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Editorial

The problem of textile waste in India has grown in recent years, particularly due to fast fashion. Prime Minister Narendra Modi expressed concern at the India Tex 2025 event in February 2025, saying that millions of clothes are thrown away every month due to changing fashion trends, posing a serious threat to the environment. He estimated that by 2030, fashion waste could reach 148 million tonnes, while currently only a quarter of it is recycled.

The challenges of textile waste require a multifaceted approach that includes improved recycling systems, consumer awareness, sustainable production practices, and responsible consumption. Governments, businesses, and consumers must all work together to reduce the environmental, social, and economic impact of textile waste.

Many Indian fashion brands and designers are now using eco-friendly fabrics and production methods. Such as organic cotton fabrics, reusable fibers, and repurposing old clothes through upcycling. Some leading fashion brands and designers are using upcycling techniques to create new products from waste. For example, new fashion designs are being created from old clothes. The government is promoting a circular economy, which involves the reuse and recycling of textiles and other materials. Under this, textile waste is being encouraged to be reused in an environmentally safe manner.

Central and state governments are working on policies that promote waste management and recycling. Such as "Swachh Bharat Mission" and "Recycling Policy". The government is giving strict guidelines to the textile industry for the disposal of waste. Many companies and startups in India are developing new technologies to recycle textile waste. These include the process of recycling clothes and converting them into new fibers or products.

Some Indian startups and companies are developing eco-friendly fashion products that not only generate less waste but also do not harm the environment. Sustainable Manufacturing: Large textile industries are now trying to save water and energy, minimise waste, and use eco-friendly raw materials in their production processes. Waste-to-Wealth Initiatives: Some companies are running waste-to-wealth programmes to convert old clothes into new products. For example, efforts are being made to convert clothes and other fabrics into carpets, bags, and other products. Special centres have been set up in some urban areas to collect and recycle textile waste. These centres collect the clothes and then recycle or reuse them. In India, many projects are being run under international and local partnerships, which are working to reduce the impact of textile waste. For example, some partnerships under the "Swachh Bharat Mission" are helping in the disposal of textile waste. Smart and biodegradable materials are being developed to reduce textile waste. These new materials are less harmful to the environment and are easily degradable, thereby reducing the problem of textile waste. Date-November 2024

Dr. Mithilesh Kumar Choubey

Editor

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INDEX

<i>Title /author</i>	Page No.
NATIONAL EDUCATION POLICY: LANGUAGE PERSPECTIVE <i>Dr. Satyapriya Mahalik, Principal, Jamshedpur Workers' College, Jamshedpur</i>	9-11
NAVIGATING CULTURAL IDENTITIES AND TRANSFORMATIONS IN AMITAV GHOSH'S THE SHADOW LINES: A POST-COLONIAL PERSPECTIVE <i>Pali Sarkar, PhD Research Scholar, Comparative Literature and Translation Studies School of Letters, Dr. B. R. Ambedkar University Delhi, India</i>	12-16
ROLE OF ARTIFICIAL INTELLIGENCE IN AGRICULTURE: OPPORTUNITIES AND CHALLENGES <i>Shweta Kumari, Research scholar, Department of Commerce and Business Management Ranchi University, Ranchi</i>	17-22
THE ROLE OF PARENTAL INVOLVEMENT IN A DIGITAL AGE EDUCATION <i>Syed Md Kahful Wara, Assistant Professor, MANUU College of Teacher Education Darbhanga Bihar</i>	23-28
GOOD GOVERNANCE OF A GENERAL DEGREE COLLEGE IN WEST BENGAL IN THE PERSPECTIVE OF NAAC ASSESSMENT IN RECENT YEAR <i>Dr. Ajoy Kumar Datta, Associate Professor in Political Science, Head of the Department of Political Science, Saheed Kshudiram College, Kamakhyaguri, Alipurduar, West Bengal.</i> <i>Prof. Rahamat Ali, Assistant Professor in Political Science, Head of the Department of Political Science, Barabazar Bikram Tudu Memorial College, Barabazar, Purulia, West Bengal.</i>	29-45
ANALYSING THE INDIAN GOVERNMENT'S DECISION TO SHUT DOWN SOVEREIGN GOLD BONDS: ECONOMIC IMPLICATIONS AND POLICY INSIGHTS" <i>Vinayak Kaushik, Research Scholar, UGC-NET/JRF, DAVV Indore</i> <i>Sunita Kumari, Research Scholar, UGC-NET, BBM KU Dhanbad</i>	46-50
GREEN MARKETING: THE GROWING AWARENESS IN JHARKHAND <i>Manila Kumari, Research Scholar, Department of Commerce and Management Vinoba Bhave University Hazaribag (Jharkhand)</i> <i>Dr. Sunil Kumar Agrawal, Associate Professor, Department of Commerce and Management Vinoba Bhave University Hazaribag (Jharkhand)</i>	51-57
FROM EMPLOYEES TO FOUNDERS: THE PSYCHOLOGICAL AND SOCIAL MOTIVATIONS BEHIND WOMEN'S CAREER SHIFTS <i>Prof (Dr) Sangeeta N Pawar, Professor and Head, , Department of Commerce, University of Mumbai</i> <i>Ms Kena Shree, Research Scholar, Department of Commerce, University of Mumbai</i>	58-66
INDIA'S FOREIGN POLICY IN THE PRESENT TIME <i>Dr. Mousumi Paul, Assistant Professor of English, L.B.S.M College, Jamshedpur, Jharkhand</i>	67-71
ASSESSING THE ROLE OF HERITAGE TOURISM IN PROMOTING SUSTAINABLE DEVELOPMENT GOALS (SDGS) IN HAMPI <i>Ashraf Allali, Research Scholar, Department of Studies in Business Administration, Vijayanagara Sri Krishnadevaraya University, Ballari, Karnataka 583105, India</i> <i>Archana H. N. Associate Professor, Department of Studies in Business Administration, Vijayanagara Sri Krishnadevaraya University, Ballari, Karnataka</i>	72-79
SUSTAINABLE AND GREEN FINANCE: A CASE STUDY OF BOKARO STEEL LIMITED <i>Kumari Suman, Research Scholar, PG Department of Commerce and Business Management, Ranchi University Ranchi, Jharkhand</i> <i>Dr. Sanjiv Chaturvedi, Dept of Commerce, Marwari College, Ranchi, Jharkhand</i>	80-86
THE IMPACT OF FINTECH ON INDIA'S BANKING SECTOR: AN ANALYSIS OF DIGITAL INNOVATION AND FINANCIAL INCLUSION <i>Ankita Prasad, Research Scholar, University Department of Commerce and Business Management, Binod Bihari Mahto Koyalanchal University, Dhanbad</i>	87-97
AN OUTLINE OF THE LEVEL OF FARM MECHANIZATION OF ORISSA <i>Dr.Sovan Chattopadhyay, State Aided College Teacher, Department of Geography, Rishi Bankim Chandra Evening College. W.B</i>	98-106

<p>STUDY OF THE SOCIO-ECONOMIC AND POLITICAL EMPOWERMENT OF WOMEN THROUGH FISHERY ACTIVITIES AT GHATAL SUB-DIVISION OF PASCHIM MEDINIPUR DISTRICT OF WEST BENGAL <i>Sk Rahaman Ali, Women’s Studies Centre, Vidyasagar University, Midnapore – 721102, West Bengal, India</i> <i>Joydev Maity, Department of Fishery Sciences, Vidyasagar University, Midnapore – 721102, West Bengal, India</i></p>	107-113
<p>THE TRAINING PROGRAMME RESPECTED ON LEG STRENGTH AND AGILITY OF COLLEGE STUDENTS: EFFECTED OF TWELVE WEEKS <i>Amitab Kumar Mandal, Lecturer, Balagarh B.K. Mahavidyalaya, Balagarh, Hooghly, West Bengal</i></p>	114-115
<p>DISPARITY BETWEEN MINIMUM WAGE RATE AND MGNREGA WAGES IN JHARKHAND <i>Priti Priya, Research Scholar, University Department of Economics, Ranchi University, Ranchi, Jharkhand</i></p>	116-128
<p>ROLE OF MITOCHONDRIA IN CANCER STEM CELL RESISTANCE <i>Kumar Saurabh, Research scholar, Sona Devi university jhamshepur Jharkhand</i></p>	129-136
<p>THE EVOLUTION OF LAND REVENUE SYSTEMS AND THEIR IMPACT ON JHARKHAND'S ECONOMY <i>Gourav Kumar Agarwal, Research Scholar, University Department of Commerce and Business Management, Ranchi University, Ranchi, Jharkhand</i></p>	137-148
<p>THE ROLE OF FOLK MEDIA IN PROMOTING RURAL HEALTHCARE IN WEST BENGAL <i>Ujjwal Ganguly, Research Scholar & SACT Teacher of Journalism & Mass Communication of Rishi Bankim Chandra College for Women, Naihati)</i> <i>Shahnaaz, Faculty of Journalism & Mass Communication, Usha Martin University, Ranchi, Jharkhand)</i></p>	149-152
<p>BEHAVIOUR FACTORS: THE IMPACT OF GENDER ON FINANCIAL DECISION-MAKING <i>Dr. Vidushi Sharma, Assistant Professor, Department of Commerce, Government College Telka, Chamba</i></p>	153-157
<p>ROLE OF THE PREAMBLE AS A MIRROR OF THE INDIAN CONSTITUTION: A STUDY <i>Nur Alam Miah, Assistant Professor, Department of Political Science Munshi Premchand Mahavidyalaya, Siliguri, West Bengal, India,</i></p>	158-162
<p>DEMONETIZATION PLAY DOMINANT ROLE TO MITIGATE THE EFFECT OF COVID-19 ON INDIAN ECONOMY <i>Dr Sanjiv Chaturvedi, Asst. professor, Dept of Commerce, Marwari College, Ranchi University, Ranchi, Jharkhand.</i> <i>Chandni Kumari, Research Scholar, Dept of Commerce and Business Management, Ranchi University, Jharkhand.</i></p>	163-165
<p>TRADITIONAL LIVELIHOODS IN A MODERN WORLD: A CASE STUDY OF THE KUTIA KONDH PVTG OF ODISHA <i>Dr. Anil Ota, Managing Consultant – Social, Ramboll India Private Limited Gurgaon</i></p>	166-175
<p>COMPARATIVE STUDY OF THE INCOME OF SCHEDULED TRIBE WOMEN AND MEN: IN THE CONTEXT OF KHUNTI DISTRICT <i>Madhuri Kumari, Research Scholar, University Department of Economics, Ranchi University, Ranchi, Jharkhand</i></p>	176-181
<p>MILLETS FOR RESILIENT AGRICULTURE: A PATHWAY TO NUTRITIONAL SECURITY AND SUSTAINABILITY IN JHARKHAND'S FOOD SYSTEM <i>Gagandeep Kaur, Junior Research Fellow, University Department of Economics, Ranchi University, Ranchi, Jharkhand</i></p>	182-191
<p>IMPACT OF COVID-19 ON GIRLS' EDUCATION: A CASE STUDY OF BAGHMARA BLOCK OF DHANBAD, JHARKHAND <i>Sumit Kumar, Research Scholar, University Department of Economics, Ranchi University, Ranchi, Jharkhand</i></p>	192-197

PRADHAN MANTRI JAN DHAN YOJANA – A STEP TOWARDS FINANCIAL INCLUSION IN INDIA <i>Ms. Disha, Research Scholar, University Department of Economics, Ranchi University, Ranchi</i>	198-201
MURSHIDABAD AND THE GREAT REVOLT OF 1857: A NEW DIMENSION. <i>Swapan Kumar Sarkar, Assistant Professor in History, Sirpat Singh College, Jiagonj, Murshidabad, West Bengal</i>	202-207
UNRAVELING THE RELATIONSHIP BETWEEN SOCIAL MEDIA MARKETING STRATEGIES, BRAND EQUITY ENHANCEMENT, AND CONSUMER REPURCHASE INTENTIONS: AN EMPIRICAL INVESTIGATION <i>Mr. Rakesh Kumar Pandey, Research Scholar, Faculty of Commerce and Management, United University Prayagraj, India.</i> <i>Dr. Anand Kumar Gupta, Associate Professor, Faculty of Commerce and Management, United University Prayagraj, India</i>	208-220
SELF-HELP GROUPS: A SPRINGBOARD FOR WOMEN'S ECONOMIC EMPOWERMENT AND SOCIAL TRANSFORMATION <i>Tipu Kumar, Research Scholar, University Department of Commerce Vinoba Bhave University, Hazaribag, 825301 (Jharkhand)</i>	221-227
NTPC'S BADKAGAON COAL MINE REVIVAL: MODEL FOR REHABILITATION & RESETTLEMENT IN THE MINING INDUSTRY <i>Dharmesh, Research Scholar, University Dept. Of Commerce, Vinoba Bhave University, Hazaribag, 825301 (Jharkhand)</i>	228-235
VARIATIONS IN INVESTMENT RETURNS AMONG FMCG STOCKS: A STUDY OF PROMINENT COMPANIES <i>Barkha Kumari, Research Scholar, Department of Commerce & Management, Vinoba Bhave University, Hazaribag (Jharkhand)</i> <i>Dr. Md. Mokhtar Alam, Associate Professor, Department of Commerce & Management, Vinoba Bhave University, Hazaribag (Jharkhand)</i>	236-248
EMPLOYEE ENGAGEMENT IN TATA STEEL <i>Ankit Kumar Agarwal, Research Scholar, University Department of Commerce and Business Management, Ranchi University, Ranchi</i> <i>Dr. Gaurav Srivastava, Assistant Professor, Department of Commerce, St. Xavier's College Simdega. Jharkhand.</i>	249-258
SOCIAL MEDIA MARKETING: THE ROLE OF TRUST, SOCIAL IDENTITY, AND CONSUMER DECISION STYLES <i>Vishal Ranjan, Research Scholar, University Department of Commerce and Business Management, Ranchi University, Ranchi</i>	259-266
THE CHANGING LANDSCAPE OF FINANCIAL INCLUSION WITH FINANCIAL TECHNOLOGY IN INDIA: OPPORTUNITIES AND CHALLENGES <i>Julie Kumari, Research Scholar, Department of Commerce and Management, Vinoba Bhave University, Hazaribag (Jharkhand)</i> <i>Dr. Md. Mokhtar Alam, Associate Professor, Department of Commerce & Management, Vinoba Bhave University, Hazaribag (Jharkhand)</i>	267-271
PRATIVA SHATPATHI'S PERSPECTIVE: WOMEN IN HER POETRY <i>Ajay Kumar Giri, Research Scholar, PG Department of Odia, Kolhan University, Chaibasa,</i> <i>Dr Manoj Kumar Mohapatra, Professor, KS College under Kolhan University, Chaibasa</i>	272-275
THE FUTURE OF GREEN FINANCE: OPPORTUNITIES AND REGULATORY CHALLENGES <i>Sunita Kumari, Research Scholar, BBMKU Dhanbad</i> <i>Vinayak Kaushik, Research Scholar, , DAVV Indore</i>	276-286

NATIONAL EDUCATION POLICY: LANGUAGE PERSPECTIVE

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Abstract

The National Education Policy (NEP) 2020 marks a transformative shift in India's educational landscape, aiming to make education more holistic, flexible, multidisciplinary, aligned with the needs of the 21st century, and aimed at fostering a spirit of inquiry and innovation among students. This policy seeks to revamp the existing system by introducing a new curricular structure, integrating vocational training, and promoting multilingualism, among other initiatives. With a vision to achieve universal access to quality education, the NEP emphasizes equity and inclusion, addressing the diverse needs of learners nationwide. By prioritizing critical thinking and creativity, the NEP 2020 sets a comprehensive roadmap for the future of education in India, aspiring to prepare students for the challenges of a rapidly evolving global society. **Language Perspective-** In response to the existing situation in India, the guidelines of NEP- 2020 recommended different strategies for achieving equitable and inclusive education. It can be said that NEP-2020 is a mixture of both ideals and realities. It is committed to the development of a variety of skills in Indian youth.

There is a virtual space for a knowledge economy by enriching the Indian knowledge system.

India is a multilingual country with more than 270 languages and dialects. However Indian constitution recognises 22 languages as official languages in its 8th schedule and out of 270 recognized mother tongues there are only 47 languages used as the medium of communication.

India has more than 400 languages spoken by people in different regions and places, whereas more than 200 languages are on the verge of extinction or already endangered. As language has a vital role to play in educating the child both orally or written, hence, it has been considered an advanced form of communication. In India, multilingual, multi-ethnic, and multi-cultural perspectives necessitated the inclusion of several languages in the curriculum. Hence the NEP-2020 has formulated a language policy to be integrated into a national plan. The three-language formula advocates the integrity of local and global languages.

The position of language in the school curriculum is communicating Nationality in a second language. Principles of course Design for Language Teaching Papers in language and

language teaching & Communicative methodology in Language Teaching are the major aspects to be discussed. Mother tongues were reported in the census of India-1961 as well as cultivated literary medium to be taught. The curriculum consists of content, teaching method, and purpose. All education is language education as all education begins with language and continues till the end. A language to be taught but not to be used as a medium of instruction. 16 Languages are spoken by 87% of the population of India. India has been a multi-lingual Nation from the beginning.

Language endangerment is a Provocative issue of recent time. Globalization and the essential output of localization have incorporated the multilingual perspective of Indian society. The Liberal economy and privatization of the Global market have been diminishing the scope of local involvement. However, the liberalization of the economy and the privatization of the global market have posed challenges to local languages. As multinational corporations expand their reach, the dominance of global languages, particularly English, has increasingly infiltrated everyday life, often overshadowing regional languages. This shift

not only diminishes the visibility of local languages but also reduces opportunities for their speakers, especially among younger generations who may perceive global languages as gateways to better economic prospects and social mobility.

The result is a gradual erosion of linguistic diversity, as younger individuals gravitate towards languages that offer perceived advantages in education and employment. Many indigenous languages, rich in cultural heritage and unique worldviews, are at risk of falling into disuse as their speakers shift to more dominant languages. This trend raises critical questions about identity, cultural preservation, and the future of multilingualism in a rapidly changing world.

Considering these developments, it is imperative to advocate for the protection and revitalization of endangered languages. Efforts must focus on raising awareness of the value of linguistic diversity, implementing educational policies that promote multilingualism, and fostering environments where local languages can thrive alongside global ones. By embracing both local and global linguistic perspectives, society can work towards a more inclusive future that honors its rich cultural heritage while navigating the challenges of an interconnected world.

NEP-2020 emphasizes promoting Indian Languages, Arts, and Culture. The Preservation and Promotion of Indian art, culture, and Languages have been considered a high priority for the Nation. Thus, cultural awareness and expression multiply the importance of the unique Indian essence in individual and social identity.

Teaching and learning of Indian languages need to be integrated within schools and higher education. A well-designed curriculum, Printed texts, and audiovisual/ digital aids in different languages must be equipped for classroom teaching. Translation, editing, printing, and publishing textbooks in local/regional languages is a necessity.

Skilled language teachers are in short supply, and language laboratories are not adequately furnished. A three-language policy that aims to promote multilingualism has created an avenue

for curricular flexibility. Areas such as comparative literature, creative writing, editing, and translation offer ample opportunities to pursue professional careers within higher education institutions.

One of the major obstacles to effective language education in most fields is the scarcity of qualified proficient language teachers and adequately prepared language labs. A lack of qualified teachers hampers the quality of language instruction in schools' efforts to enhance linguistic proficiency and support multilingualism. Students are also denied the advantages of interacting with languages in interactive, experiential settings when these valuable resources are absent—such as state-of-the-art language labs that promote active learning.

In this framework, the tri-lingual policy established by the National Education Policy has created opportunities for greater flexibility in the formulation of curricula. This strategy promotes the acquisition of several languages by students, thereby nurturing a multilingual atmosphere that holds significant importance in a heterogeneous nation such as India. Through the incorporation of regional, national, and international languages within the educational framework, the policy not only champions linguistic diversity but also enhances the depth of cultural comprehension among learners.

This multilingual framework has heightened the profile of comparative literature, creative writing, editing, and translation. Aside from making students more proficient with their language skills, the said disciplines open many professional career opportunities in college and beyond. Experts with degrees from these disciplines can easily find work in academia, publishing, content creation, translation services, and other fields.

Additionally, the fact that they can converse in several languages and cultures places these graduates in a better position than others in the job market of today. They play a significant role in those industries that call for cross-cultural conversation and understanding such as international trade, diplomacy, and cultural exchange programs. By offering a new generation of language-competent individuals, schools can help build a dynamic multilingual

society equipping people to be able to navigate and thrive in an increasingly interdependent world.

Conclusion

In conclusion, despite the ongoing issues of underqualified language educators and limited resources, the tri-lingual framework signifies a meaningful advancement in the improvement of multilingual education. By broadening the curriculum to encompass comparative literature, creative writing, and associated disciplines, we can foster a competent workforce that is prepared to address the needs of a globalized community, thereby guaranteeing the continued growth of language and culture.

Reference:

1. National Education Policy-2020 : Ed. Pankaj Arora & Haneet Gandhi, Shipra Publication, Delhi, 2022.
2. National Education Policy 2020 : Challenges & Solution Dr. Juhi Samarpila & Dr. Monika Utpal, DBMS Trust Publication, Jamshedpur, 2022.
3. National Education Policy 2020. Ministry of education, Government of India.
4. Arimardan K. Tripathi, Language Revitalization: The NEP-2020, Language and Language Teaching (Issue No. 22/07/2022).
5. Census of India. (2011). *Data on language and mother tongue*. Government of India. http://censusindia.gov.in/2011Census/Language_MTs.html.

NAVIGATING CULTURAL IDENTITIES AND TRANSFORMATIONS IN AMITAV GHOSH'S *THE SHADOW LINES*: A POST-COLONIAL PERSPECTIVE

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Abstract: Amitav Ghosh's seminal novel *The Shadow Lines* explores the intricate themes of cultural identity and its transformation steeped in the historical context of the Bengal Partition. The narrative explores the complex interplay between personal and collective identities, both fractured and reconstituted due to the traumatic national upheaval of Partition. Ghosh's portrayal of this transformative period is further complicated by the pervasive influence of contemporary global forces, illustrating the nuanced ways these forces reshape social and cultural landscapes and identities. The novel serves as a poignant exploration of the lingering impacts of colonial legacies and the ongoing redefinition of boundaries—geographical, economic, and psychological. This study uncovers the multifaceted dimensions of identity formation and transformation by analysing the intersections between the historical legacy of Partition and the cultural identities. The paper employs theoretical frameworks from postcolonial studies, drawing on the works of theorists such as Homi Bhabha and Stuart Hall to elucidate the novel's depiction of cultural fluidity.

Keywords: Cultural identity, Bengal Partition, postcolonial theory, globalisation

The Bengal Partition of 1947 stands as one of the most defining moments in South Asian history, marking the bifurcation of British India into the two separate nations of India and Pakistan. The eastern segment of Bengal became East Pakistan, which later achieved independence as Bangladesh in 1971. This seismic event resulted not only in the drawing of arbitrary borders but also in the mass displacement of millions, accompanied by communal violence, profound social upheaval, and the splintering of age-old communities¹.

The profound impact of Partition resonates deeply in Amitav Ghosh's *The Shadow Lines* (1988), as he weaves in a non-linear narrative mode the themes of cultural identity set against the backdrop of the Bengal Partition and the pervasive forces of globalisation. The novel reflects on this communal harmony and its tragic unravelling, showcasing how political decisions based on religious identity led to deep-seated divisions and hostilities. This

disruption is depicted through the narrator's reminiscences of a pre-Partition Calcutta, a city characterised by its vibrant, diverse community life, which was irrevocably altered by 1947.

The Shadow Lines follows an unnamed narrator as he recounts his family's intertwined histories across Calcutta, Dhaka, and London, exploring themes of memory, identity, and nationalism. The characters in *The Shadow Lines* are fragmented and with reconstituted identities, portraying the lingering impacts of historical upheavals and contemporary cultural influences. The narrative reflects the fragmented nature of time and space through the central characters including the narrator's grandmother, Tha'mma who nostalgically longs for her pre-Partition home as well as the narrator's cosmopolitan cousin Tridib. The narrative is heavily influenced by the traumatic events of the Partition of Bengal and subsequent communal riots experienced by the people of the time portrayed through Tridib's

tragic death during the riots, which profoundly impacts the narrator.

The Partition's aftermath saw immense human suffering, with estimates of up to two million deaths and around 15 million people displaced, forced to flee their ancestral homes and seek refuge across new borders (Talbot and Singh, 1). In *The Shadow Lines*, the narrator's family embody the personal and collective trauma of this era, grappling with the profound repercussions of a divided homeland. Ghosh asserts, "The borders had moved, not us: it was the learning of the place that changed, not the place itself" (Ghosh, 151), encapsulates the arbitrary nature of the new boundaries, underscoring the fundamental truth that while political landscapes may shift dramatically, the essence of human experience and place remains constant, creating a jarring disconnect for those caught in the throes of such changes. Keeping in line with this thought, Meenakshi Mukherjee argues that *The Shadow Lines* challenges the arbitrariness of borders and maps, using them as literary tropes to explore spatial and cultural multiplicity beyond normative divisions. She demonstrates how Ghosh critiques the conventional functions of borders by questioning "the organizing principles of division" (Mukherjee, 267).

The Social and Cultural Transformations and Continuity in a Globalised World

The Shadow Lines addresses the intersections between the historical legacy of Partition and the dynamics of globalization, which is evident in the characters' shifting aspirations and lifestyles. The novel portrays the impact of transformations on cultural and social landscapes brought about by globalization and the changes in traditional social structures and cultural practices, highlighting the tensions between old and new ways of life. Ghosh writes, "Things have changed so much, and yet they are still the same; the streets are different, but the air remains the same" (Ghosh, 78). The lines depicted people's interactions with the modern world, highlighting the tension between tradition and modernity. He captures the paradox of transformation—while the external environment changes rapidly, the underlying cultural and social dynamics often remain unchanged. Concerning the same

theme, Ghosh creates the quintessential discourse of rootless histories and selves, hence the quest for 'home', which makes it timeless. For instance, Tha'mma's story reflects the internal conflict of those suddenly alienated from their familiar surroundings, struggling to comprehend and adapt to the newly imposed national identities. Tha'mma's longing to bring her family together asserts the sense of continuing the past or the 'old self' despite the fractured political reality, underscores the emotional and psychological impact of the Partition. The narrator mentions,

I could see that she was thinking of her sister, of that long-lost time when she had dreamed of finding her and bringing her back with her to Calcutta, of restoring her to the place in the family she had left so long ago (Ghosh, 237).

This illustrates Tha'mma's emotional drive longing for a lost home and to reunite her family, underscoring the personal costs of political divisions as vividly portrayed in her memories. The narrator also wrote,

She had dreamt endlessly of the house in Dhaka where she was born; she remembered every detail of its architecture, the slope of its roof, the shape of its windows, and even the placement of the furniture. But she could not remember the faces of the people who lived there with her (Ghosh, 121).

Tha'mma represents the older generation's struggle to reconcile their memories and identities with the post-Partition world to critique nationalism as a source of violence and brutality. Such experiences assert the lingering impacts of colonial legacies and the ongoing redefinition of geographical and psychological boundaries in the postcolonial era which is a central theme of the novel.

Within the same framework, the narrative reflects the fluid and contested nature of identity in a globalized world. The author mentions "The lines that we draw are like shadows; they may shift, but they do not disappear" (Ghosh, 229) underlining the enduring influence of colonial boundaries, which continue to shape identities and experiences.

When Tridib describes how the diasporic communities in London have created a familiar environment reminiscent of home, he says,

London's so full of people from our part of the world now, you can never really feel you're away from home. You know, if you go down to Southall you'll find dhabas and mithai shops and all. You can spend your whole life there without ever having to speak a word of English (Ghosh, 83).

Tridib explores the interplay between historical legacies and contemporary realities, illustrating how identities are constantly negotiated and redefined in the effects of globalization and multiculturalism on identity formation, aligning with Bhabha's concept of hybridity, the merging of cultural identities and the emergence of new. Bhabha writes, "Hybridity is the sign of the productivity of colonial power, its shifting forces and fixities" (Bhabha, 112). Hybridity therefore is a product of the colonial encounter, resulting in the blending of different cultural elements, as evident in *The Shadow Lines*, where characters go through multiple cultural and national contexts, resulting in hybrid identities and experiences of postcolonial subjects. The characters, be it Tha'mma, Tridib, or the narrator, reflect the ongoing struggle to reconcile their fragmented identities. The breakdown of hierarchical cultural identities in the liminal space of borders leads to a new sense of hybridity. The hybridity reshapes the political function of borders, rendering their rigidity a fluid and dynamic phenomenon². It is a deconstruction of nationalism, and its emphasis on personal and collective identities in a globalized world reinforces the idea of a vision beyond national boundaries as a counterpoint to the negative impacts of nationalism.

Personal and Collective Identities in Flux

Ghosh employs traditional realism and invites readers to reconsider accepted notions of reality to approach his portrayal of the Partition's impact on people. The detailed descriptions of Calcutta and Dhaka ground the narrative in a specific historical and geographical reality, especially in the case of Tha'mma. She reveals more profound questions about memory, identity, and the fluid nature of borders as the narrator mentions how she talks of Calcutta:

"Tha'mma always spoke of it as though it were a single entity, a place with a soul, not just a part of a city like any other, but a separate being, a separate country, with a separate identity" (Ghosh, 91). This illustrates Thamma's consideration of Calcutta as a place to be but not of her own—a dual approach that underscores the tension between historical events and their repercussions on people that influence subjective recollections.

Tridib and the narrator's personal histories are also intertwined with broader national and cultural narratives, reflecting the fluid nature of identity. The narrator mentions, "But in those days, and for many years afterwards, people from the two Bengals had not been so different from each other: and it was Tridib who had shown me how slight the difference was" (Ghosh, 70). The narrator clings to memories of his childhood home, stating, "It's an illusion, I know that. But it is one that I cling to because it reminds me of a time when I had something to do with this house and with this city" (Ghosh, 153). Here, the narrator struggles to reconcile their past with their present, highlighting the tenuous nature of identities. His longing for a time when he felt a sense of belonging underscores identity as a fragmented, dynamic and ever-changing construct influenced by historical events and personal experiences.

Furthermore, through Tridib's experiences, whose cosmopolitan outlook and cross-cultural experiences challenge traditional notions of identity. Tridib's stories and his fascination with places he has never visited, like London, showcase how identities are not fixed but are constantly shaped by narratives, memories, and interactions with others. The narrator says, "He had a passion for maps, my uncle Tridib, and he had a deep fascination for the places he had never visited. London was one of these places, as was Venice" (Ghosh, 9). This reflects the fluidity and hybridity of modern identities in a globalized world following Bhabha's notion of the "Third Space" where different cultural identities intersect, creating opportunities for new forms of identity to emerge in a globalized world. Similarly, Anupam Kamal Sen argues that *The Shadow Lines* transcends the conventional modernist notions of borders and nations, creating a transcultural space beyond spatio-temporal constraints (Sen, 1). In this

context, Hall's concept of "identity as a process" is particularly relevant as he emphasizes that cultural identity is dynamic and fluid in nature, constantly shaped by historical and social context, as evident in *The Shadow Lines*, where identities are shaped by their experiences of Partition, globalization, and personal relationships and engagements.

Tridib's relationship with an Englishwoman, May Price, also shows his ability to form deep connections across cultural lines, which is a testament to his hybrid identity, influenced by both Indian and Western cultures. His cosmopolitan outlook allows him to transcend geographical and cultural boundaries, emphasizing the world's interconnectedness by imagining a borderless world (Sen, 3).

Tridib's intellectual pursuit, personal relationships and ability to experience different cultural and economic landscapes illustrate how globalization creates new possibilities and ways of living. Tridib's academic background and his travels to England for his studies represent the economic opportunities that globalisation provides. His ability to move between different worlds signifies the permeability of cultural boundaries and shows how globalization enables individuals to explore and exploit new opportunities, blending various cultural contexts to create unique personal experiences. Similarly, the relationship and shared histories between the narrator and Ila underscore the idea of cultural exchange and the creation of hybrid identities that occur in a globalized world. The narrator's fascination with Ila's life in different countries, particularly her experiences in England, illustrates the blending of cultural identities. Ila's lifestyle, influenced by her time abroad, contrasts with the narrator's traditional background. Ila's cosmopolitan experiences and the narrator's intrigue highlight the merging of different cultural perspectives and the formation of new, hybrid identities.

From a different point of view, Ila's experiences in different countries showcase the economic disparities, opportunities and complexities of living in a globalized world, where economic realities can vary drastically from one place to another. Ila's life in England, where she enjoys a level of freedom and economic privilege unavailable to many in India, contrasts sharply with her experiences in

other countries. Her career and personal choices reflect the opportunities and disparities brought about by globalization. Her ability to experience different economic landscapes reveals the advantages and challenges that present both opportunities for personal advancement and persistent economic inequalities.

Thus, Ghosh profoundly explores cultural hybridization, economic opportunities, and cross-border relationships in a globalized world. Through the characters of Tridib, the narrator and Ila, Ghosh illustrates the complexities and fluidity of modern identities and the complexities of living in an interconnected world shaped by globalization.

The Role of Memory and History

Memory has been used as a narrative device to explore the fluidity of cultural identities and the profound impact of historical events on personal lives in *The Shadow Lines*. Ghosh presents how individual memories are closely tied to larger socio-political narratives by fusing historical events and personal memories, blurring the lines between the political and the personal.

The nonlinear form of the narrative reflects how memory is a fluid and fractured process. Ghosh dissolves chronological and spatial boundaries by weaving together events from many timelines and geographical locations. The interconnectivity of the lives of the characters is reflected emphasising how the past continuously influences the present. From the beginning of the narrative, a rich tapestry of linked identities is created, for instance, by the narrator's recollections of Tridib, Ila, and Tha'mma's stories, which show how individual and collective history intersect and impact one another.

The novel portrays memory as a tool that is dynamic, malleable and evolving for constructing and deconstructing cultural identities, not as a static recollection or just a way to recall the past. For instance, characters such as Tha'mma struggle with recollections of Bengal before the partition in contrast to their daily circumstances in post-Partition India. The memories demonstrate how memories of

common places and cultural customs persist despite political conflicts, signifying the fluidity of cultural identities that cut across rigid national boundaries. This conflict is exemplified by Tha'mma's obsession with her childhood home in Dhaka, where she holds onto a fragmented identity based on a unified Bengal that no longer exists.

Dipesh Chakrabarty, in the essay, "Remembered Villages: Representation of the Hindu Bengali Memories in the Aftermath of the Partition", writes that

...memory is much more than what the mind can remember or what objects can help us document the past. It is also about what we do not always consciously know that we remember until something actually...jogs our memory... in the literature on the Indian Partition of what people do not even wish to remember, the forgetting that comes to our aid in dealing with pain and unpleasantness in life...(Chakrabarty 318)

According to Ghosh however, "Memory is a way of telling you what's important to you, I suppose" (Ghosh, 24), emphasizing the selective nature of memory in constructing one's identity. The narrator recalls how specific triggers bring forth long-forgotten memories, "And there were the days, long afterwards when I would hear something, or read something, and suddenly I would remember..." (Ghosh, 37). This reflects the fragmented and subjective nature of memories, shaped by personal experiences and emotions. Ghosh further explores the transformative power of memory, suggesting that "things remembered" are never as one wishes them to be, illustrating how memories are constantly reshaped by new experiences and perspectives (Ghosh, 56). Vibrant recollections of lost homes, familial ties, and cultural practices emerge as acts of resistance against the identities that nation-states impose. These recollections remind readers of our common humanity that transcends political boundaries and questions the legitimacy of artificial man-made borders. Thus the novel questions the official accounts of history by narrating the individual tales of those impacted by Partition. Thus, by weaving together personal and collective narratives, *The Shadow Lines* intricately represents the ongoing

impact of historical events and global forces on identity formation. It offers a nuanced and multifaceted exploration of cultural identities and transformations in the post-Partition era. It vividly portrays the complexities and contradictions inherent in identity formation, reflecting the fluid and dynamic nature of modern identities. Ghosh's depiction of these themes, viewed through the lens of a post-colonial lens, provides readers with a profound understanding of how historical legacies impact to shape individual and collective identities. The Bengal Partition serves as a poignant backdrop, *The Shadow Lines* captures the profound sense of loss, and disorientation, illustrating how arbitrary political boundaries imposed by colonial authorities, led to deep-seated divisions, communal violence, and the splintering of communities, experienced by those who lived through this tumultuous period, encapsulating the emotional and psychological scars left by the process of Partition.

References

1. Bhabha, H. K. (1994). *The location of culture*. Routledge.
2. Chakrabarty, D. (1995). Remembered villages: Representations of Hindu-Bengali memories in the aftermath of the Partition. *South Asia: Journal of South Asian Studies*, 18(sup001), 109–129. <https://doi.org/10.1080/00856409508723247>
3. Chowdhary, A. (Ed.). (2002). *Amitav Ghosh's The Shadow Lines: Critical essays*. Atlantic Publishers.
4. Ghosh, A. (1988). *The Shadow Lines*. Ravi Dayal Publishers.
5. Hall, S. (1990). *Cultural identity and diaspora*. Lawrence and Wishart.
6. Mukherjee, M. (2008). *Elusive terrain: Cultural and literary memory*. Oxford University Press.
7. Sen, A. (2019). Mapping the border, mapping the nation: Towards an understanding of the other in Amitav Ghosh's *The Shadow Lines* (Master's thesis). Itä-Suomen yliopisto.
8. Talbot, I., & Singh, G. (2009). *The Partition of India*. Cambridge University Press.

ROLE OF ARTIFICIAL INTELLIGENCE IN AGRICULTURE: OPPORTUNITIES AND CHALLENGES

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Abstract: Artificial Intelligence (AI) is a set of technologies that allow computers to perform complex task that seems to require intelligence such as learning, solution oriented and making decision. Consequently, AI has been introduced in various discipline like health and medicine, games, mathematics, finance, military, generative AI and agriculture etc. Ag-sector has been revolutionised by introducing automated system, which is designed to enhance productivity of crops with efficiency and required less-human efforts. Additionally it is going to meet future demands of population and will be instrumental to achieve sustainable development goal. The purpose of this research paper to highlights information about AI and its application, opportunities, and challenges. How farmers can earn more profits and contribute to GDP of an economy. Automated system helps in monitoring soil health, irrigation operations, protecting crops, analysing marketing demand, managing risk.

Keywords-Artificial Intelligence, Lifecycle of Agriculture, Automated system, Machine Learning.

Introduction

The word Agriculture comes from the Latin word ager, means the 'soil' & 'cultura' means 'cultivation'. It can be defined as the cultivation and production of crop plants or livestock products. Agriculture provides food, clothes, shelter, medicine, and leisure, all of which contribute to meeting the basic requirements of people and their civilisation. Consequently, agriculture is the most important enterprise in the world. It is the productive unit where free gifts of nature namely land, light, air, temperature, humidity, and rain are integrated into single primary unit which is absolutely, necessary for human beings. World bank report estimated current population of world is 8.2 billion with its fertility rate is 2.25 and in future demography will be high and so the demand for food and other essentials. The conventional methods which had been practised by farmers and agriculturist were not sufficient to meet these necessities. Thus, in the 1980's new automated strategies were introduced in agriculture sector and Japan was the first country to develop a pesticide-spraying robot.

The use of technology and machines for

instance Robots, Drones, Driverless tractors on farms and Artificial Intelligence improved agricultural operations. Gradually technologies started meeting growing needs of the crop or grain cultivation and additionally furnished potential employment to billions of people. Undoubtedly Artificial Intelligence has brought revolution to Agriculture Sector. AI-powered systems can help Agriculturalist or farmers to monitor and manage their crops with unprecedented precision. Proliferation of AI has concealed the crop yield from different factors like the climate change, population increase, employment troubles and the food safety problems. These technology saves the extra use of water, insecticides, and herbicides, maintains the fertility of the soil, facilitates efficient use of man's strength, raise the productivity, improves the fines and connect scientist with farmers.

Literature Review

Tanha Talaviya ^a, Dhara Shah ^a, Nivedita Patel ^b, Hiteshri Yagnik ^c, Manan Shah: The study

“Implementation of Artificial Intelligence in Agriculture for Optimisation of Irrigation And Application of Pesticides and Herbicides” Agriculture plays a significant role in the economic sector. The traditional methods which were used by the farmers, were not sufficient-enough to fulfil these requirements. Thus, new automated methods were introduced. Artificial Intelligence in agriculture has brought an agriculture revolution. This main concern of this paper is to audit the various applications of Artificial intelligence in agriculture such as for irrigation, weeding, spraying with the help of sensors and other means embedded in robots and drones. These technologies save the excess use of water, pesticides, herbicides, maintains the fertility of the soil, also helps in the efficient use of man power and elevate the productivity and improve the quality.

N. C. Eli-Chukwu 2019: The study “The Application of Artificial Intelligence in Agriculture” The application of Artificial Intelligence (AI) has been evident in the agricultural sector recently. This paper presents a review of the applications of AI in soil management, crop management, weed management and disease management. **Mark Ryan, Gohar Ishakhanyan and Bedir Terkinordogan:** The study “An Interdisciplinary Approach to Artificial Intelligence In Agriculture” Innovations in digital technologies, especially in artificial intelligence (AI), promise substantial benefits to the agricultural sector. AI in the agricultural sector offers the potential to feed a continuously growing global population and still contribute to achieving the UN’s Sustainable Development Goals (SDGs).

Lifecycle of Agriculture-The agricultural cycle is the annual cycle of activities from growth to harvest of a crop. These activities include soil preparation, sowing of seeds, fertilizers, irrigation, protection from weeds, harvesting and storage.

1. Soil Preparation-Preparation of soil is the primary step before growing of crop. It helps to turn the soil and loosen soil allow the seeds to penetrate deep inside the soil and get the nutrients from the soil. The loosening of soil helps the growth of several soil microbes like earthworms and when soil turns, enrich the soil

with humus and others essentials nutrients.

2. Sowing of seeds-At this stage farmers require to take care of the distance between two seeds, depth for planting of seeds and climatic conditions such as temperature, humidity, and rainfall which play an important role.

3. Fertilizers-To grow nutritious and healthy crops farmers need to maintain soil fertility for this they use fertilizers for instance nitrogen, phosphorous and potassium in appropriate ratio that 2:2:1 respectably. These substance use in the agricultural farmland as supplement to naturally found in soil, so that crop can be grown healthy and less damaged.

4. Irrigation-Underwatering or overwatering can hamper the growth of crops and if not done properly it can lead to damaged crops.

5. Protection from weed-Protection from weeds is a important factor as it decreases yields and increases production cost when interfere with harvest, and lower crop quality as well.

6. Harvesting-Harvesting is the joyous activity for the farmers because this process involves gathering of ripe crops from the fields. It’s labour-intensive activity and at this stage also includes some post-harvest activity for example cleaning, sorting, packing, and cooling of crop.

7. Storage of crops-Storing of crops is a crucial operation where farmers store their grain properly. Perennial and non-perennial crop requires storage system accordingly. Storing of grain ensure food security and it also includes packing and transportation of crops.

Application of Artificial Intelligence in Agriculture-In spite of producing enough food to feed the world’s population, around one billion people still suffer from hunger and malnutrition because of food wastage, climate change, and other factors. Moreover, with the global population estimated to reach 9.7 billion by 2050, the pressure is mounting on the agricultural industry to produce more food while using fewer resources and reducing its environmental impact. By analysing data from various sources, AI can help farmers make data-driven decisions, optimize resource usage, and reduce environmental impact. For example, the

World Economic Forum has reported that AI integration in agriculture could bring about a 60% decrease in pesticide usage and a 50% reduction in water usage.

According to research conducted by NASSCOM and McKinsey Artificial Intelligence in agriculture could lead to a \$65 billion opportunity and it can pave the way for a more sustainable, food-secure future and it can also help to achieve Sustainable Development Goal “Zero Hunger”.

Analysing Market Demand-Analysing market demand is a crucial aspect of modern agriculture. A New Mexico-based company named Descartes Labs offers an AI-powered platform to help farmers evaluate market demand. The company develops machine learning algorithms to analyse satellite imagery and weather data, providing valuable insights on optimal planting times and the best crops to grow.

Breeding Seeds- By collecting data on plant growth, artificial intelligence (AI) can help produce crops that are more resistant to weather and disease. Scientists can use AI to find the best-performing plant kinds and crossbreed them to make even more superior hybrids.

Protecting crops- AI can monitor the state of plants to spot and predict diseases, identify and remove weeds, and recommend effective treatment of pests. For example, a precision agriculture startup called Taranis uses computer vision and machine learning to analyse high-resolution images of crops, providing plant insights to identify signs of stress or disease. Their AI-powered technologies can detect and classify diseases and pests with high accuracy.. Additionally, by recommending the best course of action for controlling pests, it might lessen the need for broad-spectrum pesticides, which can kill beneficial insects and cause chemical resistance.

Soil Monitoring-By combining sensors and AI systems, farmers can monitor the water and nutrient content of the soil with precision. Deploying instruments to detect several factors such as temperature, pH levels, nutrient content, and soil moisture might be part of the sensor-based soil

monitoring process. These sensors send information back to AI systems which then analyse it and provide instructions to farmers on how best to manage their crops based on what they find out about the soil conditions.

For instance, the AI system might identify areas of the field where the soil is too dry or too moist and provide recommendations on when and how much water to apply to optimize crop growth.

Managing risk-Farmers may reduce the likelihood of crop failures by using forecasting and predictive analytics. For example, A startup company of India named Intellos Labs that uses artificial intelligence (AI) to help farmers analyse the quality of their produce and reduce food loss. The company develops software application products that use AI and computer vision algorithms to analyse fruits and vegetables and provide insights on quality, ripeness, and size. In addition to identifying flaws and illnesses in crops, these AI technologies allow farmers to take preventative action before the crops are impacted.

Observing crop Maturity-Farmers find it difficult and time-consuming to estimate crop growth and maturity, but AI can complete the work accurately and swiftly. Farmers are able to accurately forecast when crops will achieve ideal maturity by monitoring and tracking crop changes with the use of AI-powered gear, such as sensors and image recognition tools. Because of this increased accuracy, farmers may see significant cost reductions as well as increased profits.

Monitoring Soil Health-Artificial intelligence (AI) systems can accurately estimate nutrients that are deficient and carry out chemical soil analysis. For example -Agrocures, a Dutch Agritech company. One of their products, Nutrient Scanner, collects data from soil samples and provides farmers with accurate estimates of missing nutrients and overall soil status. It helps farmers to adjust their fertilizer application and irrigation practices to ensure optimal crop growth and reduce environmental impact. Additionally, AgroCares Company provides farmers with customized recommendations for soil management, helping

them to maintain the health of their soil in the long term.

Intelligent Spraying-With the help of computer vision, weeding robotics is said to be remarkably precise, resulting in a 90% reduction in pesticide usage. Blue River Technology has disrupted traditional weed control methods with its flagship product, the "See and Spray" machine. The gadget can discriminate between weeds and crops using computer vision and machine learning, then only administer herbicide where necessary.

Chatbots for Farmers-Farmers can use these conversational agents to answer questions about products or services offered, order supplies, and check inventory levels. It is also useful for managing databases of information about crops and soil conditions.

Opportunity of Artificial Intelligence In Agriculture

Global Food Demand-There is little doubt that agricultural techniques are and will continue to change towards an efficient, data-driven business since the world's food consumption is sharply rising. UN estimated of the world population by 2050 is 9.8 billion, and the world food demand is expected to increase by 59% to 98% between 2005 to 2050. This demand is not going to be addressed by tapping more to dwindling water resources, shoving more fertilizers into soil and cutting down more trees to expand farms. Indeed, crop yield around the world is by estimated to be affected adversely by climate change. In order to meet the need for more food, agriculture businesses need to implement technologies that increase productivity in environmentally favourable and sustainable ways.

Availability and Affordability in data collection-The amount of data collected in the agriculture industry has increased dramatically during the last 20 years. Twenty years ago, farmers and producers could not have imagined having access to the massive amounts of granular and comprehensive data that they have access to today. Every year, data gathering systems become more and more accessible and popular due to advancements in IoT technology.

Competitiveness and increasing costs of labour and Materials-Data driven agricultural practices reduces the costs and improves the yield. On corporation level, this is a known upcoming change in agriculture business. The news about every single big name in agribusiness (e.g., Monsanto and Bayers) shows their initiatives in AI, and that they already started programs and budget to reap benefit of AI in agriculture. Though there is minimal practical use of AI tools at the grower/farmer level, this indicates that AI in agriculture is still in its early stages of development.

International and Governmental Initiatives of Artificial Intelligence in Agriculture-Data-driven agriculture projects are receiving attention from an increasing number of governments, non-profits, NGOs, and international organisations. Their initiatives take the shape of grants and funds, facilities, instruction, and—above all—open data and infrastructures for data collecting. Infrastructures for gathering data are very important since they provide the foundation for any significant advancement in AI in agriculture. GODAN and FAO are two successful examples.

Challenges of Artificial Intelligence in Agriculture- Adoption of AI in agriculture industry needs to evaluate the practical barriers that slowed down transformation of this industry compared to some other industry. The landscape of use of technologies in agriculture is rapidly changing, for the projection of future directions, we need to understand where it came from and what the current- status is. There were some fundamental outdare in the way to adopting AI-based technologies in upstream Agriculture sector.

Data Collection

Despite of growth of precision agriculture in the past for more than two decades, there are two main problems that have hindered wide-spread applications of machine learning predictions in the agriculture sector. First, a significant portion of farmers and growers have not adopted utilities of precision-Agriculture. Second, the use of precision-Agriculture

technologies does not mean collecting all critical information using IoT or other mediums for the purpose of prediction. The latter factor could be a breaking point for usability of AI from a technical point of view. Most agricultural activities have some inherent uncertainty because of environmental factors that are not under our control. This means ongoing collaboration around data collection procedures should take place between data scientists with domain knowledge of agriculture on one side, and farmers, growers, agronomists, and consultants on the other side.

Data Ownership and Privacy-Data is owned and accessed by producers, which are farmers, greenhouse managers, breeders, agronomists, etc, but they are not the only one. Encrypting and aggregating are among methods to address issues around intellectual properties while applying AI in agriculture on large scale. There are appropriate non-disclosure agreements (NDAs) and AI techniques to help analyse the data and extract useful insights without dealing with issues around intellectual property of farming data particularly when data has spatial aspect.

Scattered Agriculture Data-Even if data is collected thoroughly, and a farmer could have access to all relevant data from the farm, the data collection among farms is not centralized. That means a collective knowledge derived from AI-based techniques do not fully flourish. For an example we can understand this by comparing agriculture sector to finance sector data collection. However, such a centralized and high-resolution data system does not exist in the agriculture sector. FAO estimated there are 570 million farms around the world. Scientist finds difficult to leverage wealth of data for better yield. There is one way around this problem without hurting privacy laws is to use satellite imagery data. This means computer vision specialists and data scientist can extract useful features (for instance NDVI and NDWI) out of historical satellite data to train their models for the predicting yield, disease, or stresses in farms.

Findings and Analysis

There are many benefits and loopholes in adopting new technologies in Agriculture

sector. This article finds out some of the reasons why farmers want to and don't want to apply Artificial Intelligence technology in Ag sector.

- a. The majority of farmers are unaware of technology and its potential benefits.
- b. There are many farmers who show interest but hesitant in adopting new technologies due to cost and complexity, poor infrastructure like internet and electricity.
- c. The majority of farmers lack in technical skills and knowledge but they are will to learn and adopt technology.

Conclusion

Artificial intelligence is prepared to drive a transformation shift in agriculture, fostering innovation and sustainable development. The agriculture sector is expected to be one of the highest sector upcoming years. Precision agriculture, resource optimization, supply chain enhancement and empowerment of smallholder farmers, AI is about to addressing these challenges that have persisted for generation. As the world's population continues to grow, harnessing the power of AI in agriculture becomes more important than ever before. AI-driven solutions, the agriculture sector can pave the way for a future where food security is assured, resources are conserved, and rural economies thrive.

Reference

1. Kataoka T, Murakami A, Bulanon D M, et al. Estimating Apple Fruit Locations for Manipulation by Apple Harvesting Robot[J]. *Ifac Proceedings Volumes*, 2000, 33(29):67-72
2. Aitkenhead M J, Dalgetty I A, Mullins C E, et al. Weed and crop discrimination using image analysis and artificial intelligence methods[J]. *Computers & Electronics in Agriculture*, 2003, 39(3):157-171.
3. Dr.D.Paul Dhinakaran, "Customers Delight towards Service Excellence in Indian Overseas Bank Chennai" *International Journal of Business Education and Management Studies (IJBEMS)*, ISSN: 2941- 9638, (Vol.3.Issue 1. 2020 (March).
4. Dr. M. Surekha, "A study on utilization and convenient of credit card" *Journal of Positive School Psychology*,

- <http://journalppw.com>, 2022, Vol. 6, No. 4, 5635-5645.
5. Dr. Yabesh Abraham Durairaj Isravel, "Analysis of Ethical Aspects among Bank Employees with Relation to Job Stratification Level" *Eur. Chem. Bull.* 2023, 12(Special Issue 4), 3970-3976.
 6. Dr. Sajan M. George "Stress Management Among Employees in Life Insurance Corporation of India" *Eur. Chem. Bull.* 2023, 12(Special Issue 4), 4031-4045
 7. Dr. Rohit Markan "E-Recruitment: An Exploratory Research Study of Paradigm Shift in Recruitment Process" *Eur. Chem. Bull.* 2023, 12(Special Issue 4), 4005-4013
 8. ARUN, R. "A STUDY ON THE PERFORMANCE OF MAJOR SPICES IN INDIA." *Recent Trends in Arts, Science, Engineering and Technology* (2018): 149 Intellos lab site.
 9. https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=qh0VXFMAAAAJ&citation_for_view=qh0VXFMAAAAJ:f2IySw72cVMC
 10. https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=qh0VXFMAAAAJ&citation_for_view=qh0VXFMAAAAJ:ufrVoPGSRksC
 11. www.google.com

THE ROLE OF PARENTAL INVOLVEMENT IN A DIGITAL AGE EDUCATION

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Abstract: The integration of digital technology into learning structures has transformed the learning culture, creating both strengths and weaknesses in parental involvement. This article delves into the core roles of parents in the learning of children in the backdrop of a digital world. The paper begins with the historical progression of parental involvement, particularly observing the contribution of digital resources to expanding traditional forms of participation. The paper further examines some digital platforms—e.g., learning management systems, communication tools, and educational websites—that facilitate parental involvement. The benefits of involvement are enormous, ranging from a high level of motivation among students to improved home-school relationships and the development of digital literacy skills. However, barriers in the form of the digital divide, a lack of technological skills among parents, and issues of privacy and data protection hinder effective involvement. To remedy these, the paper suggests several modes of parental involvement, training for teachers, better communication tools, and equitable technological access. Based on thorough analysis, this paper emphasizes the need to personalize parental involvement according to the requirements of digital education. The paper concludes by arguing for an integrated model that allows all parents the chance to support their children's learning effectively, thus improving educational performance in a more digitized learning culture. This comprehensive study provides recommendations and suggestions that will encourage significant parental involvement in the digital age.

In the past, parent participation in India has been constrained by socio-economic inequalities and conventional education systems, but digital media—such as the DIKSHA portal, WhatsApp, and domestic ed-tech applications like BYJU'S—have opened up avenues for involvement. The article examines how they allow parents to track progress, interact with teachers, and support learning at home. Benefits accrue through higher student motivation, better digital literacy, and increased home-school interaction, especially in urban and semi-urban communities. These are offset by challenges such as the digital divide—clearly apparent in rural communities where internet penetration is low—low technological competence among parents, and language diversity, among others. The COVID-19 pandemic further brought the challenges to the fore, with parents emerging as key enablers of online learning. Measures to boost participation are government-initiated training schemes, local content in local languages, and collaboration between schools and ed-tech companies. This analysis calls for an adjustment of the role of parents to suit India's heterogeneity of digital learning environment, proposing collective action between parents, teachers, and policymakers to ensure fair access and effective participation. By examining these dynamics, the article offers a blueprint for how to use parental engagement to enhance Indian educational outcomes in the digital age.

Keywords: Parental involvement, Digital education, Educational technology, Parent-teacher communication, Digital literacy, Student achievement.

Introduction-The arrival of the digital age has brought about a profound revolution in learning processes through the enhanced use of digital resources, online learning platforms, and learning software. The revolution has made it easy to implement a personalized learning

strategy, while, at the same time, revolutionizing the roles of the stakeholders, especially those of parents. Parental involvement has, in the past, been one of the cornerstones of academic achievement, as empirical studies have continually associated it

with enhanced learning outcomes, enhanced school enrollment, and enhanced social-emotional development (Epstein, 2018). Parents were, in the past, directly involved in facilitating their children to academic achievement through homework assistance, school activities, and communication with teachers. With the arrival of digital learning, however, these avenues have been opened up to allow parents to be actively involved in the learning processes of their children in new and exciting ways.

Digital technologies, such as learning management systems (LMS), communication tools, and education websites, have enabled parents to track the learning progress of their children, access required materials, and collaborate with teachers more efficiently. This change is most important during crises, like the COVID-19 pandemic, which hastened online learning and illustrated the important role parents have in enabling learning at home. However, this change poses some challenges. The digital divide—unbalanced access to the internet and technology—hinders the participation of some parents, and others might not have the technological savvy to join online spaces. In addition, issues of privacy and balancing face-to-face and digital interactions make it even harder for parents to join in.

The importance of this subject cannot be overemphasized. As education becomes more digital, parents need to adapt to support their children's success in the new landscape. Furthermore, parents have a significant role to play in creating digital literacy, which entails ensuring that their children utilize online platforms critically and safely. This article seeks to examine the complex role of parental engagement in learning in the digital age, its history, the technologies that enable it, its advantages and limitations, and how to further enhance it. By examining these aspects, the article seeks to offer a guide for parents, teachers, and policymakers to work together to harness technology towards learning success. Acceptance and acknowledgment of parental engagement in this aspect is crucial in closing education gaps and actualizing the potential of online learning.

