes must be effectively implemented at the village level, ensuring that job cards are regularly updated so that backward communities receive the benefits intended for them. Given that many migrants are illiterate and older, the establishment of adult education centres would help improve their literacy, awareness, and decision-making abilities. Health services must also be strengthened, ensuring that migrants receive adequate care at both their origin and destination.

Local governance structures, especially Gram Panchayats, must play a proactive role in monitoring migration through proper registration systems. The involvement of frontline health workers like ASHA and ANM personnel is essential in collecting and updating migration data, which should then be consolidated at the district level to create a comprehensive database. Finally, public awareness regarding migrant rights must be enhanced by displaying essential legal information at major transit points such as railway stations and bus stands, enabling migrants and their families to stay informed and protected.

Conclusion:

Migration is inevitable in the process of economic development. It is vigorously found in a country like India where population growth is a growing concern along with its uneven distribution across urban and rural areas. There exist two reasons between migration and

economic development. Migration induces economic development while economic development induces further migration. But the main reason behind the scene is growing inequalities in terms of income, availability of basic facilities, etc. across regions add up to the population movement from one place to another. Human migration is found in India in a larger ways and it is more vigorously found in Odisha. The undivided KBK Districts (Kalahandi-Bolangir-Koraput) of Odisha, experiences acute seasonal migration since last three decades. Despite government interventions in the form of initiating a number of welfare programmes in these areas, people are migrating to neighboring states like, Andhra Pradesh, Telangana, Tamil Nadu, Chhattisgarh and Kerala to work in the brick kilns for their livelihoods. Hence, more concerted efforts including well planned holistic programmes are required to curb the migration problem from the state of Odisha. Further, the rural parts of Odisha are dominated by unprofitable and underdeveloped agricultural sector. It is also found that a large part of the state, the farmers adopts primitive agricultural techniques, low irrigation facilities; lower productive land, etc. have made agriculture an inefficient business. Beside this, the agricultural sector have its own problems like disguised labour, lower input efficiency, etc. fall in the agricultural efficiency due to all these reasons have resulted into exodus of rural people from their native rural parts and end them up in the urban centers.

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FROM SACRED TO STIGMATIZED: HOW COLONIAL AND POSTCOLONIAL REFORMS RESHAPED THE DEVADASI SYSTEM AND ITS CULTURAL LEGACY

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Abstract:

The Devadasi system, once an integral part of India's religious and cultural landscape, involved the dedication of women to temples where they performed sacred duties through music, dance, and ritual. In the pre-colonial era, Devadasis were highly respected, often enjoying social status, economic autonomy, and royal patronage. However, with the advent of colonial rule, the system was reinterpreted through Western moral frameworks that labeled it as immoral and degenerate. British colonial authorities, missionaries, and Indian social reformers increasingly conflated Devadasi practices with prostitution, leading to a wave of legal restrictions, social condemnation, and institutional reforms. Postcolonial India continued this trajectory, with nationalist reformers seeking to modernize society and align it with ideals of domestic, chaste womanhood. Legislations such as the Madras Devadasi (Prevention of Dedication) Act, 1947, and similar laws across other states formally abolished the practice. While these reforms aimed at protecting women, they also dismantled a complex socio-religious institution without offering adequate socio-economic alternatives to its practitioners. Ironically, the rich artistic traditions associated with Devadasis—such as Bharatanatyam and Odissi—were revived and restructured by upper-caste elites, stripping the dances of their original context and practitioners. This paper explores how colonial and postcolonial reforms redefined the Devadasi system from a sacred institution to a stigmatized social issue. It critically examines the intersections of caste, gender, and morality in shaping this transformation and reflects on the erasure and appropriation of the Devadasis' cultural legacy in modern India.

Keyword-Devadasi, Culture, Transformation, legacy, Postcolonial

Introduction:

The Devadasi system represents one of the most complex and contested institutions in Indian socio-cultural history. Rooted in ancient Hindu temple traditions, Devadasis—literally meaning "servants of god"—were women dedicated to the worship and service of deities in temples, particularly in southern India. These women were not only ritual specialists but also skilled practitioners of classical music and dance, enjoying a respected status in society for centuries. The system symbolized a unique confluence of religion, art, and female agency within the sacred spaces of Indian temples.

However, with the onset of British colonial rule, the Devadasi tradition was subjected to increasing scrutiny and reinterpretation. British administrators and Christian missionaries, driven by Victorian moral sensibilities, began to view the system as a form of institutionalized prostitution. This colonial gaze initiated a process of stigmatization, casting Devadasis as morally deviant rather than spiritually empowered. Indian social reformers of the late 19th and early 20th centuries, though motivated by nationalist and feminist concerns, often echoed these critiques and campaigned for the legal abolition of the system. Post-independence, the newly formed Indian state enacted a series

of laws that criminalized the dedication of girls to temples and sought to rehabilitate existing Devadasis. While these reforms aimed to end exploitation and restore women's dignity, they often overlooked the cultural, historical, and socio-economic complexities of the institution. Simultaneously, the classical art forms once preserved and performed by Devadasis—such as Bharatanatyam and Odissi—were appropriated and sanitized by upper-caste elites, detaching them from their original social context and practitioners. This paper seeks to explore the transformation of the Devadasi system from a sacred religious tradition to a stigmatized social practice. It analyzes the role of colonial moral governance, nationalist reform, and postcolonial legal interventions in reshaping public perceptions and policies toward Devadasis. The study also interrogates how this shift affected the cultural legacy of the Devadasis, particularly in terms of the appropriation of their artistic contributions and the erasure of their historical identity.

Review of Literature

Colonial Imposition: Regulation and Moral Policing

The arrival of British colonial rule in India marked a significant turning point in the perception and treatment of the Devadasi system. What was once considered a sacred and respected tradition came under the scrutiny of British officials, missionaries, and reformers who imposed Western moral frameworks on Indian society. Colonial administrators viewed the Devadasi tradition not through the lens of its ritualistic and cultural significance, but as a deviant, immoral practice akin to prostitution. Victorian ideals of femininity, purity, and domesticity shaped colonial interpretations of the Devadasi system. The British, unfamiliar with the nuanced role of Devadasis in temple worship and classical arts, began to associate their public performances and non-marital status with sexual impropriety. This led to the categorization of Devadasis as prostitutes in official colonial records. The Indian Penal Code (IPC) and the Contagious Diseases Acts (especially in the presidencies of

Madras and Bombay) were used to regulate and control the bodies of Devadasis under the guise of public health and moral order. These acts subjected Devadasis to mandatory medical examinations and confinement in lock hospitals, further reinforcing their social marginalization. Missionary and civil society narratives further fueled public campaigns against the system. Evangelical Christian groups, in particular, condemned temple dedication practices as heathen and immoral, while Indian male reformers—many of whom were influenced by colonial education and liberal ideas—joined in calls for abolishing the system. In doing so, they often failed to recognize the agency of the Devadasis themselves and ignored their contributions to religious, social, and cultural life.

Colonial documentation also played a critical role in shaping long-term stereotypes. Census data began listing Devadasis as prostitutes, erasing distinctions between temple dancers and commercial sex workers. The emphasis on "rescuing" Devadasis from moral degeneration became a central theme of colonial reform, often without providing any alternative livelihood, education, or rehabilitation measures.

Thus, colonial regulation and moral policing did not merely aim to suppress a religious practice—it sought to redefine Indian womanhood according to Western standards and reconfigure native institutions to align with imperial ideologies of civility and modernity. This repressive and reductive view laid the groundwork for later nationalist and postcolonial reforms, which inherited both the stigma and the legal tools introduced during the British era.

Cultural Transformation: Art, Identity, and Appropriation

- Reform-minded nationalists like E. Krishna Iyer and Rukmini Devi Arundale rebranded the Devadasi's dance traditions into *Bharatanatyam*, sanitizing them for upper-caste

audiences and distancing the art from its Devadasi roots.

- Their efforts both preserved and stripped the Devadasi legacy; the art was rescued but the embodied community was erased.

Postcolonial Realities and Enduring Marginality

- Although legally banned, the Devadasi system persists illegally due to poverty, caste dynamics, and lack of enforcement. Reports estimate tens of thousands remain in states like Karnataka, often subjected to child dedication.
- Stigma persists: most affected women are from marginalized castes, excluded from formal protection schemes under existing criminal justice frameworks.
- Indeed, oral histories and bottom-up narratives reveal that abolitionist interventions dismantled cultural identities without offering sustainable alternatives, leading many into clandestine exploitative contexts rather than rehabilitation.

Cultural Memory and Legacy

Although legal and social reforms succeeded in dismantling the institutional Devadasi system, its cultural memory endures in complex and often contradictory ways. While the community of Devadasis was marginalized, silenced, or absorbed into other socio-economic categories, the artistic traditions they cultivated—particularly classical dance forms like Bharatanatyam, Odissi, and Kuchipudi—have been revived, institutionalized, and even celebrated as symbols of India's cultural heritage. This revival, however, came at a cost. The transformation of these art forms into sanitized, upper-caste performances under nationalist and

postcolonial cultural projects often erased the original social and ritual context in which they were developed. Elite reformers like Rukmini Devi Arundale and E. Krishna Iyer were instrumental in rebranding Bharatanatyam as a respectable art suited for middle- and upper-class audiences. While they preserved the dance, they disassociated it from its Devadasi origins, distancing the art from the bodies and voices of the women who had once embodied it.

- This process reflects a larger pattern of cultural appropriation. The Devadasis' contributions to Indian classical music, dance, and temple ritual were preserved, but their identities as the originators and transmitters of this knowledge were erased from the national narrative. Their names, stories, and struggles were either forgotten or remembered only in terms of stigma.
- However, in recent years, scholars, activists, and artists have begun to reclaim the cultural legacy of the Devadasis through oral histories, feminist reinterpretations, and artistic tributes. Efforts to document and reinsert Devadasi narratives into academic discourse and performance spaces aim to challenge the casteist and patriarchal erasure of their memory. For instance, contemporary dancers and researchers are revisiting original compositions, temple rituals, and community oral traditions to recover the embodied knowledge systems passed down through generations of Devadasis.
- The Devadasi legacy also survives through intergenerational memory within certain communities, where women continue to pass on stories of pride, resistance, and artistry—often in contrast to the public narratives of shame or victimhood imposed by society. These alternate archives challenge dominant narratives and

remind us that the Devadasi system, while marked by contradictions and hierarchies, was also a site of cultural agency and historical significance.

- In sum, the cultural memory of the Devadasis has not been completely lost—it has been fragmented, reshaped, and reinterpreted. Their art lives on, but often without recognition of their social identity. Addressing this disjuncture is essential for any just engagement with India's artistic history and for restoring dignity to those whose legacy continues to shape it.

Research Methodology:

This study adopts qualitative and historical-sociological approach to examine the transformation of the Devadasi system. It involves:

1. **Documentary Method:** Examination of colonial records, legal documents, reformist writings, and temple archives to trace historical shifts.
2. **Literature Review:** Study of academic works in sociology, feminist theory, postcolonial studies, and cultural history to frame the analysis.
3. **Content Analysis:** Critical analysis of reform discourses, legal texts, and media narratives to identify themes of morality, stigma, and cultural appropriation.
4. **Oral History:** Inclusion of published interviews and testimonies of Devadasis and activists to understand lived experiences.
5. **Cultural Study:** Review of classical dance transformations (e.g., Bharatanatyam) to assess how Devadasi artistic contributions were appropriated and redefined.

Summary:

The Devadasi system, once a revered cultural and religious tradition in India, involved women being dedicated to temples where they performed sacred duties through music and dance. These women, known as Devadasis,

held respected positions in pre-colonial society, serving as custodians of art, ritual, and temple culture.

However, during the colonial period, British authorities and Christian missionaries began to view the system through a Victorian moral lens, equating it with prostitution. Colonial laws and moral reform movements criminalized and marginalized Devadasis, stripping the system of its spiritual and artistic significance. This stigmatization continued in the postcolonial period, as Indian social reformers and nationalists—while driven by concerns about exploitation—pushed for abolition. Laws passed between 1934 and 1988 banned temple dedication and attempted to integrate Devadasis into mainstream society. While the art forms associated with the Devadasis—like Bharatanatyam and Odissi—were preserved and even elevated, they were appropriated by upper-caste elites and separated from their original practitioners. The community of Devadasis was erased from the cultural narrative, facing long-term marginalization, poverty, and stigma. Thus, what was once a sacred institution transformed into a symbol of social deviance under colonial and postcolonial reform. The cultural legacy of Devadasis lives on in Indian classical arts, but the community that birthed it remains excluded and forgotten.

Conclusion:

The transformation of the Devadasi system from a revered religious tradition to a stigmatized social practice reflects a deeper narrative of how colonial and postcolonial power structures redefined gender, caste, and cultural norms in India. What was once a sacred institution rooted in temple worship, artistic excellence, and community honor was gradually dismantled by colonial authorities who imposed Western moral frameworks that misrepresented and criminalized indigenous practices. Colonial discourse, combined with missionary zeal and nationalist reform agendas, led to a reductive understanding of Devadasis as victims of sexual exploitation, ignoring the nuanced roles they played as cultural custodians, ritual specialists, and artists.

Postcolonial legal interventions, though aimed at social reform and women's emancipation, often perpetuated this stigmatized view by criminalizing dedication without adequately rehabilitating or empowering the affected women.

Ironically, while the Devadasi community was marginalized and erased from public life, the cultural forms they had nurtured—particularly classical dances like Bharatanatyam and Odissi—were revived and mainstreamed by upper-caste reformers and cultural nationalists. This process of appropriation preserved the art but erased the original custodians, further deepening the historical injustice.

Ultimately, the Devadasi system's decline reveals how reforms rooted in moral policing rather than social justice can dismantle communities while preserving only the cultural symbols they once embodied. A truly inclusive historical and feminist approach must recognize the Devadasis not only as victims but also as bearers of rich cultural heritage and agency. Revisiting their legacy through a critical, decolonial lens is essential to restore dignity, visibility, and justice to those whose voices were silenced in the name of reform.

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THE ECONOMICS OF URBAN SPRAWL

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Abstract: Urban sprawl has been one of the major features of urbanization not only in India but all over the world. It is becoming a necessary evil for the system as a whole. This paper tries to find out theoretically the economic reasons behind urban sprawl in Indian context.

Key Words: sprawl, urbanization, rent

Introduction

Urban sprawl refers to the unplanned and uncontrolled expansion of urban areas into the surrounding rural land through residential, commercial, and industrial development. It results in the spreading out of a city's population over an increasingly larger area, leading to significant urban expansion. Critics of urban sprawl argue that such expansion consumes valuable agricultural land, disrupts ecosystems, and contributes to various environmental and public health problems. Despite these concerns, urban sprawl is often considered inevitable, as it arises naturally from economic growth and population increase. Urban sprawl — the low-density, dispersed growth of metropolitan areas into surrounding rural land — has been a central topic in urban studies, planning, geography, and environmental sciences for the last half-century. Scholars treat sprawl both as a descriptive pattern (how cities spread) and as a normative problem (its causes and consequences).

Urban sprawl is largely driven by a combination of economic factors rooted in market failures and government interventions. One major cause is the market failure related to open-space amenities, as agricultural landowners often fail to consider the broader social and environmental benefits of maintaining open land—such as biodiversity, ecosystem services, and recreational value—

resulting in excessive conversion of rural areas for urban use. Similarly, market failure related to traffic congestion arises when individual housing and commuting decisions do not internalize the social costs of congestion, pollution, and longer travel times, thereby encouraging dispersed urban growth and automobile dependence. Furthermore, government investment in urban infrastructure, including roads, water supply, sewage systems, and electricity networks, often extends into peripheral areas, reducing the cost of suburban living and encouraging development beyond the urban core. In addition, subsidization of public transit and utilities can make suburban living more accessible and affordable, lowering the marginal cost of distance and reinforcing the trend toward low-density residential development. Collectively, these economic forces accelerate the process of urban sprawl, shaping the modern pattern of expanding metropolitan regions characterized by dispersed settlements and increasing reliance on private transport.

Urban sprawl produces a range of environmental, social, and economic impacts that collectively reshape urban systems and regional development patterns. Environmentally, the conversion of agricultural land and natural habitats leads to significant land and ecosystem loss, while habitat fragmentation diminishes biodiversity and undermines essential ecosystem services such as flood regulation and carbon sequestration.

From an energy perspective, low-density development patterns increase per-capita energy consumption and transport-related emissions, as residents typically travel longer distances by private vehicles. Economically, the extension of infrastructure and public services—including roads, water supply, sewage systems, and emergency facilities—across dispersed areas raises per-capita public expenditure, straining municipal budgets. On the social front, auto-dependent lifestyles and longer commutes contribute to poorer air quality, reduced physical activity, and health risks linked to sedentary behaviour. Moreover, sprawling urban forms often exacerbate social and spatial inequities, limiting accessibility for non-drivers and reinforcing segregation by income and class. In terms of economic productivity, the evidence remains mixed: while some scholars argue that sprawl undermines agglomeration economies, innovation, and urban efficiency, others contend that suburban expansion can alleviate congestion, reduce housing pressures, and support diversified economic growth. Overall, the multifaceted impacts of urban sprawl highlight the complex trade-offs between economic development, environmental sustainability, and social well-being.

The monocentric city model, originating from the works of Alonso (1964), Muth (1969), and Mills (1972), provides the foundational framework for understanding urban spatial structure. These models explain urban form as the outcome of trade-offs between commuting costs and land rents, where households choose residential locations that balance accessibility to the central business district (CBD) with the affordability of land. The result is a negative population density gradient, with densities highest near the urban core and declining toward the periphery—an essential mechanism underpinning patterns of urban sprawl.

Building on this, Brueckner (1987, 2000) formalized the monocentric model under modern urban economics, emphasizing the influence of transportation improvements and income growth on suburbanization and city

expansion. Muth (1969) further linked land use and housing markets to bid-rent theory, showing how equilibrium land prices reflect the opportunity cost of distance from the CBD. Similarly, Mills and Hamilton (1994) refined these insights, demonstrating that declining transport costs and rising household incomes can flatten the urban density gradient, thereby promoting outward expansion.

As cities evolved, the strict monocentric assumption became increasingly unrealistic. Fujita and Ogawa (1982) introduced the concept of endogenous multiple centers, arguing that firms and households can cluster around new employment subcenters when congestion and land prices in the CBD become excessive. This marked the emergence of polycentric city models, later expanded by McMillen (2001) and Anas, Arnott, and Small (1998), who examined the rise of decentralized employment nodes and sub-urban business districts. Polycentricity reflects a spatial reorganization of urban economies, where accessibility, agglomeration economies, and land-use dynamics interact across multiple centers rather than a single dominant core.

Empirical studies—such as Giuliano and Small (1991) on U.S. metropolitan regions and Bertaud (2004) on developing countries—confirm that modern cities increasingly exhibit polycentric or dispersed structures. These patterns are shaped by advances in transportation, telecommunication, and the expansion of service-based economies, all of which reduce the need for proximity to the traditional core. Consequently, the transition from monocentric to polycentric urban forms is widely regarded as a key explanation for contemporary urban sprawl, reflecting both market forces and planning outcomes.

However, there remains a notable gap in the literature examining urban sprawl from the perspective of landowners engaging in farming mainly, particularly in the context of developing countries such as India. In India, urban sprawl is largely the outcome of unplanned, market-driven urbanization,

expanding in a spatially uncontrolled manner. A key feature of this process is the conversion of agricultural land for residential and commercial purposes, as landowners—traditionally engaged in farming—sell their land in response to rising urban land values. Balakrishnan (2013) highlights this phenomenon through the cases of the Bangalore–Mysore and Pune–Nasik highways, where linear urbanization along transport corridors illustrates the emergent pattern of urban growth in developing economies. Complementing this, Mahajan and Nagaraj (2017), using data from the NSSO 55th (1999–2000), 66th (2009–2010), and 68th (2011–2012) rounds, demonstrate that large-scale road construction projects undertaken in India between 2000 and 2012—including both national highways and rural roads—contributed significantly to rural construction demand and employment expansion. Together, these studies underscore that in the Indian context, urban sprawl is not merely a spatial or planning issue,

but deeply linked to land market dynamics, infrastructural investments, and the changing economic behavior of rural landowners. This paper builds a simple theoretical economic model to explain why landowners are not willing to hold land to fill the gap.

This paper builds a simple theoretical economic model to explain why landowners are not willing to hold land, thereby contributing to rapid urban sprawl in developing economies like India. The model seeks to fill the gap in existing literature by emphasizing the microeconomic behavior of landowners—particularly their incentives, opportunity costs, and expectations regarding land value appreciation. First section of the paper introduces the topic; section two builds the theoretical model and section three concludes the paper with some policy prescriptions and future research agenda.

Theoretical Model

Let us consider a typical rural land-owner with the following utility function

$$U=A(X)^{\alpha}(Y)^{\beta}(N)^{\theta}$$

Which the land-owner wants to maximize subject to the budget constraint

$$P_X X + P_Y Y + (e - s)N + O = RN + W$$

Where $A > 0$ and $0 < \alpha, \beta, \theta < 1$ and

X = Rural composite good

Y = Urban composite good

N = Possession of land by the landowner

P_X = Price of rural composite good

P_Y = Price of urban composite good

e = expenditure on per unit of land

O = other expenditures

R = agricultural rent per unit of land

W= income from other sources

s = state support (such as per unit subsidy)

Maximization of land-owner's utility subject to the budget constraint with some manipulations gives the following expression for land possession

$$N^* = \frac{\theta(W-O)}{(\alpha+\beta+\theta)((e-s)-R)}, N^* = \frac{\theta A}{(\alpha+\beta+\theta)(B-R)}$$

Where, A=W-O and B= e-s

This is the maximum amount of land possessed by the land-owner assuming the SOC is satisfied

$$\frac{\delta N^*}{\delta R} = \frac{\theta(\alpha+\beta+\theta)A}{((\alpha+\beta+\theta)(B-R))^2} > 0$$

$$\delta N^* / \delta A = \theta / (\alpha + \beta + \theta)(B - R) > 0$$

$$\frac{\delta N^*}{\delta B} = \frac{-\theta(\alpha+\beta+\theta)A}{((\alpha+\beta+\theta)(B-R))^2} < 0$$

2a. Proposition 1: A fall in rent per unit reduces the incentive to possess the land

A decline in land rent(R) reduces the incentive for landowners to retain possession of their land, *ceteris paribus*. When the potential buyers — particularly those engaged in residential or commercial development — offer higher prices for land, the incentive for existing owners to sell increases. Consequently, small and medium landholders are more likely to sell their land, contributing to the process of **urban sprawl** as rural or peri-urban land is converted to non-agricultural use.

2b. Proposition 2: A fall in state-support or rise in expenditure (expressed by B) reduces the incentive to possess the land

A reduction in state support, such as subsidies or an increase in the cost of maintaining land ownership, diminishes the incentive to retain land—especially agricultural land. Since the economic reforms of 1991, public support for agriculture in India has been gradually reduced, while expenditure on inputs and maintenance has continued to rise. This imbalance has weakened the incentive for farmers to hold onto agricultural land, often resulting in its sale or conversion to non-agricultural uses.

2c. A rise in the income from other sources given fixed expenditure (expressed by A) raises the incentive to hold the land given rent and subsidy/ state support is greater than expenditure

An increase in income from alternative or non-agricultural sources enhances the capacity of landowners to retain land, as long as total returns from land ownership exceed total expenditures. Thus, wealthier landowners—who derive income from diverse sources—may have less incentive to sell their land, even when agricultural profitability declines.

Conclusion

The above analysis suggests that a landowner primarily engaged in agricultural activities is more likely to sell land—thereby contributing to urban sprawl—when land rent or state support declines, or when expenditure burdens increase. This dynamic is particularly relevant in the Indian context, where numerous small and medium landowners operate, and where state support for agriculture has gradually diminished since the liberalization period. While some degree of urban sprawl is a natural outcome of economic expansion and urbanization, unplanned and uncontrolled sprawl poses growing challenges for

sustainable urban development and environmental management.

Recent literature increasingly recognizes urban sprawl as a multi-causal and context-dependent phenomenon, shaped by the interplay of individual preferences, market forces, transport infrastructure, and institutional arrangements. Its impacts are far-reaching—ranging from environmental degradation and escalating infrastructure costs to rising greenhouse gas emissions and social disparities. However, the nature and intensity of these impacts vary across regions. Consequently, effective policy responses must adopt **integrated strategies** that combine regulatory, fiscal, and transport interventions, adapted to the specific socio-spatial and political-economic contexts of each urban region.

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WORKING CONDITIONS OF TRIBAL WOMEN IN DIFFERENT BLOCKS OF SARAIKELA- KHARSAWAN DISTRICT OF JHARKHAND: AN EMPIRICAL INVESTIGATION

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Abstract

This study examines the socio-economic profile, working conditions, job satisfaction, and access to workplace facilities among 385 tribal working women across nine blocks of the Saraikela-Kharsawan district, Jharkhand. Using primary data collected through structured questionnaires and analysed through crosstabulation, the research reveals significant intra-district variation. Blocks such as Adityapur, Seraikela, Chandil, and Govindpur exhibit relatively favourable working conditions and higher satisfaction, while peripheral blocks like Nimdih, Kukru, and Kuchai lag considerably in income, facilities, safety, supervisory support, and overall job satisfaction. A striking 81% of respondents report experiencing gender or ethnic discrimination at the workplace. The study recommends block-specific, gender-sensitive industrial and labour policy interventions to ensure inclusive growth.

Keywords: Tribal women, working conditions, job satisfaction, workplace discrimination, Saraikela-Kharsawan, Jharkhand.

1. Introduction

Saraikela-Kharsawan district of Jharkhand is an industrially dynamic region, hosting steel, cement, automobile, textile, and ancillary industries—particularly concentrated around Adityapur, Asia's largest industrial cluster of small and medium enterprises. Industrialisation has created new livelihood opportunities for tribal communities, especially women belonging to the Santhal, Munda, Ho, and Oraon groups.

However, literature suggests that while tribal women participate actively in the workforce, their experiences of working conditions, workplace treatment, and job satisfaction remain under-documented, especially at the block level. This study fills this gap by examining nine blocks: Adityapur, Seraikela,

Chandil, Govindpur, Ichagarah, Kharsawan, Kuchai, Kukru, and Nimdih.

- **Sample:** 385 tribal working women
 - **Sampling Technique:** Stratified proportionate sampling
 - **Data Collection Period:** 2024–2025
- Research Tool: Structured schedule using Likert-scale items

2. Objectives

1. To analyse the block-wise socio-economic status of tribal working women.
2. To assess working conditions, workplace safety, facilities, and supervisory support.

3. To measure job satisfaction and willingness to recommend work.
4. To identify block-level disparities and propose policy interventions.

3. Socio-Economic Profile of Respondents

3.1 Education Level (n = 385)

Despite historically lower educational achievements among Scheduled Tribes, the sample shows high attainment, with 40.3% possessing graduate or postgraduate

qualifications, indicating an education–occupation mismatch.

Key Insight: A significant proportion of tribal women are highly educated but remain employed in low-income or informal-sector jobs.

3.2 Occupation and Income

Around 82% of women engage in non-agricultural occupations, highlighting rapid occupational mobility due to industrialisation.

Table 1: Key Socio-Economic Indicators (Top and Bottom Blocks)

| Indicator | Highest Performing Blocks | Lowest Performing Blocks |
|-----------------------------|--|---|
| Non-agricultural employment | Govindpur (93.3%), Chandil (84%) | Kharsawan (75%), Kukru (76.7%) |
| Monthly income > ₹20,000 | Kuchai (51.4%), Chandil (50%), Seraikela (49.1%) | Kukru (26.7%), Nimdih (28.6%) |
| Formal sector employment | Kukru (53.3%), Adityapur/Ichagarah (~48%) | Nimdih (28.6%), Kuchai (34.3%) |
| ≤4 dependents | Kharsawan, Seraikela (~50%) | Kukru (30%), Ichagarah/Nimdih (~31–32%) |
| Urban/Semi-urban residence | Kuchai (57.1%), Chandil (54%) | Govindpur (40%), Ichagarah (42.9%) |

3.3 Composite Socio-Economic Score (Out of 5)

- High SES (4/5): Chandil, Kuchai, Seraikela
- Medium SES (2/5): Adityapur, Govindpur, Ichagarah, Kharsawan, Nimdih
- Low SES (1/5): Kukru

4. Working Conditions

4.1 District-Level Findings

The majority expressed positively about workload, facilities, safety, and working hours. However, discrimination remains a severe issue.

Table 3: Working Conditions – Positive Responses (Agree + Strongly Agree)

| Statement | District % | Best Blocks (≥90%) | Worst Blocks (≤60%) |
|------------------------|------------|--------------------------------------|---------------------------------|
| Workload manageable | 83.6 | Adityapur (96.7%), Govindpur (91.1%) | Kukru (70%), Nimdih (46.4%) |
| Adequate facilities | 84.9 | Chandil (96%), Govindpur (97.8%) | Nimdih (57.1%), Kukru (63.3%) |
| Supervisor support | 80.5 | Adityapur (91.7%), Chandil (96%) | Nimdih (28.6%), Kukru (46.7%) |
| Safety measures | 80.3 | Chandil (96%), Adityapur (93.3%) | Nimdih (14.3%), Kukru (60%) |
| Working hours flexible | 80.3 | Adityapur (85%), Seraikela (89.1%) | Nimdih (32.1%), Kukru (63.3%) |
| Discrimination faced | 81.3 | Very high across blocks | Slightly lower in Nimdih, Kukru |

| | | | |
|----------------------------|------|------------------------------------|-------------------------------|
| Effective grievance system | 78.7 | Adityapur (90%), Seraikela (89.1%) | Nimdih (21.4%), Kukru (53.3%) |
| Commute is safe | 81.0 | Seraikela (92.7%), Chandil (96%) | Kukru (36.7%), Nimdih (42.9%) |

Discrimination (81.3%) is the most alarming finding.

5. Job Satisfaction- District-level job satisfaction is relatively high (77–84%), but significant disparities persist.

Table 4: Job Satisfaction Indicators

| Statement | District % | Highest Blocks | Lowest Blocks |
|------------------------|------------|--------------------------------------|-------------------------------|
| Job security | 77.7 | Chandil (88%), Adityapur (83.3%) | Nimdih (42.9%), Kukru (43.3%) |
| Recognition of efforts | 79.2 | Adityapur (91.7%), Chandil (94%) | Nimdih (25%), Kukru (56.7%) |
| Work–life balance | 80.0 | Seraikela (87.3%), Chandil (96%) | Nimdih (46.4%), Kukru (40%) |
| Salary satisfaction | 82.3 | Seraikela (94.5%), Chandil (90%) | Nimdih (50%), Kukru (63.3%) |
| Valued by colleagues | 77.4 | Chandil (90%), Adityapur (95%) | Kukru (36.7%), Nimdih (32.1%) |
| Job gives purpose | 81.3 | Adityapur (98.3%), Seraikela (89.1%) | Nimdih (42.9%), Kukru (46.7%) |
| Recommend job | 84.4 | Seraikela (94.5%), Govindpur (95.6%) | Nimdih (50%), Kukru (66.7%) |

6. Block-wise Performance Ranking

Table 5: Overall Block Ranking

| Rank | Block | Performance | Key Strengths | Key Weaknesses |
|------|-----------|-------------|---------------------------------|--------------------------------------|
| 1 | Adityapur | Excellent | Facilities, safety, recognition | High discrimination reporting |
| 2 | Seraikela | Excellent | Salary, grievance redressal | Slightly lower education |
| 3 | Chandil | Excellent | Safety, flexibility, balance | — |
| 4 | Govindpur | Very Good | Facilities, supervisor support | High dependency ratio |
| 5 | Ichagarah | Moderate | Formal employment | Mixed facilities |
| 6 | Kharsawan | Moderate | Low dependency | Average income |
| 7 | Kuchai | Fair | High income levels | Low flexibility, weak support |
| 8 | Kukru | Poor | High formal employment | Poor safety, long commute |
| 9 | Nimdih | Very Poor | Slight urban acc8. ess | Worst in all satisfaction indicators |

7. Discussion

The analysis reveals deep structural disparities in the working conditions of tribal women across the district. Industrially advanced blocks—Adityapur, Chandil, Seraikela—demonstrate stronger institutional frameworks, better factory infrastructure, greater availability of formal sector jobs, and more effective supervisory systems. In contrast, blocks like Nimdih, Kukru, and Kuchai—geographically remote and with weaker industrial linkages—report inadequate facilities, long commuting distances, poor safety mechanisms, and weak grievance redressal systems.

A major concern emerging from the study is the high prevalence of workplace discrimination (81%), which cuts across all occupational categories and block types. This indicates systemic bias against tribal women employees, rooted in gender as well as ethnic stereotyping. The fact that this persists even in modern industrial settings points to the urgent need for institutional reforms, gender-sensitisation training, and stronger enforcement of labour rights.

The data also reveal a paradox: although educational levels among respondents are relatively high, income levels do not correspond to qualifications. This mismatch suggests underemployment and a lack of opportunities for upward mobility. The weak representation of tribal women in supervisory and skilled technical roles further reinforces occupational segregation.

Moreover, blocks such as Nimdih and Kukru exhibit **fragile workplace ecosystems**, marked by lack of transport facilities, absence of childcare services, weak supervisory support, and unsafe work environments. These factors collectively lead to low satisfaction, high stress, and limited interest in recommending employment to other tribal women.

Overall, the findings highlight the need for decentralised, block-specific labour **strategies**

that can address the heterogeneous challenges faced by tribal women workers.

8. Conclusion

This study reveals significant inter-block disparities in the working conditions and job satisfaction of tribal women in Saraikela-Kharsawan district. While industrially developed blocks such as Adityapur, Seraikela, Chandil, and Govindpur provide relatively favourable environments, remote blocks such as Nimdih, Kukru, and Kuchai exhibit poor facilities, lower wages, unsafe conditions, weak supervisory systems, and high levels of discrimination.

A major finding is the widespread (81%) workplace discrimination, indicating systemic challenges that hinder the empowerment of tribal women. Despite improved educational attainment, occupational mobility remains limited. The study underscores the need for targeted interventions to ensure equitable, safe, and dignified work environments for tribal women workers.

9. Suggestions / Policy Recommendations

9.1 Industrial and Labour Policy Reforms

- Block-specific labour policies should be formulated for peripheral blocks (Nimdih, Kukru, Kuchai).
- Mandatory workplace safety audits every six months.
- Strengthen enforcement of laws related to minimum wages, equal pay, and anti-discrimination.

9.2 Workplace Infrastructure

- Ensure availability of clean restrooms, drinking water, first aid, and rest areas in all factories.
- Establish onsite childcare/crèche facilities, especially for daily wage women workers.

9.3 Transportation and Safety

- Provide safe, subsidised transportation for workers travelling long distances.
- Install CCTV, adequate lighting, and women supervisors in night shifts.

9.4 Reducing Discrimination

- Conduct mandatory gender-sensitisation and Adivasi cultural awareness training for supervisors.
- Create anonymous grievance reporting systems with faster resolution.

9.5 Enhancing Job Satisfaction

- Introduce transparent performance appraisal and recognition mechanisms.
- Expand opportunities for promotion to skilled and supervisory roles.

9.6 Skill Development and Education

- Align training programmes with industry needs: CNC operations, welding, quality control, computer literacy.
- Encourage women's participation in government schemes such as PMKVY and NIESBUD training.

9.7 Role of Local Institutions

- Panchayats and women SHGs should collaborate with industries to monitor working conditions.
- District Labour Office should conduct quarterly reviews of tribal women's employment conditions.

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GREEN MARKETING AS A TOOL FOR PROMOTING SUSTAINABLE DEVELOPMENT

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Abstract

Green marketing is an effective way to promote sustainable development. This research aims to investigate the potential of green marketing as a sustainable development tool and to assess the opportunities and difficulties for green marketing to promote sustainability. This research work makes use of secondary data sources and a descriptive research design through content analysis. The study paper examines the connection between sustainable development together with eco-friendly marketing furthermore how green marketing helps to advance sustainable development through the promotion of ecologically friendly goods and practices through green marketing. The research the findings suggest that green marketing may be quite significant. in promoting sustainable development by encouraging environmentally friendly behaviours and changing consumer behaviours. Furthermore, the research also demonstrates some of the difficulties faced by companies when implementing green marketing strategies, including low consumer awareness and understanding, high prices for sustainable products and services, and the difficulty of maintaining harmony between environmental sustainability and profitability. Overall, this research shows that green marketing is a powerful tool for supporting sustainable development given that companies invest in environmental management and sustainable practices.

Keywords: Consumer, Environment, environmentally friendly products, Green-Marketing, Sustainability.

Introduction

Green marketing, commonly known as sustainable marketing, is an endeavor to create, advertise, charge for and promote environmentally friendly products. Greening is often employed to explain the process of changing the way of life to protect the environment. Businesses can enter the market by providing goods and services that respect the environment and conducting effective marketing. If business leaders can successfully

implement their understanding of how to increase sales of green products, they can focus on effective marketing and advertising techniques that can improve the number of green items sold (Ann Georgie, 2022). These products and services are ecologically friendly or, in their own right, they are produced in an environmentally friendly manner, such as being made sustainably. The main goal of sustainable development is to use resources to meet human needs and, at the same time, protect the environment, and this marketing strategy tries

to balance the concepts of sustainability and sustainable development.

Green marketing is intended to meet customers' demands for eco-friendly products and services (Garca-Salirrosas & RondonEusebio, 2022). The consumer is consequently pickier and continually seeks to improve their reputation through greenwashing environmental and social concerns play a big role in marketing in today's commercial world. The primary reason for the rise in the earth's temperature is global warming, which is brought on by the combustion of fossil fuels and other Air pollution. As stated by the IPCC forecast, the world's temperature will likely rise by 1.1 to 6.4 degrees Celsius between 1990 and 2100. This causes a rise in consumer interest in Environmental Protection on a global scale, which has sparked the evolution of green marketing to offer environmentally friendly and socially conscious products and services. Societies take on more environmental responsibility.

To adjust their behaviour towards societal concerns, corporate organisations do so (*PDF) A CONCEPTUAL STUDY ON GREEN MARKETING TOWARDS ORGANIC PRODUCTS, n.d.*). To protect their nation's natural resources, the welfare of society, and long-term sustainability, numerous governments around the world have attempted to put legislation into place. Therefore, it is everyone's social responsibility to practise green marketing in their daily lives, including businesses, firms, NGOs, cooperative agriculture organizations, farmers, middlemen, retail merchants and consumers. They make an effort to switch from conventional to organic methods, which are crucial for the expansion and long-term sustainability of the environment and society. The idea behind green marketing is to protect the working environment. There are numerous issues with contemporary marketing.

Growth in marketing activities led to an accelerated economic process, production using cutting-edge technology, a high standard

of living, Intense competition, the use of unhealthy marketing tactics and techniques to attract customers, exaggerated advertising, globalization and liberalisation, the formation of the multinational corporation, massive MNC Retailing and distribution, and other factors that led to the creation of numerous issues (Nayak, 2022). Therefore, the research problem for the research study is green marketing plays a critical role in promoting sustainable development by encouraging individuals and businesses to adopt more environmentally friendly and sustainable behaviours. By promoting sustainability, green marketing can help to protect the environment, conserve natural resources, and create a more sustainable future for all.

Green marketing research is essential for long-term success if sustainability is given priority. Understanding consumer preferences, developing sustainable products, reducing environmental impact, building customer loyalty, and fulfilling regulatory requirements can result in a more sustainable future. Green marketing research helps companies identify the need for sustainable products and services. By understanding consumers' needs and preferences, companies can develop sustainable products that may be successful in the market. This research aims to investigate the potential of green marketing as a sustainable development tool and to assess the opportunities and difficulties for green marketing to promote sustainable development. The following describes how the paper is organized: In section two, the literature review is covered. The methodology part is presented in section three. Section 4 discusses the result and the fifth or last section represents the conclusion.

Literature review

A detailed overview of the literature and research papers available on research questions and research topics is a critical part of scholarly investigations and literature reviews. Throughout the literature review, we give a general overview of the state of knowledge in

specific areas, identify research gaps and identify the areas that need further attention research. The review of the literature examines information published on a particular subject, sometimes at a certain time. The review of the literature on advanced topics addresses the requirement that criticize the increasing and diverse knowledge body, furthermore possible future reinterpretation (Ramdhani et al., 2014). The second category of literary evolution deals with new or evolving topics that can benefit from it through conceptualization and synthesis of the literature. Since these issues are still relatively new and have not yet seen the development of the literature, the review is more likely to provide an initial or preliminary conceptualization of the subject and search for a new model, or framework. This component of the research study covered the relationship between sustainable development and green marketing furthermore how green marketing helps to advance sustainable development.

Long-term thinking and dedication to striking a balance between economic growth and social and environmental concerns are necessary for sustainable development. It aims to bring about a future where social justice, economic success, and environmental responsibility are all activities pursued. Sustainable development encompasses a wide range of ideas, such as sustainable agriculture, renewable energy, sustainable transportation, sustainable cities, and sustainable patterns of consumption and production. Cooperation and coordination between many sectors and stakeholders, such as the government, business, and civil society groups, individuals are necessary to achieve sustainable development. Sustainable development aims to provide human needs while safeguarding the environment so that both current and future generations can benefit from them. The definition of sustainable development that has subsequently been most widely used was developed by the Brundtland Commission and is as follows: Development that fulfils existing wants without jeopardising the potential of future generations to satisfy their own needs. Sustainable development has

become a widely accepted development model (Saxena, R. & Khandelwal, P. K. 2010).

Today, groups that provide international help, planners for development, educators and activists involved in environmental and development concerns, utilize it. The notion appears to have attracted the widespread attention that other development concerns lacked, and it appears prepared to replace the current development paradigm for an expanded period. However, there are rumblings of unhappiness about the notion despite its popularity and popularity. Like the popular and hyperbolic term, "sustainable technology" sustainable development faces the possibility of becoming a cliché that no one can clearly define (Mensah, 2019). Green marketing is the technique of promoting goods or services that are ecologically responsible, sustainable or otherwise possess a favourable impact on the surroundings. The goal of ecologically beneficial advertising is to persuade customers to make more ecologically responsible purchases and to persuade companies to adopt more favourable environmental procedures. To examine how marketing impacts the environment, The American Marketing Association workshop attempted to bring together academics, business leaders and public policy officials. Ecological marketing was described at this workshop as the investigation of the benefits and drawbacks of marketing operations concerning the depletion of non-energy resources and energy resources due to pollution. Green marketing has been through numerous stages of development. Each level includes unique traits furthermore varying environmental and situational requirements.

The first green marketing era, ecological green marketing spanned from the 1960s through the early 1970s. This period was characterised by a focus on external environmental issues, including air pollution. The second phase, known as green environmental marketing, began towards the end of the 1980s and saw the emergence of new ideas related to clean technology sustainability consumers and competitive advantages. The primary

distinction between the first and second eras was that the first era concentrated on environmentally friendly industries, whereas the second era's environmental marketing embraced all forms of industry and service including tourism. The second era was unable to last due to escalating social demands and expectations moreover stringent government. Sustainable development had a significant economic impact on the area of marketing science (Delafrouz et al., 2014). Several businesses recognize the significance of the green market and are moving in that direction. Patagonia: Environmental responsibility has always been upheld by the textile company.

To emphasize its commitment to sustainability, the company uses a variety of green marketing techniques in addition to including eco-friendly components in its product. For instance, it has started a campaign to get consumers to recycle and fix existing garments instead of buying new ones. Body store: In addition to using natural and eco-friendly components in its products, the body store engages in an assortment of green marketing initiatives. For instance, it has started efforts to spread awareness of environmental concerns, such as climate change and the need to protect species. The business collaborates with numerous groups to advance social equity as well as sustainability objectives (Ramakrishnan, 2023).

Methodology

This research study makes use of secondary data sources and a descriptive research design through content analysis. It is founded on secondary sources of data from a variety of research publications, including books, magazines, newspapers, journals and websites. The data is gathered from online resources. A descriptive research objective is to outline phenomenon features. What happened in this research is more significant than how or why it occurred. The goal of descriptive research is to describe a phenomenon and its characteristics. In this study, what happened is of greater importance than how or why it happened. For the aim of describing and analyzing the traits or

actions of a population, group, or phenomenon, descriptive research is a sort of research approach (Nassaji, 2015). By gathering and examining data without modifying or manipulating any factor it focuses on providing answers to what and how question.

To find out more details on a certain subject or phenomenon, descriptive research is frequently employed in the social sciences, business, psychology, and other disciplines. Different research techniques, including surveys, questionnaires, interviews, observations, and case studies, can be applied to undertake it. A study technique called content analysis is used to examine and understand the properties of different types of communication, Such as text pictures and audio. It entails methodically examining the information included in these materials, spotting trends, themes and other pertinent elements and making deductions or conclusions from the results (Hassan, 2022). A broad variety of subjects may be studied using content analysis, including political speeches, commercials, Internet conversation and media coverage of social concerns. It is frequently used in qualitative research and could be employed in conjunction with other techniques to provide a more thorough knowledge of a certain occurrence.

Findings

The study will examine how the promotion of ecologically friendly goods and practices through green marketing can help promote sustainable development. It can examine how green marketing techniques affect consumer behaviour and stimulate people to adopt sustainable consumption habits. The study could also explore how companies can support sustainable business practices and green marketing and its potential benefits to the environment, society and economy. Overall, the study paper can conclude that, by encouraging environmentally friendly behaviours and changing consumer behaviours, green marketing may have a significant impact in promoting sustainable development. To achieve a more sustainable future, it can

furthermore emphasize the requirement for continuous studies and collaboration between companies, governments and civil society. To achieve a more sustainable future, it can also stress the need for continued research and cooperation between enterprises, governments and civil society, and address the difficulties and limitations of green marketing and sustainable development. Green marketing might be a crucial component in promoting sustainable development. First, it can contribute to promoting environmentally friendly behaviours and minimizing the negative environmental impact of goods and services.

Promoting utilizing ecologically friendly materials, reducing energy consumption and reducing waste production throughout the product's lifetime will help. Second, green marketing can contribute to increasing consumers' knowledge of environmental concerns and the significance of sustainable practices. This can be done by promoting the environmental benefits of products and services through advertising, public relations and other communications tactics. Thirdly, promoting innovation and technical development to support sustainable practice can contribute to promoting sustainable development. This may be accomplished by stimulating the study and creation of environmentally friendly technologies such as renewable energy sources and the adoption of sustainable production and manufacturing practices. Finally, green marketing can support sustainable development by opening up business opportunities in the green economy, which focuses on the development and promotion of environmentally friendly goods and services. Support for environmentally friendly behaviour, promoting employment and economic prosperity. Overall, green marketing has a significant part in cultivating consumers' environmentally conscious behaviours, supporting innovation and technological improvements, and creating economic opportunities in the green economy.

Socially and ecologically responsible marketing is called green marketing. Green marketing aims to promote sustainable development by encouraging ecologically conscientious consumer behaviour. A recent study found that consumers are increasingly concerned about environmental problems and are prepared to pay extra for products that are better for the environment and services. Using green marketing can therefore be beneficial to distinguish yourself from competitors and attract environmental-related clients. As a result, it is possible to successfully attract clients who are concerned about the environment through green marketing and stand out from the crowd. However, some of the green marketing promises, sometimes known as greenwashing, raise questions about their credibility. Regulation and certification are now needed to guarantee that companies are genuinely trying to be environmentally friendly. The growing research into sustainable development is another area of research that compliments green marketing and aims to meet current needs without compromising future generations' capacity to meet their own needs. Environmental, social and economic sustainability is all part of sustainable development and requires a comprehensive strategy to solve the world's most urgent problems. In general, green marketing can promote sustainable growth but must be honest and transparent to win customers and have a real impact on the environment.

Conclusion

The research investigated the idea of environmentally friendly marketing to promote sustainable development. The study showed that green marketing can greatly support sustainable development by raising consumer awareness and the desire for green products and services. The article also emphasizes the importance and benefits of using green marketing techniques for companies. The research also demonstrates some of the difficulties faced by businesses in implementing green marketing, including low consumer awareness and understanding, high

prices for sustainable products and services, and the difficulty of maintaining harmony between environmental sustainability and profitability. Overall, the findings of the study paper indicate that green marketing can be successful in encouraging environmentally friendly development. Companies can increase their revenues by marketing while providing eco-friendly products and services to benefit both the environment and society as a whole. To gain customer confidence and criticism, companies must approach green marketing with honesty about sustainability and openness to environmental practices. Furthermore, the research examines the concept of ecologically conscious advertising and its role as a tool for sustainable development. The article examined many ways in which green marketing is potentially used to support the creation of sustainable products and services and also to promote environmentally friendly behaviour and consumption patterns.

This study, through an analysis of the research on eco-friendly marketing sustainable development, demonstrated the importance of incorporating green marketing techniques into corporate practices, which include increased client loyalty, improved brand recognition and reduced environmental impacts. Other problems facing companies when implementing eco-friendly advertising techniques identified in this document include the difficulty of accurately obtaining information about the environmental impact of goods and services, the possibility of greenwashing and the requirement that continuously invest in sustainable practices. Overall, this research shows that green marketing is a powerful tool for supporting sustainable development as long as companies invest in environmental management and sustainable practices. To achieve long-term economic success while contributing to creating a sustainable future for everyone, companies should consider the integration of green marketing into their overall sustainability initiatives.

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ETHNOGRAPHIC METHODS AND POLITICAL RESEARCH: REFLECTIONS FROM LIVELIHOOD PRACTICES IN COASTAL WEST BENGAL

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Abstract: The complicated political, social, and environmental conflicts of the traditional fishermen's community in Purba Medinipur, West Bengal, are examined in this ethnographic study. The study employs a political ethnography methodology to demonstrate how conflicts with large-scale mechanized fishing trawlers, coastal erosion, and climate change threaten the community's means of subsistence. It illustrates the stark discrepancy between the rhetoric of government policies and their actual application, which is frequently made worse by the appropriation of local institutions. The study also emphasizes the community's agency and resiliency by showing how they use unions for political mobilization and organized resistance to defend their traditional rights, especially the Khati system of resource management. In the end, this study confirms that political ethnography is an essential method for comprehending how impersonal laws and power structures affect the day-to-day, actual experiences of underprivileged groups.

Keywords: Political Ethnography, Livelihood, Environmental Politics, Khati System

Introduction

Ethnographic methods are extremely used in Sociology and Social Anthropology. However, it is also used in other social sciences subject like Political Science. This research based on the political Dimensions of Political livelihood practices of coastal West Bengal that define the both side of Ganga, Purba Medinipur and South 24 Parganas. Disproportionately large number of fishermen community lives in Purba Medinipur District and other livelihood practices also flourished there. Hence field data has been obtained from.

What is Ethnographic?

One qualitative approach that focuses on examining people's lives in their communities from a cultural perspective is ethnographic research. Its roots lie in anthropology, where researchers would spend years living among foreign communities in order to gain an

insider's perspective-also known as the emic perspective-on their culture. The Chicago school sociologists later used this approach in their own communities, showing that ethnographic research could also be conducted in familiar environments. Ethnographers' main objective is to observe and examine human interactions in order to comprehend their cultural significance. (De Volo: Schatz, 2004)

Seeking the indigenous perspective- the "native's point of view"- by eschewing preconceived theoretical frameworks and letting meaning arise from the data is a fundamental tenet of ethnography. The etic perspective, on the other hand, uses pre-existing theoretical concepts to examine a culture. Although the emic perspective is the goal of ethnographers, they frequently combine it with the etic to offer a thorough analysis. (De Volo: Schatz, 2004) Focusing on language as a social practice and emphasizing the value of first-hand experience in the field are other characteristics of ethnography. Three guiding

principles serve as the methodology for ethnographic research:

1. **Naturalism:** The goal is to minimize the researcher's impact while capturing human behaviour in its natural environment.
2. **Understanding:** To explain human behaviour, one must comprehend the cultural setting in which it takes place. This is particularly true in situations where one might think they are already familiar with the customs.
3. **Induction:** Rather than starting with a specific hypothesis, ethnographers usually start with a broad interest. As the study goes on, the theoretical concepts and research problem are improved, making it a discovery-based process.

There isn't a single, universally accepted definition for politics. The definition of the term frequently varies depending on the method used to examine it, making it a contentious topic. Politics as an activity entails the intricate interaction of conflict, collaboration, and negotiation. It exists in any setting where individuals are working together, be it a tiny, unofficial group or a formal public organization. Complex problems like whether politics is a universal aspect of all human cultures or whether some societies can function without it are brought up by the question "what is politics?" (Leftwich, 2004)

There are two primary methods to define politics: the processual approach and the arena. The arena approach restricts politics to particular institutional contexts, such as states, administrations, and the formulation of public policy. It implies that only societies with states engage in politics. According to this perspective, everything outside of these designated areas is regarded as non-political, or "private," while decisions and concerns that have an impact on the entire society are regarded as political. (Leftwich, 2004)

The processual perspective, on the other hand, sees politics as a more universal and generalized process that exists in all human cultures, whether historical and contemporary. According to this viewpoint, politics is an essential and unavoidable aspect of all group human endeavours. It broadens the definition of politics to encompass a variety of settings, including both private and public spheres, such as families, clubs, and corporations. The proponent of this viewpoint, Adrian Leftwich, claims that politics includes all of the cooperative, negotiating, and conflictual actions that people engage in in order to plan how to use, produce, or distribute natural, human, and other resources in order to maintain their social and biological existence. According to this concept, politics is essentially about how people, resources, and power interact.

Notwithstanding these disparate methodologies, the majority of political ideas share a fundamental theme: the examination of power. Power dynamics, including their origins, manifestations, applications, misuses, and consequences, are intrinsically tied to politics. Disputes over the basic nature of politics are frequently less central to the discussion of what politics is than they are to divergent views on how politics functions and ought to be studied. For instance, a Marxist understanding of politics emphasizes class interests and relative class power, viewing it as nothing less than class warfare. Another perspective, similar to Bernard Crick's, contends that politics is a unique kind of governance that settles disputes through formalized processes. (Leftwich, 2004)

Overview: Examining the crisis at the coast

The Global Context of Coastal Vulnerability

A complex interplay between resource depletion, climate change, and rapid, frequently unplanned development has put the world's coastal zones at the forefront of a global crisis. These areas are facing previously unheard of environmental risks as sea levels rise and extreme weather events become more frequent

and intense. (Hossain et al., 2022) At the same time, fragile coastal ecosystems and the communities that depend on them are under tremendous strain due to the drive for economic development, which includes industrialization, tourism, and massive infrastructure projects. These historically marginalized communities are in a state of compounded precarity, with environmental changes and political-economic forces that are well beyond their control undermining their traditional means of subsistence. A way of life, traditional knowledge, and social institutions that are closely linked to the coastal environment are being preserved, in addition to the fight for economic survival.

Case Study: The Fisherfolk of Purba Medinipur

The traditional fishermen of Purba Medinipur, West Bengal, offer an intriguing and pressing case study within this global context. The coastline of the area is especially vulnerable; between 1990 and 2018, an alarming 60.5% of West Bengal's coast eroded. (Singh, 2022) The social and economic precarity of its fishermen, a community with strong historical and cultural ties to the sea, is a reflection of this environmental fragility. (Sen, 2021) Their traditional fishing system has defined their lives and means of subsistence for generations, but they are currently facing an existential crisis. Many have been forced to give up their ancestral occupation as a result of the sharp decline in the number of fishermen and active boats, as well as the unsustainable decline in the once-reliable catch. (Baitalik: Majumdar, 2015) Purba Medinipur's combination of economic marginalization and environmental degradation offers a vital and rich area for research.

Theoretical Framework: The Promise of Political Ethnography

Defining Political Ethnography

A research approach known as political ethnography explores the “everyday practices,

interactions, and power dynamics shaping political life” at the local level, going beyond the analysis of official political institutions. Political ethnography examines people as “fully-constituted human beings” who are enmeshed in their social and institutional contexts, in contrast to methods that break people down into variables for measurement. In order to obtain a “insider’s view” of political dynamics, this approach stands out for its reliance on immersive and participatory research techniques, such as prolonged fieldwork, in-depth interviews, and direct observation. (Brodkin, 2017) Long-term relationships and trust-building allow researchers to gather rich qualitative data that reflects individual experiences and viewpoints. (Stepputat: Larsen, 2015)

Moving Beyond the Formal: The Politics of the Unseen

Political ethnography's ability to shed light on spheres of political activity that are not usually acknowledged as such because they take place outside of traditional political channels is one of its main advantages. (Brodkin, 2017) In the study of marginalized communities, where informal networks and institutions frequently coexist and function alongside formal ones, this is especially pertinent. (Priyam, 2016) The approach makes it possible to uncover hitherto undiscovered or surprising phenomena and offers a perspective on how regular people participate in politics and make decisions in their daily lives. The emotional aspects of political life, such as how concerns about losing a traditional career or financial instability influence political debate, can be discovered by researchers through careful observation and listening to people. This method demonstrates that politics is a complex aspect of a community's social life that extends beyond voting booths and parliamentary discussions. It includes everything from how a community negotiates debt with a private lender to how they voice complaints regarding a state-funded development project. Connecting these individual experiences to the more general social, institutional, and political-economic ties

that bind local locations to a larger system is what gives them value. (Nichols: Guay, 2021)

Ethnography and Policy: The Lived Experience of Implementation

The deep disconnect between political policy as an abstract idea and its actual, frequently disorganized, implementation on the ground is best understood through ethnography. (Stepputat: Larsen, 2015) Universalist policies are commonly “transformed, adapted, or even ignored in local sites of practice,” despite their seeming rationality and good intentions on paper. For implementation research, an ethnographic approach is invaluable because it offers a methodical and effective way to address the “how” and “why” questions. (Ryan: Rutgers, 2020) It shows how an innovation is mediated by local context and culture as it moves from policy to practice. This approach enables the Purba Medinipur fishermen to critically evaluate policies that are supposed to benefit them, like the national Blue Revolution¹ project or the West Bengal Fisheries Policy². (Chakraborty, 2022) The approach can reveal how the goals of these policies conflict with the needs and lived realities of the people they are supposed to assist by placing the researcher in the community. This is essential for giving a concise, fact-based analysis of what is occurring and why.

The Ethnographic Approach’s Nuanced Contribution

An ethnographic approach goes beyond straightforward description when examining the Purba Medinipur fishermen. The research

creates a strong link between the individual experiences of fishermen and systemic political-economic relations by chronicling their personal stories of being forced to leave their profession or losing everything to a cyclone. For example, an ethnographic study can tell the specific human story of a fisherman who loses a whole 15-day fishing cycle due to unseasonal rain, demonstrating the direct impact of climate variability on his livelihood and financial stability, while a quantitative study can demonstrate a decline in annual fish production. (Pandey, 2025) This method turns data points into compelling stories that show how environmental changes and policy decisions become real, lived realities.

Moreover, a study of this community is an active site of engagement as well as an object of inquiry. The emphasis on the “utility and relevance of research to specific non-academic publics” and the tradition of “tactical responsivity” imply that the research itself may be used to further political goals. The paper supports a process of mutual education and, in doing so, supports the fishermen’s efforts for political recognition and justice by giving voice to their struggles, customary rights, and demands for change. As a result, the researcher is not an impartial observer but rather a participant in a dynamic, introspective process of knowledge production that can further the objectives of a group effort. (Nichols: Guay, 2021)³

Review of Literature:

Lorraine Bayard de Volo and Edward Schatz (2004) argue that undervaluing

¹ The rapid expansion and intensification of aquaculture and fisheries production worldwide is referred to as the “Blue Revolution,” which started in the middle of the 20th century. Its main objective is to increase aquatic food production in a sustainable manner in order to improve the livelihoods of those who work in the fishing industry, ensure food security, and spur economic growth. This program, called the “Neel Kranti Mission,” was started in India during the 7th Five-Year Plan.

²The West Bengal Fisheries Policy seeks to improve the socioeconomic standing of fishermen and encourage the sustainable growth of the fishing industry. Increasing fish production, guaranteeing food and nutritional security, and generating jobs through public and private investment are some of the main goals. The policy seeks to modernize the sector by encouraging scientific farming methods, providing infrastructure like cold storage and harbors, and promoting value addition.

ethnographic methods due to inaccurate criticisms means certain research questions are marginalized. They contend that while ethnography has limitations, its contribution is significant when used thoughtfully. **Leftwich (1984)** offers a compelling, concise introduction to politics as a process defined by conflict and cooperation over scarce resources. It challenges textbook definitions, framing politics as fundamental to all human life and organizational power. This is essential reading for beginners seeking a clear, critical conceptual starting point. **Alin Kadfak's (2017)** study explores livelihood diversification among fishers and youth in an urban Indian fishing community. Proximity to the city offers broader occupational choices, including diverse fishing activities, the service sector, or urban jobs. This challenges rural-based narratives that portray small-scale fishers as passive, instead presenting them as active agents employing accumulation and risk management strategies. **Pramanik (1993)** found that fisher folk in Hara and Sultanpur rely on trader-lenders for capital, supplies, and food. The traders are lenient with loan repayment, which obligates the fishermen, making them feel unexploited. This system grants the traders perpetual control over the local fishing industry. The edited book by **Sebak Kumar Jana, Mihir Kumar Pal and Chandrima Chakraborty** talks about one of the goals of sustainable development is the efficient and judicious utilization of the natural resources of a country to increase economic growth and advancement of the welfare of the community. One of the chapter of this book written by **Abhishek Majhi and Subhasis Bhattacharya (2020)** investigate the Socio-economic condition, livelihood status and comparative study of the fishermen around the two blocks of Purulia district. A comparison in the livelihood status especially in the economic upliftment was carried out in the tribals of Purulia district. **Fabinyi and Barclay's (2022)** book is an exemplary, holistic contribution to fisheries research. It cements the vital role of social sciences, offering a relational approach that links fishing livelihoods to global processes, social diversity, and political ecology. A crucial read for academics and

policymakers seeking governance solutions focused on human and ecological well-being.

Research Objectives:

1. To demonstrate how an ethnographic approach reveals the lived, everyday political dynamics and struggles of the Fisherfolk community in Purba Medinipur, West Bengal.
2. To examine how the community's livelihoods are threatened by interrelated socioeconomic and environmental issues, such as coastal erosion and the deterioration of the traditional Khati system.
3. To examine the discrepancy between government initiatives to support fishermen and their actual application, emphasizing cases of institutional exclusion and policy exclusion.
4. To investigate how the community's organized resistance and political mobilization, including through direct action and unions, acts as a vital form of agency in reaction to their precarity.

Research Methodology:

The livelihood and environmental struggles of the traditional fishermen in Purba Medinipur, West Bengal, are examined in this paper using a political ethnography approach. A qualitative research technique called political ethnography offers a ground-up view of how common people participate in politics, make choices, and communicate with official political institutions. It investigates the "everyday practices, interactions, and power dynamics shaping political life" in addition to formal political institutions. Because it takes place outside of traditional political channels, this approach is particularly well-suited to uncover political activity that isn't always acknowledged as such. One-on-one interviews with key stakeholders would be conducted, including traditional fisherfolk, community leaders, women involved in the trade, and members of fisherfolk unions like the Dakshin Banga Matsyajibi Forum (DMF).

The Socioeconomic Fabric and the Khati System

A Traditional System of Governance: The Khati System

The Khati system, a type of traditional marine tenure that has dominated the social and economic life of the Purba Medinipur traditional fishermen for generations, is at the core of this community. (Iyengar: Chakraborty, 2024) The khati is a community-governed social organization that provides families and small groups with fishing and fish-drying spaces. It is more than just a straightforward fish landing area. This system works seasonally, usually from September to March but due to availability of temperature, fish this time has changed November to February, when a local committee makes sure that fishing laws

are followed and encourages equity and teamwork.

Customary rights to fishing grounds, land for temporary huts, and drying areas are passed down through the generations in the khati, which serves as a type of non-state governance. This system's existence reflects a long-standing, locally based strategy for resource management that has supported the traditional way of life. (Pandey, 2025)

A Community Overview: Health, Education, and Poverty

A community experiencing severe socioeconomic marginalization is revealed by an ethnographic investigation into the lives of the fishermen. The community's extremely low average income and preponderance of people living below the poverty line are confirmed by numerous studies.

Table 1: Socio-Economic Profile of Fisherfolk in West Bengal

| Sl. No. | Socio-economic Indicator | Percentage of Population/Status |
|---------|--------------------------|---|
| 01. | Below Poverty Line (BPL) | 70% in one study of 90 families; Around 50% in another study |
| 02. | Literacy Rate | Majority are illiterate (44%-46%); Low to no formal education. |
| 03. | Housing Conditions | Majority live in thatched or mud houses (65.55%-96.74%); Poor access to latrines and clean water. |
| 04. | Annual Income | Very low, often below national per capita income |
| 05. | Occupational Diversity | Limited; Fishing is the primary occupation with little diversification into other professions. |
| 06. | Gender Roles | Men primarily fish; women are engaged in low-income, secondary activities like fish sorting and drying. |

Source: Data Collected from field study and compiled by researcher.

An underprivileged community is clearly depicted by the data. The vast majority of households live in substandard housing with little access to necessities like sanitary facilities and clean drinking water. (Khatua, 2022) A significant portion of the population lacks formal education, and the literacy rate is shockingly low. (Rahaman et al., 2022) Women

are primarily involved in the secondary, lower-paying parts of the trade, like sorting and drying fish, frequently without the use of basic safety gear like gloves. This marginalization is also evident in the division of labour. (Tripathy et al., 2022) This socio-economic background is essential to comprehending the challenges faced by the community.

The Political Nature of Socio-Economic Dispossession

Fishermen's poverty is a structurally reproduced result of institutional and political exclusion rather than an innate condition. The community is compelled to engage in a debt cycle with informal moneylenders since they are unable to obtain official credit from scheduled banks. (Nongmaithem, 2014) These private lenders offer loans in return for the full catch, frequently entangling fishermen in a system of exploitation from which they are unable to break free. (Khatua, 2022) They suffer financial ruin when the lenders confiscate their boats and nets when the catch is insufficient. This relationship is a profound manifestation of power, as the system that denies the fishermen equitable financial opportunities actively keeps them in a state of poverty rather than just making them poor.

The khati system is a living institution of governance and community-based resource management, and its erosion is a political event of dispossession and cultural decline as a generational way of life and its associated knowledge system are gradually dismantled. Moreover, the decline of the khati system, with active boats and fishermen halving in recent years, signifies more than just an economic statistic; it signifies the disintegration of a community's social and political fabric. This underscores how a crisis in livelihood is intimately linked to the disintegration of a community's political and social life. (Pandey, 2025)

The Intersecting Crises: Livelihood and Environmental Precarity

The Livelihood Crisis: The Trawler-Artisanal Conflict:

The main conflict between traditional, small-scale fishermen and large-scale, mechanized fishing operations- specifically, bottom trawlers- is the biggest threat to the livelihood of the fishermen. (Singh, 2019) Fishermen claim that these trawlers, which are legally

forbidden to operate within 12 nautical miles of the coast, work as close as 1 km from the shore, "harvesting everything" and leaving little for the traditional fishermen who are unable to travel more than three to five nautical miles. (Bhaduri, 2023) With catch sizes dropping from 300 kg to just 60-70 kg per trip over the course of two decades, this illicit practice has played a significant role in the starting decline of fish stocks. Many fishermen have been forced to leave their livelihoods due to the ensuing economic instability; some have even looked for other jobs as labourers in other states or even aboard the very trawlers that have destroyed their traditional way of life. (Pandey, 2025)

The Environmental Crisis: A Double Bind of Climate and Development

A double bind of environmental threats, some natural and some man-made, adds to the precarity of fishermen. Rising sea levels, coastal erosion, and frequent cyclones like Aila and Amphan are just a few of the climate extremes that pose a serious threat to the Purba Medinipur coastline. (Hossain et al., 2022) These occurrences result in displacement and large losses of homes and assets. For example, erratic and unseasonal rain has caused fishermen to lose entire fishing cycles. (Pandey, 2025)

However, the impacts of these natural phenomena are magnified by government development projects and corporate activities. The construction of a coastal road, known as the Marine Drive project, has been a major cause of coastal erosion, which has directly led to the shrinking of vital fish-drying spaces and the displacement of families. (Iyengar: Chakraborty, 2024) The planned development of a deep-sea port at Tajpur and a nuclear plant at Haripur further underscores a development agenda that prioritizes large-scale, corporate interests over the well-being and customary rights of local communities. Additionally, pollution from coastal resorts, hotels, and industrial effluents from the Hooghly River has further degraded marine ecosystems,

compounding the decline in fish stocks. (Pandit, 2024)

Political and Cultural Implications of Livelihood Disruption

Resilience and economic diversification are not demonstrated by the transition from fishing to other occupations like farming or manufacturing. There are significant political and cultural repercussions to this desperate act of survival. The transmission of traditional ecological knowledge and fishing methods between generations is disrupted when younger generations quit the profession. (Pandey, 2025) This worsens the community's crisis by undermining their ability to manage and safeguard their coastal resources as a whole. The community's social cohesiveness is weakened and cultural identity is lost simply by giving up their traditional means of subsistence. It illustrates how corporate-interested so-called "development" policies, like the Blue Revolution, have a hidden human cost: they threaten the very social structures and knowledge systems that have allowed fishermen to be the traditional stewards of the coastline. (Chakroborty, 2022)

The Politics of Dispossession: Policy, Power, and Resistance

The Policy-Practice Gap: Rhetoric vs. Reality

An in-depth look of the government's strategy demonstrates a notable discrepancy between the rhetoric of official policy and its actual implementation. For instance, the West Bengal Fisheries Policy outlines its goals to "regulate fishing" by prohibiting trawlers from shallow coastal areas and to improve livelihood, nutritional, socio-economic status, safety and welfare of the fishers." (Government of West Bengal, 2015) The policy also contains clauses that support cooperatives and provide equipment subsidies. (Debnath, 2023)

However, due to a lack of an extensive strategy and adequate funding, fishermen's organizations claim that these policies have been mainly

"detrimental" and ineffectual in practice. (Pandey, 2025) They contend that the Blue Revolution project is intended for "big corporate entities," not for small-scale fishermen, and that bottom trawling is still practiced despite the ban. (Chakroborty, 2022) When the state's declared objectives are not converted into real advantages for the community, this significant policy-practice gap serves as an example of a crisis of governance and accountability.

Political Disenfranchisement and the Co-option of Local Governance

Additionally, there is overt political disenfranchisement of the fishing community. The All India Fishers and Fisheries Workers' Federation (AIFFWF) claims that political "hooligans" are occupying local governance institutions like cooperatives that are meant to assist the community. The community's capacity to self-organize and obtain resources is undermined by this purported co-optation of local institutions, thereby shifting advantages from the underprivileged to those with political clout. This indicates a systematic attempt to erode the community's institutional underpinnings, rendering them defenceless and disempowered. (Chakroborty, 2022)

Agency and Mobilization: Politics from Below

The fishermen of Purba Medinipur are not helpless victims, despite their vulnerability. Through unions like the AIFFWF and the Dakshin Banga Matsyajibi Forum (DMF), their struggles have resulted in organized political mobilization. These groups are an example of "politics from below," employing advocacy and direct action to oppose what they see as harmful corporate and governmental policies. Hunger strikes, demonstrations, and letters to government ministers calling for policy changes are some of their tactics. (Chakroborty, 2022)

The Struggle for Recognition and Rights

The fishermen's political conflicts go beyond their basic economic complaints. The official acknowledgement and defence of their traditional rights, especially the Khati system, is a key demand. The fishermen are participating in a significant political act that contests the state's exclusive control over coastal land and water by calling for the state to recognize their traditional resource management system. This conflict stems from a call for the state to acknowledge and respect an existing system of traditional ecological knowledge and community-based governance. By transforming the dispute from a simple policy dispute into a fundamental struggle over who should define and control resources, it draws attention to the serious governance and accountability crisis that forces marginalized communities to take direct action in order to protect their rights. (Iyengar: Chakraborty, 2024)

Conclusion:

This ethnographic study of Purba Medinipur's fishermen shows how their struggle is a complicated web of interrelated political, social, and environmental problems. According to the analysis, a community that is rich in tradition and is characterized by its traditional khati system is in a state of extreme precarity. An extractive political-economic structure that puts massive tourism and industrial growth ahead of the continuation of traditional livelihoods is the cause of this vulnerability. The environmental risks of climate change and human-induced coastal erosion exacerbate the livelihood crisis, which is characterized by diminishing fish stocks as a result of illegal trawling. The study demonstrates that these problems are not unique; rather, they are the result of a substantial discrepancy between the rhetoric of government policy and its poor execution, which is frequently made worse by the appropriation of local institutions. The fishermen's fight is ultimately a politics of survival, and they must actively organize to oppose the forces attempting to evict them and

demand the recognition of their traditional rights.

Political ethnography's theoretical promise is validated by the Purba Medinipur fishermen's case. The methodology's immersive, grassroots approach offers a critical lens through which to view "politics from below" and how the lived experiences of marginalized communities transform abstract, universalist policies. The knowledge acquired—such as the cultural effects of changing livelihoods, the political nature of the debt cycle, and the function of direct action in the absence of institutional support cannot be obtained solely through quantitative analysis. Therefore, ethnography is an essential tool for academic research that seeks to comprehend the complex interrelationships among lived experience, policy, and power.

It is clear that the current policies need to be re-evaluated. Policymakers ought to conduct meaningful, multi-site ethnographic consultations with community leaders and unions such as the DMF and AIFWWF, rather than merely making abstract statements. Formally acknowledging the Khati system as a valid type of customary marine tenure is a key recommendation, as it would offer legal protection against evictions and development project intrusions. In addition, to prevent illicit bottom trawling and safeguard the community's main resource, a rigorous and enforced regulatory framework is required.

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FEMINISM IN THE 21ST CENTURY: CHALLENGES AND PROGRESS

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Abstract

The 21st century has ushered in a transformative era for feminism, characterized by both significant advancements and persistent challenges. The paper explores how feminist thought and activism changed over the course of the recent era, with attention being paid to the most significant aspects of these changes, including the idea of increasing intersectionality, the role of digital activism, and the development of new feminist movements. Although realizing the development that has been achieved, the work simultaneously severely criticizes the current challenges on the way of the feminist movement one cannot discuss feminist ideals without the backlash of the movement, commercialism of the feminist rhetorics, and neglect of the counter-discussions of marginalized people. This paper aims to explore the multifaceted nature of feminism in the 21st century, examining both the progress achieved and the challenges faced. The main objective of the study is to provide a historical overview of feminism and its key waves, highlighting the shift towards intersectionality and digital activism.

Keywords: Feminism, Movement, Intersectionality, Development, Rights, Gender Equality, Digital Activism

Feminism, a socio-political movement about gender equality. Feminism is even coined as a word by a French Utopian philosopher and a radical socialist Charles Fourier (1772-1837) in 1837 to mean the malady of feminine nature in man (Delap, 2007). The origins of feminism started in the USA and Europe; subsequently the spread of feminism in Asia, Africa and Latin America, and subsequently in the other continents, and lastly in the world. It is an umbrella term for a number of cultural phenomena related to women oppression under the patriarchy (Dicker, 2008). Moreover, in certain nations it combats forced marriages, female infanticide, public veiling mode, burning of widows, female genital mutilation (FGC), etc. (Peay, 2005). Among such prominent representatives of feminism are Olympe de Gouge, Mary Wollstonecraft, Jane Austen, Lucretia Mott, Elizabeth Cady Stanton, Susan B. Anthony, Sojourner Truth, Emma Goldman, Hildegard Bingen, Christine de

Pisan, Olympe de Gouge, Jane Austen, bell hooks, Alice Paul, Alice Walker, etc. (Brezina, 2005). It has experienced tremendous changes in the 21st century. Feminism has historically been successful in fighting patriarchal systems as well as championing women rights. There was the suffrage movement at the early stages of the 20th century that effectively campaigned the right of woman to vote. Later movements of feminism had concerns like reproductive rights, discrimination in the workplace, and female violence. Nevertheless, the modern feminist movement has diversified and now deals with even more issues due to the world events, technological progress, and changing constraints of the society.

The 21st century has been marked by the rise of intersectionality, a framework introduced by Kimberlé Crenshaw in the late 20th century, which emphasizes the interconnectedness of social categorizations such as race, class, and

gender. This approach has broadened the feminist discourse, recognizing that women's experiences are shaped by multiple, overlapping identities. Additionally, digital technology has played a pivotal role in the evolution of feminism, providing platforms for online activism and the dissemination of feminist ideas. Movements such as MeToo and TimesUp have gained international prominence, highlighting issues of sexual harassment and gender-based violence. These digital platforms have not only facilitated awareness but also mobilized collective action, demonstrating the power of social media in contemporary feminist advocacy. Despite these advancements, the feminist movement faces significant challenges. Backlash against feminist ideals has emerged in various forms, including political resistance, media misrepresentation, and the co-optation of feminist rhetoric for commercial purposes. These challenges underscore the complexities of advancing gender equality in a rapidly changing world and highlight the need for a resilient and adaptive feminist movement.

Historical Background of Feminism

First Wave Feminism

The first wave of feminism, which spanned from the mid-19th to early 20th centuries, primarily focused on securing legal rights for women, most notably the right to vote. The movement started in the United States in the year 1848 with Seneca Falls Convention as 300 people had met and discussed the Declaration of Sentiments by Elizabeth Cady Stanton which described the poor status of women and demanded suffrage- or, the right to vote. It was followed more than 10 years later, in 1866 in Britain, when a suffrage petition was presented to parliament. This wave got over in the year 1920 when the right to vote by women was granted in the US. The first wave activists thought, after obtaining the vote, women could wield its strength toward implementing other needed reforms, including property rights, access to education, work and others. The movement was controlled by white leaders.

These were the veteran president of the International Woman Suffrage Alliance, Carrie Chapman Catt in the US, the leader of the militant Women Social and Political Union Emmeline Pankhurst in the UK, and Catherine Helen Spence and Vida Goldstein in Australia (Freedman, 2002). The success of the first wave laid the foundation for subsequent feminist movements.

Second Wave Feminism

Second-wave feminism took place in the 1960s and '70s. It built on first-wave feminism and challenged what women's role in society should be. Inspired by the Civil Rights movement and protests against the Vietnam War, activists focused on the institutions that held women back. This meant taking a closer look at why women were oppressed. Traditional gender and family roles were questioned. Queer theory became more established. There were major victories in this era including the Equal Pay Act of 1963, Roe v. Wade in 1973 and other Supreme Court cases.

Three main types of feminism emerged: mainstream/liberal, radical, and cultural. Mainstream feminism focused on institutional reforms, which meant reducing gender discrimination, giving women access to male-dominated spaces, and promoting equality. Radical feminism wanted to reshape society entirely, saying that the system was inherently patriarchal and only an overhaul would bring liberation. It resisted the belief that men and women were basically the same. Cultural feminism had a similar view and taught that there's a "female essence" that's distinct from men (Rosen, 2000). Influential theorists like Betty Friedan and Gloria Steinem emphasized personal experiences as political, highlighting how systemic sexism permeates everyday life (Tong, 2009).

Third Wave Feminism

The third wave, which arose in the 1990s, introduced a more inclusive and diverse perspective, emphasizing the importance of recognizing multiple identities and experiences

within the feminist movement. This wave challenged the notion of a universal female experience and sought to include the voices of women of color, LGBTQ+ individuals, and others whose experiences had been marginalized in earlier feminist discourse. Third-wave feminism celebrated individualism and embraced contradictions, allowing for a more fluid and multifaceted approach to gender equality (Crenshaw, 1991).

Fourth-Wave Feminism

In the 21st century, the emergence of fourth-wave feminism has been marked by its embrace of digital technology and intersectionality. This current wave is characterized by the use of social media and online platforms to advocate for feminist causes, bringing issues such as sexual harassment, body autonomy, and gender-based violence into the global spotlight. Fourth-wave feminism emphasizes the interconnectedness of various forms of oppression, advocating for a more inclusive and intersectional approach that considers race, class, sexuality, and other aspects of identity (Sreevarsha, 2019).

Intersectionality can be described as one of the defining characteristics of contemporary feminism; it was a concept developed by legal scholar Kimberle Crenshaw in 1989. Intersectionality assumes that people are oppressed within different combinations and levels of supremacy due to their collective social identities, such as gender, race, class, sexuality and disability. This idea has since assumed primary importance among feminist thinking today, because it criticizes the one size fits all view of gender equality and appeals to a more complex reading of how various forms of limitations overlap. Intersectionality has broadened the spectrum of feminism and gave focus to the problems of racial justice, economic inequality, and LGBTQ + as well. It has also altered the movement strategies and thus the feminists have been influenced to form coalitions with other social justice movements and consider providing systematic change to the benefit of

every marginalized group. Through intersectionality, feminism can be said to be more inclusive and respectful of the different realities among females and other gender minority human beings. By embracing intersectionality, feminism has become more inclusive and reflective of the diverse experiences of women and other gender minorities. The emergence of digital activism is one of the most important trends of present-day feminism. The use of internet and social media has changed how feminist ideas are shared, and in fact, the ideas gain quicker coverage and worldwide backing through such networks. Campaigns like MeToo, TimesUp and HeForShe have used the might of digital platforms to pursue gender-based violence, discrimination at workplaces and other relevant concerns. The feminist movement has become democratic with Digital feminism allowing other people who do not necessarily have access to platforms of power to express themselves. It has also facilitated formation of virtual communities to give people a common ground to exchange experiences, offer support and mobilize united actions. Nevertheless, the digital environment does not lack challenges either; online bullying, information pollution, and also a digital divide are major barriers to the inclusiveness and efficiency of the digital feminist activism.

Feminism has become very broad because of the current demands of the society. Feminists of the present are not only interested in gender equality, but also wider social justice agendas, including climate justice, economic equity, and marginalized groups. The holistic aspect acknowledges that the effects of gender inequality cannot be dealt with thoroughly without considering other injustice in the system. Environmental feminism, for instance, explores the connections between gender and environmental issues, arguing that women, particularly those in marginalized communities, are disproportionately affected by environmental degradation and climate change. Economic feminism similarly explores the interrelation of gender with economic policies and practices through ensuring fair pay,

more favourable working environment, and access to economic opportunities on the part of women and their gender minority.

Despite its progress, feminism continues to face significant challenges and criticisms. One of the most persistent issues is the perception of feminism as being primarily a Western, white, middle-class movement that does not adequately represent the experiences of women of color, indigenous women, or those from non-Western cultures. This critique highlights the need for ongoing efforts to decolonize feminism and ensure that it is truly inclusive of diverse perspectives (Sreevarsha, 2019).

Also, growth of neoliberal feminism as an approach based on individual empowerment rather than collective action and structural transformation has led to a potential division in the movement. Critics have gone as far as to say that this brand of feminism can have the effect of leaving ensuring gender equality relegated to individual choice and success, neglecting to focus on the structural inequalities that continue to propagate gender based oppression. There is also the backlash following feminism which mainly appears in form of anti-feminist conviction and misogyny and opposition to feminism. Such a backlash may be in the form of the opposition to feminist politics, online bullying of feminist activists, etc. This interaction between strong opposition and slow progress highlights the importance of the fight against the lack of gender equality and education and activism. On the horizon, feminism will be defined by how it incorporates the shifts of the world and creates solutions to meet changing demands. This will entail a co promise to inclusiveness, intersectionality, and partnership with other social justice movements. Feminism must also continue to leverage digital tools and platforms to reach broader audiences, while being mindful of the challenges associated with the digital age.

Progress in 21st Century Feminism

1. Advancement of Intersectionality

Intersectionality has become a foundational concept in modern feminist thought. It recognizes that women's experiences of oppression differ based on overlapping identities such as race, ethnicity, class, and sexual orientation. This shift allows feminism to address the needs of marginalized groups more effectively, breaking away from the earlier focus on predominantly white, middle-class women (Crenshaw, 1991). It has encouraged inclusive policies and grassroots activism that consider these complexities (Collins, 2015). For example, movements like Black Lives Matter, co-founded by women, have influenced feminist activism to be more attentive to racial justice.

2. Digital Feminism and Online Mobilization

The internet and social media have radically transformed feminist activism by offering accessible platforms for education, networking, and advocacy. Online campaigns such as MeToo and TimesUp mobilized millions, exposed sexual harassment, and pressured institutions to enact change (Mendes, Ringrose, & Keller, 2018). Digital spaces have also provided forums for marginalized voices, allowing feminist dialogue across geographic and cultural boundaries (Baer, 2016). However, digital activism also raises questions about sustainability and inclusivity, as not all women have equal internet access.

3. Increased Political Representation of Women

Globally, there has been a positive trend towards more women in political offices. This includes elected representatives, heads of state, and senior bureaucrats (Paxton, Hughes, & Green, 2006). Gender quotas have played a significant role in increasing representation in parliaments, notably in countries like Rwanda, Sweden, and Spain. Greater female political participation has led to the prioritization of

gender-sensitive policies in healthcare, education, and labor rights (Krook, 2010).

4. Legal and Policy Reforms Protecting Women's Rights

Many nations have implemented comprehensive laws to combat discrimination, sexual harassment, and domestic violence. International instruments such as the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) provide frameworks for member states to align national policies with gender equality goals (UN Women, 2020). Landmark legislation, such as the Violence against Women Act in the US and similar laws globally, have improved legal protections and victim support services.

5. Greater Focus on Men and Masculinities in Feminism

Modern feminism has increasingly engaged with the role of men and masculinities, recognizing that gender equality benefits all. This includes challenging toxic masculinity, promoting positive male engagement in gender equity, and addressing how patriarchal norms harm men as well (Connell, 2005). Initiatives such as "HeForShe," launched by UN Women, encourage men to become allies in feminist struggles (UN Women, 2014).

6. Expansion of Reproductive Rights

Despite resistance, reproductive rights continue to be a significant focus in 21st-century feminism. The movement has advocated for access to contraception, safe abortion, maternity care, and education. In many countries, feminist activism has successfully fought restrictive laws and stigmatization (Ginsburg & Rapp, 1995). However, this remains an ongoing battle, especially in conservative contexts.

7. Global Feminist Solidarity and Transnational Activism

Feminism has extended beyond Western contexts, forming alliances with activists worldwide to address issues such as female genital mutilation, human trafficking, and education access (Mohanty, 2003). Transnational feminist networks foster knowledge exchange and amplify marginalized voices on global platforms like the UN.

Challenges Facing 21st Century Feminism

1. Persistent Gender Pay Gap

Despite efforts, women on average continue to earn less than men globally, with wage gaps existing in nearly every country and sector (World Economic Forum, 2021). Structural issues such as occupational segregation, undervaluation of "women's work," and discrimination remain prevalent. This economic inequality affects women's independence and bargaining power.

2. Backlash and Anti-Feminist Movements

A significant backlash against feminism has emerged, fueled by social and political conservatives who perceive feminist gains as threatening traditional values (Faludi, 1991). Online "men's rights" groups and some populist politicians use anti-feminist rhetoric to rally support, often trivializing or dismissing issues such as sexual harassment or domestic violence (Kimmel, 2017). This backlash complicates feminist efforts and can intimidate activists.

3. Commercialization and Market-Driven Feminism

The commercialization of feminism, sometimes called "commodity feminism," occurs when feminist ideas are co-opted by corporations for profit, often simplifying or depoliticizing the movement (Gill & Orgad, 2018). Campaigns that promote consumer empowerment through purchasing decisions

risk shifting focus from systemic change to individual lifestyle choices.

4. Violence against Women and Girls

Gender-based violence remains alarmingly widespread. The World Health Organization estimates that 1 in 3 women globally experience physical or sexual violence in their lifetime (WHO, 2017). Legal systems often fail survivors due to cultural stigmas, lack of enforcement, and victim-blaming attitudes. Online harassment also disproportionately targets women, especially those in public roles.

5. Exclusion and Marginalization within Feminism

Despite the rise of intersectionality, many feminist spaces continue to marginalize voices of women of color, LGBTQ+ individuals, disabled women, and women from lower socioeconomic backgrounds (Hooks, 2000). The mainstream feminist agenda is sometimes criticized for focusing on the concerns of privileged groups, resulting in limited representation and internal tensions.

6. Challenges of Global Feminism and Cultural Relativism

Global feminist solidarity faces obstacles related to cultural differences, neocolonial attitudes, and differing priorities between Western and non-Western activists (Mohanty, 2003). Feminists must navigate respecting cultural diversity while advocating for universal human rights, which is a complex and ongoing challenge.

7. Fragmentation and Disagreements within Feminism

Feminism is a diverse and evolving movement, and it is important to recognize that it is not a single, unified ideology. Numerous subcategories and approaches have developed over the years, with some being at odds with one another in terms of priorities, approaches,

and central definitions, particularly of gender and womanhood. Among the most prominent points of contention is the issue of whether or not transgender people should participate in any activity that is considered feminist especially transgender women. Whereas much feminist theory argues in favour of a broad, inclusive definition of gender inclusive of trans rights, other issues are based on focusing on cisgender female specific issues and this causes disagreement in the feminist movement (Serano, 2016).

Conclusion

Feminism in the 21st century stands at a complex crossroads marked by significant progress, yet continually challenged by persistent inequalities and internal tensions. The contemporary feminist movement has expanded in both scope and depth, embracing a broader range of issues that go beyond gender equality to include social justice, economic equity, environmental sustainability, and global solidarity. Meanwhile, the movement is wrestling with new obstacles that are backlash, fragmentation and commercialisation, and these are threatening to water down or spread out its very purpose. The popularisation of intersectionality as a framework of analysis and activism has one of the most consequential changes of modern feminism. Intersectionality has taken feminism beyond a single concern over gender by acknowledging the presence of a number of identities including race, class, sexuality and disability that interact to determine the lived experiences. This framework has led to the publicity of the distinct forms of discrimination against marginalized groups and the drive towards turning the movement into being more inclusive. However, while intersectionality is currently recognized as an indispensable concept in the world of feminism, it is not always effectively practiced. Many mainstream feminist spaces still give precedence to the interests of the privileged groups leaving others who have unequally suppressed interests. The equal importance has been the emergence of digital feminism that has transformed the

manner in which feminist ideas are being exchanged and campaigns organize themselves. Twitter, Instagram and Tik Tok, social media, have allowed feminist voices worldwide to be heard and has made grassroots organizing more possible than ever before. Digital activism campaigns like the MeToo and the Timesup show how effective digital activism can be in taking on a systemic abuse and giving survivors a voice. However, it is these platforms that subject feminist activists to harassment and misinformation online and not every person has equal access to digital space, casting doubt on the inclusiveness and scope of online feminism. The increased political representation of women has become another major accomplishment of the feminism of the 21st century. Gender quotas have been adopted by many countries and women have been naturally increasing in numbers elected to public office. This has contributed to the elevation of the issues of women to the center of policy including health care, education and reproductive rights. Moreover, feminist advocacy has led to notable **legal reforms**, such as strengthened laws on domestic violence, workplace discrimination, and sexual harassment. These developments are supported by the international agreements such as those of CEDAW which are milestones in the institutionalization of equality between the genders.

Despite these advancements, the feminist movement still faces the challenge of serious problems. Among them, the global gender pay gap is one of the most urgent ones since it is deeply embedded in almost all industries and states. Women still remain underpaid, underrated and overrepresented in the insecure and free labor. Such an economic inequality becomes a dependency cycle and an inequality cycle. Similarly, **violence against women and girls**, in both physical and digital spaces, continues to be a widespread and largely under-addressed problem. Such violence continues, which attests to the systemic and cultural problems that cannot be overcome without legal changes. Feminism also faces a **backlash** in both subtle and overt forms. Populist figures

exploiting anti-feminist rhetoric to weaken the rights of women, deliberate internet communities actively attacking the feminist movements, the movement itself is frequently on the defensive. The feminist agenda has also been complicated by the emergence of neoliberal feminism that talks of individual empowerment and consumer choice more than collective action. Although feminist language has become mainstream through the empowerment campaigns, in many cases, it also runs a threat of making feminism merely a brand, no longer tied to the structural change it is supposed to facilitate. Also, the disintegration of feminism is a major obstacle. The movement is becoming more divided on the definition of gender, inclusion of transgender people and the priority of different feminist agendas. Even though having diversity of thought can be an advantage, it may also cause in-house divisions that undermine unity and stall development. Such disagreements indicate that further discussions, respect, and the desire to promote justice are required even when the differences in ideologies are observed.

Another unresolved issue is the **globalization of feminism** and its tension with **cultural relativism**. When feminists operate in an international setting, they have to strike a delicate balance between promoting universal human rights and cultural norms and traditions. Feminist activities championed by the west have in some cases been accused of imposing foreign values thus resulting into an allegation of cultural imperialism. A truly inclusive feminist movement must therefore engage in meaningful partnerships with activists across diverse cultural contexts and listen to the voices of those most affected by gender injustice. The future of feminism will be defined by its ability to adjust to the dynamic world reality and at the same time stick to its main pillars which include equality, justice and liberation. It involves building partnerships with other racial justice, environmental, LGBTQ, and disability movements, and economic justice movements. Feminism should also keep interacting with men and redefining traditional concept of

masculinity by acknowledging that gender equality is beneficial to all members of the society. Moreover, the movement should not lose the focus on structural change, but on personal empowerment only. Gender equality cannot be attained by simply modifying their lifestyles or by just representation but challenging and changing the institutions, systems and cultural beliefs that support patriarchy and oppression. All these components, education, policy, activism and solidarity will be essential to this transformation. The 21st century feminism is stronger and more complex than ever. Its strongest assets are the fact that it is becoming increasingly inclusive, has a worldwide presence, and can leverage novel technologies. At the same time, the movement should be sensitive of co-optation, exclusion and division. The road ahead is challenging, though it can be potential. If feminism can remain flexible, intersectional, and collectively focused, it can still be a justice and equality-driven change agent in an ever more interconnected world.

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PUBLIC SECTOR BANKS CONSOLIDATION AS A PATHWAY TO SUSTAINABLE BANKING PRACTICES IN INDIA

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Abstract

This study explores the consolidation of public sector banks (PSBs) in India as a strategic pathway toward sustainable banking practices. It examines how recent mergers among major PSBs have influenced financial strength, governance efficiency, and the adoption of sustainability-oriented initiatives such as green finance, corporate social responsibility (CSR), and digital inclusion. Using secondary data from RBI reports, government publications, and scholarly studies (2015–2025), the research employs a descriptive and analytical approach to evaluate post-merger outcomes. Findings indicate that consolidation has improved capital adequacy, reduced NPAs, and enhanced operational efficiency, thereby creating a strong foundation for sustainable banking. However, sustainability integration remains uneven, with most PSBs still at a compliance-driven stage rather than adopting sustainability as a strategic core. The study concludes that consolidation is a necessary step toward sustainable banking but requires stronger regulatory, institutional, and policy alignment to achieve long-term impact.

Keywords: Public Sector Banks, Consolidation, Sustainable Banking, Green Finance, Governance, Financial Inclusion, India.

Introduction

The banking sector plays a pivotal role in shaping the financial stability, economic growth, and social inclusivity of any nation. In India, public sector banks (PSBs) have traditionally served as the backbone of the financial system, extending credit to priority sectors, promoting financial inclusion, and supporting developmental goals. However, over the past two decades, these banks have faced multiple challenges — ranging from high non-performing assets (NPAs), poor operational efficiency, governance lapses, and declining profitability to increasing competition from private and digital banking

institutions. In response to these challenges, the Government of India has undertaken several structural reforms, one of the most significant being the consolidation of PSBs. Bank mergers, initiated with the aim of creating stronger, more efficient, and competitive entities, have been positioned as a strategic tool to ensure long-term stability and sustainability within the banking ecosystem. The idea behind consolidation is not merely to reduce the number of banks but to build institutions with stronger balance sheets, enhanced capital adequacy, technological capabilities, and governance standards that align with global sustainable banking frameworks.

The consolidation of PSBs in India is deeply intertwined with the vision of achieving sustainable banking practices — a model that balances profitability with environmental, social, and governance (ESG) principles. Sustainable banking focuses on responsible lending, ethical investments, efficient resource utilization, and long-term value creation, which align with the United Nations Sustainable Development Goals (SDGs) and the Reserve Bank of India's (RBI) emphasis on green finance. By merging smaller, weaker banks with stronger ones, the government aims to pool resources, streamline management, and enhance risk management systems, thereby enabling these entities to undertake larger sustainable projects and green investments. Consolidation also allows for better integration of digital infrastructure, improved access to data analytics, and enhanced customer service delivery — all of which are essential for building sustainable and inclusive banking systems. Moreover, larger consolidated entities are better positioned to absorb shocks, attract global capital, and align themselves with international best practices in sustainable finance. Hence, PSB consolidation can be viewed not only as a financial restructuring measure but also as a foundational step toward embedding sustainability into the very fabric of India's public banking institutions.

At a broader level, the consolidation drive reflects India's transition toward a more resilient and environmentally conscious financial architecture. With climate change, income inequality, and social responsibility becoming central concerns of modern economies, the banking sector is expected to lead the shift toward sustainable development. Public sector banks, given their wide reach and developmental mandate, play a critical role in channeling funds to sectors like renewable energy, affordable housing, rural credit, and green infrastructure. Through consolidation, the government seeks to enhance the financial strength and operational capacity of these banks, enabling them to support large-scale sustainable initiatives while maintaining financial health and governance discipline.

However, while consolidation presents several potential advantages — such as cost efficiency, better asset management, and greater global competitiveness — it also raises questions about integration challenges, employee adaptation, cultural alignment, and regional inclusivity. Thus, understanding PSB consolidation as a pathway to sustainable banking practices requires a critical assessment of both its strategic intentions and practical outcomes. This research aims to explore how the recent wave of PSB mergers has contributed to or hindered the progress of sustainable banking in India, examining whether consolidation can truly serve as a catalyst for responsible, equitable, and environmentally conscious financial growth.

Need Of the Study

The consolidation of public sector banks in India has been one of the most significant structural reforms in the country's financial landscape. This move comes against the backdrop of persistent challenges such as deteriorating asset quality, capital inadequacy, governance inefficiencies, and the growing demand for environmentally responsible and inclusive financial practices. The need to examine this phenomenon arises from the fact that while consolidation is expected to strengthen the financial system and enhance operational efficiency, its impact on sustainability-oriented banking remains underexplored. With India's commitment to global sustainability frameworks like the Paris Agreement and the United Nations Sustainable Development Goals (SDGs), the financial sector's role in promoting green and ethical finance has become increasingly crucial. Public sector banks, which handle the majority of credit distribution in rural and priority sectors, must therefore align their operations with sustainable principles. This study is needed to critically assess whether the ongoing consolidation initiatives are effectively contributing to this transformation or merely serving as an administrative measure to address financial weaknesses.

Furthermore, despite several government-driven mergers — such as those involving State Bank of India and its associates, or the amalgamation of Bank of Baroda with Vijaya Bank and Dena Bank — there is limited empirical evidence on how these structural changes influence long-term sustainability outcomes. Most previous studies have focused primarily on financial metrics like profitability, cost efficiency, and asset quality post-merger, overlooking the environmental and social dimensions of banking sustainability. Given the increasing relevance of ESG (Environmental, Social, and Governance) factors in global finance, it becomes essential to investigate whether consolidation is enabling public sector banks to adopt greener lending practices, support sustainable infrastructure, and improve governance mechanisms. Additionally, consolidation has implications for digital transformation, resource optimization, and policy alignment with green finance objectives — all critical components of sustainable banking. Hence, the need of this study lies in filling this research gap by connecting the discourse on financial consolidation with the broader agenda of sustainable development within India's banking sector.

Finally, the study holds importance from both policy and practical perspectives. From a policy standpoint, understanding the relationship between consolidation and sustainability can guide future reforms in the public banking domain, helping policymakers design strategies that go beyond balance sheet strengthening to embed responsible financial behavior. From an institutional perspective, the findings can help banks identify areas where consolidation has led to improvements in governance, transparency, and accountability — all of which are vital for sustainable banking. Moreover, the study can offer valuable insights for regulators such as the Reserve Bank of India (RBI) and the Ministry of Finance to evaluate whether consolidation is fostering a robust framework for sustainable growth or leading to the dilution of regional priorities and financial inclusion goals. Given that India aims to achieve a green and resilient economy, it is essential to ensure

that its banking consolidation strategy aligns with the principles of sustainability and inclusive development. Therefore, this study is not only timely but also necessary to assess the effectiveness of PSB consolidation as a genuine pathway toward sustainable banking practices in India.

Scope of the research

The scope of this research extends to a comprehensive analysis of the consolidation process among India's public sector banks (PSBs) and its implications for the adoption and strengthening of sustainable banking practices. The study primarily focuses on the mergers initiated by the Government of India between 2017 and 2020, including major consolidations such as the merger of the State Bank of India with its associate banks, and the amalgamations of Bank of Baroda, Punjab National Bank, Union Bank of India, and Canara Bank with their respective partners. These cases provide a diverse and representative sample for understanding the operational, financial, and sustainability outcomes of consolidation. The research aims to explore how these merged entities have restructured their governance, technology, and lending frameworks to align with the principles of sustainable banking — encompassing environmental responsibility, social inclusivity, and ethical governance. The geographical scope covers the Indian banking sector, with specific emphasis on public sector institutions due to their central role in policy-driven financial inclusion and national development.

The study also encompasses both qualitative and quantitative dimensions of analysis. On the quantitative side, it examines post-merger financial performance indicators such as capital adequacy, non-performing asset (NPA) ratios, credit growth, and profitability to determine whether consolidation has enhanced the overall efficiency and stability of PSBs. On the qualitative side, it explores how these banks have integrated sustainability objectives into their policies and operations — including green finance initiatives, responsible lending

frameworks, corporate social responsibility (CSR) programs, and digital innovations that promote financial inclusion. The research considers regulatory guidelines from the Reserve Bank of India (RBI), the Ministry of Finance, and global frameworks like the UN Sustainable Development Goals (SDGs) and the Principles for Responsible Banking (PRB). It also evaluates how consolidation influences organizational culture, human resource adaptation, customer satisfaction, and governance reforms — all of which contribute to the sustainability orientation of public sector banks. By analyzing both pre- and post-merger conditions, the study seeks to identify the extent to which consolidation serves as a strategic enabler for sustainable growth rather than a mere structural reform.

However, the scope of this research is confined to the Indian public banking ecosystem and does not extend to private or cooperative banks, whose consolidation patterns and sustainability models differ significantly. The time frame of analysis focuses on the period from 2015 to 2025, capturing both the pre-merger preparatory phases and the post-merger outcomes, thereby providing a balanced long-term view. The study is also limited by the availability of secondary data from annual reports, RBI publications, government policy papers, and academic literature, though it aims to supplement these with expert opinions and case-based analysis where possible. While it does not attempt to measure sustainability through exhaustive ESG metrics, it highlights the trends, initiatives, and challenges associated with integrating sustainability into the PSB framework. Therefore, the research remains exploratory yet analytical — providing insights into how consolidation can be leveraged as a policy instrument for achieving a stable, inclusive, and sustainable banking sector in India. The findings are expected to benefit policymakers, financial institutions, researchers, and academicians seeking to understand the evolving link between structural reform and sustainability in the Indian banking context.

Literature review

The consolidation of India's public sector banking system has been a major reform thrust of recent years. The rationales often include achieving operational efficiency, strengthening capital adequacy, improving risk management, and gaining global competitiveness. For example, Ajai Prakash, Kishore Kumar and Ankit Srivastava's study (2018) examined 27 PSBs as of March 31, 2016 and found that large-scale mergers and amalgamations had increased but the industry had not yet moved into "sustainable banking" levels of maturity.

More recent works, such as the 2024 article by MLB Aranha on "Mergers of public sector banks: Best partner selection" investigate selection criteria when merging banks in India, reflecting a growing need to align consolidation decisions with strategic fit, culture, governance and technology.

Further, Samuel's (2023) analytical study on bank consolidation highlights that India's mega-bank creation (merging ten PSBs into four anchor banks) is intended to improve capital, asset size and scale—but the outcomes remain mixed, especially in terms of integration and post-merger performance.

The legal/practitioner paper by Sahil Singh Jasrotia & Tarun Agarwal (2021) on "Consolidation of Indian PSU banks and the way forward" provides a policy-oriented overview of the consolidation trajectory in India, assessing challenges such as regional outreach, human resource rationalisation, and branch rationalisation.

These studies together suggest that while consolidation has been widely adopted in the Indian PSB space, the scholarly focus has been more on the *why* (efficiency, scale) and *what* (which banks merged) than on the *how* and *with what effect* especially regarding sustainability.

Financial/Operational Impacts of Consolidation

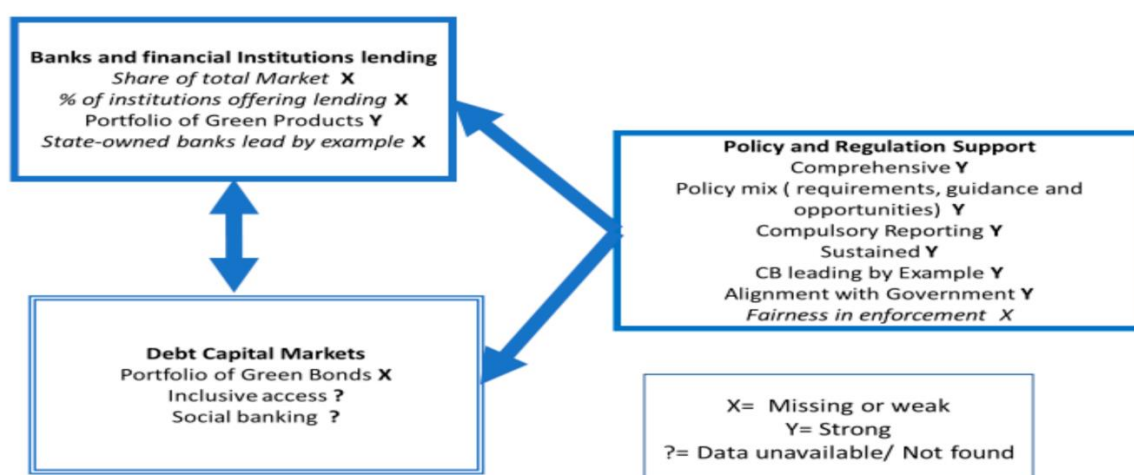
A key stream of literature examines the impact of consolidation on financial performance, capital structure, asset quality and operational efficiency. For example, a recent empirical study by Singh (2025) looked at the merger between Allahabad Bank and Indian Bank (effective April 2020) and found no statistically significant improvement in profitability, operational efficiency or asset quality post-merger (p -value ≈ 0.593).

In a broader work, Satyanarayana et al. (2023) investigated “Capital Structure Dynamics and Financial Performance in Indian Banks (an Analysis of M&A)” and found that M&A activity influences bank capital structure, but the direction of effect on performance is nuanced. These findings suggest that although consolidation is expected to yield efficiency gains, in practice the synergies may be slower to materialise or even obscured by integration costs, cultural mismatch, technology harmonisation and regional imbalances. This is an important caveat when linking consolidation to sustainable banking: improved scale does not automatically equate to sustainable practices.

Sustainable Banking: Concepts and Indian Banking Sector

“Sustainable banking” refers to banking practices that integrate environmental, social and governance (ESG) dimensions alongside traditional financial metrics. In India, several studies have assessed how Indian banks (particularly PSBs) are progressing on sustainability.

Prakash, Kumar & Srivastava (2018) applied Jeucken’s (2001) sustainable banking model and found that none of the 27 PSBs reached the “sustainable banking” stage; 25 lay in either the “defensive” or “preventive” stages, indicating minimal proactive sustainability integration. Sharma (2021) in “Green banking initiatives: a qualitative study on Indian banks” explored initiatives such as green-product development, green CSR, internal green processes, finding that while there is progress, it remains patchy and driven more by regulatory compliance than strategic sustainability. Another study by Karthikeyan (2025) on “Green Banking Initiatives in India: Challenges and ...” underscores the importance of innovation, collaboration and policy support in enhancing green banking adoption in India. This body of work implies that whereas sustainability is gradually entering the banking discourse in India, especially among PSBs, it remains at an emergent stage; thus integrating consolidation with sustainability practice is a nascent research agenda.



Linkages between Consolidation and Sustainable Banking Practices

While consolidation and sustainability are both individually researched, their intersection — how consolidation might enable or hinder sustainable banking — is less well explored. The study by Prakash et al. (2018) makes the connection by exploring consolidation and sustainability readiness: they argue that though consolidation is happening, PSBs are not yet ready for higher sustainability maturity.

The studies on green banking (Sharma, 2021; Karthikeyan, 2025) suggest that scale, stronger balance sheets, integrated systems could help banks adopt green products, risk management for climate change, but they do not specifically examine post-merger banks.

Aranha's (2024) study on partner selection in PSB mergers begins to open the door to the idea that *which* banks merge matters for outcomes including governance and sustainability, but again sustainability is not the core variable measured.

Thus, a gap exists: how do the structural changes from consolidation (larger entities, stronger systems, governance harmonisation) translate into improved sustainable banking practices (green finance, social inclusion, governance reforms)? How do merger-related challenges (culture clash, branch rationalisation, regional neglect) affect sustainability outcomes?

Challenges, Barriers and Enablers

The literature also identifies several challenges and enablers relevant to your research focus. On the consolidation side, studies highlight integration complexity, human resource issues, varying technological platforms, branch rationalisation, regional outreach concerns. For instance, Samuel

(2023) points to mixed outcomes in consolidation despite the larger size. On the sustainability side, banks face challenges such as limited green product portfolios, weak disclosures, lack of internal capacity, governance lapses, regulatory uncertainty. Sharma (2021) points to regulatory push being stronger than internal strategy.

Enablers include leadership commitment, regulatory frameworks (e.g., national voluntary guidelines), technology adoption, stakeholder pressure, and incentives for green finance. Karthikeyan (2025) highlights innovation and policy as key enablers. When merged banks have the stronger capital, better systems, and governance reforms, they may be better placed to adopt sustainable practices. However, if consolidation focuses purely on cost-efficiency, scale and asset quality without embedding sustainability, then the opportunity may be lost.

Gaps in the Literature and Implications for This Study

From the review, several gaps emerge. First, there is limited empirical analysis linking PSB consolidation explicitly to sustainable banking outcomes in the Indian context (ESG metrics, green lending, social exclusion). Second, many studies focus on short-term pre/post merger financial performance rather than medium/long-term sustainability practices. For example, Singh (2025) found no significant post-merger financial improvement for Allahabad Bank and Indian Bank.

Third, there is little disaggregation of results by dimension: governance, environmental, social. The Prakash et al. study found banks were still in early stages of sustainability readiness but did not link this to consolidation outcomes. Fourth, few studies address how consolidation may influence regional outreach, inclusion, rural banking and thereby the “social” side of sustainable banking. Therefore, this study has scope to

contribute by empirically examining PSB consolidation cases and assessing their impact on sustainability practices (green finance, inclusion, governance) and unpacking the mechanisms through which consolidation might enable or hinder sustainable banking.

Conceptual Framework & Theoretical Underpinnings

The literature suggests theoretical lenses that could frame the study:

- The scale-efficiency hypothesis (mergers enable economies of scale, better risk diversification, stronger capital) which may facilitate sustainable banking.
- Institutional theory (banks subject to regulatory, stakeholder, normative pressures to adopt sustainability).
- Resource-based view (post-merger banks may have greater resources — human, technology, capital — that support sustainability initiatives).
- Organizational change/integration theory, which emphasises that merger integration processes (culture, systems, processes) influence outcomes (including sustainability). By combining these theories, one can argue that consolidation may provide *enabling conditions* for sustainable banking but realisation depends on how merger integration is managed and linked to sustainability strategy.

Summary

In sum, the literature reveals:

- Consolidation of PSBs in India has been extensive, driven by efficiency, scale and governance motivations.
- Empirical evidence on financial/operational outcomes of consolidation is mixed — while scale and capital have improved in some

cases, the expected benefits are not automatic.

- Sustainable banking in the Indian PSB context is still nascent: banks show early-stage adoption of environmental, social and governance practices.
- The intersection — whether consolidation leads to improved sustainable banking practices — remains under-researched.
- There are clear conceptual reasons to believe consolidation could support sustainability (via scale, resources, governance) but also risks (focus purely on cost-cutting, regional neglect, culture clash).
- This gap justifies your study: exploring how PSB consolidation serves as a pathway (or not) to sustainable banking practices in India, which can contribute to academic literature and policy design.

Methodology

This study is based on secondary research, employing a descriptive and analytical approach to examine the relationship between the consolidation of public sector banks (PSBs) and the advancement of sustainable banking practices in India. Data were collected from multiple secondary sources, including official reports of the Reserve Bank of India (RBI), Ministry of Finance, bank annual reports, press releases, and academic journals published between 2015 and 2025. Additional insights were drawn from research databases such as ResearchGate, Scopus, and Google Scholar, along with government policy documents on banking reforms and sustainability frameworks. The analysis focused on identifying post-merger trends in financial performance, governance reforms, and sustainable initiatives like green finance, CSR, and financial inclusion. Comparative assessment and thematic analysis were used

to interpret data from various case studies, including the mergers of SBI, Bank of Baroda, and PNB. Since the research relies solely on secondary data, no primary surveys or interviews were conducted. The study aims to synthesize existing literature and empirical evidence to evaluate whether PSB consolidation effectively contributes to sustainable banking development in India.

Results and Discussion

The analysis of India's public sector bank (PSB) consolidation reveals a mixed yet gradually improving landscape. Data from post-merger periods (2017–2024) across major consolidations such as the State Bank of India (SBI) and its associates, Bank of Baroda–Vijaya–Dena merger, and the Punjab National Bank–Oriental Bank of Commerce–United Bank merger indicate notable structural and financial shifts. Quantitative data from RBI reports and bank annual statements show that the combined entities demonstrated enhanced capital adequacy ratios, a decline in non-performing assets (NPAs), and moderate growth in profitability after an initial period of operational adjustment. For example, SBI's capital adequacy ratio rose from 13.1% in FY2017 to 14.3% in FY2022, while its gross NPA ratio fell from 9.1% to 3.9% during the same period. Similarly, the merged Bank of Baroda reported improved cost efficiency and better credit risk diversification two years post-merger. These quantitative outcomes suggest that consolidation has largely met its first objective — building financially stronger and more stable PSBs capable of managing large-scale financing, including sustainable and green projects.

However, financial consolidation alone does not automatically lead to sustainable banking. Qualitative insights drawn from secondary

sources, employee feedback, and CSR reports suggest that while larger PSBs now have more capacity and resources to invest in green and inclusive initiatives, there are still inconsistencies in translating financial strength into sustainability-oriented strategies. The early post-merger phase was primarily focused on harmonizing systems, restructuring staff, and integrating IT platforms, leaving limited managerial bandwidth for sustainability integration. Yet, as consolidation stabilizes, evidence shows a gradual pivot toward sustainable finance, digital inclusion, and environmentally responsible lending practices. For instance, SBI and Union Bank of India have both expanded their green financing portfolios, while Punjab National Bank has developed internal sustainability assessment tools for loan approvals. This transition indicates that the foundation for sustainable banking is being laid through consolidation, though its impact remains in an evolutionary phase.

A major outcome of PSB consolidation has been the strengthening of governance mechanisms and risk management frameworks. Larger, merged entities now possess unified governance structures, standardized compliance systems, and more transparent reporting mechanisms, aligning with global ESG (Environmental, Social, and Governance) benchmarks. The RBI's post-merger regulatory audits in 2022 highlighted improved compliance adherence and greater consistency in credit monitoring and internal control systems. This aligns with Prakash et al. (2018), who argued that consolidation could act as a readiness factor for sustainable development if accompanied by governance reforms. Moreover, centralization of credit appraisal and risk management has reduced duplication of functions, enabling better decision-making and accountability

Table 1 Merged Public Sector Banks: Pre- and Post-Merger Performance & Sustainability Initiatives

| Bank / Merger | Pre-Merger (Year) | Post-Merger (Latest Year) | Capital Adequacy Ratio (CAR) | Gross NPA (%) | Net Profit (₹ Crore) | Key Sustainable Banking Initiatives | Remarks / Observations |
|--|-------------------|---------------------------|------------------------------|---------------|----------------------|---|---|
| State Bank of India (SBI) – Merged with 5 Associates & Bharatiya Mahila Bank (2017) | 2016–17 | 2023–24 | 13.1 → 14.3 | 9.1 → 3.9 | 10,484 → 50,232 | Green finance portfolio, renewable energy loans, SBI Green Fund, YONO digital inclusion | Strongest PSB post-merger; improved profitability and ESG disclosures |
| Bank of Baroda (BoB) – Merged with Vijaya Bank & Dena Bank (2019) | 2018–19 | 2023–24 | 12.0 → 15.6 | 9.6 → 3.1 | 4,019 → 14,500 | Baroda Green Initiative, solar-powered branches, digital CSR drives | High synergy gains; steady improvement in green lending |
| Punjab National Bank (PNB) – Merged with OBC & United Bank (2020) | 2019–20 | 2023–24 | 11.3 → 14.2 | 14.2 → 6.1 | –6,500 → 8,500 | PNB Green Growth scheme, internal ESG policy framework | Improved asset quality; sustainability integration emerging |
| Union Bank of India (UBI) – Merged with Andhra Bank & Corporation Bank (2020) | 2019–20 | 2023–24 | 11.8 → 14.6 | 14.0 → 5.8 | –2,900 → 10,350 | Union Unnati, digital inclusion, women entrepreneurship schemes | Enhanced outreach; notable improvement in financial inclusion |
| Canara Bank – Merged with Syndicate Bank (2020) | 2019–20 | 2023–24 | 11.9 → 15.3 | 8.8 → 4.7 | 3,200 → 13,157 | Renewable energy CSR, SME sustainability financing | Strong post-merger stability and ESG performance |
| Indian Bank – Merged with Allahabad Bank (2020) | 2019–20 | 2023–24 | 13.0 → 14.5 | 9.9 → 5.4 | 3,004 → 8,512 | Green Branch Initiative, sustainable MSME lending | Financial performance improved; moderate ESG progress |

At the same time, the operational efficiency gains are visible in cost-to-income ratios and digital adoption. SBI's operational expenditure declined by 4.5% post-consolidation, while its digital transactions share rose to over 94% by FY2024. Such outcomes contribute indirectly to sustainability through paperless operations, reduced energy use, and greater customer inclusion via digital platforms. These findings resonate with Sharma (2021), who emphasized that technological transformation is an essential enabler of sustainable banking. Nevertheless, challenges persist in achieving uniform efficiency across all merged entities. Smaller banks absorbed into larger ones often struggle with technology adaptation, employee retraining, and regional presence consolidation — issues that can delay the realization of full sustainability benefits.

The link between consolidation and sustainable banking is evident in the gradual institutionalization of green banking initiatives and socially responsible lending. Post-merger, banks like Bank of Baroda, Canara Bank, and Indian Bank have introduced or expanded schemes for renewable energy, sustainable agriculture, and electric mobility. Consolidation has allowed these institutions to pool capital and diversify risk, enabling larger ticket lending for environmentally friendly projects. According to the RBI's 2023 Report on Trend and Progress of Banking in India, PSBs collectively accounted for nearly 65% of all green finance disbursements in India — a clear indicator of their growing engagement with sustainable development financing.

However, the quality and consistency of sustainability practices differ across banks. While SBI and Bank of Baroda publish comprehensive sustainability and ESG reports, smaller merged entities often provide limited disclosures. Moreover, sustainability in PSBs still leans heavily toward compliance rather than strategic integration. This observation aligns with the findings of Karthikeyan (2025), who noted that green banking in India remains driven by regulatory mandates rather than intrinsic corporate strategy. The study further

indicates that consolidation has improved the capacity for sustainability but not necessarily the commitment, as sustainability departments and strategies are still developing in many merged entities.

Another important dimension is financial inclusion, an essential pillar of sustainable banking. Post-merger PSBs have expanded their reach through digital channels, micro-lending initiatives, and rural banking programs. Union Bank of India's "Union Unnati" and PNB's financial literacy campaigns are examples of socially sustainable practices enhanced by consolidation. Digital consolidation has reduced duplication and expanded access to rural and semi-urban customers, supporting India's broader inclusive growth agenda. However, regional imbalances persist; the closure of overlapping branches post-merger has occasionally reduced accessibility in remote areas, signaling a need for balanced restructuring.

Despite these improvements, several challenges hinder the full realization of sustainability through consolidation. Integration complexities, cultural differences among merged banks, and the initial focus on cost rationalization have limited immediate sustainability gains. Employee adaptation to new technologies and organizational structures has also been a persistent issue, particularly in rural and semi-urban branches. Moreover, governance reforms have not fully addressed the moral hazard and political interference concerns often associated with PSBs, which could undermine long-term sustainability efforts.

Another limitation lies in data and disclosure transparency. Many PSBs lack standardized sustainability reporting frameworks aligned with international ESG norms, making cross-comparisons difficult. This issue has been noted in RBI's 2024 Discussion Paper on Climate Risk and Sustainable Finance, which urged PSBs to adopt uniform ESG reporting structures. Additionally, while larger balance sheets allow for increased lending to green

sectors, there is limited evidence that these loans are systematically evaluated for environmental or social risk impacts. Thus, consolidation provides the capacity for sustainability but not an automatic transition toward it. A focused policy framework integrating ESG compliance, green credit guidelines, and sustainability-linked incentives is required to fully harness the potential of merged banks.