The Indian education sector is in the midst of a

paradigm shift with the adoption of digital technologies, driven by initiatives like Digital India and the National Education Policy 2020. This shift has revolutionized the way parental engagement operates, which has been long identified as the key driver of student outcomes (Epstein, 2018). Indian parents historically contributed to education through homework help and periodic visits to school, frequently limited by socio-economic conditions, literacy, and cultural attitudes that reserve learning for teachers. The advent of digital resources—e-learning platforms, mobile applications, and online communication—has created new channels for participation, allowing parents to become more involved.

The COVID-19 pandemic hastened this process, with schools shutting down and online classes becoming the new normal, pushing parents to become co-educators. DIKSHA and WhatsApp groups became the lifelines for the delivery of education (Ministry of Education, 2023). But this shift exposed glaring inequalities: city parents with smartphone and internet access could participate, while rural parents generally could not. Obstacles such as the digital divide, poor digital capabilities, and India's linguistic complexity—more than 19,500 dialects—make participation difficult (Census of India, 2011). Further, privacy issues and reconciling digital with face-to-face participation are still main concerns.

The Evolution of Parental Involvement in Education—Parental engagement in education has come a long way over the years, influenced by changes in society and technology. In the initial education systems, parents were mostly the ones responsible for educating, transferring knowledge and skills at home. With the development of formal education, their role changed to complementing institutional education through tasks such as monitoring attendance and creating a stable home life. The 20th century also witnessed the institutionalization of parental engagement, with Parent-Teacher Associations (PTAs) promoting partnership between families and schools (National PTA, 2023).

The latter half of the 20th century witnessed increasing acknowledgment of parental involvement, with research correlating

participation with improved academic performance (Epstein, 1987). Socio-economic constraints—poverty, illiteracy, and gender expectations—tended to limit engagement. The age of the digital revolution, heralded by the 2015 Digital India program, brought in tools such as the DIKSHA platform, which allowed parents to access learning material (DIKSHA, 2023). Urban parents started using apps such as BYJU'S to support learning, whereas rural parents used SMS or WhatsApp for messages during the pandemic.

Technology has also made learning more accessible, enabling parents to track their children's learning using online gradebooks and LMS tools such as Canvas or Google Classroom. It has also changed the way people communicate, using emails and Remind apps in place of formal meetings, making it possible for instant updates (Remind, 2023). Sites such as Khan Academy provide parents with means to enable home learning, hence enhancing their status as learning facilitators (Khan Academy, 2023). This change has been notably obvious in the context of the COVID-19 pandemic, with parents serving a fundamental role in online learning by continuously checking online homework and virtual learning sessions.

This change, however, brings complexities. Parents are now being called upon to monitor their children's use of technology, their internet safety, and navigate settings that are unfamiliar to them. Cultural norms also come into play in this change, as the norm for parent engagement differs around the globe. In some areas, schooling remains school-centric, whereas in others, parents are integral to the learning process. This history and technological advancement are needed in order to see how parent roles can be optimized in online learning, finding the right balance between old tasks and new opportunities.

Digital Tools and Platforms for Parental Engagement—The development of the digital era has introduced a multitude of tools and platforms that enhance parental involvement in the learning process. Learning management systems (LMS) such as Google Classroom and Schoology are some of the most significant examples, which enable parents to view assignments, grades, and comments from the

teacher (Google for Education, 2023). These systems offer a peek into classroom activity, thereby making it possible for parents to stay updated and to step in where necessary.

Communication tools also play a significant role. Platforms such as ClassDojo and Bloomz allow instant messaging between parents and teachers, with features such as translation to support multilingual families (ClassDojo, 2023). This instant feedback enhances the working relationship between teachers and parents and provides instant support for students. Parent portals also aggregate school-related information—grades, attendance, and schedules—into one convenient hub, making it easier to engage.

Educational websites and apps further empower parents. Sites such as Duolingo and ABCmouse provide interactive lessons that parents can employ to supplement classroom learning or discover new topics with their children (Duolingo, 2023). Such resources are especially useful for individualizing education. Schools also utilize social media and websites to communicate updates and build community, engaging parents beyond the classroom.

But the success of these tools is dependent on access and usability. Schools need to offer training so parents feel confident using these sites, and action needs to close gaps in access to technology. Through the use of these digital tools, parents can become more engaged in their children's learning, closing the gap between home and school in a digital age.

Benefits of Parental Involvement in Digital Education—Parent participation in online education has many benefits that contribute to improved student performance and better school systems. Increased student motivation is one such benefit. Parents can use online programs to track performance or help with homework, so children tend to feel more aided, and their effort and commitment improve (Henderson & Mapp, 2002). Research indicates that this engagement is linked with better attendance and academic performance.

Digital tools also fortify home-school relationships. Through access to LMS sites or messaging through apps, parents can coordinate support with classroom work, making the

learning process more consistent. This coordination sustains learning and bridges learning beyond school hours. Parents are also able to utilize online tools to supplement children's education, bringing in additional materials that address special interests or requirements.

Another important advantage is the enhancement of digital literacy. Through online learning, parents can assist children in acquiring critical competencies such as assessing information, being safe online, and applying technology appropriately (Common Sense Media, 2023). Such assistance is necessary in equipping students for a world dominated by technology. Furthermore, digital platforms are flexible, allowing busy or remotely located parents to engage at their own pace, thereby expanding the range of participation. In the end, parental involvement in online education enhances its impact, creating a setting in which pupils excel academically and personally by virtue of steady guidance and support.

Challenges and Barriers to Parental Involvement-India's online learning is challenged differently in terms of parental engagement. The digital divide is profound: 67% of urban homes are connected to the internet versus 17% of rural homes (NSO, 2022). Parents in states such as Jharkhand don't have devices, restricting involvement. Schemes such as PM e-VIDYA are meant to correct this, but on-the-ground execution is behind.

Cultural norms pose additional barriers. In patriarchal regions like Uttar Pradesh, mothers—often primary caregivers—lack decision-making power or tech access. Over-reliance on digital tools risks reducing personal teacher-parent interactions, vital in India's community-driven education. Time constraints affect working parents, particularly in informal sectors, underscoring the need for tailored solutions. While it has advantages, parental engagement with digital education is also challenged greatly. The most imminent challenge comes in the form of a digital divide, where numerous households are not even connected to devices or stable internet (Pew Research Center, 2021). This divide disproportionately hurts low-income families, worsening educational disparities and

restricting parental participation.

Poor digital literacy among parents is another barrier. Parents without experience using technology can be unable to utilize LMS systems or learning apps, hampering their ability to help their children effectively. Language differences complicate this further, especially among non-English-speaking populations. Concerns about privacy and security also keep people away, as parents fear breaches of data or their children accessing online dangers (Federal Trade Commission, 2023).

Further, excessive dependency on digital aids erodes human relationships. Although technology aids in communication, it can never equal the importance of one-on-one engagement between students, teachers, and parents. Scheduling demands create an additional level of difficulty to involvement since working parents find it challenging to sustain online needs. These obstacles demand intervention efforts geared towards allowing every parent to actively engage with his/her child's online education.

Strategies for Enhancing Parental Involvement in the Digital Age

Strengthening parental engagement in India necessitates context-specific efforts. Schools might provide digital literacy training sessions, such as experiments conducted in Kerala, educating parents on the practical use of DIKSHA or WhatsApp. Customized content made available in native languages, as NEP 2020 implies, provides availability (Ministry of Education, 2023).

Teachers have to pay utmost importance to good communication. WhatsApp groups and SMS notifications, utilized effectively in Gujarat, alert parents. App-based virtual parent-teacher conferences can overcome city-countryside disparities. Ed-tech companies have to be teamed up with to deliver easy-to-use tools according to Indian specifications.

Policymakers can scale up programs such as PM e-VIDYA, providing devices and enhancing rural internet (Digital India, 2023). Shared access of technology in community

centers, such as in Tamil Nadu, caters to underserved households. Privacy policies have to be robust to establish confidence. Collective initiatives—parent forums or local NGOs—can exchange best practices, creating an inclusive digital education ecosystem.

To break down barriers and ensure maximum parental engagement in digital learning, a number of strategies can be adopted. For parents, digital confidence is essential. Schools can provide tutorials or workshops on how to use LMS systems and learning apps, enabling parents to participate meaningfully. Online tutorials, like video guides, can also facilitate self-directed learning.

Teachers also play a critical role in providing clear instructions and open communication channels. Regular updates via email or apps can keep parents informed, and virtual office hours can offer direct contact opportunities. Platforms must also be user-friendly and accessible, with more than one language supported to cater to diverse families.

The policymakers will have to address structural problems like the digital divide by sponsoring initiatives that provide technology and internet access to historically disadvantaged groups (U.S. Department of Education, 2023). The robust data protection policies are also essential in a bid to alleviate privacy concerns. Cooperative strategies like forums for parents on the internet can also assist in the development of peer support and knowledge exchange. Through these steps, stakeholders can encourage an inclusive online learning environment in which parental participation will thrive.

Conclusion

Parental involvement is still an essential component of student success, despite the changing nature of learning in the digital age. This article has outlined the ways in which parental roles have adapted to involve digital technology, offering new methods of supporting learning. From LMS systems to communication apps, technology has introduced new ways of engaging, with benefits including enhanced motivation, more effective home-school relationships, and improved

digital literacy. However, problems such as the digital divide, absence of technological savvy, and privacy concerns require active responses.

Interventions like training programs, open communication, and policies for equal access can bridge these gaps so that all parents can participate effectively. The COVID-19 pandemic tested the resilience of parental engagement, as families managed to adapt to learning online, but it also exposed inequalities to be addressed. In the future, there must be collaboration among parents, teachers, and policymakers to be able to unleash the possibilities of digital learning in full. As technology increasingly shapes learning, parental involvement will remain a cornerstone of academic success. With the embracing of digital tools and overcoming challenges, parents can empower their children to succeed in a digital world. This article is a call for continued efforts to empower parents, making digital learning accessible to all students in equal proportions and allowing them to overcome challenges in the future.

Parental involvement continues to be at the heart of India's educational success in the digital age. Digital technology such as DIKSHA, WhatsApp, and BYJU'S have enhanced conventional roles by providing advantages such as enhanced motivation and digital proficiency. Yet the digital divide, poor tech abilities, and cultural obstacles—accentuated by the COVID-19 pandemic—accentuate differences which need to be addressed.

Interventions like training, local content, and inclusive access can equip parents from all of India's various regions. NEP 2020 and Digital India offer a roadmap, but action needs to take rural and disadvantaged groups into consideration first. Parents, teachers, and policymakers need to work together to maximize technology's potential, so that all children can gain from it.

As India's education model changes, parents will play a crucial role in filling gaps and equipping students for a digital age. This article urges consistent efforts to equip parents, synchronizing digital learning with India's socio-economic context to promote inclusive

growth and academic success.

References

1. BYJU'S. (2023). *Personalized learning app*. <https://byjus.com/>
2. Census of India. (2011). *Language data*. <https://censusindia.gov.in/2011Census/Language-2011.html>
3. ClassDojo. (2023). *Connect with parents and inspire students*. <https://www.classdojo.com/>
4. Common Sense Media. (2023). *Digital citizenship*. <https://www.commonsensemedia.org/digital-citizenship>
5. DIKSHA. (2023). *Digital infrastructure for knowledge sharing*. <https://diksha.gov.in/>
6. Digital India. (2023). *Power to empower*. <https://digitalindia.gov.in/>
7. Epstein, J. L. (1987). Parent involvement: What research says to administrators. *Education and Urban Society*, 19(2), 119–136. <https://doi.org/10.1177/0013124587019002002>
8. Epstein, J. L. (2018). *School, family, and community partnerships: Preparing educators and improving schools* (2nd ed.). Routledge.
9. Henderson, A. T., & Mapp, K. L. (2002). *A new wave of evidence: The impact of school, family, and community connections on student achievement*. National Center for Family & Community Connections with Schools. <https://www.sedl.org/connections/resources/evidence.pdf>
10. Kumar, K. (2018). *Education and colonialism in India*. Orient Blackswan.
11. Ministry of Education. (2023). *National Education Policy 2020*. https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf
12. National Statistical Office (NSO). (2022). *Household social consumption: Education*. <https://mospi.gov.in/>
13. ClassDojo. (2023). *Connect with parents and inspire students*. <https://www.classdojo.com/>
14. Common Sense Media. (2023). *Digital citizenship*. <https://www.commonsensemedia.org/digital-citizenship>
15. Duolingo. (2023). *Learn a language for free*. <https://www.duolingo.com/>
16. Epstein, J. L. (1987). Parent involvement: What research says to administrators. *Education and Urban Society*, 19(2), 119–136. <https://doi.org/10.1177/0013124587019002002>
17. Epstein, J. L. (2018). *School, family, and community partnerships: Preparing educators and improving schools* (2nd ed.). Routledge.
18. Federal Trade Commission. (2023). *Protecting kids online*. <https://www.ftc.gov/tips-advice/business-center/guidance/protecting-kids-online>
19. Google for Education. (2023). *Google Classroom*. <https://edu.google.com/products/classroom/>
20. Henderson, A. T., & Mapp, K. L. (2002). *A new wave of evidence: The impact of school, family, and community connections on student achievement*. National Center for Family & Community Connections with Schools. <https://www.sedl.org/connections/resources/evidence.pdf>
21. Khan Academy. (2023). *Free online courses, lessons & practice*. <https://www.khanacademy.org/>
22. National PTA. (2023). *Our history*. <https://www.pta.org/home/About-National-Parent-Teacher-Association/Our-History>
23. Pew Research Center. (2021, March 22). *Digital divide persists even as Americans with lower incomes make gains in tech adoption*. <https://www.pewresearch.org/fact-tank/2021/03/22/digital-divide-persists-even-as-americans-with-lower-incomes-make-gains-in-tech-adoption/>
24. Remind. (2023). *School communication software*. <https://www.remind.com/>
25. U.S. Department of Education. (2023). *Digital equity*. <https://www.ed.gov/digital-equity>

GOOD GOVERNANCE OF A GENERAL DEGREE COLLEGE IN WEST BENGAL IN THE PERSPECTIVE OF NAAC ASSESSMENT IN RECENT YEAR

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Abstract: Good Governance has now known as the most important criteria of assessing an institution either in the public or in the private sphere of governance. The present administrative system throughout the world is more or less guided by the concept of good governance. Not only that after accepting the principles of liberal democratic norms in recent times in most of the countries of the world the concept of good governance has now become the order of the day. In order to make any institution openly accessible to the general people the concept of good governance is the only measuring criteria of evaluating the viability of any institution whether it is running in a good manner or in a bad manner. The same process is also applicable in the educational institution especially in the general degree colleges in West Bengal. To have a clear idea of good governance in the educational institutions in West Bengal recently there is mandatory provisions provided by the Director of Public Instruction, Government of West Bengal to accredit each and every college by NAAC, a central agency, which has been deployed to assess the enhancement of quality education in the college. The NAAC has created two types of metrics through which it can evaluate each and every educational institution in West Bengal. These two matrices are known as Quantitative matrices and Qualitative matrices. With the help of these two types of matrices the NAAC assessed the quality and good governance of any educational institution in West Bengal.

Key Words: -Viability, Accredited, Deployed, Metrics, Enhancement, Qualitative, Quantitative, Accessible.

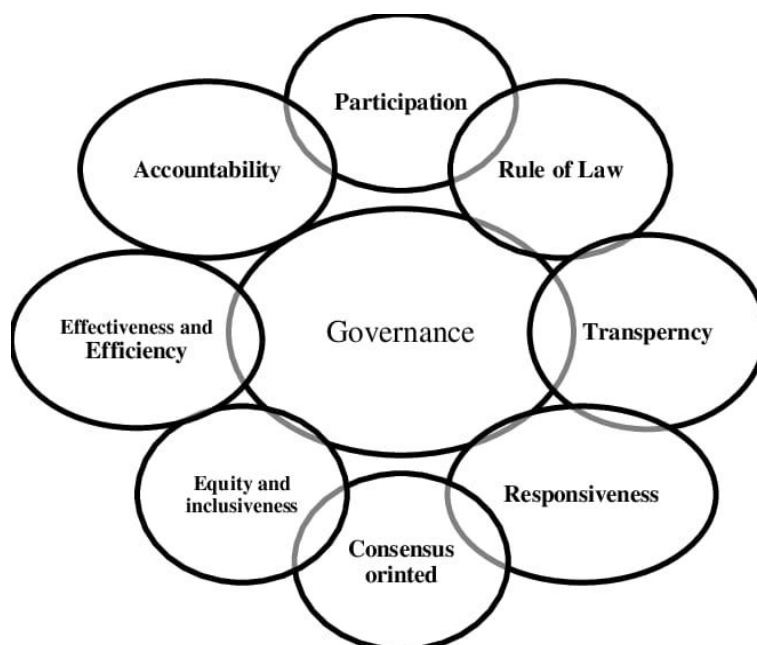
1. Introduction: Epistemologically “Good governance” is a combination of two separate words which generally implies an idea of governing process based on accuracy and has optimum level of fecundity or goodness. Actually, the term ‘good governance’ is a new terminology arising out of the present system of governance in the liberal democratic system of government. The liberal system of government has now prevailed all over the world as a dominant ideology. India is also one of the ardent followers of liberal democratic norms. It is believed that only liberal democracy can ensure individual rights and liberty in its fullest extent. It is a well-known fact that the liberal democratic system of governance is based on the consent of the people. General people are the sole and the most important stakeholder of any democratic system. In fact, the word “democratic” has come from the two

Greek words that are “Demos” means people and “Kratos” means the system of governance or rule. So, in order to make a democratic system of government successful it is very important to make people easily accessible to any governmental activity because only open access of people in any form of governmental activity can make government responsible, liable, accountable to the general public¹. Keeping in view the above mentioned perspectives of good governance an attempt has been made in this paper to examine and analyse the perspective of good governance of a general degree colleges in West Bengal in the perspective of NAAC in recent years with the help of the following sub-themes, like: (1) Concept of Good Governance, (2) governance system of general degree Colleges in West Bengal, (3) Administration of a General degree college in West Bengal, (4) How general

degree college runs in West Bengal, (5) the role of a principal of a general degree college, (6) how the financial affairs maintained in general degree college in West Bengal, (7) the responsibility of the teaching and non-teaching staff of the college, (8) the formation of the IQAC in the general Degree College, (9) why NAAC Assessment is mandatory to each and every college in West Bengal? (10) What are the procedures of accreditation by the NAAC? (11) How the concept of good governance is applicable in the college governance system. (12) Conclusion.

2. Concept of good governance: Good governance is basically attached to the administrative

activities of the government. In every governmental institution the concept of good governance is strictly followed due to make people easily accessible to the governing process, to stop corruption, to make government officials liable and responsible to the people, to make public administration transparent to the general people, and finally the ultimate goal of good governance is to make public administration accountable to the people so that they can comprehend themselves as a part of the governing process. So, good governance is composed of many benchmarks which together constitute the concept of good governance². The following diagram will help to understand clearly what does good governance mean?



- a. **Rule of law:** The first and foremost criterion of good governance is rule of law. Good governance is established only when the rule of law exists. The essence of the rule of law is- (a) All are equal in the eyes of the law, (b) All have access to the law, (c) No disciplinary action is taken against anyone without a hearing. Laws should be specific, clear and simple. The rule of law also requires the just conduct of government, an independent environment free from state coercion, and an impartial and independent judiciary is necessary for establishing the rule of law.
- b. **Transparency:** The second important criterion of good governance is transparency which implies clarity of the administrative activities. There is no

scope of confidential or hidden affairs in the administrative affairs. All governmental activities should be divulged before the public without any hindrances. If the law, policy or decision of the governing system is clear or transparent, it is easily understood by the public; if it does not have multiple meanings or scope for interpretation. Between the ruler and the ruled, there is no room for misunderstanding between the decision-maker and the followers. If policies or decisions are transparent, the way to establish good governance is smooth. But transparency requires accountability and elimination or prevention of corruption.

- c. **Responsiveness:** The third important criterion of good governance is

responsiveness which implies the sound administration or more clearly it means that the administration must have the capability to adopt with the changing environment. Responsiveness principle is where, a government listens to the needs of the people and acts immediately in order to meet their needs and if necessary, adapts its policies and provides necessary services to the needs of the people. In this way government activities remain relevant and effective. It is the essence of the principle of responsiveness that it is attentive and responsive to the will of the public.

- d. **Consensus oriented:** Another criterion of good governance is consensus orientation which implies that the opinion of the majority should be considered and attempts should be made to protect the common interest of the people or community. Consensus oriented governance is based on the common ground for the greater good. Consensus is one way to determine what is in the overall best interest of a diverse society. This approach brings all participants to the same negotiating table and comes up with solutions so that everyone has a stake. Consensus orientation is a mechanism to mitigate the diverse attitude of the people in the society and thereby create a cohesive atmosphere in the society or to pay heed to everybody in the society.
- e. **Equity and Inclusiveness:** Equity and inclusiveness are considered as one of the most important criteria of good governance because it implies an idea of equality and belongingness of all people in the society. A vibrant society improves when every individual feels a sense of belongingness in their society and the ability to shape the environment. Ensuring equity and inclusion is all that is needed to achieve and maintain the welfare of every member of society. Equal opportunities, rights and duties for all in society are not just an ideal but a reality for all. This principle helps each and every member of the society to take part in the day-to-day affairs of the social activities in any sphere of their life,
- f. **Effectiveness and Efficiency:** Effectiveness and efficiency are known as another most important criterion of

good governance. In the world of governance, achieving goals elegantly is all about effectiveness and efficiency. The function of institutions and procedures is to ensure proper utilization of resources to meet needs. This is a two-pronged approach; Effectiveness is achieving goals and efficiency is working to achieve goals as per budget and time. Suppose, government is launching a new public transport scheme if the project results in reduced commuting time, it is worthwhile. And if it operates according to budget and schedule, it is efficient. Efficiency and effectiveness are the skill of doing the best thing reasonably and conveniently.

- g. **Accountability:** Accountability is known to be another important criterion of good governance. The administrative department of a state is indebted to answer to the legal department for the decisions and actions taken by them, its directors also have to be responsible and accountable for the management of the organization within the state. This responsibility has two aspects, (a) political responsibility and (b) administrative responsibility. Political commitment is the promise made by the politicians to get the mandate of the electorate by announcing the election manifesto and to implement it. Likewise, administrators or decision implementers have to be accountable for administrative activities. To ensure accountability increases efficiency in governance, expedites completion of responsibilities, reduces corruption and achieves goals.

The success of democratic government is based on free and fair participation of the general people. Participation refers to the formulation of the policies of the state's governance system and the distribution of responsibility among the people for its implementation. This means opportunities for public participation in political and governance, citizen involvement in policy making, public participation in information, opinion and advisory activities, joint initiatives, joint planning and direct control of the people in the process of implementing state policies and decisions. People's participation in the state system from the grass root level gives momentum to good governance.

2. Governance System Of General Degree College In West Bengal:

The governance system in a general degree college mentions to the outline and procedures through which the college is managed and runs. It includes the structures, policies, and decision-making bodies accountable for ensuring the actual functioning of the institution. The governance system in a general degree college typically includes the following mechanisms:

(a) National Assessment And Accreditation Council (NAAC): National Assessment and Accreditation Council (NAAC) is an independent body established in 1994 by the University Grants Commission (UGC) to assess and accredit institutions of higher education in India. The main objective of NAAC is to improve the quality education of general degree college in West Bengal. It helps to ensure the quality of higher education and encourages a culture of accountability and status of general degree college in West Bengal. NAAC accreditation recognizes the institution's quality in terms of education, research, faculty, infrastructure, etc., as well as gives self-confidence to students that they are selecting a quality institution. It gives instant credibility to an institute and increases its reputation and admissions³. The missions of the NAAC for the higher education institutions as well as the general degree college in West Bengal are –

- Encourage the educational environment for quality education like teaching-learning process and research.
- Promote self-evaluation, accountability, autonomy, and innovations in higher education institution.
- Assume quality-related research studies, consultancy, and training programs for the student in higher education institution.
- Collaborate with other stakeholders of higher education institution.

(b) Governing body: The governing body in a government sponsored/aided college is a very important and superlative body in every college administrative system. We can describe this body as the sole and highest body for decision making of a college. A college governing body is an autonomous body to disseminate direction in the college management system. A college governing body is a group of nominated officials coming two members (One President) from DPI, Government of West Bengal, two from concern University

under which the college is affiliated, three members nominated from Teachers' Council, one member nominated from non-teaching staff, General Secretary (G.S) from the Students' Union and Principal of the concerned college is the ex-officio Secretary of the Governing body. The G.B. is responsible for the strategic direction, in determining educational character, and financial stability of a college. Formation of a governing body in a general degree college are as follows: -

- One president.
- One DPI Nominee.
- One chairman or secretary in college (Principal).
- Two University Nominee (one male and one female).
- Three teaching staff in college
- One non-teaching staff in college
- One student union representative.

(c) Affiliating university: An affiliating university is an institution of higher education that grants formal approval to colleges to operate under its academic framework. These universities typically do not conduct teaching for undergraduate courses but provide oversight, set academic standards, and regulate the affiliated colleges. In this system, colleges are dependent on the university for academic framework and accreditation but manage their internal administration and day-to-day activities.

(d) Director of public instruction (DPI), WEST BENGAL: The Director of Public Instruction (DPI) in West Bengal is a senior government official responsible for overseeing and managing the administration of higher education and general education (excluding technical and vocational education) in the state. The DPI functions under the Department of Higher Education, Government of West Bengal, and plays a crucial and pivotal role in shaping the educational landscape of West Bengal by ensuring that institutions maintain academic standards, provide quality education, and align with the broader goals of the state's education policy.

(e) Higher education council in West Bengal: The Higher Education Council in West Bengal, officially known as the West Bengal State Council of Higher Education (WBSCH), is a statutory body responsible for advising, coordinating, and monitoring higher education in the state. It works under the Department of Higher Education, Government of West Bengal, and

ensures the effective implementation of policies to enhance the quality of education in universities and colleges⁴.

Importance of WBSCHE:

Ensures a cohesive and standardized approach to higher education in West Bengal.

- Addresses the challenges of access, equity, and quality in the higher education sector.
- Acts as a bridge between the state government, academic institutions, and central regulatory bodies like the UGC.

(f) Principal: A Principal in a general degree college is the head of the institution and serves as its chief academic and administrative officer. The principal is responsible for managing the college's day-to-day operations, implementing policies, maintaining academic standards, and fostering a conducive environment for education and research.

(g) Internal quality assessment cell (IQAC): The IQAC (Internal Quality Assurance Cell) in a general degree college is a mechanism established to ensure and enhance the quality of academic and administrative processes within the institution. It is a mandatory body prescribed by the National Assessment and Accreditation Council (NAAC) in India for colleges and universities to maintain and improve institutional standards.

(h) Teachers council: In general degree colleges the 'Teachers' Council' is a statutory body consisting of all the permanent teaching staff of the college. It plays a key role in the academic and administrative functioning of the institution. The Teachers' Council fosters a collaborative environment, enabling faculty members to contribute to the academic excellence and overall development of the college.

Composition:

- Includes all permanent teachers of the college, including professors, associate professors, and assistant professors.
- The Principal or Teacher-in-Charge usually acts as the Chairperson/President of the Council.
- A Secretary is elected or nominated from among the teaching staff to manage its proceedings.

(i) Student union: A Student Union in general degree college is an elected/organized body representing the student community of the college. It serves as a platform for students to voice their opinions, participate in governance, and organize various academic, cultural, and social activities.

Structure of a Student Union:

1. Membership:

- Every enrolled student of the college is typically a member of the Student Union.
- Leadership roles are filled through elections, as per the guidelines of the affiliating university or the college's constitution.

2. Elected Representatives:

- Key positions like President, Vice-President, General Secretary, Assistant General Secretary, Cultural Secretary, and Sports Secretary are often elected.
- In some cases, there may also be departmental representatives or other specific posts, depending on the college's structure.

3. Advisors: Faculty members or the principal often act as advisors or supervisors to ensure proper functioning.

(j) College office: In a general degree college, the College Office serves as the administrative hub, managing the operational, academic, and student-related activities of the institution. It ensures the smooth functioning of various administrative tasks and acts as a liaison between students, faculty, and the college administration.

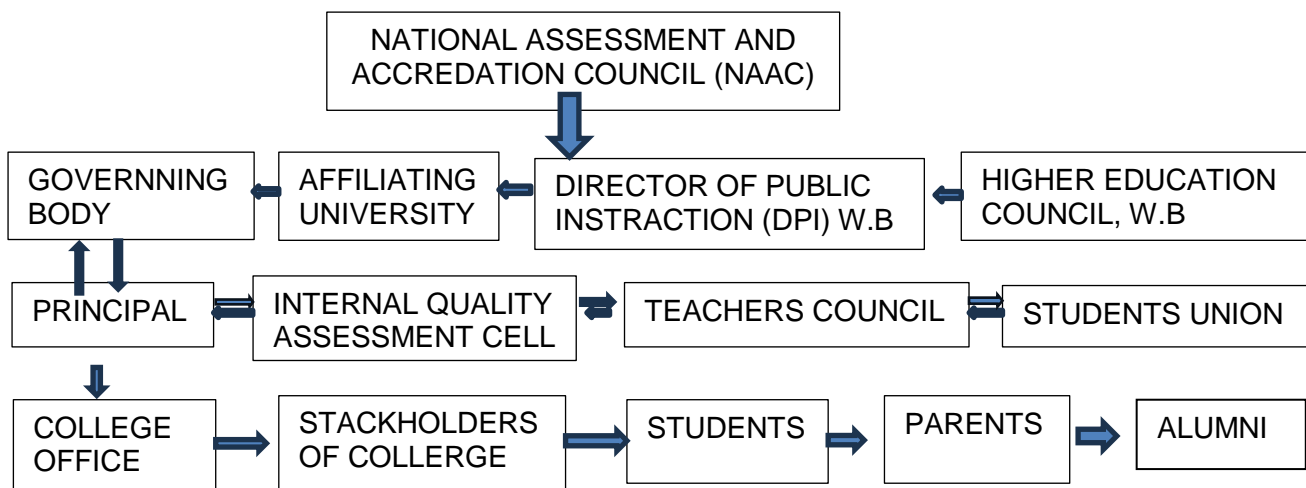
(k) Stakeholders of college: In the context of a general degree college, stakeholders refer to the individuals, groups, or entities that have a direct or indirect interest or involvement in the functioning and development of the college. They play a crucial role in shaping the institution's academic, administrative, and social environment. There are two types of Stakeholders in every institution or college, (a) Primary stakeholders like as Students, Teaching Staff, Non-teaching Staff, Parents and Guardians etc. (b) Secondary stakeholders like as Governing Body, Affiliating University, State Government and Higher Education Department, Alumni, Community and Society, IQAC Body etc.

(l) Students: A general degree college, a student refers to an individual who is formally enrolled in the institution to pursue undergraduate education. These students are engaged in acquiring knowledge, skills, and qualifications in various academic disciplines like Arts, Science, and Commerce.

(m) Parents: Parents refer to the guardians or caregivers of students enrolled in the institution.

They play a significant role in supporting the academic, emotional, and personal development of their wards during their undergraduate studies.

(n) Alumni: Alumni are a former student who have graduated or completed their education from the institution. They are an integral part of the college community and serve as a bridge between the past and present, contributing to the institution’s legacy, reputation, and growth.



3. Administration Bengal: of A General degree college in West Bengal

College administration of General Degree College basically refers to the management structure, which is responsible for the management, control and smooth running of the college. This administration generally works for the academic activities of the students, day-to-day operations of the college and improving the quality of education.

a) **Principal as D.D.O:** The principal’s responsibility is very important in college administration, as he manages and supervises the entire college activities as the chief executive of the institution. The principal's competence, leadership and accountability are key to improving the overall functioning of the college and the quality of education. At the same time principal is functioning as the drawing and disbursing officer of the college. He / She is the sole authority of the financial matter of the college. Not only that he/she along with the president of the governing body are the signatory of bank operation relating to college

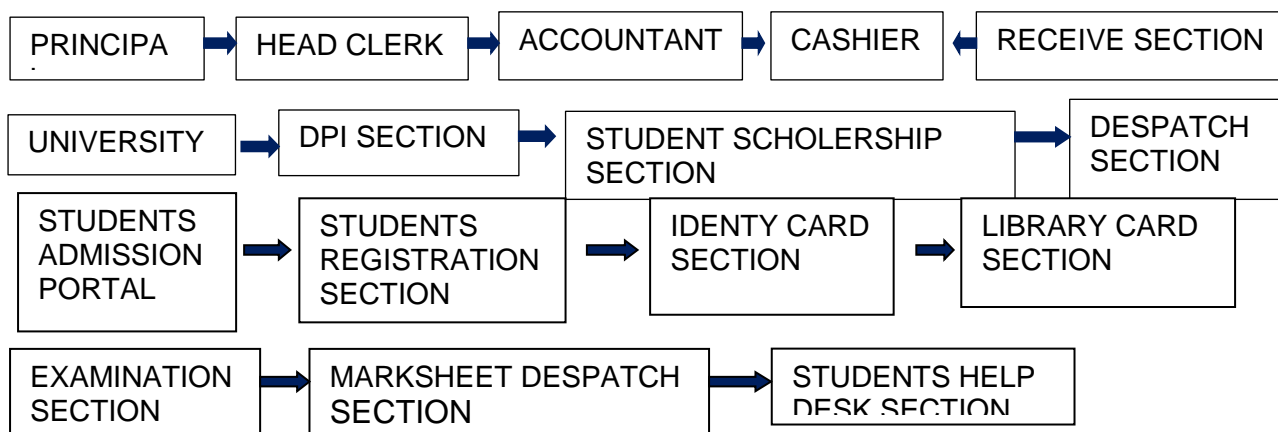
financial matters.

b) **Head clerk:** In a General Degree College, the Head Clerk is an important officer working in the administrative department, who leads the day-to-day administrative and record management activities of the college. He usually works under the direction of the principal and

c) **Accountant:** Accountant in General Degree College generally refers to the officer who manages and supervises the financial activities of the college. He works in accordance with the financial policies of the college and is responsible for the proper management of income and expenditure accounting, budget preparation, fund management, employee salaries, allowances, and other financial activities of the educational institution. This is an important post in a general degree college, as the financial stability and transparency of the college largely

depends on the expertise of this officer.

- d) **CASHIER:** Cashier in General Degree College means the person who is in charge of the financial funds and resources of the college. This is usually a financial position, where the person's main job is to manage the college's finances, preserve funds, and properly conduct financial transactions.



Receive section: The receive section of the General Degree College basically refers to the section or part where documents, applications, letters or any official documents related to the college are received. The receive section may also sometimes be referred to as the college's front desk or records department.

4. How General Degree College Runs In West Bengal:

The general degree college in west Bengal runs with the help of the following administrative and academic department like: (a) UGC (b) DPI, (c) affiliating University, (d) NAAC, (e) higher education council, (f) college Service Commission (CSC) and (g) governing body etc.

- (a) **UGC:** In case of higher education and university education the University Grants Commission is the apex body of the central government. The whole system of higher education in India are under the guidance of UGC. It provides necessary directives from time to time to implement new educational system in the country. The UGC always tries to maintain a global standard of educational system in the country. It makes education sector of the country open to all indigenous and foreign students. It also sees that indigenous students after getting degree of a

recognised university can easily get accesses in the foreign job market. At the same time, it also sees that foreign students can easily get interested to take admission in the Indian Universities. It is mandatory that each and every general degree college in West Bengal should get UGC affiliation U/S 2f and 12b of the UGC norms. In this perspective the University Grants Commission (UGC) plays a significant role in ensuring the quality, governance and overall function of general degree college in West Bengal and throughout India. The UGC affiliation is necessary for the college to receive the financial assistant and grants from the central government

- (b) \and maintain the academic standers. It ensures that the college are affiliated to recognized University and obey with the norms set by the UGC⁴⁵.

- (b) **DPI:** The Directorate of Public Instruction (DPI) in West Bengal plays a pivotal role in the governance, administration, and development of general degree colleges across the state. Acting on behalf of the Government of West Bengal, the DPI oversees and coordinates various academic, administrative, and policy-related functions for these institutions. DPI Plays a role in recruitment, selection, and appointment processes for teaching and non-teaching staff, often in coordination with the West Bengal College Service Commission

(WBCSC). DPI also handles service-related issues such as pay-fixation, promotions, transfers, retirement benefits, and grievances of college staff. DPI Coordinates with central and state-level agencies to implement education-related schemes and policies. At present the NAAC is also associated with DPI, West Bengal and issues necessary instruction from time to time for accreditation of the general degree colleges in the state as early as possible.

(c) Affiliating University: The affiliating university plays a crucial role in the administration, academic regulation, and overall functioning of general degree colleges in West Bengal. Basically it plays a pivotal role on the shaping of academic rule and regulation in general Degree College all over the state. Affiliating University develops the syllabus and ensures uniform implementation across the affiliated colleges and updates curricular to meet modern educational system. It also Conducts semester/year-end examinations and ensures a transparent and timely evaluation process, including moderation and publication of results. The affiliating university is the sole guidance in case academic ambience of the general degree college. From framing syllabus to issue certificate to the students after completion of the respective degree etc. all are maintained and managed by the affiliating university. Not only that the affiliating university is also providing necessary permission for introducing new subjects and P.G courses in the colleges throughout the state.

(d) NAAC: The National Assessment and Accreditation Council (NAAC) plays an important role in enhancing the quality of education in general degree colleges in West Bengal. NAAC assesses and accredits colleges based on their performance in areas such as teaching-learning-evaluation processes, research and innovation, infrastructure augmentation, student support mechanism and alumni, meet with the guardians or parents, students' progression and placement, financial matters and administration, institutional budget allocation and expenditure, welfare schemes or measures for teaching, non-teaching staff of the college, communicate with grievance redressal cell, anti-sexual harassment cell, internal complaint committee, placement cell, anti-ragging cell, examine fire extinguishers and overall governance system of the college. It ensures that colleges adhere to established quality benchmarks. NAAC is also intricately examining the mission, vision and future perspective of the

college. Recently the NAAC has given more emphasis on introducing job-oriented courses and instructed the college to mobilize resources as largely as possible. It also enquires academic audit, green audit, energy audit, environmental audit, rain water harvesting, management of solid waste in the college campus. NAAC is also given excruciating importance on the use of solar energy instead of electricity³.

(e) Higher Education Council: The higher education council is also one of the bodies of the state government to look into the matter of introducing new subjects in the general degree colleges in West Bengal. In case of introducing new subject or discipline in the colleges first step is to forward a prayer to the registrar of the affiliating university and university after proper enquiry and physical verification forwarded it to the higher education council for permanent affiliation. University can give only temporary affiliation of introducing a new subject but higher education council provides permanent affiliation of that new introducing subject in the general degree college in West Bengal. Apart from this the higher education council has also the authority to create teaching post as per the requirement and ratio of the students of the college. So new teaching post creation is done by the higher education council, government of West Bengal.

(f) CSC: The College Service Commission (CSC) is one of the most vital bodies of West Bengal government so far as the higher education selection and recruitment system is concerned. It looks after the recruitment process of teaching and non-teaching staff in government aided colleges in West Bengal. The CSC is conducting State Eligibility Test (SET) every year for selecting/recruiting Assistant Professor in colleges. It also conducts the recruitment process for principals, librarians in general degree college in West Bengal. The CSC is the sole authority of selecting or recruiting the teaching post of the general degree college. First of all, it conducts SET examination and qualify candidates appear for interview and as per the requirement of the college or the vacancy list prepare panel for Assistant Professor of different subjects and send the recommendation to the respective colleges for appointment. The principal's recruitment process is also done by the college service commission and the post of Assistant librarian is also recruited by the CSC.

(g) Governing Body: The Governing Body (GB) is the apex decision-making administrative authority in a general degree college in West Bengal. It plays a vital role in ensuring the

effective functioning, development, and governance of the college. The main function of the Governing Body (GB) in a college in West Bengal is to oversee and manage the overall administration, academic growth, and financial well-being of the college. It ensures that the college operates efficiently while adhering to the regulations set by the affiliating university, the state government, and the University Grants Commission (UGC) etc. the governing body is the superlative body in the day-to-day functioning of the college governance. The governing body takes resolution in its meeting held frequently and principal of the college is the executive officer to implement all such decisions taken by the governing body from time to time.

5. The role of a principal of a general degree college: The principal is the king-pin and chief academic authority of the institution and that's why he is the first responsible person of the college. As the academic leader, he has to oversee that the institution is running properly according to its vision, mission and goals. He is a source of inspiration to the teaching and non-teaching staff as well as to the students of the college. He should be an embodiment of professionalism, dedication and honesty. He is a highly knowledgeable person in educational system as well as in the college. He is the first among equals. He is a multi-faceted genius so far as the educational system is concerned. He is the rising moon among the numerous stars. From these perspectives the position of the principal in a general degree college can easily be estimable. The responsibilities and duties that the principal has to perform diligently while managing the administration of a college are mentioned below.

(1) Monitoring function, (2) Development function, (3) Leadership function and (4) Visionary function⁶.

(1) Monitoring function: Monitoring function and responsibilities is one of the most important responsibilities of Principal in general degree college or any other academic institution. The regulatory and monitoring activities and functions of a college principal are very important for the smooth running of the activities of the educational institution and ensuring a better learning environment. The monitoring functions and responsibilities of the principal are generally as follows:

(a) Administrative monitoring function and responsibility:

- Formulating and implementing policies for the smooth running of the overall activities of the college.
- Monitor faculty, staff, and student activities.
- To monitor the work progress of various departments or units of the college.
- To supervise the financial management of the college.

(b) Educational responsibility:

- Ensuring quality of education and formulation of academic calendar.
- Maintaining proper relationship between teacher and students.
- To supervise the proper implementation of the syllabus and examination conduct activities.

(c) Maintain discipline:

- To maintain a disciplined environment for students.
- To ensure the behavioural discipline of teachers and students.
- Taking quick action to solve problems.

(d) representational responsibility:

- Maintaining contact with various government and private institutions on behalf of the college.
- To support the society and the government for the development and reputation of the college.

(e) Personal responsibility:

- Demonstrate integrity, ethics and responsible behaviour.
- To create motivation and enthusiasm among teachers, staff and students.

(2) Development function: The development functions of a general degree college in West Bengal or any comparable higher education institution revolve around academic, infrastructural, administrative, and community development to ensure quality education and holistic growth of this institution. The Key functions are include-

(a) Academic Development: Curriculum Implementation: Ensure effective delivery of undergraduate programs in alignment with the curriculum set by affiliating universities.

- **Skill Development:** Introduce career-oriented and skill-enhancement programs like as soft skills, IT, or vocational training.

- **Research Promotion:** Encourage research activities among faculty and students by providing research facilities, funding opportunities, and create enthusiasm for research among the faculty members of his or her institution.
- **Quality Assurance:** Ensure quality education through regular assessments, feedback mechanisms, and accreditation from bodies like NAAC (National Assessment and Accreditation Council).
- **Workshops and Seminars:** Organize academic events for knowledge enhancement and exposure like seminars, workshops etc.

(b) Infrastructure Development:

- **Resource Mobilization:** Securing grants and funding from UGC, RUSA, State Government, or other agencies for infrastructure development.
- **Campus Development:** Planning and supervising the development of classrooms, laboratories, libraries, IT facilities, and other infrastructure.
- **Green Initiatives:** Promoting eco-friendly practices like rainwater harvesting, solar panels, and waste management.

(c) Administrative Development:

- **Policy Implementation:** Execute policies laid down by the Higher Education Department of West Bengal and the affiliating university.
- **Effective Governance:** Coordinate between various stakeholders, including faculty, non-teaching staff, students, and the governing body, to ensure smooth functioning.
- **Grievance Redressal:** Address grievances of students, staff, and faculty through effective mechanisms.

(d) Community Development: The community development function of a college principal in a general degree college in West Bengal involves building strong connections with the local community and fostering the college's role as a catalyst for social and cultural growth. These functions align with the broader goals of higher education to promote social responsibility and contribute to the community's well-being. Various programs are conducted by the college like as community-centric initiative through the college's NSS, literacy program, public health program, environmental protection program, gender equality program, social justice program

and various outreach programmes etc.

3. Leadership Function: In a general degree college in West Bengal (or elsewhere in India), leadership functions are distributed among various roles and individuals to ensure smooth functioning of the institution. Here are the key leadership functions typically observed:

- **Administrative Leader:** Acts as the chief executive officer of the college and is responsible for overall administration.
- **Academic Leader:** Oversees curriculum implementation, research initiatives, and academic standards.
- **Policy Implementation:** Ensures compliance with regulations from bodies like UGC, affiliating universities, and the Department of Higher Education, West Bengal.
- **Liaison Role:** Acts as a bridge between the college, university, government bodies, and stakeholders.
- **Strategic Leadership:** Determines policies, approves budgets, and makes long-term plans.
- **Oversight Role:** Monitors the functioning of the college and ensures adherence to its mission and vision.
- **Subject Leadership:** Manages departmental activities, faculty, and resources.
- **Operational Leadership:** Manages day-to-day tasks such as admissions, examinations, and infrastructure maintenance.

(4) Visionary function: The principal of a general degree college in West Bengal performs several visionary functions to ensure the institution's long-term success and alignment with societal, academic, and cultural needs. These functions focus on driving innovation, fostering growth, and maintaining relevance in the rapidly evolving educational landscape.

- **Long-term Vision:** Develops a roadmap for the college's growth, including infrastructure, academics, and cultural expansion.
- **Goal Setting:** Defines specific objectives for improving academic standards, research output, and student employability.
- **Resource Mobilization:** Plans for optimal use of financial, human, and

infrastructural resources to achieve the vision.

- **Curriculum Development:** Advocates for innovative and interdisciplinary programs in collaboration with the affiliating university.
- **Promoting Research and Innovation:** Encourages research activities, collaboration with industries, and the integration of technology in teaching.
- **Global Perspective:** Introduces initiatives to make students globally competent while maintaining local cultural relevance.
- **Placement and Career Support:** Establishes strong industry connections and career counselling cells to enhance employability.
- **Inclusion and Equity:** Ensures equal opportunities for students from all backgrounds, including SC/ST/OBC and economically weaker sections.
- **Modern Facilities:** Envisions state-of-the-art classrooms, laboratories, libraries, and digital infrastructure.
- **Sustainability Practices:** Promotes eco-friendly initiatives like green campuses, energy efficiency, and waste management.
- **E-Learning Initiatives:** Encourages the adoption of online learning platforms and hybrid teaching models.
- **Automation:** Oversees the implementation of digital solutions for administration, academics, and communication.
- **Preparedness for Change:** Anticipates future challenges, including societal, technological, and environmental changes, and adapts policies accordingly.

6. How the Financial Affairs Maintained in General Degree College in West Bengal: The financial affairs of a general degree college are maintained generally in two ways that is the credit side and the debt side. So far as the credit side of the college fund is concerned it is found that the college received different grants like pay packets grant from the government of West Bengal, fund received from MLA, M.P. and other sources, fund received from some local authorities like gram panchayet, panchayet Samity, Zilla parishad,

sometimes fund also received from local District Magistrate office, SDO office, sometimes benevolent person or association also donated fund for different development purposes. Apart from these funds also received from the students as development fees etc. sometimes college also mobilised resources from introducing different short-term courses and DPI also releases grants from time to time for various developmental purposes. Some other funding agencies like RUSA, NBDD, UGC etc. also provide fund to the general degree college for various

So far as the debt side of the general degree college in West Bengal is concern it refers to the left-hand side of an account which records increases in assets and expenses or liabilities. The debt side of a college primarily records all expenses incurred in the normal course of its operations. Debt side may be included like as salaries for teaching and non-teaching staff, purchase of fixed assets like furniture, computers and vehicles, construction of college buildings and infrastructure, utility expenses e.g., electricity, water, internet, library and laboratory expenses e.g., books and chemicals, debt to extracurricular activities like sports and cultural programme, examination expenses like semester exam, college yearly exam, college internal exam, repairs and maintenance expense like college building and others infrastructure. This financial matter is properly maintained with the audit system sent by AG Bengal every after 5 years of each and every college in West Bengal⁷. In order to maintain clarity of accounts and expenditure in different heads the college may depute chartered accountant for yearly audit which is regarded as the most important practices of a college?

7. THE RESPONSIBILITY OF THE TEACHING AND NON-TEACHING STAFF OF THE COLLEGE: The roles of a faculty member at a general degree institution in West Bengal include both academic and administrative responsibilities, as well as extracurricular activities. Most of their work falls under one of these categories⁸:

- 1. Responsibilities in a College Environment:**
- **Tutoring and teaching:** delivering lectures, tutorials, and seminars on a variety of topics in keeping with the course structure of the associated institution.
 - **Creating and modifying course syllabi to align with the academic framework:**

Providing the help in developing the curriculum, create exams, grade answers, and give out quizzes and other kinds of self evaluation as part of student assessment.

Mentoring and advice programs aim to assist those who need assistance with areas such as academics, professions, and remedial training.

- **Research Activities:** working on research projects alone or as part of a team, producing academic publications, and teaching research to students at all levels (undergraduate and graduate). Teachers might potentially advance their knowledge and expertise by taking advantage of professional development opportunities including seminars, workshops, and conferences.

2. Administrative Responsibilities:

- Exam duties, including participating as moderators, examiners, invigilators, and scrutinisers at colleges and universities.
- Active participation in various committees, including those handling admissions, disciplinary issues, cultural events, and the Internal Quality Assurance Cell (IQAC). Academic administration might include assisting with the creation of academic timetables and calendars as well as the maintenance of academic records.
- One example would be providing a hand with the necessary documentation and presentation for NAAC certification and any associated quality assessments.

3. Programs and Events Off-Campus:

- Extracurricular Cultural and Sports Activities: assisting and supervising students in their participation in cultural events, sports, and debates.

The National Service Scheme (NSS), the National Cadet Corps (NCC), and participating in community service projects are all instances of social outreach programs. We offer certification programs, seminars, and soft skill training to assist students become more employable and to help them improve as individuals.

4. Climbing the Corporate Ladder:

- Seminars, refresher courses, and faculty development programs (FDPs) are some of the continuing education options available to faculty members so that they may remain current in their professions.
- Partnerships with other organizations or College to combine forces and resources are one example of collaboration.
- Professional Ethics: Being honest at all times, following all rules and regulations, and being a positive role model for students.

5. Promoting the Institution:

- Managing resources include assisting with the management of instructional materials such as lab and library books.
- Putting Input into Practice: Striving for ongoing improvement in institutional governance and pedagogical methods via the use of student and peer feedback.

The West Bengal College Service Commission (WBCSC) and the associated universities in West Bengal have requested these responsibilities. Members of the faculty in these roles are required to support the advancement of the institution and adhere to university laws.

The non-teaching staffs of West Bengal's general degree institutions are vital to the efficiency of the institution. They are overseen by the college president and governing board, whose oversight is ensured by the institution's operational and administrative framework. Administrative tasks, technological matters, and providing assistance are their primary areas of responsibility. To sum up, these are the main things they are responsible for⁹.

1. Managing the day-to-day operations of the office, including communication, recordkeeping, and filing.

- Handling various administrative tasks such as managing admissions, maintaining student data, and generating reports for other entities. Migration, transfer, and bona fide credentials are among the many that students may get.
- Keeping tabs on money coming in and going out of the institution, as well as keeping track of accounts and budgets, is the responsibility of the accounting and finance department. The distribution of pensions, scholarships, and

reimbursements is something that needs constant monitoring.

- Maintaining records of grants, financial assets, and audits.

2. Examination Support:

- Assisting with pre- and post-test processes, such as registration, issuing hall tickets, and guaranteeing the safekeeping of examination materials.
- Managing the catalogue, circulating resources, and retrieving books are all examples of the technical parts of library work. Making sure the library has enough books and helping students and instructors find what they need are two of my responsibilities.
- Supervising the library's electronic resources and ensuring that it is well-organized and operates efficiently. During practical sessions, it is crucial for laboratory technicians to prepare and maintain equipment while ensuring it complies with safety criteria.
- Assist instructors and students as they carry out laboratory activities. The timely procurement of items and the management of consumable stock levels are overseen.
- Advocating for digital transformation efforts, such as the administration of online admissions systems and student information databases. • Supervising the upkeep of various pieces of IT equipment, including computers, projectors, and more.

3. Assisting Students:

- Administrative Support: Student concerns about administrative matters will be addressed. A helping hand with student administration tasks such as admissions.
Help for Everyone: Organizing events, gatherings, and cultural projects on campus.
- Efficiently directing complaints to the appropriate parties to help resolve them.

4. Maintenance and Security:

- The obligation of maintaining a clean and well-maintained campus extends to all locations, including classrooms,

laboratories, and offices. Maintaining the building's infrastructure includes overseeing repairs to the plumbing, electrical systems, and furniture.

- Security and Safety: • Keeping an eye on the campus's entrance points to ensure everyone's safety.
- Maintaining order and safety on college property at all times.
- Keeping an eye on procedures for fire prevention and disaster management.

5. Assisting institutions with assessments and certification:

- Documentation is the key to quality assurance systems like UGC assessments and NAAC certification.
- Collaboration: • Arranging and carrying out educational events including seminars and lectures in close coordination with teachers. Taking part in courses to improve skills in accordance with company goals.

6. Behaving in a Professional and Ethical Manner:

- Looking professional at all times, protecting the confidentiality of information, and obeying all rules and regulations of the institution.
- Fostering an upbeat and cooperative work environment inside the company.

8. THE FORMATION OF THE IQAC IN THE GENERAL DEGREE COLLEGE:

An essential part of Indian higher education institutions is the Internal Quality Assurance Cell, or IQAC. It was established in accordance with guidelines supplied by the National Assessment and Accreditation Council (NAAC). The IQAC's primary goal is to ensure continuous improvement in the general quality of the institution's administrative and academic procedures¹⁰.

IQAC's objectives are to: 1) Create a framework to improve administrative and academic efficacy. 2) promote the growth of innovative methods in instruction, learning procedures, and institution operations. 3) Encourage an atmosphere that values openness and responsibility. 4) Document quality improvement initiatives and outcomes in detail.

How to Create an IQAC at a West Bengali General Degree College:

The Governing Body or the college's top decision-making body must be consulted before the request to create the IQAC is approved. The IQAC should ideally consist of 8–12 members to ensure that a range of organizations are represented.

Method of Development:

- The institution's head: The IQAC Chairperson is the college.
- Key Players: The group includes seasoned instructors, support staff, alumni, student reps, and other interested persons.
- External Members: It is urged that members of the local community, business leaders, and other specialists be included.

The following should be the overview of the IQAC's structure:

- Chairperson: The institution's head
- The Coordinator of the IQAC is a senior educator.
- Teachers from three to eight levels, representing all ranks (Assistant and Associate Professors)
- 4. A management representative
- The office manager or Superintendent, who are the top administrative official.
- One nomination each from the students, alumni, and local society.
- One candidate chosen by stakeholders, employers.

9. Why NAAC assessment is mandatory to each and every college in West Bengal?

The National Assessment and Accreditation Council (NAAC) is a legal requirement for all general degree-granting colleges in India, including West Bengal¹¹. These are the most essential and vital reasons for its importance and necessity:

- **Quality Assurance:** In order to ensure that colleges in West Bengal offering general degrees are up to par, NAAC conducts assessments of these institutions. It gives up a systematic framework for monitoring, assessing, and improving academic, administrative, and institutional processes to make sure that students get a great education and

may achieve their maximum potential. Included in this are standards for administration, instruction, research, and student support services. In this way, we know that our students are receiving high-quality education. Internally, it encourages more innovative approaches to problems and more efficient operations.

2. Adhering to UGC Guidelines: In order to guarantee quality and enhance accountability in education, the University Grants Commission (UGC) mandates that all institutions pursue NAAC accreditation.

3. Institutional Eligibility for Funding: Individuals who fulfil certain requirements are eligible to receive grants and other types of financial help from programs administered by the federal and state governments, such as Rashtriya Uchchatar Shiksha Abhiyan (RUSA). Colleges run the danger of being unable to get essential funds unless they are certified by NAAC.

4. Establishing Trust and Reputation: A school with NAAC accreditation is more credible and well-respected, which in turn brings in more students, faculty, and partners. The school's rating may help parents and students make educated decisions.

5. Policy Requirement in West Bengal: Supporting NAAC accreditation is a priority for the West Bengal Higher Education Department, which aims to raise the bar for higher education in the state and guarantee that it meets all applicable national and international standards. One policy that is tied to the college's NAAC score is the Career Advancement Scheme (CAS), which is a program that promotes teachers.

6. Continuous Improvement: Institutions are evaluated every five years by NAAC to make sure they are enhancing their academic and administrative operations.

7. Benefits for pupils are immediate. Scholarships, placement assistance, and skill development seminars are just some of the benefits offered by accredited colleges and universities.

- **What Are The Procedures Of**

Accreditation By The NAAC?

- For the certification of higher education institutions (HEIs) in India, the National Assessment and Accreditation Council (NAAC) employ a methodical process. The procedure is meant to evaluate general institutional performance, infrastructure, government, and quality of education. The NAAC certification process is set out here in exact detail³.
- **Institutional Eligibility:** The general degree college or any other institution has been in operation for at least six years. At least two groups of graduates abound from it. It is linked to or acknowledged by a statutory organization such as UGC, AICTE.
- **Registration:** The college has to register on the NAAC site and generate a login ID.
- Institutional Data for Evaluation of Quality (IIQA):** The institution turns in the IIQA along with some basic information about its founding, operations, student count, and governance. Reviewing the IIQA, NAAC certifies candidacy for the next level.
- **Self-Study Report (SSR) Submission:** The institution turns in a thorough Self-Study Report (SSR) online within 45 days following IIQA approval. The SSR comprises two varieties. i.e., (a) Quantitative Metrics: Data-driven responses uploaded with supporting documents. (b) Qualitative Metrics: Descriptive responses explaining institutional processes, practices, and outcomes.
- **Data Validation and Verification (DVV):** NAAC contracts a third-party DVV partner to confirm the correctness of the quantitative data entered into the SSR. Any clarifications asked by institutions have to be answered throughout the DVV process.
- **Student Satisfaction Survey (SSS):** The purpose of the Student Satisfaction Survey (SSS) is to get comments about the teaching-learning approach and student support. To guarantee fair answers, NAAC emails a sample of students directly.
- **Peer Team Visit:** For on-site

assessment, NAAC assigns a team of professionals. Usually two to three days, the Peer Team visits any general degree college or institution. During the visit the Peer Team examines qualitative elements discussed in the SSR. They deal with management, professors, students, alumni, and other stakeholders. The team looks into buildings, infrastructure, and teaching-learning

- Based on the SSR, DVV, SSS, and Peer Team review, NAAC computes a Cumulative mark Point Average (CGPA) and awards a mark like A++ (best) to C (lowest), or "Not Accredited" should standards fall short. The NAAC website hosts the outcome, which is then shared with the university.

The validity of accreditation is five years. Institutions are urged to concentrate on areas of development and reapply for accreditation before the term runs out. Usually taking six to twelve months, the whole process— from IIQA application to accreditation took.

11. How the concept of good governance is applicable in the college governance system:

The concept of good governance is a conglomeration of various parameters through which it can be measured that whether an institution especially an educational institution is run by the concept of good governance or not. The aforesaid analysis on a general degree college in west Bengal attempts to highlight the different aspect of governance in a very intricate manner¹². The main purpose of this analysis is to find out whether these educational institutions are following the principles of good governance in its fullest extent or not. The concept of good governance encompasses a diverse set of parameters that collectively assess whether an institution, particularly an educational one, follows to principles that ensure effective management and ethical conduct. Using a general degree college in West Bengal as a case study, this research aims to conduct a comprehensive evaluation of many aspects of governance. The level of commitment these institutions have to effective leadership is of primary importance to us.

1. Accountability and Transparency:

Maintaining clear, accessible, and well-documented decision-making processes is an important part of being accountable. It calls for

openness in all monetary matters, academic regulations, and administrative procedures. Accountability is a crucial part of transparency because it guarantees that administrators and decision-makers act in a way that benefits the organization and its community. It makes them pay for what they've done.

2. Inclusive Policy Formulation: This method ensures that all perspectives, including those of students, instructors, and community members, are included while policies are being developed. This fosters an inclusive and equitable environment where the voices of all individuals are valued. The legitimacy of institutional decisions is enhanced, and a cooperative and consensus-building culture is fostered.

3. The effectiveness of methods for making decisions: Good governance requires decision-making processes that are timely, informed by data and stakeholders, and consistent with the purpose and long-term goals of the organization. After giving it some thought, you may make judgments that are more efficient, less risky, and better able to adapt to changing social and educational needs.

The bedrock of good leadership is honesty and conformity to ethical standards. Upholding academic freedom, promoting equal hiring and promotion processes, avoiding conflicts of interest, and acting with integrity in all transactions are all components of it. Institutions of higher learning have a moral obligation to attend to the needs of its constituents, including students, faculty, staff, alumni, and the general public, by upholding a reputation for honesty and fair play. To do this, one must listen carefully, speak their minds honestly, and act quickly and decisively when faced with challenges. The purpose of responsive governance is to keep the institution accountable to its members and ensure that it remains relevant¹³.

Within the context of West Bengal's general degree college, this research will investigate these features in order to provide a comprehensive evaluation. By carefully examining these areas, one may ascertain the institution's commitment to the principles of effective leadership in educational environments: transparency, responsibility, inclusiveness, and responsiveness.

Thus, the study's overarching goal is to provide light, via this thorough examination, on whether or not the educational institution in issue completely follows the principles of good

governance. This will make it easy to make well-informed judgments and adjustments as required.

12. CONCLUSION:

- a. Good Governance is essential for enhancing the performance and efficiency of general degree institutions in West Bengal, especially concerning the National Assessment and Accreditation Council (NAAC) review. The principles of effective governance strengthen institutional legitimacy and profoundly impact the quality of education provided.
- b. Quality assurance processes are vital for effective governance. Colleges may systematically improve educational quality by establishing Internal Quality Assurance Cells (IQACs) to ensure adherence to NAAC's evaluation standards. This positive quality management strategy displays a commitment to academic excellence, essential during accreditation assessments.
- c. Transparency and accountability are fundamental elements of effective governance. Institutions that emphasize transparent communication on regulations, financial oversight, and academic criteria create trust among students and educators. This transparency is essential for addressing challenges and issues, hence fostering a more engaged and satisfied student population.
- d. Involving stakeholders, such as students, academics, alumni, and community members, is crucial for effective governance in decision-making processes. The inclusion guarantees alignment between the college's objectives and the community's needs and aspirations, a criterion acknowledged by NAAC in its evaluations. Engaging stakeholders improves institutional responsiveness and adaptability.
- e. Effective resource management is essential for institutions that efficiently allocate financial and physical resources are more capable of addressing educational needs and enhancing service delivery. NAAC assessments recognize colleges that exhibit effective resource management, since this significantly influences the quality of educational programs.
- f. Furthermore, obedience with regulatory criteria displays proficient governance. Colleges that adhere to NAAC standards improve their probabilities of favourable assessments and cultivate a culture of excellence inside the institution. Regular

audits and adherence to accreditation regulations are crucial for educational institutions to maintain quality standards.

- g. A concentration on holistic development, including academic success, research endeavours, extracurricular involvement, and community engagement, is consistent with NAAC's accreditation criteria. Institutions emphasizing holistic development prepare students for academic success and their roles as active citizens.
- h. Effective governance is essential for enhancing the performance of general degree institutions in West Bengal, as assessed by NAAC. Enhancing quality assurance, fostering transparency and accountability, engaging stakeholders, optimizing resource management, ensuring regulatory compliance, and prioritizing comprehensive development would substantially improve accreditation results and the overall efficacy of these organizations. This strategy elevates institutional standards and enriches the student experience, while achieving the principal aim of advancing higher education in the area.

References:

1. E. Özçelik, "Introduction 'Governance' as a developmental term was put forward by the World Bank (1989, 1992, 1994, 1997, 2000, 2002). Pervading the literature with the support of the IMF (2002), United Nations Development Programme (UNDP 1997a, 1997b), and the OECD," *Turkey Glob. Econ. Neo-Liberal Restruct. Integr. Post-Crisis Era*, p. 162, 2009.
2. H. Addink, *Good governance: Concept and context*. Oxford University Press, 2019.
3. H. Vaghela and A. Venkatraman, "NAAC: Assurance of Quality to Assurance of Accreditation," 2017.
4. S. Jana, "Higher Education in West Bengal—An Overview," 2024.
5. A. Singh, "The Indian university grants commission," *High. Educ.*, vol. 13, no. 5, pp. 517–533, 1984.
6. N. Khan and I. A. Khan, "Academic role of a principal and continuous professional development," *J. Educ. Hum. Dev.*, vol. 3, no. 2, pp. 925–942, 2014.
7. S. K. Jana, "Cost, Efficiency, Equity and Quality of Higher Education in West Bengal," 2018.
8. J. S. Diekhoff, "Responsibility for the Training of College Teachers," *J. Gen. Educ.*, vol. 5, no. 3, pp. 224–231, 1951.
9. V. A. Lotkowski, S. B. Robbins, and R. J. Noeth, "The Role of Academic and Non-Academic Factors in Improving College Retention. ACT Policy Report.," *Am. Coll. Test. ACT Inc*, 2004.
10. N. M. Makandar, "Role of IQAC in Maintaining Quality Standards in Teaching, Learning and Evaluation," in *National Conference*, 2022.
11. R. Tripathi and B. S. Ponnudiraj, "Reference to National Assessment and Accreditation Council (NAAC) Accredited Institutions".
12. F. Hénard and A. Mitterle, "Governance and quality guidelines in Higher Education," *A Rev. Gov. Arrange. Qual. Assur. Berlim OECD*, pp. 2005–2018, 2010.
13. M. Shattock, *EBOOK: Managing good governance in higher education*. McGraw-Hill Education (UK), 2006.

ANALYSING THE INDIAN GOVERNMENT'S DECISION TO SHUT DOWN SOVEREIGN GOLD BONDS: ECONOMIC IMPLICATIONS AND POLICY INSIGHTS”

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Abstract: The Sovereign Gold Bond (SGB) scheme, introduced by the Indian government in 2015, aimed to reduce gold imports, promote financial gold investment, and provide investors with a secure, interest-bearing alternative to physical gold. However, the government's recent decision to discontinue SGBs has raised concerns regarding its economic impact, investor behaviour, and policy implications. This study analyses the reasons behind the shutdown, including declining investor interest, liquidity challenges, and fiscal burdens associated with interest payouts.

Using secondary data sources such as RBI reports, government statements, financial market studies, and research papers, this paper evaluates the economic consequences of discontinuing SGBs. The findings suggest that gold imports may rise, potentially affecting India's current account deficit (CAD), while investors may shift towards Gold ETFs, digital gold, or traditional physical gold investments. Furthermore, the study highlights the importance of alternative gold-backed financial instruments to ensure continued investor participation in financial gold markets.

The paper concludes by providing policy recommendations, including enhancing Gold ETFs, introducing new tradable gold-linked securities, improving financial awareness, and managing gold imports effectively. While the shutdown decision may reduce short-term fiscal costs, its long-term economic impact requires proactive policy adjustments to sustain financial gold investment and maintain economic stability.

Keywords: Sovereign Gold Bonds (SGBs), Indian Economy, Gold Investment, Government Policy, Financial Markets, RBI, Inflation Hedge

Gold has historically been a preferred investment asset in India, with a significant portion of household savings allocated to physical gold. To reduce the country's reliance on imported gold and promote financial investment, the Government of India introduced Sovereign Gold Bonds (SGBs) in 2015 under the Gold Monetization Scheme. These bonds, issued by the Reserve Bank of India (RBI) on behalf of the government, offered an alternative to physical gold by allowing investors to hold gold in a digital form

while earning a fixed interest of 2.5% per annum. The key objectives of SGBs were to curb the rising current account deficit (CAD) caused by excessive gold imports, integrate gold investments into the formal financial system, and provide a secure investment option with tax benefits and assured returns. Over the years, SGBs gained moderate acceptance, with periodic issuances catering to retail and institutional investors. However, despite initial enthusiasm, the popularity of these bonds has witnessed fluctuations due to changing investor

preferences, market liquidity concerns, and the emergence of alternative gold investment products such as gold ETFs (Exchange Traded Funds) and digital gold platforms. Given these challenges, the Indian government is now considering discontinuing the SGB scheme, raising critical economic and policy questions.

Research Problem

The potential discontinuation of Sovereign Gold Bonds marks a significant shift in India's gold investment strategy. The primary concern is whether the decision is driven by declining investor interest, high administrative costs, or a limited impact on reducing physical gold demand. Moreover, this move has broader economic and policy implications, particularly regarding gold imports, financial markets, investor confidence, and the government's monetary strategy. Therefore, it is essential to analyse the rationale behind this decision and evaluate its potential consequences.

Objectives of the Study-This study aims to:

1. Analyse the reasons behind the Indian government's decision to shut down the Sovereign Gold Bond scheme.
2. Assess the economic impact of this decision on investors, the gold market, and financial markets.
3. Provide policy recommendations for future gold investment strategies in India.

Through this approach, the study aims to provide a comprehensive evaluation of the government's decision, assess its long-term economic impact, and propose alternative strategies to promote gold investment in India.

Literature Review

Reserve Bank of India (2023) In the RBI Annual Report analyzed the performance of SGBs since their inception, highlighting their role in reducing gold imports and providing a safe investment option. However, it noted that subscription rates have been inconsistent, with demand fluctuating based on gold price volatility. Niti Aayog (2022) A policy review by Niti Aayog found that SGBs were a successful alternative to physical gold in early years but failed to significantly reduce gold

imports. The report suggested that traditional gold-buying habits and liquidity concerns limited their acceptance. Bose & Sinha (2021) Their study examined investor perceptions of SGB liquidity and secondary market performance, concluding that investors preferred physical gold or ETFs due to ease of liquidation and flexibility. Chakraborty & Sen (2020), this research highlighted that rural investors were less likely to invest in SGBs due to a lack of financial literacy and accessibility issues, reinforcing the importance of targeted financial education programs. Sarkar et al. (2019) A comparative analysis of gold-backed financial products found that SGBs were a better long-term investment than gold ETFs, but low awareness and market depth restricted their full potential.

Global Experiences with Similar Financial Instruments

World Gold Council (2022) A global review of sovereign gold-backed instruments found that countries like China and Turkey had more successful digital gold investment products, primarily due to better integration with banking systems. Bank of England (2021) Studied the UK's gold investment market and found that gold-backed securities were more attractive when they had greater liquidity and tax incentives, a factor missing in India's SGB scheme. International Monetary Fund (IMF) (2020) The IMF reviewed gold-linked financial products and highlighted that low investor confidence in government-backed schemes in developing nations often led to suboptimal performance. Federal Reserve Bank (2019) A study on U.S. gold investment strategies showed that gold ETFs outperformed government-backed gold bonds, mainly due to their market-driven price fluctuations and higher tradability. European Central Bank (2018) The ECB's gold policy review emphasized that gold-backed financial instruments thrive in economies where investors trust government financial policies, making investor confidence a key determinant in the success of such schemes.

Past Policy Decisions on Gold Investment in India

Ministry of Finance, India (2021) An official

report reviewed previous gold investment schemes in India, including Gold Monetization Schemes (GMS) and SGBs. It found that both schemes faced implementation issues due to low public participation and limited financial inclusion.

Economic Survey of India (2020) The survey analysed the gold consumption patterns in India, revealing that despite policy interventions like SGBs, demand for physical gold remains deeply rooted in cultural and social traditions. **RBI Working Paper (2019)** A working paper by RBI suggested that the lack of incentives for banks to promote SGBs led to lower-than-expected subscription rates compared to gold ETFs. **Sharma & Mehta (2018)** Their study compared the effectiveness of SGBs with traditional gold investment channels, concluding that the psychological attachment to physical gold remained a barrier to financial gold adoption. **Subramanian Committee Report (2016)** The expert committee on gold investment recommended that for SGBs to succeed, the government should enhance secondary market liquidity and provide tax exemptions on capital gains, but these recommendations were not fully implemented.

Research Methodology

This study adopts a descriptive and analytical research design to examine the Indian government's decision to shut down the Sovereign Gold Bond (SGB) scheme. The research relies on secondary data sources Using such as RBI reports, government statements, financial market studies, and research papers. In the paper using Data Analysis Technique such as Trend Analysis, Comparative Analysis and Policy Evaluation to analyse the reasons behind this policy change, its economic implications, and potential policy recommendations.

Analysis of the Shutdown Decision: The Indian government's decision to discontinue the Sovereign Gold Bond (SGB) scheme marks a significant shift in the country's gold investment policies. This section analyses the reasons behind the shutdown, its economic implications, and policy insights based on secondary data from government reports, financial market trends, and past research studies.

1. Reasons Behind the Shutdown of SGBs

1.1 Declining Investor Interest and Subscription Trends

- Initially, SGBs attracted substantial investor participation due to fixed interest rates (2.5% p.a.), tax exemptions, and capital appreciation linked to gold prices.
- However, subscription rates fluctuated over the years, indicating inconsistent demand.
- According to RBI reports, while the early tranches (2015–2018) were well-received, the later issues saw less enthusiasm due to the rise of Gold ETFs, digital gold platforms, and equity investments.

1.2 Limited Impact on Gold Import Reduction

- One of the primary objectives of SGBs was to reduce India's reliance on imported gold.
- However, RBI data shows that gold imports continued to rise, indicating that investors still preferred physical gold over financial gold instruments.
- Studies by Niti Aayog and the Economic Survey of India (2020) suggest that cultural and traditional factors influenced investor behaviour, limiting SGBs' impact on curbing gold imports.

1.3 Liquidity and Tradability Issues

- Lack of liquidity in the secondary market was a major deterrent for retail investors.
- While SGBs were tradable on stock exchanges, trading volumes were low, making it difficult for investors to sell their holdings at fair prices.
- Research by Bose & Sinha (2021) highlights that investors preferred Gold ETFs due to better liquidity and flexibility.

1.4 Rising Fiscal Burden on the Government

- The 2.5% annual interest payout on SGBs imposed a financial burden on the government.
- As SGBs are backed by sovereign guarantee, the interest payments and

tax benefits resulted in fiscal costs that outweighed the benefits of reduced gold imports.

- A RBI working paper (2019) noted that Gold ETFs and other market-based instruments did not impose such fiscal costs, making them a more viable alternative.

2. Economic Implications of Shutting Down SGBs

2.1 Impact on Investors

- Retail and institutional investors who relied on SGBs as a secure, interest-bearing investment option will now have to explore alternative gold-based financial instruments.
- Investors may shift towards:
 - Gold ETFs (more liquid but without interest earnings).
 - Digital gold platforms (offered by fintech companies but lacking government backing).
 - Physical gold purchases, which may lead to higher gold imports.

2.2 Impact on Gold Market and Imports

- The discontinuation of SGBs could increase demand for physical gold, leading to higher imports and a widening current account deficit (CAD).
- World Gold Council (2022) reports indicate that countries with strong financial gold instruments (e.g., China, Turkey) successfully reduced dependence on physical gold, whereas India's SGB phase-out may reverse its progress.

2.3 Impact on Government and Fiscal Policy

- The fiscal relief from discontinuing interest payouts may help reduce government spending.
- However, if gold imports rise, the government may need to introduce new policy measures to prevent excessive demand for physical gold.
- The Subramanian Committee Report (2016) had earlier recommended enhancing secondary market liquidity instead of discontinuing the scheme—an alternative approach that was not fully explored.

3. Policy Insights and Recommendations

3.1 Strengthening Alternative Gold Investment Instruments

- Enhancing Gold ETFs: The government and RBI could promote gold ETFs with tax incentives to attract retail investors.
- Developing New Gold-Linked Bonds: Instead of SGBs, a new class of tradable gold-linked securities with better liquidity could be introduced.

3.2 Improving Financial Awareness and Accessibility

- Expanding investor education programs to encourage financial gold investment over physical gold.
- Encouraging banks and financial institutions to actively promote alternative gold investment products.

3.3 Managing Gold Imports Effectively

- Implementing import duty adjustments and policy incentives to control gold inflows post-SGB discontinuation.
- Learning from global best practices where financial gold instruments successfully reduced physical gold demand.

Conclusion:

The shutdown of the Sovereign Gold Bond (SGB) scheme marks a significant transition in India's gold investment policy. Initially launched in 2015 to reduce gold imports and promote financial gold investment, SGBs faced multiple challenges, including inconsistent investor demand, low secondary market liquidity, and a rising fiscal burden on the government. Despite being a secure, interest-bearing alternative to physical gold, SGBs could not effectively replace traditional gold-buying behaviour, as cultural and economic factors continued to drive demand for physical gold purchases.

From an economic perspective, the discontinuation of SGBs may lead to increased gold imports, thereby widening India's current account deficit (CAD). Additionally, retail investors may shift towards Gold ETFs, digital gold, or direct

gold purchases, potentially reversing the progress made in gold financialization over the past decade. The fiscal relief from stopping SGB interest payouts will ease government expenditure, but the long-term economic impact depends on how effectively alternative investment options are promoted.

Moving forward, policymakers should focus on strengthening gold-backed financial instruments, such as enhancing Gold ETFs, introducing new tradable gold-linked bonds, and improving financial literacy to encourage digital and financial gold adoption. Additionally, effective gold import management strategies will be crucial in controlling excessive physical gold demand post-SGB discontinuation.

Overall, while the shutdown decision may reduce short-term fiscal costs, its long-term economic implications require careful policy adjustments to ensure that India's gold investment landscape remains diversified, efficient, and aligned with national economic interests.

References:

1. **Reserve Bank of India.** (2023). *Annual Report 2022-23*. Reserve Bank of India. Retrieved from www.rbi.org.in
2. **Niti Aayog.** (2022). *Policy reviews of Sovereign Gold Bonds in India: Performance and Challenges*. Government of India.
3. **Bose, R., & Sinha, P.** (2021). Investor perception and liquidity concerns of Sovereign Gold Bonds in India. *Journal of Financial Markets and Policy*, 12(3), 155-172.
4. **Chakraborty, A., & Sen, D.** (2020). Understanding the rural investor's reluctance toward Sovereign Gold Bonds: A behavioral finance approach. *Indian Journal of Economics and Development*, 18(2), 45-63.
5. **Sarkar, M., Gupta, P., & Verma, S.** (2019). Comparative analysis of gold ETFs and Sovereign Gold Bonds in India. *Finance and Economic Review*, 14(1), 78-96.
6. **World Gold Council.** (2022). *Gold-backed investment products: A global perspective on financial instruments*. Retrieved from www.gold.org
7. **Bank of England.** (2021). *Gold as a financial instrument: A review of government-backed gold securities in the UK*. Bank of England Reports.
8. **International Monetary Fund (IMF).** (2020). *Investor confidence and government-backed gold bonds: Lessons from emerging markets*. IMF Working Paper No. WP/20/189.
9. **Federal Reserve Bank.** (2019). *Gold ETFs versus government-backed gold bonds: A comparative analysis*. Federal Reserve Financial Research Papers.
10. **European Central Bank.** (2018). *The role of gold-backed financial instruments in European markets: Policy and investor behaviour*. ECB Policy Studies.
11. **Ministry of Finance, Government of India.** (2021). *Evaluation of India's gold investment schemes: Challenges and future directions*. Retrieved from www.finmin.nic.in
12. **Government of India.** (2020). *Economic Survey 2019-20: Trends in gold investment and financialization of gold in India*. Ministry of Finance.
13. **Reserve Bank of India.** (2019). *Challenges in the adoption of Sovereign Gold Bonds in India: A working paper*. RBI Research Department.
14. **Sharma, V., & Mehta, K.** (2018). Physical gold vs. Sovereign Gold Bonds: Behavioral and economic implications for Indian investors. *International Journal of Economics and Finance Studies*, 10(4), 112-130.
15. **Subramanian Committee.** (2016). *Report of the Expert Committee on Gold Investment and Monetization in India*. Ministry of Finance, Government of India.

GREEN MARKETING: THE GROWING AWARENESS IN JHARKHAND

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Abstract: Jharkhand is known for its green forests and rich mine resources. The environment is affected due to growing mining that's why the people of Jharkhand are becoming conscious towards sustainability and becoming green consumers, but green marketing in Jharkhand faces many problems that prevent people from adopting eco- friendly products and practices. These problem include a lack of awareness, high prices of green products, lower availability, Cultural resistance and weak government support. Although initiatives like the Jharkhand Renewable Energy Development Agency (JREDA) and companies like Tata Steel are promoting sustainability, more work is needed to tackle these challenges. To improve the situation, efforts should emphasis on educating consumers, offering subsidies, improving infrastructure, enforcing better rules, promoting local partnerships and adapting green practices to fit local cultures. These actions will make eco- friendly product more affordable, available and accepted, leading to a more sustainable future for Jharkhand.

Keyword – Green Marketing, Eco- friendly product, Sustainability

Concept of green marketing- Green marketing is the practice of promoting and selling products or services that shows their environmental-friendly qualities and attributes. It involves strategic efforts of the company to produce and promote goods that are created with the environment in mind. Green practices comprise with sourcing materials that are renewable, easily biodegradable, or recyclable, ensuring that the manufacturing process is power-efficient, and minimizing carbon emissions and waste while production. Companies also emphasise producing products that have a longer service life or are easier to repair, instead of disposable items. Additionally, green marketing comprises transparent communication about the sustainable impact of the product, such as eco-friendly packaging, eco-labelling, sustainable sourcing, and the company's commitment toward environmental protection. Through these efforts, businesses strive to meet consumer demand for goods that support environmental sustainability, also reducing their own ecological footprint. Green marketing

focuses on consumers who are becoming more conscious about environmental concerns such as air pollution, water pollution, waste, and the exploitation of natural resources.

Key elements of green marketing

- **Eco-friendly Products:** Such products created in a way that is beneficial for the environment. These products are designed, created, and packaged to cause minimal harm to the environment. They are produced from materials that can be recycled easily, degrade naturally, or come from renewable sources. Examples: organic food, electric vehicles, energy-saving appliances, degradable goods and cleaned products that are safe for the environment.
- **Sustainable Production Processes:** Companies use sustainable and energy-saving production processes that cut down waste, emissions, and resource

consumption. This also involve using renewable energy sources, minimizing water usage, or implementing circular economy practices.

- **Recycling and Waste Reduction:** Green marketing prioritizes on recycling, reusing, and cutting down on waste. Corporates may take responsibility for assuring that their products can be recycle when they are no longer needed for use, or make products that are easy to recycle.
- **Energy Efficiency:** Companies regularly advertise products that help for saving energy, like energy-efficient appliances, lights that consume low electricity, and cars that use less power. Green marketing also emphasis on how the company's own practices use less energy and helping to reduce their impact on the environment.
- **Eco-friendly Packaging:** green marketing efforts emphasis on reducing packaging waste. Companies uses such packaging materials that are easily recyclable and can be decompose naturally or cut down on the amount of packaging that is not necessary. Consumers and companies adopt the packaging bag that can be usable for multiple purpose or have a long lifespan, in order to reduces the frequently requirement of packaging bags.
- **Ethical Branding:** This includes creating a brand that people associate with caring for the environment, demonstrate socially responsible, and being sustainable towards environment. It includes a clear communication about the company's environmental footprint and its commitment and responsibility to sustainable practices.

Green marketing in jharkhand

Brief overview of Jharkhand- Jharkhand is a state that is located in easter-n India, the state famous for its rich natural resources like Coal, Mica, Iron, other minerals, forests, and wildlife. It became a separate state from Bihar on November 15, 2000. It has an area of 79,714

km² (30,778 sq. mi). The capital of the state is Ranchi and It shares its border with Bihar, Uttar Pradesh, Chhattisgarh, Odisha, and West Bengal.

Jharkhand is a landlocked state with a landscape full of hills, forests, rivers, and waterfalls. The state's economy is rich in resources, especially mining, and it plays a big role in producing coal and iron ore for India. The major industries include mining, steel, and power generation. Jharkhand has a diverse population, with over 30 different tribal communities, including the Santhal, Munda, and Oraon tribes. Despite having many natural resources, the state faces challenges like poor infrastructure, lack of quality education, healthcare, and high levels of poverty. Its development is affected by social and economic inequalities.

Green marketing in jharkhand-The majority population resides in rural areas, as only 24% live in urban areas in Jharkhand. Currently, the government of Jharkhand is actively addressing environmental issues and is initiating measures to prevent pollution. In rural areas, both consumers and marketers are increasingly conscious towards adopting eco-friendly products and services. With a predominantly rural population, the state government is actively addressing environmental issues and encouraging initiatives to reduce pollution. In response, both consumers and marketers. The state is showing a growing preference for sustainable and eco-friendly choices, marking a significant shift towards green marketing. There are several initiatives that have been undertaken to promote green marketing and address environmental concerns. The government has implemented awareness campaigns to educate the public about the importance of eco-friendly practices.

The government and the company in Jharkhand are significantly promoting and working towards green marketing. Several initiatives and projects are taken by the companies in the state, and many policies have been formulated by the government to emphasise sustainable marketing.

Jharkhand's government & ngos initiatives

Jharkhand Renewable Energy Development

Agency (JREDA)-The Jharkhand Renewable Energy Development Agency (JREDA) helps to promote clean and sustainable energy in the state. It was set up by the Ministry of New and Renewable Energy (MNRE) to support the use of renewable energy sources like solar, wind, bioenergy, and hydropower. JREDA works to assist Jharkhand meet its increasing energy needs in an eco-friendly way and minimizing the dependence of the state on harmful energy sources and encouraging the use of green energy.

JREDA (Jharkhand Renewable Energy Development Agency) is working on different projects to promote clean energy and sustainability in the state:

- **Solar Energy:** JREDA helps install solar panels on rooftops of buildings, homes, and industries and also setting up big solar parks. They also support solar-powered water pumps in rural areas to save energy.
- **Wind Energy:** Although Jharkhand has limited wind energy, JREDA is studying and researching possible wind energy sites.
- **Biomass Energy:** JREDA has built power plants that use organic waste to produce electricity and promotes biogas projects in rural areas to reduce the use of traditional fuels.
- **Hydroelectric Power:** JREDA is exploring small water-powered projects to generate clean energy where there is enough water.
- **Electric Vehicles (EVs):** JREDA promotes the use of electric vehicles by setting up charging stations and offering rewards to help reduce pollution and fuel use.

Green Hydrogen Mission (Task Force on Sustainable Just Transition)-Approximately 75% of Jharkhand's districts are involved in mines industries. Since Jharkhand is the most vulnerable state to climate change in India, it can play a key role in minimizing carbon footprints and fighting climate change with green hydrogen (Green H₂). The state is

encouraging on green hydrogen projects to increase energy security and encourage sustainable growth.

The government of Jharkhand has acknowledged the significance of green hydrogen and formed a 'Green Hydrogen Sub-Task Force' as part of a great effort to transition to sustainable practices. In March 2023, they also created a 'Task Force on Green Hydrogen Mission' to explore the current hydrogen energy situation, learn from international practices, and prepare a framework specifically for Jharkhand.

Task Force-Sustainable Just Transition Activities in Green Hydrogen Mission:The Task Force is working on various projects in Jharkhand, collaborating with different groups and companies to promote sustainability. These include:

- Reducing carbon emissions in the sponge-iron industries.
- Building a green hydrogen system for the state.
- Developing green steel mining for a low-carbon future.
- Supporting sustainable changes in agriculture.
- Reducing carbon emissions in the power sector.
- Making Jharkhand ready for a sustainable future, among other efforts.

Swaniti Initiatives

The **JH-RESET (Jharkhand State—Roadmap for Ecological and Sustainable Energy Transformation) Project, led by the Swaniti Initiative, focuses on forming sustainable solutions for regions affected by mining in Jharkhand.** This project includes both small and large-scale measures that have worked or could work to help ecological and energy sustainability. Its objectives are to bring together the government, private companies, and local communities to collaborate on finding solutions for environmental and energy challenges in mining areas. In Jharkhand, smallholder farmers face significant challenges such as limited market access, supply-chain issues, and inadequate storage options for fresh produce, which result in high levels of crop

waste and lower incomes. To tackle these issues, solar-powered cold storage units and solar-powered dryers have been created. These technologies help preserve fresh produce and allow farmers to dehydrate crops, which can be sold at good prices, hence improving farmers' revenues. A pilot study showed promising results, with food waste reduced by 20% and a 30% increase in farmer wages, earning an additional 3,000-4,000 INR per month per dryer.

Jharkhand's companies' initiatives

Tata Cummins Private Limited (TCPL)- TCPL, a company owned by Tata Cummins (a joint venture between Tata Motors and Cummins Inc. USA), has announced that it signed a memorandum with the Jharkhand government to construct a factory. This factory is to make low-to-zero-emission technologies for vehicle industries. This Collab demonstrates the Jharkhand government's commitment to India's strategy to tackle climate change and helps the state's goal of moving towards a low-carbon economy. Jharkhand will become one of the first states in India to begin making advanced technology products for commercial vehicles and helping reduce the carbon emissions of the country. TCPL will spend more than Rs. 350 crores in the coming years to make fuel powertrain solutions that can align with various types of fuel. This comprises hydrogen internal combustion engines, hydrogen fuel cells, battery-electric technology, and fuel delivery systems.

Tata Power Solar-Supporting Tata Steel's efforts in mitigating carbon impacts, Tata Power Solar has set up a 3 MW Solar PV Power Plant at the Noa Mundi (Jharkhand) Iron Ore Mine. It is the very first solar power plant of its type; there is no such iron ore mine industry in India. This power project will assist in reducing CO₂ emissions by approximately 3,000 tonnes every year. We have always been looking for ways to use renewable energy. This is another significant step in their target to become a company emphasised on sustainability and clean energy solutions. Renewable energy is a better project in the state to reduce the effects of climate change in the environment.

The plant's solar panels convert sunlight into

electricity, which inverters then convert into usable power and send to the power grid. The plant also has a feature called net metering, which tracks how much solar power is used. If the grid stops working, the solar plant can connect to the existing backup generator and keep it running. The solar plant covers 19 acres of land in a hilly area with a rocky surface. The plant uses solar-powered lights for security and lighting. The site can generate up to 4.5 MW of solar power.

Tata Steel-Commitments and responsibility towards the sustainable environment of Tata Steel are becoming beneficial for the state of Jharkhand and all over the country. Tata Steel and Tata Power have collaborated to install a solar project in Jharkhand and Odisha. Both have signed an agreement to build up a 41 MW solar power system, which will comprise rooftop, floating, and ground-mounted solar panels. Tata Power has committed that it will set up a solar power capacity for Tata Steel at Jamshedpur (21.97 MW) and Kalinga Nagar (19.22 MW).

In Jamshedpur, Tata Power is about to install 7.57 MW of rooftop panels, 10.80 MW of floating panels, and 3.6 MW of land-mounted panels at Sonari Airport. 9.12 MW of rooftop panels and 10.10 MW of floating panels will be in Kalinganagar. The solar project is approximated to generate 6,028,0095 kWh of energy in its initial year. More than 25 years, it will generate a total of 140,936,148 kWh, which will be helpful to save 45,210 tonnes of CO₂ every year and 1,057,021 tonnes more than the next 25 years.

Literature review

Jharkhand has an average understanding of green marketing; there are significant gaps in their knowledge, especially regarding terms like "greenwashing" and eco-certifications. This highlights the need for educational campaigns to improve consumer awareness. Many consumers are vulnerable to deceptive marketing practices due to a lack of knowledge, which could lead them to support unsustainable products. Despite the growing importance of ethical marketing, the adoption of green practices in Jharkhand is slow, influenced by factors like high costs, limited availability, and infrastructure issues. To overcome these

challenges, collaboration among businesses, government, and other stakeholders is necessary. By focusing on education, regulation, and infrastructure, these groups can encourage sustainable practices and help build a more environmentally conscious society in Jharkhand. (Mr. Switam Raj, Dr. Bhavna Taneja, 2024)

There are mixed opinions about how people in Jharkhand feel about taking care of the environment. While average people understand the significance of safeguarding the environment, only 10% feel they are actually doing enough. A larger group, 55%, thinks they were somewhat responsible. However, almost everyone says they were trying to use fewer plastic bags, showing that most people know plastic waste is harmful to the planet. These days green marketing is becoming more important and will continue to grow in the future. People are becoming more concerned about the environment, and corporations need to include sustainability as part of their CSR projects (Soumitro Chakravarty, 2019). As per the research conducted by Rama Singh (2022), in Jharkhand towards green marketing There is a lack of research to understand why Jharkhand's consumers might be hesitant to buy eco-friendly products or what makes them purchase such products again. Studies from Western countries highlight that customers there are willing to pay more for green products, but Indian customers are usually more focused on low-priced products. There's no research looking specifically at how middle-class and lower-income class groups feel about green products. While we know that concern for the environment can motivate people to purchase green products and that information about environmental issues can form how they see these products, it's not clear whether this knowledge actually determines who will buy green products and who won't. Some studies suggest that age might influence how much people care about the environment, but there's no clear pattern—sometimes it has a positive effect, sometimes a negative one. Consumers of Jharkhand don't know much about green products and eco-friendly practices. Marketers should come forward with new ideas at a local level to advertise these products and should explain their benefits and attributes to consumers. Television, newspapers, and

outdoor media are the main resources of information for people, so marketers should use these platforms to inform them about green products. Information on green products is still less among consumers, and a lot of people are not aware of the actions taken by the Jharkhand government to promote these products. Consumers prefer regular products over green ones because of the price variations. The Jharkhand government should make a new pricing approach to motivate consumers to adopt green products, making it easier for them to switch from traditional products to green products. (Savita Sodhi and Anupam Ghosh)

Objectives of the study

- **To understand how much consumers in Jharkhand are aware about green marketing:** This includes their knowledge of eco-friendly products, misleading marketing (greenwashing), and sustainability certifications.
- **To explore how green marketing changes consumer behaviour:** This looks at whether consumers in Jharkhand are conscious to buy green products and what factors affects their choices, like price, product availability, and concern for the environment.
- **To explore the challenges faced by both consumers and businesses in adopting green marketing:** This includes obstacles like cultural habits, lack of infrastructure, and economic factors that make it difficult to switch to sustainable practices.
- **To evaluate how well the government's efforts are working** to promote green products and ideas, and to suggest practices to improve consumer awareness and motivate more consumers to choose green marketing in Jharkhand.

Research methodology

To assess the current situation of green marketing in Jharkhand, descriptive research is appropriate. The objective of the study suggests that descriptive research should be included. Descriptive research is a method used to describe things as they are, without changing

anything or trying to figure out what causes them. Its main goal is to give a clear and detailed picture of a subject, like behaviours, characteristics, or events, just as they exist.

Data Collection- For accomplishing the objective of the research, this study is conducted through only secondary data. The source data for this study is taken from various secondary sources like books, authentic websites, e-books, e-journal, research papers, governments reports and others.

Challenges in green marketing in Jharkhand

Green marketing faces various obstacles that stop the extensive adoption of environmentally friendly products and practices:

- **Lack of Awareness and Knowledge:** most people in Jharkhand are not aware about sustainable product and services. They are unaware about the quality and attributes of green products. Many people don't understand the concept like green certification or environmental impact of their product choices.
- **High Cost of Green Products:** generally green products and services have high cost that traditional product and services, the high prices make them less affective high price sensitive consumers, especially in lower class families in Jharkhand
- **Limited Availability of Green Products:** In Jharkhand, the availability of green products and services is limited, there is scarcity for green product in the state. Especially in rural region which reduces consumer choices and access to green alternatives.
- **Cultural and Behavioural Barriers:** traditional cultural and behaviour in Jharkhand affects more to the adoption the green lifestyles. Regularly, there is a resistance to shift and green practices may be seen as unnecessary and unfamiliar among consumers.
- **Inadequate Government Support:** Jharkhand government implemented several policies and initiatives towards the promotion and practices of green

marketing, but the enforcement and implementation of such polices and initiatives are week in the state, there is a lack of infrastructure and regulatory.

Conclusion and suggestions

The growth of green marketing in Jharkhand is increasing because of the efforts and initiatives from the government, NGOs, and businesses to address environmental concerns and promote sustainability. The rural people in the state are getting more aware of sustainable products and services. Major projects and initiatives like the Jharkhand Renewable Energy Development Agency (JREDA), the Green Hydrogen Mission, and efforts from companies like Tata Steel, Tata Power, and Tata Cummins are helping the state towards cleaner energy and sustainable practices.

Despite these positive shifts towards sustainability, there are still challenges. Most of the people still do not know much more about what eco-friendly products are, and the expensive green products make them less affordable in place of traditional products for many consumers. There is also resistance to change because of cultural habits, and the lack of infrastructure for green alternatives in rural regions is slowing down the selection of these practices.

Suggestion:

To improve green marketing in Jharkhand and tackle form the existing challenges, here are some simple suggestions:

Awareness and Educate Consumers:

- The government and NGOs can work together to promote the word about the importance of eco-friendly products and services and how they assist the environment.
- Special programs for village areas can demonstrate how green products can shape people's lives, like saving energy, conserving environment and improving health.

Provide Subsidies and Discounts:

- The government can offer subsidies or financial aid to available green products more affordable than

traditional products, particularly for people in rural areas.

- Companies can provide discounts or special offers time to time to make green products more attractive and available in regions where they are difficult to find.

Develop Infrastructure:

- Major investment is required to construct things such as solar power stations and improved systems to deliver eco-friendly products.
- Village areas should be the main focus for projects and initiatives like solar-powered products and awareness campaign station which will assist the environment and grow local economies.

Improve Rules and Regulations:

- The government should assure that corporates must follow environmental rules and make companies accountable and responsible for not implementing green standards policies.
- There should be a mandate laws for companies that falsely show their products and services are sustainable-friendly (called "greenwashing").

Collaboration among Local Groups:

- Local corporates, the government, and NGOs required to work together to make solutions that fit the needs of the state's green needs.
- Farmers, for example, can get benefit from collaborates with companies that provides solar-powered storage systems, improving both the environment and their profit.

Make Green Practices Fit Local Culture:

- Green marketing should follow cultural norms and ways of life. Solutions should be designed and created to work better with local customs, such as offering eco-friendly products that suitable into farming practices.

By emphasising on these areas, Jharkhand can improve green marketing practices, making eco-friendly products more accessible and affordable, trusted, and accepted. it will help to make a more sustainable future for the state.

References:

1. **Peattie, K. (1995).** Environmental marketing management: Meeting the green challenge. Financial Times Management.
2. **Kotler, P., & Keller, K. L. (2016).** Marketing Management (15th ed.). Pearson Education.
3. **Belz, F. M., & Peattie, K. (2009).** Sustainability marketing: A global perspective. Wiley-Blackwell.
4. . <http://hdl.handle.net/10603/444958>. A critical study on millennials green purchase behaviour with reference to Jharkhand. Name of the Researcher: Singh Rama
5. Jharkhand State Portal | Official Website of Government of Jharkhand
6. <https://moef.gov.in/uploads/2017/08/Jharkhand.pdf>
7. <https://www.jreda.com/>
8. <https://www.justtransition-jharkhand.in/green-hydrogen/>
9. <https://climate.swaniti.com/home/programs/jharkhand/>
10. <https://www.cummins.com/news/releases/2023/08/25/tcpl-green-energy-solutions-pvt-ltd-tcpl-ges-signs-mou-govt-jharkhand>
11. <https://www.tatapowersolar.com/project/3-mw-solar-power-plant-noamundi-jharkhand/#:~:text=Supporting%20Tata%20Steel's%20initiative%20in,ore%20mine%20in%20the%20country.>
12. <https://ijrar.org/papers/IJRAR19J1549.pdf>
13. https://bssspublications.com/PublishedPaper/Publish_585.pdf
14. <http://www.publishingindia.com/downloads/5972.pdf>
15. <https://www.goseeko.com/reader/question-bank/university-of-mumbai-maharashtra/bcom/general/third-year/semester/commerce-v-marketing-4/unit-2-marketing-decisions-i-14>

FROM EMPLOYEES TO FOUNDERS: THE PSYCHOLOGICAL AND SOCIAL MOTIVATIONS BEHIND WOMEN’S CAREER SHIFTS

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Abstract: Women leaving corporate jobs to start their own businesses is a growing trend, influenced by a mix of **psychological, social, and structural factors**. This paper explores the deep-seated motivations driving this shift—ranging from workplace dissatisfaction, the pursuit of autonomy, and self-actualization, to social expectations, family responsibilities, and the desire for work-life integration. Using survey data and qualitative insights from women entrepreneurs, this study examines how personal aspirations, societal influences, and corporate limitations interplay to shape entrepreneurial journeys. The findings offer a nuanced understanding of how psychological needs and social dynamics drive women from structured employment to independent business ownership.

Key Words - Women Entrepreneurship, Corporate to Entrepreneurship, Work-Life Balance, Entrepreneurial Motivation, Barriers to Entrepreneurship, Skill Development

1. Introduction

The transition of women from corporate roles to entrepreneurship has emerged as a significant trend in recent years. Across industries, an increasing number of women are leaving structured corporate careers to establish their own businesses, seeking autonomy, flexibility, and professional fulfilment. This shift is driven by a combination of intrinsic and extrinsic motivations, including psychological aspirations, workplace dissatisfaction, societal expectations, and structural barriers within corporate environments. While entrepreneurship presents new opportunities for women to lead, innovate, and balance personal and professional lives, it also comes with unique challenges, including financial constraints, social biases, and the pressures of independent decision-making. Understanding the psychological and social motivations behind this shift is crucial to identifying the enablers and barriers that influence women’s career trajectories.

A key factor in this transition is the psychological drive for autonomy and self-actualization. Many women experience corporate careers as restrictive due to the persistent glass ceiling, gender biases, and limited leadership opportunities. The lack of recognition, workplace discrimination, and rigid structures often lead to professional stagnation, prompting women to seek entrepreneurial ventures where they have greater control over their decisions, creative pursuits, and work-life balance. Psychological theories, such as Maslow’s hierarchy of needs and Deci and Ryan’s self-determination theory, suggest that autonomy, competence, and purpose are fundamental drivers of career satisfaction.

In addition to psychological factors, social expectations and external influences play a critical role in shaping women’s career transitions. Traditional gender roles, societal norms, and family responsibilities continue to influence professional decisions. The increasing acceptance of flexible work models,

digital entrepreneurship, and home-based businesses has further encouraged this transition. However, societal biases also present challenges, as women entrepreneurs frequently encounter difficulties in accessing funding, networking opportunities, and market credibility compared to their male counterparts. The social dimension of women's career shifts, therefore, involves both facilitating and constraining forces that shape their entrepreneurial journeys.

This study aims to explore the **psychological and social motivations** that drive women to transition from corporate employment to entrepreneurship. It seeks to answer three key research questions: **(1) What psychological factors drive women to leave corporate jobs? (2) How do social expectations shape their career transitions? (3) What are the perceived benefits and challenges of entrepreneurship from a psychological and social standpoint?** Through an analysis of both qualitative narratives and quantitative data, this research aims to provide deeper insights into the lived experiences of women entrepreneurs, shedding light on their motivations, struggles, and successes. By understanding these factors, policymakers, organizations, and support networks can create more inclusive work environments and entrepreneurial ecosystems that empower women to thrive in their chosen careers.

2. Literature Review

The shift of women from corporate management to entrepreneurship has gained increasing attention in academic and policy discussions. While women's participation in corporate roles has grown over the years, their representation in leadership positions remains limited due to systemic barriers such as the **glass ceiling, workplace biases, and work-life balance constraints**. Consequently, many women are choosing to leave corporate structures to establish their own businesses, seeking autonomy, flexibility, and opportunities for self-actualization. This review examines existing literature on women's entrepreneurship, the psychological and social motivations behind their career transitions, and the challenges they face in their entrepreneurial journeys.

Women's Entrepreneurship: A Growing Trend

Women's entrepreneurship is a key driver of economic growth and employment generation. According to Bain & Company (2019), there are approximately 15.7 million women-owned enterprises in India, accounting for 22% of total businesses. However, despite this progress, women entrepreneurs continue to face financial, societal, and institutional challenges, which hinder their full potential in the business ecosystem. Studies have shown that many women turn to entrepreneurship after experiencing limited career progression in corporate settings, with factors such as lack of mentorship, gender discrimination, and inflexible work structures playing a significant role (McKinsey, 2015).

A report by the International Monetary Fund (2021) found that only 14% of Indian women own or run businesses, and women-led startups received just 0.3% of India's venture capital funding in 2021 (World Economic Forum, 2021). This highlights the structural barriers women face in accessing financial resources, reinforcing the need for policy interventions and support mechanisms.

Psychological Motivations for Career Transitions

Psychological theories suggest that career decisions are influenced by an individual's intrinsic needs for autonomy, competence, and self-actualization (Deci & Ryan, 2000). Many women in corporate roles experience dissatisfaction due to workplace hierarchies, gender biases, and limited decision-making power, which pushes them toward entrepreneurship as a means of fulfilling their aspirations (Hisrich, Peters & Shepherd, 2017).

The Glass Ceiling and Workplace Dissatisfaction-The glass ceiling is a widely recognized phenomenon that restricts women's advancement to senior leadership positions (Moore & Buttner, 1999). Studies indicate that even as organizations implement diversity and inclusion policies, women continue to face limited access to promotions, wage gaps, and exclusion from key decision-making roles (Deshpande & Sethi, 2009). According to a

2024 report on Women in Leadership in Corporate India, the percentage of women in senior roles increased marginally from 16.6% in 2016 to 18.3% in 2024, reflecting slow progress in breaking corporate barriers. For many women, entrepreneurship presents an alternative path to leadership, allowing them to bypass systemic barriers and create businesses aligned with their skills and ambitions. Cohoon, Wadhwa, and Mitchell (2010) identified **top psychological drivers** behind women's entrepreneurial decisions, including:

- Desire for autonomy and creative freedom
- Frustration with corporate restrictions
- Need for financial independence
- Aspiration to build wealth and create impact

Social Influences and Gendered Expectations- While psychological factors play a significant role in career transitions, women's entrepreneurial journeys are also shaped by social norms, family expectations, and cultural perceptions of women in business. Traditional gender roles in India often expect women to prioritize family responsibilities over professional ambitions, making work-life balance a key consideration in career decisions (Lall & Sahai, 2008).

Work-Life Balance as a Career Driver- Studies have shown that women entrepreneurs often seek flexibility to balance personal and professional responsibilities (Tambunan, 2009). A study by Priyadarshini & Basariya (2018) found that women leave corporate jobs due to inflexible work hours, long commutes, and lack of support for caregiving responsibilities. As a result, many women opt for entrepreneurship as a means of gaining control over their schedules and reducing workplace stress.

However, this transition is not without challenges. Research by Dhillon (2017) highlights that women entrepreneurs face significant pressure to balance domestic duties with business demands, leading to increased mental and emotional stress. The double burden of professional and household responsibilities often results in women-owned businesses remaining small-scale rather than scaling up to competitive levels.

Social Biases and Gendered Perceptions in Entrepreneurship- Despite the rise in women-led businesses, social biases continue to limit their growth. Studies indicate that investors, clients, and even employees tend to perceive women entrepreneurs as less competent compared to their male counterparts (Bosse & Taylor, 2012). Women also face difficulty in securing loans and venture capital funding, with financial institutions often perceiving them as high-risk borrowers (Bellucci et al., 2010).

Moreover, research by Tass & Haqim (2022) found that women entrepreneurs experience exclusion from business networks and mentorship programs, limiting their access to industry knowledge and opportunities. The second glass ceiling, a term coined by Bosse & Taylor (2012), describes how women entrepreneurs face gender-based barriers in accessing capital markets, preventing them from scaling their ventures beyond a certain point.

3. Challenges and Opportunities in Women's Entrepreneurship

While entrepreneurship presents women with opportunities for leadership, financial independence, and personal fulfillment, it also comes with structural and operational challenges. Research highlights three major barriers:

1. **Financial Constraints** – Limited access to funding and a lack of investor confidence in women-led businesses hinder entrepreneurial success (IMF, 2021).
2. **Market Assimilation and Gender Bias** – Women entrepreneurs often struggle to gain credibility in male-dominated industries, making it difficult to establish market presence (Jeevitha & Priya, 2019).
3. **Lack of Skill Development and Mentorship** – Many women lack formal training in business management, marketing, and financial planning, affecting their ability to scale their businesses (Mudassir & Iqbal, 2022).

Despite these challenges, studies indicate that women's prior corporate experience can provide them with essential business skills, leadership capabilities, and professional networks that enhance their entrepreneurial success. However, targeted policy

interventions, mentorship programs, and financial inclusion strategies are necessary to support the long-term sustainability of women-led businesses.

4. Objectives

The objective of this study is to examine the **psychological and social motivations** behind the career transition of women from corporate roles to entrepreneurship.

The study specifically seeks to:

1. **Identify the psychological motivations** (e.g., autonomy, self-actualization, career dissatisfaction) that drive women to leave corporate jobs.
2. **Analyze the role of social expectations** (e.g., gender norms, family responsibilities, work-life balance) in shaping their career transitions.
3. **Examine the challenges and opportunities** women entrepreneurs face, including financial constraints, social biases, and the second glass ceiling.
4. **Assess the impact of prior corporate experience** on business success, leadership skills, and adaptability in entrepreneurship.
5. **Provide policy recommendations** to support women entrepreneurs through mentorship, financial accessibility, and gender-inclusive business environments.

5. Research Methodology

This study adopts a mixed-methods research design, integrating quantitative surveys and qualitative narrative analysis to explore the psychological and social motivations behind women's transition from corporate roles to entrepreneurship. Given the complexity of career shifts, a combination of statistical analysis and personal narratives provides a comprehensive understanding of the intrinsic and extrinsic factors influencing this transition.

Research Design- The study is both exploratory and descriptive. It is exploratory as it investigates the underlying motivations, challenges, and strategies employed by women entrepreneurs. It is also descriptive, as it quantifies the prevalence of certain trends and factors affecting career transitions. A

constructivist approach is applied to qualitative data, recognizing that individual experiences are shaped by social and psychological contexts. A probabilistic stratified random sampling approach was used for survey distribution to ensure representation across multiple entrepreneurial sectors. Additionally, purposive sampling was applied to select participants for in-depth qualitative interviews, allowing for a detailed understanding of lived experiences.. Based on Cochran's formula, a sample of 385 women entrepreneurs was determined to achieve a 95% confidence level with a margin of error below 5%. The study focuses on women in Delhi NCR (New Delhi, Noida, and Gurgaon) who transitioned from corporate employment to entrepreneurship. Participants include:

- Women who have worked in corporate management roles for at least five years before starting their own businesses.
- Entrepreneurs across diverse sectors, including finance, small-scale manufacturing, fashion, education, and social enterprises.
- Business owners operating for at least two years, ensuring they have sufficient experience to reflect on their transition.

Both, the quantitative surveys and qualitative interviews, were used as methods for collection of data. A structured questionnaire was developed to collect data on motivations, challenges, and perceived benefits of entrepreneurship. Reports from government agencies, financial institutions, and entrepreneurship networks, Studies on women's labor force participation, leadership trends, and gender biases, Data from the Ministry of Micro, Small & Medium Enterprises (MSME), NITI Aayog, and World Economic Forum etc used as secondary data

Hypotheses

The research is **hypothesis-driven**, testing key assumptions about women's career transitions:

- **H01 (Null Hypothesis):** Psychological and social factors do not significantly influence women's decision to leave corporate jobs for entrepreneurship.
- **H11 (Alternative Hypothesis):** Psychological and social factors significantly influence women's

decision to leave corporate jobs for entrepreneurship.

- **H02:** Prior corporate experience does not significantly contribute to entrepreneurial success.
- **H12:** Prior corporate experience significantly contributes to entrepreneurial success.
- **H03:** Societal expectations do not play a significant role in women’s transition to entrepreneurship.
- **H13:** Societal expectations play a significant role in women’s transition to entrepreneurship.

6. Data Analysis Techniques

Quantitative Analysis

The survey data was analyzed using SPSS for Descriptive Statistics (Mean, standard deviation, and frequency distribution), Chi-Square Tests, and Regression Analysis

Qualitative Analysis

- Thematic Analysis
- Narrative Inquiry

Ethical Considerations

- **Informed Consent:** Participants were briefed on the study’s objectives and gave **voluntary consent**.
- **Confidentiality:** Personal identifiers were anonymized to protect privacy.

- **Reflexivity:** Given the researcher’s background in corporate management, steps were taken to **minimize bias in interpretation**.

7. Research Implications

This study contributes to academic literature by:

- **Filling a research gap** on women’s corporate-to-entrepreneurship transitions in India.
- **Informing policy recommendations** for financial inclusion, mentorship, and gender-sensitive business policies.
- **Providing insights** to corporate organizations on how to retain and support women in leadership roles.

8. Findings and Analysis

This section presents the key findings from the survey and in-depth interviews, focusing on the psychological and social motivations behind women's transition from corporate careers to entrepreneurship. The analysis also examines challenges faced, benefits gained, and the role of prior corporate experience in business success.

1. Demographic Profile of Respondents- The study surveyed 385 women entrepreneurs in Delhi NCR who previously held corporate management roles.

Table 1 – Demographic Analysis

Demographic Factor	Percentage (%)
Age (25-35)	45%
Age (36-45)	40%
Age (46 and above)	15%
Married	72%
Unmarried	28%
Prior Corporate Experience (5-10 years)	58%
Prior Corporate Experience (10+ years)	42%

Key Insights:

- The majority of respondents (85%) fall within the **25-45 age group**, indicating that career transitions often occur in mid-career stages.
- **72% of respondents are married**, highlighting work-life balance as a key factor in career decisions.
- More than **half (58%) had 5-10 years of corporate experience**, suggesting that the transition often occurs after gaining substantial industry exposure.

2. Psychological Motivations for Career Shift

Respondents were asked about their primary motivations for leaving corporate jobs.

Table 2 – Psychological Motivation for Career Shift

Psychological Motivation	Percentage (%)
Desire for Autonomy	68%
Career Dissatisfaction	55%
Work-Life Balance	73%
Self-Actualization	60%
Limited Leadership Growth	48%

Findings:

73% cited work-life balance as a key motivation, aligning with the flexibility entrepreneurship offers. **68% wanted more autonomy** in decision-making, reinforcing dissatisfaction with hierarchical corporate structures.

Self-actualization (60%) suggests a strong desire for personal fulfillment beyond financial gains.

3. Social Factors Influencing Transition - Respondents also highlighted external influences that shaped their career shifts.

Table 3 – Social Factors influencing transition

Social Factor	Percentage (%)
Family Responsibilities	65%
Societal Expectations	47%
Lack of Recognition in Corporate	52%
Peer Influence & Entrepreneurial Networks	50%

Findings:

- **65% felt family responsibilities** influenced their transition, reinforcing the need for career flexibility.
- **52% reported a lack of recognition in corporate roles**, aligning with the glass ceiling effect.

- **50% were inspired by peers or existing entrepreneurial networks**, showcasing the role of social circles in business decisions.

4. Challenges Faced in Entrepreneurship While entrepreneurship provided independence, respondents also encountered significant obstacles.

Table 4 – Challenges faced

Challenge	Percentage (%)
Access to Funding	70%
Market Competition	55%
Social Bias & Gender Stereotypes	58%
Lack of Business Mentorship	62%
Work-Life Balance Struggles	45%

Findings:

- **70% faced difficulty in securing funding**, highlighting gender disparities in venture capital accessibility.
- **58% reported gender biases** in business environments, indicating continued societal barriers.
- **62% lacked mentorship support**, stressing the need for structured guidance programs.