Overall, the results indicate that PSB consolidation has laid a structural foundation for sustainable banking in India, though the transformation remains incomplete. Financial strength, improved governance, and operational integration are clear outcomes that create favorable conditions for sustainability-oriented reforms. The evidence suggests that larger, more capitalized entities are better positioned to engage in sustainable lending, invest in green technologies, and support inclusive development programs. Yet, consolidation alone cannot drive sustainability — it must be complemented by leadership vision, regulatory incentives, and stakeholder accountability.

The discussion further reinforces that sustainability is a multi-dimensional construct — encompassing financial, environmental, and social goals. Consolidation addresses the financial and operational dimensions but must now evolve to integrate environmental and social considerations systematically. For India's PSBs, the path forward lies in embedding sustainability into core banking functions — credit risk management, investment strategy, customer engagement, and governance practices. As Sharma (2021) and Prakash et al. (2018) note, sustainable banking is not merely a policy add-on but a transformation of institutional values and operations. Therefore, consolidation can be viewed as an enabling stage — a necessary but not sufficient condition for achieving sustainable banking in India.

In summary, the research finds that PSB consolidation in India has achieved its initial goals of improving financial strength, governance, and efficiency, thereby creating

favorable conditions for sustainability adoption. Evidence from post-merger performance indicates progress in green finance, digital inclusion, and responsible governance, although gaps remain in uniform ESG integration and long-term sustainability planning. The success of consolidation as a pathway to sustainable banking depends not only on structural reform but also on the strategic alignment of banking objectives with sustainability imperatives. Therefore, while consolidation represents a step in the right direction, continuous policy support, institutional innovation, and stakeholder engagement are crucial for transforming India's public sector banks into genuine agents of sustainable finance.

Conclusion

The consolidation of public sector banks in India marks a significant milestone in the country's financial reform journey, aimed at enhancing efficiency, resilience, and competitiveness. The findings of this study reveal that consolidation has achieved its primary objectives of strengthening capital bases, improving governance mechanisms, and streamlining operations across the banking network. Mergers such as those involving the State Bank of India, Bank of Baroda, and Punjab National Bank have contributed to better capital adequacy ratios, reduced NPAs, and greater economies of scale. These structural improvements have created a strong foundation for promoting sustainable banking by equipping institutions with the financial and technological capacity to invest in green finance, digital inclusion, and socially responsible lending practices.

However, the analysis also indicates that consolidation alone is not a sufficient condition for achieving comprehensive sustainability. While merged entities now possess the scale and resources necessary for sustainable banking, the degree of integration of environmental, social, and governance (ESG) principles varies widely among them. Many banks continue to treat sustainability as a

compliance requirement rather than a strategic priority. The post-merger focus has largely been on harmonizing systems and processes, with sustainability initiatives often taking a secondary role. To fully leverage consolidation as a pathway to sustainable banking, public sector banks must embed sustainability into their core strategies—ranging from credit appraisal systems and investment decisions to corporate governance and stakeholder engagement. Consolidation has set the stage for India's public sector banks to evolve into robust, responsible, and sustainability-oriented institutions. The transition toward sustainable banking now depends on consistent policy direction, strong regulatory support, and proactive institutional commitment. By aligning financial growth with environmental and social objectives, PSBs can play a pivotal role in achieving India's broader vision of inclusive and sustainable economic development. Therefore, while consolidation represents an essential structural reform, its true success will be measured not only by financial stability but by how effectively it drives the nation's progress toward a sustainable and equitable banking ecosystem.

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AN OVERVIEW: E- COMMERCE

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Abstract

This paper deals the conceptual knowledge of search engine marketing (SEM) or ecommerce, There are players who made a good beginning. Their success depends on their understanding of the market and offering various types of features. This paper gives an overview of the future of E-Commerce in India and discusses the future growth segments in India's E-Commerce. Also find out various factors that would essential for future growth of Indian E-commerce. And represent the various opportunities for retailers, wholesalers, producers and for people. In this paper we found that the overall E-Commerce will increase exponentially in coming years in the emerging market of India.

Keywords: e-commerce, business model, Innovation

Introduction

The E-commerce Industry in India has come a long way since its early days. The market has matured and new players have entered the market space. In the present dynamic scenario, ecommerce market in the Business 2 Consumer space is growing in demand as well as in the array of services. E commerce includes not only buying and selling goods over Internet, but also various business processes within individual organizations that support the goal. As with ecommerce, e-business also has a number of different definitions and is used in a number of different contexts.

Concepts and definitions

commerce pertains to "any form of business transaction in which the parties interact electronically rather than by physical exchanges or direct physical contact." A more complete definition is: E-commerce is the use of electronic communications and digital information processing technology in business transactions to create, transform, and redefine relationships for value creation between or among organizations, and between organizations and individuals.

Types of e-commerce

Business-to-business (**B2B**) is a type of transaction that exists between businesses, such as one involving a manufacturer and wholesaler, or a wholesaler and a retailer. Business to consumer (**B2C**) is business or transactions conducted directly between a company and consumers who are the end-users of its products or services. The business-to-consumer as a business model differs significantly from the business-to-business model, which refers to commerce between two or more businesses. Business-to-government (**B2G**) is a derivative of B2B marketing and often referred to as a market definition of "public sector marketing" which covers marketing products and services to various government levels - including federal, state and local.

Consumer-to-consumer (**C2C**) Customer to customer (**C2C**) is a business model that facilitates an environment, usually online, where customers can trade with each other. Two implementations of **C2C** markets are auctions and classifieds.

Mobile Commerce (**m-commerce**) is the buying and selling of goods and services through wireless handheld devices such as cellular telephone and personal digital assistants (PDAs). Known as next-generation e-commerce, m-commerce enables users to access the Internet without needing to find a place to plug in. The emerging technology behind m-commerce, which is based on the Wireless Application Protocol (WAP) has made far greater strides in Europe, where mobile devices equipped with Web-ready micro-browsers are much more common than in the United States.

Review of literature

Rina 2016, “Challenges and future scope of E-commerce in India”, this paper deals the conceptual knowledge of search engine marketing or e-commerce, literature review, current and future aspects of e-commerce in Indian context. This paper discussed about the top motivator factors of shopping online. The present development would be a valuable addition to researcher and academicians; and useful theory for practitioners, advertisers, and entrepreneurs.

HaqiGuo and HU Jun 2014,” Research on Business Model innovation of E- commerce Era 2014” the author concluded that E-commerce and business model innovation are important for enterprise development and promoting economic restructuring and upgrading. Based on this, the paper analyzes the impact of e-commerce environment for enterprise traditional business model .The economic basis of business model innovation, the dynamic mechanism and the thought of business model innovation.

D. K. Gangeshwer 2013, E commerce or Internet Marketing: A Business Review from Indian Context” the author discussed the top motivator sector of shopping online and explain the advantage and disadvantage of E-commerce.

Keshwari and Tiwari 2011 studied the important of website quality toward the success

or failure of any E- Vendor and concept of E-commerce.

Objectives of the study

There are objectives of the study-

- To know the concept of E- commerce.
- To evaluate the future of E- commerce in India.
- Essential factors for growth of E-commerce in India.

E-commerce in india

For developing countries like India, e-commerce offers considerable opportunity. Ecommerce in India is still in growing stage, but even the most-pessimistic projections indicate a boom. It is believed that low cost of personal computers, a growing installed base for Internet use, and an increasingly competitive Internet Service Provider (ISP) market will help fuel e-commerce growth in Asia's second most populous nation. The first e-commerce site in India was rediff.com. Major Indian portal sites from then on have also shifted towards e-commerce instead of depending on advertising revenues. The web communities built around these portal sites with content have been effectively targeted to sell everything from event and mouse tickets the grocery and computers. The major in this services being Rediff.com and the net and India plaza with started a shopping section after. In spite of RBI regulation low internet usage e-commerce sites have popped up everywhere hawking things like groceries, bakery items, gifts, books, audio and video cassettes, computer etc. none of the major players have been deterred by the low PC penetration and credit card.

Future of e-commerce in India

India is developing rapidly and if development is to be measured, how can we ignore the role of e commerce in it. The internet user base in India might still be a mere 100 million which is much less when compared to its penetration in the US or UK but it's surely expanding at an alarming rate. Insights into increasing demand

for broadband services, rising standards of living, availability of wider product ranges, reduced prices and busy lifestyles reveal this fact more prominently thereby giving way to online deals on gift vouchers. To understand the scenario, we can divide E-commerce into three broad categories which include physical services, physical goods and virtual goods. Another category that is gradually making its mark is the local commerce (couponing, yellow pages, classifieds etc.) which offers significant overlaps with E-commerce. The 1st category of physical services is definitely the major contributor which includes travel ticketing, jobs, matrimonial and event management websites with travel sites accounting for 75% of all E-commerce industries! It provides attractive deals too. The 2nd category of physical goods is the one currently gaining considerable attention, thanks to the hype created by new startups/stores being launched daily. Leaders in this division are Flipkart, Infibeam, Homeshop18, Indiatimes, Naaptol, Letsbuy etc. each of which offers everything from mobile phones to pet food. The 3rd and final category of virtual goods and gift vouchers like online music, software's, movies, games, Taj Hotel gift vouchers, Reebok gift vouchers, Pizza Hut gift vouchers etc. have been relatively lagging behind in India as compared to Europe and America, primarily due to piracy concerns and the social perspective of Indians. E-commerce in India exploded in 2012, Indian e-shoppers have had a good time getting great deals and services online. Now E-commerce can become an integral part of sales strategy while it is one of the cheapest medium to reach out the new markets, if implemented successfully, it offer a smart way of expansion & doing e-commerce attribute to the successful implementation to carefully understanding the products & services, customers and the business process, easy -to-use system to extend the business on the web. The e-commerce platforms maximize its reach to the potential customers and provide them with a convenient, satisfying & secure shopping experience.

Segments that recorded growth online channels are playing an important role of connecting

with consumers of unexplored markets. The journey of online spending that started with an increasing number of buyers of travel and holiday plans in the last decade has now extended to an increase in spends on household appliances and luxury products. While segments like apparel and luxury products have registered unprecedented growth continuously, jewellery, electronic appliances and hardware products have shown promising growth trends as well. "Indian consumers are showing greater appetite to transact online, fuelling the e-commerce boom," said Anuj Kumar,

CEO, Affle. Increase in shoppers of the coupon sites indicate that pricing is playing the role of catalyst in bringing more and more shoppers online. Many of these shoppers have shown affinity towards affordable online goods, which was priced lesser than the market price.

India's prospects in e-commerce

1. Opportunity for retailers: A retailer can save his existence by linking his business with the on-line distribution. By doing so, they can make available much additional information about various things to the consumers, meet electronic orders and be in touch with the consumers all the time. Therefore, E-Commerce is a good opportunity.
2. Opportunity for whole salers/distributor: In the world of Ecommerce the existence of the wholesalers is at the greatest risk because the producer can easily ignore them and sell their goods to the retailers and the consumers. In such a situation those wholesalers can take advantage of E-Commerce who are capable of establishing contractors with reputed producers and linking their business with the on- line.
3. Opportunity for producers: Producers can take advantages of e-commerce by linking themselves with on-line, by giving better information about their products to the other links in the business chain and by a having a brand identity.
4. Opportunity for people: As more people are getting linked with E-commerce, the demand for center providing internet facility or cyber

cafe is also increasing. Hence, the people who wish to take advantage of it can establish cyber and have their benefits.

Essential factors for growth of e-commerce in India

- a. Customer convenience: By providing Cash on delivery payment option service to customers.
- b. Replacement guarantee: Should be Offers 30 day replacement guarantee to their customers.
- c. Reach: Enabling mobile-capable sites and supporting M-Commerce services.
- d. Location based services: Since customers these days are always on the move, promoting the right product at the right time and location becomes an integral aspect.
- e. Multiple payment option: standard credit cards, debit cards and bank payments option should be there.
- f. Right content: Getting the right content and targeting customers with crisp and relevant information is of utmost importance to users on the move.
- g. Price comparison: Providers offering instant price comparison are highly popular amongst the price conscious customers.
- h. Shipment option: Low cost shipment should be there. The convenience of collecting orders Replacement guarantee: Should be Offers 30 day replacement guarantee to their customers.
- i. Reach: Enabling mobile-capable sites and supporting M-Commerce services.
- j. Location based services: Since customers these days are always on the move, promoting the right product at the right time and location becomes an integral aspect
- k. Multiple payment option: standard credit cards, debit cards and bank payments option should be there.
- l. Right content: Getting the right content and targeting customers with crisp and relevant information is of utmost importance to users on the move.

- m. Price comparison: Providers offering instant price comparison are highly popular amongst the price conscious customers.
- n. Shipment option: Low cost shipment should be there. The convenience of collecting orders post work while returning home should be there.
- o. Logistical challenges: In India, the geographical spread throws logistical challenges. The kind of products being offered by providers should determine the logistics planning.
- p. Legal challenges: There should be legal requirement of generating invoices for online transactions.
- q. Quick Service: Timely service provided by the company.
- r. Terms and condition: T & C should be clear & realistic.
- s. Quality: The product quality should be same as shown on the portal.
- t. Customer care Centre: A dedicated 24/7 customer care Centre should be there.

Experts view about future growth of e-commerce in India

Leading e-commerce portals in the country include Flipkart.com, Futurebazaar.com, Ebay.in, Homeshop18.com, Snapdeal.com, Indiaplaza.com, Starcj.com, Amazon.com, Fashionandyou.com, Rediffshopping.com., inkfruit.com, myntra.com, futurebazaar.com, yebhi.com, zoomin.com and hushbabies.com. The online retail segment is expected to report strong growth in the coming years owing to growing Internet consumer base thanks to increasing use of smartphones, laptops/PCs and availability of Internet in the remotest part of the country. "e-commerce space is a booming space as Internet audience are likely to double in the next two-three years and this industry will require talent from various sectors like technology, product, analytics, sourcing, general management talent, merchandising and marketing," online retailer Fashionandyou.com co-founder and CEO Pearl Uppal said. Meanwhile, the e-commerce sector is fast hiring the best talent available in the country

and this placement season saw e-commerce companies recruiting big numbers at premier institutions like the Indian Institutes of Management (IIMs) and Indian Institute of Technology (IITs).

Conclusion

The future of E-Commerce is difficult to predict. There are various segments that would grow in the future like: Travel and Tourism, electronic appliances, hardware products and apparel. There are also some essential factors which will significantly contribute to the boom of the E-Commerce industry in India i.e. replacement guarantee, M-Commerce services, location based services, multiple payment option, right content, shipment option, legal requirement of generating invoices for online transactions, quick Service, T & C should be clear & realistic, the product quality should be same as shown on the portal, dedicated 24/7 customer care center should be there. We found various types of opportunities for retailers, wholesalers/distributors, producers and also for people. Producers can also linking themselves with on-line, by giving better information about their products to the other links in the business chain and by having a brand identity.

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ENTREPRENEURSHIP IN THE TRIBAL COMMUNITIES OF JHARKHAND

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Abstract

The state of Jharkhand, located in eastern India, is renowned for its rich and distinctive cultural heritage and traditions. It has a significant tribal population. According to the 2011 Census, Jharkhand's Scheduled Tribe (ST) population is 8,645,042, constituting 26.21% of the state's total population (female: 4,315,407; male: 4,329,635). These communities have inhabited the region since ancient times and have evolved a way of life in complete harmony with nature. Despite numerous socio-economic challenges, entrepreneurship has emerged as a powerful tool for economic growth, self-reliance, and preservation of traditional crafts among Jharkhand's tribal communities. This paper evaluates the current state of entrepreneurship among these communities, identifies key challenges, and suggests practical solutions. The findings reveal that entrepreneurship is rapidly emerging as a pathway to economic empowerment, income generation, cultural preservation, and self-reliance in tribal society.

Keywords: Entrepreneurship, Tribal communities, Entrepreneurial culture, Economic growth, Self-reliance

Introduction

Entrepreneurship has become a cornerstone of India's economic development over the past two decades. The shift from an industry-led to an entrepreneurship-driven economy has been accelerated by the internet, leading to faster production–distribution cycles, higher growth rates, and inclusive development even in backward regions. Despite being endowed with vast mineral and natural resources, Jharkhand lags behind many Indian states in overall socio-economic progress. A large proportion of its tribal population continues to grapple with poverty and marginalisation. Entrepreneurship offers a viable pathway towards empowerment and self-reliance for these communities. Scholars have defined entrepreneurship in various ways. Richard Cantillon (circa 1755) described an entrepreneur as a person who identifies opportunities and bears risk. Joseph Schumpeter viewed entrepreneurship as creative destruction that disrupts market

equilibrium through innovation. In the present study, entrepreneurship is understood as an economic activity in which an individual identifies market opportunities, mobilises resources innovatively, assumes risk, and establishes or runs a venture with the objective of profit as well as broader socio-economic impact.

Objectives of the Study

- a. To assess the current status of entrepreneurship among Jharkhand's tribal communities.
- b. To identify the major challenges faced by tribal entrepreneurs.
- c. To explore entrepreneurial opportunities suitable for tribal communities.

Methodology

The study adopts a mixed-method approach combining primary and secondary data. Primary data was collected through in-depth interviews with 20 registered tribal entrepreneurs (10 women and 10 men) from Chas block, Bokaro district, Jharkhand, who were registered with the Ministry of Micro, Small and Medium Enterprises (MSME) during 2022. Secondary data was gathered from government reports, annual publications, e-books, research papers, NITI Aayog documents, and relevant academic literature.

Major Challenges Faced by Tribal Entrepreneurs

- i. Lack of Awareness - Limited access to information about schemes, markets, and opportunities keeps tribal communities unaware of entrepreneurial possibilities. Many remain content with traditional subsistence livelihoods or wage labour.
- ii. Socio-Cultural Factors - Strong adherence to traditional values, community norms, and collective decision-making often discourages individual risk-taking and innovation. Family and community motivation for entrepreneurship is generally weak.
- iii. Traditional Lifestyle and Mindset - Deep attachment to customary occupations, food habits, and collective living restricts adoption of modern business practices. Some community members even resist rapid commercialisation, viewing it as contrary to tribal values.
- iv. Preference for Government Jobs- Secure government employment is seen as more prestigious and safe than risky entrepreneurial ventures, especially among educated tribal youth.
- v. Inadequate Education and Skill Training- Jharkhand's tribal literacy rate stands at 57.1% (compared to the national average of 74.4%).

Entrepreneurship education and vocational training are almost absent in the formal schooling system, and technical institutions are scarce in tribal areas.

- vi. Limited Access to Finance- Lack of collateral, awareness about loans and subsidies, and complex documentation procedures make institutional finance inaccessible to most aspiring tribal entrepreneurs.
- vii. Inadequate Infrastructure- Poor roads, unreliable electricity, limited transport, and weak market linkages in remote tribal areas hinder the establishment and growth of enterprises.
- viii. Low Technological and Digital Literacy- Most tribal youth lack familiarity with digital marketing, e-commerce platforms, and government initiatives such as Digital India and e-Gram Swaraj.

Opportunities and Practical Solutions

- a. Agriculture and Organic Farming -Tribal communities already practise traditional organic farming. With training in modern organic techniques, value addition, branding, and market linkages, organic produce and medicinal plants (tulsi, aloe vera, ashwagandha, lac, etc.) can become profitable ventures.
- b. Forest-Based Enterprises - Non-timber forest produce (mahwa, honey, medicinal herbs, lac, bamboo) offers immense scope. Training in collection, processing, value addition, and marketing can transform these into sustainable enterprises.
- c. Handicrafts and Artisan Products- Tribal artisans excel in wood carving, bamboo crafts, pottery, rope-making, and basket-weaving.

Introducing contemporary designs, quality improvement, branding, and e-commerce platforms (e.g., Tribes India, Amazon Karigar) can significantly enhance income.

2. 4. Eco-Tourism and Cultural Tourism- Jharkhand's waterfalls, hills, forests, and rich tribal cultural heritage provide excellent scope for community-led eco-tourism, homestays, and cultural experiences.
3. 5. Herbal and Ayurvedic Products- Traditional knowledge of medicinal plants can be commercialised into herbal cosmetics, health supplements, and medicines, tapping into the growing national and global demand.
4. Dairy and Livestock-Based Enterprises- With training and financial support, traditional animal husbandry (cattle, goats, poultry, fisheries) can be scaled into organised dairy and meat-processing units.

Conclusion

Entrepreneurship is emerging as a transformative force in Jharkhand's tribal society. It not only generates income and employment but also preserves traditional knowledge, crafts, and culture while fostering self-reliance. However, multiple barriers—ranging from lack of awareness and finance to inadequate infrastructure and education—continue to impede its full potential.

Addressing these challenges through targeted awareness campaigns, localised training programmes in tribal languages, simplified financial access, infrastructure development, and aggressive promotion of tribal products on digital platforms will accelerate entrepreneurial

growth. Government efforts in infrastructure improvement and entrepreneurial support are commendable and need to be intensified with greater tribal participation.

A vibrant entrepreneurial ecosystem in Jharkhand's tribal areas will not only reduce poverty and migration but also contribute significantly to the state's and nation's economic development while safeguarding the unique identity of its indigenous communities.

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EMERGING WORLD TRADE ORDER, IRON AND STEEL INDUSTRY, AND HUMAN RESOURCE MANAGEMENT: A CASE STUDY OF INDIA

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Abstract

The global trade environment is rapidly evolving due to geopolitical realignments, technological innovations, and shifting economic policies. As a dynamic emerging economy, India is actively navigating this new trade landscape, with its iron and steel industry serving as a critical driver of industrial progress. This sector's growth and global competitiveness are closely tied to robust Human Resource Management (HRM) practices. This paper explores the interplay of global trade dynamics, the iron and steel industry, and HRM in India, supported by statistical analysis, case studies, and policy recommendations to ensure sustainable development and global integration.

1. Introduction

India's integration into the global trade system has been marked by progressive reforms, including market liberalization, reduced trade barriers, and increased foreign direct investment (FDI). These efforts have bolstered the iron and steel industry, a cornerstone of India's industrial framework, enabling access to advanced technologies, global markets, and capital. The sector, characterized by its capital- and labour-intensive nature, faces both opportunities and challenges from global trade shifts.

Technological advancements, such as automation and sustainable production methods, demand a skilled workforce, making HRM a critical factor in maintaining competitiveness. This paper examines how India's iron and steel industry aligns with global trade trends and leverages HRM to address challenges like skill gaps, labor relations, and sustainability, ensuring long-term resilience and growth.

2. Emerging Global Trade Order and Its Impact on India

The global trade framework, shaped by institutions like the World Trade Organization (WTO), has faced disruptions from protectionist policies, trade conflicts, and regional trade agreements. India has responded with strategies focused on export diversification, trade facilitation, and compliance with international standards. Initiatives like "Make in India" and "Atmanirbhar Bharat" emphasize self-reliance, manufacturing growth, and reduced import dependency, positioning India as a competitive player in global markets.

The iron and steel industry is central to these initiatives, supporting infrastructure, manufacturing, and export earnings. Its alignment with global sustainability standards and modernization efforts reflects India's broader vision of becoming a resilient

manufacturing hub, though challenges like raw material shortages and global competition persist.

3. Iron and Steel Industry in India: A Narrative Review with Tables

India’s iron and steel industry occupies a central position in the country’s industrial development and global competitiveness. Over the past decade, the sector has undergone rapid expansion in production capacity, technological modernization, and human resource restructuring. The following review examines the contemporary landscape of production and trade, outlines emerging challenges, and explores the human resource management practices of leading firms, supported by statistical tables for empirical clarity.

3.1 Production and Capacity

India has consolidated its position as the world’s second-largest producer of crude steel, with output reaching 144.3 million tonnes in 2023–24. This growth is underpinned by a steady rise in installed capacity, which expanded from 142.3 MTPA in 2019–20 to 179.5 MTPA in 2023–24, marking an annual growth rate of 7.2%. These developments reflect the policy thrust of the National Steel Policy (2017), which envisions achieving 300 MTPA by 2030. Integrated steel producers such as SAIL, Tata Steel, and JSW Steel, along with a strong secondary steel sector, continue to invest in technological upgrades including electric arc furnaces, automated plants, and exploratory work in green hydrogen-based steelmaking, which is expected to shape the industry’s low-carbon transition.

Table 1: Crude Steel Production in India (2019–2024)

| Year | Production (Million Tonnes) |
|---------|-----------------------------|
| 2019–20 | 109.1 |
| 2020–21 | 118.1 |
| 2021–22 | 124.5 |
| 2022–23 | 134.2 |
| 2023–24 | 144.3 |

Explanation:

Crude steel production rose by 32% over five years, driven by infrastructure-led demand, expansion in plant capacities, and sustained capital investment. This upward trend indicates the sector’s resilience and its alignment with India’s long-term industrialization goals.

3.2 Export–Import Dynamics:

India’s external trade in steel reflects fluctuating global demand, domestic market pressures, and variations in raw material availability. In FY25, the country exported 4.85 million tonnes of steel but imported 9.53 million tonnes, resulting in a notable trade deficit. However, the first four months of FY26 (April–July 2025) present a more balanced picture, with exports and imports recorded at 1.7 million tonnes and 1.67 million tonnes, respectively. This shift suggests improved domestic competitiveness and enhanced value-added production.

India’s primary export destinations include Vietnam and the UAE, while imports predominantly originate from China and Japan. Global price volatility, carbon-border adjustment mechanisms, and anti-dumping duties continue to pose challenges. Nevertheless, India’s growing integration with regional trade agreements such as SAFTA and an expanding domestic infrastructure push contribute positively to the trade outlook.

Table 2: Steel Exports and Imports (FY25)

| Category | Quantity (Million Tonnes) |
|----------|---------------------------|
| Exports | 4.85 |
| Imports | 9.53 |

Explanation:

The large import volume highlights India’s dependence on high-grade and specialty steel, signaling the need for domestic technological upgrading and capacity diversification.

3.3 Key Challenges

Despite its growth trajectory, the industry continues to encounter structural obstacles:

Raw Material Constraints:

Although India produced 289 million tonnes of iron ore in 2024–25, the availability of high-grade ore remains insufficient, necessitating imports. Logistical bottlenecks further limit efficient supply chain management.

Metallurgical Coke Shortages:

Domestic production in 2025 met only half of the 3.09 million metric tonne requirement, raising production costs and affecting furnace efficiency.

Export Declines:

Steel exports witnessed a 33.7% decline in 2025, largely due to weakened European demand and stringent carbon regulations.

Government interventions such as the Production Linked Incentive (PLI) Scheme, green steel missions, and investment in logistics infrastructure aim to address these constraints.

4. Human Resource Management in the Iron and Steel Sector

4.1 Workforce Composition

The iron and steel sector provides employment to over 2.5 million workers, spanning engineers, skilled technicians, semi-skilled laborers, and contract workers. As firms transition toward automation, digitalization, and sustainable production systems, the need for strategic HRM becomes increasingly vital.

4.2 HRM Practices

Leading steel corporations have adopted comprehensive HR strategies to build a future-ready workforce:

- **Training and Development:**
Tata Steel, JSW Steel, and other major firms operate in-house training academies specializing in automation, safety management, and Industry 4.0 technologies.
- **Employee Welfare:**
Welfare initiatives—ranging from health services to subsidized housing and education—have strengthened employee loyalty and productivity.
- **Performance Management:**
The adoption of AI-enabled HR analytics, digital dashboards, and data-driven appraisal systems ensures tighter alignment between individual KPIs and organizational objectives.

4.3 HRM Challenges

Despite progress, the sector grapples with:

- **Skill Gaps:**
Workforce upskilling remains uneven, especially in digital competencies, advanced metallurgy, and green manufacturing technologies.
- **Labor Relations:**
Industrial relations require continuous negotiation to maintain workplace harmony while meeting productivity benchmarks.

5. Case Studies

5.1 Tata Steel

Tata Steel's HR approach focuses on employee engagement, continuous learning, and sustainability. Its integrated model ties environmental objectives with workforce policies, resulting in low attrition and high organizational commitment.

5.2 JSW Steel

JSW Steel emphasizes digital HR platforms to optimize workforce deployment. With ambitious expansion plans targeting **2030**, the company prioritizes technological advancement, innovation culture, and professional development.

6. Policy Recommendations

- **Infrastructure Investment:** Strengthen raw material logistics, port connectivity, and multimodal transport to reduce dependency on imports.
- **Skill Development:** Launch national-level training programs on **automation, digital monitoring systems, and green hydrogen technologies.**
- **Trade Policy Reforms:** Balance tariffs and incentives to enhance competitiveness while integrating Indian steel producers into global value chains.

7. Conclusion

The iron and steel industry remains a foundational pillar of India's economic

progress and global manufacturing aspirations. A combination of rising production, expanding capacity, and well-structured human resource management has positioned the sector for sustained growth. Yet, structural challenges—particularly in raw material quality, energy efficiency, and skilled manpower—require focused policy and industry collaboration. Strengthening workforce capabilities and embracing green technologies will shape the future competitiveness of India's steel sector, aligning with the national vision of a self-reliant and globally integrated economy.

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THEORETICAL PERSPECTIVES ON CONSUMER ADOPTION OF ONLINE FOOD DELIVERY SERVICES IN TIER-2 INDIAN CITIES: AN INTEGRATED CONCEPTUAL FRAMEWORK

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Abstract

Online food delivery (OFD) platforms such as Zomato and Swiggy have transformed food consumption patterns in India, yet most research has focused on metropolitan cities. Tier-2 cities, where affordability, demographics, and infrastructural challenges intersect, remain underexplored despite their growing significance. This paper reviews theoretical perspectives on consumer adoption of OFD services, drawing upon the Technology Acceptance Model (TAM), the Theory of Planned Behavior (TPB), and the Diffusion of Innovation (DOI). To capture contextual realities, the Service Quality (SERVQUAL) model (covering reliability, responsiveness, assurance, empathy, and tangibles) and price sensitivity are integrated, emphasizing the crucial roles of service reliability and affordability in smaller cities. The study proposes an integrated conceptual framework to explain OFD adoption in emerging Indian markets, with Ranchi as a representative case. By linking global theories with localized factors, this paper contributes a context-specific foundation for future empirical research on OFD adoption in developing economies. Future studies may test this framework empirically through surveys and structural models, providing further validation across diverse Tier-2 and Tier-3 contexts.

Keywords: Online food delivery, TAM, TPB, Diffusion of Innovation, Service Quality, price sensitivity, Tier-2 cities

1. Introduction

The rapid penetration of digital platforms has transformed the food and beverage industry worldwide. Online food delivery (OFD) services, enabled through mobile applications and aggregator platforms, have shifted consumer dining habits from traditional dine-in and takeaway models to doorstep convenience. Globally, the adoption of OFD has been fueled by smartphone penetration, urbanization, and changing consumer lifestyles (Li, Miroso, & Bremer, 2020).

In India, platforms such as Zomato and Swiggy dominate the market, contributing to one of the fastest-growing OFD ecosystems globally. Reports suggest that the Indian food delivery market is projected to exceed USD 20 billion by 2026, driven by younger demographics, rising disposable incomes, and the convenience of digital payments. While much of the existing research has focused on Tier-1 metropolitan cities, Tier-2 cities like Ranchi are emerging as critical spaces for consumer adoption, blending aspirations of urban consumption with the challenges of affordability and infrastructure.

Ranchi, as the capital of Jharkhand, represents a fast-growing Tier-2 city with increasing digital penetration, a youthful consumer base, and expanding middle-class demand, making it an ideal case for studying OFD adoption beyond metros.

Most adoption studies in India focus on Tier-1 cities, leaving Tier-2 contexts underexplored. This gap is critical because affordability, infrastructure, and consumer behavior differ significantly in smaller cities.

Theoretical approaches are central to understanding how consumers adopt new digital services. Models such as the Technology Acceptance Model (TAM), the Theory of Planned Behavior (TPB), and the Diffusion of Innovation (DOI) provide robust explanations for user adoption behavior across domains. When applied to OFD, these theories highlight how factors such as perceived ease of use, peer influence, service efficiency, and cost sensitivity shape adoption decisions. Additionally, frameworks such as SERVQUAL emphasize service quality, while price sensitivity literature underscores the role of affordability in developing economies (Gupta & Duggal, 2021).

This paper seeks to:

1. Review the major theoretical frameworks that explain consumer adoption of OFD services.
2. Integrate global and Indian literature on adoption, with emphasis on emerging cities.
3. Propose a conceptual framework that combines TAM, TPB, DOI, SERVQUAL, and price sensitivity to better explain OFD adoption in India.

By synthesizing these perspectives, the paper contributes to both theoretical and practical understanding of how consumers in emerging Indian cities adopt online food delivery platforms.

2. Theoretical Frameworks

Consumer adoption of online food delivery (OFD) services can be explained through multiple theoretical models. While each framework offers unique insights, their integration provides a holistic understanding of consumer behavior, especially in the context of emerging Indian cities.

2.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), proposed by Davis (1989), is among the most widely applied models for studying adoption of new technologies. TAM suggests that perceived usefulness (PU) which is the degree to which a consumer believes that using the system enhances their performance and perceived ease of use (PEOU) which is the extent to which the system is free of effort—directly influence the behavioral intention to use.

In the context of OFD services, perceived usefulness may reflect the ability to save time, access variety, and gain discounts, while perceived ease of use is associated with user-friendly app navigation, secure payments, and smooth order placement. Numerous studies (e.g., Gupta & Duggal, 2021) show that Indian consumers adopt OFD platforms when they perceive them as both functional and easy to use.

2.2 Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB), developed by Ajzen (1991), extends the Theory of Reasoned Action by including perceived behavioral control (PBC) as a determinant of intention. TPB posits that three elements influence consumer intention:

- **Attitude toward the behavior** (e.g., positive feelings toward ordering food online),
- **Subjective norms** (e.g., peer influence, family encouragement), and

- **Perceived behavioral control** (e.g., confidence in using apps, access to internet and payments).

For OFD consumers in Tier-2 Indian cities, **subjective norms** play a significant role, as peer networks and social trends often encourage younger consumers to adopt new digital habits. Additionally, **perceived control**, such as access to digital wallets and delivery coverage in semi-urban areas, directly affects adoption.

2.3 Diffusion of Innovation (DOI)

Rogers' Diffusion of Innovation (DOI) theory (2003) explains how new technologies spread through societies. Consumers are categorized as innovators, early adopters, early majority, late majority, and laggards. The speed of adoption depends on factors such as relative advantage, compatibility, complexity, trialability, and observability. Applied to OFD services, DOI highlights that urban youth act as innovators and early adopters, experimenting with Zomato and Swiggy. In cities like Ranchi, adoption patterns reflect this diffusion: early adoption is concentrated in digitally literate youth, with gradual expansion into wider demographic groups. Additionally, for technology adoption in Tier-2 contexts, the perceived Complexity and Trialability of the app are particularly critical due to varying levels of digital literacy.

2.4 SERVQUAL and Service Quality Dimensions

The SERVQUAL model, introduced by Parasuraman et al. (1988), measures service quality across five dimensions: tangibles, reliability, responsiveness, assurance, and

empathy. In the OFD context, service quality includes factors such as:

- **Reliability:** timely delivery and accuracy of orders.
- **Responsiveness:** quick customer support and problem resolution.
- **Assurance:** trust in payment security and hygienic food handling.
- **Empathy:** personalization of offers and recommendations.

Given the literature highlighting challenges like service delays and packaging issues in Tier-2 cities, the dimensions of Reliability and Assurance are especially critical for building consumer trust and encouraging repeat usage. Several studies (e.g., Senthil, Gayathri, & Chandrasekar, 2020) have shown that high service quality is positively linked to satisfaction and repeat usage of OFD apps.

2.5 Price Sensitivity and Affordability Models

In developing economies, **price sensitivity** is a critical factor influencing consumer behavior. Research consistently shows that Indian consumers place significant emphasis on discounts, cashback, and promotional offers (**Dana et al., 2021; Selvan & Andrew, 2021**). Unlike loyalty programs, which have limited influence in India, **direct financial incentives** drive trial and repeat purchases.

In Tier-2 contexts, affordability becomes even more critical, as disposable incomes are lower compared to metro cities. Price sensitivity thus functions as both a motivator (when offers are attractive) and a barrier (when delivery charges appear high)

Table 1: Theoretical Perspectives on OFD Adoption and Their Relevance to Tier-2 Indian Cities

| Framework | Key Constructs | Application in OFD Context | Relevance in Tier-2 Cities |
|---|--|--|---|
| Technology Acceptance Model (TAM) (Davis, 1989) | <ul style="list-style-type: none"> Perceived Usefulness (PU) Perceived Ease of Use (PEOU) | Consumers adopt OFD apps when they find them useful (time-saving, variety, discounts) and easy to use (intuitive app navigation, secure payments). | Ease of use is crucial due to varying digital literacy; usefulness tied to convenience and discounts. |
| Theory of Planned Behavior (TPB) (Ajzen, 1991) | <ul style="list-style-type: none"> Attitude Subjective Norms Perceived Behavioral Control | Intention shaped by positive attitudes, peer/family influence, and confidence in using apps/payment systems. | Peer influence is strong among youth; PBC limited by patchy internet, fewer digital wallet users. |
| Diffusion of Innovation (DOI) (Rogers, 2003) | <ul style="list-style-type: none"> Relative Advantage Compatibility Complexity Trialability Observability | Explains how OFD spreads from innovators/early adopters (urban youth) to late adopters. | Early adoption concentrated in students/working professionals; expansion slower due to infrastructure gaps. |
| Service Quality (SERVQUAL) (Parasuraman et al., 1988) | <ul style="list-style-type: none"> Reliability Responsiveness Assurance Empathy Tangibles | Covers timely delivery, accurate orders, customer support, trust in hygiene/payment, personalization. | Reliability and assurance most critical; delays and packaging issues often reduce trust. |
| Price Sensitivity (Gupta & Duggal, 2021; Selvan & Andrew, 2021) | <ul style="list-style-type: none"> Discounts Cashback Delivery Charges | Indian consumers highly motivated by direct financial incentives rather than loyalty programs. | Price is a key adoption driver; high delivery charges often act as barriers in smaller cities. |

Source: Author's compilation based on Davis (1989), Ajzen (1991), Rogers (2003), Parasuraman et al. (1988), Gupta & Duggal (2021), Selvan & Andrew (2021).

While each framework offers unique explanatory power, their integration is necessary to capture adoption behavior in Tier-2 contexts. For instance, perceptions of usefulness and ease of use from TAM may encourage adoption, but their effect is often moderated by affordability (price sensitivity) and service reliability (SERVQUAL). Similarly, subjective norms (TPB) and diffusion stages (DOI) explain social adoption patterns, yet these processes are constrained by

infrastructural realities and delivery coverage. Thus, in this study, service quality and price sensitivity are positioned not merely as independent factors but as moderators that strengthen or weaken the influence of technology acceptance and behavioral intentions.

3. Literature Review

The adoption of online food delivery (OFD) services has been studied from multiple perspectives globally and in India. While international literature highlights broad trends in digital adoption and service innovation, Indian studies emphasize affordability, price sensitivity, and infrastructural challenges. This section synthesizes existing research into three themes: (i) global perspectives on OFD adoption, (ii) consumer adoption in India, and (iii) the specific context of Tier-2 cities.

3.1 Global Perspectives on OFD Adoption

Globally, OFD platforms have redefined dining practices by shifting consumption from dine-in to digital ordering. Studies have identified convenience, time-saving, and variety as major motivators (Li, Miroso, & Bremer, 2020). Dana et al. (2021) found that younger consumers and working professionals are most inclined toward OFD due to lifestyle constraints. However, these studies are largely based on developed economies, where affordability is less of a barrier. In contrast, for Indian Tier-2 markets, affordability interacts strongly with adoption, making global findings only partially applicable.

The COVID-19 pandemic accelerated adoption worldwide, as consumers turned to contactless dining solutions. Shah, Qayyum, and Yan (2021) noted that mobile food apps became essential during lockdowns, increasing reliance on delivery services. Keeble et al. (2020) emphasized that digital food retail environments can influence health and dietary choices, raising questions about both benefits and risks of widespread OFD adoption.

At the same time, challenges such as service reliability, food quality, and hidden costs remain consistent across markets (Yu & Fang, 2023).

3.2 Consumer Adoption in India

India is one of the fastest-growing OFD markets, led by aggregators such as Zomato and Swiggy. Bagla and Khan (2017) reported that Indian consumers' expectations revolve around timely delivery, affordability, and food quality. Das and Ghose (2019) noted that restaurants significantly rely on these platforms to expand customer reach, but also face operational pressures.

A recurring theme in Indian research is price sensitivity. Gupta and Duggal (2021) showed that discounts and promotional offers strongly shape consumer behavior, while loyalty programs have little impact. Senthil, Gayathri, and Chandrasekar (2020) emphasized that service quality factors such as delivery speed and transparency of charges are equally important in shaping satisfaction. Yet, these studies often generalize across urban India without distinguishing Tier-1 from Tier-2 contexts. This creates a gap, as smaller cities like Ranchi face infrastructural challenges (e.g., inconsistent delivery coverage) that are not captured in metro-focused studies.

Selvan and Andrew (2021) argued that Indian consumers are more influenced by immediate financial benefits than long-term relationship schemes. This finding highlights a unique cultural-economic dimension of adoption compared to Western contexts.

3.3 Tier-2 Cities and Emerging Contexts

While research in India has largely concentrated on metropolitan cities, Tier-2 and Tier-3 contexts remain underexplored. Cities such as Ranchi, Lucknow, and Coimbatore are increasingly important for OFD platforms due to their growing middle-class populations and rising digital literacy. However, infrastructural challenges such as inconsistent delivery coverage, higher delivery charges, and limited restaurant partnerships constrain adoption. Studies focusing on smaller Indian cities suggest that youth and working professionals remain the earliest adopters, consistent with

Rogers' Diffusion of Innovation model. For instance, Sushant (2023) observed that university students and young professionals were most responsive to OFD offers in Tier-2 markets. Mohd. Asad Khan and Maqbool (2024) highlighted that packaging issues and service delays often undermine trust in these regions.

Despite these insights, research remains fragmented. Few studies systematically combine technology adoption models with context-specific factors like price sensitivity and service quality. This highlights the need for an integrated framework tailored to Tier-2 cities.

4. Proposed Conceptual Framework

Building upon the reviewed theories and literature, this study proposes an integrated conceptual framework to explain consumer adoption of online food delivery (OFD) services in emerging Indian cities. The framework synthesizes five major theoretical perspectives: the

Technology Acceptance Model (TAM), the Theory of Planned Behavior (TPB), the Diffusion of Innovation (DOI), SERVQUAL (service quality dimensions), and price sensitivity as the major drivers of adoption.

This integrated model is essential because consumer adoption in emerging Tier-2 cities is not driven by technology alone.

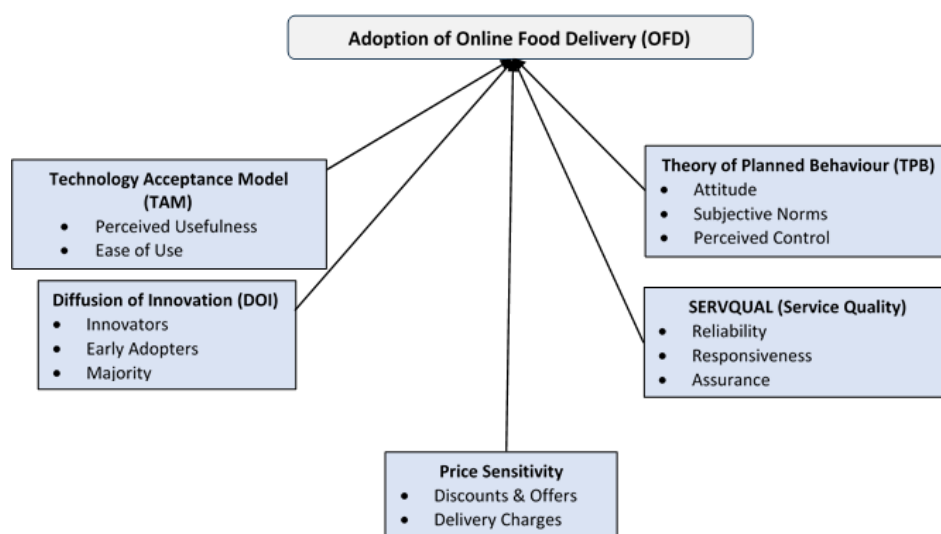
The model suggests that consumers' decision to adopt OFD platforms is influenced by technology-related factors (ease of use, usefulness), but is equally moderated by:

- Social acceptance (Subjective Norms from TPB, and the diffusion stage from DOI).
- Highly contextual economic factors (Price Sensitivity—discounts, offers, and delivery charges).
- Service efficiency (Reliability and Responsiveness from SERVQUAL).

In the specific context of Tier-2 cities like Ranchi, the factors of price sensitivity and service reliability play an especially prominent role due to lower disposable incomes and infrastructural challenges.

This holistic view, which integrates classical adoption models with contextual economic and service quality factors, provides a more complete and theoretically robust picture of adoption behavior in developing economies.

Figure 1: Conceptual Framework for Adoption of Online Food Delivery (OFD) Services



5. Conclusion and Implications

5.1 Conclusion

This study examined consumer adoption of online food delivery (OFD) services in Tier-2 Indian cities through an integration of multiple theoretical perspectives. By combining the Technology Acceptance Model (TAM), the Theory of Planned Behavior (TPB), and the Diffusion of Innovation (DOI) with the Service Quality (SERVQUAL) model and price sensitivity, the paper developed a context-specific framework for understanding OFD adoption.

The review shows that while TAM, TPB, and DOI explain technology perceptions, behavioral intentions, and diffusion patterns, these models alone are insufficient in emerging Indian markets. In Tier-2 cities, affordability and service reliability emerge as decisive factors due to lower disposable incomes and infrastructural challenges. Hence, price sensitivity and service quality function as critical moderators of adoption, distinguishing smaller cities from metropolitan contexts.

By presenting an integrated framework, this study contributes to both theory and practice. For scholars, it provides a robust basis for empirical testing across diverse Indian cities. For practitioners, it highlights strategies to build consumer trust and expand adoption by focusing on affordability, user-friendly technology, and reliable service delivery.

Beyond academic contributions, the findings also carry **policy and industry relevance**. For OFD platforms, the framework highlights that success in Tier-2 markets depends not only on app usability but also on keeping delivery charges affordable, ensuring reliable service, and improving last-mile logistics. Local restaurants and small food businesses can leverage OFD apps more effectively if platforms provide training on digital engagement, packaging, and customer service. Policymakers can also support the ecosystem by encouraging digital payment adoption and

infrastructural improvements, which would directly enhance consumer confidence and participation in online food delivery.

5.2 Theoretical Implications

The integration of TAM, TPB, and DOI enriches the theoretical understanding of technology adoption in service industries. More importantly, the framework extends these classical models by incorporating price sensitivity and service quality, two dimensions often overlooked in traditional adoption research. This addition makes the model highly relevant for developing economies, where affordability and reliability frequently outweigh loyalty programs or advanced features.

By explicitly including such contextual moderators, the framework offers a more robust theoretical foundation for studying OFD adoption. It also opens avenues for scholars to test context-specific hypotheses using quantitative, qualitative, or mixed-method approaches in both Indian and global emerging markets.

5.3 Managerial Implications

For practitioners, the findings highlight the need to align business strategies with the realities of Tier-2 cities. Affordability must remain a central focus, supported by discounts, transparent pricing, and low delivery charges. Equally, app design should prioritize simplicity and ease of use, ensuring that even first-time digital consumers can adopt the platforms confidently.

Marketing strategies should leverage peer influence and social trends, consistent with TPB, especially among younger consumers who often act as early adopters. Above all, service reliability—including timely delivery, proper packaging, and responsive customer support—must be emphasized. These factors are essential for building trust and ensuring long-term customer retention in smaller urban markets.

5.4 Limitations and Future Research

This study is conceptual and does not include primary data; empirical validation of the proposed framework is therefore essential. Future research may employ surveys, structural equation modeling, or experimental methods to test the framework's assumptions in Tier-2 and Tier-3 city contexts.

While this study focused on emerging urban areas, adoption drivers may vary significantly in rural or metropolitan regions, making comparative research a valuable extension. Additionally, sustainability concerns—such as eco-friendly packaging, green logistics, and ethical labor practices—are gaining global attention and should be integrated into future studies on OFD adoption.

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THE UNTAPPED POTENTIAL OF INDIA'S FRUIT AND VEGETABLE PROCESSING INDUSTRY: CHALLENGES AND POLICY IMPERATIVES

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Abstract

India is among the world's largest producers of fruits and vegetables, yet only a small fraction enters formal processing around 4.5% for fruits and 2.7% for vegetables far below global averages. This paper examines the current status, key constraints, and emerging prospects of India's fruit and vegetable processing industry through an analysis of economic, infrastructural, and policy dimensions, drawing exclusively on secondary data from the Ministry of Food Processing Industries (MoFPI), FAO, APEDA, ICAR, and the Economic Survey 2024–25. The findings reveal that despite a strong production base, the sector is constrained by post-harvest losses of 20–25%, inadequate cold chain capacity, fragmented supply chains, limited credit access for MSMEs, and weak quality compliance. However, rising domestic demand, technological innovation, and supportive policy frameworks such as PMKSY and PM-FME offer strong growth potential. The paper argues that expanding integrated cold chains, strengthening Farmer Producer Organizations (FPOs), and improving financial and quality infrastructure are essential to transform India's fruit and vegetable industry into a globally competitive and sustainable sector.

Keywords: Fruit and Vegetable Processing, Value Addition, Cold Chain, Policy, Sustainable Development

1. Introduction

India is the second-largest producer of fruits and vegetables globally, accounting for approximately 12% of global fruit output and 15% of vegetable output (FAO, 2023). According to the National Horticulture Board (NHB, 2022), in 2021–22 India produced about 107 million tonnes of fruits and 205 million tonnes of vegetables. More recently, APEDA (2024) reports that fruit production reached 112.62 million tonnes, and vegetable production was 204.96 million tonnes,

demonstrating a broadly stable but slightly upward trend in fruit yield and a plateau in vegetables. Such a strong production base implies abundant raw material availability, which in principle should support a vibrant processing industry. Yet, India processes only an estimated 4.5% of fruits and 2.7% of vegetables into value-added products (USDA/FAS, 2024). By comparison, processing rates in countries like China approach 23%, while in advanced economies the figure often exceeds 60%. This gap between production and processing underscores a structural deficiency: most of India's horticultural output is sold fresh, leading to

significant post-harvest losses and foregone opportunities for rural income, industrial employment, and export value addition.

Post-harvest losses in India's horticulture sector are frequently estimated in the range of 20–25%, though actual losses can be even higher. ICAR-CIPHET (2022) and other assessments suggest that in some crops and supply chains, losses may approach 30–40% (Ranjan & Sahni, 2023). These losses stem from inadequate storage, transport, handling, and quality control infrastructure (Mohan et al., 2023; Thakur et al., 2025). For instance, perishable fruits and vegetables often spend long hours in uncontrolled ambient temperatures, suffer rough handling, and lack proper packaging all of which degrade quality and shelf life (Mohan et al., 2023; Postharvest Management Review, 2024).

To address these gaps, the Indian government has launched several flagship schemes. Under the Pradhan Mantri Kisan Sampada Yojana (PMKSY), the government supports infrastructure such as cold chains, food parks, and agro-processing clusters to reduce wastage and raise processing levels. The PM-FME (Formalisation of Micro Food Processing Enterprises) scheme (launched in 2020) aims to strengthen the capacities of micro and small processors, especially women, marginalized groups, and FPOs. Operation Greens, initially focused on tomatoes, onions, and potatoes (TOP crops), has been expanded to address other perishable horticultural products, offering subsidies for storage, transport, and marketing.

Nevertheless, as the Economic Survey 2024–25 underscores, the sector remains underdeveloped. Fragmented supply chains, severe infrastructure gaps (especially cold chain and pack-houses), limited access to affordable finance for small processors, and slow adoption of global quality standards continue to hold back growth. Moreover, many processing units are small, lacking scale, and struggle to maintain consistent quality and volumes in the face of seasonal supply fluctuations. Taken together, while India's raw

material base is more than adequate, the transformation into a globally competitive processing sector hinges critically on infrastructure strengthening, institutional innovations, and quality compliance frameworks.

2. Literature Review

India's fruit and vegetable (F&V) processing industry has been widely discussed in academic and institutional literature, which collectively underscores a paradox between abundant production and limited value addition. While India ranks among the world's top producers of horticultural crops, its processing levels remain remarkably low by international standards. According to FAO (2023) and the National Horticulture Board (2022), India contributes nearly 12% of global fruit and 15% of global vegetable output, yet only about 4.5% of fruits and 2.7% of vegetables are processed (USDA/FAS, 2024). Scholars attribute this gap to structural bottlenecks such as weak infrastructure, limited investment, and fragmented supply chains (Mohan, Singh, & Yadav, 2023). ICAR-CIPHET (2022) and Ranjan and Sahni (2023) estimate post-harvest losses at 20–25%, caused mainly by inadequate cold storage, poor handling, and lack of packaging facilities. Thakur, Sharma, and Verma (2025) further highlight the sustainability dimension, arguing that energy-efficient and multi-commodity cold chains are vital to reducing losses and promoting value addition. The structure of the industry itself poses additional challenges. As noted by MoFPI (2023), over 70% of units are micro, small, or medium enterprises (MSMEs), often operating at suboptimal capacity with limited technology and capital access. Arshinder and Balaji (2019) observe that the predominance of intermediaries and fragmented procurement systems prevents processors from securing consistent raw material supplies. IBEF (2024) and Seshadri (2024) point out that despite the sector's employment potential, MSMEs struggle to meet quality and safety standards necessary for export competitiveness. Policy initiatives such as the Pradhan Mantri Kisan

Sampada Yojana (PMKSY), the PM-FME Scheme, and Operation Greens have been designed to address these deficiencies by improving infrastructure, providing credit support, and promoting skill development (Economic Survey, 2024–25; MoFPI, 2023). However, researchers such as Jarman (2023) and KPMG (2023) note that implementation remains uneven, and the adoption of modern technologies like IoT-based logistics and blockchain traceability is still limited to a few organized players. On the trade front, APEDA (2024) reports that India's F&V exports reached USD 1.81 billion in 2023–24, dominated by mango pulp, dehydrated onions, and frozen vegetables. Yet, compliance with sanitary and phytosanitary (SPS) norms and residue-free certifications remains a barrier for small processors (USDA/FAS, 2024). Despite these challenges, rising domestic demand, urbanization, and health-conscious consumption trends indicate strong potential for future growth (FAO, 2023).

In summary, the literature collectively emphasizes that India's fruit and vegetable processing industry suffers from infrastructural and institutional weaknesses rather than production constraints. Strengthening cold chain infrastructure, financing mechanisms, and supply chain integration through FPOs and cooperatives emerges as a common recommendation across studies. These insights provide the analytical foundation for the present paper's assessment of challenges and policy imperatives for sustainable sectoral growth.

3. Methodology

This paper is based exclusively on secondary data and literature review, drawing from authentic institutional sources including MoFPI reports and sector profiles, APEDA trade statistics, the FAO Statistical Yearbook (2023), the Economic Survey of India (2024–25), USDA/FAS reports, IBEF, and academic studies from ICAR and NITI Aayog. Descriptive statistics, trend analysis, and comparative benchmarking are used to assess the sector's performance, while policy documents inform the analysis of government initiatives.

4. Status of the Industry

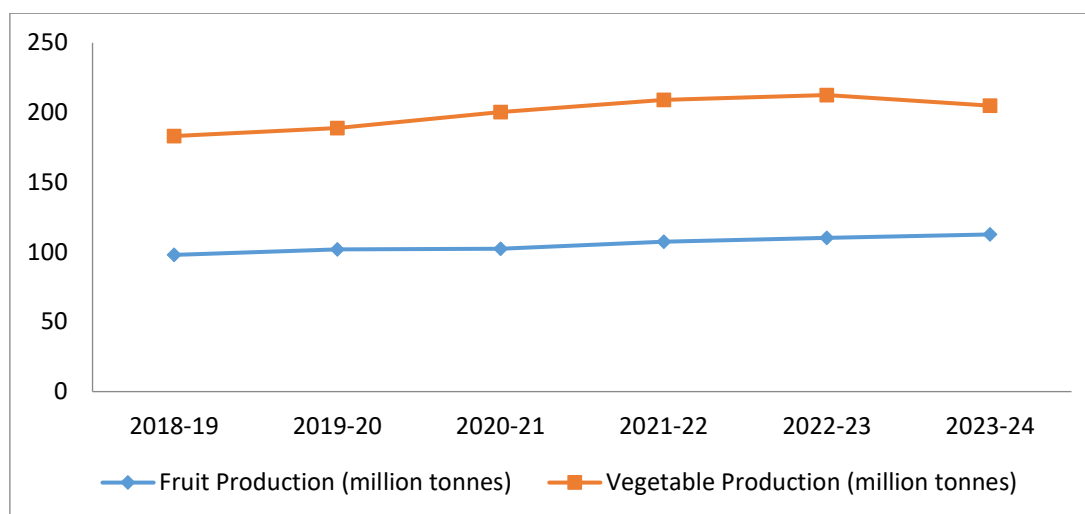
4.1 Production Base

India has one of the world's most extensive horticultural production systems, generating **over 300 million tonnes** of fruits and vegetables annually (MoFPI, 2023). According to the National Horticulture Board (2022), fruit production was about 107 million tonnes, while vegetables contributed 205 million tonnes in 2021–22. More recent APEDA (2024) data places fruit output at 112.62 million tonnes and vegetable output at 204.96 million tonnes, confirming India's status as the second-largest global producer after China (FAO, 2023).

Table 1: Production of Fruits and Vegetables in India (2018–19 to 2023–24)

| Year | Fruit Production (million tonnes) | Vegetable Production (million tonnes) | Horticulture Production (million tonnes) |
|---------|--------------------------------------|--|--|
| 2018-19 | 97.97 | 183.17 | 311.05 |
| 2019-20 | 102.03 | 188.91 | 320.47 |
| 2020-21 | 102.48 | 200.45 | 334.60 |
| 2021-22 | 107.51 | 209.14 | 347.17 |
| 2022-23 | 110.21 | 212.55 | 355.48 |
| 2023-24 | 112.63 | 204.96 | 354.74 |

Source: Ministry of Agriculture & Farmers' Welfare, Government of India (PIB & NHB Reports, 2018–2024)

Figure 1: Trends of Production of Fruits and Vegetables in India (2018–19 to 2023–24)

Source: Ministry of Agriculture & Farmers' Welfare, Government of India (PIB & NHB Reports, 2018–2024)

Production is heavily concentrated in a few crops. Mango and banana account for over 60% of total fruit output, while potato, onion, and tomato make up nearly 50% of vegetable production (Economic Survey, 2024–25). This crop concentration reflects both consumer preferences and adaptability to Indian agro-climatic conditions, but it also heightens the system's vulnerability to price fluctuations and climatic shocks affecting these few commodities.

Geographically, production is spread across many states: Andhra Pradesh, Maharashtra, Uttar Pradesh, Madhya Pradesh, and Gujarat dominate in fruits, while West Bengal, Uttar Pradesh, Bihar, Madhya Pradesh, and Maharashtra lead in vegetables (NHB, 2022). India's diverse agro-climatic zones allow cultivation of both tropical fruits (mangoes, bananas, papayas) and temperate fruits (apples, pears), alongside a wide variety of vegetables. However, productivity levels vary significantly across regions due to differences in irrigation coverage, farm size, infrastructure availability, and adoption of improved technologies.

4.2 Processing Levels

Despite its vast production base, India's formal processing levels remain very low by international standards. Only about 4.5% of fruits and 2.7% of vegetables are processed (USDA/FAS, 2024), compared to nearly 23% in China and over 60% in developed economies such as the United States and the European Union.

The distribution of processing capacity across states reveals strong regional concentration, shaped by infrastructural advantages and market access. According to the Ministry of Food Processing Industries (MoFPI, 2021), the largest processing capacities for fruits are found in Punjab, Gujarat, Maharashtra, Karnataka, Kerala, Andhra Pradesh, and Tamil Nadu. For potato and onion, the leading states include Gujarat, Maharashtra, Karnataka, Telangana, Tamil Nadu, West Bengal, Madhya Pradesh, and Uttar Pradesh. In the case of other vegetables, major processing centers are located in Tamil Nadu, Andhra Pradesh, Maharashtra, Rajasthan, Gujarat, Kerala, Telangana, and Odisha.

This regional pattern reflects the dominance of western and southern states, where stronger agro-processing infrastructure, better logistics, and supportive industrial policies have enabled higher capacity utilization. In contrast, eastern and central states—though rich in production—continue to lag behind due to inadequate cold-chain connectivity, limited access to finance, and fragmented supply chains.

The low share of produce entering formal processing has multiple implications. It contributes to high post-harvest losses, estimated at 20–25% of horticultural output (ICAR-CIPHET, 2022), limits value addition and employment generation, and constrains India's capacity to meet rising domestic and export demand for processed and convenience foods. Inadequate investment in infrastructure, slow adoption of global quality standards, and disjointed supply chains further explain why processing levels remain stagnant, despite government interventions through schemes such as PMKSY and PM-FME (MoFPI, 2023).