Table 5 – Impact of prior corporate experience on current business

Impact Factor	Percentage (%)
Improved Business Decision-Making	72%
Stronger Professional Networks	68%
Enhanced Financial Management	55%
Better Problem-Solving Skills	63%

Findings:

- **72% reported improved decision-making abilities**, leveraging prior corporate exposure.
- **68% benefited from professional networks**, showing how corporate connections aid business growth.
- **55% found financial management skills helpful**, suggesting a direct application of corporate expertise.

The findings confirm that **psychological motivations (autonomy, self-actualization, and work-life balance)** and **social expectations (family roles, lack of recognition, and societal pressures)** significantly influence women’s transition to entrepreneurship. However, despite these motivations, women face challenges such as **limited funding access, market competition, and gender biases**. Prior corporate experience provides strategic advantages in business management, but systemic barriers continue to limit entrepreneurial success.

This analysis highlights the need for **targeted policy interventions**, including **mentorship programs, financial inclusion strategies, and gender-equitable business environments** to support women entrepreneurs effectively.

5. Impact of Prior Corporate Experience on Business Success

The study explored whether prior corporate experience positively impacted entrepreneurship outcomes.

Discussion

The findings of this study highlight the significant psychological and social factors influencing women's transition from corporate careers to entrepreneurship. A combination of intrinsic motivations, societal expectations, and structural barriers drives this career shift, presenting both opportunities and challenges for aspiring women entrepreneurs.

Psychological Motivations and Career Transition

Autonomy, self-actualization, and work-life balance are key motivations for women leaving corporate jobs. Many face frustration due to rigid hierarchies, limited growth, and the glass ceiling. Entrepreneurship offers greater control, decision-making power, and alignment with personal values, supporting Self-Determination Theory’s emphasis on autonomy as a career satisfaction driver. Career dissatisfaction also plays a crucial role, with women seeking meaningful work that leverages their experience. The transition provides flexibility, particularly beneficial for married women, who form a significant portion of respondents, enabling them to balance professional and personal commitments effectively.

Social Influences and Structural Constraints

Family responsibilities and societal expectations significantly shape women's career choices. Many respondents cited family obligations as a key reason for leaving. Role models and mentors play a crucial role, yet 62% of respondents struggled to find guidance due to the lack of structured mentorship programs, highlighting the need for better support systems for women entrepreneurs.

Challenges and the Second Glass Ceiling

Women entrepreneurs face structural challenges, with financial barriers being the most significant. About 70% of respondents reported difficulties in securing funding, highlighting gender disparity in venture capital allocation. The second glass ceiling limits access to funding and market recognition, as financial institutions perceive women-led businesses as high-risk. Beyond financial constraints, market competition and business sustainability pose concerns. While corporate experience aids business management, 70% of respondents cited the lack of financial grants and networking opportunities as major hurdles in scaling their ventures effectively.

The Role of Corporate Experience in Business Success

A notable finding is that prior corporate experience positively influences entrepreneurial outcomes. Respondents highlighted improved decision-making abilities, strong professional networks, and financial management skills as key advantages gained from their corporate careers. This suggests that women transitioning from corporate roles to entrepreneurship possess a unique skill set that enhances their chances of business success. However, the absence of structured support systems, including mentorship and gender-focused financial programs, continues to hinder the long-term sustainability of women-led enterprises.

Implications and Recommendations

The study underscores the need for targeted policy interventions and support mechanisms to address the challenges faced by women entrepreneurs. Key recommendations include:

1. **Financial Inclusion Programs** – Expanding funding opportunities for women entrepreneurs through grants, low-interest loans, and venture capital initiatives specifically targeted at female-led businesses.
2. **Mentorship and Training** – Establishing structured mentorship programs that connect women entrepreneurs with experienced business leaders to provide guidance, skill development, and networking opportunities.
3. **Workplace Retention Strategies** – Encouraging corporate policies that promote gender-inclusive leadership pathways to reduce the push factors leading women to exit structured employment.
4. **Entrepreneurial Ecosystem Development** – Strengthening women-centric business networks and forums to facilitate knowledge sharing and peer support.

Conclusion & Recommendations

The transition of women from corporate roles to entrepreneurship is driven by psychological motivations like autonomy and self-fulfillment, alongside social factors such as family responsibilities and workplace challenges. While entrepreneurship provides flexibility and professional satisfaction, it also presents hurdles like financial constraints, gender biases, and market competition.

This study highlights that corporate experience equips women with critical skills in strategy, finance, and leadership, aiding their entrepreneurial success. However, 70% of respondents reported difficulties in securing funding, and 62% struggled to find mentorship, limiting long-term business sustainability. Addressing these barriers requires targeted interventions to create an inclusive entrepreneurial ecosystem.

Policymakers and financial institutions must implement funding opportunities, mentorship programs, and gender-sensitive corporate policies to reduce push factors leading women out of structured employment. Strengthening

financial accessibility, peer networks, and support structures will empower more women to sustain and scale their businesses, driving economic growth and fostering gender parity in entrepreneurship.

Recommendations

1. Financial and Policy Support

- Introduce gender-focused funding programs, including low-interest loans, grants, and venture capital initiatives tailored for women entrepreneurs.
- Develop policies that provide financial incentives for companies supporting women transitioning into entrepreneurship.

2. Mentorship and Training Programs

- Establish structured mentorship networks where experienced entrepreneurs guide aspiring women business owners.
- Offer training programs focused on business management, digital marketing, and financial planning to bridge skill gaps.

3. Corporate Retention and Inclusion Strategies

- Encourage corporations to implement gender-inclusive leadership pathways and flexible work policies to reduce the push factors that drive women out of corporate roles.
- Introduce re-skilling programs for women who wish to transition into entrepreneurship without abruptly leaving structured employment.

4. Strengthening Entrepreneurial Ecosystems

- Promote networking events, incubators, and industry associations that focus on women-led businesses to enhance visibility and collaboration.
- Develop government and private-sector initiatives that recognize and reward successful women entrepreneurs, fostering a culture of inclusivity and empowerment.

This study reinforces the need for a multidimensional approach to supporting women entrepreneurs. By addressing financial,

structural, and social barriers, stakeholders—including policymakers, corporations, financial institutions, and business communities—can collectively contribute to an environment where more women can successfully transition from employees to founders. The future of women’s entrepreneurship lies in building inclusive opportunities that empower them to thrive, innovate, and lead in the business landscape.

References

1. Stevenson, Howard H., and José C. Jarillo. “A Paradigm of Entrepreneurship: Entrepreneurial Management.” *Strategic Management Journal* 11, no. 5 (1990): 17–27.
2. Priyadarshini, S., and S. Rabiyaathul Basariya. “Women Entrepreneurs - Problems and Prospects in India.” *International Journal of Civil Engineering and Technology* 9, no. 4 (2018): 96–102.
3. Kumbhar, Vijay. “Some Critical Issues of Women Entrepreneurship in Rural India.” *European Academic Research* 1, no. 2 (2013): 112-127.
4. Tass, Mudassir Ahmad, and Iqbal Ahmad Haqim. “Women Entrepreneurship – Opportunities and Challenges in India.” *The Business Review* 26 (2022): 45–61.
5. Dhillon, Manju. “Challenges Faced by Women Entrepreneurs in India.” *International Journal in Multidisciplinary and Academic Research* 6, no. 4 (2017): 78–92.
6. Singh, A., and P. Kaur. “A Conceptual Study on Glass Ceiling of Women Professionals in India.” *International Journal of Management Studies* 7, no. 2 (2020): 45-52.
8. Schumpeter, Joseph A. *The Theory of Economic Development*. Cambridge, MA: Harvard University Press, 1934.
10. McKinsey & Company. *The Power of Parity: Advancing Women’s Equality in India*, 2015. Accessed January 2025. <https://www.mckinsey.com>
11. World Economic Forum. *Gender Gap Report*, 2021. Accessed January 2025. <https://www.weforum.org>

INDIA'S FOREIGN POLICY IN THE PRESENT TIME

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Abstract: This paper intends that an enabling narrative is one of the most important tools for managing globalization successfully and its impact on India's foreign policy. Policy statements speeches, publications, debate, academic and professional training, historiography. All of these entail rhetorical exercises that cumulate into caring an environment to either support or discourage cross-platform consensus on economic openness, or on any other significant policy stance for that matter. A well-planned narrative allows policy-makers to harness the political power of rhetoric, interpretation, emotion, and imagination to reach out to constituencies and elicit support for its economic policies. In a democracy, an elit-focussed economic platform and withdrawal of public welfare payments cannot be successfully undertaken without a powerful enabling narrative foreign policy has always been guided by national interests and pragmatism. India has deep and friendly relations with both US (and Israel) and Iran. Hence it is becoming increasingly difficult for India to walk a tight rope. India had already lost much leverage in Myanmar and the Chine. In years to as India will graduate to a responsible.

India's complex political dynamics, poverty and socio-religious balance are all factors contributing to its traditional insularity on the global scene, notwithstanding its geopolitical potential and military heft, India remains a great, nuclear power with important geopolitical interests- it is the world's largest importer of arms, according to Dhruva Jaishankar, a fellow in foreign policy studies at Brookings India and the Moderator of the contemporary world. It has enormous wealth, power and potential, and yet, it must still overcome many challenges to be a increasingly consequential world player. It faces

“Tough administrative and military reforms as it transitions from historically. What has been a much more inward looking country to a much more outwards looking country.”

The foreign Behaviour of Nations - The conceptual and analytical capacity of students and practioners of international relations would be over whelmed by an indigestible man of data if the myriad activities of nations did not group themselves into dimensions. These dimensions function to classify these activities and to summarize and group them in a way which allows for discription of present and prediction of future activities. A dimension may be interest in itself as representing our underlying influence bringing about the correlations it represents. A hypothetical dimension involving trade, international organizations, etc., For example, might well be the result of economic development. But a dimension may also be of interest in summarizing a variety of different activities and indicating which of them best can be used to represent this cluster or pattern of correlated activities.

- walframe F. Hanrieder, "comparative foreign Palicy" is some Dimensions in

the foreign Behavior of Nations (David Mckay company INC. New York, 1971) PP. 134.

Primitive and Automational political systems a comparison - An attempt to bridge the gap between political science and anthropology has merits because such cross-disciplinary endeavors may free one from unnecessarily narrow assumptions which often dominate research in a given field. This is particularly true with respect to political anthropology, since the political aspects of primitive society have often been only imperfectly analyzed.

Secondly, it may not be aims to point out that long before anthropology was established as a discipline, political philosophers analyzed the social and political antecedents of existing states and governments. E.g., Montaigne, Essays, 1, xxiii ("of custom, and that we should not easily change a law Received")

Similarities Between Primitive and International Politics:

- First, the absence of a formal government with power to judge and Punish violations of law. Second, the use of violence and “self help” by the members of the system to achieve their objectives and enforce obligations. Third the derivation of law and moral obligations either from custom or from explicit, particular bargaining relationship and fourth, a predominant organizational principle which establishes political units serving many functions in the overall social system.

The first three of these similarities between primitive and international politics are relatively self-evident when one considers those primitive societies which lack fully developed governments. The fourth, however may be not clear.

“Territorial sovereignty” – i.e., the conception that sovereignty “is always associated with the Proprietorship of a limited portion of the earth’s surface, and that ‘sovereigns inter are to be deemed not absolute owners of the state’s territory”

Maine, Ancient Law .p. 99 (original italics).

Policies And Standards: - the instrument needed for reasoned choice (Policy) consists of set of normative variables, each defined in terms of human attributes, and a set of standards for expressing preferences (ordering) among the various combinations of values of those Variables. Policies must provide calculated solutions to particular choice problems. Policies must provide calculated solutions to particular choice problems. Even if the systematic study of policy did no more than reveal the situations for which no policies are available; most of the serious differences over policy or choice arise out of scarcity and the need to assign priorities. Intellectual tools, like any other instruments, evolve and improve through use. Both the tools and the purposes for which it is employed are open to improvement modification. The process is deceptively simple in the simple, in the same sense that complex digital computers function by opening and closing large numbers of switches.

- Policies are created and applied only by reference to a real empirical situation in which there are outcomes attainable by an identifiable actor. Neither the necessary nor the impossible can be the object of reasoned choice.

Discussions of policy alternatives must take place within the limits and constraints Imposed by genuine empirical situations, not within the bounds of human imagination.

Implication for “Foreign” Policy - The most significant from traditional approaches to policy making that redefinition involves is abandoning the search for general rules of choice in favor of articulated comparisons of the outcomes that can be achieved in specific situations. Rules cannot be stated as ideals against which outcomes can be measured, they can only provide a basis for comparing outcomes to the rule.

Some of the implications of this conceptions of policy of the greatest importance for those concerned with foreign affairs because focus because they involve major changes in the focus of attention for both academics and practicing politicians, as well as modification in the goals of inquiry and the means employed to achieve them. A few of these points are explored briefly in the remainder of the paper.

- If the Consequences of behavior are taken as the focus of policy criticism, the traditional distinction between “foreign” and “domestic” policies cannot be maintained rigidly. Presumably, a policy is “foreign” if its application generates consequences in areas beyond the boundaries of the national state while “domestic” policies have an impact within those boundaries.

Globalization, Liberalization, and domestic Changes - The consequences of globalizations for the domestic arena cover wide area relating to the economy, society and state. Although the improvement in the growth rate is generally acknowledged, there is, as previously noted, controversy of over whether it is the result economic liberalizations, even as some

economists have continued to repeat the theme of economic stagnation as a major Consequence of globalization and liberalizations the most Controversial issue is relations to the impact of globalization, and by extension that of liberalization, is that of whether it has alleviated or worsened poverty. Investigations and commentary on the issue constitute a virtual growth industry.

B.B. Bhattacharya and S. Sakthivel in their article “Regional Growth and Disparity in India” comparison of pre- and post- reform Decades (Reading 20) establish that the growth accelerations, albeit moderate, of the reform decade of the 1990s - compared to the pre-reform decade of the 1980s – has seen the accentuation of disparities They, thus, confirm the similar results of several other studies, certifying in the process that there has been no trends towards convergence. By and large, growth performance has been superior in the southern states while some of the Central and eastern states, with the exceptions of west Bengal, have Performed inadequately, reflecting the effects in part of higher population growth and ins part of poor governance, finally, on a normative and pragmatic note, it would seem that there is greater scope for accomplishing the good when these two forces cooperate and collaborate. On the other hand, the attempt to replace one by the other is their proper spheres, as in the state assuming the “commanding heights” of the economy or in business capturing the state, is likely to be productive of more harm than good foreign policy is a set of principles and decisions, a plan of action and a thought out course of action adopted and used by a nation for conducting relations with other nations for conducting relations with other nations ad all international actors with a view to secure the preferred and defined goals of her national interest. The objectives are achieved through Diplomacy which is a profession, skill and art of managing country’s relations with the rest of the world. Key principles for the development of any foreign policy are

- Maintaining geographical integrity and political Independence with other states.

- Accelerating the process of social and economic development within th state.
- Increasing the individual strength of a state.
- The foreign policy of a state must complement international standards.

India’s foreign policy has four important goals:

1. Protect India from traditional and non-traditional threats.
2. Create an external environment which is conducive for an inclusive development of India.
3. Ensure that India’s voice is heard on global forums and that India is able to influence world opinion on issues of global dimensions.
4. Engage and protect Indian Diaspora.

Fundamental Principles - The Principles of India’s foreign policy are rooted in the Indian ethos, culture and traditional Indians thinking and helps achieve foreign policy goals.

These are portrayed through –

Panchsheel, or five virtues were formally in the India-china Agreement in 1954 and later evolved to act as the basis of conduct of international relations globally. These five Principles are:-

1. Mutual Respect for each other’s territorial Integrity & Sovereignty.
2. Mutual non- Aggressions
3. Mutual non-Interference
4. Equality and Mutual Benofet.
5. Peaceful Co-Existence

The following features of India’s Foreign policy;

- (a) Oppositions to export of ideologies and change of Regimes.
- (b) India does not endorse unilateral sanctions/military actions.
- (c) Interventions but not Interference.
- (d) Constructive Engagement over Aggressions.
- (e) Strategic Autonomy.
- (f) Global Consensus on issues of Global Dimensions.

(g) Diplomatic outreach.

Stability and Dynamism in India's Foreign Policy Domain:-

Static factors which contribute to stability in India's foreign policies are:

- Political stability
- Socio- religious balance
- Reductions and elimination of poverty
- Strategic independence
- The Continuity provided by the Indian Foreign Service (IFS).

Factors that make India's foreign policy process dynamic and responsive are:

- (a) India's geopolitical potential
- (b) India's military might.
- (c) Demographic dividend
- (d) China's aggression
- (e) Rivalry among countries
- (f) Digitizations
- (g) Indian Diaspora
- (h) Growing Indian market
- (i) Crisis situations like covid-19.

India's foreign policy Dynamics during Covid-19.

- Health Diplomacy
- Putting Domestic priorities first
- Commitment to multilateralism
- Commitment to Regional co-operation.

Prioritizing an Integrated Neighborhood aims to address the trust deficit, reset relations and build bridges of friendship and understanding through mutually beneficial cooperation through platforms like SAARC and BIMSTEC. A massive effort has been made to improve connectivity in our neighborhood. Railway projects with, Bangladesh and Nepal, Chabahar and Sittive ports in Iran and Myanmar, and multi-modal transport Corridors in Bangladesh are some concrete examples towards extended blast its economic of progress Outreach neighbourhood not only to " and strategic engagements with the region but also to Se Act east policy balancer emerge the region. Look west policy, Central Asia policy connect -USA- Japan- Australia Quad and pointers in that directions Leveraging International partnerships to promote Balancing of relations

between major powers. India was the ability to balance Comprehensive strategic relations with major powers like us Russia while maintaining strategic autonomy. Outreach to middle powers India's south Korea, and the United Kingdom, Supports objectives in enhancing its economic and technological growth. Diplomacy for development in India aims to bring innovative and inclusive Solutions to foster development. Foreign collaborations for several flagship schemes such as Skill India, Smart Cities, Make in India, Digital India for creating a new India by 2022 all steps in direction Entering into free Trade Agreements India has signed various FTA's with Countries like with Japan, Korea, UAE and with groupings like ASEAN to accelerate economic integration and making India a vital cog in the Global supply chains.

The relationship between domestic and foreign politics -the "central mystery", as one writer has called it – has always held a special fascination for the analyst, in part because reflection on this nexus raise some of the largest questions about the nature of political unit seeks survival and accommodations in a frequently predatory environment, they also touch upon internal dimensions such as sources the perception of restrictors and in the Systems restrictions and and their institutional machinery - festivities, the role decision of groups groups and individual - makers, and so forth In other •, all the Converging factors that influence wards, o how a political unit conceives itself, articulates and advances its demands on the environment.

Organizing questions around the distinction internal and external aspects of state affairs between internal presupposes In corresponding underlying separability historical reality, firstly, most political analyst have accepted what must have appeared as a "natural", or at least an historically and analytically justifiable foreign and e, distinctions Achuren and domestic affairs secondly, they have used this distinction as the basis for an increasingly elaborate but fundamentally two-fold Division of labor. In the first place, the historical events have made that do it extremely difficult to distinguish between international and domestic have overtaken analytical endeavors that are Still based on the assumption of their separability.

Domestic structure And Foreign Policy: -

The term "nation" doesn't mean the same thing when applied to such Phenomena various as India, France, and Nigeria. Any Society is part of an evolutionary process which proceeds by means of two seemingly Contradictory mechanisms. On the one hand, the span of possible adaptations is delimited the physical environment, the internal by the structure, and, above all, by previous choices. On the other hand evolution proceeds not in a straight line but through a series of Complicated Variations which appear anything but obvious to the chief actors. In either case, the choice is not an isolated act but an accumulation of previous decisions reflecting history or tradition and valves as well as immediate pressures of the need for Survival.

Conclusion

India's foreign policy has evolved and Changed over the last seventy years, usually at a steady pace, but sometimes, drastically to respond to fast changing global or regional scenario. India been fortunate to enjoy good growth and prosperity for the last three decades. This has provided greater Leverage to India's foreign policy and, allowed for greater resources to be allocated for the conduct of diplomacy, including consolidating and strengthening our diplomatic presence all across the globe.

Ultimately, foreign policy watchers must continue to be patient towards what they can expect from India. None the less, India is continuing to increase its presence in international affairs, and it will continue to

become an ever more important player on the world stage, despite any setbacks. As its economy and military grow stronger, and with the foreign policy ideals of both its major national parties envisioning a large role for it in the global area, India will inevitably become more important and relevant to policy makers in the United States and china.

References

1. Globalization and Hs Discontents, New York: Ww. Norton, 2003.
2. Impact of the Economic Reforms in Latin America and the Caribbean, Washington, DC: Brookings. Justitution Press, 2000.
3. Mitra, Ashok, Terms of Trade and clas Relations, London: F. cass, 1977.
4. Kundu, A., Globalizing Gujarat: Urbanization Employment and Poverty, Economic and Palitical Weekly, 35 (35 and 36), 2000, PP. 3172-82.
5. Age of 5 Globalization : Contemporary Discourses and Texts, Now Dellis: Nehru Memorial Museum and Library, 2004,
6. Bajpai, Nirupam, India's unfinished nfinished Re Reform 6 Agenda -17; The Hindu, 18 April 2002.
7. Survey of Investment projects: : overview, June 1998.
8. Das, Gurcharan, India unbound, New adelli: Penguin, 2000.

ASSESSING THE ROLE OF HERITAGE TOURISM IN PROMOTING SUSTAINABLE DEVELOPMENT GOALS (SDGs) IN HAMPI

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Abstract

Heritage tourism has been identified as a significant contributor to achieving Sustainable Development Goals (SDGs), especially in culturally rich areas such as Hampi, which is a UNESCO World Heritage Site. This research explores the economic, social, and environmental aspects of heritage tourism in Hampi, highlighting its connection with the SDGs. A systematic analysis of literature indicates that heritage tourism fosters economic prosperity and cultural preservation but also presents challenges such as environmental deterioration and socio-economic imbalances (Dorcheh & Mohamed, 2013; Gnanapala & Sandaruwani, 2016). Using a mixed-method approach, information collected from surveys and regression analysis was evaluated to determine the effectiveness of policies, community involvement, and infrastructure advancement in Hampi's tourism industry. Findings reveal that while heritage tourism contributes substantially to the local economy, inconsistencies in governance and community engagement hinder sustainable progress. The study underscores the necessity for policy reforms focusing on inclusive governance, environmental stewardship, and technological integration (Su, Bramwell, & Whalley, 2018). It is recommended that future plans should incorporate the development of capacity-building initiatives and strengthened regulatory frameworks to ensure the sustainable continuation of heritage tourism in Hampi.

Keywords: Tourism, Heritage, SDG, infrastructure, culture

1. Introduction

Heritage tourism in Hampi is crucial for local development and global sustainability. The Hampi UNESCO World Heritage Site demonstrates its potential in achieving multiple SDGs. However, tensions between preservation, community needs, and government tourism goals exist. The Hampi World Heritage Management Authority has developed a Master Plan to ensure sustainable development, while the Karnataka Tourism Policy 2020-26 incentivizes tourism investments. Research is needed to address

structural, cultural, and economic issues preventing community participation in Hampi's development. Balancing preservation with development and equitable community participation is essential for Hampi to fully realize its potential in heritage tourism.

1.1: Heritage tourism in Hampi: Hampi, the Vijayanagara Empire's capital, is a 4,100-hectare archaeological and cultural landscape dating back to the 14th-16th centuries. In 1986, UNESCO included it as a World Heritage Site, recognizing its unique architectural, cultural, and historical treasures.

Archaeological evidence suggests Neolithic habitation in the region, with over 1,600 identified ruins showcasing Vijayanagara Empire's architectural brilliance, including temples, royal complexes, and market streets.

1.2: Tourism development and economic impact

Hampi's tourism development has significantly impacted the local and regional economy, with an annual influx of 500,000 tourists. The global heritage tourism market, valued at \$587.1 billion in 2023, is expected to reach \$813.5 billion in the coming years. The Indian domestic tourism industry has grown significantly, contributing \$151.1 billion to the country's GDP. Hampi's tourism potential is limited due to infrastructure shortcomings, such as lack of approach roads and quality accommodation. Despite these challenges, tourism contributes significantly to the local economy, creating jobs and increasing income. The government has initiated initiatives for local participation, but the balance between economic growth, sustainable practices, and heritage preservation remains a challenge.

1.3: Government initiatives and policies

The Karnataka Tourism Policy 2020-26 identifies Hampi as a Focus Tourism Destination, encouraging investment in sustainable tourism development in the Hampi World Heritage Area. The HWHAMA developed a Master Plan for sustainable development, and the Ministry of Tourism recognized Hampi as India's Best Tourism Village for 2023, promoting rural tourism and local culture appreciation.

1.4: Sustainability and conservation challenges

Hampi, a World Heritage Site under UNESCO, faces sustainability and conservation challenges. The Archaeology Survey of India's Hampi Circle has limited funds for core conservation, compared to an estimated Rs 25 crore needed. Environmental threats include deforestation, pollution, and unregulated stone quarrying. The complex governance structure makes it difficult to manage the area. Experts recommend improved sanitation, green

mobility plans, architectural guidelines, and holistic approaches. Community involvement in heritage tourism is minimal, disrupting traditional livelihoods and hindering effective community development. Awareness programs and workshops are needed to address these issues. Organization of paper in section 2 provides related work on heritage, tourism and economic impact. Section 3 provides research methodology which includes need of study, scope etc. Section 4 give data and result analysis. Lastly conclusion and reference are provided.

1.5: Objectives

1. To measure the current state of heritage tourism in Hampi and its alignment with Sustainable Development Goals.
2. To evaluate the effectiveness of existing policies and initiatives in promoting sustainable tourism practices in Hampi.
3. To identify challenges and opportunities in balancing heritage conservation, community needs, and tourism development in Hampi.

2. Literature review

2.1: Heritage Tourism and Sustainable Development: A Conceptual Framework

Heritage tourism, driven by historical, cultural, and natural attractions, is increasingly recognized for its role in preserving cultural identity and economic growth. It is connected with the United Nations Development Goals and fosters sustainable development as it provides people with employment and protects cultural values that contribute to the exchange of ideas between nations. Current research points towards a multifaceted approach to SH, which encompasses economic sustainability alongside social and natural capital. Some of the measures useful in assessing sustainability include the people's engagement, distributions of posts, and environmental impact [1] (2013).

2.2: Impact of Tourism on Heritage Sites

Despite its potential positive impacts on both economic development and culture revitalization, heritage tourism carries social costs such as community eviction, loss of cultural identity and environmental pollution.

Some of the social issues in Hampi are uncontrolled growth, violation of the construction norms, felling of trees, and environmental degradation. These challenges can however be managed through inclusive governance and active engagement of the communities [2] (2016).

2.3: Economic Dimensions of Heritage Tourism

Heritage tourism improves the local standard of living because it brings in new money, generates employment, and fosters enterprise at the local level. This revenue is generated solely in the Asia-Pacific region and it contributes to more than 50 million plus employment opportunities. On the other hand, the problems related to large number of tourists include detrimental effects on the environment and costs of operation. Therefore, for optimal benefits and to reduce on the impacts, local communities should play an active role in the governance and decision making processes. [3] (2018). Heritage tourism is socially and culturally relevant with both positive and negative impacts on the communities. It can bring about cultural interchange, boost the morale of various communities, and contribute toward the improvement of the economic fortunes of various locals but at the same time, it may contribute towards the commercialization of cultures and gradual eye soring of tradition. Culture and tourism are two concepts that have always posed significant challenges in the quest for sustainable conservation of heritage resources [4] (2017). Other environmental sustainability issues in heritage tourism include increased tourism growth, which is difficult to regulate. Supportive government policies for the conservation of natural resources should be put in place while at the same time ensuring that these resources can sustain local economies. According to available literature, sustainable tourism practices entail the use of environmentally sensitive materials and participation in social communities to retain cultural identity [5] (2012). The application of technological facilities in managing the cultural endowments has significantly reviewed how cultural heritage is preserved, witnessed, and disseminated. Information technologies such as AR and VR can enhance visitor experience and

knowledge transfer, while IoT frameworks facilitate preventive preservation approaches. Digital preservation helps to conserve cultural materials and prevent objects from deteriorating [6] (2022).

Policies are widely regarded as viable tools for the management of heritage tourism sustainably both government and policy structures call for the protection of cultural heritage to be prioritized in the planning and management of tourism, while UNESCO stipulates for the use of DMPs and DMOs in sustainable tourism. It also means that community involvement is essential for enhancing the sustainability of tourism, which in turn results in increased local responsibility and socio-economic impacts [7] (2022). In 2012, the Murzyn-Kupisz, M Foundation released a model which modified the linear thinking of 'take, make, dispose' approach to resources. In this context, the shift in paradigm emerged as the basis for the formation of the circular economy, which presupposed the interdependence of various participants in the circulation of resources [5] (2012). Blomsma, Fenna et al (2018) have presented the circular economy as a complex concept for sustainability that has the ability of generating social, environmental, and economic value [8]. For the theoretical foundations of the link between circular economy and sustainability, it is referred to Geissdoerfer, M et al. (2020), who have defined the positive impact of circular economy for sustainability with preservation of diversity within the economic framework[9].

In their study, Fusco Girard, L., & Gravagnuolo, A. (2024) offer a clear methodology that outlines how circular economy can be incorporated in the conservation and management of cultural heritage for development [10]. This paper from Foster, Gillian helps to find the differences between the application of circularity indicators in theories and the transition to the real-life practice of adaptive reuse in cultural heritage structures and gives the information on how those gaps can be covered by the synergy of various approaches [21] (2020). Foster's work emphasizes the importance of context-specific solutions in heritage conservation, while Arni Dewi Boronnia, A work highlights the systemic changes required for successful transition to a circular economy [22] (2023). Khajuria, A. et

al.'s (2022) work on resource management in circular systems [11] and Nocca's research on cultural heritage in circular economy provide practical guidance for implementing circular economy strategies [23] (2021).

3. Research methodology

3.1: Methodology-

The study explores heritage tourism's role in achieving Sustainable Development Goals (SDGs) in Hampi, analyzing current practices, policies, and impacts on conservation and community development, identifying areas for improvement. The study in Hampi collected primary data from local community, tourism stakeholders, and heritage management authorities to examine heritage tourism's impact on Sustainable Development Goals (SDGs). **Researcher adopted survey method where a structured questionnaire was administered to the 100 respondents that were chosen randomly espousing Simple Random sampling method.** Secondary data was sourced from academic journals, government publications, UNESCO reports, and internet sources. Convenience sampling was used to select 100 respondents from Hampi's heritage tourism sector. Data collected is analyzed using; regression analysis, ANOVA analysis, and percentage analysis to understand trends and patterns, providing insights for

improvements in heritage tourism practices.

3.2: Hypotheses under study

Hypothesis 1: Regression Statistic

H0₁: There is no significant relationship between heritage tourism practices and the promotion of Sustainable Development Goals in Hampi

H1₁: There is a significant relationship between heritage tourism practices and the promotion of Sustainable Development Goals in Hampi

Hypothesis 2: ANOVA Statistic

H0₂: There are no significant differences in the mean impacts of different heritage tourism practices on local community development in Hampi.

H1₂: At least one heritage tourism practice has a significantly different mean impact on local community development in Hampi.

4. Data & Result analysis

4.1: Demographics of Respondents:

The paper summarizes data from 100 respondents, presenting demographics, trip characteristics, and travel motivations, followed by exploring trip characteristics.

Table-1: Demographical Profile of Stakeholders

Respondents' parameters
Age: The survey reveals that 31% of respondents are aged 25-34, with 28% aged 35-44, and 23% aged 18-24.
Gender: The study reveals a male-dominated representation in Hampi's heritage tourism sector, with 37% female participation, highlighting a gap in sustainable tourism development. This suggests the need for initiatives promoting women's participation and leadership roles.
Qualification: The majority of respondents in Hampi have completed secondary education, with 27% holding bachelor's degrees and 19% having primary education. This diverse educational background necessitates capacity-building programs to enhance tourism skills and promote inclusive growth.
Occupation: The table shows tourism employs 37% of respondents in Hampi, with agricultural activities and business owners accounting for 19%, 15%, and 15% respectively, indicating an evolving economic landscape with heritage tourism creating new opportunities.
Residency duration: The graph shows that 37% of respondents have over 10 years of residency in Hampi, 29% have 6-10 years, 23% have 1-5 years, and 11% are recent residents.
Awareness of Sustainable Development Goals: 61% of Hampi residents are aware of Sustainable Development Goals, while 39% lack familiarity, indicating potential for community understanding in heritage tourism management and enhancing sustainability concepts.

4.2: Relationship between heritage tourism practices and the promotion of Sustainable Development Goals in Hampi

The relationship between Heritage tourism practices and the promotion of Sustainable Development Goals in Hampi is measure using multiple regression analysis for the Heritage tourism’s contribution to local economy, community involvement in tourism decisions with awareness of Sustainable Development Goals. Following preposition is tested adopting Multiple regression test statistic.

H0₁: There is no significant relationship between heritage tourism practices and the awareness of Sustainable Development Goals in Hampi. In the current analysis, when the relationship between awareness of Sustainable Development Goals of Hampi with tourism’s contribution to local economy and local community involvement was regressed step-wise, it reveals that there is a significant relationship between the attributes as the p value being 0.23 for tourism’s contribution and 0.24 for local community involvement which is

lesser than 0.5. Results of test statistic indicate that null hypothesis to be rejected and alternate hypothesis to be accepted indicating there is a relationship between the awareness of sustainable development goals of Hampi and heritage tourism contribution to local economy development along with involvement of local community in decision making with regard to tourism.

The values of Regression coefficient indicate the inverse relationship between awareness of sustainable development goals and tourism’s contribution to local economy. The relationship is found to be inverse indicating tourism is contributing to local economy irrespective of implementation of sustainable development goals. Whereas, the relationship between awareness of sustainable development goals and involvement of local community in decision making with regard to tourism is linear and significant. The relationship between awareness of SDGp and tourism’s contribution is less significant compared to the relationship between awareness of SDGP and involvement of local community.

Table-2: Results of Regression Analysis

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.170043							
R Square	0.028915							
Adjusted R Square	0.008892							
Standard Error	0.519039							
Observations	100							
Regression Model								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	2	0.778097	0.389049	1.444124	0.24098			
Residual	97	26.1319	0.269401					
Total	99	26.91						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>

Intercept	1.554089	0.203748	7.627521	1.646094	1.149706	1.958472	1.149706	1.958472
Heritage Tourism's Contribution to Local Economic Development Community Involvement in Tourism Decisions	-0.11995	0.100642	-1.19186	0.236224	-0.3197	0.079795	-0.3197	0.079795
	0.063522	0.054622	1.162936	0.247709	-0.04489	0.171931	-0.04489	0.171931

4.3: Differences in the mean impacts of different heritage tourism practices on local community development in Hampi- As researcher intends to identify the differences between and within the impact of heritage tourism practices on local economic development has carried out analysis of variance test (Single factor). Test results indicate that the F value is 45.89 and p value is 1.39E-10 for the proposition-

H0₂: There are no significant differences in the mean impacts of different heritage tourism practices on local community development in

Hampi.

Based on the test results, as p value is greater than significance (0.05), null hypothesis is accepted and alternate hypothesis to be rejected indicating that no significant mean differences are noticed with regard to heritage tourism practices and impact on local economy. Results also indicate enhancement of tourism practices does not lead to much difference in the contribution of tourism to local economy in the current context.

Table-3: Results of Analysis of Variance (ANOVA)

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
Heritage Tourism's Contribution to Local Economic Development	100	144	1.44	0.269091
Impact of Heritage Tourism on Community Economy	100	252	2.52	2.272323

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	58.32	1	58.32	45.89571	1.39E-10	3.888853
Within Groups	251.6	198	1.270707			
Total	309.92	199				

5. Conclusion

Research on heritage tourism in Hampi reveals that young and working-age groups are actively involved in tourism-related activities, suggesting potential for improving sustainable

tourism practices. However, there is room for improvement in representing both the youngest and oldest age brackets. The study highlights the importance of sustainable development goals (SDGs) and the positive impacts of heritage tourism on local economic

development. Challenges include environmental degradation and cultural commodification, requiring management strategies that balance preservation and development. Community interest in training and marketing is evident. Future efforts should focus on SDGs, inclusion, and stakeholder collaboration to ensure the protection of Hampi's cultural heritage and economic growth.

6. Findings:

The study reveals a diverse representation of Hampi's heritage tourism sector, with a majority aged 25-34 years and a male-dominated representation. Most respondents have secondary education and are involved in tourism-related work. The majority of respondents have lived in Hampi for over 10 years, indicating a strong presence of long-term residents. 61% are aware of Sustainable Development Goals, and 73% recognize heritage tourism's positive impact on local economic development. However, 57% have not participated in tourism-related training, indicating gaps in capacity-building initiatives. Cultural preservation is a significant concern, with cultural tours being the most beneficial tourism activity. Challenges for heritage tourism include lack of infrastructure and environmental degradation. The study highlights the need for enhanced training programs and increased engagement among younger and older demographics in heritage tourism activities.

7. Suggestions:

The text suggests several strategies to improve tourism in Hampi, including increased community engagement, capacity-building workshops, gender inclusivity, infrastructure development, marketing campaigns, environmental conservation programs, cultural awareness campaigns, supporting local businesses, regular feedback mechanisms, sustainable development goals education, enhanced tourist information services, strengthening partnerships, introducing adventure tourism options, monitoring tourism impact, and creating community-led initiatives. These strategies aim to increase community involvement, promote gender inclusivity,

improve transportation, sanitation, and public facilities, and encourage women's participation in tourism-related activities. They also emphasize the importance of preserving Hampi's cultural heritage and fostering collaboration between government, NGOs, and the private sector.

Reference

1. Dorcheh, S. A., & Mohamed, B. (2013). Local perception of tourism development: A conceptual framework for the sustainable cultural tourism. *J. Mgmt. & Sustainability*, 3, 31.
2. Gnanapala, W., & Sandaruwani, J. A. R. C. (2016). Impacts of tourism development in cultural and heritage sites: An empirical investigation. *International Journal of Economics and Business Administration*, 2(6), 68-78.
3. Su, R., Bramwell, B., & Whalley, P. A. (2018). Cultural political economy and urban heritage tourism. *Annals of Tourism Research*, 68, 30-40.
4. Rasoolimanesh, S. M., Jaafar, M., Kock, N., & Ahmad, A. G. (2017). The effects of community factors on residents' perceptions toward World Heritage Site inscription and sustainable tourism development. *Journal of Sustainable Tourism*, 25(2), 198-216.
5. Murzyn-Kupisz, M. (2012). Cultural, economic and social sustainability of heritage tourism: issues and challenges. *Economic and Environmental Studies (E&ES)*, 12(2), 113-133.
6. Pouloupoulos, V., & Wallace, M. (2022). Digital technologies and the role of data in cultural heritage: The past, the present, and the future. *Big Data and Cognitive Computing*, 6(3), 73.
7. Martínez Yáñez, Celia (2021). "The ICOMOS draft international charter for cultural heritage tourism, reinforcing cultural

- heritage protection and community resilience through responsible and sustainable tourism management. New approaches to global policies, challenges and issues concerning cultural heritage preservation and enjoyment within tourism." INTERNATIONAL SYMPOSIUM: New Metropolitan Perspectives. Cham: Springer International Publishing, 2022.
8. Blomsma, Fenna(2018). "Collective 'action recipes' in a circular economy—On waste and resource management frameworks and their role in collective change." *Journal of Cleaner Production* 199, 969-982.
 9. Geissdoerfer, M., Pieroni, M. P., Pigosso, D. C., & Soufani, K. (2020). Circular business models: A review. *Journal of cleaner production*.
 10. Fusco Girard, L., & Gravagnuolo, A. (2024). Conclusions and Some Guidelines. In *Adaptive Reuse of Cultural Heritage: Circular Business, Financial and Governance Models* (pp. 573-588). Cham: Springer International Publishing.
 11. Khajuria, A., Atienza, V. A., Chavanich, S., Henning, W., Islam, I., Kral, U., ... & Li, J. (2022). Accelerating circular economy solutions to achieve the 2030 agenda for sustainable development goals. *Circular Economy*, 1(1).
 12. Rowe, A. (2015). Finding a balance: Heritage, tourism and local needs of Hampi. Retrieved from <https://annamrowe.files.wordpress.com/2015/03/rowe-a-2015-finding-a-balance-heritage-tourism-and-local-needs-in-hampi1.pdf>
 13. Retheesh, P. T., et al. (2018). Community involvement in tourism at Hampi. *Journal of Emerging Technologies*, 5(9), 248-249.
 14. Patel, S. (2021, February). Economy induced resettlement: Design proposal for New Hampi. *ResearchGate*.
 15. Retheesh, P. T., et al. (2018). Community involvement in tourism at Hampi. *Journal of Emerging Technologies*, 5(9), 248-249.
 16. SATTVA Trust (2011). Where is the 'living' of the living World Heritage Site? Accessed 11 March, 2015. <https://hampiheritage.wordpress.com/>
 17. Thakur, Nalini and Shubhru Gupta. (2008). 'Hampi: Statutory spatial planning tools for development of World Heritage Site.' *Context* 5(1): 127-136.
 18. Settar, S. (2015). *Archaeology of Hampi: Uncovering hidden narratives*. Bangalore: Institute of Indian History and Culture.
 19. Michell, G. (2013). *Hampi: A complete guide*. New Delhi: Marg Publications.
 20. Lal, B. S. (2024). Sustainable tourism and economic growth in India: An analysis. *Journal of World Economy*, 3(1), 34-42.
 21. Foster, Gillian(2020). "Circular economy strategies for adaptive reuse of cultural heritage buildings to reduce environmental impacts." *Resources, Conservation and Recycling* 152.
 22. Arni Dewi Boronnia, A. (2023). Tourism in the circular city—a study case of the museum circularity in Amsterdam (Master's thesis).
 23. Nocca, Francesca, Pasquale De Toro, and Viktoriya Voysekhovska(2021):. "Circular economy and cultural heritage conservation: A proposal for integrating Level (s) evaluation tool." *Aestimum* 78: 105-143.

SUSTAINABLE AND GREEN FINANCE: A CASE STUDY OF BOKARO STEEL LIMITED

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Abstract: This case study examines the convergence of environmental management and sustainable finance contributions taking place in the BSL Handicrafts Training Centre, sector 2-D, Bokaro steel city, Jharkhand. BSL'S CSR department has given a boost to Bamboo project and Water hyacinth projects which have a significant environmental impact and has also given a boost to socially responsible business practices. By making better use of water hyacinth and bamboo farming, the centre has promoted responsible investment in a socially responsible manner, which demonstrates a successful model of sustainable development. This study explores the integration of sustainable and green finance in CSR-driven environmental protection projects and highlights the improvement in socio-economic status taking place in Bokaro steel city through water hyacinth project and bamboo plantation. Water hyacinth is used in making biodegradable products while bamboo plantations contribute to carbon sequestration and sustainable material sourcing as well as playing an important role in improving the economic condition of people. The projects started with the contribution of CSR and sustainable and green finance, apart from protecting the environment, also provide better employment opportunities to the poor to sustain their lives. This study is based upon descriptive as well as empirical research. Data is collected from CSR reports of Bokaro steel plant, Published reports, Literature Review and Interview-cum-Discussion Method and through Questionnaire. Primary data is obtained from interview with executive and non-executive employees of CSR section of BSL and discussion with a person, who is from ESAF-LIMS foundation, currently running Bokaro handicraft training centre, sec-2D in association with BSL/CSR. And from online survey that was made through Google forms.

Keywords:- Bokaro Steel Plant, CSR, Sustainable and Green Finance, Water hyacinth, Bamboo plantation.

Introduction: The Indian steel industry has played an important role in global economic development but it also has environmental impacts. Harmful gases emitted from the industry and its waste products badly affect the environment, due to which climate change is happening very fast. There is increasing emphasis on sustainable finance and corporate social responsibility in the steel sector, due to the need to reduce climate change. In order to investigate the effects of sustainable financing and Corporate Social Responsibility (CSR) initiatives on the Bokaro Steel Plant, a major steel producer in India, its stakeholders and the environment are the subject of this case study. The objective of this study is to promote positive change in the steel industry through the contribution of corporate social responsibility

and sustainable finance.

Corporate Social Responsibility (CSR):- Corporate social responsibility (CSR) has been referred as a number of other terms , like “corporate sustainability”, “ responsible business”, “Social impact”, “sustainable business”, “corporate conscience”, “corporate citizenship” etc. Corporate social responsibility is a business model by which companies work for the betterment of society by making their best contribution in social and geographical areas. Before 2013, only a few companies showed their awareness towards environment and society. But the government of India has amended the Companies Act 2013 and included a new section 135, under which companies have been reminded of their moral

responsibility towards the society, towards the environmental protection.

Sustainable and Green Finance:- Sustainable finance is made up of two words sustainable and finance, in which sustainable means the use of natural resources in a way that does not harm the environment and finance refers to the availability of money at the time of requirement. And the term “sustainable finance” describes how financial decisions are made with environmental, social and governance (ESG) factors taken into account (Edmans & Kacperczyk, 2022). It seeks to minimize negative impacts on the environment and promoting social well-being while generating long-term wealth for investors and society at large. Sustainable finance includes environmental, social, governance and economic factors, while green finance include only environmental factor.

Literature review:

(Vishwakarma, 2019): He has said in his paper that the word “Corporate Social Responsibility (CSR)” is being used since a long time. Earlier only a few companies used to think of doing something better for the society and did so. In his paper, the importance of CSR for the economic development of the society has been explained. And he has said that stakeholders are very important for any professional association, so there is a need to serve them in a better way which will also help in looking after the organization. **(Soppe, 2004):** In their paper they have described three types of finance: traditional finance, behavioural finance and sustainable finance. It has been concluded that the goal of a “sustainably financed company” is consistent with the multi-attribute optimiser that speak of profit, people and planet. It presents a long-term vision in which human behaviour is based on cooperation and trust and a sustainable company is one in which the portfolio of stakeholders is based on the framework of virtue-ethical/integrative-ethical. It is concluded that “sustainably financed company” is better than ‘behavioural financed company’ and ‘traditional financed company’. **(Soppe, 2009):** In his paper, he has presented his views through figures. In the first figure, he has defined sustainable corporate finance. In the second figure he has explained the difference between monetary and real

economic transactions. In third figure, he has summarised the sustainability concept and explained how when we combine ‘social responsibility investment’ and ‘sustainable banking’ in ‘sustainable corporate finance’, it becomes “sustainable finance” and when we add ‘stakeholder’s equity’ then it becomes “sustainable market economy” and when we add ‘future generation interest’ then, it becomes “sustainable development”. The fourth figure describes the transition of balance sheets from traditional into sustainable finance. And it is concluded that, CSR and SRI (social responsible investment) are interrelated with each other.

(Liang & Renneboog, 2020): Conducted a study based on secondary data. In their paper stated that whatever decision is taken by the investors on corporate social responsibility (CSR), whether it is related with financial or business management or investor portfolio decisions, ESG (environmental, social and governance) factors should be taken into consideration. This paper focuses on green finance and strategies for promoting economic de-carbonization because climate change affects financial markets and investor behaviour.

Research Gap: Although there is great interest in sustainable finance and CSR programs that promote environmental sustainability, there is still a lack of empirical research. Specifically, the role of sustainable finance in the expansion of CSR-driven water hyacinth and bamboo projects and its impacts on biodiversity conservation, carbon sequestration and community livelihoods.

Objectives:

1. To study the effectiveness of sustainable finance and CSR initiatives taken by BSL.
2. To know the relationship between sustainable finance and the project of water hyacinth and bamboo plantation as a CSR initiative.

Methodology: This study is based upon descriptive as well as empirical research. Data is collected from CSR reports of Bokaro steel plant, Published reports, Literature Review and Interview-cum-Discussion Method and through

Questionnaire. Primary data is obtained from interview with executive and non-executive employees of CSR section of BSL and discussion with a person, who is from ESAF-LIMS foundation, currently running Bokaro handicraft training centre, sec-2D in association with BSL/CSR. And from online survey that was made through Google forms. There were 10 questions in questionnaire which were based upon the objectives of the study, in which 5 questions were related with demographic information and another 5 questions were research based. Online questionnaire was sent to the respondents and we acquired 36 responses for the study. For the sampling, convenience based sampling technique is used. The sample of the study represents the peoples residing in the surrounding areas within 20 km from the organisation. Secondary data is collected from published reports, literature review and CSR reports of BSL.

Data Analysis: This report examines, whether there is a significant relation between awareness of CSR and sustainable finance and

their overall impact on the society of Bokaro steel city and its peripheral villages. The analysis is based on 35 responses taken by Google questionnaire to the following questions:-

1. Awareness among people towards CSR
2. Positive improvements in social services
3. impact on well being of society
4. Awareness among people towards environmental aspects
5. Positive impact in society

Chi-square Test:

Hypothesis 1

Null (Ho):- Improvement of social services done by CSR section of BSL have had a adversely impact on the people.

Alternative (H₁):- Improvement of social services done by CSR section of BSL have had a positive impact on the people.

Table 1- Improvement of social services done by CSR section of BSL

Positive improvements in social services	Awareness among people towards CSR		Total
	No	Yes	
No	5	0	5
Yes	1	28	29
Total	6	28	34

Degrees of freedom = 1, Significance level = 0.05

Chi-square tabular value = 3.84, Chi-square calculated value = 28.63

Chi-square calculated > Chi-square tabular
Therefore, we accept the alternate hypothesis.

Hypothesis 2

Null (Ho):- The environmental initiatives taken by CSR section of BSL have had a adversely impact on the people.

Alternative (H₁):- The environmental initiatives taken by CSR section of BSL have had a positive impact on the people.

Table 2

Impact on well being of Society	Awareness among people towards CSR		Total
	Yes	No	
Positively Impacted	28	1	29
Negatively Impacted	1	4	5
Total	29	5	34

Degrees of freedom = 1, Significance level = 0.05

Chi-square tabular value = 3.84, Chi-square calculated value = 8.984

Chi-square calculated > Chi-square tabular

Therefore, we accept the alternate hypothesis.

Conclusion:- Hypothesis testing concludes that Table 2- The environmental initiatives taken by CSR section of BSL have had a positive impact

Data Interpretation:

The data shows that the improvements in social services taking place in Bokaro Steel City has a strong correlation with Bokaro steel plant's CSR and sustainable finance, which is being done for the betterment of the people. It shows that effective communication and implementation of CSR and environmental initiatives could significantly affect the overall development of the society and indicating that these initiatives are positively impacted on the society.

Recommendations:

- Continue and expand efforts to increase people's awareness of CSR and sustainable finance, so as to have a positive impact on the society.
- Make sure that people are satisfied with the improvements being made in social services and if not, resolve the issue and assess these initiatives regularly.

Environment Protection Initiative in BSL:

CSR has provided financial support for installation of Solar Panels and Solar Electricity System in CSR Project Centres:-

- Bokaro Diksha Centre
- Bokaro Pvt. ITI
- Bokaro Handicraft Centre
- Bokaro Sangeet Kala Academy

A BSL CSR Initiative towards Sustainability: In the Cooling Pond of sector 9, Bokaro, there was a lot of accumulation of what we call water hyacinth. The water of cooling pond is used in the cooling process in the Blast furnace department of Bokaro Steel Plant. Due to accumulation of many wastes, there was a problem in cooling process. There is also

on the people.

Limitation and recommendation: The data here has been analyzed in a small sample size, which may affect the validity of the results. Conducting research with a large sample size may provide more comprehensive view of the results.

project of setting up a Floating Solar Plant in cooling pond of sector 9, but there was a problem in that too, due to water hyacinth. This waste is being used in making handicraft items in the BSL Handicraft training centre through CSR project of BSL, which is a unique initiative in itself. Since the steel industry emits a lot of carbon, another new project is being started through CSR project of BSL under which 1800 bamboo trees will be planted in the handicraft training centre, sector-2D of BSL, which was inaugurated in 6, august 2024 and Pragyan Campus, sector-9B.

BSL Handicraft Training Center: In the year 2015, the CSR team went to DUMKA and observed the handicraft related work being done at ESAF-LIMS Centre. After this visit, a Memorandum of Understanding was signed with Bokaro and ESAF-LIMS and the foundation of this handicraft center was laid. The concept of Bokaro Handicraft Centre was Started in the year 2022 with a weekly training program. In which the villagers of peripheral villages (Mahuar, Chitahi, Ritudih) were given information related to the manufacture of water hyacinth and related handicraft items. Today Bokaro Handicraft Centre provides livelihood opportunities to artisan women of our regional villages. An exhibition of Bokaro Handicraft Centre was organized in any program / fair organized in Bokaro as well as in the program organized at Pragati Maidan, New Delhi and the success stories of rural artisan women are displayed. So far, 585 women from Mahuar, Panchaaura, Sijua, Narkara and Balidih regional villages have received handicraft training, in which artisan cards of 60 women have been made and 60 will be made in 2023-24. Marketing linkage of the products made at the Handicraft Centre is already established and plans are being made to open a showroom for the same in Bokaro soon.

Bamboo is ideal plants which absorbs high density of about 10-12 tons of CO₂ in a year and plays an important role in combating

climate change by releasing 35% more oxygen than other plants. Apart from this, bamboo has immense potential for social-economic development as its use is versatile such as wildlife conservation, wasteland rejuvenation, furniture manufacturing, handicraft item manufacturing etc. With this initiative, bamboo will be available as domestic raw material to Bokaro Handicraft Centre, Sector-2D after 3 years.

Importance of Bamboo from a Sustainable

Prospective: Another name of bamboo is a monocotyledonous flowering plant and it belongs to the Poaceae family and it grows very fast with less water in the world (Ram et al., 2010). The bamboo has been used to control erosion, protect riverbanks (Shinohara et al., 2019), conserve biodiversity (Emamverdian et al., 2020) and for numerous climate change adaptation and mitigation initiatives. It can be used as a biogas (Kobayashi et al., 2004) and biofuel (Emamverdian et al., 2020) such as bioethanol. It is treated as an important socio-economic resource due to its abundance and strong traditional usage. Bamboo harvesting and processing is a major income generating activity for many local communities. Bamboo is greater use as a herb (Yu et al., 2010) and used in everything from manufacturing materials, compost profiling and musical instruments (Cho et al., 2011), paper pulp growing, basket making, water pipes, bamboo toothbrush (“Home | NITI Aayog,” 2024), pottery production, bicycles, bridges (Xiao et al., 2010) and low altitude housing (Chung & Yu, 2002). Studies have found that the bamboo is used in the manufacturing of cloths also (Afrin et al., 2012).

Importance of Water Hycinth from a Sustainable Prospective:-

It is also known as many names such as Eichhornia crassipes or Lirio acuatico or Water lily or Buchon de agua, which contains 92.8 to 95% water, 18.2 to 19% cellulose, 48.7 to 50% hemicelluloses, 4.2 to 6.1% volatile compounds, 13 to 13.5% crude protein and 3.5 to 3.8% lignin, so it can be used in a different type of processes (Tovar-Jiménez et al., 2019). It is used as a raw material for the biodegradable products, like Cardboard, Pellets, Packaging (Sierra-Carmona et al., 2022), etc. it can be used for energy production due to its high volatile biomass and low

calorific value by combustion with coal thereby increasing the reactivity of coal during the combustion process (Sukarni et al., 2019). It is a type of agricultural residue that can be used for biogas (“IOPscience,” n.d.). It is used in the production of bio plastic (Sukarni et al., 2019). Studies have found that water hyacinth is also being used in cancer treatment (“Sciencebeingjournal,” n.d.).

Bamboo plantation at Bokaro Handicrafts Centre Campus, SAIL, Bokaro: Under the Bokaro Steel Plant CSR Scheme, 1800 saplings of the 8 species are being planted in the Handicraft Training Center established in sector 2 of Bokaro.

Environmental Impact: About 120 metric tons of carbon dioxide will be sequestered by the plantation in the campus.

Economic Impact: After 3 years the bamboo plantation required by the artisans for working in the Handicrafts Centre will be taken care of by the plantation and also bamboo poles will be supplied to the artisans for their craft work.

Economic Benefits of Bamboo for Rural Communities and Artisans in India:

Skill development:

- Government and NGOs run more than 200 bamboo training centres, which enhance skills and improve earning potential of rural people.

Employment generation:

- Bamboo cultivation creates more than 8 million jobs in India.
- Additional income of Rs 80,000 to Rs 1, 20,000 per acre annually.
- Employment opportunities in rural areas.

Manufacturing:

- Bamboo is used in more than 1,500 products.
- Growing demand in furniture and handicrafts sectors.
- CAGR expected to grow by 9.2% (xResearch, 2024).
- Indian imports are worth around Rs 3600 crore (“Home | NITI Aayog,” 2024).

Low investment:

- Low initial investment compared to other cash crops.

Government subsidy and assistance:

- Government schemes like National Bamboo Mission provide up to 50% subsidy for bamboo cultivation.
- This has increased the income of rural families by up to 30%.

Findings:

- From the above analysis, we have found that there is positive relation between Bokaro steel plant's CSR and improvements in social services.
- There is a strong correlation between awareness of CSR and sustainable finance with the well being of society.
- The data suggests that most of the people living in Bokaro are aware of environmental initiatives taken by CSR department of Bokaro steel plant.
- The study revealed that BSL handicraft centre not only contributes to environmental protection but also provides livelihood opportunities for local artisans.
- Converting water hyacinth into biodegradable products is a unique experiment in itself, which is a commendable step.
- 585 women from villages have successfully trained in BSL, Handicraft training centre and opening a showroom for their products.

Conclusion: The BSL Handicrafts Training Centre's commitment to water hyacinth project, bamboo cultivation and sustainable practices is for the bright future of the society and also is a ray of hope for a greener future. By utilizing water hyacinth and bamboo's power, the handicrafts centre not only supports local artisans but also contributes to the global effort to reduce carbon emissions and protect the environment. We should draw inspiration from this creative approach, weaving sustainability into the very fabric of our communities. Despite extensive attention to CSR and sustainable finance by corporations and the investment industry, there is a need to do more academic research in this area.