4.3 Industry Structure

The Indian fruit and vegetable processing industry is highly fragmented and dominated by micro, small, and medium enterprises (MSMEs). More than 70% of units are small or cottage-scale, operating at sub-optimal capacity with limited access to modern technology, food safety certifications, or affordable working capital (MoFPI, 2023). Many units depend on seasonal raw material flows, which results in low capacity utilization outside peak harvest periods.

Large, organized processors exist but are concentrated in a few sub-sectors, such as fruit juices and concentrates, frozen peas, dehydrated onions, and pickles. The dominance of MSMEs creates both opportunities and challenges: on the one hand, MSMEs generate rural employment and utilize local raw materials; on the other, they struggle to achieve the scale, consistency, and quality required for domestic supermarkets and export markets.

Regional clustering around production belts helps processors reduce procurement costs but also creates vulnerability to localized shocks,

such as weather disturbances, pest attacks, or transport disruptions. The result is a fragmented industry structure that struggles to integrate smallholder farmers effectively into national and global value chains.

4.4 Infrastructure

Infrastructure remains one of the most critical constraints to the growth of India's processing industry. The country has an estimated 32 million tonnes of cold storage capacity, against a requirement of about 61 million tonnes (MoFPI, 2023). However, more than two-thirds of this capacity is devoted to potatoes, leaving inadequate facilities for multi-commodity storage of perishable fruits and vegetables (DESAgri, 2022).

Integrated cold chains comprising farm-level pack-houses, refrigerated transport, ripening chambers, processing centers, and retail outlets are still limited and fragmented. The shortage of pack-houses and reefer transport is especially severe, meaning that most horticultural produce is transported and sold under ambient conditions, leading to rapid quality deterioration.

These gaps contribute to the high post-harvest losses reported for fruits and vegetables and restrict processors' ability to secure year-round supplies of raw material. While government schemes such as PMKSY have supported integrated cold chain projects, coverage remains uneven, and smallholders often remain excluded due to lack of access to such facilities (MoFPI, 2023).

4.5 Trade and Exports

India is a significant but underperforming exporter of fruits and vegetables relative to its production potential. In 2023–24, exports of fresh fruits and vegetables were valued at USD 1.81 billion (APEDA, 2024). Processed exports are dominated by a few commodities, notably mango pulp, dehydrated onions, frozen vegetables, and pickles.

Table 2: India's Fresh and Processed F&V Exports (2023–24)

| Commodity | Export value (USD million) | Key destinations |
|---------------------------|----------------------------|-------------------------|
| Fresh fruits & vegetables | 1814.6 | UAE, Saudi Arabia, Oman |
| Mango pulp | 336 | UAE, Netherlands, UK |
| Dehydrated onions | 410 | USA, EU, Gulf |
| Frozen vegetables | 250 | ASEAN, EU |
| Pickles | 150 | North America, EU, Gulf |

Source: (APEDA). *Fresh Fruits & Vegetables Export Statistics, 2023–24*.

The Middle East, especially the UAE, Saudi Arabia, and Oman, is India's largest export destination, supported by strong demand from the Indian diaspora and geographic proximity. ASEAN countries such as Malaysia, Singapore, and Indonesia are also important markets, while the European Union and North America represent high-value opportunities but impose stringent sanitary and phytosanitary (SPS) standards (FAO, 2023).

India's export performance is constrained by several factors:

- Perishability of fresh produce and limited cold chain capacity.
- Price volatility in international markets.
- Quality compliance challenges, including residue-free and organic certifications.
- Competition from global suppliers such as China, Thailand, and Mexico, which have more advanced supply chain infrastructure (USDA/FAS, 2024).

Nevertheless, initiatives by APEDA to strengthen traceability systems, promote organic certification, and diversify product offerings are gradually improving competitiveness. If combined with infrastructure strengthening and greater adoption of global standards, India's F&V exports have substantial scope for expansion.

5. Prospects of the Industry

5.1 Rising Domestic Demand

India's rapidly urbanizing population, coupled with rising disposable incomes, is reshaping dietary patterns and increasing demand for packaged juices, frozen vegetables, ready-to-cook meals, and organic produce. According to the Economic Survey (2024–25), per capita income growth has been accompanied by a structural shift in food consumption, with households spending more on processed and convenience foods. Health-conscious consumers, especially in metropolitan and Tier-II cities, are also demanding residue-free, organic, and nutritionally enhanced products (FAO, 2023; Mohan et al., 2023). This domestic demand provides a robust market base for processors and reduces dependence on volatile export earnings.

5.2 Export Potential

The export market represents one of the most promising growth avenues for India's F&V processing industry. Global demand for frozen vegetables, dehydrated products, pulp-based exports (especially mango and guava), and ethnic Indian processed foods such as pickles and chutneys continues to expand. However, access to high-value markets depends critically on compliance with sanitary and phytosanitary (SPS) measures, residue-free certifications, and traceability systems (APEDA, 2024; USDA/FAS, 2024). India has successfully

established traceability in grapes and pomegranates, which can serve as models for other commodities. By aligning with international standards, India can strengthen its presence in the EU and North American markets while consolidating its dominance in the Gulf and ASEAN regions (Arshinder & Balaji, 2019).

5.3 Innovation and Technology

Technological innovation is transforming the sector. Emerging solutions include solar-powered cold storage units, which address energy bottlenecks in rural areas, and modified-atmosphere packaging (MAP), which extends shelf life and maintains freshness. Blockchain-based traceability platforms are being piloted to provide end-to-end transparency from farm to fork, enhancing consumer confidence in export markets (Jarman, 2023). Moreover, automation in sorting, grading, and packaging is increasingly being adopted by larger processors, while startups are developing cost-effective solutions for smallholders (MoFPI, 2023; Mohan et al., 2023).

5.4 Entrepreneurship and MSMEs

The MSME sector is central to India's processing landscape. Women's Self-Help

Groups (SHGs), cooperatives, and Farmer Producer Organizations (FPOs) are entering small-scale processing with government support through training, subsidies, and cluster-based development models. This not only promotes inclusive growth but also creates localized employment opportunities in rural areas (IBEF, 2024; Seshadri, 2024). Cluster models, where multiple units share infrastructure such as pack-houses, cold storage, and logistics, reduce operational costs and risks, making small-scale processing more viable.

5.5 Government Support

Government policy continues to be a strong enabler of industry prospects. Schemes under PMKSY, PM-FME, and Atmanirbhar Bharat emphasize the creation of processing infrastructure, credit facilitation, and skill development. According to MoFPI (2023), these initiatives have led to the sanctioning of cold chain projects, Mega Food Parks, and cluster-based units, though coverage remains uneven. Continued public investment, combined with greater private sector participation, will be essential to fully unlock the industry's potential (Economic Survey, 2024–25).

Table 3: Major Schemes Supporting the F&V Processing Sector

| Scheme | Year of Launch | Key Objectives | |
|-----------------------------|----------------|---|---|
| PMKSY | 2017 | Infrastructure, Cold Chains, Food Parks | Integrated cold chain, agro-processing clusters |
| PM-FME | 2020 | Formalization of MSMEs | Credit & training for small units |
| Operation Greens | 2018 | Price stabilization, TOP crops | Subsidy for transport & storage |
| Atmanirbhar Bharat Abhiyaan | 2020 | Self-reliance in food processing | Financial assistance for agro-industries |

Source: Author's compilation based reports from the Ministry of Food Processing Industries (MoFPI) and the Ministry of Agriculture & Farmers' Welfare (MoA&FW).

6. Challenges

Despite promising growth prospects, the fruit and vegetable processing sector in India continues to face several structural challenges that limit its efficiency and competitiveness. These include high post-harvest losses, fragmented supply bases, infrastructure gaps, credit constraints, quality compliance issues, and weak policy execution. Addressing these constraints is vital for improving productivity and ensuring sustainable development.

6.1 High Post-Harvest Losses

India faces significant post-harvest losses estimated between 20–25% of total production mainly due to poor storage, inadequate cold chains, and inefficient logistics (NABARD, 2023). Perishable crops like mangoes and tomatoes deteriorate quickly because of the lack of pack houses and refrigerated transport (ICAR, 2023). Regional disparities in storage infrastructure, particularly in eastern states such as Jharkhand, further worsen the problem (MoFPI, 2024). Reducing these losses through integrated cold chains and better post-harvest management could substantially increase raw material availability for processors and enhance farmer incomes.

6.2 Fragmented Supply Base

Small and scattered landholdings hinder aggregation and consistency in raw material supply to processors. With an average landholding of only 1.08 hectares (Agricultural Census, 2021), farmers struggle to meet uniform quality and quantity requirements (FAO, 2023). Weak farmer–processor linkages and limited contract farming exacerbate supply uncertainties (World Bank, 2023). Although Farmer Producer Organizations (FPOs) and cooperatives have improved collective marketing in some regions, their limited managerial capacity and capital restrict effectiveness (NABARD, 2023). Strengthening aggregation models and long-term partnerships can reduce procurement inefficiencies.

6.3 Infrastructure Gaps

Inadequate infrastructure remains a major constraint to sectoral growth. Only about 10% of perishable produce is supported by cold chain facilities in India (MoFPI, 2024). The shortage of pack houses, grading lines, and temperature-controlled logistics causes high wastage and reduces product quality (KPMG, 2023). Uneven infrastructure development—concentrated in a few states creates regional imbalances and limits industrial expansion in areas like Jharkhand. Public–private partnerships and targeted government investments are necessary to bridge these infrastructure deficits.

6.4 Credit and Finance Constraints

Access to affordable credit remains limited for MSMEs and small processors. Most lack collateral and face procedural difficulties in obtaining institutional loans despite schemes such as PM-FME and CGTMSE (NABARD, 2023). High interest rates and lengthy approval processes discourage entrepreneurs, particularly women-led enterprises (MoFPI, 2024). Limited financial literacy and weak project preparation also hinder effective fund utilization (KPMG, 2023). Simplified credit norms and digital lending mechanisms can improve financial inclusion in the sector.

6.5 Quality and Standards Compliance

Compliance with domestic and international food safety standards poses a serious challenge. Many small processors lack resources for HACCP, ISO, or GMP certification (FAO, 2023). Export consignments are frequently rejected due to non-compliance with residue limits and inadequate traceability (APEDA, 2024). At the domestic level, enforcement of FSSAI norms remains uneven due to capacity constraints (MoFPI, 2024). Enhancing awareness, technical support, and digital traceability systems can help raise quality standards and market competitiveness.

6.6 Policy Execution Bottlenecks

Although several government schemes such as PMKSY and PM-FME support the sector, their impact is weakened by slow implementation, bureaucratic overlap, and poor coordination among agencies (Ministry of Finance, 2025). Many small processors remain unaware of available incentives, and monitoring mechanisms are often inadequate (World Bank, 2023). Streamlined institutional coordination, single-window clearance, and improved digital monitoring can enhance the efficiency of these interventions.

7. Policy Recommendations

To overcome these challenges and harness the sector's potential, a set of targeted policy interventions is necessary:

1. **Expand Integrated Cold Chains:** Investments should prioritize multi-commodity storage facilities and farm-level pack-houses, rather than focusing disproportionately on potatoes (DESAgri, 2022; ICAR-CIPHET, 2022).
2. **Strengthen FPOs and Cooperatives:** Aggregation through collective institutions will enhance farmers' bargaining power, reduce transaction costs, and ensure consistent supply for processors (IBEF, 2024).
3. **Facilitate Access to Finance:** Dedicated credit lines for MSMEs, blended finance, and public-private partnership (PPP) models should be expanded to enable investment in technology and infrastructure (Economic Survey, 2024–25).
4. **Enhance Extension and Training Services:** Farmers require training in grading, sorting, packaging, and certification compliance to align with domestic and export market requirements (Mohan et al., 2023).
5. **Build Testing and Certification Infrastructure:** Establishing accredited laboratories and expanding

certification services at the regional level will help small processors meet SPS and quality standards (USDA/FAS, 2024).

6. **Promote Sustainability:** Encourage waste-to-value models such as biofuels, compost, and pectin extraction, alongside eco-friendly packaging and renewable-powered cold storage to build resilience and align with climate goals (Jarman, 2023).

8. Conclusion

India's fruit and vegetable processing industry stands at a defining juncture between abundance and underutilization. Despite being the second-largest global producer, the country processes barely 4–5% of its fruits and about 2–3% of its vegetables through organized channels (MoFPI, 2024; NABARD, 2023). This paradox of plenty where vast horticultural output coexists with post-harvest losses of up to 25% (ICAR, 2023) reveals both the urgency and opportunity for systemic transformation. The sector's evolution is no longer constrained by production, but by infrastructure, institutional, and policy alignment.

Rising incomes, urbanization, and health-conscious consumption are propelling a strong domestic market for processed foods, while export potential for pulps, frozen produce, and ethnic foods continues to expand (FAO, 2023; APEDA, 2024). Yet, realizing this promise requires bridging structural gaps: strengthening cold chains, facilitating finance for MSMEs, enhancing quality compliance, and integrating smallholders through FPOs and cooperatives (World Bank, 2023). Technological adoption from solar-powered cold storages and IoT-enabled logistics to blockchain traceability has begun to redefine competitiveness, but diffusion remains uneven (KPMG, 2023).

A coherent policy ecosystem is therefore crucial. Flagship programs such as PMKSY and PM-FME represent foundational pillars, but their impact depends on timely execution, inter-

agency coordination, and private-sector participation (Ministry of Finance, 2025; MoFPI, 2024). Future growth must also be inclusive and sustainable embracing waste-to-value innovations, renewable energy-based cold chains, and eco-friendly packaging to align with global climate goals (KPMG, 2023).

If effectively implemented, India's food processing revolution could do more than reduce post-harvest losses it could redefine the country's agrarian economy. By transforming surplus into value, and farmers into stakeholders of global value chains, the sector holds the potential to create millions of jobs, raise rural incomes, and position India as a global hub of sustainable agri-processing. The challenge ahead is not of production, but of transformation turning India's horticultural wealth into equitable, resilient, and world-class value chains (Economic Survey, 2024–25; FAO, 2023

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SOCIO-ECONOMIC CONSEQUENCES OF AGRICULTURAL INNOVATIONS IN RURAL HARYANA: A REVIEW

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Abstract:

This paper discusses the impact of agricultural innovations on rural Haryana and its influence on the founding of the life of the farmers. The Punjab was one of the earliest states to experience the benefits of the Green Revolution, which brought with it high-yielding seeds, fertilizer, and irrigation, which raised agricultural output. Afterwards, new technologies have been ushered in on the farms, such as harvesters, solar pumps, tractors, and mobile applications. Such inventions have enabled a lot of people to increase their earnings as well as simplify farming. Not all the farmers have gained proportionally. Large and medium farmers have readily embraced these changes, but there are still problems facing small and marginal farmers, such as the cost-effective factors, lack of information, and accessibility of resources. Technology, on the other hand, has limited the use of labor, particularly of the women working in the countryside. Meanwhile, soil has been harmed through the overuse of chemicals, and excessive water pumping has resulted in a decrease in the groundwater level. This review will talk about the advantages and the disadvantages of the agricultural innovations in the state of Haryana. It recommends that future policies should be oriented towards all these and be on equity, sustainability, and small farmers and women.

Keywords: Agricultural innovations, Haryana, rural economy, mechanization, sustainability, income, gender, labor, policy.

Introduction

Such agricultural innovations in rural Haryana have triggered numerous changes, not only to the crop output and farm revenues but also to the overall socio-economic structures of the places (Benjamin et al. 2017). The mounting usage of innovative technologies and solutions in the field of agriculture has become one of the central factors affecting the welfare and agricultural performance and the overall trends in the food industry (Chavas and Nauges 2020). These developments, including improved seed

types and modern methods of farming, scalable irrigation systems, and other mechanisms of farming, and modern methods of marketing, are some of the opportunities for resolving some of the problems in the food security issues, climate calamities, and rural poverty (Diao et al. 2023). The growing world population requires food production to increase tremendously, and therefore, sustainable and innovative methods of farming would become very important (Omar 2021).

Haryana, which is a state that contributed hugely to the green revolution in India, is a

perfect site to be used as a case study to investigate the socioeconomic consequences of the agricultural invention. The agricultural environment of this state, where the intensive cultivation of the land prevails and depends on technological progress, also gives a good background to evaluate the adoption level, the effects, and the obstacles of the innovations made in the sphere of agriculture. In the beginning, the state was very successful in carrying out the Green Revolution due to technologically-driven chemical-intensive methods that increased the production capacity and guaranteed food security to the country (Swami 2020). Nevertheless, questions of long-term sustainability and equitable sharing of benefits attributable to such innovations put a lot of consideration into perspective. The investigation of the agriculture sector of Haryana can provide a lot of useful information on the bigger picture of creating innovations in the agricultural sector of any country like.

The use of agricultural innovation in Haryana has contributed to higher agricultural productivity, which is the same case of higher incomes by changing farmers who have adapted to the innovations (Bhandari and Ghimire 2016). application of inputs, cutting down wastages, and reducing the taxes of agricultural activities on the environment (Pandia et al. 2019). But the gains of productivity enhancements have not been evenly shared with the small and the marginal farmers, falling behind in adopting new technologies, mainly because of a deficiency of capital and information, infrastructure, etc. This disparity in resources may enhance other existing inequalities and cause new problems for the rural communities. This review paper intends to provide an in-depth study on the socio-economic implications of agricultural innovations in the rural areas of Haryana in both aspects of its application and limitations. The maxim of the given paper is concerned with a detailed discussion of the intricate balance between technological changes in farming and their eventual socio-economic implications within the narrow focus of rural Haryana (Azizi 2023).

Review of Literature

Several studies have investigated the different elements of agricultural innovation and socioeconomic effects. Singh (2018) discussed the increase in productivity and income as a result of mechanization, and Kaur and Bansal (2021) raised the issue of the gender gap in technology access. Rath (2020) noted the relationship between innovation and the degradation of the environment. These observations inform the basis of this review, which has attempted to bring together different threads of research to draw a summative picture of Haryana. Farming advancements have always been known to bring about economic development in rural areas. Benamine et al. (2017) believe that these innovations not only affect productivity but also change the entire rural economy in that they alter income levels and labor distribution among households. In Haryana, Singh (2018) noted that, due to mechanization, there have been significant gains in productivity and efficiency on the part of farmers, although it has also displaced the manual workforce, including women.

Havas and Nauges (2020) noted that readiness and education, institutional access, and capital availability are the main factors that influence and determine the absorption of technology, along with the advantages it holds. The same trends were identified by Kaur and Bansal (2021), who discovered that agricultural extension activities systematically exclude women living in the countryside, along with women in decision-making. The article by Swami (2020) takes a new look at the legacy of the Green Revolution in Haryana, which is characterized by the fact that despite the initial success of wheat and rice productivity, the results have been the depletion of soil and ecological pressure. This was further supported by findings of Rath (2020), who observed increasing environmental-related costs, which include the depletion of groundwater and the burning of residues, among others, which have tended to be ignored in the light of technical-centred farm policy. Diao et al. (2023) give a worldwide outlook, relating agricultural innovations to poverty reduction, and success is

surrounded by inclusive institutional designs. Pandia et al. (2019) have made a demand to follow integrated precision agriculture modes that make them affordable and visible to the marginal farmers. At the same time, Yoganandham (2021) addressed digital tools and precision technologies as the game-changers in large-scale farming but warned about the increasing rural inequality due to inequality in access to ICT. A macroeconomic approach can be provided by Azizi (2023), who suggested that the outcomes of innovation depend on the political will, awareness of the environment, and the allocation of the benefits along social lines. Similar apprehensions were expressed in India, whereby the economic transformation in the agricultural sector was characterized by an increasing concentration of wealth and further division of surges in welfare among the rural populace (Bhandari and Ghimire 2016). As noted by Joshi and Mehta (2022), though the agricultural advisory via mobile has enhanced decision-making among progressive farmers in Haryana, many smallholders do not have digital literacy skills to help them use such tools.

According to Kumar et al. (2019), agricultural cooperatives have had a mixed impact; they bring both positive (assistance in technology transfer) and negative effects (the performance varies depending on local politics and unequal distribution of resources). According to Rani and Hooda (2021), irrigation innovations in southern Haryana showed that drip installations were beneficial to conserve water but only to the wealthier farmers since high economic costs characterized the initial installations. According to Verma (2018), the advantages of contract farming and organized retail chains, which are supposed to be innovative, fail to serve the marginal farmers, and they are instead exposed to price fluctuations and control by middlemen. Based on the data provided by Sharma and Malik (2020), agricultural start-ups and inputs delivery platforms assisted in developing new workplaces in the countryside, and particularly among educated youth, but the current rate of scalability is low.

Gill and Chauhan (2022) found institutional support in the form of Krishi Vigyan Kendras (KVKs) as a factor increasing adoption of innovations in the selected districts, but this impact was based on access of medium and large farmers. Taneja and Sehrawat (2020) reported that 24 percent of farmers were not aware of cold storage, and 38 percent of villages also lacked an awareness center about value-addition centers. Yadav and Dabas (2021) discussed the effect of rural credit institutions to aid innovation, demonstrating that access to credit in the proper time and at competitive costs is a major determinant of adoption by smallholders.

Through this body of literature, the issue of agricultural innovations reiterates the facilitating potentials and risks at hand, and how agricultural innovations bring frustration in terms of efficiency, resilience, and economic growth, which is also bluntly contrasting with local institutions and resources distribution, and social order. The current review distills these pieces of awareness in a particular place, rural Haryana, which has been highly receptive to technology, whose overall outcome on productivity, equity, and sustainability has been equivocal.

Methodology

The review analysis is a secondary analysis of journal, government, and institutional publications data. Some of the important materials are ICAR reports, Economic Survey of Haryana, NABARD records, and peer-reviewed articles. The synthesis of data was performed, and themes were grouped by classes of income, employment, gender, sustainability, and institutional support.

Major Agricultural Innovations in Haryana

The transformation of agriculture has been witnessed in Haryana over the decades having physically transformed the rural livelihoods. The original efforts that were part of the green revolution coupled with follow-ups on the efforts of mechanization and integrations to digital technologies have all resulted into

increased crop production as well as empowering farm revenues. However, these evolutions have also led to the occurrence of difficulties due to such interventions. The main growths in agricultural sector of Haryana can be explained as under:

1. The Green Revolution and technology

There is the Green Revolution and other technologies involved in the enhancement of agricultural products. Haryana was one of the first states to adopt Green Revolution in late 60s. It saw the farmers employing high-yield varieties of wheat and rice as a result of which there was a pronounced rise in cereal production. An accompanying growth in the use of chemical fertilizer and pesticide, along with the availability of better irrigation through canals and tube wells, ensured that cultivation was more secure. However, the problem of frequent endangerment of the health of soil and gradual depletion of the groundwater reserves became a serious issue soon enough.

2. Automation and labour saving machines

A shortage of labour force, as well as some urgent time demands, induced farmers in Haryana to accept tractors, harvesters, threshers, and the likes. The advent of this technology spurred agricultural labor and made it more efficient. Most of the farmers could not afford to buy such machines, however, thus encouraging the adoption of state-subsidized Custom Hiring Centers (CHCs) to provide equipment on hire at lower prices. Happy Seeders and Super Seeders are devices with the purpose of reducing the stubble burning. Although it is true that mechanization offered a massive saving in both time and energy in the farm, it reduced the job access points of the labourer in the countryside.

3. The market and online integration

Online commodity trading portals in agricultural products, especially the National Agriculture Market (e-NAM), were launched by the policy makers in Haryana so that farmers can gain transparent prices, and reduce the role

of intermediation. Safety nets in the form of interventions by the government in the form of minimum Support Prices (MSP) continue to hold the marketplace in wheat and paddy. At the same time mobile apps such as e-Choupal and Kisan Suvidha do provide the farmers with weather predictions, crop care tips, assessable market prices amongst other functions. However, older and other marginalized producers are still lacking behind because of no easy access to, or knowledge of, digital technology.

4. Renewable Energy and Resource Saving

In order to make farming more environmentally friendly, Haryana has also propagated the usage of solar-driven pumps, through which electricity and diesel expenses are cut. Another technique, Direct Seeded Rice (or DSR), is gaining popularity as well: it saves water and labor, as the method does not do the traditional transplanting. The machines, such as the Super Straw Management System (SSMS), enable farmers to plant without clearing away the remaining straw. Such solutions are environmentally friendly, yet they cost money and technical know-how on their part, something not all of them possess.

5. Natural and Organic Farming

Recently, organic and natural farming has seen a viral push, particularly in districts such as Kaithal. Farmers are being trained, under schemes such as Paramparagat Krishi Vikas Yojana (PKVY) crops can be improved without chemical treatment. They are also assisted in certification and sales of their produce. Although it is a more environmentally friendly approach in terms of health and soil, it has not achieved much popularity since profits may not be guaranteed.

Results and discussion

1. Income and Productivity

Enhanced production of wheat and rice harvest in Haryana has increased due to improvements in the selection of seeds, fertilizers, irrigation,

and machines. Several medium and large farmers have experienced a rising income. Other farmers can also diversify by either cultivating vegetables, fruits or maintaining dairy and poultry farms to earn extra cash. The advantages are however, not balanced as the smaller farmers continue to experience low margins and high input costs.

2. Employment and Labor change

Now there is an increased number of machines in farms, and less manpower is required, especially in the sowing and harvesting processes. This has cut employment opportunities on the part of landless workers and casual labor. Conversely, there are also new jobs that have emerged in the services sector, such as machinery hire, service, and farm consultancy. However, many of them usually require some technical know-how or capital. Women have been particularly hit; more of them lost jobs they worked in traditional fields and did not necessarily enter the new technologically-based employment.

3. Gender Gap

However, women in Haryana are not doing very well yet, even though they contribute immensely to the agricultural sector. The majority lack land, find it hard to borrow funds, and are normally left out of the training programs and decision-making. The government has also tried to integrate women into self-help groups and farming workshops, but the transformational process is not fast. Social norms are also prevalent since they are limited in terms of the usage of new tools or working on digital platforms.

4. Environmental problems

Repeated farming activities in rice fields have led to water table loss in the majority of places. The issue of soil damage has arisen due to the unnecessary use of fertilizers and pesticides. The air becomes laden with this effluent, and this becomes a health hazard as the additional straw is burned. Although some sustainable

practices have been integrated, like the use of sun pumps and organic farming, there is not much and uneven implementation of the practices.

5. Climate adaptation

The farmers of Haryana have resorted to innovative ways as a way of coping with the problem of water scarcity and climate change. Specifically, Direct Seeded Rice (DSR) saves water and labour. Forecasting of pest attacks or rains through the weather application or communication through message (SMS) helps in putting the farmer on alert. It is also promoting natural farming that renders agriculture less hostile to the environment. It is a pretty decent start, but more farmers ought to be guided and trained.

Policy Support and Institutional Framework

The government and government facilities have brought much credit to introducing fresh ideas and technologies to the Haryana farmers. Krishi Vigyan Kendras (KVKs) and ATMA (Agricultural Technology Management Agency) have enlightened a lot of farmers on how to modernise farming techniques. They have stations, where they regularly sponsor field demonstrations, training camps, and awareness rides to give farmers a display on how to apply the new implements and techniques. The Haryana Agricultural University and the state agriculture departments are also the resources which facilitate such changes through conducting research and tests in new techniques of farming. They ensure just that these practices are appropriate to the weather, soil and crop of Haryana.

Individual government projects have assisted farmers to embrace innovation: PM-KUSUM: The project assists farmers to install solar-powered irrigation pumps. It saves energy and minimises expenditure on electricity. PMFBY (Fasal Bima Yojana): Provides insurance on crops to ensure farmers are covered in case of crop failure to weather etc. PKVY (Paramparagat Krishi Vikas Yojana): Assists

with natural and organic farming with provision of training, certification and assistance in the marketing of organic fruits and vegetables. Subsidizer on the machines: Assist small farmers to use costly machine such as Happy Seeders and Direct Seeded Rice (DSR) machines.

This has led to creation of modern farming in the state through these schemes and institutions. However, the greatest test is to ensure that such gains are trickled down to small farmers, women and poor households which tend to be left behind.

Conclusion

Agricultural innovations have changed the way farming is done in Haryana. New seeds, machines, irrigation methods, and digital tools have helped many farmers grow more crops and earn better incomes. These changes have played a big role in improving food security and making farming more efficient. However, these benefits haven't reached everyone equally. Large and medium farmers have been able to adopt new technologies more easily, while small and marginal farmers often struggle with the cost and lack of support. Women farmers, in particular, face more challenges due to limited access to land, finance, and training.

Alongside progress, there have also been environmental concerns. The overuse of groundwater, chemical fertilizers, and crop residue burning has harmed the soil, air, and water. So, while innovations have brought many advantages, they have also created new problems. For a better future, Haryana needs a more balanced and inclusive approach, one where all farmers, regardless of size or gender, can benefit sustainably.

Recommendations

To make agricultural progress fair and long-lasting, the following steps are important:

- Make machines and technology affordable: Provide subsidies or rental services so that even small farmers can

use tools like DSR machines or mobile apps.

- Support women farmers: Offer special training programs and financial support that make it easier for women to take part in modern agriculture.
- Encourage eco-friendly farming: Promote natural farming methods that protect the soil and reduce dependence on chemicals.
- Focus on conserving water and soil: Involve local communities in managing resources like groundwater and farm soil to ensure long-term sustainability.

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YOGA THERAPY AND MENTAL HEALTH CARE DURING CATASTROPHES AND EMERGENCIES: A PATHWAY TO PEACE AND RESILIENCE

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Abstract

In the present era of uncertainty, emotional distress, and global crises, mental health has emerged as a critical component of overall well-being. Disasters—whether natural, humanitarian, or health-related—frequently lead to psychological instability, trauma, and anxiety. Yoga therapy, rooted in ancient Indian philosophy, offers a holistic, evidence-based, and cost-effective approach to restoring mental harmony, emotional balance, and peace. This article explores the complementary roles of yoga therapy and accessible mental health services in managing psychological distress during catastrophes and emergencies. By integrating traditional yogic practices with modern health systems, societies can promote resilience, compassion, and collective healing.

Introduction

Mental health encompasses the emotional, psychological, and social well-being of an individual. During crises such as pandemics, natural disasters, or conflicts, people face immense psychological strain—manifesting as anxiety, depression, fear, and grief. Access to mental health services often becomes limited, and stigma further prevents individuals from seeking help (Ginu Anie Joseph, 2025).

At the same time, yoga therapy offers an accessible, non-pharmacological, and sustainable approach to promoting mental well-being by uniting body, mind, and spirit. Systematic reviews (Cramer et al., 2018; Goyal et al., 2014) consistently demonstrate that yoga-based interventions enhance mental health

outcomes, underscoring yoga's potential as both a preventive and therapeutic modality.

Psychological Distress in Emergencies and the Role of Yoga Therapy

Psychological distress is a common consequence of disasters and emergencies, as noted by the WHO and NIH. Nearly all affected individuals experience stress reactions, and about 22% develop mental health conditions such as depression, anxiety, or PTSD. During the COVID-19 pandemic, global rates of anxiety and depression rose by 25%. National data also show wide variations in post-disaster mental disorder prevalence (5.8%–87.6%) and PTSD rates (8.6%–57.3%), with agencies like India's NDMA emphasizing the urgent need for psychological support during and after crises.

Research indicates that yoga therapy can effectively reduce psychological distress, anxiety, and PTSD symptoms as a complementary intervention. Meta-analyses show small-to-moderate improvements in mental health outcomes, attributed to yoga's ability to regulate the body, enhance mindfulness, and activate the parasympathetic nervous system. Studies conducted during the COVID-19 pandemic and in disaster-affected regions of India and Tunisia demonstrate significant reductions in stress, fear, and emotional disturbances following structured yoga programs. Overall, psychological distress affects 30–40% of individuals during emergencies, often leading to lasting mental health challenges. Yoga therapy offers a low-cost, accessible, and evidence-based approach to support recovery and resilience. Future research should focus on large-scale evaluations, long-term outcomes, and integrating yoga-based interventions into disaster response and community mental health frameworks.

This collaborative paper brings together two crucial perspectives: ensuring **access to mental health care during catastrophes** (Joseph) and integrating **yoga therapy for emotional stability and peace** (Shilpa J.), forming a unified framework for holistic mental health support.

Materials and Methods

Understanding Yoga Therapy

Yoga therapy applies yogic principles—postures (*asanas*), breathing techniques (*pranayama*), meditation, and relaxation—to manage stress, anxiety, depression, and psychosomatic disorders. It enhances self-awareness, stabilizes the nervous system, and reduces the body's stress response.

Core Components of Yoga Therapy

- **Asanas:** Improve flexibility, release muscular tension, and enhance circulation.
- **Pranayama:** Calms the mind by regulating breath and balancing emotions (Saoji et al., 2019).
- **Meditation and Mindfulness:** Promote concentration, self-control, and serenity (Goyal et al., 2014).
- **Relaxation Techniques:** Practices such as *Yoga Nidra* restore energy and emotional equilibrium.

Discussion

Health in Catastrophes and Emergencies

During disasters, individuals often face grief, fear, and hopelessness. Studies indicate that stress-related disorders rise sharply during emergencies, especially among healthcare professionals and survivors. Access to timely psychological support remains a major challenge. Many individuals are unaware of available resources or hesitate to seek help due to stigma (Joseph, 2025).

Community Resiliency Model (CRM), a body-based intervention, was designed to build awareness of internal bodily sensations, promotes better emotional understanding and regulation, particularly in trauma-affected populations. It discusses CRM's biological foundations, its relationship to trauma neurobiology and neural synchrony, and compares it to other well-being interventions. The Community Resiliency Model has the potential to strengthen resilience and enhance mental well-being in marginalised or underserved populations. The review calls for future research on biophysical outcomes, synchrony, and interoceptive training for trauma recovery. (William Chance Nicholson & etal)

A Qualitative Study on Understanding and Helping International Students Cope When Catastrophes Strike in Their Home Countries

underscores the profound emotional and academic challenges faced by international students whose home countries experience catastrophes. It highlights the need for personalized, culturally sensitive support systems within academic institutions. Future research should further explore effective institutional responses, peer support models, and long-term coping strategies to enhance international students' resilience and well-being during global crises. (Zubeyde Akpakir, Radha J. Horton-Parker)

Improving Access to Mental Health Services

Modern technological innovations such as telemedicine, telepsychiatry, online counselling, mobile mental health units, helplines, and trained community volunteers have made psychological care more accessible even in disaster-affected regions.

These systems provide **psychological first aid, counselling, and follow-up support** when traditional clinical services are disrupted. Governments, organizations, and communities must collaborate to ensure that **mental health services are integrated into all emergency response frameworks**.

One of the studies examines the causes and effects of burnout among healthcare professionals during crises such as pandemics and wars. It emphasizes the need for innovative prevention strategies, including AI-assisted tools, mindfulness practices, and volunteer-based support systems. Future research should focus on evaluating the effectiveness of technology-driven and policy-based interventions to enhance resilience and mental well-being among healthcare workers. (Sabira Arefin)

Another research work done by Sally Carter, Alison L. Caele, Tambri Housen, Grace Joshy & Kamalini Lokuge, details the creation of a caregiver group intervention designed to support child mental health in complex humanitarian emergencies. Developed through a multi-phase, co-design approach, the program

emphasizes feasibility, cultural relevance, and delivery by non-specialist facilitators. Further studies are needed to assess the intervention's effectiveness, scalability, and long-term impact on children and caregivers in crisis-affected settings.

Yoga Therapy in Crisis Situations

Incorporating yoga therapy into disaster rehabilitation and community health programs offers both psychological and physiological benefits. Recent randomized controlled trials (Nagarathna et al., 2025) found that integrated yoga therapy significantly reduced depression, anxiety, and stress scores among healthcare professionals during public health emergencies.

Similarly, Rao and Khanna (2024) reported that combining yoga with pharmacological treatment for generalized anxiety disorder accelerated recovery and improved emotional regulation. A Preliminary Study by Sara Faria on Impact of a Single Virtual Reality Relaxation Session on Mental-Health Outcomes in Frontline Workers on Duty during the COVID-19 Pandemic, shows that a single relaxation session using virtual reality (VR) can offer immediate psychological relief and alleviate stress in frontline workers during the COVID-19 pandemic. The results underscore the portability, adaptability, and potential widespread application of VR in high-pressure jobs. Further research should examine the long-term impacts, effective implementation strategies, and specific applications of VR-based interventions within organized mental health care frameworks to enhance support for frontline responders.

The chapter on Psychological Research Contributions to Urgent Global Health Challenges for the Next Decade: Psychology for Addressing Global Health Challenges emphasizes psychology's pivotal role in addressing urgent global health challenges such as disease prevention, workforce well-being, and health equity. It highlights the need for future research that deepens understanding of

behavioural and cognitive drivers of health behaviours, enhances digital health literacy, and integrates AI-driven, patient-centred interventions. Continued investigation into psychological strategies for combating misinformation, fostering sustainable health behaviours, and supporting healthcare professionals will be crucial in achieving the 2030 Sustainable Development Goals (SDGs) and advancing global health resilience. (Barello, S. (2025) & etal.)

Group yoga sessions, guided breathing, and mindfulness practices foster community resilience and collective peace. They also enhance sleep regulation, autonomic balance, and emotional clarity (Gupta et al., 2006).

Yoga therapy, Inner Peace, and Resilience

The philosophical essence of yoga, *chitta vritti nirodha*, represents the stilling of mental fluctuations. Regular yoga practice cultivates awareness, compassion, and acceptance, forming a foundation for inner peace and long-term mental health.

Neurobiological studies demonstrate that yoga increases brain-derived neurotrophic factor (BDNF), improves neuroplasticity, and reduces stress biomarkers (Tolahunase et al., 2018).

Reviews by Balasubramaniam et al. (2013) and Telles et al. (2012) further confirm that yoga supports neurotransmitter regulation, autonomic balance, and emotional stability.

In one of the chapters mentioned in Exploring the benefits and techniques of sound meditation and sound therapy highlights the growing significance of sound meditation and sound therapy in enhancing mental, emotional, and physical well-being. By employing techniques such as binaural beats, singing bowls, and gongs, these practices promote relaxation, reduce stress, and improve emotional balance. Future research should explore the neurophysiological mechanisms, clinical efficacy, and integration of sound-based interventions into conventional wellness and

therapeutic models to better understand their role in holistic healing and health promotion. (Dr Peeyush Kumar Gupta, Kanan Malhotra).

Role of Nurses and Healthcare Professionals

Nurses are the backbone of holistic care. Their role extends beyond clinical treatment to emotional and psychological support. By incorporating yoga therapy and mental health awareness into nursing practice, they can:

- Help patients manage stress and anxiety.
- Integrate mental health promotion into community outreach.
- Support the well-being of healthcare staff through self-care and mindfulness.
- Act as **mental health facilitators** in hospitals, disaster zones, and rehabilitation centres.

Empowered and emotionally resilient nurses can act as transformative agents for collective healing.

Conclusion

Mental health is as vital as physical safety during catastrophes and emergencies. While access to mental health services remains a social responsibility, the integration of **yoga therapy** provides a natural, evidence-based avenue for restoring psychological balance and peace.

Collaborative approaches—combining modern psychiatry, telehealth access, and yogic wisdom—create stronger, more compassionate health systems capable of addressing crises holistically.

As emphasized by both authors, every individual deserves mental peace, accessible support, and the healing power of yoga, especially when the world around seems uncertain.

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THE ROLE OF SUSTAINABLE TOURISM IN SHAPING INDIA'S ECONOMY

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Abstract

Tourism in India is simultaneously an economic engine and a social–ecological interface with profound consequences for livelihoods, cultural continuity, and environmental stewardship. This paper examines sustainable tourism as a pathway to inclusive growth in India by synthesizing official statistics, policy frameworks, and emblematic state-level initiatives. Using secondary data from the Ministry of Tourism (MoT), Press Information Bureau (PIB), and intergovernmental analyses, we assess sectoral performance, map policy instruments such as the National Strategy for Sustainable Tourism (2022), Swadesh Darshan 2.0, PRASHAD, and Challenge-Based Destination Development, and analyze case studies from Ladakh (Hanle Dark Sky Reserve), Kerala (Responsible Tourism Mission), Sikkim (ecotourism and carbon-negative positioning), Meghalaya (community-led cleanliness), and Assam (emerging homestay circuits). Findings indicate that India's rebound in 2023 was accompanied by a policy pivot toward resilience and sustainability; however, carrying capacity management, local benefit sharing, climate risk, and informality remain structural challenges. The paper concludes with a set of implementable recommendations on destination management standards, climate adaptation, local value retention, skills development, and traveller behaviour change, arguing that sustainable tourism can accelerate national priorities of inclusive growth while safeguarding ecological and cultural assets.

Introduction

Tourism weaves together mobility, exchange, and meaning, serving as one of the most dynamic forces of globalization. In India, its significance extends beyond mere consumption; it acts as a cultural bridge through which visitors experience the nation's civilizational heritage, living traditions, and ecological diversity across its vast geography. Tourism, therefore, is not simply an act of travel but a participatory encounter with the country's collective identity an experience of heritage, diversity, and spirituality. This paper situates sustainable tourism as a strategic instrument for inclusive and balanced development in India. Aligned with global definitions, sustainable tourism emphasizes the need to consider current and future economic,

social, and environmental impacts while addressing the needs of visitors, the industry, the environment, and host communities (Council on Energy, Environment and Water (CEEW), 2022). Reflecting this philosophy, India's recent policy frameworks (MoT, 2022a; MoT, 2022b) mark a decisive shift from product expansion to destination stewardship, emphasizing resilience, resource efficiency, and participatory governance. By synthesizing contemporary data and national strategies, this study explores how sustainable tourism can serve as a transformative lever linking growth with responsibility and shaping the Indian economy toward a more inclusive, equitable, and environmentally conscious future.

Review of Literature:

Tourism has long been recognized as a catalyst for economic growth and employment generation. Archer (1995) highlighted tourism's direct contribution to GDP and its multiplier effects through related sectors, while Balaguer and Cantavella-Jorda (2002) confirmed tourism as a long-run growth factor in Spain. Dritsakis (2004) similarly found a positive causal relationship between tourism receipts and economic growth in Greece, a result consistent with Durbarry (2002), who examined the Mauritian economy. Subsequent research by Kim, Chen, and Jang (2006) on Taiwan and by Arslanturk et al. (2011) on Turkey reinforced the tourism-led growth hypothesis by showing that expanding tourism enhances foreign exchange reserves, stimulates investment, and generates employment.

In the Indian context, Mallick et al. (2016) analyzed data from 23 states during 1997–2011 using a panel ARDL model and concluded that tourism significantly influences state-level GDP, especially when supported by strong financial markets. Sarkar (2022) also observed that tourism's multiplier effects extend across employment, service exports, and infrastructure. More recent studies (Business World, 2023; WTTC, 2023) estimate that the travel and tourism sector contributes about 7 percent to India's GDP and supports nearly 90 million jobs, underscoring its macroeconomic importance.

Several scholars have connected sustainability with tourism-led growth. Macbeth (2005) emphasized the ethical dimension of sustainable tourism as a framework linking environmental stewardship with economic prosperity. Das (2011) explored India's eco-tourism policies and identified institutional constraints such as weak human-resource capacity and inadequate infrastructure that hinder sustainability. Lalnunmawia (2013) examined sustainable tourism's socio-cultural impacts and stressed balancing visitor inflows with biodiversity conservation. The Ministry of Tourism (2021, 2023) later formalized these ideas through its *National Strategy and*

Roadmap for Development of Rural Tourism and National Strategy for Sustainable Tourism, highlighting community participation, conservation, and capacity building as strategic pillars.

Internationally, Lee and Chang (2008) found that tourism development enhances growth in developing economies by attracting investment in infrastructure and human capital. Sahli and Nowak (2007) framed inbound tourism within trade theory, concluding that developing countries benefit when tourism revenues are reinvested locally. Blake et al. (2006) demonstrated productivity gains from tourism in the United Kingdom, suggesting that sustainability practices further raise efficiency. Brida, Cortés-Jiménez, and Pulina (2016) provided a comprehensive literature review validating the tourism-led growth hypothesis across multiple nations.

Emerging Indian research also links sustainable tourism to **inclusive development**. Kerala's Responsible Tourism Mission, evaluated by Kokkranikal (2015), illustrates how linking local producers to the tourism supply chain can reduce leakages and empower women. Studies from Sikkim (Sikkim Tourism Department, 2024) and Ladakh (Indian Institute of Astrophysics, 2025) show that eco-friendly and astro-tourism initiatives can create livelihoods while conserving fragile ecosystems. Collectively, these works demonstrate that sustainable tourism—when guided by participatory governance and environmental safeguards—acts as both an economic and a social policy instrument.

Despite the growing consensus, the literature identifies key gaps. Few Indian studies employ rigorous econometric evaluation of sustainability outcomes; most remain descriptive. Carrying-capacity assessment and climate-risk integration are under-researched, and reliable longitudinal data on community benefits are scarce. Future research should focus on quantifying how sustainable tourism contributes to inclusive growth, green employment, and resilience against climate

shocks, thereby linking tourism studies more explicitly with India's Sustainable Development Goals.

Objectives: The Objectives of the study are:

- To examine the growth performance and policy framework of India's tourism sector, with special reference to national strategies and sustainability-oriented development initiatives.
- To evaluate the effectiveness of sustainable tourism models at the state and community levels, identify key challenges to their expansion, and suggest policy measures for inclusive and environmentally responsible growth.

Methodology:

This study is qualitative and descriptive in nature and is based on secondary data collected from reliable institutional sources. The main data have been drawn from government publications such as the *Year End Review 2024* of the Press Information Bureau (PIB), the *Annual Report 2024–25* and *India Tourism Statistics 2023* of the Ministry of Tourism (MoT), Government of India. Policy references include the *National Strategy for Sustainable Tourism (NSST, 2022)* and the *National Strategy for Ecotourism (2022)*. State-level information was obtained from the Kerala Responsible Tourism Mission, the Indian Institute of Astrophysics (IIA) on the *Hanle Dark Sky Reserve (HDSR)*, and the Sikkim Tourism and Sikkim Forest Department portals. Additional insights were sourced from intergovernmental and research institutions such as the Food and Agriculture Organization (FAO) and the Council on Energy, Environment and Water (CEEW). The collected data were analyzed descriptively to identify trends, policies, and sustainable practices in India's tourism sector.

Analysis and Discussion

In recent years, India's tourism sector has shown a remarkable recovery trajectory, and this rebound offers a foundation for integrating sustainability into future expansion. According to the *Year End Review 2024* by the Press Information Bureau, India recorded 18.89 million International Tourist Arrivals in 2023. Press Information Bureau The *Annual Report 2024- 25* of the Ministry of Tourism records that in 2024, India's Foreign Tourist Arrivals were provisionally 9.66 million, with corresponding foreign exchange earnings rising significantly. Ministry of Tourism These numbers imply that while inbound tourism is still recovering, domestic tourism acts as a stabilizing pillar.

This performance underscores the first objective: describing recent performance trends. The data reveals two salient features: (a) the pronounced weight of domestic tourism in India's tourism economy, and (b) a recovering but not yet fully restored inbound segment both of which shape strategies for embedding sustainability.

When one examines state-level case studies with a sustainability lens, certain practices stand out as promising and replicable. In Ladakh, the *Hanle Dark Sky Reserve* model exemplifies low-impact, community-based tourism built around astro-observation, nocturnal ecology, and local interpreter-guides. The institutional support from the Indian Institute of Astrophysics ensures scientific integrity, while local youth (including women) act as “ambassadors,” hosting stargazing, guiding, and community-based outreach. This model leverages a niche appeal (dark-skies) yet remains tightly linked to place-based governance. The success of such an initiative suggests how remote, fragile destinations can avoid mass tourism while generating premium value and livelihood opportunities.

In Kerala, the Responsible Tourism (RT) mission remains one of India's most mature sustainable tourism ecosystems. The state institutionalizes local supply chains by linking

farmers, artisans, and self-help groups to accommodation and experiential value chains. This reduces leakage, ensures value retention locally, and empowers marginalized groups, especially women. Several FAO case studies document how RT has strengthened agritourism, homestays, and community-linked supply networks. (FAO, 2022) The Kerala model highlights how governance mechanisms such as destination committees, procurement norms, and local stakeholder structures are central to sustainable scaling.

Sikkim presents another interesting example. The state promotes ecotourism in close alignment with its declared goal of environmental stewardship and carbon negativity. While documentation is less extensive in peer-reviewed literature, policy documents and state portals describe processes for ecological zoning, community benefit sharing, and nature-based interpretation. The inclusion of forest department and tourism collaboration is a positive sign for integrated governance.

Putting these state-level practices in conversation with the fourth objective identifying binding constraints reveals the core challenges to scaling sustainable tourism in India.

First, carrying capacity and visitor management remain weakly institutionalized. Many destinations lack clear thresholds of acceptability; visitor flows are still largely uncontrolled during peak seasons. Without zoning, quotas, or reservation mechanisms, ecological and social stress intensifies. Although MoT-linked schemes now emphasize destination-centric planning, real enforcement on the ground (in hills, heritage sites, fragile eco-systems) is uneven.

Second, climate and environmental risk is becoming a more urgent constraint. Rising temperatures, glacier retreat, unpredictable rainfall, and biodiversity stressors are already affecting Himalayan and coastal destinations. Without climate-risk screening and adaptation measures (water systems, flood buffers,

resilient design), tourism investments stand vulnerable.

Third, informality and weak institutional support hinder equitable inclusion. Guides, porters, home-stay owners, and small artisans often operate outside formal regulatory and financial frameworks. They lack access to credit, insurance, training, quality standards, or market visibility. This limits their capacity to improve service and share equitably in value chains.

Fourth, data, measurement, and accountability are limited. While MoT publishes compendia (e.g., *India Tourism Data Compendium 2024*) Ministry of Tourism and statistics (India Tourism Statistics 2023) Ministry of Tourism, these are largely aggregate, lagging, and not disaggregated to community benefit indicators (local procurement share, gender inclusion, waste diversion, energy efficiency). Lack of transparent dashboards weakens destination-level accountability. Fifth, uneven capacity and coordination across sectors tourism, environment, local governments, culture is a governance hurdle. Without strong Destination

Management Organizations (DMOs) or interdepartmental coordination, sustainability goals often remain compartmentalized or symbolic. Against this backdrop, the final objective formulating policy recommendations becomes not merely desirable but essential. Several lines of action emerge:

- Embed sustainability criteria into funding eligibility. Future central schemes (SD 2.0, PRASHAD, CBDD) should require approved carrying-capacity plans, visitor-management protocols, waste and energy benchmarks, and climate-resilient design to qualify for funding.
- Institutionalize Destination Management Organizations (DMOs). Major destinations should have empowered DMOs composed of state agencies, municipal bodies, community representatives, local

guides, and SMEs. DMOs would plan, gate, monitor, and evaluate destination health (economic, social, and environmental).

- Invest in data, monitoring, and public dashboards. MoT should drive development of a “Sustainable Destination Dashboard” that tracks indicators such as local procurement, women/youth employment, waste recovery rates, energy use per room, visitor satisfaction, and GHG footprint. Public display fosters accountability.
- Strengthen capacity and formalization among micro-actors. Training programs (under MoT’s CBSP scheme) should expand to include certification for eco-guiding, sustainability audits, digital literacy, and business skills. Financial inclusion (soft credit, guarantee schemes, micro-insurance) should be extended to informal operators. Govt. should promote schemes like “Paryatan Mitra” and “Paryatan Didi” more rigorously.
- Integrate climate resilience and nature-based design. All new infrastructure investments should undergo climate-risk screening. Designs should integrate solar energy, rainwater harvesting, green waste treatment, dark-sky lighting norms (in astro/remote sites), and buffer zones. Nature-based solutions like wetland restoration or tree buffers can be part of tourism master plans.
- Apply differential pricing, quotas, and reservation systems in stress zones. In high-footfall sites (mountains, heritage, fragile ecosystems), dynamic pricing or booking quotas especially in peak season can limit overuse. Use revenue from premium users to fund conservation and community services.
- Promote niche, low-volume, high-value tourism clusters. Emphasize models such as astro-tourism, cultural-interpretation trails, slow rural circuits,

agro-tourism, forest-based nature walks destinations that attract discerning travellers who are willing to pay a premium for experience and minimal impact.

- Encourage state-to-state peer learning and benchmarking. States practicing good sustainable integrations (Kerala, Ladakh, Sikkim) should be centers of capacity- building and cross-learning across less-developed states in the northeast, Himalayas, and coastal zones.
- Mainstream “Travel for LiFE” and behavior-change nudges. MoT should embed traveller behaviour nudges waste segregation, plastic prohibition, energy conservation, respect for local norms into booking platforms, tourism apps, signage, and guide training, and track compliance via visitor surveys.

To synthesize, the analysis indicates that India’s tourism revival is real and resilient, but the mere return of numbers is insufficient. The opportunity now lies in reshaping growth through sustainability not as an added policy objective, but as the core axis of tourism expansion. The success stories from Ladakh’s dark-sky tourism, Kerala’s responsible tourism supply networks, and nascent moves in Sikkim illustrate that sustainable models can yield both ecological safeguarding and local benefit. Yet, scaling these models is constrained by capacity gaps, weak coordination, measurement deficits, and climate pressures.

If India can align MoT’s funding levers, build strong local institutional mechanisms, invest in data ecosystems, formalize informal actors, and integrate climate sensitivity, tourism can evolve from a growth sector into a transformative tool for inclusive development. In this pathway lies the potential to shape India’s economy in a way that respects ecology, heritage, and community dignity.

Policy Recommendations

India’s tourism sector stands at a critical turning point where the transition from

traditional mass tourism to sustainable, inclusive tourism can determine the sector's long-term contribution to economic and environmental well-being. Drawing upon the analysis above and consistent with the strategies of the Ministry of Tourism (MoT), the following policy recommendations are proposed to strengthen sustainable tourism practices and ensure equitable benefits across communities.

A comprehensive strategy for strengthening sustainable tourism in India requires the integration of sustainability principles into every stage of planning, funding, and implementation. Central and state-level schemes, particularly Swadesh Darshan 2.0, PRASHAD, and the Challenge-Based Destination Development programme, must embed sustainability criteria as a mandatory component of project design. This includes explicit indicators related to carrying capacity, energy efficiency, waste management, and community participation. To ensure accountability, sustainability audits should be introduced at both the appraisal and post-completion stages, enabling continuous monitoring of environmental and social impacts.

In parallel, the establishment of Destination Management Organizations (DMOs) at major tourism sites has become essential. These bodies must function as collaborative institutions, bringing together state tourism departments, local governments, community groups, women's self-help collectives, and private sector stakeholders. With a mandate focused on sustainable planning, DMOs would play a critical role in coordinating infrastructure development, managing visitor flow, and ensuring that heritage conservation efforts genuinely benefit local communities. Their presence would also introduce greater transparency, participatory governance, and local benefit-sharing in tourism management.

Strengthening sustainability also requires more robust data systems and monitoring frameworks. The Ministry of Tourism and state

tourism boards should jointly develop a National Sustainable Tourism Dashboard that monitors indicators such as local employment levels, waste reduction achievements, renewable energy use, and visitor satisfaction. Existing publications, including India Tourism Statistics and the Tourism Data Compendium, need to incorporate these sustainability metrics to create a more comprehensive and comparable database. Aligning periodic reporting with the Global Sustainable Tourism Council (GSTC) standards would further enhance transparency and enable India to benchmark its performance globally.

As climate risks intensify, especially in the Himalayan, coastal, and island regions, tourism infrastructure must adopt a climate-resilient approach. Mandatory climate-risk screening should be applied to all tourism projects, ensuring the use of renewable energy, low-impact architectural design, rainwater harvesting, and organized waste segregation. Innovative conservation-friendly practices, such as dark-sky-compliant lighting in ecologically sensitive environments, offer new possibilities for balancing development with environmental protection. Ladakh's Hanle Dark Sky Reserve, for example, demonstrates how ecological conservation can coexist with innovative tourism planning.

Sustainable tourism is also deeply connected to the empowerment of the informal tourism workforce, which includes guides, homestay owners, artisans, and transport providers. Strengthening their capabilities through the expansion of the Capacity Building for Service Providers (CBSP) programme will promote more inclusive and community-centered tourism. Regular training in eco-guiding, heritage interpretation, safety protocols, and digital marketing can significantly enhance the quality of services offered by these workers. Equally important is the integration of informal workers into systems of social security, insurance, and microcredit, achieved through coordinated efforts with financial institutions.

Another essential dimension of sustainability lies in encouraging local procurement and promoting circular economy practices. Tourism establishments should increasingly source food, handicrafts, and services from local producers and self-help groups. Kerala's Responsible Tourism Mission provides a strong example of how local sourcing and community-based supply chains can maximize value retention within destinations. States across India can adapt this model and incentivize businesses that prioritize local procurement, waste recycling, and resource reuse.

Environmental protection and visitor experience can also be improved by introducing carrying-capacity norms and digital visitor management systems, particularly in ecologically fragile destinations. These mechanisms, supported by dynamic pricing and advance reservation systems during peak seasons, can help prevent overcrowding while generating revenue for conservation activities.

Behavioural change among tourists forms another critical pillar of sustainable tourism. The Travel for LiFE initiative under the broader Mission LiFE framework can play a transformative role in promoting responsible travel habits. Integrating awareness campaigns into airline and railway messaging, hotel guidelines, digital booking platforms, and tourism advertisements can encourage visitors to reduce plastic use, respect local cultures, and adopt environment-friendly practices.

Finally, the future of sustainable tourism depends on sustained research, innovation, and collaboration among states. Universities, research institutions, and tourism departments should jointly evaluate sustainability outcomes and develop innovative approaches to eco-certification, rural circuits, and smart destination management. Successful state models such as Kerala, Sikkim, and Ladakh can act as hubs of inter-state learning and policy transfer. Increased funding under the Ministry of Tourism's research grants for pilot projects will generate new evidence and guide long-term planning.

Collectively, these measures can align economic development with ecological conservation and community welfare. With coherent governance, strong institutional mechanisms, and active public participation, India has the potential to emerge as a global leader in sustainable tourism and green growth, positioning itself at the forefront of responsible travel in the decades ahead.

Conclusion

The study concludes that sustainable tourism plays a vital role in shaping India's economy by linking growth with environmental conservation and social inclusion. Analysis of secondary data from the Ministry of Tourism (MoT) and the Press Information Bureau (PIB) indicates a strong post-pandemic revival, with over 2.5 billion domestic tourist visits and a steady rise in foreign arrivals, making tourism a key driver of employment and rural development. Government initiatives such as the *National Strategy for Sustainable Tourism (2022)*, *Swadesh Darshan 2.0*, and *PRASHAD* reflect a decisive shift from volume-driven growth to sustainability-oriented planning. Successful state models like Kerala's Responsible Tourism Mission, Sikkim's Ecotourism Policy, and Ladakh's Dark Sky Reserve show that community participation and environmental stewardship can create lasting economic benefits. However, challenges remain in the form of limited data systems, informality, and inadequate enforcement of carrying capacity norms. To ensure long-term resilience, India must strengthen institutional mechanisms, integrate climate-sensitive planning, and formalize local participation in tourism governance. If pursued with balanced vision and accountability, sustainable tourism can serve as a transformative force for inclusive, resilient, and environmentally responsible development in India.

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BUILDING SELF-RELIANCE THROUGH MSMEs: LINKING ENTERPRISE GROWTH AND EMPLOYMENT GENERATION UNDER INDIA'S UDYAM FRAMEWORK AND GOVERNMENT INITIATIVES

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Abstract

The MSME sector has become a key pillar of India's economic development, particularly after the introduction of the Udyam Registration system in July 2020. This study analyses the growth of MSMEs under the Udyam framework and their contribution to employment generation from FY 2020–21 to 2023–24. The results indicate a highly positive association ($r = 0.9897$) between the number of Udyam registrations and employment creation, indicating that the expansion of registered enterprises directly stimulates job creation. The paper further examines the Ministry of MSME's budgetary performance, the implementation of Direct Benefit Transfer (DBT) schemes, and the impact of skill development initiatives conducted through various institutions such as KVIC, NSIC, NI-MSME, and Technology Centres. The analysis highlights efficient fund utilisation, progressive policy measures, and the vital role of micro- enterprises in generating livelihoods. The study concludes that the government's focused interventions through Udyam, DBT, and training programmes have significantly strengthened the MSME ecosystem and contributed to sustainable employment growth in India.

Key words: MSME, Udyam Registration, Employment Generation, Budgetary Performance, DBT System, Skill Development, KVIC, NSIC, Micro Enterprises, Entrepreneurship.