We acknowledge that the academic papers in our review do not constitute an exclusive list of all studies in this area or topics, and as more studies emerge, the list needs to be updated

regularly. There is also a large and growing literature on corporate social responsibility, especially on sustainable finance, which is currently not the focus of our review. Nevertheless, we hope that our article on CSR and sustainable finance will provide readers with a more holistic understanding, and will encourage more research in this important and exciting field.

References:-

1. Afrin, T., Tsuzuki, T., Kanwar, R., & Wang, X. (2012). The origin of the antibacterial property of bamboo. *Journal of the Textile Institute*, 103(8), 844–849. <https://doi.org/10.1080/00405000.2011.614742>
2. Cho, E., Um, Y., Yoo, S. K., Lee, H., Kim, H. B., Koh, S., . . . Lee, Y. (2011). An Expressed Sequence Tag Analysis for the Fast-Growing Shoots of *Bambusa edulis* Murno. *Journal of Plant Biology*, 54(6), 402–408. <https://doi.org/10.1007/s12374-011-9179-2>
3. Chung, K. F., & Yu, W. K. (2002). Mechanical properties of structural bamboo for bamboo scaffoldings. *Engineering Structures*, 24(4), 429–442. [https://doi.org/10.1016/s0141-0296\(01\)00110-9](https://doi.org/10.1016/s0141-0296(01)00110-9)
4. Edmans, A., & Kacperczyk, M. (2022a). Sustainable Finance. *Review of Finance*, 26(6), 1309–1313. <https://doi.org/10.1093/rof/rfac069>
5. Emamverdian, A., Ding, Y., Ranaei, F., & Ahmad, Z. (2020a). Application of Bamboo Plants in Nine Aspects. *The Scientific World JOURNAL*, 2020, 1–9. <https://doi.org/10.1155/2020/7284203>
6. Home | NITI Aayog. (2024, July 24). Retrieved from <https://www.niti.gov.in/>
7. Kobayashi, F., Take, H., Asada, C., & Nakamura, Y. (2004). Methane production from steam-exploded bamboo. *Journal of Bioscience and Bioengineering*, 97(6), 426–428. [https://doi.org/10.1016/s1389-1723\(04\)70231-5](https://doi.org/10.1016/s1389-1723(04)70231-5)
8. Liang, H., & Renneboog, L. (2020). Corporate Social Responsibility and

- Sustainable Finance: A Review of the Literature. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3698631>
9. Ram, N., Singh, L., & Kumar, P. (2010). Bamboo plantation diversity and its economic role in North Bihar, India. *ResearchGate*. Retrieved from <https://www.researchgate.net/publication/343889603>
 10. Sciencebeingjournal. (n.d.). Retrieved from <http://www.sciencebeingjournal.com/>
 11. IOPscience. (n.d.). Retrieved from <https://iopscience.iop.org/>
 12. Sierra-Carmona, C. G., Hernández-Orduña, M. G., & Murrieta-Galindo, R. (2022). Alternative Uses of Water Hyacinth (*Pontederia crassipes*) from a Sustainable Perspective: A Systematic Literature Review. *Sustainability*, *14*(7), 3931. <https://doi.org/10.3390/su14073931>
 13. Shinohara, Y., Misumi, Y., Kubota, T., & Nanko, K. (2019). Characteristics of soil erosion in a moso-bamboo forest of western Japan: Comparison with a broadleaved forest and a coniferous forest. *CATENA*, *172*, 451–460. <https://doi.org/10.1016/j.catena.2018.09.011>
 14. Soppe, A. (2004). Sustainable Corporate Finance. *Journal of Business Ethics*, *53*(1/2), 213–224. <https://doi.org/10.1023/b:busi.00000039410.18373.12>
 15. Soppe, A. (2009, February 1). Sustainable Finance as a Connection Between Corporate Social Responsibility and Social Responsible Investing. Retrieved from <https://ssrn.com/abstract=1336182>
 16. Sukarni, S., Zakaria, Y., Sumarli, S., Wulandari, R., Permanasari, A. A., & Suhermanto, M. (2019). Physical and Chemical Properties of Water Hyacinth (*Eichhornia crassipes*) as a Sustainable Biofuel Feedstock. *IOP Conference Series Materials Science and Engineering*, *515*, 012070. <https://doi.org/10.1088/1757-899x/515/1/012070>
 17. Tovar-Jiménez, X., Favela-Torres, E., Volke-Sepúlveda, T. L., Escalante-Espinosa, E., Díaz-Ramírez, I. J., Córdova-López, J. A., & Téllez-Jurado, A. (2019). Influence of the geographical area and morphological part of the water hyacinth on its chemical composition. *Ingeniería Agrícola Y Biosistemas (En Línea)/Ingeniería Agrícola Y Biosistemas*, *11*(1). <https://doi.org/10.5154/r.inagbi.2017.10.013>
 18. Vishwakarma, V. (2019). Corporate Social Responsibility (A Literature Review). *Shanlax International Journal of Management*, *7*(1), 36–42. <https://doi.org/10.34293/management.v7i1.554>
 19. Xiao, Y., Zhou, Q., & Shan, B. (2010). Design and Construction of Modern Bamboo Bridges. *Journal of Bridge Engineering*, *15*(5), 533–541. [https://doi.org/10.1061/\(asce\)be.1943-5592.0000089](https://doi.org/10.1061/(asce)be.1943-5592.0000089)
 20. xResearch. (2024, August 28). Digital Agriculture Marketplace Market Size is Estimated to grow at a CAGR of 9.2% during the forecast period. Retrieved from <https://www.linkedin.com/pulse/digital-agriculture-marketplace-market-size-estimated-grow-bekff>
 21. Yu, Y., Jiang, Z., Fei, B., Wang, G., & Wang, H. (2010). An improved microtensile technique for mechanical characterization of short plant fibers: a case study on bamboo fibers. *Journal of Materials Science*, *46*(3), 739–746. <https://doi.org/10.1007/s10853-010-4806-8>

THE IMPACT OF FINTECH ON INDIA'S BANKING SECTOR: AN ANALYSIS OF DIGITAL INNOVATION AND FINANCIAL INCLUSION

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Abstract: The emergence of Financial Technology (FinTech) together with digital banking techniques had a major impact on India's financial industry. As India is emerging as second largest digital finance leader, FinTech has changed the game's rules for millions, democratizing access to services, previously reserved only for a few selected. Small businesses, the foundation of India's economy, have emerged as key beneficiaries of FinTech advancements. Digital lending platforms have effectively tackled one of their biggest challenges—access to credit. By leveraging alternative data sources, such as transaction history and behavioral insights, these platforms facilitate real-time, collateral-free financing tailored to the needs of small entrepreneurs. This enhanced financial flexibility enables businesses to expand operations, create employment opportunities, and make substantial contributions to economic growth.

The piece investigates the evolution of FinTech in India while assessing its benefits to financial inclusion and analyzing regulatory aspects as well as facing obstacles. The analysis recognizes government programs alongside the essential contribution of the Reserve Bank of India to create suitable conditions that enhance FinTech development. This article uses present market trends with projected outlooks to determine sustainable practices for FinTech and digital banking development in India.

Keywords: FinTech, Financial, Digital, Banking, Technology, INDIA

"The Impact of FinTech on India's Banking Sector: An Analysis of Digital Innovation and Financial Inclusion"

Introduction

The Indian financial sector is going through quantum innovation in recent years where technology has become a driving force in shaping how financial products and services are delivered. From digital payments to technologies like Blockchain and AI, financial institutions have been shifting towards Digital innovation. With the fusion of Mobile banking and online banking, the landscape of digital banking has been redefined. In the post-pandemic era, the Indian government has strongly emphasized boosting digital transactions and addressing the significant gap in financial inclusion, which has been identified as a key driver for raising the nation's GDP. At the center of this transformation lies financial technology, or FinTech, which has emerged as

a key player in facilitating greater financial access, efficiency, and innovation.

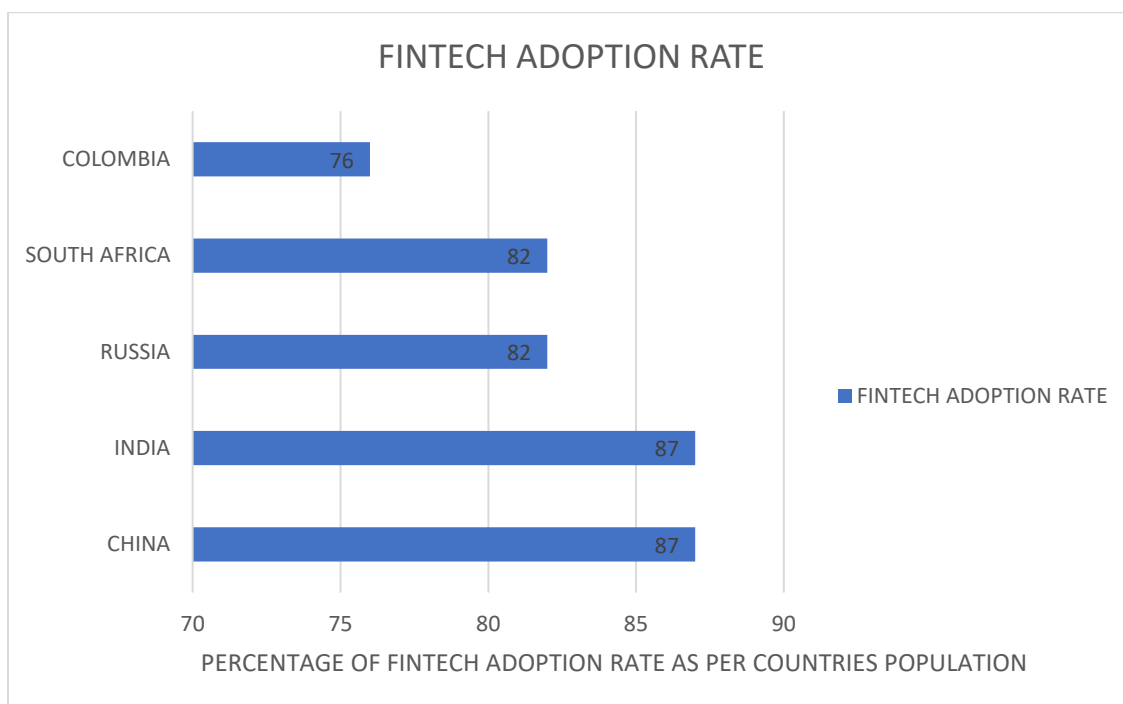
FinTech, a fusion of finance and technology, encompasses a wide array of digital solutions that aim to enhance the delivery of financial services. These technological advancements enable companies, consumers, and business owners to manage their financial operations more effectively. In the context of India, where large segments of the population have traditionally been underserved by conventional banking systems, FinTech came with the potential to bridge this gap and bring affordable and flexible financial products to low-income groups.

The Reserve Bank of India (RBI) defines financial inclusion as “the process of ensuring

access to appropriate financial products and services needed by all sections of society, especially vulnerable groups, at an affordable cost in a fair and transparent manner.” As India continues to move toward a more digitally enabled economy, the role of FinTech in promoting financial inclusion becomes ever more significant, not only in transforming the banking sector but also in contributing to broader economic growth and development. This research paper aims to analyze the impact of FinTech on India’s banking sector, focusing on the transformative effects of digital innovation and its potential to foster greater

financial inclusion.

India stands as the world’s second-largest adopter of FinTech, with 87% of its population utilizing financial technology, surpassing the global average of 64%. This surge in adoption can be attributed to several factors, including enhanced service features, greater convenience, and more affordable access to financial goods and services. In particular, FinTech offers solutions tailored to meet the needs of vulnerable groups, contributing to the ongoing efforts of financial inclusion.



SOURCE: Fintech futures(2024)

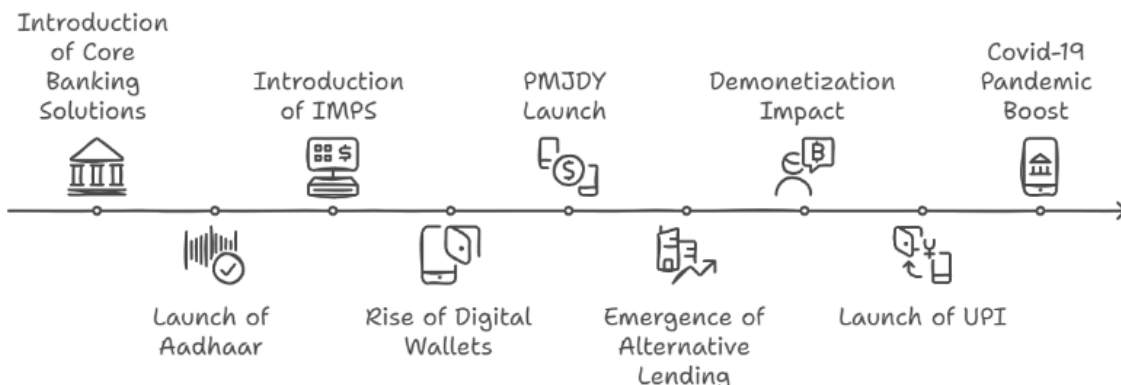
From Traditional Banking to Fintech: A Timeline

The beginning of FinTech in India dates back to the pre-2000s as the banking sector relied on core banking solutions. (CBS). With the launch of Aadhar (2009), IMPS Immediate Payment Service (2010), and the rise of digital wallets due to increasing e-commerce (Paytm) (2013), Pradhan Mantri Jan Dhan Yojana (2014), Alternative lending platforms (refers to Marketplace lending, Peer-to-Peer lending (P2P) is a model that uses technology to cater borrowers underserved by traditional lending institutions) and NON-Banking Finance Corporation(NPCI), (2015) accelerated the

growth phase. However, the arrival of UPI through NPCI and the introduction of RuPay cards (2017) has modernized digital payments through the system of affordable, easy-to-use, and real-time transfers. The Covid-19 pandemic boosted digital banking and FinTech adoption.

Embedded finance (where financial services are delivered through nonfinancial platforms like Amazon Pay and Ola Money) and Buy Now, Pay Later (BNPL) models are reshaping consumer finance, offering instant, collateral-free credit. The RBI launch of the Central Bank Digital Currency (CBDC) or digital rupee modernizes the payment ecosystem.

Evolution of Fintech in India



Source: Dristiias (2025)

Innovation in technology is essential and is transforming the way financial services are provided. Understanding the effects and impacts of such innovation is important for financial inclusion and economic growth. Being the second most emerging country, India is also doing everything in its power to embrace Fintech to enhance these elements while attempting to reduce any possible risk

Objective

- To comprehend the concept of fintech and digital banking.
- To study the challenges of implementing financial inclusion in India.
- To investigate the role of emerging technologies in promoting financial inclusion and explore prospects.

Literature Review

In a research paper titled *Disruption of Traditional Banking Services by Financial Technology in the Digital Economy*. (2024)., the researcher describes how Fintech is challenging the core banking system. Technologies like mobile banking, blockchain, and AI, have altered customer expectations and to be competitive banks must collaborate with FinTechs to undergo digital transformation. The paper explores the future trends and

strategies to change the financial landscape. Judith Nwoke.2024. The research highlights the significant progress in digital banking products that have improved the accessibility and efficiency of users. The study emphasized how AI and Blockchain have promoted financial inclusion and literacy. The research also explains the positive technological impact on small business loans and wealth distribution. Marta Barroso.2022. The researcher conducted a systematic literature review focusing on the emergence of new technologies in the finance industry. The paper shows how new technologies like AI and blockchain are reshaping the investment and finance sector surpassing traditional financial institutions. The paper also emphasized the challenges, regulations, and efforts to evolve the finTech landscape. Iwan Harsono.2024.The paper highlights the significance of FinTech in improving user experience and operational efficiency of financial services. It identifies a key trend in the financial industry, Open banking which collaborates among financial institutions promoting financial inclusion. The holistic findings of this paper are the importance of technological innovation for the future growth of the financial landscape. Fang. 2024.discussed the impact of Fintech on Banking industry. It discussed the importance of modern technologies like AI and Big data are providing automation in Fintech to enhance the Service, improve Risk management and

Innovative financial product. The paper emphasized on the need for banks to upgrade with technology and cooperate with fintech firms to overcome the challenges of data security. The use of AI, Blockchain, and big data will be beneficial for providing personalized financial services. Anton & Nucu.2024. The study examined the impact of financial inclusion on the banking system across 81 countries and concluded that there exists a linear relationship between financial inclusion and banking stability. The key component is operational efficiency, through which financial inclusion influences banking stability. This means that as financial services become more accessible and widely used the operational efficiency of banks will improve thus contributing to overall stability.

L Wewege, J Lee, MC Thomsett,(2020). ,The fintech firms attracted customers with superior user experience. The rise of open banking in the UK and Europe has changed how financial data has been shared. Traditional banks are increasingly collaborating with fintechs rather than competing. The AI-driven banking detection and risk assessment systems are integral to fintech startups. X Vives .2017. The paper concluded that Fintech will disrupt banking industry but it cannot replace banks entirely. The integration of Fintechs with banking will enable banks to adopt new technologies and fintechs will come under regulatory framework. This integration will result in hybrid financial system where both will coexist and will increased potential to overcome financial inclusion. A Sanmath .2019.The paper highlights how financial technology is collaborating with banks to enhance financial inclusion. Innovations in technology are automating customer service and banks are shifting towards digital-first strategies. However internet connectivity and digital illiteracy remain barrier in rural areas. Sloboda Larysa Ya., Demianyk Oleksandr M.2021. this case studies discussed in this paper underscore the importance of collaboration in driving technological advancements and meeting the evolving needs of customers. However, the journey is not without challenges. Regulatory environments, cybersecurity concerns, and the need for cultural compatibility between banks and fintechs are critical areas that require ongoing

attention. Governments and regulatory bodies play a crucial role in creating supportive frameworks that facilitate innovation while ensuring consumer protection and market stability.

Research Methodology- The paper is based on Secondary data, and the information is retrieved from the Internet via Academic journals, Research papers, Government publications , Industry report, Books and Conference papers, Online database such as Google Scholar, and RBI report on the same subject matter.

The Core Technologies Shaping Fintech- As mobile applications became more advanced, the expectations for user-friendly banking services increased. In today's landscape, the combination of digital transformation within financial institutions and increased flexibility has fundamentally altered the banking experience. Customers no longer need to endure lengthy queues, extended waiting periods, or delays to carry out their routine banking tasks resulting in the growing number of web-based platforms and apps to secure user data. In today's environment, both individuals and organizations want cutting-edge security solutions that will use artificial intelligence (AI) and advanced fraud detection algorithms to protect their personal information and financial transactions. Some new edge technology that acts as a plinth driving factors behind the FinTech revolution are discussed below:

1. **Blockchain technology-** Blockchain technology is a revamp in the FinTech industry. It is a decentralized peer-to-peer (P2P) digital ledger of transactions that records transactions and distributes them to all the computer system networks. Blockchain can reduce expenses and lower costs, automate operations, make data transparent, improve customer experience, and improve reaching of the FinTech companies. Credit organizations. Banks and other financial organizations are actively implementing automated solutions to conduct faster and safer financial transactions.

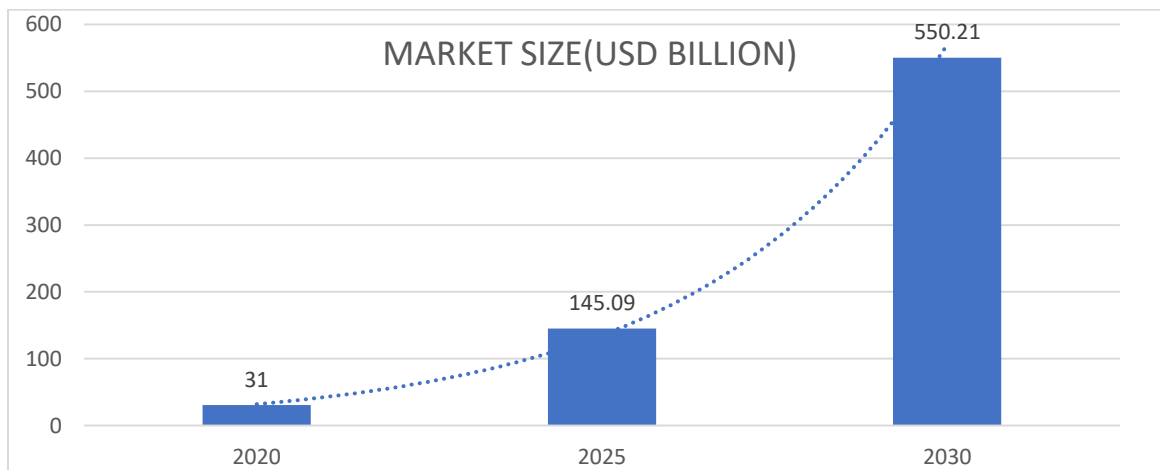
2. **Hyper-Automation-** Hyper-automation employs modern technologies such as artificial intelligence (AI), robotic process automation (RPA), and low code / no code platforms to streamline procedures for decision-making. It outlines a complete strategy for transforming individual jobs into optimized, intelligent, and automated systems that provide customer support through AI-driven chatbots and virtual assistants to handle queries. Financial organizations may use these tools to cut costs, increase operational efficiency, and deliver better services to their clients.
3. **Artificial Intelligence-** Artificial intelligence (AI) is the use of machines to do activities that typically require human intelligence. This covers a variety of tasks including understanding natural language, solving problems, determining patterns, and making judgments. Artificial intelligence (AI) systems are meant to replicate human intellect and can execute activities such as chess, language translation, and driving. Artificial intelligence (AI) is expected to deliver value addition to the financial sector by competing with expanding tech companies. AI will help in improving customer service, automation of processes, and making more informed decisions.
4. **No-Code and Low-Code Development Platforms-** No-code and low-code development platforms allow both programmers and non-programmers to develop applications with minimal or no coding experience. These platforms simplify the development process and allow for quicker deployment of applications. They are particularly useful for financial institutions looking to innovate and adapt rapidly to market changes. These platforms help to launch applications faster, reducing the time to market new financial products or services. They are easily scalable and provide flexibility to create custom applications, thus simplifying for onboard customers. FinTechs can create applications for the personal financial management of customers to manage their finances, track expenses, and set future financial goals.
5. **Cloud Computing-** Cloud computing technology is essentially used to store data, files software servers over the internet instead of hard copies and hard drives. It improves data management by collecting data, analyzing it for decision-making, and storing it in a central location. It also detects fraudulent activity and calculates risk thus improving customer service. Cloud computing uses a pay-as-you-go pricing model to reduce costs. Cloud providers ensure strict Data privacy and security by providing multiple layers of data protection against data breaches and cyber-attacks. It is an effective way to deliver personalized services to customers as per their needs and maintain their cloud-based customer relation management.
6. **Internet of Things (IoT)-** It is a network of interconnected devices that can interact and share data via the Internet. These gadgets, which are commonly outfitted with sensors and software, collect data from their surroundings and perform activities. The Internet of Things (IoT) offers a wide range of applications in the financial industry, including smart sensor systems, wireless communication networks, and support for numerous applications and processes. IoT devices may gather and send data, delivering significant insights to financial organizations.
7. **Open-Source Software-** Open-source software is a cost-effective, adaptable, and creative way to use and reuse source code by anyone around the globe. The source code can be viewed, modified, and altered as per user needs. The tools are essential for tech companies and traditional financial institutions as they give flexibility to use the platforms and reuse the code better. Open-source software facilitates

collaborative development and innovation by sharing knowledge and improving internal processes while driving industry-wide innovation. It provides better security and is technologically compatible based on standards.

8. **Big data analytics-** Big data analytics is used to collect and store financial transactions and provide a comprehensive dataset for analysis. It is a type of predictive analysis that not only analyses data but also predicts market trends, automates decision-making, and assesses the risks associated. These are extremely large data sets that are used to analyze trends and patterns and give useful insights that are used for decision-making. The three Vs of big data are velocity, volume, and variety. It opens a wealth of opportunities by empowering businesses to enhance personalized products, deliver customer service make accurate predictions, and detect fraud. Fraud detection is one of the most important keys in big data

analytics. It is a technology that works in collaboration with AI to ensure cyber security.

9. According to a report by Boston Consulting Group (BCG) and QED Investors, the fintech sector, which currently holds a 2% share of the \$12.5 trillion global finance revenue is estimated to grow up to 7%, of which banking fintechs are expected to constitute almost 25% of all banking valuations worldwide by 2030. FinTech revenues are projected to grow sixfold from \$245 billion to \$1.5 trillion by 2030, At a compounded annual growth rate of 30.55%, the market is anticipated to nearly double in size by 2030, reaching \$ 550.21 billion from \$145.09 billion in 2025. The development of governmental efforts that give the FinTech industry in India a solid base is the result of government pushes for financial inclusion, digitalization, and startup activity.



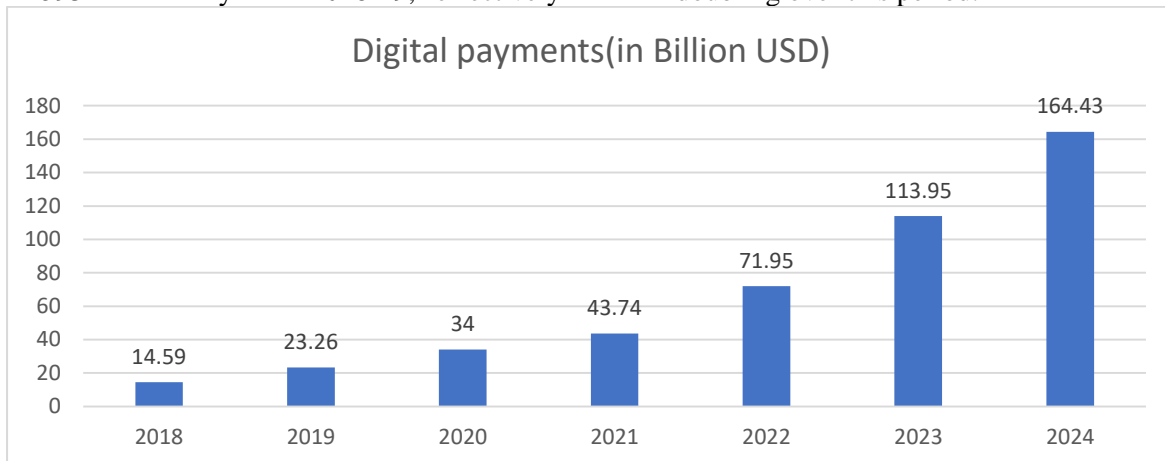
Indian Fintech Market

Source-Mordor Intelligence

The number of FinTech users worldwide is projected to rise significantly, with estimates suggesting that by 2030 more than \$1.5 trillion individuals will be utilizing FinTech services. Currently, India hosts over 10,200 FinTech startups and 25 unicorns, placing it as the third largest FinTech market globally.

Since the onset of the COVID-19 pandemic, the volume of Digital payment transactions in India has significantly increased, estimated at around \$1.89 trillion by 2025. Looking ahead, India's digital payments market is poised for further expansion. As per PwC projections, the total transaction value is anticipated to grow from ₹265 trillion in FY 2023-24 to

₹593 trillion by FY 2028-29, effectively doubling over this period.



Source-Statista

Data released by NPCI reveals that the key driver of this surge has been the Unified Payments Interface (UPI), which recorded a significant jump from 0.92 billion transactions in FY 2017-18 to 16.73 billion transactions in 2024-25.

Bridging the Gap: Fintech, Digital Banking, and Financial Inclusion

UN2030 agenda for sustainable development stressed the FinTech potential to reduce financial exclusion and reduce income inequality. Traditionally, financial services were only available through banks and institutions, however, the advancement of technology has opened the doors for non-financial institutes like FinTechs. FinTech innovation includes mobile wallets, blockchain, and digital banking to provide cost-effective and scalable solutions to bridge the gap between formal financial services and unbanked populations. Economic policy in India considers financial inclusion to be its central strategic objective. Empirical studies documented a positive relationship between Economic growth, FinTech and Financial inclusion. With innovations in digital payments, the development of new credit assessment methods, the offering of tailored financial solutions, and the fostering of financial education, FinTech has greatly changed the financial landscape of India. Below are mentioned some of the revolutionary steps that have imprinted a positive relationship between the trinity of fintech, Digital banks, and Financial inclusion.

1. Digital Payment Revolution-

Digital payments have an everlasting impact on financial inclusion, and FinTech has played a key role in this. The FinTech companies offer banking services through apps and websites thus letting millions of people access and streamline themselves in financial inclusion. In India, systems like the Unified Payments Interface (UPI) have changed the conventional and dominating cash payments. These payment methods ensure fast safe, and smooth transactions helping people—those in far-off areas—to take part in the official financial system more. India’s UPI is now accepted in seven countries: Sri Lanka, UAE, France, Singapore, Nepal, and Bhutan breaking geographical barriers.

2. Alternative credit assessment model-

Traditional methods to evaluate credit often exclude people with little or no credit history. FinTech companies have come up with new models that use data from digital transactions online activity, and other sources to check if someone can repay a loan. This approach has allowed people who couldn't get loans before to access credit and loans letting them invest in businesses, education, and personal growth.

3. **Tailored Financial Products-** FinTech companies offer many financial products made to fit the needs of individuals and small businesses. These include small loans personalized savings accounts digital insurance options, and easy-to-use investment choices. By offering these tailored financial services, FinTech has helped underserved communities manage their money better and reach financial stability thus improving financial inclusion.
4. **Promoting Financial Literacy-** Many FinTech platforms help with financial education. They offer interactive tools mobile apps, and online courses. These efforts help people understand money matters, make smart choices, and boost their financial health. This has helped lower-income groups. It gives them the know-how to handle money matters with confidence.
5. **Support Small Businesses and Entrepreneurs-** FinTech gives small businesses access to digital payment options, loans, and tools to manage money. Companies like Paytm and PhonePe let businesses handle digital payments, keep track of cash, and get loans. This helps businesses grow, create jobs, and boost the economy.
6. **Collaboration Between FinTech and Traditional Banks-** More and more, FinTech companies team up with conventional banks to reach more people. These team-ups let FinTech firms use bank systems while offering new money solutions to people who didn't have them before. When banks and FinTech firms work together, they create mixed services. These blend the safety of traditional banking with the speed and ease of FinTech.

Policy Landscape and Government Actions-
The FinTech innovation remains supported

through regulatory mechanisms created by both the Government of India and the Reserve Bank of India (RBI). The financial sector undertaking also includes regulations by the Securities and Exchange Board of India (SEBI) regulating the security market, the Insurance Regulatory and Development Authority of India (IRDAI) regulating the insurance sector, Pension Fund Regulatory and Development Authority (PFRDA) regulating the pension sector, and the National Payment Corporation of India (NPCI).

The Reserve Bank of India issued rules for digital payments together with Payment bank licenses together with regulatory sandbox (controlled environment for testing of financial products and services) which supports innovative trials while safeguarding customers. These initiatives alongside Jan Dhan Yojana and Aadhaar have established strong conditions for digital financial services through their promotion of UPI.

Challenges in the FinTech Ecosystem- While FinTech has converted fiscal services and enhanced availability, it continues to encounter several obstacles that affect its growth and efficacy. Security threats in cyberspace when combined with privacy issues of data and digital access inequality create major barriers in FinTech operations. For digital banking to sustain its growth there is an essential need to build strong infrastructure in rural areas while simultaneously running financial literacy programs.

These obstacles encompass nonsupervisory challenges and cybersecurity pitfalls. Below are some of the primary hurdles within the FinTech ecosystem.

- **Regulatory and Compliance Challenges-** the FinTech industry operates in a fast-changing regulatory environment. Governments and financial authorities regularly update rules to keep up with new technology. However, unclear regulations can create challenges for FinTech startups, which must follow complex financial laws, obtain necessary approvals, and protect customer data. Staying compliant with these rules can be

costly and time-consuming, especially for smaller FinTech companies with limited resources.

- **Data Privacy and Cybercrimes-**As digital payments are increasingly transitioning online, FinTech companies become high targets for cyber pitfalls like Data breaches and identity theft. This technology is used to enhance, automate and scale the delivery of financial services w
- **Trust and Customer Engagement-**Even though FinTech services are growing, trust remains a major challenge, especially for older demographics and people in rural areas. Many still prefer traditional banks due to concerns about security, fraud, and a lack of awareness.
- **Digital Infrastructure and Connectivity-** Even though internet access is improving, many remote and rural areas still face issues with weak digital infrastructure like Unstable mobile networks, poor internet connections, and limited smartphone availability, making it harder for people to use FinTech services. Without strong digital infrastructure, FinTech companies struggle to reach those who need financial services the most.
- **Tough Competition and Market crowding-** With many startups and established financial companies fighting for market share, the FinTech industry is highly competitive. The market crowding makes it even harder for FinTechs to retain customers as it increases marketing costs and customer acquisition costs. Unlike traditional banks with steady revenue models, FinTech companies often rely on venture capital funding and struggle to become profitable due to high operating costs and regulatory compliances.
- **Lack of Digital and Financial Literacy-** Financial literacy is crucial as a large part of the demographic lacks digital knowledge, especially in rural

and semi-rural areas. Without proper digital education, building trust and confidence in this ecosystem, especially among low-income groups is difficult.

- **The Future of Bank-FinTech Partnerships:** The partnership between Banks and FinTech companies is crucial for competitive differentiation. This partnership allows each party to focus on their core business. The intersection of these two collaboratively ensures that the demand for digital finance for finance is met efficiently. The FinTech sector is creating new products, services, and business models for the financial ecosystem, however, this sector lacks investment as they are dependent on venture capital funding, and that's where bank legacy joins. The Banking as a service (Baas) model of bank FinTech partnership enables FinTech to develop financial products on the back of legacy banks that enhance customer experience and engagements. This is a win-win situation for both partners. Another kind is FinTech- as - a- technical- partner, where banks purchase a customised white label solution (pre built by one company and sold under another brand name) from FinTech to provide a seamless experience for customers. The most important benefit of this partnership is the shortening of the timeline between the agreement and the implementation. This integration also results in the reduction of manual work, however attracting and retaining skilled professionals remains a top priority. The growing trend of Bank-FinTech partnerships is promising, as this collaboration is the evolution of the digital ecosystem and more customized customer-centric financial models. The advanced technologies leveraged by FinTech must be adopted by banks, moreover the FinTechs needs the expertise of banks to understand customer behavior and engagement. Both together look promising and can bring revolution to the financial sector

of India.

Future Prospects for the Indian Banking Ecosystem

- **Sustainable Banking and Green FinTech Initiatives**-Digital banking could reduce the environmental footprint of old banking by reducing the need for physical branches and practicing eco-conscious digital channels. Sustainability is poised to become a top priority in the future. The need for eco-friendly financial products or green Finance initiatives like green loans for investment products would focus on sustainability.
- **Neobanks**-These are online financial institutions that are very much alike to banks, They use mobile apps and websites to provide a digital banking experience. Neobanks are often terms as “challenger banks” because they challenge the traditional banking system where they offer high interest as compared to physical banks to avoid overhead costs. It further accelerates financial inclusion as they are accessible to underserved populations. The landmark of neobanks is their mobile-first approach which means they are designed to work primarily on mobile devices. They also provide innovative features like real-time transaction notifications, investment tools, easy and quick account setup, and a wide range of trading markets that include cryptocurrency and stock exchange.
- **InsuTech**, is a combination of insurance and technology which includes predictive analysis with the use of AI and IoT. It is customer customer-centric approach that creates a personalized experience across all channels. These are capable of disrupting the insurance sector and reshaping the insurance products and services delivered. The growing customer base and the emergence of technologies led to greater competition and thus it can empower traditional insurance companies by reducing cost to market, improving operational

efficiency, and developing innovative products.

- **Wealth management**-The future of wealth management is more than just FinTech. It is transparent, collaborative in nature, and importantly, personalized in the sense that the investors will get solutions on their life goals and events. They offer real-time access to users' portfolios and allow them to make decisions independently. Most of the wealth management apps use AI and blockchain to secure user interfaces.
- **Platform banking**- also known as Banking as a service (BaaS) which provides a platform allowing third-party companies to integrate their financial service into a single and unified customer interface, making a marketplace of different financial products in one place. The key driver of this system is the flexibility and seamless access to customer choices, within a single app, acting as a hub for different financial products from multiple service providers. It can facilitate financial inclusion by embedding microfinance options within its platforms.
- **RegTech and SupTech**-As per RBI, RegTech Is an application that makes regulatory compliance more effective and efficient through automated processes and lowers the cost of compliance. SupTech is a technology used to support supervision by regulators.It is seamless and straight through data collection/reporting, data analysis, and decision-making.

Research Findings and Conclusion-As we head into 2025, fintech is gearing up for further innovations, with Payment banks and hyper-personalisation leading the charge in redefining the financial industry. FinTech is more than a disruptor and is the future of banking globally. As digital banking evolves, a more customer-first approach is evolving, driven by artificial intelligence and automation that will provide hyper-personalised service for customers. Blockchain technology is another disrupter in the financial sector as its potential to streamline

financial inclusion driven by cross-border payment, reducing time and cost, and improving security is on the next level. India's Fintech has shown positive growth, driven by government initiatives (UPI, AADHAR, and PMJDY) and post-pandemic. The market is projected to grow at a CAGR of 30% recording digital payments transaction values doubled from 265 trillion (2023-24) to 593 trillion (2028-29). Emerging technologies (AI, Blockchain, IoT,) are the key enablers of financial inclusion enabling a personalized and real-time availability of financial products and services. The synergetic partnership between fintech and banks collaboratively reduces customer acquisition costs and expands reach. Neobanks, InsuTech, Green Finance, RegTech, etc are the driving forces of financial inclusion in the next phase. By prioritizing infrastructural development, regulatory policies, and financial inclusion India can solidify its global position to be a FinTech leader. The FinTech continues to innovate further and will undoubtedly act as a catalyst for financial transformation. By enabling technologies and managing risks, a new financial system can be created that is more inclusive, resilient, and cost-effective.

References

1. Nwoke, J. (2024). Digital Transformation in Financial Services and FinTech: Trends, Innovations and Emerging Technologies. *International Journal of Finance*, 9(6), 1–24. <https://doi.org/10.47941/ijf.2224>
2. *Disruption of Traditional Banking Services by Financial Technology in the Digital Economy*. (2024). <https://doi.org/10.32629/memf.v3i6.2607>
3. <https://www.pwc.in/assets/pdfs/publications/2017/FinTech-india-report-2017.pdf>
4. <https://www.finos.org/blog/open-source-software-in-finance-trends-and-insights#:~:text=In%20this%20blog%2C%20we%20explore%20the%20top%20open,points%20these%20companies%20experience%20when%20working%20with%20>
5. <https://globalfintechinnovations.com/fintech-projected-to-become-a-1-5-trillion-industry-by-2030/>
6. <https://www.equanimityinvestments.com/blog/the-rise-of-the-mighty-fintech-industry>
7. <https://www.niyogin.com/blogs/why-is-india-spearheading-the-fintech-revolution>
8. <https://www.fintechfutures.com/2024/12/2024-in-review-the-key-fintech-trends-of-the-year/>
9. Fang, Q. (2024). Application of FinTech in Digital Banking Operations in the Information Age. *Applied Mathematics and Nonlinear Sciences*, 9(1). <https://doi.org/10.2478/amns-2024-0527>
10. Anton, S. G., & Nucu, A. E. (2024). The impact of digital finance and financial inclusion on banking stability: International evidence. *Oeconomia Copernicana*, 15(2), 563–593. <https://doi.org/10.24136/oc.3046>
11. Wewege, L., Lee, J., & Thomsett, M. C. (2020). Disruptions and digital banking trends. *Journal of Applied Finance and Banking*, 10(6), 15-56.
12. Vives, X. (2017). The impact of FinTech on banking. *European Economy*, (2), 97-105.
13. Sanmath, A. (2019). Fin Tech Banking–The Revolutionized Digital Banking. *International Journal of Trend in Scientific Research and Development*, 1(1), 17-20.
14. Ya, S. L. (2020). Prospects and Risks of the Fintech Initiatives in a global banking industry. *Проблемы экономики*, (1 (43)), 275-282.
15. <https://www.drishtiiias.com/daily-updates/daily-news-editorials/india-to-become-a-fintech-powerhouse>
16. <https://www.statista.com/outlook/fmo/digital-payments/india>

AN OUTLINE OF THE LEVEL OF FARM MECHANIZATION OF ORISSA

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Abstract: Over the last two decades, India has seen significant growth in farm mechanization. The focus continues to be on promoting mechanization in agriculture to reach small farmers and regions with low farm power resources. Orissa, an eastern state known for vast agricultural land and nine agro-climatic zones, plays a crucial role in Indian agriculture. Initiatives such as subsidies on machinery, women-friendly equipment, focusing on SC and ST farmers, and promoting technical know-how and door-step services, have boosted mechanization in Orissa. The overall level of farm mechanization was calculated by combining two indices, i.e., the dimension index and the farm mechanization index (total farm machinery/000' gross cropped area), considering the data from 2008–09 to 2018–19. Puri, Cuttack, and Balasore lead in mechanization, while others like Rayagada lag. Although mechanization affects cropping intensity and yield, the observed relationship is not statistically significant.

Key Words: Orissa, Level of farm mechanization, cropping intensity, production, total cropped area.

1. Introduction: Farm mechanization is the key component of present-day agriculture. It is true that many of the progressive countries have already mechanized their agriculture under favourable conditions and adapted the modernized form of agriculture. Farm mechanization is technically alike to agricultural mechanization, but it refers to only those activities that occur normally inside the boundaries of the farm unit or at the farm unit level, like a village, commune, cooperative, etc. (Gifford, 1981). Actually farm mechanization helps to bring a new phase in agriculture in a country like India. "Farm mechanization includes development application and management of all mechanical aids for field production, water control, material handling, storing and processing. Mechanical aids include hand tools, animal drawn equipment, power tillers, tractors, engines, electric motors, processing and hauling equipment(Dogra, nd). In a context of limited land resources, it is important and most significant to use machines to enhance yield and ensure high agricultural production, in addition to other controlling factors like HYV seeds, fertilisers, irrigation, etc. The Indian agricultural sector has witnessed a drop in the use of animals and

humans in agriculture and other related activities in recent times. It gave a scope for agricultural tools to become a trend and an unavoidable component of agriculture. Farm mechanization helps in the efficient utilization of inputs, which helps to enhance the productivity of land and labour. Simultaneously, it also helps to reduce the drudgery in farm operations (Verma et al., 2015). "Mechanization involves the use of an intermediate device between the power source and the work. This intermediate device usually transforms motion, such as rotary to linear, or provides some sort of mechanical advantage, such as speed increase or decrease or leverage".(Chavan et. al., P. 15). However, to meet the growing demand for food grains and other food and non-food commodities, the expansion of farm mechanization is becoming inevitable (Srivastava, 1999). Farm mechanization can bring timeliness, better field coverage, and cost-effectiveness, as well as precise agricultural operations, competent resource use, and applied inputs. Under stressful conditions, it can also help conserve soil moisture, and the excess water from rainfall or flooding can also be re-utilised (Rao, et al. 2018). The change in technology, which

includes modern hand tools, animal drawn implements, tractors, thrashers, and more economic patterns of farm management, plays a vital role in the selection of crops grown and decision making at the farm level (Hussain, 2010). In India, the early stage of agricultural mechanization was influenced by the technological development of England (Verma, et al. 2015). In the early phase of the 19th century, the mechanization in India took place, and with time, other machines were introduced. In 1914, the first tractor was brought, and in 1930's pump sets and in 1940's high-power horsepower crawler were imported into India (Singh, 2015). The main support for mechanization came from electrical and mechanical sources. The Indian farmers gradually responded to farm mechanization technology, especially after the Green Revolution in the 1960s (Verma, et al. 2015). With time, farm mechanization became popular for farmers with large as well as small holdings. Olaoye, et al. (2002) analysed agricultural productivity, farm mechanization index, and interrelationships in southwest Nigeria by applying Nowacki's (1974) method. Singh (2006) discussed about farm mechanization policies and directions in Korea. Ghosh (2010) focused on farm mechanization in modern agriculture and its determinants. Olaoye, et al. (2017) investigated the performance level of schemes of farm settlement and its relation with the degree of agricultural mechanization index in Nigeria. Yi et al. (2019) did research on the mechanization service of China and associated institutional innovation and farm productivity. Tiwari et al. (2019) discussed the trends, policies, and associated farm mechanization in India. Sarkar (2020) investigated the investment and ownership of farm machinery across nine agro-ecological regions of India. Yedke (2023) did a review on farm mechanization in India. So many studies are done on farm mechanization, focusing on the evolution, progress, status, sustainability, relation of farm mechanization with crop production, etc. Orissa also contains Kalahandi, Balangir, Koraput, or KBK Region; those are actually backward districts that attain more attention but struggle to get development. Orissa has evidenced four 'State Agricultural Policies' in the past: the first one in 1996, the second one in 2008, the third one in 2013, and the most recent one in 2020. Farm

mechanization also got a focus in these policies. So the main focus of this paper is to explore the status or progress of farm mechanization in Orissa.

2. Material and methods:

2.1 The Study Area:

The latitude and longitudinal extension of Orissa is 17° 31'N to 20°31'N latitude and 81° 31'E to 87° 30' E longitude (**Fig.1.1**). It covers 155.71 lakh hectares, and the state is divided mainly into ten agro-climatic zones. The two main physiographic zones of the state are: i) the plateau region, which covers 77% of the total geographical area; and ii) the coastal region, which covers 23% of the total geographical area. The plateau region consists of seven agro-climatic zones, and the coastal region contains three agro-climatic zones. Warm and humid, hot moist sub-humid, moist sub-humid, and hot and humid climates are the main climatic types prevailing in the district. This versatile physiographic condition, holding sizes, crop practice, and agricultural policies have encouraged the progress of farm mechanization in the state. The state covers 155707 sq km of area and has a total 41974218 population and 34970562 of them are rural, i.e., (83.31%. 413989 cultivators, 6739993 agriculture labourers, including main and marginal workers.

2.2 Data used and database generation and methodology:

Measurement of agricultural mechanization can be done by focusing on the degree, level, and capacity of mechanization (Almasi et al., 2000). The Orissa agricultural statistics provide data on the state level distribution of different agricultural components. District-wise progress under farm mechanization under the different work plans has been given. The measurement of farm mechanization uses either the equipment per ha, the energy input per ha, or the monetary value of the power utilized per working hour. In a technological context, agricultural mechanization level is expressed as HP/ha, with the standard being 1.5 to 2.0 HP/ha (Ozemerzi and Berek-Barut, 1998). Pishbin (2013) suggested two aspects of mechanization; mechanization capacity and mechanization

level. Both indices are associated with energy consumed per unit area (Obaia and Ghazy, 2017). The data has been taken from the Orissa Agricultural Statistics from 1996–97 to 2018–19. To find out the level of farm mechanization, primarily the district-level dimension index of farm machines and the farm machine density (total farm machines/000' gross cropped area) have been calculated.

Dimension Index = (actual value of the indicator-minimum value)/(maximum value-minimum value)... (i)

The farm machine density = (total farm machines/000' gross cropped area)..... (ii) (Guleti et al. 2020)

The dimensional indices acquired from the corresponding indicators were standardized using a determined minimum and maximum (Deb, 2015). The scale-independent values for each dimension are derived by utilizing the minimum and maximum values. For calculating the dimension index, the maximum and minimum values of each farm machine from the district-level data are selected, and we try to find out the relative position of an individual with respect to the threshold values. By using the dimension index, the position of the district in terms of the availability of farm machinery can be found. The calculated data for all the years is kept, the composite dimension index of each farm machine is calculated, and then the mean dimension index value is calculated. Besides finding out the relative location of districts with respect to determined maximum and minimum values, it is also essential to estimate the farm machine density per 000' gross cropped area. This will give the spatial magnitude of farm machines existing at the district level. The farm machine density (total farm machines/000' gross cropped area) of all the districts for the selected time span, i.e., 2008–09 to 2018–19, is calculated to get the agricultural perspective. The total area sown once and/or more than once in a specific year is denoted by the gross cropped area. In other words, the area is considered multiple times based on the number of sowings in that year. The density of a farm machine can be calculated by dividing the total number of farm machines /000' hectare gross cropped area (Gulati, Juneja, 2020; Farmechn,

n.d.). Then both the dimension index and farm machine density index values are ranked by rank weighing, and from that average rank is calculated. This average rank is used as the index value of the level of farm mechanization. (2008–09 to 2018–19). Finally, bi-variate regression has been used to find out the existing relation between the level of farm mechanization and cropping intensity, the average food crop, and the average cropped area of the selected time span, i.e., 2008–09 to 2018–19.

3. Objective:

The paper consists of the following objectives- Executing the level of farm mechanization and its spatial variability and the relation of level of farm mechanization and food security, food crops and total cropped area.

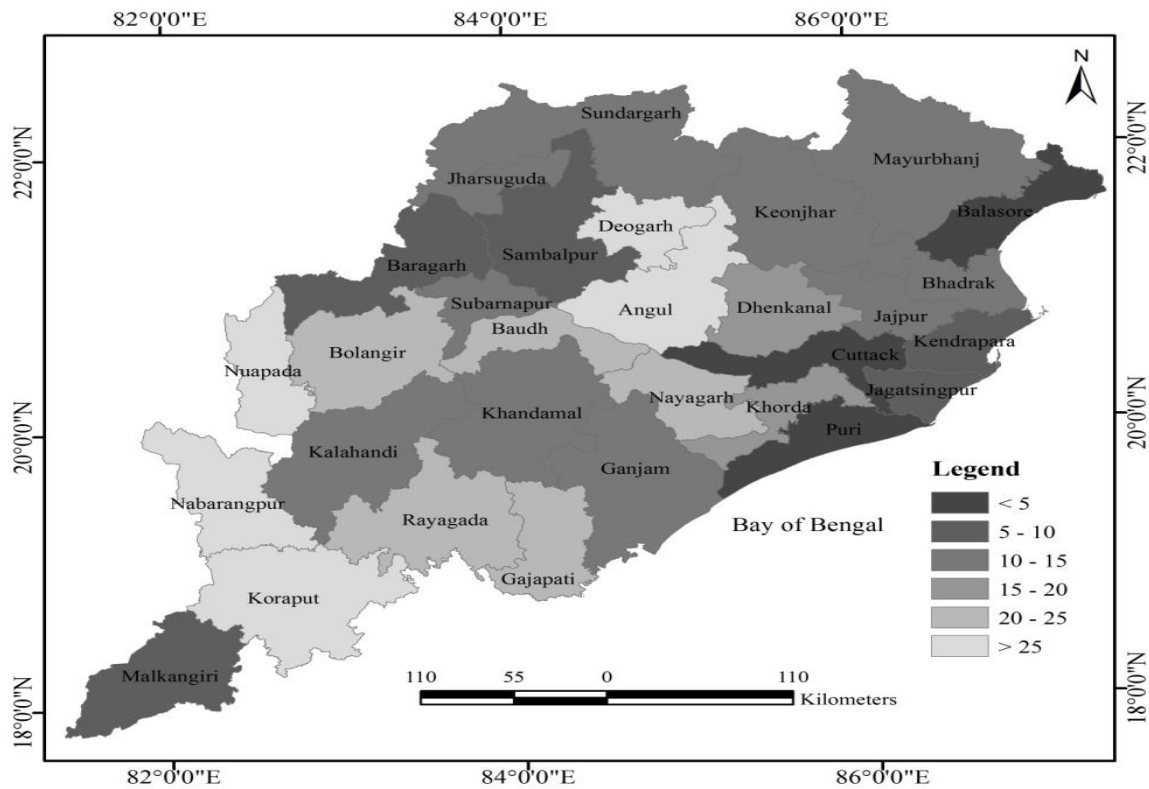
4. Result and Discussion:

4.1 Level of Farm Mechanization:

Data variability, different formats, and different times of introduction of agricultural implements and farm machinery, etc. are unavoidable hindrances to measuring the level of farm mechanization for a longer period of time. The number of farm machines is definitely important to estimate the progress of district-level farm mechanization. It is noted that farm mechanization started with tractors and power tillers, but the number of these machines started to increase only after 2008 (Mohapatra et al., 2014). The agricultural policy taken in 2008 focused on the availability of the machines at a suitable subsidized rate, i.e., around 50%, which helped to ensure the high use of machinery in farming. But this is not sufficient to demonstrate the support of farm machinery in agriculture. To find out the level of farm mechanisation, primarily the dimension index and the farm mechanization density (total farm machinery/000' Gross cropped area) have been applied. The calculated data for all the years is kept, and then both index values are ranked and the average rank is calculated, and that average rank is used as the index value of the level of farm mechanization (2008–09 to 2018–19). Before 2008–09, all the data was not available. As an example, power threshers, comb harvesters,

pump sets, etc. were not given higher prior to 2008–09, which acted as a hindrance for calculating the level of farm mechanization. So finally, the data from 2008–09 to 2018–19 is taken for analysis, Ranking is an easy method to measure the level of development. Here, the higher average value of both the selected indices, i.e., the mean dimension index and the mean farm machinery/000 GCA, shows a developed state. Prior to 2008–09, this acted as a hindrance for calculating the level of farm mechanization. So finally, the data from 2008–09 to 2018–19 is taken for analysis, Ranking is an easy method to measure the level of development. Here, the higher average value of both the selected indices, i.e., the mean dimension index and the mean farm machinery/000 GCA, shows a developed state. Prior to 2008–09 acted as a hindrance for calculating the level of farm mechanization. So finally, the data from 2008–09 to 2018–19 is taken for analysis, Ranking is an easy method to measure the level of development. Kendall's ranking method is applied to get the index value of the level of farm mechanization. Here, the higher average value of both the selected indices, i.e., the mean dimension index and the mean farm machinery/000 GCA, shows a developed state. The rank, i.e., 1, 2, etc., is given to the highest values of these two indices (Tables 1 and 2). Within 2008–09 to 2018–19 two agricultural policies can be accounted for. Puri, Cuttack, and Balasore are three districts that have achieved the highest level of farm mechanization. Continuous progress in agricultural processes, more focus on boro cultivation, intensive rice cultivation, and reduction of dependency on bullocks, demand, and available subsidies for farm machinery are some significant factors for more mechanization. 13.3% of the districts are highly mechanized including Malkangiri, one of the KBK districts. 30% of the districts have secured mechanized status in agriculture. A similar percentage of the district, i.e., 13.3%, shows a moderate to less mechanized state. 20%, or six

districts, show a more backward state or a very less mechanized state, and 66% of them are KBK districts. Though agricultural policies have been implemented and they have focused on mechanization, the backward districts are almost in the same condition as they were in 2008–09. Specifically, Koraput, Nabarangpur, and Nuapada districts are most backward from the perspective of farm mechanization as well as agricultural development. These districts had been suffering from multifaceted backwardness, like tribal backwardness, hill area backwardness, and severe natural calamity backwardness. (NABCONS, nd.) The socio-economic backwardness, coupled with government restrictions on tribal land acquisition, limits the possibility of developing potential. Even outsiders also face hindrances to harnessing and developing agricultural potential. Peculiar living habits of the local people and a lack of exposure to the outside world also inhibit the change process for accelerated economic growth. The farmers' decision to adopt mechanization relies on several factors, including socioeconomic conditions, geographical conditions, types of crops cultivated, and the availability of irrigation facilities (Ministry of Agriculture and Farmers Welfare, 2023). Heterogeneous topography, less fertile soils like brown forest, lateritic alluvial soil, red mixed red & black, lateritic soil mixed with red and yellow soil, etc., and homogenous underdeveloped native tribal cultured people don't get accustomed to mechanized from of agriculture, so this restricts the scope for agriculture as well as farm mechanization. But intensive rugged topography, with 36% of forest area and 27% cultivable land, provides lesser scope for intensive cultivation in Deograh (DLIC, Deogarh, Orissa, 2016). As per the district irrigation plan, Angul (2016), this district has only 18% net sown area and 43% is forested land, so it limits the scope for cultivation (CSE, 2017) (Fig:1).



4.2 Relation between level of farm mechanization and cropping intensity, total cropped area and crop production: The increased use of farm machines has led to an increase in cropped area, cropping intensity, and agricultural production in the country (Singh, 2000). For Orissa, whether the farm mechanization has a significant impact on cropping intensity, total cropped area, and crop production can be estimated simply by applying bi-variate regression analysis. Here, the null hypothesis can be considered as there is no relationship between farm mechanization and three other variables.

4.2.1 Level of farm mechanization and cropping intensity: Cropping intensity is the ratio of net sown area to gross cropped area. Cropping intensity refers to the number of crops raised on the same agricultural land in one agricultural year (Saud, 2021). The average cropping intensity has been calculated using district level data from 2008–09 to 2018–19. The average cropping intensity varies from 134% to 203%. 17% of the districts have an average cropping intensity lower than 145%, and 13% of the districts have the highest

average cropping intensity, i.e., more than 190%. 70% of the districts have moderate cropping intensity (Table). Higher rank, i.e., 1, 2, etc., is given to the highest values of these two indices. To get the relation between average rank detecting level of farm mechanization and average cropping intensity, rank is given to the average cropping intensity also. Here, a higher rank, i.e., 1, 2, etc., is given to the highest values of average cropping intensity. The regression between the index value of the level of farm mechanization and the rank of average cropping intensity shows that the r square value is 0.005 and the multiple R is 0.07. The null hypothesis can be considered as there is no relation between farm mechanization and cropping intensity. The relation is slightly positive, but as the p value is greater than 0.05, i.e., 0.69, the relation is statistically insignificant. So the null hypothesis can be accepted, and alternative hypothesis have to be rejected (Fig:2a).

4.2.2 Level of farm mechanization and total cropped area: Total cropped area may be influenced by the level of farm mechanization and total cropped area. The total cropped area

from 2008–09 to 2018–19 is taken, and the average cropped area (ACA) is calculated. This average cropped area is calculated, ranked, and used to find out the relation between the level of farm mechanization and the rank of the average total cropped area. The null hypothesis can be considered as there is no statistically significant relation between the index value of the level of farm mechanization and the average total cropped area. The r square value is 0.07, and the multiple R is 0.26. The relation is slightly positive, but the p value is greater than 0.05, i.e., 0.16. So the relationship is statistically insignificant (Fig:2b).