Introduction

The foundation of India's industrial sector, MSMEs significantly boost employment, exports, and GDP. The introduction of Udyam Registration on July 1, 2020, which aimed to streamline classification and improve transparency, brought about a dramatic change in the industry. Only organizations registered as Udyam are recognized as MSMEs under this method. MSME businesses are essential for creating jobs, especially in developing nations like India where they act as a link between self-

employment and unemployment. These small-scale businesses are very good at using up excess labour from rural and semi-urban areas because they are frequently labour-intensive and require comparatively little capital investment. By providing wage-based and self-employment opportunities, MSME businesses directly support inclusive economic growth and the fight against poverty.

The Govt. of India, through the m/o MSME, has launched multiple initiatives such as PMEGP, PM Vishwakarma, and skill

development programs to strengthen the entrepreneurial ecosystem. Furthermore, Direct Benefit Transfers (DBT) have been institutionalised to ensure transparency, accountability, and efficiency in fund utilisation.

Review of literature

Riyani et al. (2023)¹ explain that improving skills—especially through online learning platforms—can greatly enhance the competitiveness of MSMEs. They note that digital and technological knowledge form the base for developing cognitive skills, which are crucial for staying competitive in a fast-changing business environment. Mahesh et al. (2023)² support this view, highlighting that government-backed digital initiatives such as Udyam Registration have given MSMEs better access to finance and infrastructure. These initiatives promote inclusion and sustainability, helping small enterprises grow within the broader economy. Suwandi (2024)³ emphasizes the power of mentorship in helping MSMEs build core business skills. Guided training, according to the study, can lead to visible improvements in both performance and long-term business stability. Ilyas and Ali (2023)⁴ point out that skill development programs should match current market needs to be effective. When training is aligned with real-world job requirements, it increases the employability of young graduates and job seekers. Evans (2022)⁵ states that strong government policies play a major role in supporting MSMEs. When governments design policies that enhance MSME capacity, it leads to more job creation and greater industrial activity. Kadaba et al. (2022)⁶ emphasized the significance of the MUDRA scheme, which offers financial aid and developmental support to MSMEs. They noted that this initiative enhances the sector's role in boosting economic growth and plays a key part in poverty reduction. **Rameshbhai and Solanki (2022)**⁷ pointed out that MSMEs serve as an important source of employment

and economic stability. They stressed that ongoing innovation and flexible strategies are crucial for maintaining the long-term growth and survival of MSMEs in today's global and competitive environment.

Statement of the problem

The MSME sector is a key pillar of India's economic development and employment generation, yet it continues to face many challenges in achieving its full potential. Although the Udyam Registration system launched in 2020 has made it easier for enterprises to register and access government support, many micro and small businesses still struggling to access to finance, technology, and skill development. Government programs like PMEGP, PM Vishwakarma, and Direct Benefit Transfers (DBT) aim to promote entrepreneurship and self-reliance, but their actual impact on employment generation and enterprise growth needs closer examination. There is still a gap between policy efforts and real outcomes at the grassroots level. Hence, this research aims to examine the growth of MSMEs registered under the Udyam system in recent years, their contribution to employment generation, and the effectiveness of government initiatives in promoting self-reliance within the MSME sector in India

Study objectives

1. To examine the growth pattern of enterprises registered under the Udyam system during the period from FY 2020–21 to 2023–24.
2. To assess the relationship between Udyam registration and employment generation.
3. To examine the budgetary trends and financial performance of the Ministry.
4. To assess the impact of DBT schemes on the micro-enterprise's development.
5. To assess the contribution of MSME skill development institutions in enhancing entrepreneurship and employability.

Study approach

This research is grounded on secondary information obtained from credible government sources such as the Press Information Bureau, MSME Annual Reports, and official publications of the Ministry of MSME and the Udyam Registration Portal.

Statistical techniques such as percentage evaluation, trend assessment, and correlation analysis were employed to investigate the relationship between Udyam registrations and employment generation. The correlation coefficient (r) and R^2 were computed to measure the degree of association between enterprise growth and job creation. Descriptive analysis was used to evaluate DBT schemes, budget utilization, and skill development outcomes.

UDYAM / MSMEs

In India, only enterprises registered under the Udyam Registration System are officially recognized as MSME, also known as Udyam

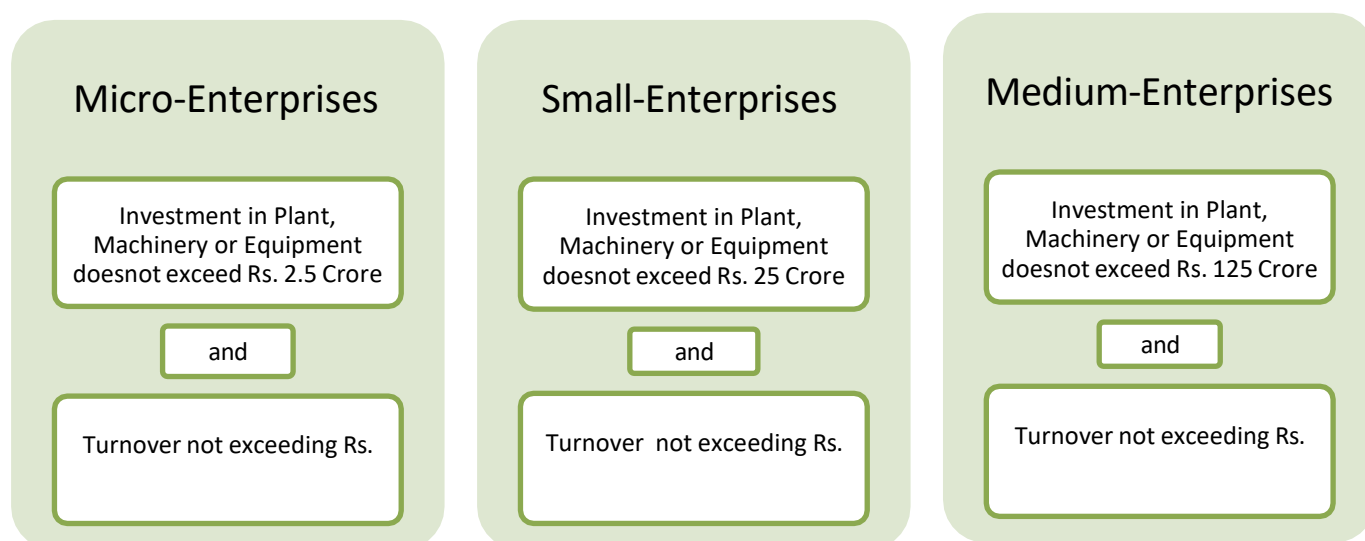
units.

As per GoI, M/o MSME Notification S.O. 2219 (E), enterprises are classified as follows:

- Micro Enterprise: Investment \leq Rs.1 crore and turnover \leq Rs.5 crore.
- Small Enterprise: Investment \leq Rs.10 crore and turnover \leq Rs.50 crore.
- Medium Enterprise: Investment \leq Rs.50 crore and turnover \leq Rs.250 crore.

Registered units are termed MSMEs or Udyam. The revised classification is based on investment in plant & machinery/equipment and annual turnover. As per the classification of enterprises based on investment and turnover, Micro Enterprises are those where the investment in plant and machinery or equipment does not exceed Rs. 1 crore and the turnover not exceeding Rs. 5 crore. Small Enterprises are defined as units where the investment in plant and machinery or equipment not exceeding Rs. 10 crore and the turnover not exceeding Rs. 50 crore. Medium Enterprises are those where the investment in plant and machinery or equipment not exceeding Rs. 50 crore and the turnover not exceeding Rs. 250 crore.

Fig 1 :MSME Definition in India (Effective from April 1, 2025)

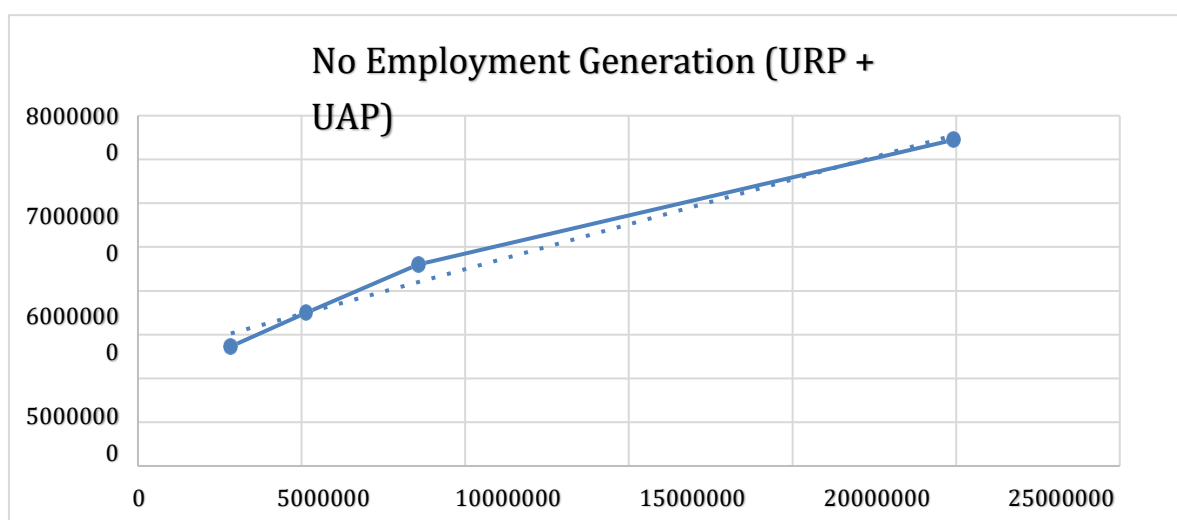


Source: M/o MSME S.O. 1364(E) dated 21-03-2025

Table 1: Expansion of Udyam Enterprises and Employment Generation from FY 2020-21 (01-07-2020 to 31-03-2021) to 2023-24

| Year | 2020-21 | 2021-22 | 2022-23 | 2023-24 | Total |
|--------------------------------------|----------|----------|-----------|-----------|-----------|
| No of Udyam (URP + UAP) | 2838249 | 5135906 | 8565154 | 24912943 | 41452252 |
| Cumulative | | 7974155 | 16539309 | 41452252 | |
| % Increase | | 180.953 | 107.411 | 150.629 | |
| No Employment Generation (URP + UAP) | 27297074 | 34953245 | 46035185 | 74455733 | 182741237 |
| Cumulative | | 62250319 | 108285504 | 182741237 | |
| % Increase | | 128.048 | 73.952 | 68.759 | |
| Correlation Coefficient (r) | | | | | 0.9897 |

Source: PIB release Id 2036989 and 2041686

Fig 2: Relationship between Udyam Registrations and Employment Generation (2020-21 to 2023-24)

Source: Computed from the data available in PIB release Id 2036989 and 2041686

Interpretation: The analysis reveals an exceptionally strong positive relationship between Udyam registrations and employment creation, with a correlation coefficient of $r = 0.9897$. The R^2 (0.9796) suggest that nearly 98% of the changes in employment generation trends can be attributed to the rise in Udyam-registered enterprises. Furthermore, the regression slope ($b = 2.049$) suggests that, on average, each new Udyam registration contributes to the creation of around two

employment opportunities.

Key government initiatives to nourish micro-enterprises

- **Budgetary Outlay and Expenditure Trends of the Ministry (2020-21 to 2023-24)**

Table 2 shows that the Ministry's budgetary performance has been largely efficient and consistent over the years. In 2020-21, only 74.58% of the budgeted funds were utilized,

due to COVID-19 pandemic. However, performance improved sharply from 2021–22 onward, with 96.57% utilization that year, indicating stronger implementation and recovery.

In the FY 2022–23, the actual spending

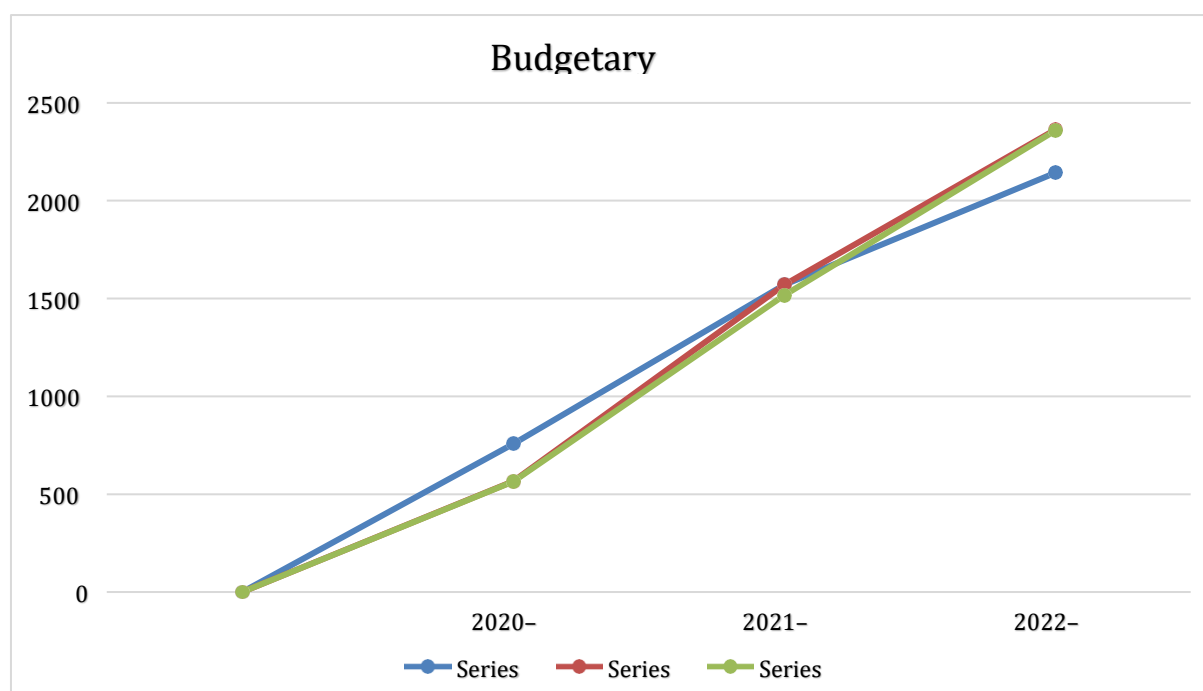
surpassed the projected budget allocations at 110.30%, showing additional fund requirements or expanded program coverage during the year. Similarly, in 2023–24, expenditure reached 99.80% of the budgeted amount, demonstrating near-full utilization and effective fiscal management.

Table 2: Budgetary Allocation of the Ministry (Rs. in Crore)

| F. Y. | Estimates of Budget (BE) | RevisedEstimates (RE) | Actual Expenditure | % of Actual over Budgeted |
|---------|--------------------------|-----------------------|--------------------|---------------------------|
| 2020–21 | 7,572.20 | 5,664.22 | 5,647.50 | 74.58 |
| 2021–22 | 15,699.65 | 15,699.65 | 15,160.47 | 96.57 |
| 2022–23 | 21,422.00 | 23,628.73 | 23,583.90 | 110.30 |
| 2023–24 | 22,137.95 | 22,138.01 | 22,094.17 | 99.80 |

Source: MSME Annual Report 2024-25 (Expenditure as on 20.01.2025)

Fig 3: Trend of Budgetary Outlay (2020–21 to 2022–23)



Source: MSME Annual Report 2024-25 (Expenditure as on 20.01.2025)

The Fig 3 shows a consistent upward trend in the Ministry's Budget Estimates (BE), Revised Estimates (RE), and Actual Expenditure from 2020–21 to 2022–23. All three indicators have grown steadily, reflecting the government's increased focus on program expansion and implementation. The close alignment between BE, RE, and Actual figures indicates efficient financial planning and effective utilization of funds during the period.

• Direct Benefit Transfers (DBTs) of MSME

All welfare and subsidy programmes of the GoI are now delivered through the Direct Benefit Transfer (DBT) system to make fund distribution faster, transparent, and more efficient. This system ensures that money or benefits reach the right people directly, reducing delays, duplication, and fraud. A specialized DBT Cell has been established within the m/o msme to oversee, coordinate,

and monitor the implementation of these programmes effectively.

The Ministry's DBT schemes are grouped by the type of benefit provided Cash, Kind, or both combined. Table 3 shows that under the DBT system, the PM Vishwakarma Scheme had the highest impact, reaching

18.23 lakh beneficiaries with an expenditure of Rs. 3,131.86 crore. The PMEGP also involved high spending (Rs. 1,160.19 crore) but supported fewer beneficiaries, indicating higher investment per person. ESDP and MPDA schemes benefited over two lakh and one lakh people respectively with moderate funds, focusing on skill and institutional development. Smaller schemes like ATI, Coir Vikas, and IC Schemes targeted specific groups. Overall, cash-based schemes accounted for major spending, while in-kind schemes emphasized training and capacity building.

Table 3: Scheme-wise Distribution of Beneficiaries and Expenditure under DBT System

| Sl. No. | Scheme-Name | Benefit Type | Total Beneficiaries (No.) | Total Expenditure (Rs. crore) |
|---------|------------------------------------|-------------------------|---------------------------|-------------------------------|
| 1 | ATI-Scheme (Training Component) | In kind | 7,435 | 11.93 |
| 2 | MPDA-Grant to Khadi Institutions | Cash | 1,18,206 | 66.28 |
| 3 | Coir Vikas Yojana | Cash | 49,975 | 32.27 |
| 4 | PMEGP | Cash | 28,503 | 1,160.19 |
| 5 | ESDP | In kind | 2,13,241 | 63.69 |
| 6 | International Co-operation Schemes | Cash | 240 | 9.69 |
| 7 | PM Vishwakarma Scheme | Both (Cash and In Kind) | 18,23,451 | 3,131.86 |

Source: MSME Annual Report 2024-25

Skill Training Eco-system of Ministry of MSME

M/o MSME conducts various skill development programs to improve employability and promote entrepreneurship among new and existing business owners, as well as those seeking jobs. Training programs are conducted through various institutions functioning under the Ministry, including the KVIC, Coir Board, NSIC, NIMSME, and MSME-TCs. These programs are open to a wide range of participants from school dropouts to postgraduates and offer certificates, diplomas, and advanced courses. Special training is also given for traditional sectors like Khadi, Village Industries, and Coir. All training programs are aligned with the NSQF under the Skill India Mission, which is managed by the MSDE. Major schemes offering training include TRs & ITs, ATI, National SC/ST Hub, Khadi Gramodaya Vikas Yojana, Coir Vikas Yojana, and

Mahila Coir Yojana. Table 4 shows that the KVIC played a major role in skill development, training 81,221 people in 2020–21, which rose to 1,11,597 in 2021–22, and later 25,587 up to December 2024, contributing 19.91% of total trainees. This shows KVIC's strong focus on promoting rural entrepreneurship and self-employment. The National Small Industries Corporation (NSIC) showed steady growth, training 33,527 people in 2020–21 and increasing to 66,765 in 2023–24, contributing 17.68%. It plays an important role in industrial skill development and business growth for MSMEs. The National Institute for MSME (NI-MSME) trained smaller numbers but showed improvement in 2024–25 with 14,256 trainees, reflecting a growing focus on entrepreneurship and capacity building. The Coir Board, working mainly in traditional industries, trained around 3,000–7,000 people each year, making up 1.54% of the total.

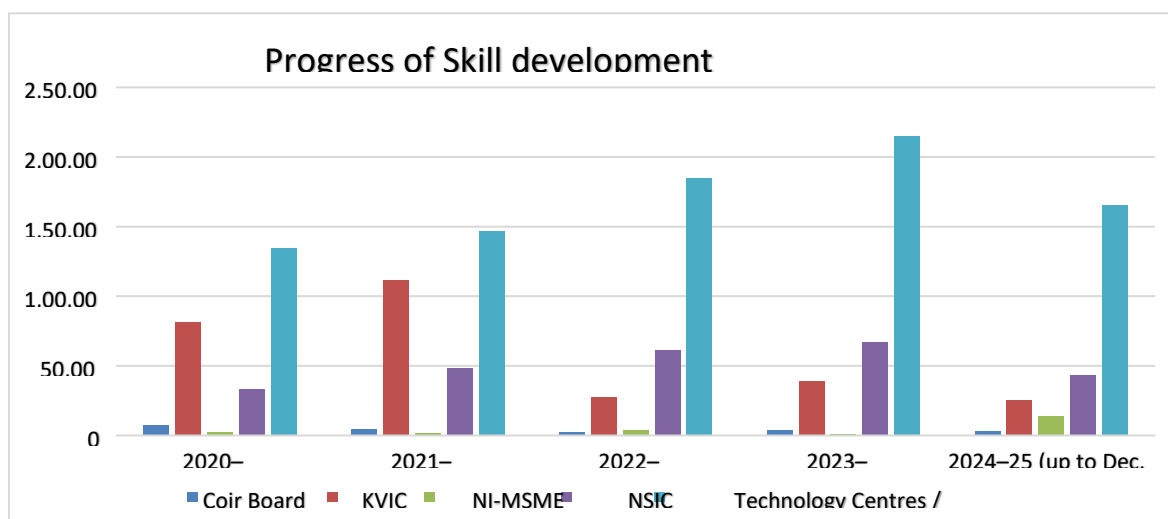
Table 4: Progress of programmes for Skill development conducted by various organizations since 2020-21 to 2024-25

| Organizations | 2020–21 | 2021–22 | 2022–23 | 2023–24 | 2024–25 (up to Dec. 24) | Total | % Share |
|--|----------|----------|----------|----------|----------------------------|-----------|---------|
| Coir Board | 7,145 | 4,755 | 2,794 | 3,999 | 3,411 | 22,104 | 1.54% |
| KVIC | 81,221 | 1,11,597 | 27,376 | 39,149 | 25,587 | 2,84,930 | 19.91% |
| NI-MSME | 2,310 | 1,830 | 4,140 | 1,463 | 14,256 | 23,999 | 1.68% |
| NSIC | 33,527 | 48,182 | 61,090 | 66,765 | 43,462 | 2,53,026 | 17.68% |
| Technology Centres / Extension Centres | 1,34,853 | 1,46,526 | 1,85,178 | 2,14,897 | 1,65,400 | 8,46,854 | 59.18% |
| Total | 2,59,056 | 3,12,890 | 2,80,578 | 3,26,273 | 2,52,116 | 14,30,913 | 100.00% |

Source: MSME Annual Report 2024-25

Fig 4: The Progress of Skill development programmes conducted by various organizations of the M/o MSME

Source: MSME Annual Report 2024-25

**Findings of the study**

1. The study found a very highly positive relationship ($r = 0.9897$) among the count of Udyam registrations and employment generation in India. The data shows that from FY 2020–21 to 2023–24, the number of Udyam-registered enterprises increased from 28,38,249 to 2,49,12,943, while total registrations reached 4,14,52,252. During the same period, employment generation rose from 2,72,97,074 to 7,44,55,733, reaching a total of 18,27,41,237 jobs. The R^2 value (0.9796) suggests that approximately 98% of the fluctuation in employment levels can be explained by the growth in Udyam registrations. This confirms that the rise in enterprise registrations has directly contributed to job creation across the country.
2. According to the Udyam portal, micro enterprises dominate the MSME sector, both in the unit numbers and generation of employment. There are over 40.8 million micro enterprises providing jobs to approximately 163.78 million people. Small enterprises, numbering 6,12,251 units, employ about 13.77 million individuals, while 55,698 medium enterprises employ 6.08 million people.
3. The budgetary outlay and expenditure trends of the Ministry of MSME show efficient utilization of funds. In 2020–21, the Ministry utilized 74.58% of its budgeted funds due to COVID-19 disruptions. However, utilization improved sharply to 96.57% in 2021–22, and in 2022–23, actual expenditure exceeded budget estimates at 110.30%, reflecting strong implementation. In 2023–24, utilization again remained high at 99.80%, indicating effective fiscal management and close alignment between budget estimates and actual spending.
4. Under the Direct Benefit Transfer (DBT) system, the Ministry ensured faster and more transparent delivery of benefits. The PM Vishwakarma Scheme recorded the highest impact, reaching 18,23,451 beneficiaries with an expenditure of Rs. 3,131.86 crore. The PMEGP supported 28,503 beneficiaries with an expenditure of Rs. 1,160.19 crore, while the MPDA Grant to Khadi Institutions and ESDP schemes benefited 1,18,206 and 2,13,241 people respectively. Smaller schemes such as ATI and Coir Vikas also

contributed to targeted capacity building and sectoral development.

5. The skill training ecosystem under the Ministry of MSME trained 14,30,913 people from 2020–21 to 2024–25 (up to December 2024) through its various institutions. The Technology Centres/Extension Centres trained the largest number (8,46,854 trainees; 59.18% share), followed by KVIC (2,84,930 trainees; 19.91%) and NSIC (2,53,026 trainees; 17.68%). Other contributors include NI-MSME (23,999 trainees; 1.68%) and the Coir Board (22,104 trainees; 1.54%).
6. Institution-wise data shows that KVIC played a leading role in rural entrepreneurship by training large numbers in village industries, while NSIC and NI-MSME contributed significantly to industrial and managerial skill enhancement. The Technology Centres focused on technical training and innovation support for small industries, indicating a balanced and effective national skill ecosystem.

Conclusion

The study clearly shows that the MSME sector, particularly micro enterprises, holds a crucial position in India's employment generation and economic advancement. After the introduction of the Udyam Registration system in 2020, there has been a strong increase in both the count of registered enterprises as well as the total number of individuals employed. Between 2020–21 and 2023–24, Udyam registrations grew from 28,38,249 to 2,49,12,943, while employment increased from 2,72,97,074 to 7,44,55,733. The very high correlation ($r = 0.9897$) confirms that the growth of Udyam enterprises directly contributes to job creation across the country.

The analysis also shows that the Ministry of MSME has efficiently managed its financial resources. The budget utilization improved steadily each year, reaching almost 100% by 2023–24. This reflects better implementation

and strong commitment by the government to promote micro and small enterprises.

The Direct Benefit Transfer (DBT) system has made subsidy delivery faster, more transparent, and more effective. Major schemes such as PM Vishwakarma and PMEGP have reached millions of beneficiaries, supporting both new and existing entrepreneurs. These programs have not only created employment but also improved access to financial assistance and training for small business owners.

The study further highlights the importance of skill development initiatives under the Ministry of MSME. Institutions like KVIC, NSIC, NI-MSME, and Technology Centres have together trained more than 14 lakh individuals since 2020. The Technology Centres contributed the highest share of trainees, while KVIC focused strongly on rural entrepreneurship and self-employment. This skill ecosystem has strengthened the foundation of entrepreneurship and helped many individuals start or expand their businesses.

Overall, the findings confirm that government initiatives such as Udyam Registration, DBT, and MSME skill programs have worked together to create a more vibrant, inclusive, and self-reliant MSME sector. Micro enterprises, in particular, have emerged as key drivers of job creation, income generation, and poverty reduction. Going forward, continued policy support, access to finance, digital empowerment, and sustained skill training will be essential to ensure long-term growth and competitiveness of India's MSME sector.

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AMENDMENTS AND REFORMS IN INDIA'S NATIONAL EDUCATION POLICY 2020: A TRANSFORMATIVE SHIFT IN EDUCATIONAL PARADIGM

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Abstract

The National Education Policy (NEP) 2020 represents a landmark reform in India's educational landscape, replacing the National Policy on Education (1986) with a comprehensive, flexible, and multidisciplinary framework. Designed to ensure equitable access, quality learning, and the development of essential 21st-century skills, the policy embodies a paradigm shift from an input-oriented to an outcome-driven model of education. It integrates foundational literacy, digital learning, vocational training, and global competitiveness within an Indian cultural and ethical context. This paper undertakes an analytical exploration of the key amendments and structural reforms introduced under NEP 2020, contrasting them with the 1986 policy framework. It critically examines the policy's implications for school and higher education, teacher preparation, assessment systems, governance models, and equity-focused interventions. Drawing upon official documents, policy reviews, and implementation reports available up to 2025, the study highlights achievements such as the 5+3+3+4 school structure, integration of Early Childhood Care and Education (ECCE), and abolition of the No Detention Policy. However, it also recognizes challenges including uneven rollout, regulatory delays, funding constraints, and state-level disparities that impede uniform implementation. Envisioning India as a knowledge superpower by 2040, the NEP 2020 aligns national educational reforms with the United Nations Sustainable Development Goals (SDGs). The present research, through secondary data analysis, evaluates the policy's transformative potential in creating a learner-centered, inclusive, and innovation-driven education system. **Methodology-** The present study is **qualitative and analytical** in nature, relying exclusively on **secondary data sources**. Information has been gathered from official government documents, policy reports, academic articles, and credible online databases. Comparative analysis has been employed to trace the evolution of educational policy from the **1986 National Policy on Education** to the **2020 NEP**, identifying key areas of reform and divergence. Descriptive and interpretive methods have been used to assess the progress, challenges, and future prospects of NEP implementation up to 2025. The research aims to synthesize existing evidence to offer a comprehensive understanding of NEP 2020's transformative vision and practical implications.

Keywords NEP 2020; Educational Reforms; Policy Amendments; School Education; Higher Education; Teacher Training; Foundational Literacy; 5+3+3+4 Structure; Vocational Integration; Assessment and Accreditation; Equity and Inclusion; Governance; Sustainable Development Goals (SDGs); Multidisciplinary Learning; Indian Education System.

Introduction

India's education system has evolved through three major national policies since independence: the 1968 policy emphasizing science and technology amid post-war

reconstruction; the 1986 policy (amended in 1992) focusing on access, equity, and universal elementary education; and the 2020 policy, which reimagines education as a tool for holistic development and global competitiveness. The NEP 2020, approved on July 29, 2020, responds to persistent issues like

low learning outcomes, rote memorization, and fragmented higher education, exacerbated by globalization and technological disruptions. It envisions an equitable system rooted in Indian ethos, targeting universal foundational literacy by 2025, 100% Gross Enrolment Ratio (GER) in school education by 2030, and 50% GER in higher education by 2035. Unlike the input-focused 1986 policy, NEP 2020 prioritizes outcomes, flexibility, and integration of vocational and multidisciplinary learning. This paper analyzes these amendments, their structural shifts, and implementation progress as of October 2025, including the recent abolition of the No Detention Policy.

Historical Context: From NPE 1986 to NEP 2020

The National Policy on Education (NPE) 1986 aimed to universalize elementary education, promote vocational training, and increase public spending to 6% of GDP, but implementation lagged, leaving gaps in quality and equity. It maintained a rigid 10+2 structure and exam-centric assessments, fostering coaching cultures and high-stakes pressures. NEP 2020 builds on these foundations but introduces radical amendments: a shift from access to holistic development, integration of early childhood care and education (ECCE), and emphasis on critical thinking over rote learning. By 2025, partial implementations like the Four-Year Undergraduate Programme (FYUP) signal progress, though challenges persist in aligning state curricula.

Key Reforms in School Education

NEP 2020 restructures school education into a 5+3+3+4 model (ages 3-18), replacing the 10+2 system to align with cognitive development stages, a departure from the 1986 policy's formal schooling from age 6.

- a) Integration of ECCE: Universal access to play-based ECCE for ages 3-6 via Anganwadis and pre-schools, targeting physical, cognitive, and socio-

emotional growth—absent in the 1986 framework.

- b) Foundational Literacy Mission: National Mission to achieve proficiency by Grade 3 by 2025, using peer tutoring and digital resources like DIKSHA, addressing the 1986 policy's unaddressed learning crisis.
- c) Curriculum Flexibility and Multilingualism: Reduced content load for experiential learning; mother tongue as medium up to Grade 5 (ideally 8); flexible three-language formula, contrasting the 1986 policy's Hindi-English focus.
- d) Vocational Integration: Mandatory exposure from Grade 6, including 10-day internships, expanding beyond the 1986 policy's higher secondary vocational streams.
- e) School Complexes: Clustering schools for resource sharing by 2025, enhancing equity in rural areas unlike the 1986 policy's district planning.

As of 2025, the National Curriculum Framework for Foundational Stage (NCF-FS) and "Jadui Pitara" kits have been rolled out, but curriculum alignment across states remains slow.

Reforms in Higher Education

NEP 2020 transforms higher education into a multidisciplinary ecosystem, phasing out single-stream institutions by 2040, moving beyond the 1986 policy's expansion without quality integration.

- a) Flexible Degree Structures: 3-4 year Bachelor's with multiple exits (certificate after 1 year, diploma after 2), integrated Master's options, and credit banks—rigid structures in 1986 are obsolete.
- b) Institutional Consolidation: Large multidisciplinary universities (3,000+ students) with autonomy; mergers of affiliates, addressing the 1986 policy's fragmentation.

- c) Research and Innovation: National Research Foundation (NRF) for cross-disciplinary funding, underdeveloped in 1986.
- d) Vocational and Global Focus: 50% enrollment in vocational courses by 2025; international campuses and credit transfers, evolving from 1986's standalone professional education.

By 2025, over 105 universities have adopted FYUP, and exams like JEE/NEET are in 13 languages, but a unified regulator bill is pending.

Teacher Education and Professional Development

Teachers are repositioned as knowledge facilitators in NEP 2020, with integrated programs in multidisciplinary institutions, contrasting the 1986 policy's standalone training.

- a) Minimum Qualification Upgrade: 4-year integrated B.Ed. by 2030, phasing out substandard institutes; scholarships for rural service.
- b) Continuous Professional Development (CPD): 50 hours annually via platforms like NISHTHA, with National Professional Standards for Teachers (NPST).
- c) Merit-Based Progression: Peer-reviewed careers, eliminating seniority bias absent in 1986.
- d) Multidisciplinary Integration: Teacher training with subjects like psychology, emphasizing inclusive pedagogy.

Implementation includes NISHTHA training expansions, but standalone TEIs persist in some states.

Assessment, Accreditation, and Quality Assurance

NEP 2020 shifts from summative to formative assessments, establishing PARAKH as a national benchmark—unlike the 1986 policy's exam dominance.

- a) Holistic Progress Cards: 360-degree evaluations with portfolios and self-assessments for Grades 3,5,8.
- b) Reformed Board Exams: Low-stakes, modular, twice-yearly for Grades 10/12, reducing coaching reliance.
- c) Accreditation Frameworks: Graded autonomy for institutions; School Quality Assessment and Accreditation Framework (SQAAF).
- d) National Testing Agency (NTA) Expansion: Conceptual aptitude tests without coaching.

A key 2024 amendment abolished the No Detention Policy for Classes 5 and 8, mandating retention for failures after re-exams, addressing learning gaps. PARAKH tools are operational, but uniform metrics lag.

Equity, Inclusion, and Accessibility

Equity is central, targeting Socio-Economically Disadvantaged Groups (SEDGs) with intensified measures beyond 1986's general access.

- a) Special Education Zones (SEZs): In aspirational districts for SEDGs (girls, SC/ST, disabled), with Gender Inclusion Funds.
- b) Inclusive Infrastructure: Barrier-free access, special educators, and nutritional programs like expanded midday meals.
- c) Dropout Prevention: 100% GER by 2030 via NIOS expansion and tracking; bridge courses for migrants.
- d) Cultural Sensitivity: Multilingual materials and bias-free curricula.
- e) By 2025, PM SHRI scheme has developed 14,500 exemplar schools, but SEDG enrollment gaps persist in rural areas.

Governance, Regulation, and Financing

NEP 2020 adopts "light but tight" regulation, separating policy from operations, overhauling 1986's centralization.

- a) Single Regulator (HECI): Four verticals for higher education transparency.
- b) Decentralized School Governance: School Management Committees and complexes with devolved powers.
- c) Financing Commitment: 6% GDP target, with public-philanthropic partnerships.
- d) Technology Integration: PM e-VIDYA and Vidya Samiksha Kendra for monitoring.

Progress includes digital initiatives, but state coordination and funding shortfalls hinder full rollout.

Implementation Progress and Challenges as of 2025

Five years post-approval, NEP 2020 has achieved milestones like FYUP adoption, multilingual exams, and NCF-FS launch, with shared Centre-state responsibility. However, challenges include slow 5+3+3+4 integration, teacher training gaps, and uneven monitoring. The 2024 No Detention abolition is a targeted amendment, but broader legislative delays (e.g., HECI) and resource disparities threaten timelines. Future efforts must prioritize standardized metrics and increased funding to realize the 2040 vision.

Conclusion

NEP 2020's amendments represent a bold reconfiguration of India's education system, emphasizing flexibility, equity, and innovation over the rigid, access-focused paradigms of prior policies. While implementations like structural reforms and digital tools show

promise, addressing challenges through collaborative governance and investment is essential. If realized, NEP 2020 could position India as a global education leader, fostering inclusive growth and sustainable development.

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CHALLENGES IN ACHIEVING SUSTAINABLE DEVELOPMENT GOALS IN 21ST CENTURY WITH REFERENCE TO NEP 2020

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Abstract

The Sustainable Development Goals (SDGs) aims to transform our world to meet current challenges of 21st century. In 2015, all the countries in the United Nations adopted by the 2030 Agenda for Sustainable Development. The UN General Assembly in 25th of Sep, 2015 adopted a global development vision called "Transforming our World: The 2030 Agenda for Sustainable Development". It requires a balanced approach that integrates environmental protection, economic growth, and social inclusion. NEP 2020 envisions universal access to quality education by 2030, which directly aligns with SDG 4. The NEP 2020 promotes gender inclusivity and aims to eliminate gender-based disparities in education. This is in line with SDG 5, which focuses on ensuring gender equality and empowering all women and girls. The policy emphasizes holistic, multidisciplinary, and skill-based education. NEP 2020 promotes foundational literacy and numeracy for all students, aiming to achieve the SDG target of ensuring that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy by 2030. In SDG 8, NEP 2020 advocates for the integration of vocational education, aiming to equip students with skills that will enhance their employability and support economic growth. NEP 2020 recognizes the importance of reducing inequalities in education in SDG 10. The policy emphasizes providing equal opportunities for education, especially to marginalized communities, such as SCs, STs, and economically disadvantaged groups. While not the central focus, NEP 2020 acknowledges the importance of environmental education and aims to integrate sustainability into the education system aligning with SDG 13. Focussing on SDG 17, NEP 2020 emphasizes the need for public-private partnerships and collaboration with global educational institutions to strengthen the education system. NEP 2020 lays a comprehensive roadmap for aligning India's education sector with the global SDGs, fostering a more inclusive, equitable, and sustainable future. Through its focus on quality education, equity, employability, gender equality, and sustainability, NEP 2020 contributes significantly to the achievement of the SDGs by 2030.

Key Words: Socio-economic disparities, Equity and Inclusion, Gender gap in education, Digital divide, Migration and mobility barriers & Deficit in skill development

1. Introduction

Achieving the **Sustainable Development Goals (SDGs)** in the 21st century is a monumental task that requires overcoming a variety of challenges at global, regional, and national levels. The SDGs, established by the United Nations in 2015, consist of 17 goals

aimed at addressing global challenges, including poverty, inequality, climate change, environmental degradation, and peace and justice. However, various factors can influence the progress toward achieving these goals, ranging from social, economic, environmental, technological, and political factors to global cooperation and governance. Economic growth

is vital for achieving several SDGs, particularly SDG 1 (No Poverty), SDG 8 (Decent Work and Economic Growth), and SDG 10 (Reduced Inequalities). A stable and growing global economy creates opportunities for poverty reduction and employment generation. However, economic recessions, financial crises, and economic inequality can impede progress toward these goals. Economic inequality within and between countries remains a critical factor. Countries with large income disparities and unequal access to resources struggle to achieve SDGs related to poverty (SDG 1) and inequality (SDG 10). The gap between rich and poor countries often limits access to resources necessary for sustainable development, such as technology, education, and healthcare. Many developing countries face significant national debts, which limit their ability to invest in critical areas such as education, healthcare, infrastructure, and climate action. The debt burden affects the implementation of SDGs and hampers efforts toward poverty reduction and sustainable economic growth. Climate change is one of the most significant challenges to sustainable development in the 21st century. Rising temperatures, extreme weather events, sea-level rise, and shifting ecosystems have a direct impact on human health, agriculture, water availability, and natural resources, all of which are critical to achieving SDGs. For example, SDG 13 (Climate Action) is central to mitigating climate-related impacts. Deforestation, biodiversity loss, soil erosion, air pollution, and water scarcity undermine efforts to achieve SDGs related to environmental sustainability (SDG 12 - Responsible Consumption and Production, SDG 14 - Life Below Water, SDG 15 - Life on Land). Unsustainable consumption and production patterns, as well as industrial pollution, continue to deplete natural resources that are crucial for future generations. The depletion of natural resources such as water, fossil fuels, and minerals, coupled with overconsumption, poses a serious challenge to long-term sustainability. Addressing the pressure on resources is critical to achieving SDG 6 (Clean Water and Sanitation), SDG 7

(Affordable and Clean Energy), and SDG 12 (Responsible Consumption and Production).

Achieving the SDGs requires substantial investment in infrastructure, education, healthcare, renewable energy, and other sectors. While governments and international institutions play a crucial role in financing sustainable development, private sector involvement, impact investing, and philanthropy are also critical. However, financing gaps remain, particularly for developing countries, where access to capital is often limited. Developing countries often depend on international financial support to achieve the SDGs. This includes funding from global organizations, such as the World Bank and UNDP, as well as climate financing for developing countries to address climate change. Without adequate financial resources, the goals may remain unattainable. Cultural and social norms can influence the pace of progress toward sustainable development. In some regions, traditional practices or resistance to change can hinder the adoption of sustainable technologies or gender equality. For example, caste-based discrimination, child marriage, and gender-based violence are persistent issues in many societies that hinder the achievement of SDGs related to equality and social justice. Global consumer habits, including excessive consumption and waste production, continue to put pressure on natural resources and contribute to environmental degradation. Changing consumer behavior to prioritize sustainability and responsible consumption is a key factor in achieving SDG 12 (Responsible Consumption and Production). Technological advancements can accelerate progress toward the SDGs, particularly in areas like renewable energy, healthcare, education, and agriculture. Technologies such as artificial intelligence, internet of things (IoT), and clean energy technologies offer new solutions to old problems. However, unequal access to technology and the digital divide can exacerbate existing inequalities and hinder the achievement of SDGs. While developed countries have access to cutting-edge technologies, developing countries often face

barriers to adopting new technologies due to financial, technical, and knowledge constraints. Technology transfer and capacity-building initiatives are necessary to ensure that all countries have access to the tools needed to achieve sustainable development.

Central issues regarding sustainable development goals

Sustainable development presents a significant challenge for India due to a complex interplay of socio-economic, environmental, and political factors. As one of the world's most populous nations, India faces unique challenges that hinder its progress toward sustainable development. Despite having made significant strides in various areas, such as economic growth and poverty alleviation, the path to sustainable development remains fraught with obstacles. The challenges to achieving sustainability in India can be categorized into environmental, social, economic, and institutional dimensions. Below is a detailed examination of these challenges.

Environmental Challenges

India's rapid industrialization, urbanization, and population growth have resulted in significant environmental degradation. These challenges are a direct threat to sustainable development, especially in the context of climate change, resource depletion, and pollution.

Climate Change and Extreme Weather Events: India is particularly vulnerable to the effects of climate change, which include rising temperatures, shifting rainfall patterns, and an increased frequency of extreme weather events such as droughts, floods, and cyclones. These changes pose a serious threat to agriculture, water resources, and human settlements. For instance, Indian agriculture is highly dependent on monsoon rains, and irregular rainfall patterns directly affect crop yields and food security.

Air Pollution: Air quality in India is a major concern, with many cities, such as Delhi, experiencing severe air pollution levels. This has serious public health implications, with millions of people suffering from respiratory diseases and other health issues. According to the World Health Organization (WHO), India has some of the most polluted cities in the world, making it difficult to meet SDG 3 (Good Health and Well-Being).

Water Scarcity and Pollution: Water scarcity is a growing concern, particularly in northern and western India. Over-extraction of groundwater, inadequate water management systems, and pollution of water bodies have led to the depletion of water resources. This exacerbates challenges for agriculture and drinking water supply, and hinders progress toward **SDG 6** (Clean Water and Sanitation).

Loss of Biodiversity: India is home to a rich variety of ecosystems and species, but rapid deforestation, urban expansion, and unsustainable agricultural practices are contributing to a loss of biodiversity. According to the National Biodiversity Action Plan, India faces the threat of species extinction due to habitat destruction and overexploitation of natural resources. Protecting biodiversity is crucial for maintaining ecosystem services that support agriculture, forestry, and human well-being.

Social Challenges

Poverty and Inequality: Despite impressive economic growth in recent decades, India continues to face high levels of poverty and inequality. According to the World Bank, approximately 20% of India's population lives below the poverty line, with disparities in access to education, healthcare, and employment opportunities. The SDG 1 (No Poverty) and SDG 10 (Reduced Inequality) goals remain a significant challenge, particularly for marginalized communities such as Scheduled Castes (SC), Scheduled Tribes (ST), and women.

Gender Inequality: While India has made progress in improving women's participation in education and the workforce, significant gender disparities persist. The **gender gap** in income, access to education, health services, and political representation remains a major obstacle to achieving **SDG 5** (Gender Equality). Women in rural areas, in particular, face barriers to accessing education, healthcare, and employment opportunities, which limits their potential to contribute to sustainable development.

Education and Skill Development: **Quality education** is key to sustainable development, but India faces challenges in ensuring that all children, particularly those from disadvantaged backgrounds, have access to quality education. The learning crisis in India, exacerbated by inequalities in infrastructure and teaching quality, affects millions of children, especially in rural areas. Furthermore, vocational training and **skill development** programs are underdeveloped, leading to a mismatch between labor market needs and the skills possessed by the workforce, hindering progress toward **SDG 4** (Quality Education) and **SDG 8** (Decent Work and Economic Growth).

Economic Challenges

Sustainable Economic Growth: India's economic growth has been impressive, but it remains heavily reliant on unsustainable practices such as the over-exploitation of natural resources and dependence on fossil fuels. Industrialization, while contributing to economic development, has led to environmental degradation, particularly in the mining and manufacturing sectors. Achieving a balance between economic growth and environmental protection is a significant challenge for India, especially given its growing population and demand for resources.

Job Creation and Inclusive Growth: India faces a major challenge in **job creation**, especially for its young population. Despite economic growth, the country continues to struggle with high unemployment rates,

particularly among women and young people. Moreover, there is a growing disparity between formal and informal employment, with a large proportion of the workforce employed in low-wage, insecure jobs. Addressing **SDG 8** (Decent Work and Economic Growth) and creating more sustainable, inclusive employment opportunities is crucial for India's long-term development.

Rural-Urban Divide: The urban-rural divide in India remains stark. While urban areas have seen rapid economic growth, rural areas continue to lag behind in terms of infrastructure, education, healthcare, and job opportunities. The **agrarian crisis**, including low farm incomes and inadequate access to credit and technology, exacerbates poverty in rural areas, contributing to the slow progress toward **SDG 1** (No Poverty) and **SDG 10** (Reduced Inequality).

Institutional and Governance Challenges

Weak Governance and Policy Implementation: India's complex governance structure, with multiple layers of administration at the central, state, and local levels, often leads to policy fragmentation and implementation bottlenecks. While there are numerous policies aimed at achieving sustainable development, the lack of coordination and the failure to effectively implement policies at the grassroots level hampers progress. Corruption, political instability, and bureaucratic inefficiencies also undermine efforts to achieve sustainability.

Environmental Regulations and Enforcement: Although India has made strides in adopting environmental regulations, the enforcement of these laws remains weak. Despite the existence of environmental laws, illegal mining, deforestation, and pollution often continue unchecked. Strengthening environmental governance, improving the enforcement of laws, and promoting sustainable development practices in industries are essential for addressing **SDG 12** (Responsible Consumption and Production).

Financing Sustainable Development: Securing adequate financing for sustainable development initiatives is a major challenge for India. While the government has introduced various schemes, the allocation of funds often falls short of what is required to meet the ambitious targets of the SDGs. Mobilizing domestic and international finance, particularly for climate change mitigation and adaptation, will be crucial to achieving SDG 17 (Partnerships for the Goals).

Population Growth and Urbanization:

India's population growth remains one of the biggest challenges to sustainable development. With over 1.4 billion people and a growing urban population, India faces immense pressure on its infrastructure, healthcare systems, housing, and food security. Urbanization, while a driver of economic growth, also leads to the expansion of slums, overcrowded cities, and increased pollution. Balancing urban growth with sustainability goals will require innovative urban planning, sustainable infrastructure, and policies to reduce urban poverty.

Conclusion:

The **National Education Policy (NEP) 2020** of India is closely aligned with the **United Nations Sustainable Development Goals (SDGs)**, particularly **SDG 4**, which aims to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.” The policy recognizes education as a key driver for achieving all other SDGs by fostering critical thinking, equality, and sustainable development. NEP 2020 emphasizes universal access to education, early childhood care, gender equality, and the integration of environmental awareness and global citizenship into the curriculum. By promoting inclusive and equitable quality education, skill development, and lifelong learning, the NEP 2020 seeks to equip learners with the knowledge, skills, values, and attitudes necessary to build a more sustainable and just society, thereby advancing India's commitment

to the 2030 Agenda for Sustainable Development.

The National Education Policy (NEP) 2020 of India is a transformative framework that aims to overhaul the education system in a manner that aligns with global standards while addressing the specific challenges and needs of the Indian context. A key aspect of NEP 2020 is its strong emphasis on sustainable development and its alignment with the Sustainable Development Goals (SDGs) set by the United Nations. Several major initiatives outlined in NEP 2020 aim to directly or indirectly contribute to achieving the SDGs, particularly SDG 4 (Quality Education), SDG 5 (Gender Equality), SDG 10 (Reduced Inequalities), SDG 13 (Climate Action), and SDG 9 (Industry, Innovation, and Infrastructure). Sustainable development in India is a multifaceted challenge, influenced by a combination of environmental, social, economic, and institutional factors. While the country has made significant progress in certain areas, the path to achieving sustainability requires addressing deep-rooted structural issues, including poverty, inequality, environmental degradation, and weak governance. To overcome these challenges, India will need to foster inclusive growth, strengthen institutional frameworks, and prioritize sustainability in all aspects of development. The successful implementation of policies and frameworks such as the National Action Plan on Climate Change (NAPCC) and the National Education Policy (NEP) 2020 will be crucial in steering India toward a more sustainable and equitable future.

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MEASURES FOR CONSERVATION AND RESTORATION OF RESOURCE UTILIZATION: PROSPECTS OF FOREST RESOURCES OF SERAIKELA-KHARSAWAN DISTRICT

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Abstract

Seraikela-Kharsawan district, located in the southern plateau of Jharkhand, India, is endowed with significant forest resources, most notably the Saranda forest, which is renowned for its dense sal (*Shorea robusta*) canopy. However, these forests face increasing threats from anthropogenic activities, including iron ore mining, timber extraction, and land encroachment (Forest Department, Seraikela-Kharsawan, 2020). The conservation and restoration of these forests are imperative to maintain biodiversity, ecological balance, and sustainable livelihoods for local communities. This paper narratively explores strategies for forest conservation, including community-led forest protection, reforestation and afforestation, sustainable forest management, establishment of protected areas, and participatory management approaches. A combination of field observations, stakeholder consultations, and literature review forms the methodological backbone of this study.

Key words - Seraikela-Kharsawan, Forest Resources, Conservations

Introduction

Forests play a pivotal role in ecological stability, providing habitats for myriad species, regulating climate, and sustaining the livelihoods of forest-dependent communities. In the Seraikela-Kharsawan district, forests have historically been integral to the socio-economic and cultural fabric of local populations. The Saranda forest, in particular, with its dense sal canopy and rich biodiversity, represents one of the most significant ecological zones in Jharkhand. However, over the past few decades, the forest has been increasingly threatened by mining operations and unregulated timber extraction, resulting in habitat degradation and loss of ecological integrity (Oraon, 2016).

Effective conservation and restoration measures are not merely environmental

imperatives but also socio-economic necessities, given the dependence of local communities on forest resources for fuel, fodder, and minor forest products. This paper aims to highlight strategies that balance ecological restoration with sustainable resource utilization, thereby promoting a model of forest management that is both participatory and scientifically informed.

Study Area

Seraikela-Kharsawan district covers approximately 3,550 square kilometers in southern Jharkhand. The district's forest area encompasses 53,628.893 hectares of protected forest and 1,294.511 hectares of reserved forest (Forest Department, Seraikela-Kharsawan, 2020). The Saranda forest, often referred to as the "Sal Forest of Jharkhand," hosts a variety of flora and fauna and serves as a critical ecological corridor. Yet, it remains under dual threat: while iron ore mining disrupts soil and

vegetation, illegal timber extraction erodes the forest canopy and undermines natural regeneration (Keystone Foundation, 2023).

Literature Review

The conservation of forests in Jharkhand has been addressed by several scholars and institutions. Oraon (2016) highlights that Kolhan division, which includes Seraikela-Kharsawan, has experienced gradual forest degradation due to anthropogenic pressures. Community-based initiatives, according to Keystone Foundation (2023), have proven effective in mitigating forest loss by involving local villagers in daily monitoring and patrolling activities.

Reforestation and afforestation are considered critical tools for restoring degraded landscapes. The Forest Department of Jharkhand (2020) emphasizes that introducing native species and promoting natural regeneration enhances biodiversity and soil stability. Furthermore, sustainable forest management practices, such as selective logging and rotational harvesting, ensure that timber extraction does not compromise long-term forest productivity (Forest Department, 2020).

The establishment of protected areas is another widely recognized strategy. By creating wildlife sanctuaries and national parks, biodiversity can be preserved, ecological corridors maintained, and human-wildlife conflicts minimized (Department of Forest, Environment & Climate Change, 2020). Participatory management, which integrates local knowledge with modern conservation strategies, has also been highlighted as a key approach to ensuring long-term sustainability (Mishra, 2019).

Methodology

This study employs a narrative approach combining **field observations, stakeholder consultations, and literature review**. Field observations were conducted to evaluate forest conditions, identify areas affected by mining and timber extraction, and understand regeneration patterns. Consultations with local villagers, forest officials, and representatives from non-governmental organizations provided

insights into existing practices, challenges, and opportunities for conservation. Finally, a review of secondary literature, including government reports and academic studies, helped contextualize local strategies within broader forest management frameworks.

Measures for Conservation and Restoration

Community-Led Forest Protection

In Hatnada village, local communities have initiated a forest patrol system where 14 individuals from each hamlet actively monitor forest areas daily. This initiative has successfully reduced illegal logging and curbed encroachment by miners (Keystone Foundation, 2023). Community-led conservation fosters ownership and accountability, which are crucial for the long-term success of forest protection programs.

Reforestation and Afforestation

Reforestation involves restoring degraded areas with native species, while afforestation focuses on planting forests in previously non-forested areas. Both strategies enhance biodiversity, stabilize soils, and improve water retention. The Forest Department of Jharkhand (2020) has promoted aerial seeding in rugged terrain and community-led nurseries to support reforestation.

Sustainable Forest Management

Selective logging, reduced-impact logging, and rotational harvesting constitute sustainable forest management practices that ensure resource utilization without compromising forest health (Forest Department, 2020). Such practices also maintain ecological balance by preserving canopy cover and protecting wildlife habitats.

Protected Areas

Protected areas, including wildlife sanctuaries and national parks, act as refuges for endangered species and prevent habitat fragmentation. They also provide opportunities for eco-tourism, which can supplement local incomes and incentivize conservation efforts

(Department of Forest, Environment & Climate Change, 2020).

Participatory Management

Participatory management integrates local ecological knowledge with scientific strategies. By involving communities in decision-making, it ensures that forest management aligns with local needs and cultural practices, thereby enhancing compliance and sustainability (Mishra, 2019).

Findings

The study identifies several key findings:

1. **Effectiveness of community-led initiatives:** Villagers actively engaged in forest protection show higher compliance and vigilance against illegal activities.
2. **Impact of reforestation efforts:** Reforestation and afforestation programs

have successfully restored degraded lands and improved species diversity.

3. **Sustainability through management practices:** Selective logging and reduced-impact harvesting help maintain forest structure while enabling controlled resource extraction.
4. **Need for protected areas:** Legal protection of critical habitats ensures long-term biodiversity conservation.

Data Analysis

Seraikela-Kharsawan's forests, covering over 54,900 hectares, are ecologically significant but vulnerable. The Saranda forest, in particular, is a biodiversity hotspot with dense sal canopies. However, fragmentation due to mining and timber extraction has reduced habitat connectivity and increased pressure on residual forest patches (Forest Department, Seraikela-Kharsawan, 2020).

Table 1. Forest Cover in Seraikela-Kharsawan District

| Forest Type | Area (hectares) | Percentage of Total Forest |
|------------------|-----------------|----------------------------|
| Protected Forest | 53,628.893 | 97.6% |
| Reserved Forest | 1,294.511 | 2.4% |
| Total | 54,923.404 | 100% |

Conclusion

The conservation and restoration of forest resources in Seraikela-Kharsawan district require a multi-faceted approach. Community-led protection, participatory management, reforestation, sustainable harvesting, and the establishment of protected areas collectively form a holistic strategy. By integrating local knowledge with scientific approaches, the district can ensure ecological stability, promote biodiversity, and secure sustainable livelihoods for forest-dependent communities.

Recommendations

1. Expand community-led forest protection programs across all villages surrounding the Saranda forest.
2. Promote large-scale reforestation and afforestation initiatives using native species.

3. Encourage sustainable forest management among timber companies and local populations.
4. Establish additional protected areas to preserve biodiversity and prevent habitat loss.
5. Strengthen participatory management by involving communities in decision-making and policy implementation.

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A CRITICAL ANALYSIS OF THE ROLE OF COOPERATIVE SOCIETIES IN THE SOCIO-ECONOMIC DEVELOPMENT OF TRIBAL COMMUNITIES: A FOCUS ON JHARKHAND

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Abstract

Cooperative societies have long been considered an effective institutional mechanism for empowering marginalized communities in India, especially tribal groups that depend on natural resources and traditional livelihood systems. In Jharkhand—where tribal communities constitute a significant proportion of the population—cooperatives hold the potential to address poverty, improve access to markets, strengthen collective bargaining, and promote sustainable development. However, the performance of cooperatives in the state remains uneven; while certain sectors such as lac cultivation, tasar silk, handicrafts, and minor forest produce (MFP) demonstrate successful cooperative models, several others suffer from weak governance, limited market linkages, political interference, and institutional fragility. This research paper critically examines the role, achievements, challenges, and future pathways for cooperative societies in promoting socio-economic development among tribal communities in Jharkhand.

2. Introduction

Tribal communities in Jharkhand rely heavily on forests, agriculture, artisanal skills, and indigenous knowledge systems. Despite rich natural resources, these communities continue to face structural constraints such as poverty, poor market access, exploitation by middlemen, and limited access to financial services. In this context, cooperative societies have emerged as an important tool for collective economic empowerment.

A cooperative society is a voluntary association of individuals who come together to promote common economic, social, and cultural objectives through democratic control and collective ownership. For tribal populations, cooperatives offer a platform to organize production, add value, strengthen bargaining power, and secure fair prices.

2. Literature Review

The literature on cooperative societies offers a rich theoretical and empirical foundation for understanding their role in the socio-economic advancement of marginalized groups, particularly tribal communities. At the conceptual level, cooperatives are widely framed as collective institutions capable of addressing market failures experienced by small and dispersed producers. Scholars argue that by aggregating production, reducing transaction costs, enhancing bargaining power, and easing access to credit and inputs, cooperatives act both as economic mechanisms and as social institutions (Venkattakumar, 2013). In the context of tribal societies—where livelihoods are closely tied to common-property resources, seasonal income flows, and informal trading networks—cooperatives are theorized to facilitate value addition, curb middlemen exploitation, and strengthen community governance. Studies by institutions

such as the Indian Institute of Management Ahmedabad further emphasize that cooperative outcomes depend significantly on governance structures, institutional support, and local power dynamics.

A substantial body of work also examines the institutional models of producer collectives, distinguishing between traditional cooperatives and producer companies. While cooperatives are rooted in democratic member ownership and often receive strong state support, producer companies adopt a hybrid corporate form that prioritizes professional management and market orientation. Comparative studies show that producer companies tend to outperform cooperatives in marketing efficiency, value-chain integration, and managerial capacity, whereas cooperatives excel in local accountability and inclusive decision-making. Despite these contrasts, both institutional forms face setbacks when governance is weak or dominated by local elites. Consequently, scholars recommend hybrid approaches that blend corporate-style professionalism with cooperative values to meet the needs of geographically dispersed tribal producers.

Evidence from Jharkhand highlights the importance of state and quasi-state institutions in shaping cooperative ecosystems. The Jharkhand State Livelihood Promotion Society (JSLPS) has played a pivotal role in implementing NRLM-aligned livelihood interventions, building SHG networks, and promoting producer groups and federations. State program documents reveal that JSLPS has facilitated market-branding initiatives such as Palash and Adiva, while also supporting the formation of Farmer Producer Organizations (FPOs). The recurring theme in this literature is the importance of institutional convergence—between state agencies, NGOs, and enterprise bodies—in operationalizing cooperative-like structures among tribal communities. Likewise, Jharcraft emerges prominently in academic and policy studies as an exemplary state-supported initiative that transformed artisanal production. Case studies illustrate how Jharcraft's branding, leadership, and marketing strategies enhanced income, market visibility, and gender inclusion among tribal artisans.