4.3.3 Level of farm mechanization and production: Farm mechanization has a significant impact on the production of crops. It is also assumed that mechanization of farm activities is

required to enhance production and productivity (AAP, Agricultural Department, Andhra Pradesh,n.d). Investing more in research on agricultural mechanization can contribute to enhancing agricultural production and attaining sustainable development by boosting land productivity and ensuring food security (Zhou, Ma., 2022; Zhou, Yang, and Wang, 2023). The bi-variate regression between the level of farm mechanization and rank of average production of food crops from 2008–09 to 2018–19 (total food grain, total oilseed, total fibre, total vegetables, total condiments, and spices) is done. The multiple R is 0.26, the R square value is 0.07, and the p-value is 0.17. The null hypothesis can be considered as there is no relation between the index value of the level of farm mechanization and food crop production. The greater P-value than 0.05 shows insignificant status (Fig:2c).

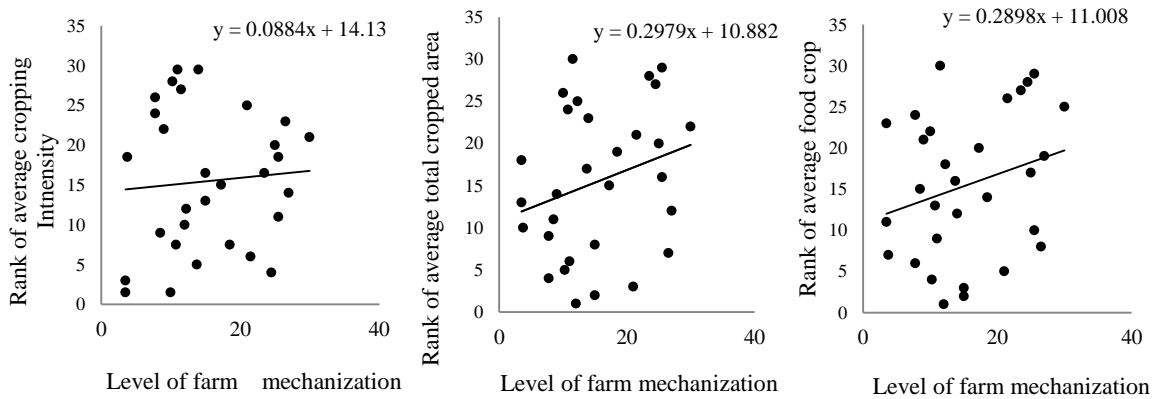


Figure 2: Scatter diagram showing the relation between a) level of farm mechanization and rank of average cropping Intensity, b) rank of average total cropped area and c) rank of average food crop production relation between these two variables so the null hypothesis has to be accepted. Another regression between index value of level of farm mechanization and average food grain also shows a p-value more than 0.05 i.e. 0.098, representing an insignificant relation between these two variables. Multiple and R square values are respectively 0.3 and 0.09. This means though a positive relation exists between index values of level of farm mechanization, average food crops and average food grains but the relation is surprisingly insignificant in this case, considering a time span of 11 years.

5. Conclusion: The well structured and planned agricultural policies became able to focus on the farm mechanization and suitable subsidies has significant impact on the sell of the tractor. Except this the positive information and its practical application encouraged the cultivators to adopt the facilities. It is for sure that the farm mechanization

can reduce drudgery in farm operations, cost effectively, consumes less time and ensures more production. This has encouraged the cultivators to incorporate the use of machineries in the cultivation process. Except this; suitable assistance on farm machinery have supported the framework. It is found that the KBK districts are still backward from the aspect of farm mechanization. The schemes are needed to be more planned. The backward (KBK) districts should get more assistance as well as a subsidy to adapt farm machineries. There are some Non-KBK districts also that are lagging behind to get sufficient farm machineries/000 GCA. So it is quite clear that the implementation of the scheme could have taken place, but not adopted by the mass of cultivators. But it also true moderation has been started in the process of cultivation and an impressive progress has been noted also. But, to get the uniform development of agriculture, more production and reduction of drudgery farm mechanization is required. With proper schemes, or rational functioning of the implemented schemes could be helpful to make the condition more progressive.

Table 1: Composite and Average of dimension Index values and average of ranks (2008-09 to 2018-19)

Sl no	District	Farm machineries											Mean DI	Rank
		Tractor	power tiller	Reaper	Trans planter	Rotav-eter	POIM	Power Thresher	SPOI	Comb. Harvester	Pump sets	Manual / BD Implements		
1	Angul	2.37	0.682	1.206	1.10	0.32	0.33	0.90	2.12	0.019	2.965	0.157	1.11	25
2	Balasore	4.49	8.413	1.438	4.42	5.57	4.98	5.95	2.44	4.483	4.742	2.444	4.49	3
3	Bargarh	8.20	8.95	3.465	5.95	4.31	3.50	0.67	6.30	11.181	4.630	1.073	5.29	1
4	Bhadrak	2.60	3.786	0.704	0.51	1.32	1.26	4.56	0.70	2.641	2.823	0.958	1.99	18
5	Bolangir	4.02	1.211	3.329	0.67	1.72	2.51	0.35	2.09	0.271	3.572	2.291	2.00	17
6	Boudh	0.70	0.42	1.687	0.35	0.36	0.32	0.11	1.37	0.131	1.590	0.531	0.69	28
7	Cuttack	5.00	4.641	3.381	3.36	3.32	2.71	7.53	2.56	0.837	6.660	2.894	3.90	5
8	Deogarh	0.67	0.911	0.668	0.67	0.20	0.27	0.00	1.63	0.043	1.228	0.166	0.59	29
9	Dhenkanal	3.14	2.456	1.124	1.11	1.57	1.06	0.99	4.31	0.094	3.198	0.745	1.80	19
10	Gajapati	1.73	0.003	1.593	0.08	0.45	0.91	0.11	0.82	0.072	1.976	0.605	0.76	27
11	Ganjam	6.01	7.878	5.866	0.95	5.76	9.26	0.18	5.74	0.184	6.744	1.509	4.55	2
12	Jagatsingpur	3.29	2.319	1.493	1.24	3.87	2.03	6.70	0.74	0.819	4.442	0.907	2.53	14
13	Jajpur	3.37	2.659	0.811	1.00	2.83	4.22	5.22	0.80	0.914	3.479	0.979	2.39	15
14	Jharsuguda	1.32	4.183	4.495	1.32	0.84	2.87	0.00	1.03	0.451	1.938	0.280	1.70	22
15	Kalahandi	5.08	6.253	2.342	3.83	2.16	3.01	0.31	6.65	1.904	3.315	3.495	3.49	8
16	Kandhamal	2.63	3.952	1.134	1.59	3.43	1.57	2.25	0.92	0.253	4.369	1.164	2.11	16
17	Kendrapara	4.35	5.677	0.983	3.30	3.38	2.58	3.42	1.70	0.451	4.202	1.641	2.88	10
18	Keonjhar	4.48	4.435	2.673	1.52	1.39	1.86	3.23	4.00	0.655	3.403	1.014	2.61	13
19	Khordha	3.29	1.513	1.519	0.97	0.63	0.68	2.59	3.89	0.676	2.387	1.210	1.76	20
20	Koraput	2.66	1.218	0.456	0.32	0.46	0.70	0.09	1.21	0.235	1.577	1.603	0.96	26
21	Malkangiri	4.62	4.713	1.615	0.70	1.95	2.19	3.11	2.43	0.723	2.852	6.150	2.82	11
22	Mayurbhanj	3.88	4.863	1.832	1.04	2.50	2.23	4.00	2.13	0.356	1.884	5.887	2.78	12
23	Nabarangpur	4.12	0.91	1.227	0.68	1.03	2.66	0.52	1.09	0.499	1.935	0.693	1.40	23
24	Nayagarh	3.10	0.922	1.573	0.60	0.34	3.18	1.88	4.19	0.056	2.836	0.322	1.73	21
25	Nuapada	1.85	0.217	0.217	0.54	0.34	0.72	0.09	0.46	0.243	0.741	0.741	0.56	30
26	Puri	4.65	2.731	8.058	4.10	3.84	2.96	9.58	2.39	2.004	7.410	1.514	4.48	4
27	Rayagada	3.69	0.484	0.468	2.70	0.38	1.17	0.09	0.68	0.4	2.436	0.916	1.22	24
28	Sambalpur	4.19	8.87	5.903	5.44	2.09	3.37	0.03	3.19	3.043	2.914	0.678	3.61	7
29	Subarnapur	5.05	3.584	1.955	4.24	4.47	3.44	0.00	2.17	3.442	3.002	0.535	2.90	9
30	Sundargarh	7.38	6.627	7.13	3.53	1.76	4.44	0.35	2.56	0.36	4.063	1.942	3.65	6

POIM: Power Operated Implements

SPOI: Special Power operated implements

Table 2: Total Farm machineries/000 Gross cropped area (2008-09 to 2018-19)

Sl no	District	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Composit e	Mean	Rank
1	Angul	0.96	2.78	5.7	1.90	6.6	5.8	2.4	6.21	6.21	3.46	3.73	45.75	4.2	29
2	Balasore	2.92	2.89	9.4	2.40	15.1	34.1	34.0	13.28	13.28	14.68	12.06	154.1	14.0	4.5
3	Bargarh	1.89	4.01	5.7	6.95	7.5	11.8	10.5	8.48	8.48	8.75	13.20	87.26	7.9	14.5
4	Bhadrak	1.85	4.58	11.9	9.54	10.4	14.4	8.4	10.25	10.25	8.55	8.65	98.77	9.0	10
5	Bolangir	1.53	3.86	2.2	4.11	3.5	6.8	6.0	8.23	8.23	6.01	7.86	58.33	5.3	25
6	Boudh	1.22	7.89	11.6	4.06	7.0	6.0	4.0	11.08	11.08	4.16	4.41	72.5	6.6	19
7	Cuttack	2.58	5.40	11.7	19.71	19.6	25.0	25.9	14.54	14.54	12.33	10.75	162.1	14.7	2
8	Deogarh	2.56	5.07	8.3	4.10	6.1	8.0	4.5	8.90	8.90	4.66	8.51	69.6	6.3	22
9	Dhenkanal	1.89	6.19	7.0	3.26	6.6	9.5	8.8	10.37	10.37	7.41	5.97	77.36	7.0	18
10	Gajapati	2.75	6.20	3.3	5.15	7.0	8.5	5.2	9.21	9.21	4.30	8.92	69.74	6.3	22
11	Ganjam	1.43	2.05	7.1	8.21	6.0	8.2	5.6	7.82	7.82	8.89	6.51	69.63	6.3	22
12	Jagatsingpur	6.02	9.91	12.4	12.66	24.0	27.1	20.1	8.64	8.64	7.31	9.28	146.1	13.3	6
13	Jajpur	2.22	6.51	7.9	5.30	13.7	10.6	6.8	8.49	8.49	7.79	9.66	87.46	8.0	12.5
14	Jharsuguda	6.06	10.59	14.1	14.52	18.9	23.1	14.1	14.25	14.25	12.43	22.93	165.2	15.0	1
15	Kalahandi	2.19	2.99	4.2	2.86	4.5	7.3	9.7	9.69	9.69	7.88	8.06	69.06	6.3	22
16	Kandhamal	5.26	9.48	14.2	10.29	3.4	4.4	8.5	15.50	15.50	12.66	10.07	109.3	9.9	8.5
17	Kendrapara	2.78	4.03	4.7	6.79	14.1	15.1	10.2	9.11	9.11	14.33	19.46	109.7	10.0	7
18	Keonjhar	1.81	8.87	8.2	12.78	5.2	8.5	6.9	10.27	10.27	3.37	4.79	80.96	7.4	17
19	Khordha	2.02	4.43	3.1	4.13	17.0	9.7	8.0	9.04	9.04	9.60	10.73	86.79	7.9	14.5

20	Koraput	0.92	1.59	3.8	3.45	3.8	5.5	9.9	6.42	6.42	2.97	4.92	49.69	4.5	27
21	Malkangiri	4.44	12.57	7.3	10.05	7.7	5.2	2.9	7.60	7.60	29.61	58.61	153.6	14.0	4.5
22	Mayurbhanj	0.43	1.15	3.8	3.30	11.9	19.3	23.8	19.40	19.40	1.92	4.22	108.6	9.9	8.5
23	Nabarangpu	1.33	2.48	3.5	2.45	5.9	6.3	4.8	6.05	6.05	4.84	4.28	47.98	4.4	28
24	Nayagarh	1.94	8.51	5.8	4.83	7.5	8.0	3.5	10.73	10.73	2.81	4.45	68.8	6.3	22
25	Nuapada	0.38	2.91	3.6	2.41	2.0	4.2	2.2	3.75	3.75	2.64	3.42	31.26	2.8	30
26	Puri	4.01	6.19	20.0	19.71	17.7	19.5	22.9	10.56	10.56	11.08	12.67	154.9	14.1	3
27	Rayagada	2.40	1.96	3.3	4.83	5.6	5.5	3.7	8.84	8.84	3.44	5.59	54	4.9	26
28	Sambalpur	3.99	5.85	5.8	8.41	8.9	13.4	9.6	10.15	10.15	7.60	12.85	96.7	8.8	11
29	Subarnapur	4.87	10.15	10.7	10.23	6.0	7.4	5.0	8.65	8.65	5.22	11.63	88.5	8.0	12.5
30	Sundargarh	2.16	4.79	6.9	3.67	7.2	12.0	10.0	12.28	12.28	6.33	8.99	86.6	7.9	16

Table 3: Calculation table for level of farm mechanization 2008-09 to 2018-19:

Sl No	District	DIR	FMD AR	Mean Rank (FMI)	Sl No	District	DIR	FMD AR	Mean Rank (FMI)	Sl No	District	DIR	FMD AR	Mean Rank (FMI)
1	Angul	25	29	27	11	Ganjam	2	22	12	21	Malkangiri	11	4.5	7.75
2	Balasore	3	4.5	3.75	12	Jagatsingpur	14	6	10	22	Mayurbhanj	12	8.5	10.25
3	Bargarh	1	14.5	7.75	13	Jajpur	15	12.5	13.75	23	Nabarangpur	23	28	25.5
4	Bhadrak	18	10	14	14	Jharsuguda	22	1	11.5	24	Nayagarh	21	22	21.5
5	Bolangir	17	25	21	15	Kalahandi	8	22	15	25	Nuapada	30	30	30
6	Boudh	28	19	23.5	16	Kandhamal	16	8.5	12.25	26	Puri	4	3	3.5
7	Cuttack	5	2	3.5	17	Kendrapara	10	7	8.5	27	Rayagada	24	26	25
8	Deogarh	29	22	25.5	18	Keonjhar	13	17	15	28	Sambalpur	7	11	9
9	Dhenkanal	19	18	18.5	19	Khordha	20	14.5	17.25	29	Subarnapur	9	12.5	10.75
10	Gajapati	27	22	24.5	20	Koraput	26	27	26.5	30	Sundargarh	6	16	11

Note: DIR:Dimension Index rank

FMDAR: Farm machineries Density Average Rank

Table 4: Level of farm mechanization 2008-09 to 2018-19

Range	Status	Districts	In No	In %
<5	Very highly mechanized	Puri, Cuttack ,Balasore	03	10.00
5-10	Highly mechanized	Baragarh,Malkangiri, Sambalpur, Kendrapara,	04	13.33
10-15	Mechanized	Jagatsingpur, Mayurbhanj, Sundargarh, Subarnapur, JharsugudaGanjam, Kandhamal,Jajpur, Bhadrak	09	30.00
15-20	Moderately mechanized	KalahandiKeonjhar, Khordha ,Dhenkanal	04	13.33
20-25	Less mechanized	Bolangir, Nayagarh , Boudh ,Gajapati	04	13.33
>25	Very less mechanized	Rayagada, Deogarh ,Nabarangpur, Koraput ,Angul, Nuapada	06	20.00

Reference:

1. Alla, Bhargavi. Dr. Varma, B.M (2021). Design and Analysis of a rotavator. *International Research Journal of Engineering And Technology*. 8, 12.pp.730-742. <https://www.irjet.net/archives/V8/i12/I RJET-V8I12I2127.pdf>
2. Almasi, M., Kiani, S. and Louimi, N. (2000).Principles of Agricultural Mechanization.Ma'soume (PBUH) Publication.Ghom, Iran. P. 19-40.
3. Alkire, S.(2002). Dimensions of Human Development. *World Development*, Volume 30, 2. pp. 181–205, [https://doi.org/10.1016/S0305-750X\(01\)00109-7](https://doi.org/10.1016/S0305-750X(01)00109-7).

4. Bhuyan,J., Mohanty,D.K.(2017). Assessment of manual paddy transplanters for drudgery reduction of farm women in Mayurbhanj district of Orissa, *Asian Journal of Home Science* DOI: 10.15740/HAS/AJHS/12.2/373-377, Volume 12 | Issue 2 | December, 2017 | 373-377, http://www.researchjournal.co.in/upload/assignments/12_373-377.pdf.
5. Chavan, P.B., Patil, D .K. Dhondge,D .S. (2015). Design and Development of manually Operated Reaper, *IOSR Journal of Mechanical and Civil Engineering*, 12,3. PP 15-22. https://www.academia.edu/26944147/Design_and_Development_of_manually_Operated_Reaper

6. Cherian, A., Jessen, P.S. Varghese, A. (2016). A Review on Power Tiller Attachments. 10.13140/RG.2.1.4843.3528. Kerala Technological Congress
7. https://www.researchgate.net/publication/303305626_A_Review_on_Power_Tiller_Attachments
8. Chitta, (2009). Orissa farmers buy tractors, power tillers and combine harvesters in record numbers. <https://www.orissalinks.com/orissagrowth/archives/2232>. Retrieved on: 12.2.2022
9. CSE (2017). Indicative Plan District Mineral Foundation Angul, Odisha. https://cdn.cseindia.org/docs/DMF/dmf_different_states/Indicative-plan-district-mineral-foundation-Angul-Odisha.pdf.
10. Das, F.C. (2009). Report on status and prospects of mechanisation in rice. Rice Knowledge Management Portal pp.1 24
11. Deb, S. (2015). The Human Development Index and Its Methodological Refinements. *Social Change*, 45(1), 131-136. <https://doi.org/10.1177/0049085714561937>.
12. Dogra, R (n.d) Farm Machinery and Equipment I, e-KrishiShiksha
13. <http://ecoursesonline.iasri.res.in/mod/page/view.php?id=473>
14. https://cdn.cseindia.org/docs/DMF/dmf_different_states/Indicative-plan-district-mineral-foundation-Angul-Orissa.pdf.
15. FAO, (2016). Sustainable Agricultural Mechanization. <https://www.fao.org/3/i6167e/i6167e.pdf>. retrieved on: 14.08.2023
16. Ghosh, B.K. (2010). Determinants of Farm Mechanisation in Modern Agriculture: A Case Study of Burdwan Districts of West Bengal. *International Journal of Agricultural Research*. 5. 1107-1115. 10.3923/ijar.2010.1107.1115.
17. Gifford R. C. (1981). *Agricultural mechanisation in development: Guidelines for strategy formulation*. FAO Agricultural Services Bulletin No. 45. Food and Agriculture Organisation, Rome. <https://www.fao.org/3/be821e/be821e.pdf>.
18. Government of Andhra Pradesh, Department of Agriculture.
19. Government of India, District Level Implementation Committee, Deogarh, Odisha (2016). District Irrigation Plan (Year- 2016) of Deogarh District, Odisha. <https://pmksy.gov.in/mis/Uploads/2016/20160603095805360-1.pdf>.
20. Government of India, Ministry of Agriculture & Farmers Welfare.(2023). Mechanisation of Indian Agriculture.PIB Delhi
21. <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1896139#:~:text=The%20farm%20mechanization%20levels%20assessed,operation%20is%20the%20least%20mechanized%20>
22. https://pc.Orissa.gov.in/sites/default/files/2020-03/Economic_plantation.pdf
23. Government of Orissa, Information and Public Relations Department (2005). State Agriculture Policy - 1996 , Orissa Reference Annual – 2005. <https://magazines.Orissa.gov.in/orissaannualreference/ORA-2005/ORA-2005.html>.
24. Government of Orissa, Directorate of Agriculture and Food Production Orissa (2000-01). Orissa Agriculture Statistics 2000-01. <https://agri.Orissa.gov.in/sites/default/files/2022-08/AGRICULTURAL%20STATISTICS-2000-2001.pdf>.
25. Government of Orissa, Directorate of Agriculture and Food Production Orissa (2003). Orissa Agriculture Statistics 2001-02. <https://agri.Orissa.gov.in/sites/default/files/2022-08/AGRICULTURAL%20STATISTICS-2000-2001.pdf>.
26. Government of Orissa, Statistics Section, Directorate of Agriculture and Food Production Orissa (2004). Orissa Agriculture Statistics 2002-03. . Orissa, Bhuvaneswar.

STUDY OF THE SOCIO-ECONOMIC AND POLITICAL EMPOWERMENT OF WOMEN THROUGH FISHERY ACTIVITIES AT GHATAL SUB-DIVISION OF PASCHIM MEDINIPUR DISTRICT OF WEST BENGAL

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Abstract: In today's world, women are trying to be self-reliant in the aspects of socially, economically, politically and psychologically, therefore they are joining various professions as like fishery activities. The aim of this study is to find out how the women of Ghatal sub-division are progressing themselves economically, socially, politically and psychologically self-independent. For this study, researcher has applied descriptive and exploratory research methods with quantitative and qualitative methods. Researcher has collected sixty-seven raw data from the fisherwomen. These data have been analyzed through MS Excel data analysis tools. Final outcome of this study is, most of the women who has participated in fishery activities, are from fish selling and fish production category, their average age is between 38-49 years, their educational status is that 39 women are from literate group and 28 women from illiterate group, their average income of per month is 8500 rupees. Most of the women's political active and also, they are psychologically satisfied by being associated with this work. The Government (central-state) has taken some initiatives for the development of their livelihood. Due to some of administrative complicities, these initiative and policies has not successfully implemented.

Keywords- Women Empowerment, Fishery Activities, Socio Economic and Political Status, Self-Sustenance.

Introduction

Empowerment is a continuous and cyclical process through which people are made socially, economically and politically self-reliant. Where a person can have full control over his life. He shall enjoy full freedom in his personal life and shall be immediately assured of the right to speech and expression of opinion. So, it has different views about this empowerment- According to the Merriam-webster dictionary, "act or action of empowering someone or something: the granting of the power, right, or authority to perform various acts or duties". According to Cambridge dictionary, "the process of gaining freedom and power to do what you

want or to control what happens to you". According to Collins dictionary, "The empowerment of a person or group of people is the process of giving them power and status in a particular situation". According to The Berkeley Well-Being Institute. "Process that fosters power in people for use in their own lives, their communities, and their society, by acting on issues they define as important". According to the Oxford Learner's Dictionaries, "the act of giving somebody more control over their own life". According to the Yui (2021), "authority or power given to someone to do something," as well as "the process of becoming stronger and more confident, especially in controlling one's life and claiming one's rights".

Western Perspective of Women Empowerment
When we talk about the concept of the Women Empowerment, the first thing comes to our mind is they (women) are 'neglected and oppressed'. The main reason for this thinking come to our mind is that patriarchy, patriarchal society has been treated 'women' as an object/machine, since ancient times till now. They do not care about the 'women' as a human being, they have all the same freedoms or rights as like men. The people of patriarchal society, they think that women are 'weak'. so, their duty should be a 'mother' not to participate in the main stream of the society. It is not just that women are being exploited in recent time, they have been neglected by the patriarchal society from the ancient times in the name of religion, societal rituals, economic and political factors. However, now women are living in a better position compare to before, but they have not yet become fully self-reliant. So, they have been seen doing various movements, meetings and building associations at different times to make themselves self-reliant, such as- Women Suffrage Movement in the end of 19th centuries and early 20th centuries, they were organized for voting right and this movement spread in many countries like USA, UK and New Zealand etc. finally the they were securing the suffrage right by the various wave/movement. These wave are-

- First Wave- mainly focused on the legal and political equality as well as property right and access to education.
- Second Wave- this movement has been emerged in the 1960s and 1970s, the main objective to reduce the cultural and social inequality as well as to fight against the work-place discrimination, domestic violence and barrier of reproductive rights.
- Third Wave – this movement emerged in the early 1990s, it has main objective that, addressing issues such as LGBTQ+ right, to reduce the racial inequality and also global perspective of feminism.

And lastly, Women's Movement ensuring rights of women in areas such as health, education, employment, and political representation. Also, numerous international

treaties and agreement have been signed focusing on the women's empowerment such as, According to Anon and Tomar, "These are CEDAW (1993), the Mexico Action Plan (1975), the Forward- Looking Tactics of Nairobi (1985), the Declaration of Beijing, and the Forum for Action (1995) and other instruments of this nature" (Anon & Tomar, 2021).

Indian Perspective of Women Empowerment- Since, the ancient time, women have been faced various problems by the male dominated society but at that time, various reformists leaders emerged to break out these obstacles, viz Annie Besant, Sarojini Naidu, Ishwar Chandra Vidyasagar, Raja Rammohan Roy, Jyoti Rao Phule and Pandita Ramabai. They were trying to create awareness among the women and also teach them how to removing the social, political and economic obstacles as well as sati paratha, child marriage, Parda Protha and polygamy. They were little bit successful to create in awareness for the development of the women. At that time women were transferred them from traditional rituals to modern societal norms, breaking the various barriers of patriarchal society. India's independence and sovereignty were recognized on August 15, 1947. As a result, we got a written constitution. In this written constitution, women's rights have been enshrined. These are- Article 14, Article 15, Article 16, Article 39(A), Article 42, Article 44, Article 51 A (E), Article 243 D (3), Article 243 D (4) and Article 243 T (4).

In the present time, the govt. of India has been taken various policies for development of the women, like- Beti Bachao Beti Padhao Scheme, Women help line scheme, Working women hostel, Rajiv Gandhi National Creche Schem, Ujjwala Scheme, Swadhar Greh, Support to Training and Employment Programme of Women, Mahila Police Volunteers, Indira Gandhi Matritva Sahyog Yojana, One stop centre scheme, Nari shakti Puruskar and Matsya Sampad Yojana etc. And also, the state govt. of West Bengal has been taken namouras welfare policies & schemes for betterment of the women. Like, Kanya Shree Prakalpa, Prakalpa, Sabuj Sathi, Utkarsh Bangla, Swasthya Sathi, Joi Johar Scheme, Bongo Matsya Yojana and Lakshmi Bandar etc.

The Emergence of Fishery Industry- The growth of the fishing industry is an important sphere in human history. When human civilization originally began, they lived near bodies of water and relied on fish for food. Fishing has become a viable livelihood. Historically, coastal peoples catch fish with nets, hooks, and traps. Later on, they are catching fish by the boats, ship and modern equipment. During the 18th to 19th centuries, we can see significant change in fishing industries because of industrial revolution. Even now, the fishing industry is an important part of the world economy, providing food security, employment, and economic growth to many countries. The fisheries industry is developing to meet the growing global human demand for seafood.

Fishery Industry- The fisheries industry refers to many activities including the cultivation, processing, and distribution of fish and other aquatic animals. This industry has included small-scale fishing, large-scale commercial fishing operations, and aquaculture.

What are the Fishery Activities- It is basically economic activities that involve fish culture and capture. Fishery activities typically include the production, harvesting, processing, and distribution of fish and other aquatic organisms for human consumption or other uses. These activities are- fishing, processing, net mending, food processing, salting, distribution and marketing and also research and management etc.

Review of Literatures

These literature review assists researcher to gain knowledge about the previous study, it is now very much helpful to understand and explain the significance of the study. Umesha, K. M. (2023). In this study, the researcher demonstrates that this sector has been a significant contributor to foreign exchange gains, with India being one of the world's leading seafood exporting countries. Mondal et al., (2019). This study has provided that aquaculture production, revenue generation, livelihood resource extraction and food security is an unquestionable contribution to rural poverty alleviation in Bangladesh. A Baseline

Report, Department of foreign affairs and trade, Government of Australia, (2020). In this report has focused on every government's principal is to implement laws and initiatives to empower women and provide them with additional benefits. Finally, this report encourages government, industry, and civil society organizations to incorporate gender into programs such as technical development, research, and data collection. Datta, S. K., & Kandu, R. (2000). The writer has given importance on advanced initiatives such as health insurance, increased training and credit facilities, easier access to inputs, restoration of previously underutilized wetlands and need-based government incentives. These initiatives can help to improve the fishing industry. Jacob, J. (2021). In this journal the researcher has given focus on the Women's participation in fishing industries. Not only helps society decrease gender disparity through ornamental agriculture, but it also improves the quality of life of women in various countries, states, and communities (Jacob, 2021).

Research Gap-Through this review of literatures, I have gained a lot of information about my research area. These reviews are so much helpful for me. There has a lot of research articles on empowerment of women through fishery activities but I could not find single research on my research area. Here is a justification of my research.

Objectives of the Study-To find the socio-economic and political status of fisher-women in Ghatal Sub-Division district of Paschim Medinipur in West Bengal. **Methodology-** In my research I have study on Ghatal sub-division, which under in a district of Paschim Medinipur. Paschim Medinipur is known as a West Medinipur, which are divided into three sub-division: Medinipur Sadar, Kharagpur and Ghatal. This Subdivision have five municipalities like, Chandrakona, Ram Jibonpur, Khirpai, Kharar and the Ghatal Municipality, as well as five community development blocks like- Ghatal, Chandrakona-I, Chandrakona-II, Daspur-I, and Daspur-II. The sub-division is located in the northeast of Paschim Medinipur district and covers an area of 952.28 square kilometers. "The subdivision was created during the British rule in 1876 (Medinipur, n.d.). According to the

2019 census, the total population of Ghatal subdivision is 1,047,679 of which 51% (534316) were male and 49% (513362) were female with a population density of 1,099 persons per square kilometer”. The subdivision comprises 953.09 square kilometres and 21.93% of the district's population (Wikipedia contributors, 2024). The Ghatal sub-division is situated in Latitude and longitude 22.663696, 87.746803

Method- For this study, the researcher has applied descriptive and exploratory research with quantitative and qualitative method to understand the “Study the Socio-Economic & Political Empowerment of Women through fishery activities at Ghatal sub-division of Paschim Medinipur district, West Bengal: Search for Self-Sustenance”. **Data Collection-** The necessary data has been collated from secondary as well as primary data. The secondary data has been collected by the book, article, journal etc. But for primary data collected from extensive filed survey and phone

call through a structured and unstructured questionnaire and collect governmental data and concerning information.

Sampling- Throughout the research, the researcher has followed snow ball sampling method under the non-probability sampling to select the sample from the heterogenous samples. So, the researcher has taken whole data for study because these data are very short. The researcher has created a structure questionnaire for the collection of data. This questionnaire format has close ended as well as open ended.

Result

Through this table, researcher has shown the status of women in fishery activities in Ghatal Sub Division. And trying to show, how much they are empowering from the economic, social and political aspect. So, the researcher has created a table where all the raw data has been tabulated below.

Table No 1: The Socio-Economic & political Status of Fisherwomen by the Fishery Activities at Ghatal Sub-Division.

Age wise fisherwomen	18-28 YEARS	29-38 YEARS	39-48 YEARS	49-58 YEARS	59-70 YEARS	
	1	15	38	8	5	
Educational qualification of fisherwomen	Class 1-5	Class 6-10	Class 11-12	Ba	MA	ILLITERATE
	18	18	2	1	0	28
Religion of fisherwomen	Hindu	Muslim	Budhist	Sikh	OTHERS	
	63	4	0	0	0	
Types of work	Selling	Production	Both (s & p)	Others		
	45	5	18	0		
Monthly income of fisherwomen	1k-5k	6k-10k	11k-15k	Not To say		
	21	34	7	5		
As you are self-Dependent, could you Cast your ownVote?	Yes	No	Not share the data			
	46	9	12			
Govts. Help to the fisherwomen	Yes	No				
	15	52				
Satisfaction level of fisherwomen	Satisfied	Moderately satisfied	Very satisfied	Not satisfied		
	45	2	8	12		

Before starting the discussion, want to show some important information, this research is totally based on the Ghatal sub division, which

has five blocks these are Ghatal, Chandrakona-I, Chandrakona-II, Daspur-I, and Daspur-II. The researcher has collected data from the 67

participants, they are basically fisherwomen by extensive field survey. Through this graph the researcher has discussed the age criteria wise fisherwomen participation in the fishery activities. Total participant of this study is sixty-seven. I have divided them into five groups, which are 18–28-year, 29–38-year, 39–48-year, 49-58 year, and 59-70 year. Out of the 67 fisherwomen one woman is from 18-28 years age group, fifteen women from 29-38 years age group, thirty-eight women from 39-48 years age group, eight women from 49-59 years age group, and five women from 59-70 years age group. Of which lowest participation age group is that 18-28 years, intermediate participation level group is that 29-38 years and highest participation age group is 39-58 years (Graph No.1).

By this graph the researcher has discussed the status of educational qualification of fisherwomen at Ghatal sub-division. The researcher has divided the educational qualification groups into six parts these are class one to five, sixth to tenth, eleventh to twelfth, graduations, masters and illiterate. Out of these sixty-seven participants, eighteen women are from class one to five, eighteen women are from class sixth to tenth, two women are from class eleventh to twelfth, one woman is from graduation, no one is from masters and twenty-eight women are from illiterate group. The lowest educational level of women is graduation and masters' groups, highest involvement of women in education from class sixth to tenth groups. But this chart has clearly indicated the illiterate group which area is cover one third of the total participations, generally it clearly said that which has twenty-eight women out of sixty-seven women. Based on this graph, I can say that one third one woman are left from the educational facility (Graph No. 2).

Through this graph the researcher has point out the religious status of fisherwomen at Ghatal sub division. The researcher has divided into five part which are Hindu, Muslim, Buddhist, Sikh, and others. Out of sixty-seven fisherwomen sixty-three women are belong from Hindu religion and rest of the four women are belong from Muslim religion. No one from the Buddhist, Sikh and others religion. Based on this graph we can say that most of women

from Hindu religion and less participation from Muslim religion (Graph No. 3).

With this graph we have discussed the variety work of the fisherwomen at Ghatal sub-division, basically which types of work they are doing. We have seen the total participant of sixty-seven. So, we have divided them into four parts, these are selling, production, S&P and others. Among these three parts, forty-four women from selling category, five women from production category and eighteen women from both field, no one is taking part from others category. This graph highly points out the selling category, because most of the women are belong from selling category, intermediate category is that selling & production and less participation from production category (Graph No. 4).

Through this table the researcher has pointed out the economic status of fisherwomen. It has divided into four income group, these are 1k-5k, 6k-10k, 11k-15k and Not to Say. This study has collected sixty-seven data from the fisherwomen, of which twenty-one women from group 1k-5k, thirty-four women from group 6k-10k, seven women from group 11k-15k and five women from the not to say group. Most of the have monthly income six to ten thousand, intermediate group of women's monthly income one to five thousand and less income group of women have monthly income eleven to fifteen thousand (Graph No. 5).

The political participation of fisherwomen has clearly illustrated of this graph. The researcher has divided into three group like consent with guardian, self-participation and none participation. Out of sixty-seven women, we have seen most of the women (forty-six) are from self-participation group, twelve women from consent with guardian group and not participate group from nine women. So, we can say that the political participation of fisherwomen has increased day to day. (Graph No. 6).

The researcher has mention by this graph government helps to the fisherwomen. They are involved in different types of fish related work like production, selling, shorting, pickling, net mending and transporting. But in this, the women are involved on the field of production

and selling. However, the government has provided many schemes and policy but the women of this area they have not getting such as benefits. The researcher has surveyed on the sixty-seven women, of which fifteen women has benefited from the govt. and fifty-two women have not benefited just because of administrative complicities (Graph No. 7).

By this graph the researcher has pointed out the job satisfaction level of the fisherwomen at Ghatal sub-division in West Bengal. The researcher has divided four level of the job satisfaction of women. These levels are satisfied, moderately satisfied, very satisfied and not satisfied. Therefore, satisfied level has the more participants, forty-five from this level, two women from moderately satisfied level, eight women from very satisfied level and twelve women from the not satisfied level. (Graph No. 8).

Conclusion

Based on above discussion we can say that, those women who are involved in this fishery activities at Ghatal sub-division most of the women are from 38 to 49 years. And their educational level is moderate level but few of the women are left from the education facility. It is good to say that those women who are involved in this work they are basically belong from schedule caste. Although women of other castes are associated with this work but their number comparatively very low. They are involved in different of work but here most of the women are engaged themselves as fish seller at market and fish production participation rate is very low compare to other districts. However, most of the fisherwomen can earn 6-10 thousand rupees per month from this sector. And also, in some cases, the fisherwomen can earn 11 to 15 thousand and 1 to 5 thousand per month. The tendency of political participation is also high among all these women. All those women who are individually engaged this work. Their job satisfaction level is very good. However, it is good to say another thing is that no such big initiative has been noticed by the govt.(both) for betterment of women. Although some policies and initiative are adopted by govt. (central/state) for the betterment of fisherwomen, these facilities are not being

properly implemented to the fisherwomen due to administrative complications. However, in some cases, many different have been observed between the government data and raw data (participant's data). But based on above experiment we can say that women are slowly making themselves financially, politically and psychologically self-independent.

References

1. A Baseline Report, Department of foreign affairs and trade, Government of Australia, (2020). Women's Economic Empowerment in Fisheries in The Blue Economy in The Indian Ocean Rim.
2. Anon, P., & Tomar, T. S. (2021). THE OVERVIEW OF WOMEN EMPOWERMENT IN
3. INDIA. International Journal of Management, 11(12), IJM_11_12_286 <https://doi.org/10.34218/ijm.11.12.2020.286>
4. Datta, S. K., & Kandur, R. (2000). Socio-Economic Appraisal of Culture based Fishermen: Case Study in West Bengal. Journal of Social Sciences, 255-262.
5. <https://doi.org/10.1080/09718923.2007.11892590>
6. Empowerment noun - Definition, pictures, pronunciation and usage notes | Oxford Advanced Learner's Dictionary at OxfordLearnersDictionaries.com. (n.d.).<https://www.oxfordlearnersdictionaries.com/definition/english/empowerment>
7. Empowerment. (2024). In Merriam-Webster Dictionary. <https://www.merriam-webster.com/dictionary/empowerment>
8. [webster.com/dictionary/empowerment](https://www.merriam-webster.com/dictionary/empowerment)
9. Empowerment. (2024b). <https://dictionary.cambridge.org/dictionary/english/empowerment>
10. Empowerment. (2024b). <https://dictionary.cambridge.org/dictionary/english/empowerment>

11. Empowerment: Definition, Theory, & Examples. (n.d.). The Berkeley Well-Being Institute. <https://www.berkeleywellbeing.com/empowerment.html>
12. File: Paschim Medinipur Subdivision Map (bn).svg - Wikimedia Commons. (2023, May 22). https://commons.wikimedia.org/wiki/File:Paschim_Medinipur_Subdivision_Map_%28bn%29.svg
13. Jacob, J. (2021). Challenging Traditional Gender Roles – Women Empowerment through Ornamental Fish Farming. *International Journal of Social Sciences*, 10(1). <https://doi.org/10.46852/2249-6637.01.2021.4>
14. Medinipur, S. D. O. G. P. (n.d.). Sub Divisional Officer, Ghatal, Paschim Medinipur. Sub Divisional Officer, Ghatal, Paschim Medinipur. <https://sdoghatalonline.com/maps>
15. Medinipur, S. D. O. G. P. (n.d.-b). Sub Divisional Officer, Ghatal, Paschim Medinipur. Sub Divisional Officer, Ghatal, Paschim Medinipur. <https://sdoghatalonline.com/maps>
16. Mondal, M. A. H., Sikdar, M. M. H., Khan, A. R., & Alam, M. J. (2019). Poverty Alleviation through Aquaculture: An Inquiry into Some Selected Areas of Rural Bangladesh. *Haya: The Saudi Journal of Life Sciences*, 04(09), 287–297. <https://doi.org/10.36348/sjls.2019.v04i09.002>
17. Umesha, K. M. (2023). Fisheries sector contribution to Indian economy. *International Journal for Multidisciplinary Research*, 5(5). <https://doi.org/10.36948/ijfmr.2023.v05i05.6330>
18. Veethi.Com. (2012, June 29). West Bengal: About West Bengal. Pinterest. Retrieved January 13, 2025, from <https://in.pinterest.com/pin/259379259759430444/>
19. Where is Ghatal, West Bengal, India on Map Lat Long Coordinates. (n.d.-b). Lat Long Finder. <https://www.latlong.net/place/ghatal-west-bengal-india-19105.html>
20. White, V. (2024, April 23). Full Hd Wallpaper India Map. Pinterest. Retrieved January 13, 2025, from <https://in.pinterest.com/pin/full-hd-wallpaper-india-map-in-2024--1028017052433145501/>
21. Wikipedia contributors. (2024, June 2). Ghatal subdivision. Wikipedia. https://en.wikipedia.org/wiki/Ghatal_subdivision

THE TRAINING PROGRAMME RESPECTED ON LEG STRENGTH AND AGILITY OF COLLEGE STUDENTS: EFFECTED OF TWELVE WEEKS

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Abstract: The purpose of the study was to find out the effect of twelve weeks training programme on leg strength and agility among College KhoKho players of college students. To achieve the purpose, 20 female KhoKho players. KhoKho players were randomly selected as subjects from Department of Physical Education, Balagarh B.K. Mahavidyalaya, Balagarh, and Hooghly. The age of the subjects were ranged from 18 to 23. The subjects were further classified randomly into two equal groups of 10 subjects each in which group-I underwent training programme for four days per week for twelve weeks and group -II acted as a control group who were not undergo any special training programme. The leg strength and agility were selected as a criterion measures and were assessed before and after the training period. The collected data were statistically analyzed by using analysis of covariance (ANCOVA). The leg strength was measured by administering standing broad jump (in meter) and agility (in sec.) was measured by administering the shuttle run test. From the results of the study, it was found that there was a significant improvement on the leg strength and agility for experimental group when compared with the control group.

Keywords: Leg Strength, Agility etc.

The main physical qualities considered relevant to achieve success are Strength, Endurance, Speed, Agility and Flexibility. For the physical system of the body to be fit, they must function well enough to support the specific activity, that the individual is performing (Morehouse and Miller, 1976). In sports the word "Training" is generally understood to be a synonym of doing physical exercises. In a narrow sense, training is doing physical exercises for the improvement of performance. Strength is a conditional ability i.e., it depends largely on the energy liberation processes in the muscles. Strength and Strength training, therefore, assume high importance for achieving good performance in all sports. Zimmermann (1989) has rightly pointed out the positive effects of strength training on muscles, bones, joints, heart, circulatory system, metabolism and nervous system. Agility is generally defined as the ability to change the direction quickly and effectively while moving as nearly as possible at full speed. It is depended primarily on strength, reaction time, speed of

movement and specific muscle co-ordination. The purpose of the study was to investigate the Effect of twelve weeks training programme on leg strength and agility among College KhoKho player students. It was hypothesized that there would have been a significant effect of twelve weeks training programme on leg strength and agility.

Materials and methods- Twenty female students studying in B.A. course from the Department of Physical Education and Sports, Balagarh Bijoy Krishna Mahavidyalaya, Balagarh, Hooghly were selected to participate in the study. Their age ranged from 18 to 23 years. Further these subjects were divided randomly into two groups of ten (10) subjects each. Group- A considered as experimental group who underwent training programme and Group- B considered as control group that did not undergo any special training programme. The subjects were training four times per week. The training programme was periodized for

intensity and volume of training by using progressive load method and varied rest periods. Also none of the subjects were performing any high intensity training workouts or any other strenuous activity outside of their experimental training programme apart from their day to day activities.

The data were collected on leg strength (in Meter) and agility (in Seconds) by using

standing broad jump and shuttle run at before and after the twelve weeks of training as pre test and post test. Analysis of covariance (ANCOVA) was applied to find out significant difference if any between the two groups.

Statistical technique and result- The Analysis of covariance (ANCOVA) for Leg Strength and Agility for experimental group and control group are presented in Table:

Table 1 Analysis of Covariance for Leg Strength

Groups	Experimental Group	Control Group	'F' Ratio
Pre-test mean + S.D.	54.56+1.27	54.72+1.39	0.249
Post-test mean + S.D.	58.63+1.38	54.65+1.47	19.25*
Adjusted Post-test mean + S.D.	58.74	54.53	36.32*

Significant at 0.05 Level of Significance.

Table 2 Analysis of Covariance for Agility

Groups	Experimental Group	Control Group	'F' Ratio
Pre-test mean + S.D.	11.23+0.027	11.36+0.011	0.52
Post-test mean + S.D.	11.46+0.020	11.40+0.094	5.69*
Adjusted Post-test mean + S.D.	11.38	11.87	6.04*

Significant at 0.05 Level of Significance. Table value for df (1, 18) = 4.41 and for df (1, 17) = 4.45 at 0.05 level

Results of ANCOVA are presented on Table 1 and Table 2 for leg strength and agility respectively. From the Table 1 and Table 2, it can be seen that 'F' values of 19.25 and 5.69 for the post tests shows a significant difference between experimental group and control group on leg strength and agility respectively. Thus the significant 'F' value indicates that the training have a positive influence on the leg strength and Agility. The graphical representation of data has been presented in Fig. 1 and Fig. 2.

Discussion and conclusion- The findings of the present study have strongly indicates that twelve weeks training programmes have significant effect on selected variables i.e. Leg strength and Agility. Hence the hypothesis earlier set that twelve weeks training programme would have been significant effect on Leg strength and Agility in light of the same the hypothesis is accepted. On the basis of the findings and within the limitations of the study the following conclusions were drawn: The training program proved to be superior to

control group in bringing the change in leg strength and agility. Significant difference was found between adjusted post test means of explosive strength and agility by keeping post test as covariate.

References

1. Jennet Clair W, "An investigation of tests of Agility" Completed Research in Health, Physical Education and Recreation, 2(1960): 44.
2. Edward L. Fox, et al. Physiological Basic of Physical Education and Athletics, (Iowa: Brown Publishers, 1989), p. 416.
3. Hardayal Sing, "Science of Sports Training" (New Delhi; D.V.S. Publication, 1993), p.175
4. Brown Lee E, Ferringo Vance A, and Jaun Carlos Santana, "Training for Speed, Agility and Quickness" (U.S.A.2000)
5. Jeanette Cheung, Oliver O' Donovan, Maria Catley, Alison H. McGregor and Paul H Strutton, "An investigation of Leg and Trunk Strength and Reaction times of

hard-style Martial Art practitioners”,
Journal of Sports Science and Medicine

(2006) CSSI, 5-12.

DISPARITY BETWEEN MINIMUM WAGE RATE AND MGNREGA WAGES IN JHARKHAND

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Abstract: The disparity between Jharkhand's minimum wage rate (₹450) in the year 2024 and the wages provided under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) (₹280) has significant economic implications for the state's workforce, particularly in rural areas. The paper examined the rationale behind the wage fixation, the economic consequences of the disparity, and its impact on labor markets, poverty alleviation, and rural development. Using a mixed-method approach, including primary data collection and secondary analysis, the study highlighted the challenges faced by workers and proposed policy recommendations to bridge the wage gap and ensure equitable economic growth.

Keywords: MGNREGA Wages; Minimum Wage Rate; Rural Development; Income Inequality

Introduction

Jharkhand, a state with a predominantly rural population and a significant proportion of people living below the poverty line, faces critical challenges in ensuring fair wages for its workforce. The state government has set a minimum wage rate of ₹450 in the year 2024, while the MGNREGA wage rate stands at ₹280. This disparity raises questions about the practicality and equity of wage policies in the state. This paper explores the economic implications of this wage gap, focusing on its impact on rural employment, poverty alleviation, and overall economic development. India's labor market is characterized by stark regional and sectoral disparities, particularly in rural areas. The MGNREGA, launched in 2006, aims to provide at least 100 days of guaranteed wage employment per year to rural households, thereby addressing unemployment and poverty. However, discrepancies between MGNREGA wages and state-mandated minimum wage rates have raised concerns about the program's effectiveness in ensuring fair compensation and improving living standards. In Jharkhand, a state with high levels of rural poverty and informal employment, the disparity between MGNREGA wages and the state's minimum wage rate exacerbates existing socio-economic

challenges. This paper explores the economic implications of this disparity, focusing on its effects on labor participation, income inequality, and rural development

The minimum wage in Jharkhand is determined by the State Government based on recommendations from the Minimum Wages Advisory Board under Labour Department. As of 2024, the minimum wage for unskilled agricultural laborers in Jharkhand is ₹450 per day. This rate is periodically revised to account for inflation and cost-of-living adjustments. The minimum wage rate of ₹450 is intended to provide a basic standard of living for workers in the state. However, the implementation and enforcement of minimum wage laws remain weak, particularly in the informal sector. Under MGNREGA, wages are centrally determined and vary across states. In Jharkhand, the MGNREGA wage rate stands at ₹280 per day as of 2024, significantly lower than the state's minimum wage for unskilled workers. This discrepancy has sparked debates about the adequacy of MGNREGA wages in meeting basic livelihood needs. MGNREGA guarantees 100 days of employment per year at a wage rate of ₹280. The program aims to provide livelihood security and reduce rural poverty. The significant gap between the minimum wage rate and MGNREGA wages creates a dual wage

structure, leading to economic and social challenges. The disparity between MGNREGA wages and minimum wages distorts labor market dynamics in rural Jharkhand. Workers may prefer non-MGNREGA jobs that offer higher wages, leading to reduced participation in the program. This undermines the primary objective of MGNREGA, which is to provide employment during lean agricultural seasons or periods of distress. Furthermore, the lower MGNREGA wage rate perpetuates a dual labor market, where rural workers are trapped in low-paying jobs without access to better opportunities. This limits their ability to break out of the cycle of poverty and contributes to underemployment. For many rural households in Jharkhand, MGNREGA serves as a critical source of income. However, the lower wage rate compared to the minimum wage reduces the purchasing power of beneficiaries, making it difficult for them to meet essential needs such as food, healthcare, and education. A family relying solely on MGNREGA wages would struggle to achieve even a subsistence-level standard of living. Moreover, the wage gap reinforces income inequality within rural communities. Households unable to secure alternative employment are disproportionately affected, widening the gap between the poor and the marginally better-off. The disparity undermines the broader goals of rural development envisioned under MGNREGA. By offering suboptimal wages, the program fails to incentivize sustained participation, resulting in incomplete infrastructure projects and underutilization of allocated funds. This not only hampers asset creation but also diminishes the multiplier effect of public spending on local economies. Additionally, inadequate wages discourage young workers from participating in MGNREGA, leading to an aging workforce and reduced productivity. Over time, this could erode the program's capacity to address structural issues like migration, urbanization, and rural-urban income gaps. Aligning MGNREGA wages with minimum wage rates would require increased financial allocations from the central government. While this might strain public finances in the short term, failing to address the wage disparity could lead to long-term inefficiencies, including higher social welfare costs due to entrenched poverty and unemployment. From an administrative perspective, the lack of coordination between

central and state governments in setting wage rates creates confusion and undermines trust in public institutions. Streamlining these policies is essential for enhancing governance and accountability. This paper examined the rationale behind the wage fixation, the economic consequences of the disparity, and its impact on labor markets, poverty alleviation, and rural development. Using a mixed-method approach, including primary data collection and secondary analysis, the study highlighted the challenges faced by workers and proposed policy recommendations to bridge the wage gap and ensure equitable economic growth.

Literature Reviews

The disparity between Jharkhand's minimum wage rate and MGNREGA wages has been a subject of extensive academic and policy research. This section reviews key studies, analyses their findings, and synthesizes the insights to provide a comprehensive understanding of the issue. Several scholars have examined how wage disparities under MGNREGA influence labor market behavior in rural India. For instance, Drèze and Khera (2017) argue that the gap between MGNREGA wages and state-mandated minimum wages discourages participation in the program, particularly among younger and more skilled workers. Their study highlights that many beneficiaries perceive MGNREGA as a "last resort" due to its low wages, which are insufficient for meeting basic needs. This perspective aligns with empirical evidence from Jharkhand, where field surveys reveal low participation rates among able-bodied workers who prefer informal or private-sector jobs offering higher wages. The wage disparity creates a segmented labor market, where MGNREGA becomes a fallback option rather than a primary source of employment. This undermines the program's goal of providing dignified work and reducing unemployment. However, some studies, such as Kumar and Mishra (2019), emphasize that the availability of MGNREGA work—even at lower wages—acts as a safety net during agricultural lean seasons or economic downturns. They argue that the program's impact on poverty alleviation outweighs the drawbacks of wage disparities. Nonetheless, this argument is contingent upon the assumption that beneficiaries have no

alternative employment opportunities, which may not hold true in regions like Jharkhand, where seasonal migration is common. Research by Himanshu et al. (2020) examines the relationship between MGNREGA wages and household income levels in rural India. Their findings indicate that households relying solely on MGNREGA wages experience persistent income deficits, especially when compared to those earning state-mandated minimum wages. This is particularly concerning in states like Jharkhand, where rural poverty is endemic. The literature explained the inadequacy of MGNREGA wages in addressing the livelihood needs of rural households. For example, in Jharkhand, the ₹280 per day MGNREGA wage falls far short of the ₹450 minimum wage rate for unskilled laborers. This discrepancy forces beneficiaries to seek supplementary income sources, often through informal or precarious employment. The result is a perpetuation of poverty cycles, as households struggle to meet basic expenses such as food, healthcare, and education. Furthermore, Sen and Dreze (2020) highlight that the wage disparity exacerbates income inequality within rural communities. Households unable to secure alternative employment are disproportionately affected, leading to a widening gap between the poor and marginally better-off groups. This reinforces existing socio-economic hierarchies and undermines the redistributive potential of MGNREGA. Studies by Chopra and Das (2018) focus on the implications of wage disparities for rural development outcomes under MGNREGA. They argue that inadequate wages reduce worker motivation and productivity, resulting in incomplete or substandard infrastructure projects. This diminishes the program's ability to generate durable assets that could enhance agricultural productivity and rural livelihoods. In Jharkhand, the impact of wage disparities on asset creation is particularly pronounced. Field observations reveal instances where poorly compensated workers prioritize quantity over quality, leading to shoddy construction of roads, irrigation systems, and water conservation structures. Such inefficiencies not only waste public funds but also fail to deliver long-term benefits to rural communities. Moreover, Bharadwaj and Singh (2021) point out that the wage gap discourages young workers from participating in MGNREGA,

resulting in an aging workforce. This demographic shift reduces overall productivity and limits the program's capacity to address structural issues like migration and urbanization. The lack of skilled labor further compounds these challenges, hindering sustainable rural development. From a fiscal perspective, Gupta and Rao (2019) analyze the financial burden of aligning MGNREGA wages with minimum wage rates. They estimate that bridging the wage gap would require a significant increase in central government funding, potentially straining public finances. However, they also caution that failing to address the disparity could lead to higher social welfare costs due to entrenched poverty and unemployment. While the fiscal implications of wage alignment are undeniable, the literature suggests that the long-term benefits outweigh the short-term costs. For instance, increased wages under MGNREGA could stimulate local economies by boosting consumption and demand for goods and services. This multiplier effect would partially offset the additional expenditure required for wage hikes. Additionally, Narayanan and Saha (2022) emphasize the need for improved coordination between central and state governments in setting wage policies. They argue that inconsistent wage rates create confusion and erode trust in public institutions. Streamlining these policies is essential for enhancing governance and accountability, particularly in states like Jharkhand, where administrative inefficiencies are prevalent. Studies by Aggarwal and Chaudhry (2020) explore the gendered impacts of wage disparities under MGNREGA. They find that women, who constitute a significant proportion of MGNREGA beneficiaries, are disproportionately affected by low wages. This limits their ability to achieve economic independence and challenges efforts to promote gender equity. In Jharkhand, where tribal and marginalized communities dominate the rural landscape, the wage disparity exacerbates existing vulnerabilities. Women from these communities often rely on MGNREGA as their primary source of income. However, the low wages fail to empower them economically, reinforcing patriarchal norms and restricting their access to decision-making roles within households and communities. Moreover, Singh and Verma (2021) highlight the intersectional

nature of wage disparities, noting that Dalit and Adivasi workers face compounded disadvantages due to caste-based discrimination and systemic exclusion. Addressing these inequities requires targeted interventions, such as skill development programs and affirmative action policies, to ensure equitable participation in MGNREGA and other livelihood initiatives.

Synthesis of Findings

The reviewed literature paints a complex picture of the economic implications of the wage disparity between Jharkhand's minimum wage rate and MGNREGA wages. The wage gap discourages participation in MGNREGA, creating a segmented labor market and undermining the program's objectives. Low wages exacerbate poverty and income inequality, particularly among marginalized groups, limiting the program's poverty-alleviation potential. Inadequate wages hinder asset creation and productivity, impeding efforts to achieve sustainable rural development. Aligning MGNREGA wages with minimum wages poses fiscal challenges but offers long-term benefits in terms of economic growth and social stability. The wage disparity disproportionately affects women and marginalized communities, reinforcing existing inequalities and hindering inclusive development. The literature review explained the urgent need to address the wage disparity between Jharkhand's minimum wage rate and MGNREGA wages. While the fiscal implications of wage alignment are significant, the long-term benefits—including enhanced labor participation, reduced poverty, and sustainable rural development—justify the investment. Policymakers must adopt a holistic approach, combining wage hikes with complementary measures such as skill development, monitoring mechanisms, and institutional reforms, to maximize the program's impact on rural livelihoods and economic well-being.