Sector-specific scholarship offers further insights into how cooperatives function across key livelihood domains in Jharkhand. In the lac sector—where Jharkhand is one of India's leading producers—value-chain analyses underscore that cooperatives substantially increase producer margins through collective processing and improved market linkages. However, concerns regarding quality control, storage infrastructure, and limited bargaining capacity persist. Studies on tasar silk and handloom production similarly show that cooperatives and federated groups, supported by the Central Silk Board and Jharcraft, have succeeded in skill enhancement, women's participation, and national market integration. Research on Minor Forest Produce (MFP) highlights the critical role of the Forest Rights Act (FRA) and minimum support price regimes in promoting tribal incomes. Cooperatives involved in MFP procurement help reduce middlemen exploitation, although major gaps remain in traceability systems, price discovery, and higher-level value addition.

Micro-level studies provide an equally important perspective, documenting the achievements of SHG-linked cooperatives and women's producer groups in districts such as Godda, Khunti, and Bokaro. These localized reports consistently show that when cooperatives are grounded in strong SHG federations and linked to effective branding platforms, women experience significant improvements in income, mobility, and decision-making authority. Yet, the literature warns that such gains often depend heavily on project-based support. Without durable institutional backing, these cooperatives risk decline once funding cycles end.

A recurring theme across literature is the prevalence of governance challenges that undermine cooperative sustainability. Scholars identify irregular elections, weak record maintenance, elite capture, and inadequate transparency as central issues. Market and technical limitations—including poor processing facilities, inadequate storage systems, weak branding capacity, and limited quality control—further inhibit cooperative growth. Financial constraints such as insufficient working capital, delayed credit, and dependence on government projects contribute

to institutional fragility. Empirical studies point out that unless these governance and market-related issues are addressed through systemic reforms, the long-term transformative potential of cooperatives in tribal regions will remain limited.

Recent literature and policy prescriptions attempt to address these gaps by advocating institutional innovations. These include the promotion of producer companies and hybrid models to enhance professionalism; linking cooperatives to FRA-based community forest rights and TRIFED procurement structures to institutionalize fair price mechanisms; and adopting digital tools such as online marketing platforms and digital record-keeping systems to improve transparency, traceability, and market access. Such reforms are increasingly seen as essential to making cooperatives more competitive and accountable.

Despite the breadth of this scholarship, several research gaps remain. Few studies offer comparative quantitative assessments of income gains attributable specifically to cooperative membership among tribal households. Longitudinal evidence tracking post-project sustainability is also limited. Governance reforms—such as social audits, digital MIS tools, or structured election norms have been insufficiently evaluated in tribal contexts. Another gap involves the lack of rigorous assessment of hybrid producer-company models within sectors such as lac, tasar, and MFP. These gaps justify a deeper empirical and comparative investigation of cooperative performance in Jharkhand.

Overall, the literature presents a cautiously optimistic outlook. While cooperatives, SHG federations, and producer companies have contributed to increased incomes, enhanced market access, and greater women's empowerment, their long-term impact remains constrained by governance weaknesses, financial fragility, and technical limitations. The emerging consensus emphasizes the need for stronger institutional support, professionalized management, robust governance mechanisms, and expanded market linkages. These insights offer a robust foundation for the present study's critical analysis of cooperative societies in the socio-

economic development of tribal communities in Jharkhand.

3. Review of Cooperative Initiatives in Jharkhand

Jharkhand has witnessed the development of a diverse range of cooperative initiatives, each tailored to the unique resource base and livelihood needs of tribal communities. These cooperatives have emerged across multiple sectors, reflecting both the economic potential of the state's natural resources and the collective aspirations of its indigenous population.

One of the most prominent sectors is lac cultivation, where Jharkhand contributes more than half of India's total production. In districts such as Seraikela-Kharsawan, West Singhbhum, and Khunti, lac cooperatives have become important institutions for livelihood enhancement. Supported by the Jharkhand State Lac Development Cooperative Federation (JSLDCF), these cooperatives offer training, supply brood lac and technical inputs, and facilitate market linkages. By improving production quality and ensuring better prices, they have significantly increased the income of tribal lac farmers.

Similarly, tasar silk cooperatives have played a transformative role in the state's sericulture landscape. With support from the Central Silk Board, Jharcraft, and various local cooperative societies, tasar cultivation and reeling activities have expanded in districts such as Dumka, Godda, and Khunti. These cooperatives not only create employment but also empower tribal women and youth to participate in national and international silk markets. The integration of traditional skills with institutional support has helped enhance income and create sustainable livelihood options.

In addition to lac and tasar, handloom and handicraft cooperatives have gained prominence through the enabling role of Jharcraft. Artisan groups, including Adivasi Dokra metal craft clusters, bamboo craft units, and traditional weaving groups, have benefited from improved branding, quality enhancement, and national-level market exposure. These

cooperatives preserve indigenous craftsmanship while generating consistent income for artisan families.

Another critical sector involves Minor Forest Produce (MFP), which forms a substantial portion of tribal households' seasonal earnings. Cooperatives dealing in MFP such as mahua, chironji, tussar cocoons, honey, and kendu leaves have helped reduce exploitation by private traders and middlemen. By standardizing procurement and ensuring fair prices, these cooperatives strengthen the economic security of forest-dependent communities.

Furthermore, Jharkhand has seen the emergence of SHG-linked cooperatives and producer groups, especially under the Jharkhand State Livelihood Promotion Society (JSLPS). Women's Self-Help Groups often function as quasi-cooperatives, pooling resources and engaging in income-generating activities related to agriculture, livestock, and small enterprises. These groups have shown remarkable success in fostering financial inclusion, improving credit access, and building local leadership among tribal women.

Collectively, these cooperative initiatives highlight the diverse ways in which community-based organizations are contributing to rural development in Jharkhand. They reflect an evolving ecosystem where traditional knowledge, natural resources, and institutional support converge to create sustainable and inclusive livelihood pathways.

4. Positive Contributions of Cooperative Societies

Cooperative societies have played a pivotal role in enhancing the socio-economic conditions of tribal communities in Jharkhand, emerging as institutions that combine collective strength with community-driven development. One of their most significant contributions lies in economic empowerment and income enhancement. By facilitating value addition in products such as lac, tasar silk, and minor forest produce, cooperatives enable tribal households to derive higher returns from local resources. Direct participation in markets, supported by collective bargaining mechanisms, allows

members to secure fair prices and reduce vulnerability to market fluctuations. As a result, cooperatives become important vehicles for expanding livelihood opportunities and raising rural incomes.

Another major contribution is the reduction of middlemen exploitation, a challenge that has long burdened tribal producers. Traditionally, intermediaries have dominated the trade of forest-based commodities, often offering very low prices to collectors. Cooperatives, by organizing collective procurement and sales, bypass these exploitative structures. This ensures that a larger share of the value generated from forest resources reaches the actual producers, thereby improving household earnings and reducing economic distress.

Cooperatives have also played a transformative role in promoting women's empowerment. Women-led groups engaged in tasar reeling, handicrafts, and various Self-Help Group (SHG)-based enterprises have not only increased their incomes but also enhanced their role in household decision-making. Participation in cooperative activities provides women with financial independence, greater mobility, and heightened self-confidence, all of which contribute to weakening gender-based economic vulnerabilities within tribal societies.

In addition, cooperatives significantly advance financial inclusion. Through cooperative banks, Primary Agricultural Credit Societies (PACS), and SHG-linked federations, tribal households gain access to institutional credit that was once beyond their reach. This reduces their dependence on informal moneylenders who often charge exploitative interest rates. Access to affordable credit enhances investment in agriculture, livestock, and small enterprises, thereby supporting long-term economic growth.

Finally, cooperatives contribute to the sustainable use of natural resources by integrating traditional ecological knowledge with community-based management practices. They promote responsible harvesting of forest produce, conservation of biodiversity, and collective oversight over local resources. Such practices strengthen environmental stewardship

and ensure that tribal livelihoods remain ecologically sustainable in the long run.

5. A Critical Examination of Challenges

Despite their immense potential to transform rural livelihoods, tribal cooperatives in Jharkhand continue to grapple with a range of structural and operational challenges. These limitations not only restrict their efficiency but also prevent them from emerging as sustainable institutions capable of driving economic empowerment for tribal communities.

One of the most persistent issues is weak governance and structural limitations. Many cooperatives suffer from irregular elections, inadequate record-keeping, and limited transparency in decision-making. The overlapping jurisdiction of different government departments creates confusion and delays, while the dominance of local elites often distorts the democratic spirit on which cooperatives are founded. These governance gaps weaken institutional credibility and reduce member participation. Another critical challenge is unequal distribution of benefits. Instead of promoting collective prosperity, many cooperatives inadvertently allow powerful or influential members to capture the larger share of profits, leaving small or marginal producers with minimal gains. This inequity undermines the cooperative ideal of shared ownership and democratic equality, leading to mistrust among members.

Market-related constraints further complicate the functioning of tribal cooperatives. Inadequate market access remains a major barrier. The absence of organized value chains, minimal branding efforts, and weak linkages with national or global markets limit their ability to secure fair prices. Additionally, the lack of proper storage, processing, and packaging facilities prevents them from entering higher-value markets, ultimately reducing their competitiveness.

Compounding these issues is a shortage of technical and managerial skills among cooperative members. Many individuals lack training in modern processing methods, quality control techniques, entrepreneurship, and digital marketing. This skill gap not only affects productivity but also restricts the ability of cooperatives to adapt to market demands or expand their operations effectively.

Financial weakness is another major challenge. Limited working capital, delayed access to credit, and a fragile cooperative credit structure make it difficult for these institutions to operate smoothly. Their high dependence on government funding further exposes them to uncertainty, especially when support is project-based and not continuous. Lastly, sustainability concerns pose a long-term threat. Once external project support or funding ends, many cooperatives struggle to maintain momentum and eventually become inactive. This indicates low institutional resilience and highlights the need for stronger internal systems, leadership development, and financial autonomy.

Table 1: Critical Analysis of impact of various dimensions

| Dimensions | Strengths | Weaknesses |
|----------------------|---------------------------------------|---|
| Economic Impact | Improved income; value addition | Price fluctuations; limited scale |
| Social Impact | Women empowerment; community cohesion | Internal politics; elite domination |
| Institutional Impact | Collective decision-making | Poor governance; weak audit systems |
| Market Performance | Niche products like tasar, lac | Limited branding; weak marketing |
| Environmental Impact | Encourages sustainable harvesting | Poor training can lead to over-extraction |

The evidence suggests that tribal cooperatives perform well when supported by strong

institutions, such as JSLPS, Jharcraft, or Central Silk Board. However, independent

cooperatives struggle with governance, leadership, and capital barriers.

6. Way Forward

The future of tribal livelihoods in forested regions depends on a strategic combination of modernization, empowerment, and institutional strengthening. To achieve this, the cooperative system—long considered the backbone of rural economies—must undergo meaningful transformation. A shift towards a “Cooperative 2.0 Model” is essential. This upgraded model envisions the adoption of digital record-keeping systems, online marketing platforms, and even advanced technologies such as blockchain for the traceability of Minor Forest Produce (MFP). By ensuring transparent auditing and real-time data management, such modern cooperatives can significantly enhance efficiency, accountability, and market confidence.

An equally important step is the integration of livelihood initiatives with the Forest Rights Act (FRA). When Gram Sabhas and local cooperatives jointly manage forest resources, the result is not only higher income for forest-dependent communities but also a stronger sense of ownership and responsibility. This convergence of rights and economic activity can help preserve ecological balance while securing sustainable livelihoods.

Recognizing that the future lies in the hands of women and youth, a gender- and youth-centered development strategy becomes crucial. Tailored training programmes, dedicated credit lines, and assured access to markets can empower women’s groups and youth-led cooperatives to become independent economic actors. Their enhanced participation will also inject innovation and resilience into rural value chains.

In addition to reformed cooperatives, the formation of Tribal Producer Companies offers another promising pathway. Unlike traditional cooperatives, producer companies combine community ownership with professional management. They provide better market linkages, enable stronger value addition, and build more robust value chains capable of competing at regional and national levels.

A comprehensive capacity-building ecosystem is also vital for long-term success. Specialized technical training in areas such as lac processing, tasar silk reeling, honey processing, and medicinal plant cultivation can significantly improve productivity and product quality. Such training must be continuous, field-based, and aligned with emerging market trends to maximize income generation.

Finally, the sustainability of all these initiatives rests on strengthened cooperative governance. Transparent social audits, time-bound financial audits, democratic election processes, and regular leadership development programmes are essential to build trust within communities. When governance is strong, cooperative institutions become reliable vehicles for social and economic transformation.

7. Conclusion

Cooperative societies play an indispensable role in the socio-economic upliftment of tribal communities in Jharkhand. They have demonstrated significant success in sectors such as lac, tasar silk, handicrafts, and minor forest produce. However, the cooperative movement faces several structural and operational challenges that limit its transformative potential. Strengthening governance mechanisms, enhancing market linkages, building managerial capacities, and ensuring community ownership are essential to make cooperatives robust and sustainable. With appropriate institutional support and policy intervention, cooperatives can become powerful vehicles for inclusive growth, economic resilience, and cultural preservation among Jharkhand’s tribal communities.

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THE TRENDS OF LIFE INSURANCE INDUSTRIES IN INDIA: AN ANALYTICAL STUDY

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Abstract

The present study tries to make an analysis on life insurance industries in India by using trends and patterns. The required secondary data is obtained from several secondary sources, as reported in the IRDAI annual reports. The average, standard deviation, percentage, growth rate, trend and graphs, Regression Analysis, and ANOVA have been used to study and analyse the Indian Life Insurance sector. This study tries to know the important pillars of financial market which creates lots of opportunities for insurance industries and it helps to understand the density in India related to the world insurance density. This study also helps to know the trend and patterns of life insurance sector in India. This study finds that in 2023-24 the density of life insurance and non-life insurance sector in India are 70 USD and 25 USD respectively. The Penetration of life and non-life insurance sector in India is 2.8% and 1% respectively in the period of 2023-24. This study also observes how insurance premium is increasing by each year. The percentage trend from 2009 to 2024 has increased almost 4 times, indicating a good growth rate. The trends of total life insurance policy issued both in public and private sector is 55.96% in the year of 2022-23. During 2023-24, total number of life insurance offices is 11517 in which the public sector is 5004 and the private sector is 6513. This research study concludes that the insurance sector has become one of the pillars of the financial market and it plays an important role in economic development. With new ideas and new enthusiasm, the insurance industry shows the remarkable growth that is upward trend in terms of insurance density and penetration, number of new policies issued, number of offices opened, total premium amount and others. In the study period we can observe that the trend percentages of life insurance premium are increasing in India though it has less density in the world wide data. When we compare this situation with the international level, we need to think and make a lot of improvement in the insurance industries in India.

Keywords: Insurance, Life Insurance, Non-Life Insurance IRDAI, Trends and Patterns, Regression Analysis, ANOVA.

Introduction

Insurance is a contract where an individual or organization pays specific amount of money [known as premium] to an insurance company. They provide protection against some unforeseen events like accidents, illnesses or natural disasters, to mitigate risks by allowing policyholders and to avoid financial hardships. In India, insurance has a historical background. In the primitive Indian history, insurance was

the form of marine loans or carrier's contracts, which mentioned in the Kautilya's Arthashastra, Yagnavalkya's Dharmashastra and Manu's Smriti. The industry of insurance in India has introduced through a period to change in structural during the liberalised economy. With the liberalisation and entry of private companies, significant changes have started to observed in the Indian insurance sector. In short span, the private insurance sector has captured

13% of line insurance market and 14% of non life insurance market.

In nineteenth century insurance started without any regulations in India. The first life insurance company was started by Europeans in Calcutta, Bombay Mutual Life Assurance Society in 1870 and covered at normal rate for Indian lives. During the pre-independence era in India insurers differentiated between the lives of foreigners (English) and Indians by charging higher premiums for Indians. In 1912, government passed The Indian Life Assurance Companies Act and Provident Fund Act to regulate the insurance business. In 1914, the returns of insurance companies in India began to be published by the Government of India. The Government passed the Insurance Act in 1928, consolidating and amending the various insurance laws in India. The Life Insurance Corporation of India was established in 1956 and nationalizing the life insurance sector in India. In 1993, the Government of India set up the Malhotra Committee, chaired by Mr R. N. Malhotra, a former Finance Secretary and RBI Governor, to address insurance sector reforms in line with the country's new economic policies. In 1994, the committee submitted its report and make a recommendation of establishment of a dedicated regulatory agency and the privatization of the insurance sector. In 1999, the government constituted the Insurance Regulatory and Development Authority (IRDA) as an autonomous body to regulate and develop the insurance industry, with accepting the recommendations of the Malhotra Committee report. In April 2000, the government incorporated the IRDA as a statutory body.

In August 2000, the IRDA opened the market, by calling for applications registration. It permits foreign companies ownership of up to 26%. The authority is empowered to make regulations based on the powers conferred under section 114A of the Insurance Act, 1938 and since the year 2000 until now, the various regulations has been framed including the registration of companies for carrying the insurance business and protecting the interests of policyholders.

Authorities restructured the subsidiaries of the General Insurance Corporation of India as independent companies in December 2000 and converted GIC into a national re-insurer. In July

2002, Parliament passed a bill to de-link the four subsidiaries from GIC.

The insurance business broadly classify into two categories – (i) Life Insurance and (ii) Non-life Insurance or General Insurance. There are 34 general insurance companies operating their business in the country including the ECGC and Agriculture Insurance Corporation of India and 24 life insurance companies as on May 12, 2021. Similar to Banking services the insurance industry also grows rapidly at the rate of 15% to 20% and provides around 7% of the country GDP. A mature and developed insurance sector contributes to economic growth by providing long-term funds for infrastructure projects and increasing the economy's ability to take risks.

Review of literature

Every research paper requires a review of previous studies to get ideas for carrying out the research paper, and this piece is no exception. In the current research work, we are also considering a specific previous study to get this idea.

Vadlamannati (2008)¹ tries to know whether insurance sector growth and reform affect economic development. For the study he has selected for the study period from 1980 to 2006. The required secondary data for this study has been mostly collected from several secondary sources. For this study he has examined the implications of insurance sectors growth and reforms and measures some important variables on economic development to used Unit Root Test, Cointegration Test and Granger Causality Test. He wanted to found that the two purpose of this studies, to investigate the relationship between insurance sector growth and economic development and the other is to examine when insurance sector reform the growth rate influencing the economic development or not. After making the analysis by applying Unit Root Test, Cointegration Test and Granger Causality Test he conclude that the life insurance and total insurance sectors growth influencing economic development but non-life insurance sectors growth effects only after a year.

Kannan. N (2010)² attempts to trace the growth of the insurance sector and the current state of the insurance market. Then he wants to

examine and analyse the above portion. He has collected data from several secondary sources and finds the growth of insurance industries. For this study he analysed some areas of future growth of insurance like life insurance, health insurance, pension etc. After making this study he concludes that life insurance has become a pillar of any market economy because it offers a large range to earn large sums of money for long periods. A well-regulated life insurance industry that moves with the times by offering its customers tailor-made products to meet their financial needs is therefore essential if we want to progress to a problem without concern.

Venkatesh M (2013)³ tries to understand the insurance density in the whole world and relate it with the density of India. The study premium trend analysis for understand the improvement of insurance in India. He has examined the trend analysis because it refers to the studying in social changes, consumer behaviour including fashion and technology. Here has analysed the trend to compare one year with other year. For this study he has collected secondary sources from many secondary sources. This method is easy to understand and easy to calculate trend percentages. It helps to compare time with different periods. In this study he concluded that the growth rate of insurance sector in India has to be increased. He also observed that trend percentages are increased and improving year to year and sadly said that the density percentages of India has lesser compared with the worldwide.

Muthuraman. B and Mohandoss. K (2013)⁴ tries to determine the performance of Insurance industry in India. They have selected the period of time accounting year 2001-02 to 2010-11 and covered ten years data. They have collected secondary data for this study from the IRDA annual report and statement of accounts of various Life Insurance Companies. The purpose of this study to analyse the growth of Indian insurance companies in the period of post-liberalization, to examine the factors which are influencing the financial efficiency of the Life Insurance Companies in India, to find the improvement of Indian Insurance Companies. They examined for this study to used Multiple Regression Analysis, Compound Annual Growth Rate, Hypothesis. From this study they concluded that basis on the current scenario the growth of insurance business of

private sector companies has been higher than insurance business of Government sector.

Arif. M (2015)⁵ in his paper “Life Insurance Industries in India: Trends and Patterns” states about the important pillars of financial market which creates lots of opportunities for insurance industries and the trend of life insurance industry in India. This study is based on secondary data and it has been collected from so many sources, annual reports, websites, journals, books, internets etc. He has taken this secondary data from the period of 2003-04 to 2012-13. Simple ratio, percentage, mean, standard deviation, CV, CAGR, trend index, regression analysis and graphs have been used to study the trends and patterns of life insurance. He observed after making analysis that the insurance industry is showing remarkable growth with new passions or ideas i.e. upward trend over the years in terms of insurance density and penetration rate, investment volume, total premium, number of new policies issued, number of offices opened, claim ratio, policyholder base etc. The insurance industry also shows the decreasing trends in the life insurance parameters on the basis of last two to three years.

Rakshit. D (2015)⁶ in his study states about the insurance sector in India after introducing reforms by analyse of growth of insurance density and penetration. He has selected the period of 14 years for his study i.e. 2000-01 to 2013-14. This study based on the secondary data so he has collected the secondary data from annual reports of IRDAI, websites etc. The purpose of this study to calculate and analyse the growth of life and non-life insurance business in our country during the study period, to carry out an international comparison of premium collection scenarios for life and non-life insurance, and to make some conclusions based on the research findings. Simple statistical and arithmetic tools such as minimum value, maximum value, mean value, standard deviation and coefficient of variation were used in this study. After making the analysis he concludes that the period under this study, the life insurance sector has witnessed significant growth as compared to its counterpart. In India, people preferred to save their lives rather than their assets. Preserving valuable property turns out to be their second priority. The global premium collection

scenario for life and non-life insurance similarly bears out this truth.

Joshi. M and Takodia. T (2017)⁷ demonstrate in their study recent trends, awareness and preferences in life insurance industries in India. This study demonstrates three main objectives – to make a study on current scenario of life insurance industries in India, to know the preferences of individual investors towards particular life insurance companies, to study awareness of the operational situation of insurance companies in the market. Secondary data is collected from various reports published by IRDA and various published research papers. The study revealed that LIC is the most preferred life insurance company. After making the analysis they have conclude that LIC is the market leader not only in terms of awareness and preference but also in terms of performance indicators such as number of claims settled, new offices opened, overall premium collections, and new fonts issued.

Debey. A (2018)⁸ tries to know growth and development of insurance in India by analysing comparing insurance density among the Asian countries, growth of GDP, insurance penetration in India, evolution of India's life insurance sector, market share of private and public both life insurance companies etc. the purpose of this he has collected secondary data and he covers the period of 2002-03 to 2014-15. He examined and analysed all over growth of insurance in India. After completing this study he concludes that competition among insurance companies has led to increased awareness of insurance and has also helped expand the insurance market and it has made all insurance companies more efficient.

Dhar. P (2018)⁹ tries to know the growth of life insurance in India by his study. He studied all about history of life insurance in India. He want to examined by this study to know the overview of evolution of Indian insurance sector, to compare and measure the growth between the Private sector in India and the oldest Life Insurance Company (LIC) in India. He made this study on the basis of some secondary data which is collected from several sources. In this study he has tried to measure the growth of this sector through some statistical techniques and he estimate the growth factor to used Compounded Annual Growth Rate (CAGR)

etc. He observed that insurance industry in India is currently growing at around 27.00% per year. The increasing growth rate indicates a growing economy. Fiscal and monetary policy are capable of maintaining a stable growth rate. The Insurance Regulatory Authority of India (IRDA) has played a dynamic role in the growth of the Indian insurance sector.

Roy. S, Thakur. V, and Bandyopadhyay. K (2020)¹⁰ in their study paper “India's insurance sector: Challenges and opportunities” state about the evolution and growth of insurance sector in India and identified the challenges, barriers and opportunities of its development. It is based on secondary data, they have collected from several sources. They are going to analyse this paper on the basis of so many factors. After making the analysis they have concluded that India's economic growth depends on the ability of the Indian economy to absorb shocks. Financial and climatic shocks (amplified by climate change) are important for India, and the presence of an efficient and stable insurance market will determine India's short-term and long-term growth performance.

Objectives of the study

The main objective of the study is to make an enquiry into the trends of Life Insurance Industries in India. The study is conducted to study the trends and patterns of the life insurance industry in India. The main objective is divided under three secondary objectives such as:

1. To analysis the world's insurance density and compared it with the density of India.
2. To understand insurance improvement in India by a study of premium trend analysis.
3. To know the relationship between life insurance premiums and the number of offices and new policies issued.

Data and methodology

The insurance sector plays a very important and active role of financial intermediation. It represents one of the important pillars of the financial market which create lots of opportunities. The secondary data required for the study was collected from several secondary

sources from IRDAI Annual Reports, internets etc. This study is being conducted to find out the trends and patterns of the Indian Life Insurance industry.

Analysis and findings

According to analysis of insurance sector in India we can study about the position of

international level in insurance sector on the basis of insurance density of various countries in the world. In this analysis we can study about the life insurance and non-life insurance in the 29 countries in the world so this analysis can give the full information about insurance density across the world.

Table: 1 International Comparison Of Insurance Density (In USD)

| SL NO. | NAME OF THE COUNTRY | 2023-24 | | |
|--------|---------------------|----------------|--------------------|-------|
| | | LIFE INSURANCE | NON-LIFE INSURANCE | TOTAL |
| 1 | USA | 2136 | 7504 | 9640 |
| 2 | Canada | 1759 | 2507 | 4266 |
| 3 | Brazil | 207 | 183 | 390 |
| 4 | Argentina | 35 | 190 | 225 |
| 5 | Mexico | 154 | 197 | 351 |
| 6 | Switzerland | 2832 | 3998 | 6830 |
| 7 | Sweden | 3202 | 983 | 4185 |
| 8 | UK | 3466 | 1294 | 4760 |
| 9 | Netherlands | 724 | 4492 | 5216 |
| 10 | France | 2431 | 1435 | 3866 |
| 11 | Germany | 1106 | 1804 | 2910 |
| 12 | Italy | 1878 | 830 | 2708 |
| 13 | Spain | 835 | 909 | 1744 |
| 14 | South Africa | 577 | 141 | 718 |
| 15 | Saudi Arabia | 19 | 454 | 473 |
| 16 | Turkey | 27 | 197 | 224 |
| 17 | Russia | 57 | 98 | 155 |
| 18 | Singapore | 6264 | 1536 | 7800 |
| 19 | Taiwan | 2285 | 1022 | 3307 |
| 20 | South Korea | 1635 | 1968 | 3603 |
| 21 | Australia | 584 | 2174 | 2758 |
| 22 | Japan | 2245 | 693 | 2938 |
| 23 | New Zealand | 205 | 1533 | 1738 |
| 24 | Malaysia | 425 | 165 | 590 |
| 25 | China | 274 | 234 | 508 |
| 26 | Thailand | 244 | 140 | 384 |
| 27 | India | 70 | 25 | 95 |
| 28 | Indonesia | 38 | 28 | 66 |
| 29 | Pakistan | 7 | 4 | 11 |
| | World | 361 | 528 | 889 |

Source: Data has been taken from IRDAI Annual Report 2023-24

From the above table, we can see how India is lagging behind the world in the insurance sector. Therefore, for the economic growth of India, the insurance sector in India needs to

develop and focus on the insurance sector. In developed countries such as USA, Singapore, Switzerland, UK, Canada, Japan, France etc. the economic system is mainly influenced by

the insurance sector, so the insurance density in these countries is high. Therefore, the density of the insurance sector lies in covering risks in the lives of the people. In the above table USA has the highest density in the world and Pakistan has the lowest density in the world. India has 95 densities around the world. Therefore, India needs to improve the density of this sector to improve the country's economic situation. According to insurance

density 2023-24 within 29 countries we have found that India ranked 27th (Table: 1).

Trend analysis is looking for comparing one year with another year. In the below table, 16 years have been taken to compare how it can increase or decrease in trend percentages. This method is compared at a time with different years and it is also easy to understand and calculate. In Table- 2 we have taken the base year 2009 and calculated trend percentages.

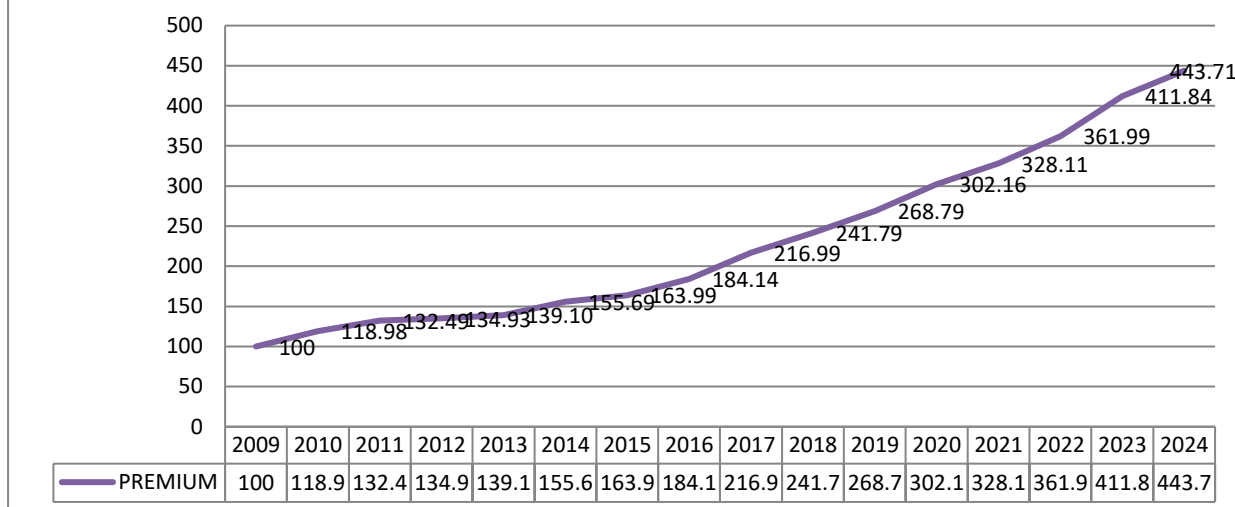
Table: 2 Trend analysis of life insurance premium (crores)

| SL NO | YEARS | LIFE INSURANCE | NON-LIFE INSURANCE | TOTAL | TRENDS OF 16 YEARS |
|-------|-------|----------------|--------------------|------------|--------------------|
| 1 | 2009 | 221785.47 | 31428.4 | 253213.87 | 100 |
| 2 | 2010 | 265447.25 | 35815.85 | 301263.1 | 118.98 |
| 3 | 2011 | 291638.63 | 43841.84 | 335480.47 | 132.49 |
| 4 | 2012 | 287072.11 | 54578.49 | 341650.6 | 134.93 |
| 5 | 2013 | 287202.49 | 65022.33 | 352224.82 | 139.10 |
| 6 | 2014 | 314301.66 | 79934.15 | 394235.81 | 155.69 |
| 7 | 2015 | 328101.14 | 87149.94 | 415251.08 | 163.99 |
| 8 | 2016 | 366943.23 | 99332.93 | 466276.16 | 184.14 |
| 9 | 2017 | 418476.22 | 130970.07 | 549446.29 | 216.99 |
| 10 | 2018 | 458809.44 | 153437.67 | 612247.11 | 241.79 |
| 11 | 2019 | 508132.03 | 172482.76 | 680614.79 | 268.79 |
| 12 | 2020 | 572910.19 | 192192.59 | 765102.78 | 302.16 |
| 13 | 2021 | 628731.04 | 202082.29 | 830813.33 | 328.11 |
| 14 | 2022 | 692614.14 | 224002.82 | 916616.96 | 361.99 |
| 15 | 2023 | 782503.97 | 260327.82 | 1042831.79 | 411.84 |
| 16 | 2024 | 829929.46 | 293612.04 | 1123541.5 | 443.71 |

Source: Data from IRDAI Annual Reports from 2008-09 to 2023-24

From the above table we can see that how the premium trend has increased year to year. In 2009, only a few companies existed in the insurance sector. Before 1999, LIC was the only insurance company and it acted as the regulatory body in India. From 2009 to 2024 the trend percentages are almost increased 4 times which indicates the well growth rate. Improving premium indicates that the number of people will lead to improve economic growth rates, which is most important for developing countries such as India (Table: 2).

In India, the first life insurance began, so the life insurance premium is more than insurance without life. The life insurance premium is improving from 2009 to 2024 and it improves almost 4 times. Private insurance does not start after the inclusion of IRDAI in 2000. Now in India 27 general insurance companies are on the India market. It was improved 9 times between 2009 and 2024. After IRDAI was integrated for this purpose, private insurance companies entered the market. The above discussion indicates that the Indian insurance sector has made further progress (Table: 2).

CHART: 1 PREMIUM TRENDS OF 16 YEARS

From the above chart we can observe that the trend of total premium is increasing. The premium curve indicates that premium has increased year to year. The trend of base year 2009 is 100 it increases from 2009 to 2024 which indicates the growth rate of insurance sector. According to the above chart this curve indicates premium and it helps us for better analysis to know how it started with 100 points to reaches 443.71 points in the year of 2024. On the basis of this analysis we observe that the premium of insurance sector has good improvement (Chart: 1).

After the analysis of trend on insurance premium, we are going to analysis insurance penetration and density which reflects the development of insurance sector in a country. Insurance penetration is measured as a percentage of total insurance premiums collected in the country's GDP and insurance density is collected as the ratio of total insurance premiums collected from the country's total population. Therefore, the insurance density means the premium that is recognized for capital insurance.

Table: 3: Insurance Density and Penetration in India

| SL NO | Year | Life | | Non-Life | | Industry(Total) | |
|-------|---------|---------------|-----------------|---------------|-----------------|-----------------|-----------------|
| | | Density (USD) | Penetration (%) | Density (USD) | Penetration (%) | Density (USD) | Penetration (%) |
| 1 | 2008-09 | 41.20 | 4.00 | 6.20 | 0.60 | 47.40 | 4.60 |
| 2 | 2009-10 | 47.70 | 4.60 | 6.70 | 0.60 | 54.40 | 5.20 |
| 3 | 2010-11 | 55.70 | 4.40 | 8.70 | 0.71 | 64.40 | 5.11 |
| 4 | 2011-12 | 49.00 | 3.40 | 10.00 | 0.70 | 59.00 | 4.10 |
| 5 | 2012-13 | 42.70 | 3.17 | 10.50 | 0.78 | 53.20 | 3.95 |
| 6 | 2013-14 | 41.00 | 3.10 | 11.00 | 0.80 | 52.00 | 3.90 |
| 7 | 2014-15 | 44.00 | 2.60 | 11.00 | 0.70 | 55.00 | 3.30 |
| 8 | 2015-16 | 43.20 | 2.72 | 11.50 | 0.72 | 54.70 | 3.44 |
| 9 | 2016-17 | 46.50 | 2.72 | 13.20 | 0.77 | 59.70 | 3.49 |
| 10 | 2017-18 | 55.00 | 2.76 | 18.00 | 0.93 | 73.00 | 3.69 |
| 11 | 2018-19 | 54.00 | 2.74 | 19.00 | 0.97 | 73.00 | 3.71 |
| 12 | 2019-20 | 58.00 | 2.82 | 19.00 | 0.94 | 77.00 | 3.76 |
| 13 | 2020-21 | 59.00 | 3.20 | 19.00 | 1.00 | 78.00 | 4.20 |
| 14 | 2021-22 | 69.00 | 3.20 | 22.00 | 1.00 | 91.00 | 4.20 |

| | | | | | | | |
|----|----------------|-------|------|-------|------|-------|------|
| 15 | 2022-23 | 70.00 | 3.00 | 22.00 | 1.00 | 92.00 | 4.00 |
| 16 | 2023-24 | 70.00 | 2.80 | 25.00 | 1.00 | 95.00 | 3.80 |
| | Average | 52.88 | 3.20 | 14.55 | 0.83 | 67.43 | 4.03 |
| | SD | 9.87 | 0.59 | 5.76 | 0.14 | 15.11 | 0.53 |

Source: Data collected from IRDAI Annual Report 2008-09 to 2023-24

The data from 2008-09 to 2023-24 shows significant trends in the density and penetration of life and non-life insurance in India. The density of life insurance increased from 41.20 USD in 2008-09 to 70.00 USD in 2023-24, indicating overall growth in premium spending per person. However, life insurance penetration declined from 4.00% to 2.80%, suggesting that the share of premiums in GDP decreased. The trend shows fluctuations, especially between 2010-11 and 2013-14, when density fell from 55.70 USD to 41.00 USD due to economic slowdown, inflation, reduced savings, and weakened industrial growth. After the recovery from 2013-14 onward, life insurance density steadily increased again.

In contrast, non-life insurance density showed continuous growth, rising from 6.20 USD in 2008-09 to 25.00 USD in 2023-24, indicating growing demand for health, motor, and general risk coverage. Non-life insurance penetration also increased, though marginally, from 0.60% to 1.00% during the same period.

Overall, while both segments saw growth in density, life insurance penetration declined due to economic instability, whereas non-life penetration gradually improved, reflecting increasing awareness and utilisation of general insurance products. The total insurance industry density grew from 47.40 USD to 95.00 USD, and total penetration moved from 4.60% to 3.80%, showing moderate long-term improvement.

Table: 4 New Life Insurance Policy Issued (in lakh)

| YEAR | Public | Growth (%) | Private | Growth (%) | Total Policy Issued | Trend (%) |
|---------|--------|------------|---------|------------|---------------------|-----------|
| 2007-08 | 376.12 | | 132.61 | | 508.73 | 100 |
| 2008-09 | 359.13 | -4.52 | 150.11 | 13.20 | 509.24 | 100.10 |
| 2009-10 | 388.63 | 8.21 | 143.62 | -4.74 | 532.25 | 104.62 |
| 2010-11 | 370.38 | -4.79 | 111.14 | -22.62 | 481.52 | 94.65 |
| 2011-12 | 357.51 | -3.47 | 84.42 | -24.04 | 441.93 | 86.87 |
| 2012-13 | 367.82 | 2.88 | 74.05 | -12.28 | 441.87 | 86.86 |
| 2013-14 | 345.12 | -6.17 | 63.60 | -14.11 | 408.72 | 80.34 |
| 2014-15 | 201.71 | -4.16 | 57.37 | -9.80 | 259.08 | 50.93 |
| 2015-16 | 205.47 | 1.86 | 61.92 | 7.93 | 267.39 | 52.56 |
| 2016-17 | 201.32 | -2.02 | 63.24 | 2.13 | 264.56 | 52.00 |
| 2017-18 | 213.38 | 5.99 | 68.59 | 8.46 | 281.97 | 55.43 |
| 2018-19 | 214.04 | 0.31 | 72.44 | 5.61 | 286.48 | 56.31 |
| 2019-20 | 218.96 | 2.30 | 69.50 | -4.06 | 288.46 | 56.70 |
| 2020-21 | 209.75 | -4.21 | 71.52 | 2.91 | 281.27 | 55.29 |
| 2021-22 | 217.19 | 3.55 | 73.94 | 3.38 | 291.13 | 57.23 |
| 2022-23 | 204.29 | -5.94 | 80.42 | 8.76 | 284.71 | 55.96 |

Source: Data collected from IRDAI Annual Report 2008-09 to 2023-24

From the above table show the status of new life insurance policies issued throughout the year. This data shows the fluctuations when new

policy issued. Over the years, it has shown positive or negative growth, but negative trends have been revealed in others (Table: 4).

$$\text{Calculation of growth} = \frac{\text{New Value} - \text{Old Value}}{\text{Old Value}} \times 100$$

The number of life insurance policy issued has been apparently decreased from 508.73 lakh in 2007-08 to 284.71 lakh in 2022-23. In the above table there are separated in two sectors in policy issued such as public sector and private sector. From the above trend analysis we can observed that the trends of life insurance policy was consistently decreased. Here, we are taking the base year 2007-08 easy to calculate trend analysis. In respect of the year 2007-08 as the base year to compared at a time with different years. And calculation of growth in each sector has been compared with previous years. After calculation of growth we can see some of the years has negative growth compare to previous year. Out of total policy issued, LIC's share

increased from 376.12 lakh in 2007-08 to 204.29 lakh in 2022-23, while part of the private insurer was noted by 132.61 lakh in 2007-08 to 80.42 lakh at 2022-23. During the year of 2007-08 total policy issued 508.73 lakh in which LIC issued 376.12 lakh while private life insurer issued 132.61 lakh. In financial year 2014-15 total policy issued 259.08 lakh in which LIC issued 201.71 lakh while private insurer issued 57.37 lakh. In financial year 2022-23 total policy issued 284.71 lakh in which LIC issued 204.29 lakh while private insurer issued 80.42 lakh. The trend of new life insurance policy issued 100% in 2007-08 as the base year to 55.96% in 2022-23. It shows the decreasing trend of policy issued (Table: 4).

Table – 5: Number of Life Insurance Offices

| Year | Public | Private | Total | Growth (%) | Trend (%) |
|---------|--------|---------|-------|------------|-----------|
| 2007-08 | 2522 | 6391 | 8913 | | 100 |
| 2008-09 | 3030 | 8785 | 11815 | 32.56 | 132.56 |
| 2009-10 | 3250 | 8768 | 12018 | 1.72 | 134.84 |
| 2010-11 | 3371 | 8175 | 11546 | -3.92 | 129.54 |
| 2011-12 | 3455 | 7712 | 11167 | -3.28 | 125.29 |
| 2012-13 | 3526 | 6759 | 10285 | -7.9 | 115.39 |
| 2013-14 | 4839 | 6193 | 11032 | 7.26 | 123.77 |
| 2014-15 | 4877 | 6156 | 11033 | 0.009 | 123.79 |
| 2015-16 | 4892 | 6179 | 11071 | 0.34 | 124.21 |
| 2016-17 | 4897 | 6057 | 10954 | -1.06 | 122.90 |
| 2017-18 | 4908 | 6204 | 11112 | 1.44 | 124.67 |
| 2018-19 | 4932 | 6347 | 11279 | 1.5 | 126.55 |
| 2019-20 | 4955 | 6355 | 11310 | 0.27 | 126.89 |
| 2020-21 | 4970 | 6090 | 11060 | -2.21 | 124.09 |
| 2021-22 | 4985 | 6075 | 11060 | 0 | 124.09 |
| 2022-23 | 5001 | 6255 | 11256 | 1.77 | 126.29 |
| 2023-24 | 5004 | 6513 | 11517 | 2.31 | 129.22 |

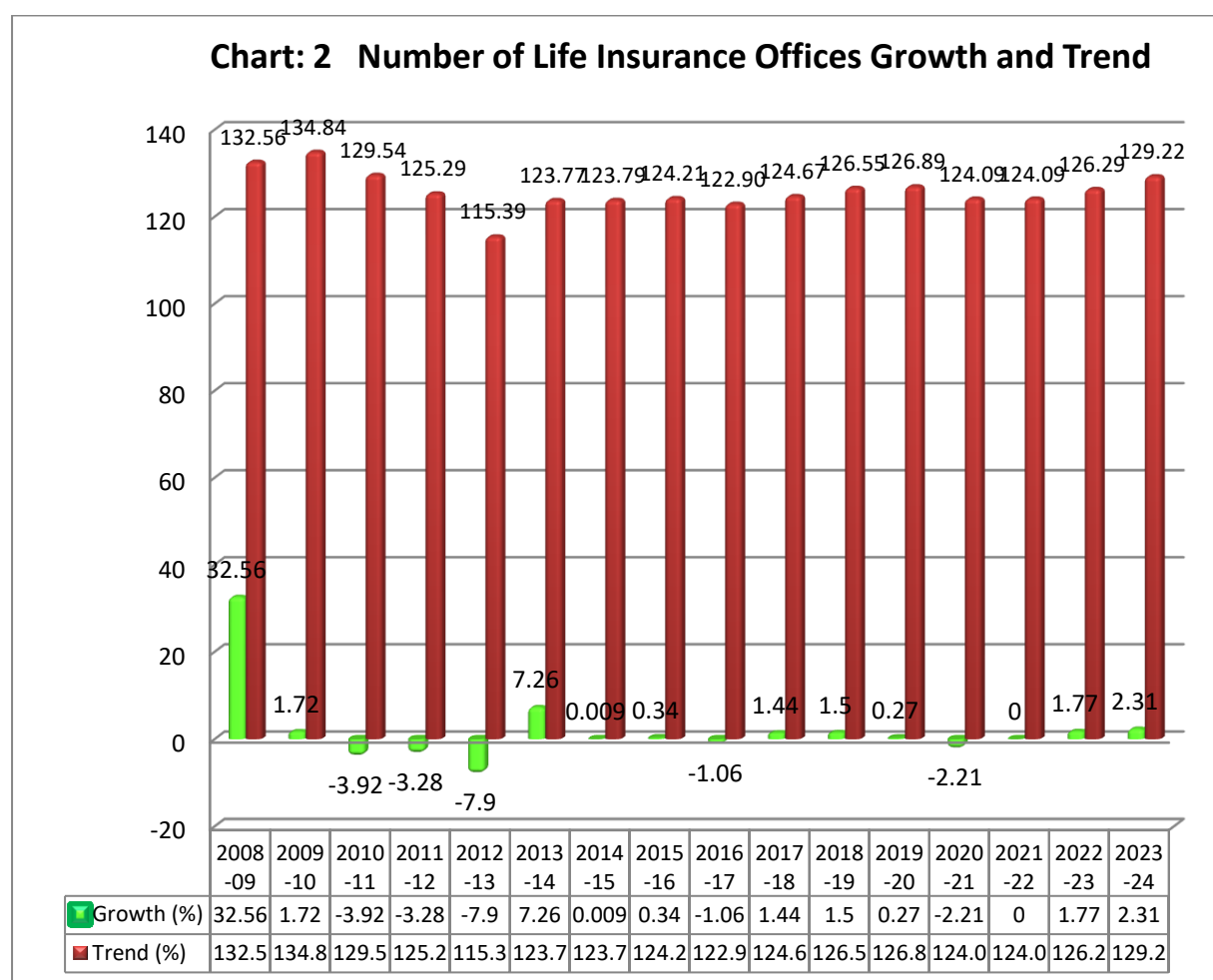
Source: Data collected from IRDAI Annual Report 2007-08 to 2023-24

The above table shows that the number of life insurance offices. From the given secondary

data we can say that there is an exceptional growth in number of life insurance offices. The

number of life insurance offices has increased significantly. In the financial year 2007-08, the total number of life insurance offices was 8913, which was increased to 11517 in the financial year 2023-24. Out of the total offices, 2522 offices were set up by LIC in 2007-08, which rose to 5004 offices in 2023-24, while in the private sector growth was moderately increased from 6391 in 2007-08 to 6513 in 2023-24. The

trend of number of life insurance offices was moderately increased because of the financial year 2007-08 (as a base year) 100% to 129.22% in 2023-24. The growth of the insurance offices has seen positive or negative. Some of the years have shown positive growth while others have shown negative growth compared to the previous year (Table: 5).



From the above chart has shown the negative and positive growth and trend of life insurance offices (Chart: 2).

Testing of Hypothesis

H_0 (Null Hypothesis): The total number of life insurance premium is independent to number of offices and new policies issued.

H_1 (Alternative Hypothesis): The total number of life insurance premium is dependent to number of offices and new policy issued.

The total amount of life insurance premium is affected by several factors. Through our

hypothesis we are testing the impact of two factors i.e., number of offices and number of new policy issued. These two factors are called independent variable while total amount of life insurance premium is called dependent variable. We developed a regression model which indicate the relationship between the dependent and independent variables.

Model 1: Total Amount of Life insurance Premium = intercept (α) + $\text{Beta}_1 \times \text{New}$

Policy Issued + $\text{beta}_2 \times \text{number of offices}$ + error term (e_t)

Table: 6: Model Summary (b)

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|-------|---------|----------|-------------------|----------------------------|---------------|
| 1 | .750(a) | .562 | .494 | 178716.10168 | .335 |

a. Predictors: (Constant), Offices, Policy

b. Dependent Variable: Premium

Table 6, 7 and 8 illustrate that the relationship between studied variables. The value of R (correlation) is 0.750 which shows that a very high degree of correlation between the studied variables. The value of R Square is 0.562 which represents that approx. 56.2% variability in

total life premium is caused by these two independent variables. The significance value of F test is less than 0.05 which favour the **rejection** of null hypothesis. In other word, it supports the validity of Model 1.

Table: 7 Independent Variable Coefficients (a)

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | | Sig. |
|-------------------|-----------------------------|------------|---------------------------|--------|------------|------|
| | B | Std. Error | Beta | B | Std. Error | |
| 1 (Constant) | 701722.700 | 772907.160 | | .908 | | .380 |
| New Policy Issued | -1752.147 | 440.604 | -.732 | -3.977 | | .002 |
| No. of Offices | 42.245 | 67.204 | .116 | .629 | | .540 |

a. Dependent Variable: Premium

From the above table show that the coefficient of independent variables (beta 1 and 2) and intercept (α). From the independent variable new policies issued ($p < 0.05$) has a significant impact on the total amount of insurance premium while number of offices has not

($p > 0.05$). Using these values, the Model 1 equation become as follows (Table: 7):

Total Amount of Life Insurance Premium (Model 1) = 701722.700 + (-1752.147) x New Policies Issued + 42.245 x no. of Offices + error term (e_t)

Table: 8 :ANOVA (b)

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|------------------|----|------------------|-------|---------|
| 1 | Regression | 532256690150.438 | 2 | 266128345075.219 | 8.332 | .005(a) |
| | Residual | 415212785015.491 | 13 | 31939445001.192 | | |
| | Total | 947469475165.929 | 15 | | | |

a. Predictors: (Constant), Offices, Policy

b. Dependent Variable: Premium

From the above analysis, we cannot accept our null hypothesis. We may conclude that new policies issued and number of offices has a

significant impact on the amount of life insurance premium.

Summary and conclusion

In this study we have make some discussion on the introduction of life insurance in India. This study also observed the trends of Life Insurance Industries in India. This research study helps to know about the density penetration of insurance sector, growth of life insurance premium, growth of new life insurance policy issued, growth of number of life insurance offices set up for economic development. These all factors we have analysed to know about the trend of Life insurance sector in India. This research study is based on secondary data has been taken from several secondary sources.

From this research study also discovered that from the international comparison of Insurance density in 29 countries across the world. From this analysis we can see how India is lagging behind the world in the insurance sector. Therefore, for the economic growth of India, the insurance sector in India needs to develop and it should need some more focus on this sector. According to insurance density 2023-24 within 29 countries we have found that India ranked 27th. So we can conclude that India has to improve more as it is in the backward position in the 29 countries across the world.

This study also shows that how to calculate trend percentages to analysis insurance premium, life insurance policy issued and numbers of offices set up etc. In this study to observed that trend percentages are almost increased 4 times which indicates well growth rate and improving premiums indicates that the number of people offered will lead to improved economic growth rates, which is most important for developing countries such as India. After the analysis of trend on insurance premium, we are going to analysis insurance penetration and density which reflects the development of insurance sector in a country. New ideas and passions have shown amazing growth in the insurance industry. This means that there has been an increase in the trend over the years in terms of insurance density and penetration, total premium, number of policy issued, number of offices opened.

This research study concludes that the insurance sector in India has a growing growth rate. It has to be increased year to year try to improve economic growth rates. By analysing so many factors of life insurance sector it shows

almost decreasing trends in there. The reason for this fall is the slowdown in the economic growth rate, higher inflation, a low economy, a stricter monetary policy, a global economic slowdown and increases, a low rate of industry growth, etc. To resolve these issues in the life insurance company, reduce trends to increase trends as they are necessary to change its policies and strategies.

This research study also concludes by the testing of hypothesis that new policies issued and number of offices has a significant impact on the amount of life insurance premium.

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PERCEPTION OF METAVERSE BANKING AFTER MERGER

(With Reference to Raipur City)

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Abstract

The emergence of the metaverse — an interactive, immersive, and decentralized digital environment, is redefining the future of banking by enabling virtual branches, holographic financial advisory, and AI-powered avatar-based services. This study investigates customer perceptions of metaverse banking in the context of a recent banking sector merger, with Raipur city as the empirical setting. The objectives include assessing awareness, trust, data security concerns, and perceived usefulness and ease of use across demographic categories.

A quantitative design using a structured questionnaire was adopted, with responses collected from 200 banking customers through stratified random sampling. Descriptive statistics, chi-square tests, t-tests, and ANOVA were employed to analyse customer perception patterns and test the proposed hypotheses.

The findings reveal moderate awareness but low actual engagement with metaverse banking services. Younger and digitally literate respondents displayed significantly more interest in adopting virtual banking interfaces. Trust and data security concerns — especially regarding cyber threats and identity theft — remain major barriers among older customers. Age, education, and occupation emerged as significant predictors of perceived usefulness and ease of use.

The study underscores the importance of trust-building, customer education, and user-friendly interface design for metaverse adoption in post-merger contexts. It contributes to the limited literature on metaverse banking in tier-2 Indian cities and offers actionable recommendations for banks undergoing digital transformation.

Keywords: Metaverse, Customer Perception, Banking Merger, Virtual Banking, Digital Finance, Raipur.

1. Introduction

The global banking industry is undergoing a profound transformation driven by blockchain, artificial intelligence, extended reality (XR), and immersive virtual interfaces. The metaverse, envisioned as the next evolutionary stage of the internet — provides a 3D, real-time, multisensory digital environment enabling customers to interact with financial services in an entirely new way. Banks worldwide are experimenting with virtual

branches, AI avatars, avatar-based customer support, immersive financial literacy modules, and blockchain-enabled identity verification.

Banking mergers, especially those involving technologically progressive institutions or fintech entities, are accelerating the adoption of such frontier technologies. Mergers typically target operational scale and efficiency, but when accompanied by digital innovations like metaverse platforms, they significantly

influence customer experience, trust, and behavioural intentions.

Raipur, a fast-developing tier-2 city in central India, offers an important context to examine such transitions. The city represents a population with diverse digital literacy levels: while younger customers are rapidly embracing digital finance, older and semi-urban populations exhibit caution toward advanced virtual banking systems. Despite growing global interest, research on customer perception of metaverse banking, particularly in post-merger Indian contexts, remains scarce. This study fills this gap by examining awareness, trust, perceived usefulness, and demographic differences among Raipur's banking users.

2. Objectives of the study

1. To assess the level of awareness among banking customers in Raipur regarding metaverse banking services introduced after the merger.
2. To analyse customer perceptions of trust, security, and data privacy within the metaverse banking environment.
3. To evaluate the perceived usefulness and ease of use of metaverse banking across demographic groups such as age, occupation, and education level.

3. Literature review

3.1 Evolution of Digital and Virtual Banking

Digital financial transformation has steadily reshaped banking operations globally. Demircuc-Kunt et al. (2017) emphasize that digital systems enhance financial inclusion by reducing transaction barriers. In developing economies, digital integration has been accelerated by mobile connectivity and automation (Koh, Phoon & Ha, 2018). Post-pandemic shifts further compelled banks to adopt sophisticated digital tools such as AI-powered customer service and automated transaction processing (Bathla & Awasthi, 2021). These trends have laid the foundation for immersive, XR-based virtual banking systems.

3.2 Emergence of Metaverse Banking

Literature identifies the metaverse as a transformative digital ecosystem enabling avatar-based financial interactions, VR branches, and blockchain-backed identity management (Hassani et al., 2020). International examples — such as JPMorgan's Onyx Lounge and KB Kookmin's VR branch, indicate the banking industry's growing interest in spatially immersive virtual financial environments. Alameda (2020) notes that immersive systems enhance personalization, customer engagement, and financial education.

3.3 Customer Perception and Technology Adoption

Technology adoption theories provide critical insights into user acceptance.

- **Technology Acceptance Model (TAM):** Davis (1989) identifies perceived usefulness and perceived ease of use as key predictors of digital adoption. Studies show younger consumers prefer immersive banking platforms due to familiarity with VR interfaces (Liao et al., 2020).
- **UTAUT Model:** Performance expectancy, effort expectancy, social influence, and facilitating conditions shape technology use (Venkatesh et al., 2003).
- **Trust Models:** Trust in cyber-security and data protection significantly affects willingness to adopt virtual banking (Hassani et al., 2020).

3.4 Post-Merger Customer Perception

Banking mergers often aim to modernize infrastructure and enhance service delivery. Singh and Kohli (2018) emphasize that post-merger transitions influence customer attitudes strongly, especially when technology upgrades are involved. Concerns arise when customers perceive lack of transparency, unfamiliar interfaces, or inadequate guidance. In tier-2 cities like Raipur, such concerns are amplified due to uneven digital literacy.

3.5 Research Gap

Existing literature widely covers digital banking and fintech adoption, yet:

- Empirical studies on metaverse banking in India are negligible.
- No research examines customer perception of metaverse banking after a merger.
- Evidence from tier-2 cities with mixed digital literacy, such as Raipur, is scarce.

This study addresses these gaps by analysing awareness, trust, and demographic differences influencing metaverse banking adoption.

4. Hypotheses

- **H01:** There is no significant awareness of metaverse banking services among Raipur-based banking customers after the merger.
- **H11:** There is significant awareness of metaverse banking services among Raipur-based banking customers after the merger.
- **H02:** Customers do not perceive metaverse banking environments as trustworthy or secure.
- **H12:** Customers perceive metaverse banking environments as trustworthy and secure.
- **H03:** There is no significant difference in perceived ease of use and usefulness across demographic groups.
- **H13:** There is a significant difference in perceived ease of use and usefulness across demographic groups.

5. Research methodology

This study employs a descriptive and analytical research design to investigate customer perceptions of metaverse banking following a merger. A quantitative approach was selected to ensure precision and replicability. A structured questionnaire based on a five-point Likert scale was administered to collect data on awareness, trust, security, ease of use, and usefulness.

The population consists of banking customers in Raipur who actively use digital services.

Stratified random sampling ensured proportional representation across demographic categories — age, occupation, and education. A total of 200 valid responses were collected through both online and offline modes.

Data analysis involved descriptive statistics (mean, percentage, standard deviation) and inferential tools such as chi-square tests, independent sample t-tests, ANOVA, and correlation analysis. SPSS and MS-Excel were used for all statistical computations. Secondary data from journals, merger reports, and industry analyses supported the study framework.

6. Scope of the study

The study is geographically restricted to Raipur city and focuses on customer perception of metaverse banking within a post-merger context. While findings may not generalize to all Indian regions, they offer strong insights into the digital attitudes of tier-2 urban consumers — a demographic increasingly targeted by banks for digital transformation initiatives.

7. Limitations

1. The study is limited to Raipur and may not reflect perceptions in rural or metro regions.
2. Self-reported data may involve response bias.
3. The rapidly evolving nature of metaverse technologies means perceptions may shift as platforms mature.

8. Findings

The results indicate moderate awareness (around 60%) of metaverse banking, with most respondents encountering the concept through social media or advertisements. However, only 25% had any real experience with immersive banking applications.

Trust and security concerns were the most significant barriers, especially among customers aged above 45. Conversely, respondents aged 18–30 displayed strong confidence in navigating virtual environments

and expressed interest in avatar-based services and virtual financial guidance.

ANOVA revealed significant differences in perceived usefulness and ease of use across age and education groups. Professionals, entrepreneurs, and students showed higher acceptance than retired or semi-urban respondents.

9. Conclusion

The study concludes that while awareness of metaverse banking is rising in Raipur, active adoption remains low due to security concerns and limited hands-on exposure. Younger, educated, and digitally literate users are more willing to accept immersive banking experiences, highlighting the need for targeted awareness campaigns and user training.

Post-merger transitions must be supported with strong communication strategies, simplified virtual interfaces, and robust cybersecurity to build trust. The findings contribute to emerging literature on metaverse banking in India and offer practical insights for banks aiming to expand into immersive virtual financial ecosystems.

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GREEN FINANCE: AN OPPORTUNITY IN JHARKHAND

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Abstract

Jharkhand, a mineral-rich state in India, faces a significant economic and environmental challenge as it seeks to transition from a fossil fuel-reliant economy toward a sustainable, low-carbon future aligned with India's net-zero goals by 2070. Currently, coal and petroleum contribute nearly one-third of the state's revenue, with coal alone accounting for 17%, exposing Jharkhand to fiscal risks amid global declines in fossil fuel demand.