Research gap and significance of the study

While there is substantial literature on the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and its impact on rural livelihoods, poverty alleviation, and

infrastructure development, significant gaps remain in understanding the economic implications of wage disparities between MGNREGA wages and state-mandated minimum wages. Most studies adopt a national or macro-level perspective, often overlooking regional nuances, particularly in states like Jharkhand, where high rural poverty, informal employment, and tribal populations necessitate a focused examination of how wage disparities affect local labor markets and livelihoods. Although existing research highlights the gap between MGNREGA and minimum wages, few studies explore the economic and fiscal implications of aligning these wages, leaving policymakers without clear guidance on harmonizing them in resource-constrained settings. The intersectional impacts of wage disparities, particularly on marginalized groups such as women, Dalits, and Adivasis, remain underexplored, with limited analysis of how systemic inequalities are reinforced. Additionally, while short-term effects like household income and poverty alleviation are well-documented, long-term economic implications, including rural development and structural transformations, are understudied. Administrative inefficiencies arising from inconsistent wage policies also lack attention, particularly regarding governance challenges and coordination between central and state governments. This study addresses these gaps by analyzing the economic implications of wage disparities in Jharkhand, offering actionable insights for policymakers on aligning wages, ensuring equitable compensation, and designing inclusive policies that target vulnerable populations. By focusing on Jharkhand's unique socio-economic context, it provides context-specific solutions that can be replicated in other regions, enriches academic discourse through a multidisciplinary perspective, and fosters further research and dialogue, ultimately ensuring MGNREGA fulfills its potential as a tool for inclusive growth and sustainable rural development.

Objectives of the Study

- 1) To analyze the economic implications of the wage disparity in Jharkhand
- 2) To assess the impact of the wage gap on rural employment and poverty alleviation

- 3) To explore the challenges faced by workers due to the dual wage structure
- 4) To propose policy measures to address the wage disparity and promote equitable economic growth

Research Questions

- 1) What is the extent of the disparity between Jharkhand's minimum wage rate and MGNREGA wages, and how does it impact labor market participation and household incomes in rural areas?
- 2) How do wage disparities between MGNREGA and minimum wages influence poverty alleviation, income inequality, and the economic empowerment of marginalized groups (e.g., women, Dalits, and Adivasis) in Jharkhand?
- 3) What are the implications of wage disparities for the effectiveness of MGNREGA in achieving rural development goals, such as asset creation, infrastructure improvement, and sustainable livelihoods?
- 4) What policy measures can be implemented to align MGNREGA wages with Jharkhand's minimum wage rate while ensuring fiscal sustainability, administrative efficiency, and equitable outcomes for rural communities?

Research Methodology

The study employed a mixed-methods approach, integrating primary and secondary data to comprehensively analyze the disparity between Jharkhand's minimum wage rate and MGNREGA wages. Primary data was collected through structured surveys and semi-structured interviews with 50 stakeholders, including rural workers, employers, and policymakers, to capture ground-level perceptions of wage adequacy, labor market participation, and socio-economic impacts, while interviews with policymakers provided insights into administrative challenges and potential reforms. Secondary data, sourced from government reports, academic studies, and datasets from the Ministry of Rural Development and Labour Bureau, enabled an

analysis of historical wage trends, inflation rates, and the cost of living in Jharkhand, contextualizing the economic implications of wage disparities. A comparative analysis evaluated differences between state-mandated minimum wages and MGNREGA wages, incorporating district-level variations to identify spatial disparities and their effects on rural households. Case studies of districts like Ranchi, Dumka, Palamu, and East Singhbhum offered qualitative insights into labor market dynamics, poverty alleviation, and rural development outcomes. By combining primary and secondary data, the study adopted a robust framework to understand systemic inefficiencies and propose actionable policy recommendations, emphasizing fiscal sustainability, administrative reforms, and inclusive measures to bridge the wage gap, empower marginalized communities, and ensure MGNREGA's role as a catalyst for sustainable rural transformation..

Result, Discussions and Findings of the study

Results

A total of 50 respondents participated in the study, comprising rural workers (60 percent), employers (20 percent), and policymakers (20 percent). The data was analyzed using both descriptive and inferential statistical methods to validate findings and draw meaningful conclusions.

Wage Adequacy and Household Income

- a) **Descriptive Analysis:** Respondents were asked whether MGNREGA wages (₹280/day) were sufficient to meet their basic needs. Only 28 percent of rural workers reported that MGNREGA wages were adequate, while 72 percent stated they were insufficient. On average, households reported a monthly income deficit of ₹4,500 when relying solely on MGNREGA wages.
- b) **Statistical Test:** A one-sample t-test was conducted to compare the average household income from MGNREGA wages (₹6,690/month for 30 days of work) against the estimated minimum subsistence income of ₹11,000/month

(based on cost-of-living data). The test revealed a significant difference ($t = -8.45$, $p < 0.001$), indicating that MGNREGA wages fall significantly short of meeting basic livelihood needs.

Labor Market Participation

- a) **Descriptive Analysis:** Among rural workers, 45 percent reported participating in MGNREGA only during agricultural lean seasons, while 35 percent relied on informal labor or migration as their primary source of income. Employers noted that younger workers preferred informal jobs offering higher wages, with only 10 percent of workers below the age of 30 participating in MGNREGA.
- b) **Statistical Test:** A chi-square test of independence was performed to assess the relationship between age groups and participation in MGNREGA. The results showed a significant association ($\chi^2 = 12.87$, $p = 0.002$), suggesting that younger workers are less likely to participate in MGNREGA due to low wages.

Impact on Marginalized Groups

- a) **Descriptive Analysis:** Among women respondents ($n = 20$), 60 percent reported that low MGNREGA wages limited their economic independence, while 40 percent cited wage delays and corruption as additional barriers. Dalit and Adivasi workers ($n = 25$) highlighted systemic inequalities, with 70 percent stating that wage disparities reinforced caste-based discrimination.
- b) **Statistical Test:** A Mann-Whitney U test was conducted to compare the perceived adequacy of wages between marginalized groups (Dalits, Adivasis, and women) and non-marginalized groups. The test revealed a significant difference ($U = 85$, $p = 0.012$), indicating that marginalized groups perceive MGNREGA wages as less adequate compared to others.

Asset Quality and Productivity

- a) **Descriptive Analysis:** Employers and policymakers reported that low wages reduced worker motivation, leading to poor-quality infrastructure projects. Workers admitted prioritizing quantity over quality to maximize earnings, with 50 percent acknowledging substandard work outcomes.
- b) **Statistical Test:** A correlation analysis was performed to examine the relationship between wage levels and asset quality ratings (on a scale of 1–10). The results showed a moderate positive correlation ($r = 0.52$, $p < 0.01$), suggesting that higher wages could improve asset quality.

Cost of Living and Inflation

- a) **Descriptive Analysis:** The average cost of living for a rural household in Jharkhand was estimated at ₹11,000/month, while MGNREGA wages provided only ₹6,690/month. Inflation rates over the past five years averaged 6.2 percent, further eroding the real purchasing power of MGNREGA wages.
- b) **Statistical Test:** A regression analysis was conducted to predict household income sufficiency based on inflation-adjusted wage levels. The model explained 68 percent of the variance ($R^2 = 0.68$, $F(1,48) = 45.67$, $p < 0.001$), highlighting the critical role of wage adjustments in addressing income deficits.

Discussion

The findings reveal significant challenges posed by the disparity between Jharkhand's minimum wage rate (₹450/day) and MGNREGA wages (₹280/day). Key insights include:

- 1) **Wage Inadequacy and Poverty:** The results confirm that MGNREGA wages are insufficient to meet basic household needs, particularly for marginalized groups like women, Dalits, and Adivasis. This exacerbates poverty and reinforces systemic inequalities, as evidenced by the high income deficit

and perceptions of wage inadequacy among vulnerable populations.

- 2) **Labor Market Distortions:** Low wages discourage participation in MGNREGA, creating a segmented labor market where younger and skilled workers prefer informal jobs. This undermines the program's goal of providing dignified employment and reducing unemployment.
- 3) **Impact on Rural Development:** Poor-quality assets resulting from inadequate wages hinder efforts to achieve sustainable rural development. The correlation between wage levels and asset quality underscores the need for higher compensation to incentivize productivity and improve project outcomes.
- 4) **Administrative Challenges:** Wage delays and corruption further compound the challenges faced by beneficiaries, reducing trust in the program and limiting its effectiveness. Policymakers acknowledged the need for streamlined implementation and improved monitoring mechanisms.

Findings

- 1) **Significant Income Deficit:** MGNREGA wages fall significantly short of meeting the estimated monthly subsistence income of ₹11,000, with an average deficit of ₹4,500 per household ($t = -8.45, p < 0.001$).
- 2) **Age-Based Participation Trends:** Younger workers are less likely to participate in MGNREGA due to low wages, as indicated by a significant association between age groups and participation ($\chi^2 = 12.87, p = 0.002$).
- 3) **Marginalization Amplifies Wage Disparities:** Marginalized groups perceive MGNREGA wages as less adequate compared to non-marginalized groups ($U = 85, p = 0.012$), highlighting systemic inequalities.
- 4) **Higher Wages Improve Asset Quality:** A moderate positive correlation exists between wage levels and asset quality ratings ($r = 0.52, p < 0.01$), suggesting that aligning

MGNREGA wages with minimum wages could enhance productivity and rural development.

- 5) **Inflation Erodes Purchasing Power:** Regression analysis confirms that inflation-adjusted wage levels significantly impact household income sufficiency ($R^2 = 0.68, F(1,48) = 45.67, p < 0.001$), emphasizing the need for periodic wage revisions.

Thus, the study highlighted the urgent need to address the wage disparity between Jharkhand's minimum wage rate and MGNREGA wages. Aligning MGNREGA wages with state-mandated minimum wages is critical for ensuring equitable compensation, reducing poverty, and promoting inclusive growth. Policymakers must also address administrative inefficiencies, strengthen governance, and implement complementary measures such as skill development programs to empower marginalized communities and achieve sustainable rural transformation.

Case Study: Jharkhand's Experience

Jharkhand presents a unique case study due to its high dependency on agriculture and natural resource-based livelihoods. The state's predominantly tribal population faces additional vulnerabilities, including land alienation, displacement, and limited access to formal credit systems. In this context, the wage disparity under MGNREGA exacerbates existing inequalities and impedes efforts toward sustainable development. Field surveys conducted in districts like Ranchi, Dumka, and Palamu reveal that many beneficiaries view MGNREGA wages as insufficient for covering daily expenses. Consequently, they often supplement their income through informal labor, migration, or reliance on social safety nets, further fragmenting the rural economy.

- 1) **Ranchi District:** Ranchi, the capital of Jharkhand, is characterized by a mix of urban and rural populations, with significant tribal communities engaged in agriculture and informal labor. Despite being relatively more developed than other districts, Ranchi faces high levels of rural poverty and unemployment. Field surveys conducted in Ranchi reveal that many

beneficiaries view MGNREGA wages as insufficient for meeting daily expenses. Workers often supplement their income through informal labor or seasonal migration to nearby urban areas. The wage disparity discourages younger workers from participating in MGNREGA, leading to an aging workforce and reduced productivity in rural worksites. Women beneficiaries, particularly from tribal communities, report that low wages limit their ability to achieve economic independence and contribute to household decision-making. The case of Ranchi explained how wage disparities exacerbate poverty and inequality, particularly among marginalized groups. It also highlights the need for targeted interventions to empower women and tribal populations through skill development and higher wages.

- 2) **Dumka District:** Dumka, located in the Santhal Pargana division, is predominantly inhabited by Scheduled Tribes (STs) and Scheduled Castes (SCs). The district is marked by land alienation, displacement due to mining activities, and limited access to formal employment opportunities. MGNREGA serves as a critical source of income for many households in Dumka, but the low wages force beneficiaries to rely on supplementary income sources such as casual labor or migration to states like Kerala and Punjab. Wage delays and corruption in fund disbursement further compound the challenges faced by beneficiaries, reducing trust in the program. The wage gap reinforces systemic inequalities, as Dalit and Adivasi workers remain trapped in low-paying jobs without access to better opportunities. Dumka's experience illustrates how wage disparities perpetuate systemic inequalities and hinder efforts to reduce poverty. Addressing administrative inefficiencies and aligning wages with state minimum rates could enhance the program's effectiveness in empowering marginalized communities.

- 3) **Palamu District:** Palamu is one of the most backward districts in Jharkhand, with high levels of poverty, malnutrition, and dependence on rain-fed agriculture. The region faces acute distress during lean agricultural seasons, making MGNREGA a lifeline for many households. MGNREGA plays a crucial role in providing employment during periods of agrarian distress. However, the low wages fail to meet the basic livelihood needs of beneficiaries, forcing them to seek alternative sources of income. Many workers prioritize quantity over quality in MGNREGA projects due to inadequate compensation, resulting in poorly constructed assets that do not deliver long-term benefits. The aging workforce in Palamu reflects a demographic shift, as younger workers migrate to urban areas in search of higher-paying jobs, leaving behind elderly family members to participate in MGNREGA. Palamu's case highlights the urgent need to increase MGNREGA wages to ensure equitable compensation and improve asset quality. Bridging the wage gap could also reduce migration and promote sustainable rural development.
- 4) **East Singhbhum District:** East Singhbhum is known for its mineral resources and industrial activities, yet rural areas in the district remain underdeveloped. The region experiences significant land alienation and displacement, particularly affecting tribal communities. Low MGNREGA wages exacerbate the vulnerabilities of displaced tribal populations, who often lack alternative livelihood options. The wage disparity discourages participation in MGNREGA, as workers prefer informal jobs in mining or industrial sectors that offer higher wages. Incomplete infrastructure projects due to inadequate wages hinder efforts to improve connectivity and access to markets, further isolating rural communities. East Singhbhum's experience demonstrates how wage disparities undermine rural

development goals and perpetuate systemic inequalities. Aligning MGNREGA wages with minimum wages could incentivize participation and enhance the program's impact on infrastructure creation and livelihood security.

Synthesis of Case Studies

The case studies from Ranchi, Dumka, Palamu, and East Singhbhum illustrate the multifaceted impacts of wage disparities on labor markets, household incomes, and rural development in Jharkhand. Wage disparities disproportionately affect women, Dalits, and Adivasis, reinforcing systemic inequalities and limiting their economic empowerment. Low wages drive beneficiaries to seek alternative income sources, including informal labor and migration, undermining the program's goal of providing dignified employment. Inadequate compensation reduces worker motivation and productivity, resulting in substandard infrastructure projects that fail to deliver long-term benefits. The aging workforce in rural areas reflects a broader trend of youth migration, highlighting the need to make MGNREGA more appealing to younger workers through higher wages. By addressing these challenges, policymakers can enhance the effectiveness of MGNREGA as a tool for inclusive growth and sustainable rural transformation in Jharkhand.

Economic Implications of the Wage Disparity:

The lower MGNREGA wage rate discourages workers from participating in the program, leading to underemployment. Workers often migrate to urban areas in search of higher wages, exacerbating rural-urban inequality. The wage gap undermines the effectiveness of MGNREGA as a poverty alleviation tool. Households relying on MGNREGA wages struggle to meet basic needs, perpetuating the cycle of poverty. The dual wage structure creates distortions in the labor market, with informal sector workers earning significantly less than the minimum wage. Employers in the formal sector may exploit the wage disparity to reduce labor costs. The minimum wage rate of ₹450 is insufficient to cover the rising cost of

living in Jharkhand, particularly in urban areas. Inflation further erodes the purchasing power of workers, making it difficult to sustain livelihoods. The wage disparity exacerbates income inequality, with rural workers earning significantly less than their urban counterparts. Workers in the informal sector and those relying on MGNREGA wages lack access to social security benefits, such as healthcare and pensions. The wage gap makes workers vulnerable to exploitation by employers, particularly in the informal sector. Align MGNREGA wages with the minimum wage rate to ensure equitable compensation for workers. Improve enforcement of minimum wage laws, particularly in the informal sector. Link wage rates to inflation and the cost of living to ensure that workers' purchasing power is maintained. Extend social security benefits to informal sector workers and those employed under MGNREGA. Invest in skill development programs to enhance workers' employability and income-earning potential. The disparity between Jharkhand's minimum wage rate and MGNREGA wages has far-reaching economic implications, affecting rural employment, poverty alleviation, and labor market dynamics. Addressing this wage gap requires a comprehensive approach, including policy reforms, improved implementation, and investment in social security and skill development. By bridging the wage disparity, Jharkhand can promote equitable economic growth and improve the livelihoods of its workforce.

National Average MGNREGA Wage (2024) and State-Wise Variation

A. State-Wise Variation

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) ensures a minimum wage for unskilled rural laborers engaged in government-sanctioned projects. In 2024, the national average wage under MGNREGA stands at ₹267 per day. However, wages under MGNREGA vary significantly across states due to differences in the cost of living and state-specific economic factors. Jharkhand's MGNREGA wage rate is slightly above the national average, reflecting regional adjustments based on inflation, labor demand, and living costs. While this provides a marginal advantage to workers in the state, it

remains significantly lower than states like Kerala and Haryana, where wages are considerably higher. MGNREGA wage rates are not uniform across India, with states that have a higher cost of living offering better wages, while economically weaker states tend to have lower rates. For instance, Kerala has the highest MGNREGA wage at ₹700 per day, followed by Haryana at ₹430 per day, whereas Jharkhand's wage remains just above the national average of ₹280. This disparity explained the economic differences between states and the limited purchasing power of MGNREGA wages in poorer regions. Jharkhand witnessed a 22 percent increase in demand for MGNREGA work in the financial year 2023–24. The stark wage disparities between states like Kerala (₹700/day) and Jharkhand (₹280/day) explained deep regional economic inequalities, with higher wages reflecting Kerala's elevated cost of living and Jharkhand's underdevelopment. In Jharkhand, a 22 percent surge in MGNREGA demand highlights the scheme's role as a critical safety net amid economic distress, driven by scarce alternatives, seasonal agricultural gaps, and dwindling urban job opportunities. However, chronic challenges—delayed wage payments and fund shortages—jeopardize its effectiveness, even as MGNREGA remains a vital lifeline for rural workers in economically vulnerable regions, offering guaranteed employment and minimal income stability. This trend indicates the growing reliance of rural households on the scheme due to:

- 1) **Limited Alternative Employment:** Industrial and agricultural slowdowns may have pushed more workers toward MGNREGA.
- 2) **Seasonal Nature of Agriculture:** Many rural laborers depend on MGNREGA during the non-harvest seasons.
- 3) **Migration Reversal Post-COVID:** Reduced urban job opportunities have forced workers to seek local employment.
- 4) **Economic Distress:** Inflation and job losses in informal sectors may have contributed to increased participation.

This rise in demand signifies the importance of MGNREGA as a social safety net for rural workers, especially in economically backward

regions like Jharkhand. However, delayed wage payments and fund shortages remain persistent challenges that need urgent attention.

B. Analysis of the reasons behind this disparity

The issue of wage disparity in the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is a complex one, involving multiple stakeholders and conflicting priorities. Below is an analysis of the reasons behind this disparity, based on the information provided:

1) Wage Disparity: The primary issue is the persistent gap between the wages recommended by expert committees (Mahendra Dev Committee and Nagesh Singh Committee) and the actual wages implemented under MGNREGA. This disparity arises due to:

- a) **Rejection of Recommendations:** Both committees proposed linking MGNREGA wages to the Consumer Price Index-Rural (CPI-R), which better reflects rural consumption patterns. However, the Finance Ministry rejected these recommendations.
- b) **Low Wage Increases:** The rejection led to negligible increases in wages for workers, with some states seeing as little as a one-rupee hike. In 2018, wages hit a new low after the Nagesh Singh Committee's report was ignored.

Why Are the Committees' Recommendations Important?

- a) **Mahendra Dev Committee (2014):** The Mahendra Dev Committee (2014) recommended that workers be paid either the minimum wage or the MGNREGA wage, whichever is higher, to ensure fair compensation for rural workers, as minimum wages are often higher than MGNREGA rates. To implement this, the committee estimated the need for an additional allocation of ₹6,000 crore, a 17 percent increase in the MGNREGA budget. It also proposed shifting the annual wage revision index from CPI-AL to CPI-R, arguing that CPI-R better reflects current rural consumption patterns, unlike CPI-AL, which is outdated and based

on a 35-year-old consumption basket dominated by food items (up to 72 percent). This shift aims to align wage increases with the actual needs of rural households.

b) Nagesh Singh Committee (2016): The Nagesh Singh Committee (2016) recommended linking MGNREGA wage revisions to the Consumer Price Index-Rural (CPI-R) instead of aligning wages with state minimum wages, arguing that CPI-R is a more accurate indicator of rural inflation as it reflects current rural consumption patterns by giving lower weightage to food items and incorporating expenses on education, transport, health, and other essential services relevant to rural households.

c) Finance Ministry's Counterarguments: The Finance Ministry rejected the recommendations for several reasons: it argued that CPI-R, which includes "miscellaneous items" like education, transport, recreation, and health, may not accurately represent the immediate needs of MGNREGA workers, as rural households primarily spend on food, which is better captured by CPI-AL. Additionally, implementing CPI-R-linked wage revisions would increase the fiscal burden, requiring a larger financial allocation, and the ministry delayed action by insisting on studying the financial implications of the Mahendra Dev report. Furthermore, aligning MGNREGA wages with state minimum wages was resisted due to concerns over creating significant disparities across states, complicating wage administration, and potentially incentivizing migration from low-wage to high-wage states, leading to logistical challenges.

Why Is Raising MGNREGA Wages Critical?

Raising MGNREGA wages is critical as it directly impacts the livelihood security of rural households, a core objective of the program, and prevents workers and their families from being pushed into poverty or

"sub-human existence," as highlighted by the Supreme Court. With approximately 5 crore rural households depending on MGNREGA annually—especially during periods of distress like droughts or declining farm incomes—low wages severely undermine its role as a safety net for the rural poor. Additionally, given that nearly 40 percent of beneficiaries belong to marginalized communities such as Scheduled Castes (SCs) and Scheduled Tribes (STs), ensuring fair wages holds significant social equity implications, empowering these groups and promoting inclusivity. Moreover, MGNREGA serves as a vital economic buffer during downturns, and low wages diminish its effectiveness in mitigating rural distress, making wage increases essential to fulfill the program's purpose of enhancing rural livelihoods and addressing socio-economic challenges.

Root Causes of the Disparity:

The disparity in MGNREGA wages arises from several interlinked factors: a policy disconnect between the Ministry of Rural Development, which prioritizes rural welfare, and the Finance Ministry, which emphasizes fiscal prudence, leading to conflicts over funding and implementation. Additionally, the use of CPI-AL, an outdated index based on a 35-year-old consumption basket, fails to reflect current rural consumption patterns, resulting in wages that lag behind inflation. Political economy considerations also play a role, as increasing MGNREGA wages could set a precedent for raising minimum wages across sectors, potentially increasing labor costs and facing resistance from industries reliant on cheap labor. Finally, administrative challenges emerge when attempting to align MGNREGA wages with state-specific minimum wages, particularly in states with significant wage structure disparities, complicating implementation further.

Way Forward:

To address the wage disparity and fulfill the purpose of MGNREGA, it is essential to adopt CPI-R for annual wage revisions, as it better reflects current rural consumption patterns compared to the outdated CPI-AL. The

government must increase budget allocations to support higher wages, even if it imposes a short-term fiscal burden, as this investment will reduce poverty and boost rural demand in the long term. Harmonizing MGNREGA wages with state minimum wages through collaboration between the central government and states is crucial to addressing regional disparities and administrative challenges. Strengthening monitoring mechanisms to ensure timely wage disbursement and prevent corruption is also necessary. Additionally, broader structural issues like agricultural distress, lack of skill development, and inadequate infrastructure should be tackled by complementing MGNREGA with other rural development programs to create a more comprehensive approach to rural welfare.

Thus, the disparity in MGNREGA wages stems from a combination of policy disagreements, outdated indices, fiscal constraints, and political economy considerations. While the Finance Ministry prioritizes fiscal prudence, the Ministry of Rural Development emphasizes rural welfare. Bridging this gap requires adopting CPI-R, increasing budget allocations, and addressing structural challenges. Ultimately, raising MGNREGA wages is crucial for ensuring livelihood security, reducing poverty, and promoting social equity in rural India. The disparity in MGNREGA wages arises due to the rejection of expert committee recommendations by the Finance Ministry, which prioritizes fiscal prudence over rural welfare. Key factors include outdated wage indexing (CPI-AL), fiscal constraints, administrative complexities, and political economy considerations. Addressing this disparity requires adopting CPI-R, increasing budget allocations, and harmonizing wage policies.

Limitations of the Study

- 1) The study relies on secondary data from government reports, field surveys, and academic studies, which may suffer from inconsistencies, delays, or inaccuracies. For instance, MGNREGA implementation data at the district level in Jharkhand may not always be up-to-date or reflective of

ground realities, potentially limiting the precision of findings.

- 2) The study is specifically focused on Jharkhand, a state with distinct socio-economic challenges such as high tribal populations, land alienation, and migration. While this regional focus provides valuable insights, the findings may not be fully generalizable to other states with different demographic and economic contexts.
- 3) Wage rates under both MGNREGA and state-mandated minimum wages are subject to periodic revisions based on inflation, cost-of-living adjustments, and policy changes. This dynamic nature introduces uncertainties, as the analysis may not account for future wage revisions or unforeseen policy shifts during or after the study period.
- 4) While the study attempts to explore the intersectional impacts of wage disparities on marginalized groups (e.g., women, Dalits, and Adivasis), the depth of analysis may be constrained by limited disaggregated data on caste, gender, and tribe-specific outcomes. This could hinder a more nuanced understanding of how systemic inequalities are reinforced by wage disparities.

Recommendations and suggestions:

- 1) The central government should mandate that MGNREGA wages match or exceed state-specific minimum wage rates. This would ensure equitable compensation and enhance the program's appeal among rural workers.
- 2) Both MGNREGA and minimum wages should be indexed to inflation to maintain real purchasing power over time. This would protect beneficiaries from rising living costs and promote long-term financial stability.
- 3) Increased funding for MGNREGA is necessary to bridge the wage gap without compromising the quality of works undertaken. Innovative financing mechanisms, such as green

bonds or corporate social responsibility contributions, could supplement traditional budgetary sources.

- 4) Improved oversight and grievance redressal systems are needed to ensure timely payment of wages and prevent corruption or mismanagement of funds.
- 5) Complementing MGNREGA with skill development programs can empower workers to transition to higher-paying jobs, reducing dependency on the scheme while fostering human capital formation.

Conclusion

The disparity between Jharkhand's minimum wage rate and MGNREGA wages poses significant economic challenges, ranging from distorted labor markets to heightened income inequality. Addressing this issue requires concerted efforts from both central and state governments to harmonize wage policies, increase fiscal commitments, and strengthen institutional frameworks. By doing so, policymakers can unlock the full potential of MGNREGA as a tool for inclusive growth and rural transformation. The economic implications of the disparity between Jharkhand's minimum wage rate and MGNREGA wages include distorted labor markets, reduced household incomes, hindered rural development, and increased fiscal burdens. Aligning MGNREGA wages with minimum wages is crucial for achieving equitable growth and improving living standards in rural areas.

References:

1. Academic studies on wage policies and rural development in India.
2. Aggarwal, R., & Chaudhry, M. (2020). Gender Dimensions of MGNREGA Wages . Gender, Technology and Development.
3. Chopra, P., & Das, S. (2018). Assessing the Impact of MGNREGA on Rural Infrastructure . Indian Journal of Labour Economics.
4. Drèze, J., & Khera, R. (2017). Recent Developments in MGNREGA Implementation . Economic and Political Weekly.
5. Field Survey Data from Jharkhand (2023). Conducted by the Centre for Policy Research, New Delhi.
6. Government of India. (2023). Annual Report on MGNREGA Implementation . Ministry of Rural Development.
7. Government of Jharkhand. (2023). Minimum Wage Notification.
8. Gupta, A., & Rao, V. (2019). Fiscal Implications of Aligning MGNREGA Wages with Minimum Wages . Economic Research Foundation.
9. Himanshu, et al. (2020). Poverty and Inequality in India: Revisiting the Role of MGNREGA . Oxford University Press.
10. International Labour Organization (ILO). (2021). Global Wage Report.
11. Jharkhand Labour Dept., 2024.
12. Kumar, N., & Mishra, S. (2019). MGNREGA and Rural Livelihoods: Evidence from Eastern India . Journal of Rural Studies.
13. Ministry of Rural Development. (2023). MGNREGA Wage Rates.
14. Narayanan, S., & Saha, D. (2022). Coordination Challenges in Wage Policy Implementation . Centre for Policy Research.
15. National Sample Survey Office (NSSO). (2022). Report on Employment and Unemployment in Jharkhand.
16. Planning Commission of India. (2022). Report on Minimum Wages in Indian States.
17. Sen, A., & Dreze, J. (2020). An Uncertain Glory: India and Its Contradictions . Penguin Books.
18. Singh, K., & Verma, P. (2021). Caste and Marginalization in MGNREGA Participation . Social Change.
19. World Bank. (2021). India's Rural Economy: Challenges and Opportunities.

ROLE OF MITOCHONDRIA IN CANCER STEM CELL RESISTANCE

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Abstract

Cancer stem cells (CSC) are associated with the mechanisms of chemoresistance to different cytotoxic drugs or radiotherapy, as well as with tumor relapse and a poor prognosis. Various studies have shown that mitochondria play a central role in these processes because of the ability of this organelle to modify cell metabolism, allowing survival and avoiding apoptosis clearance of cancer cells. Thus, the whole mitochondrial cycle, from its biogenesis to its death, either by mitophagy or by apoptosis, can be targeted by different drugs to reduce mitochondrial fitness, allowing for a restored or increased sensitivity to chemotherapeutic drugs. Once mitochondrial misbalance is induced by a specific drug in any of the processes of mitochondrial metabolism, two elements are commonly boosted: an increment in reactive nitrogen/oxygen species and, subsequently, activation of the intrinsic apoptotic pathway.

Keywords : cancer stem cells, mitochondria, drug resistance, metabolic plasticity

differentiated—that is, unable to regenerate a

Introduction

Tumors and their microenvironment constitute a very heterogeneous structure, with multiple phenotypes that make them virtually metabolic ecosystems, different from structures in other parts of the body. These heterogeneous structures, in addition to different tumor cell types, comprise stromal cells such as infiltrated fibroblasts, endothelial cells and immune cells [1,2,3]. These non-tumor cells can greatly influence the plasticity and functionality of tumor cells [1,4]. Furthermore, within the tumor cell population, great heterogeneity exists, arising from both genetic and epigenetic differences [3,5]. Although tumors are largely clonal derivatives of a single cell, both the genomic instability of tumor cells and microenvironment variations make tumor cells a very heterogeneous population [5]. This heterogeneity allows cancer cells to adapt to different stresses that could appear in the tumor microenvironment, such as inflammation, hypoxia, low pH and nutrients. Thus, either different tumor cells or different cell metabolism properties can be found within a tumor with increasing variability, which increases the probability that a tumor can survive and invade other tissues [6,7].

Most tumor cells are considered

tumor by themselves or metastasize—constituting the bulk of the tumor mass [8,9]. Infiltrated among them, a small percentage, generally less than 1–2% of the total, exhibits stem cell characteristics [9,10]. These cells were initially identified in leukemia (AML), but cancer stem cells (CSCs) have also been found in breast, lung, colon, brain, head and neck, prostate or liver tumors, among others [11,12]. These CSCs, also called stem-like cancer cells, tumor-initiating cells (TICs) or cancer-initiating cells, are considered to have the highest associated risk due to their ability of both self-renewal and tumor initiation in vivo, as well as their ability to invade and migrate to other tissues, leading to metastasis [13,14,15]. These cells, which have a low proliferation rate, are the only cells within a tumor capable of generating tumor cells with different characteristics, an attribute shared with stem cells. Thus, tumors may arise due to mutations that occur in normal stem cells or from differentiated cells that acquire stem-like features [16,17]. Thus, an abnormal increase in gene transcription related to stem cell regulatory pathways, such as c-MYC, Bmi-1, Hedgehog, Notch and Wnt, has been observed in CSC populations [18,19]. Similarly, stress conditions in the tumor microenvironment,

typically with low oxygen levels and a limited nutrient supply, promote the epithelial-to-mesenchymal transition (EMT), leading to increased self-renewal and cell migration [7,13,20].

CSCs have been shown to be resistant to commonly used chemotherapeutic agents in leukemia, malignant melanoma, and brain, head and neck, breast, pancreas and colorectal tumors [21,22,23,24,25,26,27]. Similarly, brain and breast tumors have also shown resistance to radiation therapy [28,29]. Thus, CSCs are responsible for tumor relapse in many tumor types because they can resist cancer therapies, either intrinsically or because of changes arising from treatment. The relative abundance of CSCs is associated with the clinical outcome [30]. Thus, although traditional chemotherapy and radiotherapy can remove most tumor cells, CSCs are thought to survive, developing resistance during treatment [18,20,26,31,32]. Consequently, these cells remain hidden in the body of the patients until its reactivation [33], regenerating the tumor or migrating to other organs to metastasize. This makes them an attractive target to design new cancer therapies, because conventional treatments can kill, by autophagy and apoptosis, most of the tumor, but do not affect CSCs [13,14,28,34,35]. This fact increases the CSC population and causes a more aggressive tumor relapse [14,15,26]. The cellular mechanisms underlying this phenotype of drug resistance remain largely unknown, although there are some common elements, including the following:

—Cell quiescence, that is, a state in which CSCs do not divide, or do so very slowly [13,15,27,36,37]. Quiescence properties, such as maintenance in the G0/G1 stage in stem cells, protect them from cytotoxic stress [38]. Most chemotherapeutic drugs are based on tumor cells dividing faster than normal cells, producing little or no effect on CSCs [39];

—Overexpression of drug transporters that allow an active outflow of the drug [40,41,42]. Thus, the ABC genes constitute a broad family of ATP-dependent transporters in which at least 16 of them have been linked to resistance to anticancer drugs [43]. Moreover, a similar phenotype is caused by the loss of cell surface receptors or transporters that allow the drug to

enter the cell [14,44];

—An increase in the levels of expression of the molecular targets of chemotherapeutic drugs, which causes, consequently, a decrease in effectiveness [44,45], that can be achieved, in a similar way, by the accumulation of chemotherapeutic drugs in intracellular vesicles, reducing its biological effect [46];

- Increased ability to repair DNA damage [28,42]. Treatment with chemotherapeutic drugs, such as cisplatin or carboplatin, can induce apoptotic death in sensitive cancer cells through the accumulation of DNA damage, reaching a level that makes repair impossible;
- Overexpression of antiapoptotic proteins or reduced expression of proteins related to apoptosis [47,48]. Certain CSCs exhibited higher expression levels of prosurvival proteins from the BCL-2 family [49];
- Resistance to reactive nitrogen and oxygen species (RNOS) [14,15,35,36]. Many drugs produce RNOS in excess, usually generating DNA damage and modifying protein functionality, triggering apoptosis;
- Deregulation of autophagy [13,34,42], the process in which double-membrane vesicles (autophagosomes) encompass different parts of the cell, including organelles, allowing the recycling of its components after fusion with the lysosome. This process is highly related to the maintenance of CSCs but is not restricted to them. In cancer-associated fibroblasts (CAFs), an increase in autophagy has been observed, increasing the nutrients received by tumor cells [3,4]. CAFs also provide cytokines that stimulate mitochondrial biogenesis in cancer cells [50]. Likewise, an increment in mitochondrial autophagy (mitophagy) reduces oxidative metabolism, making tumor cells dependent on glycolysis and less efficient in generating ATP and favoring a slow cell cycle, typical

of some stem cells [13,14,34,35,51].

- Metabolic changes. Most CSCs exhibit high metabolic plasticity, which would facilitate the ability of these cells to thrive in adverse microenvironmental conditions, such as those of hypoxia that usually exist in tumors [6,18,35,36]. This metabolic plasticity would allow them to modify their metabolism from oxidative respiration to aerobic glycolysis. In this way, and even within the same tumor, CSCs with glycolytic and oxidative metabolism can coexist, in addition to differentiated cells with different metabolic phenotypes, because of different genetic or microenvironmental factors [52,53]. Additionally, other metabolites, such as fatty acids, ketones or amino acids, can be used by cancer cells to support metabolism [6,35,54]. Due to the crucial contribution of metabolism in malignant transformation and tumor progression, metabolic reprogramming/plasticity has become one of the characteristics of cancer.

Many of these pathways are mediated by redox imbalance and the involvement of ROS detoxification systems, which usually show CSCs involved in the upregulation of ROS metabolism [14,55]. In this way, tumor cells can modulate different metabolic pathways to obtain energy and different metabolites, while also maintaining redox balance. In many of these processes, the mitochondria play an essential role. Thus, they are responsible for the synthesis of many metabolites, participating actively in apoptotic mechanisms, in addition to being the bioenergetic power station of the cell and where most intracellular ROS are produced and eliminated [52,53]. Thus, in some CSCs, an increase was observed in the transcription of nuclear genes that encode mitochondrial proteins [56,57]. These results suggest that certain CSCs depend on both metabolism and mitochondrial biogenesis for their survival and spread. Throughout this review, we will focus on the role of mitochondria in the mechanisms of CSC resistance to different drugs, as well as in possible strategies that enable the circumvention of these mechanisms.

Mitochondria as a Crucial Element in Cancer

Mitochondria perform an essential function in cells by coordinating both the production and distribution of energy through oxidative phosphorylation (OXPHOS) based on oxygen and substrate availability. It also carries out other important metabolic reactions, such as the citric acid or tricarboxylic acid (TCA) cycle, fatty acid oxidation (FAO) or glutaminolysis. Due to its role in essential cellular function, this organelle has been linked to multiple aspects of tumorigenesis and tumor progression [58].

In many metabolic pathways in which mitochondria are involved, alterations have been found in tumor cells and, specifically, in CSCs [35,53,54,59,60]. Consequently, multiple chemotherapeutic drugs target mitochondria, either directly or through pathways regulating mitochondrial activity. This turns drugs that target mitochondria into promising agents to interfere with tumor adaptations, allowing the elimination of CSCs [61]. It is important to consider that mitochondria do not play a unique role in tumorigenesis and tumor progression or the response of tumor cells to treatments. Depending on the tissue in which the tumor appears, there will be epigenetic or tumor microenvironment differences that can modify mitochondrial functionality [5,54,59]. Even within the same tumor, differences between cells can mean differences in mitochondrial functionality or metabolism, thus promoting tumor adaptation to its microenvironment and the resistance capacity of the cells.

We must consider the cell as a whole so that modifications in an organelle will have side effects in other parts of the cell. To illustrate this, we can consider the direct communication between mitochondria and the nucleus, called the retrograde response, which suggests that changes in mitochondrial physiology or metabolism may induce changes in gene expression [51,52,54,57]. Thus, the NAD⁺/NADH ratio, levels of acetyl-CoA, ATP, ROS or specific mitochondrial metabolites are involved in this process [62]. Furthermore, because most of the proteins that play a role in the mitochondria are encoded in the nucleus, there is a required nucleo-mitochondria

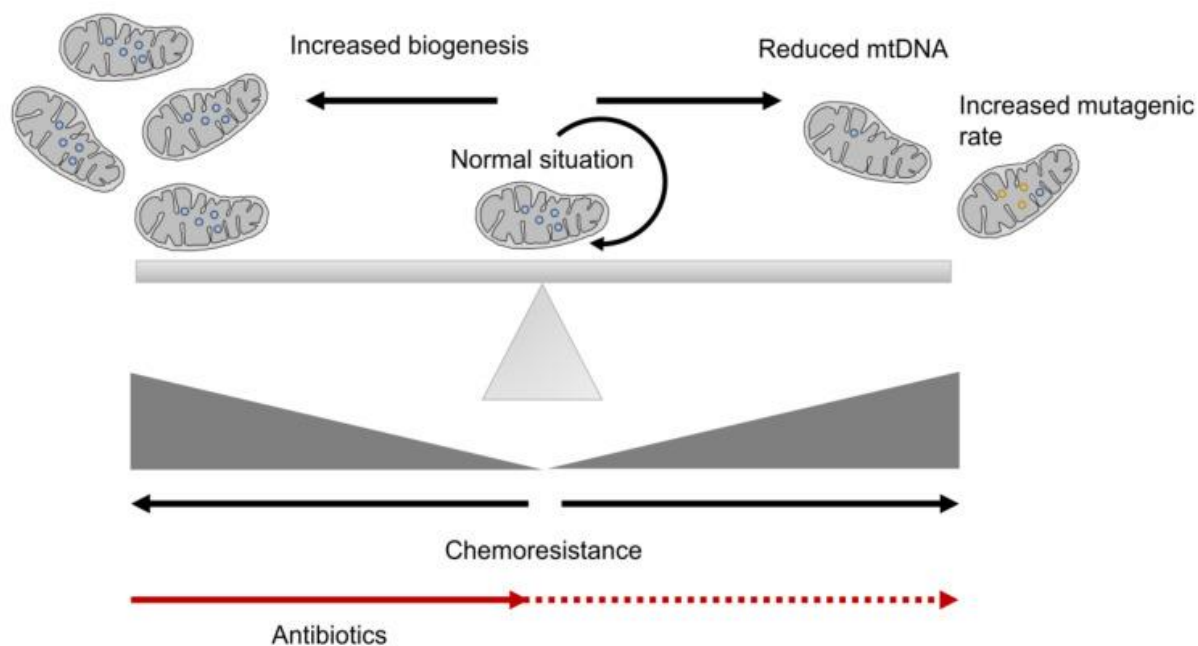
communication to allow not only the proper mitochondrial function but also the replication of mitochondrial DNA (mtDNA) through the import into mitochondria of proteins such as TFAM, POLG and POLGY2 [52,63].

Multiple signaling pathways can modify mitochondrial function, such as the PI3K/AKT/mTOR pathway, with multiple roles in tumorigenesis [64]. This fact makes it challenging to describe in a review all the processes implied in CSCs' drug resistance mediated by mitochondria. Thus, herein, we will mainly focus on mitochondrial processes. If we analyze the cycle of a mitochondrion, three key steps are involved: the generation of new mitochondria (biogenesis), mitochondrial metabolism, and the autophagy of aging or non-functional mitochondria (mitophagy) [13,34,54,60,65]. For each step, CSCs exhibit resistance mechanisms to different drugs. To consider the mitochondrial mechanisms of CSC resistance, the crosstalk between different processes inside a cell must be discussed. Multiple drugs generate oxidative stress, inducing increased ROS, against which there are multiple defense mechanisms in mitochondria [14,55]. Although some drugs cause DNA damage that will produce increased ROS, other drugs produce increased ROS that will damage DNA [66,67]. Additionally, mitochondria are crucial in cell death/survival

due to the role of some of their related proteins, such as cytochrome c, in triggering the intrinsic apoptotic pathway [68]. Throughout this review, we will discuss how alterations in the regulation of each of the three key steps (biogenesis, metabolism and mitophagy) modify the resistance of CSCs to different chemotherapeutic drugs. In addition, we will discuss how that resistance can be overcome, inducing apoptotic pathway for tumor cell clearance.

Mitochondrial Biogenesis and CSC Resistance

Mitochondrial biogenesis misbalance in cancer stem cells (CSCs). In normal cells, mitochondrial mass is usually maintained. However, both increased mitochondrial biogenesis, on the one hand, and alterations on mtDNA, on the other hand, are connected with an increased resistance in CSCs. Black arrows refer to increased chemoresistance, from a normal situation where mitochondrial biogenesis allows the maintenance of mitochondrial population. Treatment with antibiotics of CSCs with high mitochondrial biogenesis can overcome chemoresistance (red arrow), but prolonged treatments can force the appearance of a CSC population with reduced mtDNA (dotted red arrow).



Mitochondrial Metabolism in CSC Resistance

Importantly, each CSC subpopulation inside a tumor may exhibit a different metabolic profile to other CSCs or the tumor mass, with this heterogeneity associated with resistance to treatment. Thus, contradictory results have been obtained regarding the metabolic profile of CSCs. In some cases, they have been described as mainly glycolytic [61,103,104,105,106]; other articles have indicated that CSCs are primarily dependent on OXPHOS [18, 61,76,107].

The metabolic status of CSCs is very important in drug resistance mechanisms because, when glycolytic CSCs differentiate and proliferate, a change from anaerobic to aerobic metabolism can be observed [14]. However, CSCs from different tumor types have also been described as depending on OXPHOS for most of their energy. The increased efficiency of OXPHOS-based metabolism would, in theory, allow cancer cells to use the nutrients better, allowing them to survive in nutritionally poor environments [35]. Studies have suggested that treatment-resistant CSCs are less glycolytic, indicating that specific OXPHOS inhibition could attack these cells, helping them to escape from damage in hypoxic areas of the tumor. Thus, cells under severe hypoxia become more resistant to irradiation than cells in normoxia [108].

At the molecular level, the typical metabolic flexibility of cancer is based on the reconnection among the different metabolic pathways, achieved through the synthesis or degradation of key proteins that allow metabolites to change pathways according to cells' needs. The first of the described mechanisms of this metabolic remodeling is the so-called Warburg effect, in which cells use large amounts of glucose in the presence of oxygen [109]. This leads to the formation and secretion of lactate in a mechanism called aerobic glycolysis [86,109]. Although this mechanism is inefficient in energy production in the form of ATP, glucose absorption from tumor cells is usually higher, leading to a net ATP production similar to the level achieved with OXPHOS, caused by different mutations in respiratory complexes [48].

The low ROS levels present in CSCs could be

due to events leading to metabolic reprogramming, which is essential for maintaining self-renewal and improving the antioxidant defense mechanism [14]. Thus, glycolytic CSCs are usually adapted to the typical hypoxic environment of many tumors, in which the glycolytic metabolism prevails to counteract a low mitochondrial level. Specific physiological metabolites, such as pyruvate, tetrahydrofolate, and glutamine, can function as cytotoxic agents in CSCs when administered at doses that disrupt the redox $\text{NADP}^+/\text{NADPH}$ ratio [110]. Thus, pyruvate accumulation mimics the blockade of the respiratory chain performed by the binding of antimycin A to cytochrome c reductase in mitochondrial complex III [110,111].

High ALDH1 (aldehyde dehydrogenase-1) expression levels are characteristic of CSCs, which are related to increased resistance to chemotherapeutic agents in sarcoma, breast and lung CSCs [112,113,114]. High ALDH expression protects against the toxic effects of RNOS production derived from chemotherapeutic treatment, so that its inhibition further raises the RNOS levels, triggering apoptosis [115]. High ALDH activity is associated with high levels in the mitochondrial mass, both in cell lines and samples derived from patients, suggesting higher mitochondrial biogenesis or retarded degradation of mitochondria. Thus, the mitochondrial biogenesis inhibitor doxycycline targets ALDH^+ breast CSCs [116]. These results could be related to higher expression of mitochondrial ALDH isoforms [117].

The regulation among the enzymes of the glycolytic pathway, OXPHOS and TCA cycle, all involved in the synthesis of ATP and maintenance of the NAD^+/NADH ratio, results in high metabolic plasticity in a large proportion of CSCs. The mitochondria take small molecules, such as pyruvate, fatty acids and amino acids, from catabolic reactions to obtain reduced power in the form of NADH and/or FADH_2 . These molecules allow, through their oxidation, the electron transfer in the mitochondrial respiratory chain from water to molecular oxygen.

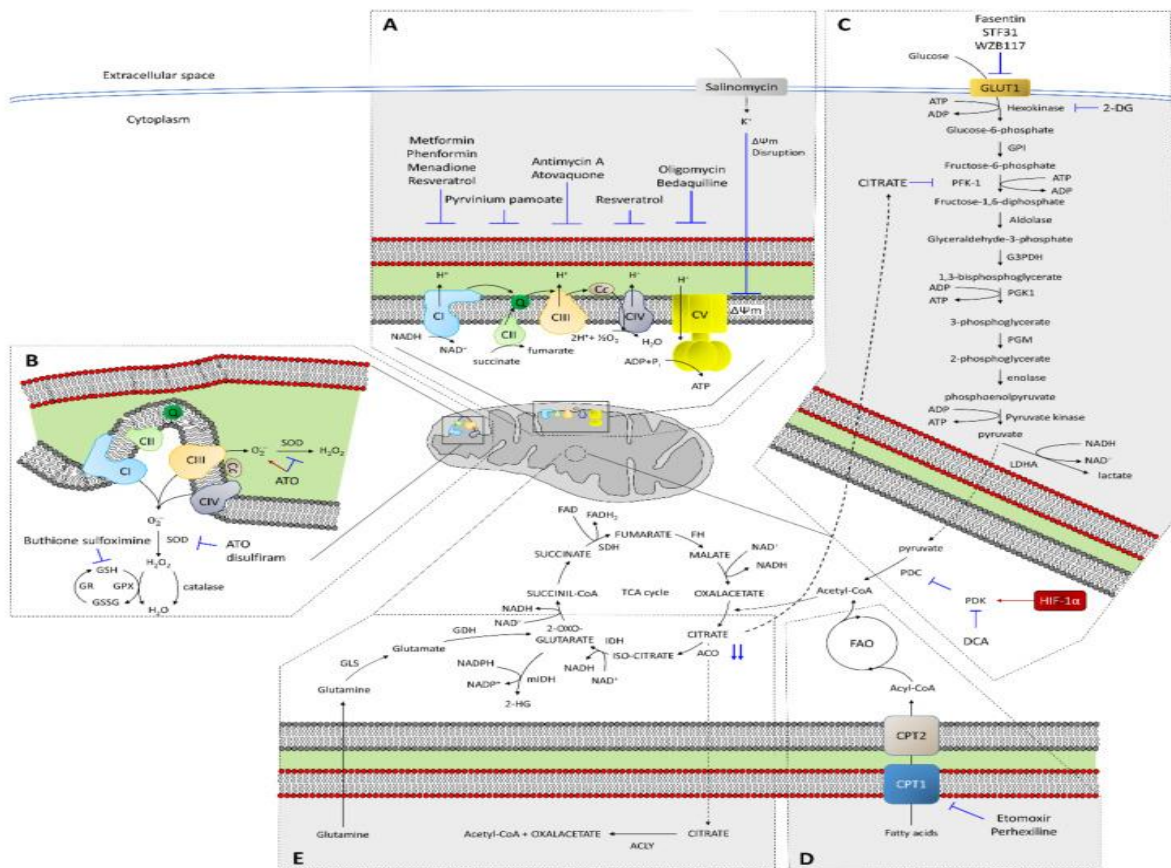
Importantly, design strategies that target a type of metabolism can lead to tumor cells, especially CSCs, with higher metabolic

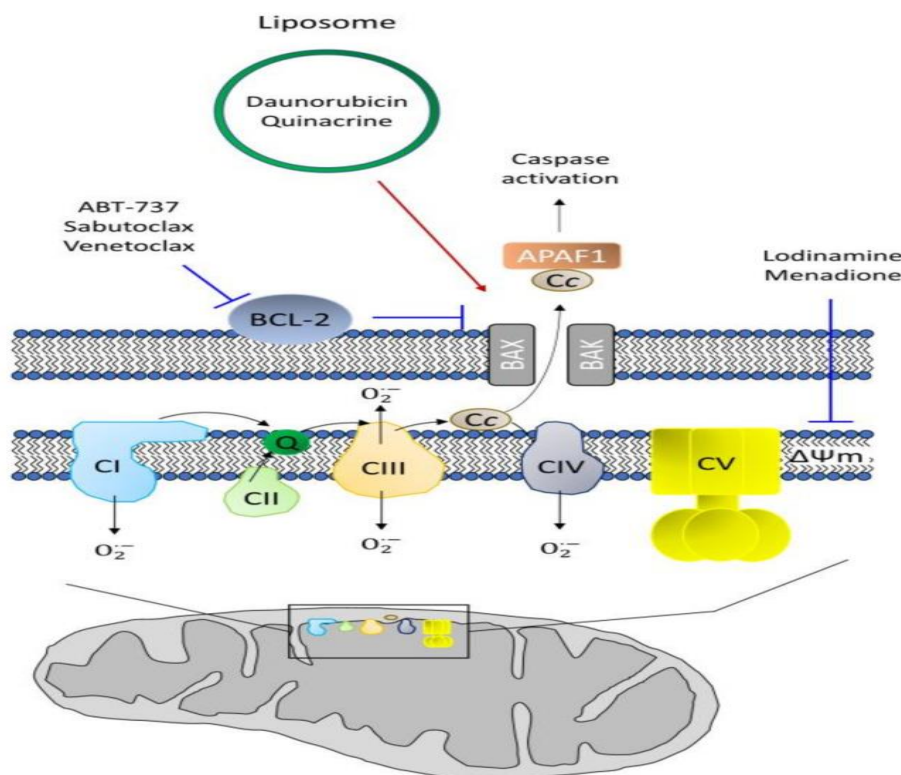
plasticity, changing their metabolism to adapt to the new situation. Thus, considering combined treatment is important to short-circuit mitochondrial metabolic plasticity.

Role of the Mitochondrial Respiratory Chain in CSC Resistance

Mitochondrial metabolism targeting can overcome CSC resistance. (A) Mitochondrial electron transport chain (ETC), core of oxidative metabolism, showing some of the described inhibitors for each complex (blue lines) used for CSC treatment. CI: complex I; CII: complex II; CIII: Complex III, CIV: Complex IV; CV: Complex V; Q: ubiquinone; Cc: cytochrome c. Outer mitochondrial membrane appears in red, while inner mitochondrial membrane is colored in grey. Salinomycin causes mitochondrial membrane potential ($\Delta\Psi_m$) disruption. (B) Reactive oxygen species produced as a consequence of ETC. Inhibitors of mitochondrial detoxifying enzymes are labelled with a blue line. Red arrow indicates a RNOS enhancer. ATO: Arsenic trioxide; GSH: glutathione; GSSG: glutathione disulfide; GR: glutathione reductase; GPX: glutathione

peroxidase. (C) Glycolytic metabolism, showing inhibitors of GLUT1 and hexokinase, blocking glycolysis at its beginning, and dichloroacetate (DCA), that inhibits pyruvate dehydrogenase kinase (PDK) and allow the incorporation of pyruvate into the tricarboxylic acid (TCA) cycle. Blue lines correspond to glycolytic inhibitors, while red arrows belong to HIF-1 α , a glycolytic enhancer. 2-DG: 2-deoxyglucose; GPI: glucose-6-phosphate isomerase; G3PDH: glyceraldehyde-3-phosphate dehydrogenase; PGK1: phosphoglycerate kinase; PGM: phosphoglycerate mutase. (D) Summary of fatty acid oxidation (FAO) metabolism. Etomoxir and perhexiline, inhibitors of CPT1 (blue line) diminished CSC population, by reducing mitochondrial incorporation of fatty acids. (E) Pathways related to the TCA cycle frequently modified in CSCs. Blue arrows correspond to aconitase (ACO) knockdown. SDH: succinate dehydrogenase; FH: fumarate hydratase; IDH: isocitrate dehydrogenase; mIDH: mutated IDH. GLS: glutaminase; GDH: glutamate dehydrogenase; IDH: isocitrate dehydrogenase; ACLY: ATP citrate lyase.





Summary of intrinsic apoptotic pathway. BCL-2, as antiapoptotic protein, inhibits the formation of pores by BAX/BAK that allow cytochrome c release to the cytoplasm, where it interacts with Apaf-1 to constitute apoptosome, allowing caspase cascade. Drugs targeting apoptosis comprise dissipaters of mitochondrial membrane potential ($\Delta\Psi_m$) or BCL-2 inhibitors (blue lines) or molecules enhancing formation of BAX/BAK pores (red arrow).

Conclusion

Mitochondria behave as an organelle of extraordinary metabolic plasticity, capable of modifying their different pathways to support (cancer) cell survival. Additionally, the combination of different chemotherapeutic agents or radiation is a good strategy to overcome the resistance of CSCs. Thus, blocking at least two metabolic pathways simultaneously would reduce the possibility of a relapse, as well as the possible development of resistance. However, and due to metabolic plasticity, it would be important to know which pathway(s) is prevalent in a specific CSC population, in order to use drugs that could target them, increasing its effectiveness. Additionally, it would be interesting to study

the design of synergistic treatments focused on CSCs mitochondrial metabolism, to reduce relapse probability.