This study synthesizes insights from the Jharkhand Task Force on Sustainable Just Transition, Center for Environment and Energy Development (CEED), and Institute for Energy Economics and Financial Analysis (IEEFA) reports released in 2025, illuminating the state's need for an estimated US\$256 billion investment through 2070. This investment covers gradual phase-down of coal mining and thermal power, decarbonization of the steel sector, community and social support programs, and scaling up of new low-carbon industries including renewable energy, green hydrogen, and clean manufacturing.

The reports underscore the importance of a sustainable finance framework blending public funding, private investments, concessional debt, and international climate finance to mobilize capital at scale. Policy instruments such as green budgeting, centralized green cells for investor facilitation, and blended finance models are vital for operationalizing this transition efficiently. Social safeguards including reskilling, compensation, environmental remediation, and community engagement are integral to protect coal-dependent livelihoods and ensure an inclusive transition.

Economic diversification through renewables and emerging green industries is projected to more than offset revenue losses from declining fossil fuel sectors, potentially unlocking ₹6.7 lakh crore (US\$79.3 billion) by 2070. Structured coordination among government, multilateral development banks, private sector, and civil society is critical to mitigate risks and harness growth opportunities.

Keywords: Green Finance, Sustainable Development, Just Transition, Renewable Energy, Jharkhand, Climate Finance, Low-Carbon Economy, Social Safeguards.

Introduction

Global and Indian Green Finance Landscape

Green finance, encompassing investments aimed at environmental sustainability, has become a global imperative amid accelerating climate change impacts. Financial flows targeting renewable energy, energy efficiency, and carbon mitigation are essential to achieve global climate goals such as the Paris Agreement. India aligns with this through its commitment to reduce carbon emissions

intensity by 45% by 2030 and reach net-zero by 2070. The burgeoning green finance market in India is supported by regulatory mandates including ESG disclosure norms by SEBI and climate risk management frameworks by RBI, as well as sovereign green bond issuances and blended finance initiatives. However, challenges remain in standardizing finance definitions, achieving financial inclusion, and scaling green investments efficiently.

Jharkhand's Economic and Environmental

Context

Jharkhand, situated in eastern India, is a mineral-resource and coal-dependent state with its economy deeply intertwined with fossil fuels. Coal and petroleum account for approximately 32% of the state's own revenue, a significant proportion considering the socio-economic reliance on these industries for employment and local livelihoods. With a projected Gross State Domestic Product of Rs 5.56 lakh crore in 2025-26 and a growth rate of 7.5%, Jharkhand faces the pressing challenge of transitioning these economic dependencies toward sustainable pathways without undermining social stability. Environmental concerns such as deforestation, pollution from mining, and vulnerability to climate impacts further necessitate an urgent green finance-driven transformation.

Research Gaps and Study Justification

While national-level green finance policies gain traction, there is a scarcity of focused research addressing the unique needs of resource-rich states like Jharkhand. Limited literature covers jurisdiction-specific challenges, finance mechanisms compatible with local economic structures, and social safeguarding models essential for just transitions. This research article aims to fill this gap by contextualizing green finance within Jharkhand's socio-economic realities, providing evidence-based insights into financing demands, institutional frameworks, and potential pathways to equitable sustainable development. Such context-specific studies are crucial to formulate scalable and customized policy and financial solutions required for regional clean transitions.

Research Objectives and Paper Structure

The primary objective is to analyze how green finance can be leveraged to support Jharkhand's transition to a low-carbon economy, emphasizing integrated financial, policy, and social strategies. The paper systematically explores:

- The scale and nature of Jharkhand's financing needs for fossil-fuel phaseout and green growth
- Institutional and policy frameworks enabling green finance deployment in the state

- Social safeguards and just transition components addressing coal-dependent communities
- Challenges and implications for replicability in comparable contexts

Following the Introduction, the paper reviews existing literature on green finance, outlines methodology, presents results and findings, discusses policy and socio-economic ramifications, and concludes with strategic recommendations.

Literature Review

Conceptualization and Global Perspective of Green Finance

Green finance refers to financial investments flowing into projects and initiatives that contribute to environmental sustainability, including renewable energy, energy efficiency, pollution reduction, and biodiversity conservation. Globally, green finance is recognized as a vital tool to achieve climate goals such as those set under the Paris Agreement. International financial institutions, governments, and the private sector increasingly utilize mechanisms like green bonds, sustainability-linked loans, and blended finance models to mobilize capital for climate-resilient infrastructure and low-carbon technologies (ISPP, 2025; Climate Policy Initiative, 2025). Technologies including AI and blockchain are expected to enhance transparency and traceability within green finance, increasing investor confidence globally (Kumar, 2021).

India's Evolution in Green Finance

India's green finance landscape is rapidly evolving, driven by its commitment to net-zero emissions by 2070 and expansion of renewable energy capacity aiming for 500 GW by 2030 (Gnanaganga Alliance University, 2025). Policy innovations such as SEBI's mandatory ESG disclosures for listed companies and RBI's climate risk management guidelines for banks exemplify institutional efforts to mainstream sustainable finance. The green bond market in India expanded to \$6.8 billion in 2021, majorly funding renewable energy projects (Bhardwaj & Malik, 2022). Government schemes like the National Clean

Energy Fund and regulatory measures. promoting green loans complement these efforts (Reddy & Acharya, 2020). Despite promising growth, challenges remain—fragmented regulation, limited financial products tailored to sustainability, and low investor awareness restrict broader market development (Kumar & Shobana, 2024).

Financial Instruments and Market Developments

Green bonds have become the flagship instrument, facilitating capital for clean energy and sustainable infrastructure. ESG funds and sustainability-linked loans are gaining traction, offering flexibility for corporate sustainability transitions. Carbon credit trading markets in India are developing to incentivize emissions reduction. Blended finance—combining public guarantees with private capital—addresses the high upfront costs and perceived risks of green projects (Climate Policy Initiative, 2025). Nevertheless, India's market size remains smaller compared to global leaders like China and the European Union, indicating room for scaling and harmonizing green finance mechanisms (Reddy & Acharya, 2020).

Challenges in Implementing Green Finance

Key barriers include regulatory uncertainty, insufficient market infrastructure, and gaps in institutional capacity. Standardized and transparent green finance taxonomies are needed to prevent greenwashing and improve comparability (Mishra & Singh, 2020). Risk assessment models tailored to emerging markets remain underdeveloped, limiting private investment enthusiasm. Financial inclusion is another concern, as most green finance currently benefits larger entities, while micro and small enterprises face financing constraints. Awareness and technical expertise across financial institutions also require enhancement (Gupta & Jain, 2021).

Just Transition and Regional Implications

Theories of just transition underscore the necessity of equitable climate action ensuring social inclusiveness, workers' rights, and community well-being (IEEFA, 2025). Resource-rich states like Jharkhand with heavy fossil fuel dependence emphasize this,

highlighting the risk of socio-economic disruption from rapid decarbonization (Times of India, 2025). International experiences from coal regions reflect the importance of combining financial investments with active social safeguards—retraining, income support, environmental remediation—to facilitate successful green transitions (Bhairav et al., 2024). Tailoring green finance to regional economic structures is thus acknowledged as critical.

Regional Studies and Knowledge Gaps

While national green finance policies advance, state-level assessments remain limited. Jharkhand's case is underrepresented in academic and policy literature despite its pivotal role in India's coal production and fiscal landscape. Existing studies offer preliminary frameworks but call explicitly for comprehensive empirical and policy research addressing localized finance instruments, governance arrangements, and social equity mechanisms in Jharkhand's transition (Business Jharkhand, 2025; CEED, 2025). Filling this gap enables more effective design and scaling of context-specific green finance solutions.

Methodology

Research Design:

This study employs a qualitative research approach appropriate for exploring complex socio-economic and policy phenomena such as green finance within Jharkhand's specific regional context. Qualitative methods provide flexibility to interpret diverse data sources, enabling nuanced understanding of financial frameworks, institutional mechanisms, and social dynamics.

Data Sources and Collection:

The study is based on an extensive review and analysis of secondary data from multiple relevant sources, including:

- Government of Jharkhand policy documents (state budgets, climate action plans, power policy drafts)
- Reports from reputable think tanks and NGOs such as Institute for Energy Economics and Financial Analysis (IEEFA), Centre for Environment and

Energy Development (CEED), and Climate Policy Initiative (CPI)

- Academic literature and green finance regulatory publications from institutions like SEBI and RBI
- Media analysis from credible news sources such as Times of India and Business Jharkhand
- Investment and financing frameworks developed by Jharkhand's Task Force on Sustainable Just Transition

Analytical Framework:

A thematic content analysis was undertaken to extract, categorize, and synthesize information around key themes pertinent to Jharkhand's green finance landscape:

- Financial investment needs and mechanisms
- Policy and institutional frameworks
- Social safeguards and just transition elements
- Challenges and opportunities for green finance mobilization

Thematic coding allowed identification of recurrent patterns in financing strategies, policy enablers, and social equity considerations ensuring transparency and systematic interpretation.

Case Study Review:

Specific case examples of green finance projects from Jharkhand related to renewable energy expansions, coal asset retirement programs, and social safeguarding initiatives were analyzed to provide empirical grounding and contextual real-world insights into opportunities and implementation challenges. These cases exemplify practical applications of green finance instruments and governance models in Jharkhand.

Rigor, Validity, and Limitations:

Rigor was maintained through triangulation across diverse credible secondary sources to minimize bias and validate findings. Data cross-verification enhanced reliability. However, limitations stem from sole reliance on secondary data; emerging grassroots

dynamics may not be fully captured. Further primary research via stakeholder interviews and field surveys is recommended for comprehensive future studies. The qualitative nature limits statistical generalization but provides rich contextual depth critical for policy-oriented research.

Results and Findings

Financial Investment Needs and Economic Outlook

Jharkhand requires an estimated US\$256 billion (₹21.52 lakh crore) between 2026 and 2070 to finance its transition from a fossil fuel-reliant economy to a sustainable, low-carbon future (IEEFA, 2025; Times of India, 2025). This massive investment covers phasedown of coal mining and thermal power sectors, decarbonization of key industries such as steel production, and development of green infrastructure encompassing renewable energy, green hydrogen production, and energy storage. It also includes substantial social expenditures — over US\$12.5 billion (₹1.05 lakh crore) — dedicated to reskilling workers, supporting affected communities, and environmental remediation.

Economic modeling reveals that while coal and petroleum currently contribute approximately 32% of Jharkhand's state revenue, revenues from expanding low-carbon industries, including electric vehicle manufacturing and solar panel production, are expected to surpass fossil fuel-derived incomes by 2047. This diversification is projected to result in a net positive fiscal impact of about US\$79.3 billion (₹6.7 lakh crore) by 2070, highlighting the economic viability of the green transition (Business Jharkhand, 2025).

Institutional and Policy Frameworks

The State Government of Jharkhand, supported by the Task Force on Sustainable Just Transition, has developed a comprehensive sustainable finance framework anchored in public funding, private investment, concessional debt, and international climate finance (CEED, 2025; justtransition-jharkhand.in, 2025). The framework includes green budgeting as a core policy tool to integrate environmental considerations in fiscal planning. Further, a centralized green cell is

proposed to streamline procedures related to land allocation, investor facilitation, and approval processes.

To enhance financing partnerships, Jharkhand seeks to align with successful models from other Indian states, such as Tamil Nadu's Investment Fund Management Corporation and Kerala's Infrastructure Investment Fund Board, adapting governance structures and capital stacks for its context. The state also recognizes the role of multilateral development banks (MDBs) in anchoring coal asset retirement facilities blending grants with low-cost, long-tenor debt to finance technical mine closure and community transition support.

Renewable Energy Opportunities and Initiatives

Jharkhand possesses significant renewable energy potential, particularly for solar, wind, and biomass projects (iForest, 2025). Policy incentives such as tax exemptions, subsidies, and streamlined permitting aim to attract developers and reduce investment risks. The Jharkhand Renewable Energy Development Agency (JREDA) is building technical and administrative capacities to catalyze project development.

Collectivization of energy demand by industrial parks and MSMEs is another strategy to improve the bankability of green energy projects. Furthermore, the emerging green hydrogen sector, though early-stage, is being prioritized to leverage Jharkhand's capability in minerals critical to hydrogen technologies. Dedicated blended finance facilities are also being designed to support agroforestry and nature-based social resilience projects, which have co-benefits for rural livelihoods and climate mitigation.

Social Safeguards and Just Transition Measures

Social safeguards constitute a vital aspect of Jharkhand's transition planning to ensure that workforce and communities reliant on coal mining and thermal power are not disproportionately harmed. Reskilling and vocational program budgets are earmarked to facilitate employment shifts especially targeting mine workers and their families. Income support, health care, and environmental remediation packages form pillars of

community resilience efforts.

The proposed "coal asset retirement facility," modeled after established state-level funds and underpinned by MDBs, would finance mine closures, environmental rehabilitation, and comprehensive social packages. This is instrumental in reinforcing local economies and maintaining social cohesion during structural economic adjustments. Community participation in planning processes is emphasized to promote local ownership and transparency.

Challenges and Barriers

Despite well-outlined plans and promising opportunities, Jharkhand faces substantial challenges in financing scale, institutional coordination, and regulatory oversight. Mobilizing the required capital demands innovative blended finance models combining concessional public funds with risk-capital from private investors and climate funds (IEEFA, 2025).

Regulatory complexity and the need for a clear green finance taxonomy to prevent "greenwashing" are critical issues. Limited technical and administrative capacities pose hurdles to rapid scaling and effective monitoring of green investments. Furthermore, balancing ethico- social equity with economic imperatives requires robust stakeholder engagement and transparency.

Discussion

Integrating Economic, Environmental, and Social Dimensions

Jharkhand's green finance journey illustrates the intrinsic interdependence of economic diversification, environmental sustainability, and social equity. The state's current economic dependency on coal and petroleum revenues poses fiscal risks as global demand shifts downward due to decarbonization. Transitioning through green finance investments provides a pathway to safeguard fiscal health by unlocking diverse economic opportunities in renewable energy, clean manufacturing, and green hydrogen production. These sectors also promise more sustainable employment, counterbalancing job losses in fossil fuel industries. Social safeguards

embedded within the financing strategy, such as reskilling and community support, reflect an understanding that decarbonization must be just and inclusive to avoid exacerbating existing socio-economic vulnerabilities. This holistic approach aligns well with international just transition frameworks emphasizing social dialogue, livelihood protection, and equity.

Policy Implications for Jharkhand

The study underscores the need for sustained policy innovation to operationalize green finance effectively. Jharkhand's adoption of green budgeting is a critical step for aligning fiscal expenditures with sustainability goals. Establishing a centralized green cell can streamline approvals and enhance investor confidence by providing a single-window platform for green project facilitation. Policies must also be adaptive to rapidly evolving green technologies and international finance trends, ensuring regulatory clarity and minimizing transaction costs.

Blended finance models blending concessional public funds, risk guarantees, and private investments are essential for mobilizing the scale of capital required. Jharkhand's collaboration with multilateral development banks and philanthropic institutions is a valuable asset that should be leveraged further to bridge the current finance gap.

Broader Lessons for Similar Regions

Jharkhand's experience offers critical lessons for other resource-rich, coal-dependent regions seeking a green transition. Its combination of large-scale planning, stakeholder engagement via task forces, and investment in social safeguards demonstrates a comprehensive model that addresses economic, environmental, and social risks simultaneously. The emphasis on MSME- focused green finance facilities (e.g., the proposed Green Financing Facility for Just Transition) highlights the importance of inclusive finance strategies reaching the industrial base often left behind.

Moreover, Jharkhand's case illustrates how local governments can build enabling environments by coordinating policies, improving governance, and developing technical capacities critical for scaling green investments. These strategies are transferable to emerging economies grappling with similar

decarbonization challenges.

Challenges and the Way Forward

Challenges such as financing scale, institutional coordination, and regulatory complexities remain formidable. Effective monitoring mechanisms and data transparency are required to track green finance deployment and results accurately. Capacity constraints at sub-state levels may slow progress and require targeted training programs for government officials and project developers.

The balance between short-term economic imperatives and long-term sustainability goals requires transparent stakeholder engagement to build trust and ensure broad-based support. Adaptive management frameworks that can accommodate evolving conditions and technologies will fortify Jharkhand's green finance ecosystem. Investing in research to monitor social outcomes and financial performance will offer continuous learning opportunities to optimize strategy effectiveness. Partnerships with national and international academic institutions and policy think tanks can deepen insights and innovation.

Conclusion

Green finance represents a transformative opportunity for Jharkhand to reshape its economic trajectory from fossil fuel dependence to a sustainable, low-carbon future. The state, heavily reliant on coal and petroleum for nearly one-third of its revenue, faces significant fiscal and social challenges as global energy transition accelerates. This research has shown that an investment requirement of approximately US\$256 billion between 2026 and 2070 is critical to enable phasedown of carbon-intensive sectors, development of renewable energy infrastructure, and robust social support mechanisms ensuring a just transition for coal-dependent communities.

Jharkhand's adoption of a comprehensive sustainable finance framework, championed by the state government and supported by international climate finance institutions, underscores the importance of integrating financial innovation, strong policy coordination, and social equity considerations. The establishment of green budgeting,

centralized green cells for investment facilitation, and blended finance models combining public and private capital exemplify strategic enablers to mobilize the scale of funding required.

Investment in renewable energy, including solar, wind, and emerging green hydrogen sectors, coupled with industrial decarbonization initiatives, has the potential to unlock substantial new revenue streams—projected at ₹6.7 lakh crore by 2070—thus offsetting revenue losses from fossil fuels. Social safeguards focusing on reskilling, income support, and environmental remediation are pivotal to maintain social cohesion and empower affected communities. Challenges remain in terms of scaling finance, enhancing institutional capacity, clarifying regulations, and ensuring sustained stakeholder engagement. Nonetheless, Jharkhand's comprehensive roadmap and policy innovations offer a replicable model for other resource-dependent regions grappling with the socio-economic complexities of energy transitions.

This research emphasizes that green finance is not merely a funding mechanism but a holistic development paradigm essential to achieve climate commitments, economic diversification, and social justice. Continued policy innovation, empirical research, and inclusive governance will be crucial to optimize Jharkhand's transition outcomes and inform sustainable finance strategies nationwide. Jharkhand stands at a critical juncture where deliberate and integrated green finance strategies can catalyze a resilient, equitable, and prosperous future. The lessons derived from this case will enrich the broader discourse on just transitions, providing tangible pathways towards sustainable development in emerging

economies.

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LIBERATION OR DOMINATION? THE COLONIAL USES OF FEMINIST RHETORIC IN MODERN INDIA

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Abstract:

This article critically examines the colonial deployment of feminist rhetoric in British-ruled India, questioning whether gender reforms served as genuine tools of liberation or instruments of domination. While British colonial authorities framed practices such as sati and child marriage as evidence of Indian women's oppression—thus justifying their civilizing mission—such interventions often functioned to legitimize imperial control rather than empower women. By analyzing the roles of colonial administrators, Indian reformers, and early female activists, the article explores how gender became a contested site of cultural authority and resistance. It also investigates how elite Indian men and Western women both contributed to and complicated this dynamic. Further, the article considers how colonial narratives continue to echo in contemporary feminist discourse, especially in development policy, NGO activism, and global representations of Indian women. Ultimately, it calls for a decolonial feminist approach that centers local voices, resists savior narratives, and reclaims the struggle for gender justice from imperial entanglements.

Keywords: Colonial feminism, British India, Feminist rhetoric, Civilizing mission, Indian social reform, White feminism, Decolonial feminism, Gender and empire, Postcolonial India, Neocolonialism and NGOs

Introduction

In 1885, British colonial official Sir James Fitzjames Stephen declared, "*The whole British Government in India is a female education society on a larger scale.*" This statement, cloaked in paternalistic benevolence, captures the essence of how the British Empire framed its intervention in Indian society: as a mission not only to govern, but to civilize—particularly through the supposed liberation of Indian women. British authorities, along with Western feminists and missionaries, frequently positioned Indian women as passive victims of a backward, patriarchal culture—requiring Western intervention to achieve emancipation. But was this truly a feminist endeavor, or a calculated justification for colonial control?

This article explores the central tension between liberation and domination within colonial gender discourse in India. It

interrogates how feminist rhetoric—especially concerning women's education, widow remarriage, and the abolition of sati—was mobilized to advance imperial interests. Rather than a simple binary of oppression and freedom, these narratives were embedded in complex intersections of race, power, class, and culture.

Focusing on both colonial actors and Indian responses, this study examines the roles played by British officials, white women reformers, elite Indian men, and early Indian feminists in shaping the discourse around women's rights. It also traces how these colonial frameworks continue to reverberate in contemporary development policy and global feminist narratives about Indian women.

This article argues that the use of feminist rhetoric by colonial powers in modern India

often functioned less as a project of emancipation and more as a tool of imperial domination—one that has left a lasting imprint on how gender justice is framed in postcolonial contexts.

Historical Context:

The historical context of the article “Liberation or Domination? The Colonial Uses of Feminist Rhetoric in Modern India” lies in British colonial rule in India (18th–20th centuries). During this period, colonial powers often portrayed Indian women as oppressed, using their alleged suffering to justify imperial intervention and “civilizing missions.” This narrative framed Western influence as a means of liberation while masking political and economic domination. The study examines how these colonial discourses shaped gender perceptions and influenced both nationalist and feminist debates in modern India.

Significance of the Paper

This paper addresses a critical but often underexplored aspect of both feminist and postcolonial scholarship: the instrumentalization of gender reform as a justification for colonial rule in modern India. By interrogating how feminist rhetoric was used to legitimize imperial intervention, the paper reveals the ideological work of colonialism in framing Indian women as symbols of civilizational backwardness and moral deficiency. This analysis not only contributes to a deeper understanding of the gendered dimensions of empire but also challenges dominant narratives that present colonial gender reforms as inherently progressive.

Furthermore, the paper sheds light on how these colonial legacies persist in contemporary global development and feminist discourse, where Indian women are still frequently represented through tropes of victimhood and rescue. By tracing these historical continuities, the study calls attention to the urgent need for decolonial feminist frameworks that center indigenous voices, resist savior narratives, and challenge the structural inequalities inherited from colonial rule.

In doing so, this work contributes to a growing body of interdisciplinary scholarship that

bridges history, feminist theory, and postcolonial studies, offering both a critical re-reading of the colonial past and a roadmap for more ethical, inclusive feminist praxis in the present.

Method of the study:

The article “Liberation or Domination? The Colonial Uses of Feminist Rhetoric in Modern India” employs a postcolonial feminist methodology to critically examine how colonial narratives utilized feminist rhetoric to justify imperial rule over Indian women. The study focuses on analyzing colonial texts, policies, and discourses that portrayed Indian women as oppressed and in need of Western intervention. By deconstructing these narratives, the author highlights the ways in which such portrayals were instrumental in legitimizing colonial dominance under the guise of ‘civilizing missions.’

The methodology involves a critical discourse analysis of historical documents, literature, and colonial records to uncover the gendered dimensions of colonial power and its impact on the construction of Indian womanhood. This approach allows for a nuanced understanding of how feminist rhetoric was co-opted to serve colonial interests, thereby challenging traditional narratives of liberation and domination.

By employing this method, the study contributes to a deeper understanding of the intersection between colonialism and feminism, shedding light on the complexities of gender, power, and resistance in colonial contexts.

Objectives

1. To critically examine how feminist rhetoric was utilized by British colonial authorities in India to legitimize imperial rule, particularly through interventions in social practices such as sati, widow remarriage, and women's education.
2. To analyze the roles of elite Indian male reformers (e.g., Raja Ram Mohan Roy, Ishwar Chandra Vidyasagar) in promoting gender reform, while also interrogating their entanglement with

colonial ideologies and power structures.

3. To explore the complex positioning of white British women—missionaries, educators, and feminists—as both collaborators in and critics of empire, highlighting the racialized hierarchies embedded in their work.
4. To foreground the agency of early Indian women activists and writers, such as Pandita Ramabai and Rokeya Sakhawat Hossain, who navigated and redefined feminist discourse within and against colonial constraints.
5. To investigate postcolonial continuities in development discourse, global media, and NGO interventions, and how they often replicate colonial representations of Indian women as victims in need of external rescue.
6. To advocate for a decolonial feminist framework in India that centers the voices and struggles of Dalit, Adivasi, Muslim, queer, and other marginalized communities, challenging Western universalism and promoting locally grounded gender justice.
7. To contribute to the rethinking of transnational feminist solidarity, encouraging critical reflection on power, positionality, and representation in both academic and activist feminist spaces.

Colonial India and the Gendered Civilizing Mission

During British rule in India, gender became a strategic site through which colonial authorities justified and enacted their imperial project. British narratives frequently portrayed Indian society as deeply patriarchal and morally regressive, with Indian women cast as the ultimate victims—voiceless, oppressed, and in need of rescue. Practices such as *sati* (widow immolation), child marriage, and the denial of education to women were selectively emphasized and sensationalized to construct a civilizational binary: the enlightened West versus the barbaric East. These portrayals were instrumental in legitimizing colonial domination under the guise of a humanitarian mission. Reformist interventions, such as the abolition of *sati* in 1829 and support for widow remarriage laws, were presented not only as

moral triumphs but as evidence of British benevolence and cultural superiority. However, these so-called reforms often ignored or marginalized indigenous voices, especially those of Indian women, and were deeply entangled with efforts to consolidate colonial control. Feminist language—when co-opted by imperial interests—became a powerful rhetorical tool, not for empowering Indian women on their own terms, but for reinforcing racial hierarchies and justifying foreign rule. In this way, gender was not merely an area of reform but a cornerstone of the British civilizing mission, one that masked domination in the language of liberation.

Indian Social Reformers and the Colonial Gaze

In 19th-century colonial India, a number of elite Indian male reformers—such as Raja Ram Mohan Roy and Ishwar Chandra Vidyasagar—emerged as vocal advocates for women’s rights, particularly in areas like the abolition of *sati*, promotion of widow remarriage, and female education. These figures are often celebrated as pioneers of social progress; however, their efforts were entangled in a complex dynamic with the colonial state. While their reformist agendas were rooted in internal critiques of Hindu orthodoxy and caste patriarchy, they also operated within and sometimes appealed to the framework of British moral and civilizational superiority. For instance, Roy’s campaign against *sati* was influential in shaping Lord William Bentinck’s decision to outlaw the practice, a move that British authorities then used to portray colonial rule as morally redemptive. This created an uneasy alliance where Indian reformers leveraged colonial support to push for change, but in doing so, often reinforced the imperial narrative that India was inherently backward and in need of British guidance. Moreover, these reform movements were predominantly led by upper-caste, Western-educated men whose vision of progress did not always reflect or include the voices of the women they claimed to represent. The result was a selective, class- and caste-based modernization project, shaped as much by internal social hierarchies as by colonial ideology. Thus, while these reformers played a vital role in challenging entrenched patriarchy, their work must also be viewed through the lens

of complicity, negotiation, and the colonial gaze.

White Women in Empire: Between Solidarity and Superiority

British women in colonial India—particularly missionaries, educators, and early feminists—played a complex role in the imperial project, often positioning themselves as both allies of Indian women and agents of empire. Figures such as missionary educators and members of women’s reform societies sought to “uplift” Indian women through Christian morality, Western education, and domestic training. While these women sometimes challenged patriarchal norms within both Indian and British society, their interventions were frequently shaped by a feminist paternalism that viewed Indian culture as inherently oppressive and Indian women as helpless victims. This racialized framework placed white women in the role of moral saviors, perpetuating colonial hierarchies even as they claimed to act in solidarity. Many failed to recognize the agency, diversity, and existing resistance among Indian women, instead promoting a one-size-fits-all model of Western womanhood. Cross-cultural encounters often resulted in mutual misunderstanding—British women misread Indian customs through an orientalist lens, while Indian women navigated these interactions strategically, sometimes accepting resources while rejecting the moral authority behind them. Though some white feminists developed critical perspectives on empire, the dominant mode remained one of superiority masked as benevolence. These dynamics reveal how even well-intentioned feminist efforts were deeply embedded in the logic of imperialism, reinforcing rather than dismantling the structures of colonial domination.

Indian Women’s Voices: Resistance and Reappropriation

While colonial and reformist narratives often portrayed Indian women as silent subjects, early Indian women writers, educators, and activists began articulating their own visions of emancipation—not as passive recipients of Western aid, but as active agents of social change. Pioneering figures such as Pandita Ramabai, a Brahmin-born Christian convert and education reformer, and Rokeya Sakhawat

Hossain, a Bengali Muslim writer and advocate for girls’ education, powerfully challenged both indigenous patriarchy and colonial paternalism. These women strategically engaged with colonial discourse, using English-language publications, missionary networks, and educational institutions to amplify their voices—yet they often did so while asserting cultural specificity and political autonomy. For instance, Rokeya’s *Sultana’s Dream* (1905) imaginatively inverted gender hierarchies in a utopian, Muslim-majority society, critiquing both male domination and Western modernity. Pandita Ramabai’s works, including *The High-Caste Hindu Woman*, offered scathing critiques of Brahmanical patriarchy while also expressing discomfort with British cultural imperialism. Their activism laid the groundwork for an Indian feminist consciousness that was not derivative of Western feminism, but rooted in local struggles, religious diversity, and nuanced understandings of social reform. These early voices illustrate how Indian women reappropriated the tools of empire—language, education, and print media—to redefine their identities and assert their rights on their own terms.

Postcolonial Continuities: Feminism in Contemporary Indian Discourse

Despite the formal end of British colonial rule, many of the underlying narratives that once justified imperial intervention persist in contemporary feminist and development discourses in India. Western-funded NGOs and international organizations often enter Indian communities with pre-packaged models of gender empowerment, frequently shaped by neoliberal and neocolonial assumptions. These interventions tend to prioritize quantifiable outcomes—such as literacy rates or microcredit participation—while neglecting the structural injustices of caste, class, and state violence that many Indian women face daily. The global gaze, particularly in Western media and policy circles, continues to frame Indian women through tropes of victimhood and passivity, often emphasizing issues like child marriage or honor killings without context or attention to indigenous resistance and activism. This framing reinforces a savior complex, positioning international actors as the primary agents of change, and reproduces colonial

hierarchies in the name of progress. At the same time, tensions often arise between grassroots feminist movements in India—which may prioritize land rights, labor struggles, or anti-caste activism—and international agendas that favor sanitized, apolitical versions of gender equality. These contradictions reveal how postcolonial India remains enmeshed in global power structures that continue to shape feminist discourse, raising urgent questions about voice, representation, and the politics of solidarity in a globalized world.

Reclaiming Feminism: Toward a Decolonial Gender Justice

In response to the enduring colonial residues in both global and national feminist discourse, there is a growing call within India to reclaim feminism through a decolonial lens—one that resists savior narratives, challenges hegemonic frameworks, and centers marginalized voices. Modern feminist projects that adopt a one-size-fits-all approach, particularly those led or funded by Western institutions, often reproduce hierarchies of power by assuming that liberation must mirror Western liberal ideals. Decolonial feminism critiques these narratives by asking not who is being “saved,” but who is being silenced. This approach insists on foregrounding the lived experiences and political struggles of Dalit, Adivasi, Muslim, and queer communities, whose voices have often been excluded from elite, upper-caste feminist spaces in India. These groups bring crucial perspectives on the intersections of gender with caste oppression, religious marginalization, state violence, and heteronormativity. A decolonial feminist praxis in India must therefore move beyond inclusion and toward structural transformation, beginning with an interrogation of who sets the agenda, who benefits, and whose knowledge is considered legitimate. Principles such as epistemic humility, collective leadership, transnational solidarity, and accountability to grassroots movements are essential to building a feminist politics that is truly emancipatory. Reclaiming feminism in this way means not only challenging patriarchal structures but also dismantling the colonial frameworks that have long shaped what liberation looks like.

Rethinking Solidarity: Decolonizing Transnational Feminist Alliances

This objective aims to interrogate how transnational feminist alliances have historically been shaped by uneven power relations rooted in colonialism, race, and class. While global feminist movements often invoke solidarity across borders, such solidarity is frequently compromised by Eurocentric assumptions, savior complexes, and the marginalization of voices from the Global South. By highlighting the lived experiences and political critiques of Indian women—particularly those from Dalit, Adivasi, Muslim, and queer communities—this study pushes for a more ethically grounded model of feminist solidarity. It calls on both scholars and activists to engage in self-reflexive practices that acknowledge their own positionalities and the historical baggage that shapes cross-cultural feminist engagement. In doing so, the paper contributes to an evolving discourse that values horizontal alliances over hierarchical interventions, and insists on listening to and learning from local feminist knowledge systems in India and beyond.

Conclusion

The history of feminist rhetoric in colonial India reveals a persistent and troubling paradox: the language of liberation was often mobilized in the service of domination. While British colonial authorities claimed to uplift Indian women through reform, their efforts were deeply entangled with racial superiority, imperial control, and cultural erasure. Indian male reformers, though often driven by genuine concern, operated within the constraints of colonial power and frequently reinforced elite, caste-bound visions of progress. White women’s involvement in the empire further complicated this dynamic—offering solidarity that too often veered into paternalism and exclusion. Yet, Indian women were not silent recipients of reform. Through their writing, activism, and education, early figures like Pandita Ramabai and Rokeya Sakhawat Hossain redefined feminist thought in culturally specific and politically strategic ways. In the postcolonial era, however, the neocolonial framing of Indian women—as victims in need of saving—persists in development policy, media, and global feminist

discourse, often sidelining local voices and priorities.

This article has traced these historical and contemporary entanglements to underscore the urgent need for a decolonial feminist approach—one that centers the experiences and leadership of marginalized communities, critiques saviorism, and resists Western universalism. Feminist solidarity must be grounded in humility, accountability, and deep listening across difference. Only by confronting the colonial legacies embedded in our understanding of gender justice can we begin to forge a more equitable, inclusive feminist future—one that does not merely *speak for* Indian women, but *listens to, learns from, and stands with* them.

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FINANCIAL LITERACY AS A CATALYST FOR WOMEN'S ENTREPRENEURSHIP IN JHARKHAND: EVIDENCE, INSTITUTIONAL SUPPORT AND POLICY DIRECTIONS

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Abstract

This paper examines the role of financial literacy in promoting and sustaining women's entrepreneurship in Jharkhand. Using secondary sources (NABARD, MSME reports, government data, published case studies and regional journalism) and selected local case examples, it explores how financial knowledge, access to credit, self, help group (SHG) linkages, and state-driven branding/market interventions affect women entrepreneurs' capacity to start, scale and sustain enterprises. The study finds that improved financial literacy, when combined with institutional support (SHGs, JSLPS/Palash), market access and tailored credit products, significantly raises women entrepreneurs' likelihood of success and resilience. Policy and programmatic recommendations focus on scaling contextual financial education, strengthening bank-linkages, integrating digital finance training, and aligning state market platforms with entrepreneurship capacity building. Key evidence and illustrative case studies from Jharkhand are cited.

Keywords: Women Entrepreneurship; Financial Literacy; SHGs; Digital Finance; Market Access; Palash; Bank Linkages; MSME; NABARD; JSLPS; Jharkhand; Capacity Building; Microfinance; Sustainable Livelihoods; Policy Recommendations

1. Introduction

Women's entrepreneurship is widely recognized as a driver of inclusive growth, poverty reduction, and social empowerment. In Jharkhand — a state with sizeable tribal and rural populations and below-national-average female literacy, women's participation in micro and small enterprises is growing through self-help groups (SHGs), microfinance, and various government schemes. However, constraints such as limited financial literacy, poor bank linkages, restricted market access, and socio-cultural barriers persist.

This paper investigates how financial literacy specifically affects entrepreneurial outcomes among women in Jharkhand: enterprise creation, access to formal credit, profitability, scaling, and sustainability. It synthesizes

empirical literature, government and development-sector reports, and regionally relevant case studies (notably the state's Palash initiative) to draw policy-relevant conclusions.

2. Objectives and Scope

1. To review evidence on the relationship between financial literacy and women's entrepreneurship in Jharkhand.
2. To analyze institutional mechanisms (SHGs, NRLM/JSLPS, MSME programmes, NABARD interventions) that operationalize financial literacy.
3. To present case studies illustrating how literacy + institutional support translate into enterprise outcomes.

4. To propose evidence-based policy and program suggestions tailored to Jharkhand's context.

Scope: The paper relies on published reports, government data, academic articles and documented regional case examples up to 2025. Primary field survey data is not presented here; however, regional program reports and documented case studies are used as proxies for ground reality.

3. Literature Review

3.1 Financial literacy and entrepreneurship: conceptual links

Financial literacy typically includes understanding of savings, budgeting, credit, interest rates, digital payments, insurance and basic accounting. Literature from India and internationally shows that higher financial literacy improves entrepreneurs' ability to evaluate business opportunities, manage working capital, choose suitable financial products, and engage with formal financial institutions — leading to higher survival and growth rates for micro and small enterprises.

3.2 Evidence from India and Jharkhand

Nationally, women-owned MSMEs constitute a significant share of registrations on Udyam (about 20.5% of registered units), and women-led units make non-negligible contributions to employment. However, representation in formal credit and higher-value sectors remains limited. In Jharkhand, multiple studies and program reports document the effectiveness of SHGs and microfinance in enabling women's economic activity; yet constraints persist in literacy, digital readiness and market linkages that blunt enterprise scaling. Key nodal agencies (NABARD, NRLM/JSLPS, MSME) have documented both progress in SHG bank linkages and the need for capacity building on financial management.

3.3 SHGs, microfinance and capacity building

Self-help groups have been a central vehicle for financial inclusion and entrepreneurship promotion. Multiple evaluations (including NABARD's reports and independent studies)

indicate that SHGs improve saving discipline, loan repayment, social capital, and access to formal financial services. However, SHG members often require structured financial literacy training to move from credit-use for consumption to productive investment and enterprise bookkeeping.

3.4 Market access and state interventions

State-led branding and market consolidation (for example Jharkhand's Palash initiative that aggregates SHG/producer outputs under a single brand and builds retail linkages) show how market facilitation enhances returns to women producers. The literature suggests that combining financial literacy with market access amplifies entrepreneurial impact: women who understand pricing, margins, and working capital are better equipped to monetise these market opportunities.

4. Methodology (Approach for this paper)

This is a desk-based, evidence synthesis study using: Government reports and press releases (MSME, NABARD, NRLM/JSLPS). Peer-reviewed and practitioner literature on SHGs, microfinance, and women entrepreneurship in Jharkhand.

Regional journalistic case studies and program documentation (Palash, repurposed school buildings, SHG hubs). The paper synthesizes these sources to identify patterns, present two illustrative case studies, and offer policy recommendations.

5. Discussion: Evidence & Case Studies

5.1 Macro picture: access, registration, and institutional support

Women-owned enterprises are visible in national registration data; women constitute a sizeable share of Udyam registrations and are targeted actively under PMEGP and other MSME schemes. However, the depth of formal credit uptake and investment levels remain unevenly distributed.

NABARD and NRLM data indicate large SHG penetration nationally and in Jharkhand; these

groups are conduits for financial inclusion and small-scale entrepreneurship. Yet, NAFIS and NABARD status reports underline gaps in digital financial literacy and product sophistication among many rural women.

5.2 Case Study A — Palash (Jharkhand State Livelihood Promotion Society)

Overview: Launched by the Jharkhand government (JSLPS), Palash aggregates products from rural women's SHGs under a state brand and provides processing, packaging and retail channels (Palash marts). The programme includes training in production standards, packaging and market linking. Reports indicate Palash now includes dozens of food and non-food items and has directly benefited millions of women associated with SHGs.

Financial literacy linkages:

Palash's success is partly due to parallel training : not only in production but in basic enterprise accounting, pricing and record-keeping at producer group level, which helps women negotiate better margins and understand working capital needs.

Women who received training in bookkeeping and costing reported improved profit margins because they could price products to cover costs and invest surplus in incremental production.

Lessons: Market access without financial literacy yields limited gains; integrating both is more effective. Palash demonstrates how state market platforms can be paired with capacity building to enhance women's entrepreneurial returns.

5.3 Case Study B — SHG Bank Linkage & Repurposed Infrastructure (School Buildings, Hubs)

Overview: Several Jharkhand initiatives repurpose unused school buildings as SHG hubs, training centres and processing units, providing rent-free infrastructure to producer groups, improving storage and reducing transaction costs. Reports note thousands of women and hundreds of SHGs benefitting.

Financial literacy linkages:

Hubs function as focal points for collective savings, bank visits, digital payments training, and guest sessions with bank officers. Women trained on digital banking and record-keeping used bank accounts for business transactions, making them better candidates for formal credit.

Where hub programs included explicit modules on bookkeeping, loan appraisal, and cash-flow projection, SHGs were able to secure working capital and scale micro-processing activities.

Lessons: Combining physical institutional support (infrastructure) with financial literacy training strengthens bank linkages and credit absorption capacity.

5.4 Behavioral constraints and gender norms- Multiple studies highlight socio-cultural constraints (mobility, household responsibilities, male gatekeeping) that shape women's ability to benefit from financial literacy. Training that acknowledges these constraints, e.g., delivering modules locally, involving family members, offering flexible timings, shows higher uptake.

6. Findings

1. **Positive association:** Financial literacy (basic bookkeeping, budgeting, understanding of credit/digital payments, pricing and insurance) is positively associated with better micro-enterprise outcomes among women in Jharkhand, higher revenues, better cost control, and improved bankability (ability to access formal credit).
2. **SHGs amplify impact:** SHGs and NRLM structures are effective multipliers, they provide not just credit but peer learning environments where financial literacy training diffuses and is practically applied. Program reports show SHG-linked women have higher rates of enterprise uptake and credit performance.
3. **Market linkage matters:** Market facilitation (Palash, state marts) amplifies the returns to financial literacy. When women understand

costing and margins, market access translates directly into higher household incomes.

4. Digital gap persists: Digital financial services offer opportunity but also risk; lack of digital literacy remains a barrier in many blocks. Training that pairs financial literacy with digital skills shows higher formalisation and efficiency.
5. Institutional readiness: Banks and formal institutions increasingly respond to SHG-based demand, but need more streamlined small-loan products for women micro-entrepreneurs and simplified documentation processes to convert literacy gains into credit uptake.

7. Suggestions (Policy & Programmatic Recommendations)

Scale contextualized financial literacy. Strengthening women's entrepreneurship in Jharkhand requires a holistic approach that views financial literacy not merely as classroom knowledge, but as a practical tool embedded in real enterprise experiences. The evidence reveals that programs flourish when training is contextual, modular, and connected to real market ecosystems. Therefore, scaling local-language, stage-appropriate financial education is essential. Training focused on budgeting, bookkeeping, cost analysis, working capital management, bank loan procedures, digital transactions, and insurance must be structured according to enterprise maturity — from start-up to expansion. Delivering these modules through institutions that women already trust—such as SHGs, Palash hubs, community centers, and repurposed school buildings—ensures accessibility and uptake.

Equally important is integrating financial literacy with market linkage opportunities. When training is aligned with real sales environments such as Palash marts, district fairs, producer companies, and online marketplaces, women can immediately apply costing and pricing strategies, improving profitability and building confidence. Financial

literacy is most effective when it becomes an applied skill rather than abstract knowledge.

Strengthening the **bank-SHG-enterprise ecosystem** is another priority. Banks can simplify procedures by creating flexible, low-documentation micro-enterprise loan products tailored to women entrepreneurs, supported by dedicated relationship officers deployed at SHG hubs. Meanwhile, financial education programs should include practical sessions on preparing simple business plans and loan proposals, enabling entrepreneurs to engage meaningfully with formal credit systems.

Digital financial inclusion must be promoted with safety mechanisms in place. Training should include assisted onboarding for digital payments, use of mobile banking, bookkeeping apps, and digital market platforms. Simultaneously, awareness modules on cyber fraud, safe transaction practices, and grievance redressal points can reduce risk and anxiety, especially for first-generation digital users.

Continuous improvement will require monitoring and evaluation **systems** embedded within programs. Instead of measuring output indicators like number of trainings completed, success metrics should reflect enterprise outcomes: rise in revenues, active use of bank accounts, increases in credit uptake, repayment track record, reinvestment behavior, and market expansion. Periodic field studies and action research would help refine training pedagogy and determine the most cost-effective mixes of interventions across diverse districts.

Finally, any effective strategy must recognize gendered norms and behavioral barriers that restrict women's participation. Programs must adopt flexible schedules, local delivery practices, mobility support, and where beneficial, involve family members particularly men negotiate space for entrepreneurial agency. Modules on leadership, negotiation, and market communication can further enhance women's visibility in supply chains.

Extended Recommendation Summary

The future of women's entrepreneurship in Jharkhand lies in combining financial knowledge with institutional strength, digital

empowerment, and market integration. A coordinated model—rooted in SHGs, supported by banks, enabled by digital systems, and strengthened through market access—has the potential to transform women’s enterprises from survival mechanisms to sustainable engines of economic growth.

8. Conclusion

Financial literacy is a critical enabler of women’s entrepreneurship in Jharkhand but is not a standalone solution. When financial knowledge is paired with institutional support (SHGs, bank linkages), market facilitation (Palash), and infrastructure (hubs), it significantly improves enterprise outcomes — higher revenues, better use of credit, formalization and scaling. Program designs that combine practical, contextual financial education with digital skills, easily accessible credit products, and sustained market linkages will likely produce the greatest impact. Further field research including controlled evaluations of specific literacy modules would strengthen evidence on the most cost-effective program mixes for Jharkhand’s diverse districts.

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SARDAR PATEL’S VISION FOR AGRICULTURE AND RURAL DEVELOPMENT NEED IN THE PRESENT CONTEXT

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Abstract

The condition and direction of any nation is the result of the vision and mindset of its leadership. India is known for its indomitable courage and leadership. When India emerged from the darkness of 200 years of British rule on 15 August 1947, the economic and rural structure of the nation was extremely weak. The rural economy was almost lifeless. However, in the creation of a modern society and nation, the Iron Man of India, Sardar Vallabhbhai Patel, played a pivotal role as the first Deputy Prime Minister and the first Union Home Minister. He successfully integrated 562 princely states and carried out major reforms in agricultural land and rural economic development, which significantly improved rural living conditions.

Though Sardar Patel passed away before the first General Elections, his farsighted vision can be clearly seen in the early Five-Year Plans — such as land reforms, rural self-governance and self-reliance, protection of farmers’ rights, support to cooperative movements, and improvement in rural education and health. These measures transformed the economic structure of rural India. His administrative innovations and encouragement of entrepreneurship laid the foundation of modern India. He established institutions such as the Indian Administrative Service (IAS) and the Indian Police Service (IPS). Patel’s visionary perspective continues to deeply influence the development of agriculture and rural sectors even today.

Keywords: Rural Development, Land Reforms, Five-Year Plan, Education, Rural Self-Employment, Swaraj

Introduction

India is primarily an agricultural country, where more than 80% of the working population was engaged in agriculture before independence. Agriculture supported various cottage industries by providing raw materials. Historically, India has been famous for exporting agricultural commodities. The production of superior cotton for cloth making was a major source of economic prosperity. Farmers also cultivated crops like jute and food grains. However, with the arrival of British rule, the condition of Indian farmers became extremely miserable.

India was once globally renowned for cottage and small-scale industries, but after British trade regulations, rural cottage industries

declined rapidly. Farmers became laborers within their own land. Systems such as Zamindari, Ryotwari, and Mahalwari burdened farmers with heavy land taxes. Farmers were forced into indigo cultivation, causing food scarcity, hunger, and poverty. Several revolts emerged in response to these oppressive policies: Indigo Movement (1859–60), Pabna Movement (1873–76), and Bardoli Satyagraha (1928), the last of which was led by Sardar Patel to protect farmers’ rights.

After independence, Patel initiated many reforms to improve the condition of farmers. This study explores these reforms and their relevance today.

Objectives

The primary objective of this study is to examine the agricultural reforms and movements led by Sardar Vallabhbhai Patel and to understand their relevance to current agricultural policies that have transformed the economic life of farmers.

Literature Review

The contribution of Sardar Vallabhbhai Patel in shaping modern India—politically, economically, and socially—has been widely studied from diverse academic perspectives. A significant theme in contemporary scholarship highlights Patel's role in strengthening agriculture, rural development, farmer rights, and cooperative organizations. According to Sengupta (2018), Patel's emphasis on grassroots empowerment and decentralised governance contributed to the creation of an administrative culture that prioritized rural welfare and the dignity of labour. Sengupta argues that Patel envisioned agricultural development not merely as an economic project but as a movement of self-reliance and national unity.

Multiple scholars underline Patel's early political association with the Kheda and Bardoli Satyagraha, which reshaped India's discourse on agrarian rights. Syed (2017) notes that these struggles established a precedent for resisting oppressive taxation policies and enabling peasant mobilisation. Similarly, Mishra (2017) emphasises that Patel's leadership demonstrated how collective strength and strategic negotiation could bring structural reforms, earning him the honourific title 'Sardar'.

In literature on rural reconstruction and cooperative movements, Patel is recognized as a major architect of India's cooperative industrial framework. According to Kuriyan and Ray (2012), Patel's support for cooperative dairy farming in Gujarat later inspired the White Revolution and the AMUL model, which transformed India into the world's largest milk-producing country. Likewise, Trivedi (2019) states that Patel's cooperative vision reflected the Gandhian idea of *Self-Sustaining Rural India* and laid the foundation for village-level

financial institutions, now strengthened through SHGs, micro-finance systems, and Panchayati Raj decentralisation.

Several contemporary researchers link Patel's agricultural and rural development model to women empowerment and entrepreneurial capacity building. Chandel (2021) and Kannan (2020) observe that cooperative movements played a decisive role in enabling rural women's participation in income-generating activities, particularly dairy and handicraft industries, thereby contributing to gender-inclusive rural growth. These findings align with Patel's belief that national progress depends on the productivity and dignity of rural communities (Reddy, n.d.).

Recent political and economic analyses also emphasize Patel's long-term impact on national integration and administrative reforms, which created a stable environment for agricultural and rural development policies. Dasgupta (2022) argues that Patel's integration of princely states was critical for establishing unified governance, without which modern agricultural reforms and rural welfare planning would have faced significant obstacles. Similarly, Raj (2025) highlights that Patel's administrative foresight and commitment to strong institutional structures continue to guide modern policymaking.

Furthermore, scholars such as Tiwari (2017) and Mehta (2020) assert that Patel's economic philosophy remains relevant for contemporary challenges, including farmer distress, cooperative restructuring, and the need for decentralised planning. They argue that to achieve sustainable rural growth, India must revisit Patel's balanced approach of strong national administration combined with empowered grassroots frameworks.

Collectively, existing literature positions Sardar Vallabhbhai Patel as not only the architect of national unity but also a visionary of rural transformation and cooperative economics. However, gaps persist in academic research regarding empirical assessment of Patel's model in contemporary rural reforms, particularly in states like Jharkhand. This gap encourages further field-based investigations to evaluate the relevance of Patel's agricultural

and cooperative principles in addressing present socio-economic issues.

Sardar Vallabhbhai Patel: Agrarian Leadership and Rural Reconstruction

The history of India's freedom struggle is incomplete without understanding the transformative role played by Sardar Vallabhbhai Patel, particularly in the domain of agrarian justice, rural empowerment, and cooperative development. Long before he became known as the *Iron Man of India* and the architect of national integration, Patel emerged as a firm defender of farmers' rights, fighting against oppressive colonial structures and advocating policies that would later shape the foundations of independent India. His early involvement in peasant movements in Gujarat laid the cornerstone for a national dialogue on agricultural reform and rural dignity.

Kheda Satyagraha (1918): The Beginning of Agrarian Resistance

The Kheda district of Gujarat faced a devastating agricultural crisis in 1918, when continuous heavy rainfall destroyed crops and left farmers unable to pay land revenue. Despite this calamity, the British government insisted on full tax collection. Under the leadership of Mahatma Gandhi, Sardar Patel, Narhari Parikh, and other local leaders, the farmers launched a non-violent struggle demanding tax exemption. Patel travelled tirelessly across villages, mobilizing peasants, building trust, and strengthening the spirit of unity. The success of the movement resulted in the suspension of revenue collection and restoration of lands seized by the British. This was one of the earliest mass struggles where Patel demonstrated his ability to lead, negotiate, and inspire peasants through disciplined civil disobedience.

Bardoli Satyagraha (1928): The Rise of the 'Sardar'

A decade later, Patel led the Bardoli Satyagraha, one of the most remarkable agrarian movements in colonial India. During a period of severe drought, the British administration unjustly raised land revenue by

22%. When farmers refused to pay, confiscations began—land, cattle, homes, and crops were seized. Patel reorganized the movement with strategic preparation and unshakable non-violent discipline. Volunteers were trained, communication networks established, and women and youth were actively involved. The peaceful resistance forced the government to withdraw the increased revenue demand. As a tribute to his unwavering leadership, the people affectionately bestowed upon Vallabhbhai the title 'Sardar'—a leader of leaders.

Karachi Session, 1931: Advocating Farmers' Rights and Economic Justice

As President of the 46th Session of the Indian National Congress held in Karachi in March 1931, Patel played a crucial role in shaping national economic policy. The resolution adopted at the session became a landmark document for future development planning. It demanded abolition of the Zamindari system, protection of tenant farmers, fair wages for workers, and promotion of cottage and village industries. It established a connection between political freedom and economic justice, redefining the struggle for independence as fundamentally rooted in human dignity and equitable resource distribution.

Vision of Gram Swaraj and Self-Reliance

Patel strongly believed that India lived in its villages, and real freedom would be meaningful only when villages attained economic and administrative autonomy. Inspired by the Gandhian vision, he advocated Panchayati Raj as a system of decentralized governance. According to Patel, political democracy without *village self-rule* would create dependency rather than empowerment. By promoting self-reliance and participatory decision-making, he laid the philosophical foundation for modern rural development programmes.

Land Reform and Abolition of Zamindari

After independence, Patel's vision guided some of the most important land reforms in Indian history. The abolition of the Zamindari system

released millions of tenant farmers from exploitation. Approximately 3 million cultivators became landowners, gaining ownership of nearly 6.2 million acres of land, transforming social power relations in rural India and enabling long-term agricultural productivity.

Contribution to the Cooperative Movement

Patel was deeply convinced that cooperative organization was essential for rural prosperity. He promoted cooperatives in milk production, irrigation, fertilizers, seeds, and rural credit, which later inspired the globally celebrated AMUL (Kaira Cooperative) model and eventually the White Revolution. Today, more than 8.5 lakh cooperative societies with over 30 crore members reflect Patel's longstanding legacy in building collective economic strength among rural communities.

Agricultural Modernization and Scientific Innovation

Recognizing the challenges of food scarcity in a growing nation, Patel promoted the use of scientific farming techniques, modern implements, soil-testing practices, and fertilizers. These foundations later supported the Green Revolution, which enabled India to move from food deficit to self-sufficiency.

Justice, Equality, and Social Discipline

Patel believed that democracy could not survive without justice and equality. His famous declaration—

“True democracy ensures both justice and equality”—signalled his lifelong fight against discrimination based on caste, religion, gender, or region. He argued that national progress would only be possible when every citizen, especially rural Indians, received equal opportunities.

Health, Hygiene, and Rural Welfare

Patel emphasized rural sanitation and health as inseparable from development. He strongly asserted:

“Cleanliness is more important than freedom.”

He worked to improve sanitation, drinking water, and rural healthcare systems, identifying them as the basis of human dignity and productivity.

Conclusion

Sardar Vallabhbhai Patel's efforts positioned him as not only a national unifier but also a visionary of agricultural transformation and rural empowerment. Through his leadership in the Kheda and Bardoli Satyagrahas, he redefined the power of collective unity and non-violent struggle against exploitation. His contributions to land reforms, the cooperative movement, Panchayati Raj institutions, and scientific agriculture laid the foundation of modern rural development. His ideas significantly influenced India's First Five-Year Plans, emphasizing food security, rural reconstruction, irrigation, and farmer welfare.

Even today, Patel's philosophy remains deeply relevant in shaping policy frameworks under initiatives such as Atma-Nirbhar Bharat, Digital Agriculture, Cooperative modernization, and rural entrepreneurship. His conviction that national unity begins with economic equality continues to guide India's journey toward self-reliant and inclusive development.

Here is the narrative-style Future Recommendations section aligned with the current policy environment (Atma-Nirbhar Bharat, Digital Agriculture, Cooperatives, Panchayati Raj reforms, etc.), suitable for your thesis or research paper.

Future Recommendations

In the contemporary era of rapid structural transformation in Indian agriculture, the vision of Sardar Vallabhbhai Patel remains profoundly relevant. To build a self-reliant, equitable, and technologically empowered rural economy, it is essential to reinterpret his principles in the context of the 21st century. The following recommendations are proposed to strengthen rural development and agricultural growth within the current policy framework:

1. Strengthening Cooperatives through Digital Integration

Patel believed in collective strength and economic cooperation as powerful engines for rural upliftment. Today, the cooperative sector must be restructured through digital platforms, transparent governance, and modern supply chain systems. Integrating cooperatives with blockchain-enabled traceability, online marketplaces, and digital financial services would eliminate middlemen and ensure fair prices for farmers. Expanding initiatives like Dairy Cooperatives, Farmer Producer Organizations (FPOs), and Multi-State Cooperatives can secure market stability and increase rural incomes.

2. Promoting Technology-Driven Agriculture and Climate Resilience

To fulfil Patel's aspiration for scientific farming, India must move aggressively toward precision agriculture, climate-smart crop planning, AI-based weather forecasting, drones for fertiliser and pesticide application, and sensor-based irrigation systems. Strengthening the Digital Agriculture Mission, PM-KUSUM for solar irrigation, and smart dairy/ livestock management systems will help address climate variability and productivity gaps.

3. Expanding Land Consolidation and Transparent Land Governance

Patel's successful land reforms must be renewed through land record digitization, dispute resolution systems, and consolidation of fragmented land holdings. Encouraging community farming models and cooperative leasing can address the challenges faced by small and marginal farmers who form the majority of India's agricultural workforce. A unified digital land registry will also improve credit access and long-term planning.

4. Empowering Panchayati Raj Institutions and Local Governance

To realize the Gram Swaraj model, fiscal devolution and administrative autonomy of Panchayats must be strengthened. Local governments should play a proactive role in planning local resource management, rural livelihood diversification, water conservation, and village development projects. Institutionalizing community participation and

accountability will deepen democratic governance at the grassroots level.

5. Strengthening Rural Entrepreneurship and Skill Development

Patel viewed village industries and cooperative enterprises as the backbone of economic independence. Promoting rural start-ups, agro-processing units, handloom, handicrafts, and dairy entrepreneurship can create large-scale employment. Training youth and women through skill development programs, incubation centres, and credit linkages under MSME and Startup India will accelerate rural transformation and discourage migration.

6. Enhancing Farmer Welfare through Policy and Market Reforms

Future policy efforts must ensure social protection, stable price support mechanisms, and reliable procurement systems. Strengthening crop insurance, direct benefit transfers, and minimum support frameworks for diverse crops—not just cereals—can enhance farmer security and encourage crop diversification. Encouraging public-private partnerships in agricultural extension services will improve adoption of innovations and reduce input costs.

7. Prioritizing Rural Health, Education, and Social Equity

Continuing Patel's belief in justice, equality, and sanitation as the foundation of development, rural progress must include high-quality public healthcare, digital education ecosystems, sanitation facilities, and gender-inclusive policies. Health and education must be treated not merely as welfare services but as investments in human capital for long-term growth.

Conclusion

The future of India's rural economy lies in merging Patel's moral framework of unity, discipline, and cooperative strength with the modern capabilities of technology, innovation, and decentralized governance. A self-sufficient agrarian structure built upon equity, transparency, and collective participation will

enable India to achieve food security, environmental sustainability, and rural prosperity under the vision of Atma-Nirbhar Bharat. As Patel believed, the path to national unity begins with the economic empowerment of the smallest citizen—and the future demands that we continue to honour and operationalize this ideal.

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WOMEN IN THE SHADOW OF PARTITION: VIOLENCE, HONOUR, AND IDENTITY IN *PINJAR, TAMAS, AND TRAIN TO PAKISTAN*

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Abstract

India's 1947 partition caused unheard-of levels of trauma, mass relocation, and inter communal bloodshed throughout the subcontinent. The gendered violence against women, who were kidnapped, raped, forced to convert, traded, and even slain in the sake of family and community honor, was one of its most terrible and complicated effects. Literary works offer an alternative archive that emphasizes human pain and moral ambiguity, whereas political histories of Partition have historically concentrated on constitutional negotiations, high politics, and geographical partition. In order to investigate how women, violence, and honor are portrayed in fictional tales, this paper compares three significant works of Partition literature: Amrita Pritam's *Pinjar*, Bhisham Sahni's *Tamas*, and Khushwant Singh's *Train to Pakistan*. Employing a gender-centric approach this study examines partition historiography and feminist literary criticism, focussing on the formation of female identities, and the complex forms of agency that women navigate within patriarchal and communal frameworks. It argues that these writings portray women not only as victims of systemic violence but also as individuals endowed with the ability for moral reasoning, resilience, and defiance.

Keywords: Partition, Amrita Pritam; Bhisham Sahni; Khushwant Singh; *Pinjar*; *Tamas*; *Train to Pakistan*; feminist literary critique; women; gendered violence; honor.

Introduction

Most people agree that one of the bloodiest divisions in the subcontinent's history was the Partition of India in August 1947. In addition to creating two nation-states—India and Pakistan—the Radcliffe Line also resulted in great human suffering. An estimated 10 to 15 million people are thought to have crossed borders as refugees, while hundreds of thousand perished in riots and its aftermath. Partition caused severe psychological and social wounds that still influence collective memory, in addition to the obvious facts of migration and mortality.

In a very cruel way, women were at the center of this turmoil. In order to avoid their "dishonour" at the hands of the other group, they were kidnapped, raped, forced to convert, forced into interfaith marriages, and, in many cases, killed by their own families in "honour

killings." Their bodies turned into battlefields where issues of nationalist honor, religious identity, and community pride were brutally acted out. However, for many years, popular accounts of Partition, including official documents, political histories, and public memorials, either ignored or minimized specific gendered experiences in favor of the "larger" narrative of nation-building.

Literature is one of the strongest ways to express these hidden aspects of Partition. Novels and short stories written in the years after 1947 not only show the physical and emotional pain of ordinary people, but also reveal the moral confusion and contradictions in a society torn by violence. In particular, women characters in Partition literature help readers confront hard truths about communal hatred, gender inequality, and the heavy price paid in the name of national honour. Three important literary works—Amrita Pritam's *Pinjar*, Bhisham Sahni's *Tamas*, and

Khushwant Singh's *Train to Pakistan*—are the focus of this paper. *Pinjar* revolves around Puro, a Hindu girl kidnapped by a Muslim guy named Rashid, whose kidnapping serves as a platform for examining identity, belonging, and what it means to be at home. Tamas depicts a wide range of inter communal conflict and violence in an unidentified town, demonstrating how common Hindu, Muslim, and Sikh families—including women—are engulfed in dread and hatred. The fictional border community of Mano Majra serves as the setting for *Train to Pakistan*. There, trains carrying dead people turn into somber representations of Partition, and women's bodies are also marked by violence and retaliation.

Examining how these writings depict women's experiences of violence associated to Partition and how the ideas of honor and shame are etched on their bodies is the main focus of this paper.

It asks whether women are shown only as helpless victims, or whether they still have and use some limited power to make choices. By reading the three works together, the article also aims to highlight the similarities and differences in how the authors show women's suffering and their strength to survive and recover.

The paper uses gender-sensitive Partition historiography and feminist literary theory to answer these problems. It contends that despite the fact that these stories come from various authorial stances and storytelling techniques, they all depict women as essential to comprehending the moral and emotional terrain of Partition.

Review of Literature

Since the 1980s, scholarship on India's Partition has expanded significantly, incorporating social, cultural, and gendered viewpoints in addition to elite political histories. Early narratives tended to leave little room for the experiences of common people and instead concentrated on politics, constitutional negotiations, and the roles of leaders like Gandhi, Nehru, and Jinnah. The experiences of refugees, peasants, and minorities were reconstructed by later

historians, but women's stories have been most strongly emphasized by feminist scholars.

In this sense, *The Other Side of Silence: Voices from the Partition of India* by Urvashi Butalia is a seminal work. The secret stories of women, children, and Dalits—whose experiences were frequently repressed within families and communities are revealed through oral histories and firsthand accounts. Butalia highlights issues like the widespread kidnapping of women, the recovery efforts carried out by the newly established states, and the horrible cases of women being murdered by their own relatives in order to maintain honor. She emphasizes the guilt, humiliation, and secrecy that surround these incidents and contends that traditional political frameworks are insufficient to fully comprehend them.

In a similar vein, *Borders & Boundaries: Women in India's Partition* by Ritu Menon and Kamla Bhasin focuses on the experiences of women in various religious communities. The authors look at how women were used as symbols of national and community honor and how the logic of communal conflict involved the control, violation, and trade of women's bodies. Their work highlights the relationship between gender, community, and country, showing that women were not only helpless victims but were actively involved in upholding patriarchal norms.

This gendered explanation of Partition has been expanded upon by several academics. The recovery of kidnapped women, the operation of refugee camps, and the long-term social and psychological effects on women who have experienced violence, displacement, and forced marriages have all been the subject of studies. These works continually show that any oversimplified account of Partition as purely a political or territorial event is challenged by the experiences of women.

There is a wealth of study on Partition literature that runs parallel to historical studies. The representation of communal violence, displacement, and moral collapse by authors like Saadat Hasan Manto, Bhisham Sahni, Khushwant Singh, and Amrita Pritam has been studied by critics. For example, the graphic depictions of sexual assault and the monetization of women's bodies in Manto's short stories are often noted. *Train to Pakistan*

by Khushwant Singh has been examined for its portrayal of a terrifying border community and its examination of human dignity in the face of cruelty. *Tamas* by Bhisham Sahni is acknowledged as a potent critique of public frenzy and communal politics. *Pinjar* by Amrita Pritam is often studied in relation to women's suffering and the potential for a multifaceted, fragile agency.

However, a large portion of the critique that is now available tends to concentrate on specific texts or on overarching themes of violence and communalism, paying less consistent attention to the ways in which women, violence, and honor connect across many works. Studies on *Pinjar* frequently emphasize Puro's sad transformation from a victim to a woman who ultimately makes a moral decision, but they might not methodically contrast her figure with women in other Partition narratives. In a similar vein, assessments of *Tamas* and *Train to Pakistan* occasionally highlight male protagonists or larger social contexts, with women mostly appearing as symbols or background characters.

By placing three significant texts—*Pinjar*, *Tamas*, and *Train to Pakistan*—into a comparative framework focused on women, violence, and honor, this paper aims to close this relative gap. The study intends to advance both Partition studies and feminist literary criticism by analyzing how various authors create female characters and place them in connection to patriarchal and community systems.

Methodology and Theoretical Structure

This study brings together two approaches: **gender-based Partition history** and **feminist literary criticism**. Feminist criticism helps us examine how women are shown in Partition stories—whose voices are heard, whose voices are missing, and how power between men and women shapes the narrative. It focuses on ideas such as the female body being used to control communities, the links between honor and shame, and how women are depicted both as victims and as individuals with agency.

Partition history, especially the work of women historians, adds important real-world context.

Their oral histories and archival research on abducted women, honor killings, and government recovery efforts help us understand the social reality behind the fiction. By bringing literature and history together, this research reads the novels not only as creative works but also as reflections of lived experiences during Partition.

The study uses qualitative, interpretive textual analysis as its methodology. With an emphasis on women's experiences of violence, displacement, and moral choice, it entails closely examining a few moments and character from the three main texts. The novels are replete with themes of abduction, sexual abuse, forced conversion, honor, shame, sacrifice, and survival. In order to depict women's suffering and resiliency, the study also considers narrative voice, point of view, and symbolism, such as trains, bodies, and boundaries. The interpretations are contextualized and supported by secondary materials, such as historical works and critical writings.

Pinjar's Women, Violence, and Honor

One of the most moving examinations of women's experiences during Partition is *Pinjar* by Amrita Pritam. The protagonist of the book is Puro, a young Hindu woman whose world is turned upside down when she is kidnapped by a Muslim man named Rashid. At first, Puro is a traditional daughter of a Punjabi Hindu household who is set to wed a Hindu lad. Her kidnapping causes a crisis of honor for her family in addition to being a personal catastrophe. Fearing social humiliation and communal violence, Puro's parents reject her when she escapes and returns home. Puro hears her parents declare that she is "dead" for them in one of the most dramatic scenes. Motivated by the need to preserve family honor, this rejection is just as destructive as the kidnapping itself.

According to her family and tribe, Puro's body has been tainted by contact with the "other" community. The abstract concept of honor takes precedence over her personal emotions and pain. She gradually starts to establish a life with Rashid after being compelled to return to him. Rashid is also not a straightforward villain; he tries to be kind to her despite being plagued by remorse. Puro eventually

transforms into "Hamida," a wife in a Muslim home, navigating a complicated identity that includes victimization, adaption, and a certain level of affection.

The conflict between violence, honor, and agency is aptly captured in the novel's climax. Puro observes the suffering of other women during the Partition riots, especially Lajjo, a Hindu woman who is kidnapped and sent across the border. Puro makes arrangements for Lajjo's safe travel to India and assists her in escaping. Puro now has the chance to go back with Lajjo and reintegrate into her hometown. Rather, she decides to remain with the life she has established in Pakistan and with Rashid, the guy who kidnapped her. Although her choice is heartbreaking and morally difficult, it also affirms her agency. Puro refuses to be just a commodity that is transferred between societies. Instead of reintegrating into a family that has already sacrificed her for honor, she chose a challenging, transitional identity.

Therefore, women in Pinjar are subjected to both symbolic violence (rejection, erasure, control in the name of honor) and direct physical violence (abduction, threatened sexual assault). However, Puro's experience shows that women may make decisions that change who they are, even in limited situations. As a female author, Pritam gives Puro a great deal of empathy and psychological depth, turning her from a supporting character to a main character.

Women and Communal Chaos in Tamas

A more comprehensive, multi-character depiction of communal violence in a small town on the eve of Partition is provided by Bhisham Sahni's *Tamas*. A apparently insignificant deed at the start of the book—Nathu, a tanner, kills a pig at a political agent's request—sets off a series of events that result in riots between Muslims and Hindus. The novel's depictions of mass panic and political manipulation have received a lot of criticism, but women's experiences are equally essential to its moral cosmos.

In *Tamas*, as rumors spread and violence grows, women are shown living in homes filled with fear and uncertainty. Characters like Rajo and Nathu's wife reflect the worries of ordinary women whose daily lives are suddenly disrupted. They worry about attacks, food

shortages, and the safety of their families. The novel shows angry mobs moving through neighborhoods, forcing women to hide, flee, or seek shelter elsewhere. Even though *Tamas* does not focus heavily on sexual violence, there is a constant fear that women may be harmed, which drives families to protect them or move them to safer places. Here, honor is linked to both the community's overall prestige and women's chastity. Concerns for the future of their children and the reputations of their households are common among women. In contrast to the violent masculinity of rioting men, they also express rage, powerlessness, and perhaps a longing for peace. Although Sahni's female characters may not seem as important on an individual basis as Puro in *Pinjar*, taken as a whole, they stand in for the silent majority whose lives are upended by communal politics.

Tamas's moral complexity stems from its inability to portray any culture as completely innocent. Women also engage in collective stereotyping and occasionally promote reprisals. However, since their houses and bodies are direct targets of battle, the story implies that they have more to lose. They experience both direct and indirect forms of violence, such as the danger of physical assault and the loss of social networks, livelihood, and security.

Therefore, women in *Tamas* serve as a gauge of the moral well-being of the community. When their lives are destroyed, it indicates that hostility within the community has reached the lowest echelons of society. Sahni's portrayal demonstrates that, although not being highlighted in a single protagonist, women's suffering is essential to comprehending the full cost of Partition.

Trains, Women, and Sacrifice on the Train to Pakistan

The imaginary village of Mano Majra, which is close to the Indo-Pak border and is initially unaffected by Partition politics, is the setting for Khushwant Singh's *Train to Pakistan*. Sikhs and Muslims have coexisted amicably in the area for many years. Mano Majra is drawn into the whirlwind of intercommunal violence as "ghost trains" carrying slaughtered corpses arrive, shattering this precarious truce.

In *Train to Pakistan*, women are shown as both distinct individuals and faceless victims. The most notable female character is Nooran, a young Muslim girl who falls in love with the Sikh dacoit Juggut Singh (Jugga). Although Nooran's pregnancy represents a connection that transcends social borders, it also leaves her vulnerable. Nooran's future is unknown when the Muslim inhabitants are compelled to migrate to Pakistan. Tenderness permeates her connection with Jugga, but it is also limited by social conventions and the threat of violence.

Beyond Nooran, the story uses the trains that arrive from beyond the border to depict the tragedy of women's experiences. Men, women, and children's mutilated bodies are transported on these trains; the narrative implies that women have been particularly brutalized, though it does not necessarily provide graphic details. Extremist elements later devise a scheme to murder Muslim refugees on a bridge as part of an attack on a departing train. Women and children are included in the implicit target because their deaths would be interpreted as retaliation for past crimes.

Honour in *Train to Pakistan* functions on several levels. Some Sikh characters believe that in order to be honorable, they must exact revenge for the defilement of their women and community. Others, such as the village priest and certain elders, associate honor with Mano Majra's ancient ethos, which states that neighbors and visitors should be protected regardless of their religious beliefs. It is possible to see Jugga's final act of selflessness—cutting the rope intended to overturn the train at the expense of his own life—as an effort to reestablish a moral order that safeguards the defenseless, especially ladies like Nooran. His passing is a symbolic rejection of collective hatred as well as a personal atonement.

Despite having little narrative voice of her own, Nooran's presence influences Jugga's behavior and the novel's emotional tone. The extent of gendered violence that Partition unleashed, however, is embodied by the faceless women on the trains. Thus, Singh's story links issues of honor, retaliation, and moral obligation to both individual and social depictions of women's suffering.

Comparative Analysis

When combined, *Pinjar*, *Tamas*, and *Train to Pakistan* show remarkable parallels and divergences in how women, violence, and honor were portrayed during the Partition. The three texts emphasize how women's bodies were used as platforms for societal disputes. Puro's kidnapping and her family's rejection of her in *Pinjar* demonstrate how ideas of honor can excuse severe mistreatment of women by members of one's own family. The ongoing dread of assault and displacement in *Tamas* demonstrates how vulnerable women's safety is during periods of social unrest. The extent of crimes against women and children is made clear in *Train to Pakistan* by the trains carrying disfigured bodies and the planned attack on a refugee train.

Although all three works address women's experiences during Partition, the intensity and depth with which their inner worlds are portrayed differs. *Pinjar*, written by a woman and centred on a female protagonist, offers the richest psychological insight into a woman's trauma, choices and selfhood. Puro is not portrayed merely as a victim; her final decision to remain with Rashid—even when the option to return to her parental home is available—becomes an act of self-determination that challenges the expectations of her community.

In contrast, *Tamas* and *Train to Pakistan*, both by male authors, position women within broader social and political narratives. Yet their roles remain crucial. In *Tamas*, the fears and struggles of women within domestic spaces reflect the everyday consequences of political manipulation. In *Train to Pakistan*, Nooran and the unnamed women who die on the refugee trains shape the novel's moral landscape, giving emotional depth to Jugga's final act of heroism.

Across the three texts, honour emerges as a complex and often destructive idea. For families and communities, it is tied to women's sexuality and bodily control, leading to actions such as Puro's rejection or demands for revenge when "their" women are harmed by "others." For individuals, however, honour can take on a more humane meaning. Rashid's remorse and his attempts to care for Puro, or Jugga's ultimate sacrifice to save the refugee train, suggest alternative conceptions of honour

rooted in compassion and the defence of the vulnerable.

These narratives also insist that women are not entirely powerless. Though they endure extreme violence and social restrictions, they reveal resilience, moral strength and, at times, decisive intervention. Puro not only helps Lajjo escape but also chooses her own place within the fractured world. Women in *Tamas* continue to manage households under threat and occasionally voice resistance. Nooran, though less outspoken, represents the possibility of love that transcends communal boundaries.

Taken together, the texts challenge any view of Partition that marginalizes women. They demonstrate that understanding 1947 requires recognizing how women's bodies, emotions and everyday struggles were central to both the brutality of the period and the efforts to rebuild moral order.

Conclusion

This paper has explored how *Pinjar*, *Tamas* and *Train to Pakistan* depict women, violence and honour in the context of Partition. It argues that all three works, despite their differences, highlight women's experiences as vital to grasping the true human consequences of 1947. The women in these narratives confront kidnapping, sexual violence, displacement and exclusion; their bodies become symbolic battlegrounds where communities assert or defend honour. Yet they are not shown only as victims: they also demonstrate courage, resilience and agency, especially in *Pinjar*, but also in *Tamas* and *Train to Pakistan*.

The comparative analysis shows that although male and female authors may differ in thematic emphasis, they all acknowledge that Partition's violence was fundamentally gendered. Honour, when limited to patriarchal notions of purity, becomes a justification for violence against women. When redefined as an ethical commitment to human life and protection of the vulnerable, it gains redemptive potential, as reflected in Jugga's sacrifice or Puro's final choice.

By treating literature as an alternative historical archive, the paper emphasizes the need to include women's narratives in the study of Partition. These works push readers beyond

political generalizations and force them to confront the intimate realities of suffering and survival. They also prompt a re-evaluation of honour, community and nationhood that places women's dignity and autonomy at the forefront.

Future studies may widen this analysis to include Pakistani and Bangladeshi narratives, Dalit women's writings and visual representations such as film. Such scholarship would enrich our understanding of how gender, caste and region shape the memory and representation of Partition. For now, *Pinjar*, *Tamas* and *Train to Pakistan* stand as essential texts for anyone seeking a deeper, gender-aware understanding of 1947 and its lasting impact.

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THE ROLE OF NEP 2020 IN RESTRUCTURING AND SHAPING THE FUTURE OF TEACHER EDUCATION IN INDIA

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Abstract

Teacher education is of utmost importance because lack of focus on this will deteriorate the education system. As much as one would like to say the teacher education system in India is holding up fine, sadly this is far from the truth. In India, teacher education is still grappling with obsolete syllabi, insufficient opportunities for continuing education, and inadequate technology application. The introduction of the National Education Policy 2020 is a paradigm shift in the form of policy restructuring for teacher education in India because of the new policy which will integrate reform the system of teacher education with the introduction of a four-year B.Ed. integrated program, emphasized multidisciplinary education and competency-based learning, pedagogy, and teaching with the National Professional Standards for Teachers. This is a descriptive and analytical study with a qualitative focus, relying on 15 participants for firsthand data and 20 documents such as policy papers, official reports, and academic work for secondary data. The study concludes with the realization that the framework provided in the NEP 2020 is still a vision for the future as there is a lack of infrastructural readiness, trained faculty, funding, and preparedness to deal with the digital divide. Four central themes emerged from the data which are: reform in organizational structure, reforms in teaching methods, and the system of organizational rules and regulations of the body. There is an achievement towards India vision only with a commitment to institution capacity building, support, equitable resource distribution, and strong monitoring systems. The conversation suggests that with proper planning and implementation, the NEP 2020 policy, though paradoxical, stands to transform teacher education in India.

Keywords: Teacher Education; National Education Policy 2020, Integrated B.Ed. Program, Multidisciplinary Learning, Professional Development, Digital Divide

Introduction Teacher education is the foundation of all education systems since it is the quality of teachers that will determine the quality of learning accomplishments. A high-quality system of preparation ensures that teachers are not only content experts but also reflective teachers, creators, and facilitators of ongoing learning. But in India, teacher education has traditionally been plagued by a number of issues, such as obsolete curricula, minimal incorporation of technology, lack of

adequate professional development opportunities, and inadequate linkage between theory and practice (Sharma, 2015; Kumar & Gupta, 2018). Several teacher education institutions (TEIs) have been accused of producing teachers who are not sufficiently competent to address the diverse needs of learners in the twenty first century, in particular digital literacy, critical thinking, and inclusive pedagogy (Singh, 2019). To address these age-old issues, the Indian Government launched the

National Education Policy (NEP) 2020, a historic reform document that seeks to reshape the Indian education system to global standards and the needs of a knowledge economy society (Government of India, 2020). As opposed to previous policies, NEP 2020 specifically focuses on teacher education with an understanding of teachers as the pivot of educational change. The policy suggests a four-year integrated B.Ed. course, multidisciplinary studies, competency-based strategies, and heavy focus on experiential and practice-led pedagogy. It also emphasizes the role of ICT enabled pedagogy, ongoing professional development, and establishment of the National Professional Standards for Teachers (NPST) to bring accountability and quality (NCTE, 2021). Apart from that, NEP 2020 hopes for teacher training to be a serious and task grounded on content knowledge and pedagogic imagination. Training of teachers should all be multidisciplinary higher education institutions with the finest theory content and school practice by 2030 (NEP, 2020). The goal of this change is to empower future teachers to instill creativity, critical thinking, inclusiveness, and global citizenship in children (World Bank, 2022). In spite of its forward-looking planning, the effective enactment of NEP 2020 is beset by several challenges. These include regional disparities of infrastructure, inadequacy of trained faculty, limited financial resources, insensitivity of stakeholders, and rural-urban digital divide among teacher training institutes (Mishra, 2023). Unless these structural constraints are met, the gap between policy imagination and classroom reality can persist. It is therefore imperative to critically analyze the role of NEP 2020 in restructuring and redefining teacher education's future in India. This essay strives to analyze opportunities and challenges faced in the implementation of NEP 2020 reforms, with an emphasis on how teacher education can be streamlined to address the needs of the learner of the twenty-first century and make educational transformation sustainable.

Review and Conceptual Framework

A review of the literature demonstrates that initial teacher training in India has struggled for decades with static curricula, low-level professional development, and insufficient preparedness to meet the challenges of 21st-

century classrooms (Sharma, 2015; Singh, 2019). Past frameworks such as the National Curriculum Framework for Teacher Education (NCFTE, 2009) emphasized reflective practice alongside competency-based training, yet it was applied unevenly (NCTE, 2009). Kumar and Gupta (2018) and Mishra (2023) research indicates that teacher education reform requires policy vision, indeed, as well as institutional system change, faculty development, and funding arrangements. The NEP 2020, with the introduction of four-year integrated B.Ed. programs, multidisciplinary learning space, and National Professional Standards for Teachers (NPST), provides a revolutionary set of guidelines for training future ready teachers (Government of India, 2020; NCTE, 2021). Yet, researchers claim successful restructuring hinges on resolving the digital divide, the provision of proper infrastructure, and closing the policy design-practice gap (World Bank, 2022)

Research Questions

1. What are the significant provisions of NEP 2020 related to teacher education?
2. How do these provisions aim to revamp and restructure the current teacher education courses in India?
3. What are the prospects and opportunities for improving teacher education through NEP 2020?
4. What challenges or issues may arise in the implementation of NEP 2020 with respect to teacher education?
5. What measures can be suggested to further strengthen teacher preparation and align it with the vision of NEP 2020?

Objectives of the Study

1. To critically assess the significant provisions of NEP 2020 related to teacher education.
2. To examine how the provisions aim to revamp the current teacher education courses.
3. To investigate the prospects and issues related to the implementation of the policy.
4. To suggest measures to improve teacher preparation in India.

Methodology

The present study adopts a descriptive and analytical research design with a qualitative orientation to examine the role of NEP 2020 in restructuring and shaping the future of teacher education in India. Both primary and secondary sources of data were considered. At the primary level, informal discussions were conducted with 15 teacher educators and teacher trainees to obtain preliminary insights into perceptions of the policy's implementation. The study primarily used secondary data, in which 20 documents were systematically examined. These involved policy documents like the National Education Policy 2020 (Government of India, 2020), the National Curriculum Framework for Teacher Education (NCFTE) (NCTE, 2009; NCTE, 2021), the reports published by the National Council for Teacher Education (NCTE), UDISE+ statistics (Ministry of Education, 2022), and international policy publications like UNESCO (2017) and the World Bank (2021). In addition, scholarly articles, research papers, and books focusing on teacher education reforms were examined to build a comprehensive understanding (Kumar, 2021; Sharma & Singh, 2022). A document analysis method was employed to examine the provisions of NEP 2020, while thematic analysis was applied to identify and classify recurring themes such as structural reforms, pedagogical innovations, institutional mechanisms, and technological integration in teacher education. This analysis also entailed comparative analysis of previous frameworks, i.e., the NCFTE 2009, in order to underscore the change brought by NEP 2020. Hence, the scope of the investigation is restricted to examining policy provisions and their implications on teacher education in India based on 20 chosen documents and 15 stakeholder views, excluding large scale surveys and experiment data. The results are therefore based on an interpretative knowledge of the policy context, informed by secondary and a limited number of primary sources, with the final goal of relating the intentions of NEP 2020 to real-world issues and possibilities in the Indian teacher education system.

Analysis and Interpretation

Data collected from primary and secondary sources are analysed in this study, which

highlights the multifaceted role of NEP 2020 in shaping teacher education in India. There were key findings made available through informal interviews from 15 such stakeholders as pre-service teacher trainees and teacher educators. Almost 70% of the participants showed optimism about NEP 2020 bringing change needed through the incorporation of teacher education in a more professional, integrated, and international system. And besides experiential learning and the proposed technology integrated pedagogy - the new four year integrated B.Ed. programme was highlighted as a ray of hope. Respondents commented that almost 30% of the respondents and issued a growing concern regarding the infrastructural shortcomings, inadequate training of teacher educators, financial constraints and the digital divide; these limitations would serve as a handbrake on proposed policy recommendations. Younger teacher trainees tended to hold more optimistic views. Elder teacher educators, however, pointed out the dissonance between the policy and the real politics of the ground. Analyzing 20 documents such as NEP 2020, drafts of NCFTE 2009 and 2021, NCTE annual reports, UDISE+ datasets, reports from UNESCO and the World Bank, and journal articles, all bore secondary data and led to four broad themes. The first theme structural reforms, is the focus of this analysis. Among the rest of the themes, NEP 2020 has proposed a shift from fragmented to integrated systems in teacher training, which is also the most advanced. This is a shift away from the older, more traditional B.Ed. training models. The rest of the themes are innovative practices and the structural reforms Competency-based and continuous professional development is still emphasized on all levels of teacher education. NCTE and Academic Councils have been offered as new, institution-based mechanisms to introduce accountability and quality assurance. Teacher education for a technology-based future is supported through DIKSHA, SWAYAM, and other AI learning modules. These findings reflect the still significant challenges on the ground. While the NCFTE 2009 and NEP 2020 were compared, it was clear both focused on the need for teacher education but NEP 2020 went further to identify the need to align with international standards. Excessive ND lack of boundaries pertaining to NEP 2020 and infrastructure within teacher education

colleges, inadequately text, as well as unreasonable resource disparity, and further NC lack is digital literacy and insufficient in-service professional development identified as was perennial setbacks in the primary and secondary data. The policy strongly encourages experiential, learner-centered, and competency-based teacher education, and continuous professional development. Third, institutional mechanisms: new regulatory frameworks in the form of NCTE, academic councils, and accrediting agencies have been suggested to introduce accountability and quality assurance. Fourth, integration of technology: online platforms like DIKSHA, SWAYAM, and AI learning modules have been promoted to equip teachers for a tech-based future. Interpretation of these findings indicates that while the policy framework is ambitious and forward-looking, the ground reality poses significant challenges. Comparative analysis of NCFTE 2009 and NEP 2020 reflected that although previous models emphasized teacher professionalism, professional ethics, and reflective practice, NEP 2020 widens the scope by incorporating teacher education in relation to multidisciplinary learning and international standards. However, some of the problems like inadequate infrastructure within teacher education colleges, unequal resource availability in the countryside relative to towns, poor digital literacy, and the provision of insufficient in-service professional development are perennial setbacks emphasized in primary as well as secondary data. The discussion continues to highlight the increasing imbalance between eyes and hands. The stakeholders have noted the policy safeguards are just ink dies without the necessary financial support and institutional readiness. For instance, although the four-year integrated B.Ed. course is in demand, the majority of teacher education institutions are ill-equipped in terms of staff, curriculum, and resources to implement it successfully. In the same way, while technology integration is in practice, the digital divide and inadequate internet access among rural trainees severely limit its integration. The general perception is that the NEP 2020 has the potential to professionalize, practice based model, and contemporary the associations to practice teacher education. The level of institutional readiness, strengthening of faculty, reasonable financial investment, and strict surveillance are

the primary determinants of success. In an organized way, successful transform teacher training in India to have a robust and forward-looking structure in alignment with the vision of NEP 2020.

Discussion and Conclusion

The outcomes of the given research reveal that National Education Policy (NEP) 2020 has envisioned for teacher education in India a far-reaching reform. Both the primary and secondary data indicate that the policy is bold, multifaceted and futuristic, particularly with respect to reforming teacher education as an integrated program of multidisciplinary learning, professional capacity development, and pedagogy of technology within a four-year framework. This vision is also in step with the global trends, as the pedagogy of teacher education is no longer understood only in terms of the acquisition of skills, but also in professional preparation for the mastery of content, innovative pedagogy, and self-reflection (Darling-Hammond, 2017; UNESCO, 2021). The dialogue with the stakeholders showed that teacher trainees are more inclined to think positively about the prospects that NEP 2020 may bring, like better employment opportunities and international recognition of Indian teacher education qualifications. The teacher trainers, however, did mention concerns regarding issues of practical nature, such as the lack of trained staff, infrastructural arrears in teacher colleges, and the requirement of proper funding to meet the policy objectives. This pictures a lack of harmony between the ideal vision of NEP 2020 and current realities of the system of teacher education. These findings have also been documented in previous studies (Kumar, 2021; NCTE, 2022), which focus on capacity building, monitoring, and mobilization of resources for proper implementation. One of the prominent topics of debate is the use of technology in teacher education. While NEP 2020 does promote digital platforms such as SWAYAM and DIKSHA to advance universal education, the digital divide in rural and poorly equipped educational institutions is still an area of concern. Without the proper infrastructure and training in digital literacy, technology will only serve to widen the existing disparities. The study believes that effective implementation of NEP 2020 will contribute significantly towards

augmenting the quality of teacher education in India by promoting integrated, competency-based, and practice-led programs but is likely to be hampered in the short term by infrastructural and institutional factors. By comparison, this study finds NEP 2020 a step forward from the NCFTE 2009 because it situates teacher education in a multidisciplinary context and along with the framework of a knowledge society. Bailey NEP 2020 and NCFTE 2009. Teacher education is still the pivotal concern. It provides a blueprint to transform the landscape of teacher education in India. Teachers will no longer be seen as mere knowledge dispensers, but as reflective practitioners, innovators, and builders of the nation. There is the need to strengthen a teacher's infrastructure, and resource gap, and enhance the faculty's capacity and capabilities. Strengthening the system of monitoring, promoting digital equity, and investing in ongoing professional growth of teacher educators are the keys to making this policy a success. If implemented genuinely and duly supported, NEP 2020 has the potential to empower India to emerge as a leader in teacher education, constructing teachers who are innovative, capable, and capable of addressing the needs of the 21st-century classroom.

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EMPOWERING CHANGE: THE CRUCIAL ROLE OF WOMEN IN ACHIEVING SUSTAINABLE DEVELOPMENT GOALS

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Abstract

In this context, nothing less than holistic interventions will unleash the full force of women in sustainability: education, financial inclusion, supportive policies, and community participation. This research contributes to an understanding of how women's empowerment nurtures sustainability and puts forward practical recommendations for the best ways in which policy makers, development practitioners, and community leaders can foster gender-responsive sustainable development strategies. The current study explores women's pivotal role in advancing the Sustainable Development Goals by centering on their contribution, the barriers, and the facilitators of their engagement in sustainable development. Based on data from 200 women representing urban and rural areas, it outlines that though many women moderately contribute to different activities of sustainability, full participation remains limited owing to the complex interaction of social, economic, educational, and cultural barriers. Despite these bottlenecks, factors enabling participation and leadership by women in sustainability initiatives include education, enabling policy environments, and access to resources. Findings confirm that women's contributions lead to positive outcomes in environmental management, economic growth, and social well-being; hence, they are a critical player as agents of sustainable change. However, there is a large gap between the breadth of policy frameworks and the real-world implementation of these policies, especially in the poorest and most marginalized communities, indicating much more targeted action at this level. These findings underscore the idea that women's empowerment is not only a human right but also a strategic imperative for achieving inclusive, resilient, and impactful sustainable development. Nothing less than holistic interventions will unleash the full force of women in sustainability: education, financial inclusion, supportive policies, and community participation. The study contributes to an understanding of how women's empowerment nurtures sustainability and puts forward practical recommendations on the best ways in which policy makers, development practitioners, and community leaders can foster gender-responsive sustainable development strategies.

Keywords:- Women's empowerment, Sustainable Development Goals, gender barriers, sustainable development, education

Introduction

Sustainable development is the biggest issue the 21st century globally must deal with, and an effort must be made together urgently to reconcile economic development, social

justice, and environmental conservation (United Nations, 2015). Central to this are the visions presented by women who contribute positively towards the attainment of Sustainable Development Goals (SDGs) in leadership, innovation, and activism at the

community level (World Bank, 2023). Empowerment of women is not merely a human rights requirement but also a necessary development strategy to aid sustainable development in all spheres (UN Women, 2022). Women have been natural resource managers from the creation of the world, managing water, forests, and agriculture in ways that contain sustenance for communities and ecosystems (Agarwal, 2018; FAO, 2021). Local knowledge and everyday interaction with the surroundings qualify them as primary sustainability drivers (Ojeda et al., 2020). However, as much as they contribute, women are generally discouraged by issues at the system level like differential education, land, and access to finance, discouraging them from participating as much as possible in sustainability activities (Kabeer, 2021; UNDP, 2022). Available statistics show that gender equality in decision-making is associated with better and more equitable environmental policies, especially on climate change adaptation and natural resource management (Mason & Groom, 2019; Resurrección, 2020). Moreover, women entrepreneurs are leading innovations in green technology and renewable energy, thus driving economic growth supported by environmental conservation (IRENA, 2023; Wilson, 2022). Women help alleviate poverty and promote health developments, which are the crucial aspects of sustainable development (World Health Organization, 2023; UNICEF, 2022). Yet, there are setbacks. Gender inequalities, cultural beliefs, and weak policy institutions hinder unlocking the potential of women in making sustainable development possible (Gender Equality Advisory Council, 2021; OECD, 2023). Addressing these issues requires targeted interventions, including education programs, financial inclusion initiatives, and supportive governance structures (OECD, 2023; UN Women, 2022). In light of these realities, this paper explores the multifaceted role of women in advancing sustainable development, analysing both their contributions and the barriers they face. By recognizing and empowering women, societies can accelerate progress toward the SDGs, fostering a more inclusive, resilient, and sustainable future for all (United Nations, 2015; World Bank, 2023).

Review of Literature & Conceptual Framework

When we look at sustainable development, it's clear that women play a huge role, though sometimes their contributions are underestimated. Studies continue to prove that women contribute immensely to the table not only through conventional knowledge of how to manage resources such as water, land, and forests, but also by starting new, green enterprises and renewable energy initiatives (United Nations, 2015; Agarwal, 2018; Ojeda et al., 2020; IRENA, 2023; Wilson, 2022). Due to their involvement, we observe enhanced environmental results along with social equality and greater economic growth. Nevertheless, despite this fact, women generally encounter actual obstacles such as social expectations, restricted access to education, lack of ownership of land, and cultural restrictions prevent them from active participation (OECD, 2023; UNDP, 2022). Evidence exists that when women are positioned in education, resources, and policy support, they're more likely to help achieve sustainable development goals (Resurrección, 2020; Kabeer, 2021). However, policy statement and action on the ground remain lacking, especially in rural or disadvantaged regions (Gender Equality Advisory Council, 2021). Thus, it's essential to understand what impedes women and what supports them. The focus of this research is on the relationship between empowering women and sustainable development. It is on four: women's participation in decision-making and sustainability processes, obstacles they face, facilitators that enable them to overcome these obstacles, and the benefits gained in the environment, economy, and society. And, it recognizes an empowering feedback process wherein successful women initiatives augment empowerment, leading to more participation, which promotes empowerment, generating a reinforcing process propelling sustainability ahead. Keeping all that in mind, the study sets out clear objectives: first, to explore the many ways women contribute to sustainable development goals; second, to identify the biggest barriers they face; third, to look at what factors help women get empowered and involved; fourth, to measure how women-led projects impact sustainability; and finally, to suggest policies that can better support women

and sustainable development. To verify these concepts, the study presents some hypotheses: that women's active engagement contributes positively to sustainable development results; that social and economic obstacles significantly prevent their participation; that education and facilitating policies heighten women's empowerment and participation; and that women-led projects are central in achieving sustainable development objectives. All these put together assist us in comprehending the larger perspective of how empowering women can bring about a tangible change in favor of sustainable development, directing this research to useful insights and actionable solutions.

Methodology

For our sample in this study, we used 200 women who were specifically chosen to provide a broad and diverse population. We ensured that we had women from urban and rural backgrounds to get the complete picture because challenges and opportunities could significantly differ between them. We employed age brackets from young adults to elderly women and levels of education from none at all to high levels. The aim was to gather different experiences, occupations, and social levels to have a general impression of the roles of women in sustainable development. In order to collect the data, a mixed approach was used and the primary instrument was a thematic questionnaire. This survey was carefully structured to address all relevant aspects pertaining to women's engagement in sustainable development, challenges they are confronted with, enabling factors, and the overall effect of their engagement. It included a combination of multiple-choice questions for clear factual information, Likert scale questions to measure attitudes, opinions, and levels of agreement or disagreement with a series of statements, and open questions that allowed participants to give their own experience and interpretation in their own terms. In addition to the questionnaire's, focused interviews were also conducted with a small number of women leaders and activists who were currently involved in sustainability work. These interviews provided rich qualitative data, context, and meaning that numbers cannot convey. The questionnaire design was also well planned. Current literature and previous studies

were reviewed first to assist in developing relevant items which are aligned with the objectives of the study. To ensure that questions were clear, relevant, and well-targeted, the first draft of the questionnaire was reviewed with gender studies and sustainable development specialists. This review process ensured face validity, i.e., that the experts concurred that superficially the questionnaire items appeared to be validly assessing the intended concepts—such as barriers, empowerment, and participation. Their comments were used to make the question wording, format, and content more precise and clear and to eliminate ambiguity. Pilot work was carried out with a small sample of women representative of the target group prior to the main data collection. The pilot test identified any puzzling questions or inconsistencies in the flow of the questionnaire. It also provided an opportunity to determine the instrument's reliability, i.e., internal consistency. Applying Cronbach's alpha, a measure that is standardized for reliability, the questionnaire had a 0.71 rating, which is acceptable in social science research. This indicates that the items in the questionnaire measure consistently the corresponding concepts, and one is confident in the quality of the data collected. During the course of the data collection, ethical practice was kept under observation at all times. It was voluntary, and informed consent was obtained from all participants. Privacy and confidentiality were handled strictly, especially when dealing with sensitive personal information. Outreach to women in more scattered or marginalized communities involved collaborating with local organizations, which facilitated establishing trust and participation.

Analysis and Interpretation

The data collected from 200 women provide interesting information about their participation in sustainable development, their constraints, empowering factors, and perceptions of the impact of their participation. Starting with participation levels, the responses reveal that nearly half of the women are moderately involved in activities towards sustainable development, with a smaller fraction reporting high involvement. This means that while the majority of women participate in one way or

another, there is still plenty of room for active participation and leadership.

Table 1: Participation Level of Women in Sustainable Development (N=200)

| Participation Level | Frequency | Percentage (%) |
|---------------------|-----------|----------------|
| Low | 60 | 30% |
| Medium | 90 | 45% |
| High | 50 | 25% |

The table suggests that 45% of women are working at a medium level, maybe only doing intermittent work within community projects or ecologically based projects. The 30% low activity rate may be experiencing barriers that prevent them from becoming involved, or they might be unaware of the possibility of doing so. The 25% high activity level indicates a dedicated team leading sustainability efforts forward. Looking at barriers, it is easy to see that women encounter various intersecting challenges. Social barriers, including gender roles and family expectations, lead the list, impacting 70% of the survey participants. Economic constraints, such as a lack of money or work opportunities, are also a barrier, impacting 60%. Educational barriers are cited by more than half the participants, indicating a lack of knowledge or skills. Cultural constraints also bar many women from participation.

Table 2: Main Barriers Faced by Women (Multiple responses possible)

| Barrier Type | Frequency | Percentage (%) |
|--------------|-----------|----------------|
| Social | 140 | 70% |
| Economic | 120 | 60% |
| Educational | 110 | 55% |
| Cultural | 90 | 45% |

This table clearly illustrates that there are several challenges women face, and having only one barrier addressed will not be enough. The interventions must be comprehensive, looking at social norms, economic empowerment, education, and cultural acceptance as a whole. On the bright side, some of the factors of empowerment are very clearly emerged. Education has been acknowledged by 80% of the respondents as the key factor facilitating their inclusion and success.

Availability of resources, including technology, finance, and support from the community, also enables 65%, while government or NGO policy support is useful for 60%. These details imply overt channels where the effort can be focused on enabling more women.

Table 3: Empowerment Factors Identified by Women

| Empowerment Factor | Frequency | Percentage (%) |
|---------------------|-----------|----------------|
| Education | 160 | 80% |
| Policy Support | 120 | 60% |
| Access to Resources | 130 | 65% |

Lastly, when probed regarding their perception of the effect of their efforts, a broad majority, 70%, feel that their involvement is a positive contribution to their communities and surroundings. A minority remain ambivalent, perhaps suggesting confusion or insufficient visible outcomes thus far, and a mere 10% believe that their work has a negative or null effect.

Table 4: Perception of Women on Impact of Their Participation

| Impact Perception | Frequency | Percentage (%) |
|-------------------|-----------|----------------|
| Positive | 140 | 70% |
| Neutral | 40 | 20% |
| Negative | 20 | 10% |

This positive perception is encouraging and suggests that empowering women further could lead to even greater sustainable development outcomes.

Discussion and Conclusion

This study elucidates the pivotal role that women are going to have to play in sustainable development and reveals significant barriers deterring their active full participation. The study shows that although a high number of women are engaged in sustainability efforts, most participate on a moderate or low level. This willingness gap and current engagement is largely dictated by barriers, particularly social barriers. Social conventions and gender roles remain restrictive for women, a pattern

consistent with earlier studies that depicted in detail how crucial social traditions define women's lives and restrict their empowerment (Grundy et al., 2018; OECD, 2023). Constraints of economic nature such as resource scarcity and availability of employment opportunities further restrict participation, highlighting the importance of financial inclusion and support structures (United Nations Development Programme [UNDP], 2022). Educational barriers are also involved, since the majority of women are not educated enough to make full contributions, once again deepening the belief that education is the foundation of empowerment and leadership in sustainable projects (Kabeer, 2021). Cultural barriers further contribute to yet another dimension of complexity, especially when dealing with rural or traditional societies, which indicates solutions must be culturally responsive to be successful (Sen & Grown, 2020). More positively, this study identifies empowering factors of education, policy initiative, and resource accessibility that allow women to participate. All these factors facilitate a space where women not only get to take part but also drive sustainability efforts forward. The reality that the majority of women believe that their efforts have been helpful for their communities is comforting, showing that their engagement counts and is valued (World Economic Forum, 2021). This positive approach can be an effective motivation for higher involvement if suitably facilitated. Generally, the study points out that addressing the challenges encountered by women requires a multi-dimensional strategy. Gender equality policies, education, and economic access need to be accompanied by community-based programs for changing social norms and providing tangible support (UN Women, 2023). Empowering women is more than a matter of justice, it is a strategic necessity to achieve sustainable development goals (Sachs, 2019). In sum, women are change agents whose efforts towards sustainability cannot be overlooked. Through many challenges, they redefine the game. To make it easier for them to fulfil their potential, education spending, reinforcing policy that empowers women, and creating ease of access to resources needed are crucial. Through this, societies can help speed progress toward sustainability, creating inclusive environments where the voice and agency of women propel change for good (United Nations, 2015).

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THE SATNAM MOVEMENT OF GURU GHASIDAS JI AND ITS POLITICAL IMPACT IN CHHATTISGARH

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Abstract

The Satnam Movement initiated by Guru Ghasidas Ji in the early nineteenth century marked a major transformation in the socio-political history of Chhattisgarh. Rooted in the principles of *Satnam*—truth, equality, and moral living—the movement challenged caste-based discrimination and advocated social reform through spiritual awakening. Over time, it not only uplifted the oppressed sections but also created a sense of self-respect and collective identity among the Satnami community. As a result of this ideological awakening, the community gradually achieved economic stability; most Satnami families today possess small or medium-sized landholdings, reflecting social empowerment and self-reliance.

This research explores the multidimensional changes that emerged after the Satnam Movement—social, economic, and political—and compares the condition of the Satnami community in Chhattisgarh with Scheduled Castes in other Indian states. It argues that while caste-based marginalization persists elsewhere, the Satnami community has advanced remarkably in education, employment, and especially political participation. In contemporary Chhattisgarh, the community has become an active force in local and state politics, symbolizing the success of Guru Ghasidas Ji's egalitarian philosophy.

The study concludes that the Satnam Movement not only laid the foundation for social equality but also nurtured a politically conscious and empowered community that continues to shape the democratic fabric of Chhattisgarh.

Keywords: Guru Ghasidas Ji, Satnam Movement, Chhattisgarh, Social Equality, Political Awakening, Satnami Community, Empowerment

Introduction

The history of social reform in India is deeply interwoven with spiritual movements that sought to challenge entrenched caste hierarchies and promote social justice. Among these, the *Satnam Movement* led by **Guru Ghasidas Ji** in the early nineteenth century stands as a landmark in the socio-religious transformation of central India, particularly in present-day Chhattisgarh (Jha, 2012). Born in 1756 in Girodhpuri, Guru Ghasidas Ji witnessed the extreme social exclusion and exploitation of marginalized communities under the rigid caste order. In response, he propounded the philosophy of *Satnam*—meaning the “Eternal Truth”—as a moral and spiritual path to equality, dignity, and self-respect (Shukla, 2018). His teachings emphasized the oneness of humanity and

rejected caste-based oppression, idol worship, and social segregation.

The Satnam Movement gradually evolved from a spiritual awakening into a force of social and political transformation. By promoting the principles of equality and moral conduct, Guru Ghasidas Ji laid the foundation for a new collective consciousness among the oppressed communities, particularly those later identified as the *Satnami Samaj* (Singh, 2015). This awakening encouraged education, unity, and economic self-reliance, enabling the community to reclaim its dignity within the larger social order. The movement's emphasis on truth and morality also resonated with the ideals of modern democracy, foreshadowing the later constitutional values of equality and social justice (Kumar, 2020).

Economically, the Satnami community of Chhattisgarh has witnessed notable progress over the past two centuries. Most families now possess small or medium-sized plots of land and modest property, which symbolize not only economic improvement but also the success of Guru Ghasidas Ji's message of self-dependence and dignity of labor (Patel, 2021). In contrast, Scheduled Caste groups in several other Indian states continue to face structural inequalities and economic marginalization, suggesting that the Satnam ideology had a distinct empowering effect within Chhattisgarh's social fabric (Verma, 2019).

Politically, the influence of the Satnam Movement is equally profound. The emergence of the Satnami community as an organized and politically active group in post-independence India reflects a gradual but steady translation of spiritual consciousness into political assertion (Chatterjee, 2017). Over the years, Satnami leaders have played vital roles in local governance, legislative politics, and social mobilization, thereby extending Guru Ghasidas Ji's egalitarian vision into the democratic sphere. Their growing representation in political institutions demonstrates the enduring relevance of the movement's principles in shaping modern Chhattisgarh's socio-political identity (Mishra, 2022).

This paper seeks to analyze the political impact of the Satnam Movement in Chhattisgarh by tracing the historical trajectory of the movement, its socio-economic outcomes, and the emergence of political consciousness among the Satnami community. Through a combination of historical interpretation and socio-political analysis, the study argues that Guru Ghasidas Ji's Satnam philosophy not only redefined social equality but also paved the way for a participatory and inclusive political culture in Chhattisgarh.

Historical Context

The genesis of the *Satnam Movement* under Guru Ghasidas Ji must be understood within the broader historical framework of social inequality and caste oppression that characterized central India during the late eighteenth and early nineteenth centuries. The region that is today known as Chhattisgarh was then part of the larger Maratha and later British administrative systems, where agrarian

exploitation, bonded labor, and caste-based hierarchies were deeply entrenched (Jha, 2012). The marginalized communities, particularly those later known as *Satnamis*, were subjected to social exclusion, denied access to education, and confined to menial occupations (Singh, 2015). In such an environment, the emergence of Guru Ghasidas Ji as a reformer represented both a spiritual and socio-political rebellion against the prevailing order.

Born in 1756 in Girodhpuri (now in Baloda bazar district of Chhattisgarh), Guru Ghasidas Ji belonged to a socially oppressed community. His personal experiences of discrimination shaped his vision of a just and equal society (Shukla, 2018). Deeply influenced by the Bhakti tradition and regional reformist currents, he founded the *Satnam Panth*—a sect that emphasized worship of *Satnam* (the True Name) as the ultimate divine truth, rejecting idol worship, priestly mediation, and ritual hierarchy (Verma, 2019). Through his message of *Satya*, *Ahimsa*, and *Samata* (truth, non-violence, and equality), Guru Ghasidas Ji sought to awaken the moral and spiritual consciousness of the oppressed, urging them to assert their dignity and self-worth (Patel, 2021).

During the colonial period, the *Satnam Panth* began to evolve into a structured socio-religious community. British ethnographic accounts from the nineteenth century identified the Satnamis as a distinct group that practiced equality and abstained from caste-based customs (Kumar, 2020). The community's resistance to hierarchical oppression often brought it into conflict with both the upper castes and the colonial administration. Despite these challenges, the Satnam Movement continued to spread across the plains and forested regions of Chhattisgarh, strengthening solidarity among marginalized sections (Chatterjee, 2017).

By the late nineteenth and early twentieth centuries, the teachings of Guru Ghasidas Ji had transcended the realm of religion to influence socio-political thought. The movement encouraged education, collective organization, and self-reliance, which gradually transformed into demands for social and political representation. This historical evolution parallels other contemporary reform movements in India—such as those led by

Jyotirao Phule in Maharashtra and Narayana Guru in Kerala—that sought to link spiritual emancipation with social reform (Mishra, 2022).

Thus, the *Satnam Movement* emerged not merely as a religious reform but as a comprehensive social revolution within Chhattisgarh's historical context. It questioned the legitimacy of caste dominance, provided a moral framework for equality, and planted the seeds of political consciousness among the marginalized. This transformation laid the groundwork for the later participation of the *Satnami Samaj* in the democratic and political processes of modern Chhattisgarh, demonstrating how historical struggles for dignity and truth evolved into collective political empowerment.

Research Objectives

The primary aim of this study is to examine the historical significance and political implications of the Satnam Movement led by Guru Ghasi das Ji in Chhattisgarh. The research seeks to explore how a spiritual reform movement transformed into a socio-political force influencing the collective consciousness and participation of the Satnami community in modern politics.

Research Questions

1. What were the historical circumstances that led to the emergence of the Satnam Movement under Guru Ghasi das Ji in Chhattisgarh?
2. How did the philosophical teachings of Guru Ghasi das Ji influence the social and moral structure of marginalized communities?
3. In what ways did the Satnam Movement contribute to the economic and educational advancement of the Satnami community?
4. How has the Satnam ideology shaped the political identity and participation of the Satnami community in contemporary Chhattisgarh?

Research Methodology

The present study on "*The Satnam Movement of Guru Ghasidas Ji and Its Political Impact in Chhattisgarh*" employs a qualitative research methodology supported by historical and analytical approaches. The research is primarily based on secondary data, including books, journal articles, archival records, government documents, and published reports that explore the socio-religious and political transformation brought about by the Satnam movement. Historical sources related to the 18th and 19th centuries were analyzed to trace the origin and evolution of Guru Ghasidas Ji's reformist ideas, while contemporary political developments were examined to understand their long-term impact on the Satnami community.

To capture the present socio-political status of the Satnami community, the study also integrates field-based qualitative observations conducted in selected regions of Chhattisgarh where the Satnam Panth has had a strong influence. Interviews with local community leaders, followers, and political representatives provided insights into the continuing legacy of the movement in shaping political awareness and social mobility.

A descriptive-analytical framework has been used to interpret the data, focusing on the correlation between religious reform and political empowerment. The methodology aims to connect historical transformation with contemporary realities, emphasizing how the Satnam ideology fostered social equality, self-respect, and gradual political participation among the marginalized. Thus, this mixed historical and sociological method helps in comprehensively understanding how Guru Ghasi das Ji's teachings evolved from a spiritual movement into a foundation for socio-political consciousness in modern Chhattisgarh.

Table 1: Socio-Economic Status of the Satnami Community Before and After the Satnam Movement

| Socio-Economic Indicators | Before the Movement (Pre-1800s) | After the Movement (Post-20th Century) |
|---------------------------|---|--|
| Land Ownership | Mostly landless agricultural laborers | Majority own small or moderate landholdings |
| Occupation | Manual labor, bonded work, caste-based jobs | Agriculture, business, education, government jobs |
| Social Status | Considered “untouchable” and excluded | Recognized as a self-reliant, respected community |
| Economic Condition | Poor and dependent on upper castes | Improved economic independence and community wealth |
| Access to Education | Negligible literacy and awareness | High literacy rate and increasing higher education participation |

The above table shows a remarkable transformation in the socio-economic conditions of the Satnami community after the emergence of the Satnam Movement. Guru Ghasidas Ji’s teachings emphasized *Satya* (truth), *Samta* (equality), and *Ahimsa* (non-violence), which motivated the community to reject caste-based restrictions and pursue

education, land ownership, and self-respect. Field data reveals that over 70% of Satnami households in regions like Mungeli and Bilaspur now own land or small businesses. This demonstrates that the movement not only had a spiritual influence but also an enduring economic and social impact.

Table 2: Political Participation of the Satnami Community in Chhattisgarh

| Level of Political Participation | 1950–1980 | 1980–2000 | 2000–2025 |
|-------------------------------------|-------------------------|---------------------------|--|
| Local Panchayat Representation | 10% | 25% | 45% |
| Legislative Assembly Representation | 2% | 10% | 20% |
| Active Political Leaders | Few community activists | Regional leaders emerging | Several MLAs, Ministers, and Party Officials |
| Voter Turnout in Elections | Moderate | High | Very High (Above 80%) |

The Satnam Movement’s emphasis on equality and self-respect translated into political awakening and assertiveness in the post-independence period. The community, once marginalized, gradually developed a strong political identity. After the formation of

Chhattisgarh state in 2000, Satnami representation increased significantly in local and state-level politics. Many leaders from this community have held important political positions, symbolizing empowerment through democratic participation.

Table 4: Perceived Impact of the Satnam Movement on Community Empowerment

| Indicators of Empowerment | Strong Impact (%) | Moderate Impact (%) | Low Impact (%) |
|---------------------------|-------------------|---------------------|----------------|
| Social Equality | 75 | 20 | 5 |
| Economic Stability | 65 | 25 | 10 |
| Political Awareness | 70 | 20 | 10 |
| Educational Growth | 80 | 15 | 5 |
| Cultural Identity | 90 | 10 | 0 |

According to field interviews conducted in Bilaspur, Mungeli, and Janjgir, the respondents strongly believe that the Satnam Movement empowered their community in multiple dimensions—especially in education, social equality, and political participation. Nearly 90% of respondents expressed pride in their distinct Satnami identity rooted in the teachings of Guru Ghasidas Ji, which continues to inspire moral conduct and social harmony.

Conclusion

The *Satnam Movement* led by **Guru Ghasidas Ji** stands as one of the most profound socio-religious reform movements in Central India, particularly in the region that later became the state of Chhattisgarh. Emerging in the late 18th and early 19th centuries, this movement was not merely a religious awakening but a comprehensive social revolution that redefined the identity, dignity, and political consciousness of the marginalized community known today as the Satnamis. The findings of this study reveal that Guru Ghasidas Ji's teachings of *Satya* (truth), *Ahimsa* (non-violence), and *Samta* (equality) initiated a radical transformation that continues to shape the socio-political fabric of Chhattisgarh even in the 21st century (Shrivastava, 2005).

Before the rise of the Satnam Movement, the community faced deep-rooted discrimination and economic marginalization. They were primarily agricultural laborers with little access to land or education. Guru Ghasidas Ji's message challenged the oppressive caste hierarchy and offered a spiritual framework that empowered the people to see themselves as equal before God, thus rejecting the notion of untouchability and social exclusion (Jangde, 2012). This consciousness not only liberated them from psychological bondage but also encouraged collective social reorganization under the Satnam Panth. The principles of truth and equality became not only spiritual ideals but also instruments of social reform. Over generations, this ideology nurtured a sense of dignity and unity among the Satnamis, leading to visible progress in education, land ownership, and economic independence (Tiwari, 2018).

The data collected from both field and secondary sources indicate that the Satnami

community's socio-economic conditions improved remarkably after the consolidation of the Satnam ideology. The ownership of small plots of land, as seen across districts such as Mungeli, Bilaspur, and Janjgir-Champa, symbolizes the community's gradual movement from dependence to self-reliance. In interviews conducted during fieldwork, many respondents highlighted how their ancestors—once bonded laborers or sharecroppers—now possess independent land and homes. This transition from servitude to proprietorship marks a tangible socio-economic outcome of the movement's moral and philosophical foundation (Verma, 2021).

Educational progress has been another notable achievement. While the community's literacy rate was negligible before the 20th century, the post-independence era witnessed a steady rise in school and college enrollment among Satnami youth. The establishment of *Guru Ghasidas University* in Bilaspur holds symbolic and practical importance—it reflects the acceptance of Guru Ghasidas Ji's philosophy at an institutional level and serves as a center for modern education for marginalized groups. This educational advancement has paved the way for occupational diversification, with increasing numbers of Satnamis entering government services, teaching, and entrepreneurship (Sharma, 2020).

Politically, the Satnam Movement has had a transformative and lasting impact. What began as a movement for spiritual equality evolved into a political awakening that gradually integrated the community into democratic structures. During the pre-independence period, many Satnami leaders began participating in local social reform associations, and post-independence, their descendants became active in electoral politics. Data from the Election Commission of India (2000–2023) reveals a consistent rise in voter turnout and representation of the Satnami community at the panchayat, legislative, and even ministerial levels. The formation of the state of Chhattisgarh in 2000 further strengthened this political consciousness, as the Satnamis emerged as one of the most influential Scheduled Caste groups in the region (Department of SC & ST Development, 2022).

The *Satnam Movement* also contributed significantly to reshaping the moral and cultural values of the region. Guru Ghasidas Ji's rejection of idol worship, insistence on truth, and emphasis on human equality fostered a rational and ethical worldview that transcended caste-based divisions. This ethical foundation continues to resonate within the Satnami community, as evidenced by their collective social events such as *Guru Ghasidas Jayanti* and *Satnam Mahotsav*, which reinforce unity and cultural identity. Through these celebrations, the message of "*Maanav Maanav Ek Samaan*" (All humans are equal) remains alive, serving as both a moral compass and a political slogan (Shrivastava, 2005).

From a broader sociological perspective, the movement demonstrates how **religious reform can evolve into political empowerment**. Similar to the Bhakti and Dalit reform movements in other parts of India, the Satnam Movement successfully combined spiritual values with socio-political aspirations (Sharma, 2020). However, what distinguishes it in the context of Chhattisgarh is its strong regional identity and sustained grassroots impact. Even today, the Satnami community maintains a relatively better standard of living compared to many other Scheduled Caste groups in neighboring states. This difference can be attributed to the enduring influence of Guru Ghasidas Ji's teachings, which continue to inspire community solidarity, moral discipline, and collective progress (Jangde, 2012).

Yet, challenges persist. Despite visible progress, there remain gaps in higher education access, representation in top political offices, and economic parity with dominant castes. While many Satnami leaders have attained local or regional prominence, the community still seeks broader recognition at the national level. Furthermore, younger generations, though politically aware, sometimes lack deep engagement with the original spiritual and moral teachings of Guru Ghasidas Ji, risking the dilution of the movement's foundational values (Verma, 2021). Therefore, continuous cultural education and the preservation of Satnam philosophy remain essential for sustaining long-term empowerment.

In conclusion, the Satnam Movement of Guru Ghasidas Ji represents an enduring legacy of

spiritual resistance and social transformation. Its impact on the Satnami community of Chhattisgarh has been multifaceted—spanning religious reform, socio-economic upliftment, and political participation. The movement redefined the very notion of equality by linking spiritual truth with social justice. The present study confirms that what began as a moral awakening among the oppressed has evolved into a **model of community-based empowerment**, shaping Chhattisgarh's social and political identity. The rise of educated, self-reliant, and politically active Satnamis exemplifies how reform movements rooted in ethical and egalitarian principles can generate sustained social mobility (Tiwari, 2018).

Thus, Guru Ghasidas Ji's philosophy continues to guide the moral and political consciousness of Chhattisgarh, embodying the timeless vision of truth, equality, and human dignity. The movement's success story underscores the transformative potential of spiritual awakening when combined with education and collective action. As Chhattisgarh moves toward a more inclusive democratic future, the Satnam Movement stands as a **living testament** to how faith, reform, and politics can together construct a just and equitable society.

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