References

1. Denton A.E., Roberts E.W., Fearon D.T. Stromal Cells in the Tumor Microenvironment. In: Owens B.M.J., Lakins M.A., editors. Stromal Immunology. Springer International Publishing; Cham, Switzerland: 2018. pp. 99–114. [DOI] [PubMed] [Google Scholar]
2. Roma-Rodrigues C., Mendes R., Baptista P.V., Fernandes A.R. Targeting Tumor Microenvironment for Cancer Therapy. *Int. J. Mol. Sci.* 2019;20:840. doi: 10.3390/ijms20040840. [DOI] [PMC free article] [PubMed] [Google Scholar]
3. Baghban R., Roshangar L., Jahanban-Esfahlan R., Seidi K., Ebrahimi-Kalan A., Jaymand M., Kolahian S., Javaheri T., Zare P. Tumor microenvironment complexity and therapeutic implications at a glance. *Cell*

- Commun. Signal. 2020;18:59. doi: 10.1186/s12964-020-0530- [DOI] [PMC free article] [PubMed] [Google Scholar]
4. .Yan Y., Chen X., Wang X., Zhao Z., Hu W., Zeng S., Wei J., Yang X., Qian L., Zhou S., et al. The effects and the mechanisms of autophagy on the cancer-associated fibroblasts in cancer. *J. Exp. Clin. Cancer Res.* 2019;38:171. doi: 10.1186/s13046-019-1172-5. [DOI] [PMC free article] [PubMed] [Google Scholar]
 5. Prasetyanti P.R., Medema J.P. Intra-tumor heterogeneity from a cancer stem cell perspective. *Mol. Cancer.* 2017;16:41. doi: 10.1186/s12943-017-0600-4. [DOI] [PMC free article] [PubMed] [Google Scholar]
 6. .Faubert B., Solmonson A., DeBerardinis R.J. Metabolic reprogramming and cancer progression. *Science.* 2020;368:eaaw5473. doi: 10.1126/science.aaw5473. [DOI] [PMC free article] [PubMed] [Google Scholar]
 7. Wang Y., Dong C., Zhou B.P. Metabolic reprogram associated with epithelial-mesenchymal transition in tumor progression and metastasis. *Genes Dis.* 2020;7:172–184. doi: 10.1016/j.gendis.2019.09.012. [DOI] [PMC free article] [PubMed] [Google Scholar]
 8. Vlashi E., Pajonk F. Cancer stem cells, cancer cell plasticity and radiation therapy. *Semin. Cancer Biol.* 2015;31:28–35. doi: 10.1016/j.semcancer.2014.07.001. [DOI] [PMC free article] [PubMed] [Google Scholar]
 9. Rich J.N. Cancer stem cells: Understanding tumor hierarchy and heterogeneity. *Medicine.* 2016;95:S2–S7. doi: 10.1097/MD.0000000000004764. [DOI] [PMC free article] [PubMed] [Google Scholar]
 10. O’Brien C.A., Kreso A., Dick J.E. Cancer Stem Cells in Solid Tumors: An Overview. *Semin. Radiat. Oncol.* 2009;19:71–77. doi: 10.1016/j.semradonc.2008.11.001. [DOI] [PubMed] [Google Scholar]

THE EVOLUTION OF LAND REVENUE SYSTEMS AND THEIR IMPACT ON JHARKHAND'S ECONOMY

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Abstract: This research paper provides a comprehensive historical analysis of the evolution of land revenue systems in Jharkhand and examines their profound impact on the state's economic, social, and political landscapes. Beginning with an exploration of pre-colonial communal land practices—where tribal communities such as the Munda, Santhal, and Oraon maintained lineage-based, usufructuary rights—it traces the gradual shift to tenant-based systems under the influence of Hindu Rajas and Muslim Jagirdars. The study then details the transformative changes introduced during the British colonial period, notably the Permanent Settlement and the ensuing Zamindari system, which restructured land ownership and revenue extraction, leading to widespread land alienation and economic exploitation of indigenous communities. Special attention is given to the application of Wilkinson's Rules in Kolhan as an attempt to safeguard tribal land rights amid these changes. In the post-independence era, the paper reviews the effects of the Bihar Land Reforms Act of 1950 and subsequent amendments to the Chotanagpur and Santhal Pargana Tenancy Acts, highlighting ongoing challenges in balancing revenue generation with the protection of tribal rights. Furthermore, it assesses the dual impact of industrialization and mining on agricultural practices and the environment, underscoring persistent socio-political tensions. Ultimately, the findings underscore the intricate relationship between land revenue policies and Jharkhand's development trajectory, calling for sustainable reforms that reconcile economic growth with equitable land rights and cultural preservation.

Keywords: Land Revenue Systems, Zamindari System, Tribal Rights, British Colonial Policies, Agrarian Reform

Introduction

The state of Jharkhand, situated in eastern India, is characterized by its diverse topography, forming a significant part of the Chotanagpur Plateau, and its rich endowment of mineral resources and forests. This region is also home to a substantial tribal population, including prominent groups such as the Munda, Santhal, and Oraon. Throughout history, land has held paramount importance as a fundamental resource in this region. Consequently, the systems governing land ownership, management, and revenue extraction have played a pivotal role in shaping the socio-economic and political structures of Jharkhand. Understanding the historical trajectory of these land revenue systems is crucial to comprehending the state's economic development, social dynamics, and political

landscape. This paper aims to provide a detailed

historical account of the land revenue systems that have prevailed in the region now known as Jharkhand, from pre-colonial times to the present day. It will analyze the impact of these evolving systems on the economy of Jharkhand, considering aspects such as agricultural development, industrialization, resource extraction, and overall state revenue. Furthermore, the social and political consequences of these land revenue systems, particularly their effects on tribal communities and the broader socio-political landscape of Jharkhand, will be examined. By tracing this evolution, this study seeks to offer a comprehensive understanding of the intricate relationship between land revenue systems and the development of Jharkhand.

Pre-Colonial Land Revenue Systems in Jharkhand

Traditional Community-Based Land Ownership and Management

In the pre-state era of Jharkhand, a fundamental norm prevailed: "he who sows, reaps the yield". This principle underscored the right of cultivation, but the ownership of land was generally vested in the lineage or the village community, rather than in individual proprietors. Among the Munda tribe, in particular, land ownership was deeply rooted in the concept of lineage, known as *khunt*. Land rights were intrinsically linked to membership within this lineage, whose ancestors were recognized as the original individuals who cleared and settled the land. Families held usufructuary rights, meaning they had the right to use the land as long as they cultivated it, but they were not considered the absolute owners. Land was viewed as an integral part of Mother Nature, holding significant spiritual value, and the regular propitiation of guardian spirits was a customary practice.

Within this traditional system, community leaders played a crucial role. The lineage landowners, known as *khuntkattidar*, held primary rights to the land and collected a form of tribute or rent from affinal relatives who resided in the village. As cultivation expanded and settlements grew, groups of villages were often constituted into larger units called *patti* for administrative and service purposes. The head of the *patti*, known as the *manki*, held a position of authority over the village chiefs. These village chiefs were obligated to provide military services to the *manki*, and over time, the gifts they offered to the *manki* gradually transformed into more formalized dues. This early system, therefore, was characterized by communal ownership, usufructuary rights, a deep spiritual connection to the land, and the initial stages of a hierarchical arrangement in the form of tribute and the authority of the *manki*.

The Influence of Hindu Rajas and Muslim Jagirdars

Over time, the land revenue system in Jharkhand underwent a transition with the

increasing influence of Hindu Rajas and Muslim Jagirdars. Cultivators gradually shifted from holding communal rights to becoming tenants who paid tribute, known as *chanda*, to the Rajas. These Rajas were perceived as protectors of the land rather than its absolute owners, marking a move towards a more centralized, albeit still loosely structured, system of revenue extraction. The Chotanagpur Raj emerged as the first kingdom in the region to be recognized by the Mughal Empire, and subsequently, other neighboring smaller kingdoms were also integrated, collectively forming the region known as Jharkhand under the administrative unit of the Subah of Bangal. By the 17th century, the Chotanagpur of this time had been drawn into the orbit of the agrarian system of northern and eastern India.

This period also witnessed the introduction of new cultural and religious influences. Hindu Rajas propagated Pauranic Hinduism, while Muslim Jagirdars brought in popular Islamic traditions, contributing to the evolving socio-cultural landscape of the region. A significant development during this era was the initiation of land grants by the kings to both religious institutions and secular individuals. These grants bestowed rights of ownership and the authority to collect revenue from the land, gradually eroding the traditional lineage-based land rights of the tribal communities. Even *bhuinhari* land, which represented the remnants of the old *khuntkatti* system, came under threat as grantees acquired the rights of those who died without heirs or migrated. Thus, the influence of Hindu Rajas and Muslim Jagirdars introduced the concept of tribute, facilitated the gradual erosion of communal land rights through land grants, and steered the land revenue system towards a more hierarchical structure centered on control and revenue extraction by ruling elites.

The Transition during the British Colonial Period

The Introduction of the Permanent Settlement

A pivotal moment in the history of land revenue systems in Jharkhand arrived with the advent of British colonial rule. In 1765, the Mughal Emperor Shah Alam II granted the British East

India Company the *Dewani*, which conferred upon them the responsibility for tax collection in Bengal, a province that included the territory of present-day Jharkhand. While the first recorded British entry into Chotanagpur occurred around 1770, it took them approximately a century and a half to establish complete control over the land. A landmark policy introduced by the British was the Permanent Settlement of 1793. Initially implemented in Bengal, this system encompassed the regions of Bihar, Orissa, and Chotanagpur.

The Permanent Settlement fundamentally altered the existing land relations. It recognized the Zamindars as the permanent proprietors of the land, granting them hereditary rights and the authority to collect revenue from the cultivators. In return for this ownership, the Zamindars were obligated to pay a fixed annual revenue in cash to the East India Company. They were permitted to retain a portion of the collected revenue as their share. In the context of Chotanagpur, this policy meant that proprietary rights to land were bestowed upon these Zamindars, often supplanting the existing traditional landlords, Rajas, and Jagirdars. Furthermore, the introduction of a fixed cash rent and the establishment of the British judicial system brought about significant changes to the agrarian structure of the region. The Permanent Settlement, therefore, represented a radical departure from the pre-existing land management practices, ushering in an era of private land ownership and a formalized, cash-based revenue system that profoundly impacted the tribal communities and their customary land rights.

Implementation and Impact of the Zamindari System

The implementation of the Zamindari system marked a watershed moment in the history of landownership in the region, as it was the first time that proprietary rights were formally conferred upon the Zamindars. This transformation had profound consequences for the cultivators, who were relegated to the status of tenants with significantly diminished and insecure rights. These tenants were often subjected to exorbitant rents and faced the constant threat of eviction if they failed to meet

the revenue demands. The financial pressures often compelled them to seek loans, leading to a cycle of indebtedness and further exploitation at the hands of moneylenders.

The traditional tribal system of *Khuntkatti*, which was based on communal land ownership, was severely undermined by the imposition of the Zamindari system. This new system facilitated the influx of outsiders, including moneylenders, Zamindars, and traders, who were often referred to as *dikus* (aliens), into the tribal lands. These *dikus* gradually occupied the ancestral lands of the tribals, effectively reducing them from landowners to landless laborers who were expected to work under the dictates of the new landlords. Moreover, the new landlords often imposed forced labor, known as *Bandhua Majdooori*, and levied excessively high rental rates on the tribals for cultivating any land. Ironically, even some of the newly recognized Zamindars found it challenging to meet the high fixed revenue demands set by the Company, and those who defaulted on their payments risked losing their *zamindari*. The Zamindari system, therefore, proved to be largely oppressive for the original inhabitants of Chotanagpur, resulting in widespread land alienation, severe economic exploitation, and the disruption of their deeply rooted socio-economic structures. The emergence of the *diku* class as a new set of landlords further intensified the hardships faced by the tribal communities.

Analysis of the Practical Application and Limitations of Wilkinson's Rules in Kolhan

In 1834, the princely state of Chhota Nagpur was brought under the administration of the East India Company, and this was followed by the inclusion of the Kolhan Government Estate in 1838. Following the Kol rebellion of the early 1830s, the British implemented a distinct system of direct administration in the Kolhan region, which corresponds to present-day West Singhbhum, known as "Wilkinson's Rules". These rules were specifically designed to maintain Kolhan as a "reserve" for the Ho tribe and to preserve their traditional "communal" social system. The administration of this region was directly overseen by the Kolhan superintendent, who governed through the authority of the Ho Mundas and Mankis.

A key aspect of Wilkinson's Rules was the provision that no governmental activity or land acquisition could be lawfully undertaken within the tribal areas of Kolhan without obtaining explicit permission from the village assembly, or *gram sabha*. This provision underscored a recognition of the communal nature of land ownership and management prevalent among the Ho people and aimed to safeguard their rights against external encroachment. However, the legal status of Wilkinson's Rules has been a subject of ongoing debate. While some sources suggest that these rules lack formal statutory backing as they were not framed by the Governor-General in Council, the only competent authority at the time, it is also acknowledged that they were consistently followed and acted upon in the administration of civil justice in the Kolhan area for a considerable period, approximately 150 years. Notably, the original copy of Wilkinson's Rules has reportedly remained untraceable, with even the High Court of Patna having only seen a typed copy. Despite their long-standing application, the Kolhan Enquiry Committee, in its report of 1948, highlighted certain deficiencies within these rules, suggesting that they might have become inadequate to fully address the evolving needs and complexities of the region. Thus, Wilkinson's Rules represent a unique colonial administrative approach that recognized communal tribal structures and granted autonomy to village assemblies in land matters, but their informal legal standing and eventual limitations posed challenges to their long-term effectiveness.

Overview of Other Land Revenue Systems Introduced by the British

While the Zamindari system held prominence in the Bengal Presidency, which included Jharkhand, the British also introduced other significant land revenue systems in different parts of India, namely the Ryotwari and the Mahalwari systems. The Ryotwari system involved a direct settlement of land revenue with the individual cultivators, who were recognized as the proprietors of the land. These cultivators had ownership rights, including the ability to sell, mortgage, or gift their land, and they paid taxes directly to the government. This system was primarily practiced in regions such as southern India, the Bombay area, Assam, and Coorg. In contrast, the Mahalwari system treated the village as a collective unit for the purpose of revenue payment. The land was divided into Mahals, which could consist of one or more villages, and the tax was assessed on the entire Mahal. While ownership rights were generally vested with the peasants, the responsibility for collecting and paying the revenue to the government rested with the village headman or a village committee. The Mahalwari system was introduced in areas like the North-West Frontier, Agra, the Central Province, the Gangetic Valley, and Punjab. Based on the available research material, the Ryotwari system was not prevalent in Jharkhand. The presence and specific impact of the Mahalwari system in Jharkhand are not explicitly detailed in these sources, suggesting that the Zamindari system was the dominant form of British land revenue administration in this region, although localized variations or indirect influences might have existed. Understanding these different systems provides a broader context of the diverse agrarian policies adopted by the British across India.

Table 1: Comparison of British Land Revenue Systems

Feature	Permanent Settlement (Zamindari)	Ryotwari System	Mahalwari System
Area of Prevalence (including Chota Nagpur)	Bengal, Bihar, Orissa, Varanasi; Dominant in Chota Nagpur	Madras, Bombay, parts of Assam and Coorg; Localized in some parts of Jharkhand (e.g., Santals)	North-West Frontier, Agra, Central Province, Gangetic Valley, Punjab; Limited impact on Jharkhand
Basis of Revenue Assessment	Fixed permanently with Zamindars	Variable, based on individual landholding and productivity	Variable, based on village or mahal productivity

Ownership Rights	Zamindars recognized as owners	Peasants/cultivators recognized as owners	Village community collectively owned land: individual cultivators held personal rights
Key Features	Fixed revenue demand; Hereditary rights for Zamindars; Peasants became tenants	Direct settlement with individual cultivators; Revenue subject to periodic revision; Elimination of intermediaries (in theory)	Revenue assessed on village as a unit; Village headman responsible for collection; Periodic revision of revenue
Impact on Peasants/Cultivators	Often led to exploitation, high rents, and insecurity of tenure	High revenue demands could lead to indebtedness and land loss; Potential for exploitation by officials	Collective responsibility could burden entire villages; High and variable revenue demands

Source: Author’s Creation

Social and Economic Consequences of British Land Revenue Policies

The implementation of British land revenue policies in Jharkhand had far-reaching and predominantly negative social and economic consequences for the region, particularly for its tribal communities. A major outcome was the widespread alienation of land from the original tribal inhabitants to a new class of landlords,

moneylenders, and other outsiders. This dispossession undermined the traditional communal landownership systems that had been in place for generations and disrupted the established livelihoods of the tribal population. The influx of *dikus*, or outsiders, further exacerbated the situation as they exploited the tribals through the imposition of high rents, the creation of debt traps, and the plundering of the region's natural resources.

Table 2: Major Tribal Uprisings in Jharkhand Against British Land Policies

Name of Uprising	Period	Key Leaders	Main Causes (linking to land revenue policies)	Outcomes/Impact
Kol Uprising	1831-1832	Buddhu Bhagat, Joa Bhagat, Madara Mahato	Economic exploitation due to new land tenure and administrative systems; Influx of outsiders; High taxes; Loss of traditional lands	Suppressed by the British; Led to some reforms in British policy in Chota Nagpur; Creation of South-West Frontier Agency
Santhal Rebellion	1855-1856	Sidhu Murmu, Kanhu Murmu	Exploitation by British and Zamindars due to Permanent Settlement; High taxes; Forced labor; Desire for self-rule	Brutally suppressed; Led to the creation of the separate district of Santhal Pargana; Highlighted tribal grievances
Birsa Munda Movement (Ulgulan)	1895-1900	Birsa Munda	Erosion of traditional Khuntkatti system; Exploitation by landlords and moneylenders; Loss of traditional rights; Forced labor	Suppressed; Led to the Chota Nagpur Tenancy Act of 1908, providing some protection to tribal land rights
Tana Bhagat Movement	1914-1920	Jatra Bhagat	Protest against exploitative practices, forced labor, and lack of land rights under British rule; High taxes	Non-violent resistance; Aligned with the Indian Nationalist Movement; Raised awareness about tribal rights

Source: Author’s Creation

British policies also led to the forced commercialization of agriculture, often

compelling farmers to shift from cultivating food crops to growing cash crops to meet the revenue demands. This shift frequently resulted in food insecurity and even famines in the region. The insistence on the payment of revenue in cash, a departure from the earlier practice of payment in kind, further contributed to the growing indebtedness among farmers, as they were often forced to borrow money at high interest rates to meet the British demands. This cycle of debt often led to the rise of bonded labor, as farmers and laborers who could not repay their loans were forced into servitude. The widespread grievances arising from land alienation, economic exploitation, and social disruption fueled numerous social uprisings, rebellions, and movements throughout the colonial period, including the Kol rebellion, the Santhal Hul, the Birsa Munda Uprising, and the early stages of the Jharkhand Movement. These movements were a direct response to the oppressive nature of the British land revenue policies and the profound negative impact they had on the lives and livelihoods of the people of Jharkhand.

Evolution of Land Revenue Systems in Post-Independence Jharkhand

Impact of the Bihar Land Reforms Act of 1950

Following India's independence, a significant focus was placed on agrarian reforms across the country, and the Bihar Land Reforms Act of 1950 was enacted with the aim of abolishing the intermediary rights that had been granted under the Permanent Settlement. This legislation sought to dismantle the Zamindari system by vesting the ownership of landed property held by intermediaries, including the Zamindars, in the state of Bihar, which at that time included the region that would later become Jharkhand. The primary objective of this act was to eliminate the exploitative role of the Zamindars and establish a direct relationship between the state and the actual cultivators of the land.

However, the implementation of the Bihar Land Reforms Act faced considerable delays and resistance from vested interests. Furthermore, the act contained provisions that allowed

intermediaries to retain possession of certain categories of land, such as homesteads and land under their *khas* (private) possession. Despite these limitations and challenges in its implementation, the act represented a fundamental shift in land ownership patterns in Jharkhand. It marked a transition from a system dominated by private intermediaries to one where the state held significant control over land resources. While the intended benefits for the peasantry were not immediately and fully realized, the Bihar Land Reforms Act of 1950 laid the groundwork for subsequent land policies and continued efforts to address the historical inequities in land distribution that had persisted through the colonial era.

Amendments to the Chotanagpur Tenancy Act and Their Implications

The Chotanagpur Tenancy Act of 1908, which was initially enacted by the British administration in response to the widespread tribal uprisings against land alienation and exploitation, continued to be a crucial piece of legislation in Jharkhand even after India gained independence. Its primary aim was to protect the land rights of the tribal communities by imposing restrictions on the transfer of tribal land to non-tribals and by recognizing certain customary community rights over land and resources. Over the years following independence, the CNT Act has been amended several times. For instance, in 1938, even before independence, a provision was introduced allowing for the purchase and sale of tribal land at the police station level, and this provision was later modified in 1947. The Act has been amended as much as 26 times since its enactment in 1908, at the latest in 1996 when the then Bihar government allowed transfer of land belonging to STs for industry and mining.

More recently, around 2016, the Jharkhand government introduced controversial amendments to the CNT Act that sparked widespread protests and opposition from tribal communities. These amendments sought to permit the use of agricultural land owned by Scheduled Tribes, Scheduled Castes, and Other Backward Classes for industrial and commercial purposes. Tribal communities and activists viewed these changes as a significant dilution of the protections afforded by the

original Act and expressed concerns that they would lead to increased land alienation and make the safeguards against exploitation ineffective. The amendments were seen as prioritizing the state's agenda for industrial and commercial development at the expense of the land rights and livelihoods of the tribal population. The ongoing debates and resistance surrounding these amendments highlight the persistent tension between economic development imperatives and the need to protect the land rights of Jharkhand's indigenous communities.

The Evolution and Current Status of the Santhal Pargana Tenancy Act

Similar to the Chotanagpur Tenancy Act, the Santhal Pargana Tenancy Act (SPT Act) also has a historical legacy of protecting tribal land rights in the Santhal Pargana region of Jharkhand. Enacted by the British in 1876 following the Santhal Hul, a major tribal uprising, the SPT Act aimed to prevent the exploitation of the Santhal community, notably by prohibiting the sale of Adivasi land to non-Adivasis within the Santhal Pargana region, which borders West Bengal. After India's independence, the Santhal Pargana Tenancy Act of 1949 became the first codified law of tenancy in this division of Jharkhand. This legislation supplemented the existing tenancy laws from the British era and formalized some of the customary laws pertaining to tribal land ownership and usage.

In recent times, the SPT Act, along with the CNT Act, has also been subject to amendments that have generated considerable controversy. These amendments, similar to those proposed for the CNT Act, have raised concerns about the potential for increased land alienation due to the facilitation of land transfer for industrial and commercial purposes. Traditionally, the SPT Act had even stricter provisions than the CNT Act, generally not allowing the transfer of either urban or rural land, except through inheritance. The proposed changes have been met with resistance from tribal communities who fear a weakening of the protective mechanisms that have historically safeguarded their land rights. The evolution and ongoing debates surrounding the SPT Act underscore the enduring significance of land as a contentious issue in

Jharkhand, particularly in the context of balancing development with the rights and interests of tribal populations.

The Role and Effectiveness of Community-Based Land Management Systems

Despite the formal land laws and revenue systems, traditional community-based land management practices continue to hold relevance in post-independence Jharkhand, especially within the tribal-dominated areas. These customary practices, deeply rooted in the history and culture of the tribal communities, often stand in contrast to the principles and procedures of modern statutory laws. Frequently, these modern laws are perceived as being biased towards the interests of the state machinery, facilitating the acquisition of tribal land for development projects and other purposes. Notably, there has been a perceived neglect of community rights in land management, particularly in the period following economic liberalization and reforms.

The Forest Rights Act (FRA) of 2006 was a significant piece of legislation that aimed to address this issue by recognizing the rights of tribal communities and other traditional forest dwellers over forest land and resources. However, the effective implementation of this Act in Jharkhand, like in many other states, has faced challenges and remains an area of concern. Another important legal framework is the Panchayats Extension to Scheduled Areas Act (PESA) of 1996, which grants significant powers to Gram Sabhas (village assemblies) in Scheduled Areas, including the management of natural resources. There are ongoing concerns about the effective implementation of PESA and potential conflicts with state policies, such as the Land Bank policy, which aims to create land reserves for industrial and infrastructural development. The interplay between customary land management systems and these post-independence legal frameworks highlights the complexities of land governance in Jharkhand and the continued struggle for tribal communities to assert their rights over their ancestral lands and resources.

Impact of Land Revenue Systems on Jharkhand's Economy

The Relationship Between Land Revenue Policies and Agricultural Development

The evolution of land revenue policies in Jharkhand has had a profound and multifaceted impact on the state's agricultural development. Under the British, the Permanent Settlement, driven primarily by the objective of maximizing revenue extraction, often proved detrimental to the agricultural population. The imposition of high revenue demands frequently led to the impoverishment of cultivators and hindered investment in agricultural improvements. Furthermore, the British emphasis on cash payments for revenue obligations prompted a shift in cropping patterns, with farmers increasingly cultivating cash crops over food crops. This transition, while serving the economic interests of colonial power, often resulted in food insecurity and vulnerability for the local population.

In the post-independence era, land reforms aimed at addressing the inequities of the past had a mixed impact on agricultural productivity. While initiatives such as land restoration acts in some tribal regions brought about positive changes by reclaiming illegally transferred lands, implementation gaps and the continued issue of land alienation hindered widespread agricultural progress. Notably, the privatization of landholdings and the appropriation of village land by the state after independence, coupled with inadequate technological and infrastructural support for agriculture from successive governments, have

been identified as contributing factors to the ecological and food security challenges faced by rural Jharkhand. The management of traditional irrigation systems, crucial for agricultural sustainability, was also affected by the shifts in land ownership and control following land reforms. Therefore, the historical trajectory of land revenue policies in Jharkhand reveals a complex relationship with agricultural development, where the initial focus on revenue extraction often came at the expense of agricultural sustainability and the well-being of cultivators, and subsequent reforms have faced challenges in fostering widespread and equitable agricultural advancement.

The Contribution of Land Revenue to the State's Budget and Overall Economy

Historically, land revenue has been a significant source of income for governments in Jharkhand, reflecting its agrarian and resource-rich nature. An analysis of recent trends in land revenue receipts, based on audit reports, provides insights into its ongoing contribution to the state's finances. There have been notable variations between the budgeted estimates for land revenue and the actual amounts collected. For instance, data from December 2024 indicates a budget estimate of INR 17,000 million for land revenue, while the actual receipts were INR 3,260.8 million. This discrepancy suggests potential challenges in accurately forecasting and realizing revenue from this sector.

Table 3: Trend of Land Revenue Receipts in Jharkhand Based on Audit Reports

Year	Actual Receipts (in crore INR)	Percentage of Variation from Revised Estimates	% of Actual Land Revenue Receipts vis-à-vis Total Tax Receipts of the State
2007-08	26.26	(-) 29.88	0.76
2008-09	53.33	(+) 1.10	1.42
2009-10	41.28	(-) 31.20	0.92
2010-11	130.65	(+) 97.95	2.29
2011-12	52.94	(-) 36.59	0.76
2012-13	96.30	(+) 82.06	-

Source: Principal Accountant General (Audit) Jharkhand, Ranchi

Another perspective on the contribution of land revenue can be seen by comparing the budgeted estimates with the actual receipts. For the fiscal

year 2023-24, the budget estimate for land revenue was INR 17,000 million, while the actual receipts up to December 2024 were INR

3,260.8 million. In comparison, the budget estimate for receipts from Stamps and Registration for the same period was INR 14,500 million.

The government of Jharkhand has expressed a focus on enhancing revenue generation from various sources, including land and related departments. In line with this, there has been a proposal to introduce a commercial tax on lands that are being used for commercial purposes. The rationale behind this initiative includes enhancing transparency in land-related matters and potentially increasing the state's revenue base. While precise figures on the percentage contribution of land revenue to the total state budget are not consistently available across the provided snippets, the data suggests that it remains a relevant, albeit potentially fluctuating, component of Jharkhand's fiscal resources. Efforts to streamline land administration and improve revenue collection efficiency, such as the digitization of land records and the introduction of online services, also indicate the state's intent to optimize the economic contribution from land-related activities.

The Impact of Industrialization and Mining Activities

Jharkhand's rich endowment of mineral resources has been a primary driver of industrialization and mining activities in the state, significantly reshaping its economic landscape. While this sector has been a major source of revenue for the state, with coal being the predominant contributor, it has also had substantial implications for land use and the displacement of local communities, particularly tribal populations. The process of industrialization and mining has often involved large-scale land acquisition, facilitated by both colonial-era laws like the Land Acquisition Act of 1894 and the Coal Bearing Areas Act of 1957. This has led to the displacement of numerous tribal communities from their ancestral lands, impacting their traditional livelihoods and cultural heritage. Since independence, approximately 20% of Jharkhand's area has been diverted, mostly for mines and dams, causing the displacement of around four million tribals between 1947 and 2012.

Furthermore, the environmental consequences of extensive mining and industrial operations in Jharkhand have been significant, including air and water pollution, soil degradation, deforestation, and a loss of biodiversity. These environmental costs can have long-term repercussions for the state's economy and the well-being of its inhabitants. The controversial Land Bank policy, which aims to create reserves of land for industrial and infrastructural development, has also raised concerns regarding its potential impact on the land rights and access to resources for marginalized communities. While industrialization and mining are crucial for Jharkhand's economic growth and revenue generation, their impact on land ownership, displacement, and the environment necessitates careful consideration and a balanced approach to ensure sustainable and equitable development.

Analysis of Recent Land Revenue Policies and Their Potential Economic Impact

Recent land revenue policies in Jharkhand indicate a focus on enhancing revenue generation, improving administrative efficiency, and attracting investment. The state government's consideration of introducing a commercial tax on lands used for commercial purposes is a significant policy development. The stated objectives of this initiative include increasing transparency in land-related matters and potentially boosting the state's revenue. By taxing properties used for business activities, the government aims to tap into a potentially significant revenue source.

Another notable policy is the effort to bring land-related services under the Right to Service Act. This move is intended to improve the efficiency and timeliness of services such as land mutation and the issuance of land receipts, thereby enhancing public convenience and potentially streamlining revenue collection processes. The proposal to implement a barcode system for land receipts, allowing citizens to access them on their mobile devices, also reflects an effort to modernize and simplify land administration. Furthermore, the ongoing initiatives to digitize land records and provide online access to land-related information are

expected to contribute to greater transparency and efficiency in land management.

However, the potential economic impacts of amendments to the Chotanagpur Tenancy Act and the Santhal Pargana Tenancy Act remain a subject of debate and concern. While these amendments could potentially facilitate land transfer for industrial and commercial development, attracting investment and fostering economic growth, they also raise significant concerns about displacement, loss of livelihoods, and the erosion of land rights, particularly for tribal communities. The long-term economic and social consequences of these policies will depend on how they are implemented and whether adequate safeguards are put in place to protect the interests of all stakeholders.

Social and Political Consequences of Land Revenue Systems

Detailed Examination of Land Alienation and Its Long-Term Social Consequences

The historical processes of land alienation in Jharkhand, both during the British colonial period and in the post-independence era, have had profound and enduring social consequences, particularly for the state's tribal communities. The loss of ancestral land has resulted in widespread displacement, forcing communities to relocate and often leading to the disruption of their traditional ways of life. This displacement has frequently led to indebtedness as people lose their primary source of livelihood and are forced to borrow money for survival. In some instances, this has even resulted in forced labor and servitude under moneylenders and landlords.

Beyond the economic impacts, land alienation has severely disrupted the traditional social structures and cultural practices of tribal communities in Jharkhand. Land is deeply intertwined with their history, rituals, and religious beliefs, and its loss can lead to a significant erosion of cultural identity and a decrease in community autonomy. Furthermore, land alienation has contributed to marginalization and increased poverty within these communities, as agriculture and forest resources often form the basis of their subsistence economies. The historical and

ongoing processes of land transfer have also exacerbated social inequalities in Jharkhand, with non-tribal communities and elites often benefiting from the acquisition of land and resources. The long-term social consequences of land alienation continue to shape the socio-economic landscape of Jharkhand, contributing to vulnerabilities and challenges faced by its tribal population.

The Role of Land Grievances in the Political Mobilization of Tribal Communities and the Jharkhand Movement

Grievances stemming from land alienation and the perceived injustices in land revenue systems have played a central and enduring role in the political mobilization of tribal communities in Jharkhand. Throughout history, numerous tribal uprisings and movements have erupted in the region, with the protection and restoration of land rights being a primary driving force. The Kol rebellion, the Santhal Hul, and the Birsa Munda Uprising are prominent examples of tribal resistance against colonial land policies and the exploitation they engendered.

The Jharkhand Movement, which gained significant momentum in the latter half of the 20th century, was also fundamentally rooted in the historical injustices of land alienation and the aspiration of tribal communities to protect their ancestral lands and cultural identity. The demand for a separate state of Jharkhand was, in large part, a culmination of decades of struggle over land rights and self-determination. Even after the formation of Jharkhand in 2000, land rights and the issue of displacement due to development projects, industrialization, and mining continue to be significant political issues in the state. Ongoing protests and demands for better compensation, rehabilitation, and the protection of land rights underscore the fact that land grievances remain a potent force in the political landscape of Jharkhand.

Analysis of How Land Revenue Systems Have Shaped Broader Social and Political Dynamics

The evolution of land revenue systems in Jharkhand has had a profound influence on the broader social and political dynamics of the

region. The introduction of new land revenue systems by the British led to the emergence of new social classes, such as the Zamindars and moneylenders, who often came from outside the traditional tribal structures, thereby altering existing power hierarchies. These systems often contributed to increased social differentiation and inequality, as some groups gained control over land and resources while others were dispossessed and marginalized.

Control over land and the revenue derived from it became a central aspect of political power, shaping the relationships between the state, local rulers, and various communities. The implementation of land revenue policies also had a significant impact on inter-community relations, particularly between the tribal and non-tribal populations of Jharkhand. The historical injustices and disparities created by these systems have contributed to long-standing social and political tensions in the state, influencing patterns of social organization, political mobilization, and the ongoing discourse on rights, justice, and development in Jharkhand.

Conclusion

The history of Jharkhand is intricately woven with the evolution of its land revenue systems, from the pre-colonial era's communal ethos to the complexities of the post-independence landscape. Initially characterized by community-based ownership and tribute systems, the arrival of Hindu Rajas and Muslim Jagirdars introduced the concept of land grants and a gradual shift towards centralized revenue extraction. The British colonial period brought about a radical transformation with the Permanent Settlement, establishing private land ownership under Zamindars and a rigid cash-based revenue system that profoundly impacted the indigenous tribal communities, leading to widespread land alienation and economic exploitation. Post-independence, while land reforms aimed to address these historical inequities, their implementation faced challenges, and the Chotanagpur and Santhal Pargana Tenancy Acts, despite their protective intentions, have been subject to amendments that raise concerns about the future of tribal land rights.

The impact of these evolving land revenue systems on Jharkhand's economy has been significant. While land revenue has historically contributed to the state's budget, the policies have also shaped agricultural development, often with detrimental consequences for local cultivators. The rich mineral resources of Jharkhand have driven industrialization and mining, generating revenue but also causing displacement and environmental degradation. Recent land revenue policies reflect a focus on enhancing revenue and efficiency, but they intersect with ongoing debates about land rights and sustainable development. The social and political consequences of these systems, particularly land alienation, have been profound, fueling tribal mobilization and shaping the socio-political dynamics of Jharkhand, ultimately contributing to the formation of the state itself. The legacies of historical land revenue policies continue to influence the current challenges faced by Jharkhand in balancing economic progress with the protection of land rights and the well-being of its diverse communities. Future research could delve deeper into the long-term impacts of specific land reform measures and the effectiveness of current land governance mechanisms in this historically significant region.

References

1. Asmelash, L. (2019, August 14). *What is the Chotanagpur Tenancy Act, and why are tribals in Jharkhand opposing its amendments?* CNN.
2. *Audit Reports | Principal Accountant General (Audit) Jharkhand, Ranchi.* (2013). <https://cag.gov.in/ag/jharkhand/en/audit-report/details/5647>
3. Basu Mallik, S. (2011). *Land Rights in Jharkhand: An Analysis of Chhotanagpur Tenancy Act.* Journal of Cultural and Social Anthropology, VI(1), 12.
4. Besley, T., & Burgess, R. (2002). The political economy of land reform in India. *The Economic Journal*, 110(462), 39-432.
5. Birua, D. (2025, March 11). Jharkhand government plans for tax on lands being used for commercial purposes:

- Minister. *The Economic Times*.
6. De Soto, H. (2000). *The mystery of capital: Why capitalism triumphs in the West and fails everywhere else*. Basic Books.
 7. Gass, S. M., & Varonis, E. M. (1984). The effect of familiarity on the comprehensibility of nonnative speech. *Language Learning*, 34(1), 65-89.
 8. Ghatak, M., Moretti, E., & Wright, R. (2013). Land acquisition and compensation in India. *The Journal of Development Economics*, 105, 24-40.
 9. Goldstein, M., & Udry, C. (2008). Land rights and labor supply in Ghana. *Journal of Development Economics*, 87(2), 198-211.
 10. Guha, S. (1985). *The agrarian economy of the Bombay Deccan 1818-1941*. Oxford University Press.
 11. Habib, I. (1982). *An atlas of the Mughal empire: political and economic maps with detailed notes, bibliography and index*. Oxford University Press.
 12. Imam, S. H. (1990). *Anthropology of development: Tribal India*. Concept Publishing Company.
 13. Krech Thomas, S. (2004). *Accents in discourse: Sociophonetic approaches*. Palgrave Macmillan.
 14. Mathew, P. (2003). Jharkhand Movement: Ethnicity and Culture of Silence. *Indian Journal of Social Science*, 16(1), 63-85.
 15. PRSIndia.org. (2023). *Jharkhand Budget Analysis 2023-24*. Retrieved from <https://prsindia.org/budgets/states/jharkhand-budget-analysis-2023-24>
 16. PRSIndia.org. (2024). *Jharkhand Budget Analysis 2024-25*. Retrieved from <https://prsindia.org/budgets/states/jharkhand-budget-analysis-2024-25>
 17. Reid, J. (2001). *Final report on the survey and settlement operations in the district of Lohardaga (Ranchi) 1902-1910*.
 18. RGICS.org. (2016). *Tribal Protest and Government's Oppression over Proposed Amendment to Tenancy Laws*.
 19. Roy, S. C. (1915). *The Oraons of Chota Nagpur*. Research Society*, 17(3-4), 203-221.
 20. Sharma, A., Ambili, V. S., & Reddy, V. R. (2008). Rainfed agriculture in India: Status, challenges and policy options. *NRRA*.
 21. Sifton, J. W. (1917). *Final report on the survey and settlement operations in the district of Ranchi, 1902-1910*.
 22. Singh, K. S. (1983). *Birsa Munda and his movement, 1874-1901: a study in tribal society and social change*.
 23. Singh, K. S. (1985). *Tribal society in India: an anthropo-historical perspective*.
 24. Singh, S. (2019). Jharkhand Pathalgadi Movement: Assertion of Tribal Rights. *Economic and Political Weekly*, 54(40), 14-16.
 25. Sryahwapublications.com. (2019). Land Rights in Jharkhand: An Analysis of Chhotanagpur Tenancy Act. *Journal of Cultural and Social Anthropology*, 1(1), 1-12.
 26. Swamy, S. (2016). *Repeated Displacement Forces Jharkhand Tribals to Leave Ancestral Lands*. IndiaSpend.
 27. Taylor, F. B. (2001). *Final report on the survey and settlement operations in the Porahat Estate, district Singhbhum, 1930-1937*.
 28. Thapar, R., & Siddiqi, M. H. (1979). *Chotanagpur: The Pre-Colonial and Colonial Phase*.
 29. Thorner, D. (1956). The agrarian revolution in India since independence. *The Annals of the American Academy of Political and Social Science*, 305(1), 83-91.
 30. Verma, D. K. (2023). Environmental Impact of Industrialization in Jharkhand: A Review. *International Journal of Advanced Multidisciplinary Scientific Research (IJAMSR)*, 7(8), 34-46.

THE ROLE OF FOLK MEDIA IN PROMOTING RURAL HEALTHCARE IN WEST BENGAL

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Abstract:

While digital media has transformed global communication, traditional folk media remains a potent force with its profound connection to the masses. In West Bengal's rural areas, folk media is not just a cultural element but an immersive experience that resonates with the audience, instilling a sense of pride and respect for their heritage. This unique cultural significance sets folk media apart, making it a compelling tool for communication and a cornerstone of rural healthcare promotion.

Keywords: Folk Media, Rural population, Culture, Digital Media

Introduction

Folk media, with its unparalleled ability to connect with people, particularly in rural areas, plays a pivotal role. The local population, largely reliant on folk media for communication, showcases their resilience and resourcefulness. With limited exposure to modern media, these communities find a deeper connection to their culture and values through folk media. Government and Non-governmental organizations are harnessing this unique aspect of folk media to drive various developmental programs in rural areas, highlighting its unmatched power to mobilize the rural population. In rural areas, literacy rates might be lower, and access to modern forms of media might be limited. Folk media, including folk songs, dances, street theatre, and storytelling, are powerful communication tools.

Health Education: Folk media is often used to disseminate important health information and promote preventive measures. Folk songs, street theatre, and storytelling sessions raise awareness about the disease, vaccination, sanitation practices, and family planning.

Community Mobilization: Folk media events like jatra (Traditional Bengali folk theatre) and folk dance performances serve as platforms for community engagement. These events often integrate health awareness themes and participation among rural audiences.

Cultural Preservation: Traditional art forms, music, and storytelling are preserved and celebrated through folk media. This preservation helps maintain cultural identity and strengthens community bonds, contributing to overall well-being.

Local Language Utilization: Folk media communicates in local languages and dialects, ensuring that health messages are accessible to all community members, including those with limited literacy or formal education.

Behaviour Change Communication: Folk media employs innovative techniques to promote behaviour change regarding health practices. For example, folk songs with catchy tunes and memorable lyrics reinforce messages about adopting healthy habits.

In West Bengal, where cultural traditions are deeply ingrained, leveraging folk media in

healthcare promotion improves health outcomes and strengthens cultural bonds and identity among rural communities.

West Bengal Rural Health Mission:

The National Rural Health Mission was launched on 12 April 2005 for seven years (2005-2012) to provide integrated, comprehensive Primary Health Care Services, especially to the poor and vulnerable sections of society.

The NRHM would operate as an omnibus board-band program by integrating all vertical health programmes of the Departments of Health and Family Welfare, including the Reproductive & Child Health Programme, National Filaria Programme, Revised National Tuberculosis Programme, National Blindness Control Programme and Externally Aided Projects (EAP).

It has been decided to establish a District Health Mission in each district to undertake and coordinate all health programmes in the district. The mission's functions would be carried out through the District Health and Family Welfare Samity and the Block Health Family Welfare Samity.

Rural Health Scenario in West Bengal: Rural Health in West Bengal recently developed. The government has taken the initiative to establish rural health. The state has 923 primary health centres (PHCs), and the government has set up numerous multi-speciality hospitals nationwide. The rural healthcare system is closely related to economic growth by boosting human capital accumulation, which can be used to overcome poverty. The importance of the rural health care system is closely related to productivity in food grain production. West Bengal has 2889 health sub-centres, 283 primary health centres and 105 community health centres, respectively.

Importance of Rural Health: Special attention needs to be given to health care in rural areas to control the speed of disease and reduce the growing mortality rates due to adequate health facilities. Various organizations and media are coming together for improvements in health care, and

technology plays a crucial role in facilitating this. Folk media use familiar cultural forms that are acceptable and appealing to the local community. It provides learning opportunities to audience members, regardless of their social and cultural differences. Folk media can create awareness and motivation without any feeling of boredom. Its use distinguished local artists as communicators. It encourages community participation.

Use of Traditional Media in Rural Health in West Bengal

Traditional media have proven to be powerful tools of communication in the rural society of West Bengal. The most crucial advantage of folk media is its flexibility in day-to-day life, and it can be introduced into traditional folk form art such as wall paintings, puppet shows, folk songs, dances, melas and festivals, proverbs, storytelling, etc. Traditional media has the most significant appeal to the masses and has the quality to touch the deepest emotions of the illiterate millions. It plays a vital role in extending education and health in rural people in West Bengal.

Traditional Media and Health: Community health services awareness campaigns can be organized through traditional means. They can improve the utilization of primary health care services among rural communities. The intervention can result in substantial improvements in child health after training village women in activities, conducting community awareness programs through folk drama, and starting plays in different districts of West Bengal. Women can be empowered regarding their health needs.

Puppet shows and street plays can be organized to make the community aware of Tuberculosis and HIV. With the help of traditional folk media, efforts can be taken to create awareness among mothers for safe and safe delivery, pregnancy care, infant feeding practices and treatment of diarrhoea. After motivating the community through traditional media training, they can also learn about different maternal and child health components. Rural communities can receive valuable information about breastfeeding, immunization, Nutrition, child's mental and physical health, sanitation and

hygiene.

Folk Drama: Folk drama can be staged at the grassroots level to spread health messages regarding ill health, like tobacco use, AIDS, HIV, maternal health, family planning, etc. However, the drama should be entertaining and readily acceptable to the rural public.

Different workshops on rural health issues were held in the Malda district of West Bengal. Folk dramas “Gambhira” and Domni were performed in front of the rural people of Malda. Performance is usually structured as a dialogue songs, dances and jokes. Dramas were sensitized on the issue of child health, child marriage and severe health problems. Government and NGOs use folk drama to promote public health campaigns (polio vaccination, COVID-19 awareness)

Puppets: Puppetry is a popular form of folk media in rural West Bengal areas. Shadow puppetry and string puppetry are popular forms. Puppets have been used since the earliest times to animate and communicate the ideas and needs of human societies. In recent years, puppets, especially galore puppets, have become increasingly used in communication and development.

Puppets are being used to raise awareness of different health issues in rural districts of West Bengal. The government uses puppets extensively to promote various government projects related to health concerns like Dengue, anaemia, family planning, and Child Health.

Jatra: It is a popular folk-theatre form of Bengali theatre, including Bangladesh and the Indian states of West Bengal, Bihar, Assam, Orissa, and Tripura. To attract audiences, jstras are usually four-hour plays preceded by a musical concert, often lasting an hour. The dramatic performance is liberally mixed with dramatic monologues, songs, and duet dances on the folk tune. Jatra plays are usually performed on open-air stages. Jstras depict real-life health issues like maternal health, sanitation, and disease prevention. They are interactive and emotionally engaging, making complex health topics easier to understand.

Kabigan: Kabigan, traditional folk performances involving musical debates

between two poets (Kabiwals), has historically been important in rural Bengal’s cultural and social awareness. While primarily an entertainment form, it has been effectively used for health communication in rural areas.

Kabigan's competitive and entertaining nature keeps rural audiences engaged. It simplifies complex health topics through storytelling, humour, and rhythmic debate and encourages safe childbirth practices, breastfeeding, and immunization. Kabigan effectively reaches illiterate populations. It promotes awareness about reproductive health.

Fairs and Festivals: West Bengal is also known for its fairs and festivals. Different colourful fairs and festivals are held in West Bengal. In popular fairs, rural panchayats take the initiative to organise health camps and health awareness programs in rural Bengal.

During the Durga Puja festival, health camps are also arranged in districts in West Bengal. At fairs and festivals, colourful folk media promote health care programs for rural people. So, fairs and festivals are considered traditional forms of communication in West Bengal.

COVID-19 in Rural Health in West Bengal: India is the second-worst country in the world affected by the COVID-19 pandemic. West Bengal is an ill-affected state in India. The Government of West Bengal took various initiatives to curb the spread of the Coronavirus. COVID-19 infection, which predominantly affected the urban areas, also reached rural areas of the state. Many factors pose a big challenge for Rural Bengal in dealing with COVID-19.

These include the scarcity of medical equipment and health facilities, social stigma—fear of ill-treatment at the health facility, fear of losing economic opportunities being quarantined, etc. Government and non-government organisations used folk media to promote health awareness in rural areas during the COVID-19 pandemic.

Health Awareness through Folk Art in COVID times in Bengal: In a diverse country like India, which has close to 65 per cent of the population living in a rural or semi-urban setup, 30 per cent of the population lacks literacy, in addition to significant school dropout rates in

rural health communication, particularly during the pandemic. Recently, IIT Kharagpur took up this challenge to improvise an effective method of health communication for a large portion of the rural population in West Bengal. They engaged with folk artists (Patua) from the Naya village in West Midnapur to hold a COVID-19 awareness outreach initiative communicated through visual and musical art forms. This is where the Gurupada Chitrakar, Jaba Chitrakar and Sonali Chitrakar were brought in to tell the tale of COVID-19.

The Patua groups composed their songs in local dialects along with scroll paintings in folk art format to help the audience understand the challenges of COVID-19 and the best practices to be adhered to. This mode of communication provides scientific information to rural people in various sections of society, especially in the area of health.

Use of Bohurupee Folk Artists in COVID-19: During the coronavirus pandemic in West Bengal's Hooghly and Birbhum districts, the bohurupee folk art form traditionally involves artists donning elaborate costumes and makeup in a bid to mythological characters in Hinduism. Bohurupee folk artists in the Birbhum district have been engaged in the awareness campaign. Folk artists put their skills to use in awareness of COVID-19. Bohurupee of Birbhum travels from village to village to use their skills to promote health awareness among rural people during the COVID-19 pandemic.

Data Collection: In this article, I reviewed published data on the role of folk media in rural health care in West Bengal, India. I have identified electronic databases such as Google Scholar for searching research papers using keywords like "role of traditional media," "role of traditional media in rural health care," "rural health care in West Bengal, India," etc.

Conclusion:

It is true that if we want to penetrate development among the rural masses, we would

have to plan to use the folk forms of this state. Folk media often communicate and promote new ideas in the rural healthcare sector. Interest in folk media in promoting rural health development has recently increased because of the limitations of modern communication methods in rural areas of West Bengal.

Folk media should touch the hearts of the rural masses, not just their ears. In this age of digital media, the question arises as to whether folk media will survive if steps are taken to identify various folk forms of communication in the state of West Bengal and codify them according to their nature, content, and extent of flexibility. In this article, I try to identify the role of traditional media in rural healthcare in West Bengal. Through this article, I learned that the Government and NGOs took initiatives to use folk media for health awareness, such as Child Health, Dengue, Pulse polio, HIV, breastfeeding, and even the coronavirus. The impact of using folk media in rural masses for health communication is very positive and effective.

References:

1. Joshi, U (2005) Text Book of Mass Communication and Media
2. Ghosh, S (2009) Mass Communication an Indian perspective
3. Mukhopadhyay, D- Traditional media and Development Communication, Vidura, Nov-Dec-1987 pp. 27-31
4. <https://www.worldwidejournals.com/>
5. <https://www.biotecharticles.com/>
6. <https://www.presscouncil.nic.in>
7. <https://www.publishingindia.com>
8. <https://nics.ac.in>
9. <https://e-pao.net/>
10. <http://perfectthealthmela.com/>
11. <http://www.india-tourism.net/Fairs-Festivals.htm>
12. Chiovoloni, M. (2004). The interactive power of local and traditional communication systems; Ilea Magazine, pp. 1-4

BEHAVIOUR FACTORS: THE IMPACT OF GENDER ON FINANCIAL DECISION-MAKING

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Abstract

In recent years, the role of women in financial decision-making has garnered significant attention, particularly in the realm of stock market investments. Today, more women than ever are making investment decisions, shaping their financial futures, and challenging traditional gender norms within the realm of personal finance. Despite this progress, studies show that women still tend to invest less aggressively than men, often displaying greater risk aversion and cautious decision-making. This research aims to explore the current state of stock market investments by women, examining the factors that influence their investment decisions. For this purpose an attempt has been made to analyze the relationship between the gender of the respondents and the factors affecting their investment behaviour. For this study t-test for equality of means and Levene's test for equality of variance has been used to know whether there is a significant difference among gender of individual investors and factors affecting their behaviour while taking the investment decisions in the Indian Stock Market. Various behavioural factors which were included in this study have been taken from the review of past literature. Study area of the research includes three cities of North India that are New Delhi, Chandigarh and Shimla. Primary data were acquired through the use of a well structured questionnaire from the sample size of 450 respondents.

Keywords: Indian Stock Market, Investment behaviour, Gender equality, Behavioural Factors.

Introduction

In the realm of financial decision-making, various psychological, social, and cultural factors influence how individuals approach money management, investment, and risk-taking. One of the most significant yet often underexplored elements in this field is gender, which plays a crucial role in shaping financial behaviors and decisions. Investment behavior is strongly affected by the level of risk we are willing to take and to what extent we believe an investment is going to be successful. It has been found in previous experiments that men and women tend to have different risk preferences and beliefs, with dissimilar investment behavior as consequence. So to understand and provide an appropriate explanation for the investors' decisions on the basis of gender, it is important to explore the behavioural factors that influence the decisions of individual

investors at Indian Stock Market. So in the

present study individual investors' behaviour towards investing in Indian Stock Market has been studied on the basis of six main factors which are as follow:

- 1. Herding Effect:** Herding effect is identified as readiness of investors to follow the action of other investors. Professionals usually consider carefully the existence of this behaviour in the investors, due to the fact that investors rely on collective information more than their own information. Investors prefer herding behaviour if they believe that herding can help them to select useful and reliable information. In the stock market, herding behaviour of the investors tends them to take their investment decision on the basis of

masses' decisions of buying and selling stock and it causes a state of inefficient market which usually leads to speculation.

2. **Market Information Tracking:** It is believed that the market factors such as past trends of stocks, company's customer preference, market fundamentals etc influence the decision making of investors in the security market. Investors closely follow investment tools' performance of return and publications with financial content presented with the means of communication like internet and media and it positively influences their behaviour. The high influence of market variables show that most of the investors are interested in attending training courses about stocks. Therefore, they understand the importance of market information to the price movements as well as the importance of technical analysis in forecasting.
3. **Heuristic Behaviour:** Heuristic behaviour means to follow the rule of thumb and mental short cues that leads to more convenience to the investor in making their investment decisions. This method is important and beneficial in the limited time period. Sometimes it affects the decisions of the individual investors negatively because it leads to biases. In this approach decisions are based on conventional thinking which results in the risk of inaccuracy as this approach does not follow the step by step processing.
4. **Investment Expectancy:** Expectations related to the returns on investment is a subjective phenomenon which can be evaluated by investors' feelings, thus different investors may have different expectations from the same level of investments.
5. **Future Outlook:** Profit and loss which was the result of past investment also affects the future investment decisions of an individual investor. Normally individual investors become more risk averse after a loss on their investment and become more risk seeker after

receiving a profit on their past investment. This behaviour sometimes makes the decision of an individual investor irrational because loss aversion may negatively influence the wealth of the investor.

6. **Social Impact:** Investment decisions of the individual investor may get affected positively or negatively by the surrounding environment. Social impact includes the legal environment also which means strict laws for frauds related to the stock market will surely encourage the individual investor to invest more and more. Because they do not have any fear about being cheated by the company or any other agent.

Review of Literature

Barber and Odean, (2001) As men tend to trade more than women, their difference in investment behavior could make an impact on which companies get a larger share of investors' money. **Marinelli et al., (2017)** It has been shown that even when controlling for socio-demographic and economic variables, gender still plays a role in the difference in investment behavior between men and women. **Shanker V.C (2022)** This empirical study focuses on factors influencing share market trading based on gender of investors in Tirunelveli district of Tamil Nadu state. This will throw light on the areas in which female respondents are way ahead of male respondents in share trading and those areas in which male respondents are ahead of female respondents' in share trading. **Jennifer et. al (2024)** It was found in the research that women receive less encouragement than men to participate in the stock market. However, equal encouragement reduces the gender gap in stock market participation. It was concluded in their study that women receive less encouragement because of the perception that women are less interested in finance than men.

Objective- To analyze the behavioural factors that affect the investment decisions of the individual investors of the Indian Stock Market on the basis of gender.

Research Methodology- For the purpose of research primary data has been collected

through a well structured questionnaire. Convenience sampling method has been used in the study. The study is carried out in three cities of North India i.e. New Delhi, Chandigarh and Shimla. Total 450 respondents participated in the study. The responses were based on a five point likert scale. Various behavioural factors have been taken from the secondary data.

Analysis and Interpretation- The reliability of the data collected through the questionnaire has been firstly tested by using Cronbach Alpha. Cronbach's Alpha measures the reliability of the different categories and consists of

estimates of how much variation in scores of different variables is due to change or random errors. After that an attempt has been made to analyze the relationship between the gender of the respondents and the behavioural factors related to Indian Stock Market.

Ho: Individual Investors' investment decision in Indian Stock Market is not influenced by their behaviour factors like Herding Effect, Market Information Tracking, Heuristic Behaviour, Investment Expectancy, Future Outlook and Social Impact on the basis of their gender.

Table 1: Mean Score

Factors	Male	Female
Herding Effect	-.0178	.0485
Market Information Tracking	.0105	-.0285
Heuristic Behaviour	.0431	-.1172
Investment Expectancy	.1297	-.3526
Future Outlook	.0577	-.1568
Social Impact	.0403	-.1096

It is evident from this table that the mean score of female respondents is positive (0.0485) and In the case of male respondents these scores are negative (-0.0178). It depicts that the male respondents do not follow the decisions of other investors and make their investment decisions on their own risk whereas female respondents rely on the information of their close friends and relatives and then make any investment decision. In case of market information tracking the mean score is positive for male and negative for females which shows that male respondents examine the market fundamentals by using various techniques such as technical analysis or fundamental analysis before making any investment decision whereas female investors give less preference to market information. As per male respondents the next factor heuristic behaviour makes the decision making process

easier, especially in complex and uncertain environments. In case of investment expectancy the male respondents are more satisfied with their investment decisions because their rate of return is equal to or higher than the average return rate of the market. Mean score for the next factor that is future outlook is also positive in case of male respondents and negative in case of female respondents. It is observed that in comparison to females, males got more depressed from the prior losses and did not make further investments while in case of prior gains they were encouraged to make more investments. In the case of the next factor male respondents had a great impact of their family structure and social environment on the investment decisions taken by them. Whereas in case of female respondents the mean score is negative that is -0.1096.

Table 2: Independent Samples Test

Factors	Significance Value by Levene’s Test	Assumption of Variance	Significance Value by T Test	Null Hypothesis
Herding Effect	.133	Equal Variance Assumed	.533	Accepted
Market Information Tracking	.359	Equal Variance Assumed	.713	Accepted
Heuristic Behaviour	.602	Equal Variance Assumed	.132	Accepted
Investment Expectancy	.723	Equal Variance Assumed	.000	Rejected
Future Outlook	.000	Equal Variance not Assumed	.023	Rejected
Social Impact	.174	Equal Variance Assumed	.159	Accepted

In the above table, the value of Levene’s test and T test has been presented, which points towards the acceptance and rejection of the null hypothesis. In case of first factor that is herding effect, the value of Levene’s test indicates that the variance of the two population are assumed to be approximately equal and the value of the test is also more than .05, indicating that the investment behaviour is not influenced by the herding effect on the basis of gender, as we generally see that female investors follow the decisions of their male counterpart and does not make the investment on their own.

Again, in case of market information tracking the Levene’s value and T test value is more than .05 which leads to the acceptance of null hypothesis means there is no significant difference between mean scores of responses given by male and female investors towards the effect of market information tracking as it was found in this research that male respondents are more aware about the market information and they follows many types of analysis for the same, but the female respondents are not very much aware about the various analysis techniques for tracking the exact market information and in that case, they depends on the male investors for market information.

Heuristic behaviour factors include skill and knowledge of the stock market to anticipate the end of good or poor market returns and the ability to forecast the changes in stock prices. In case of this factor, the Levene’s value points towards the assumption of equal variance assumed and the value of T test points towards the acceptance of null hypothesis means the response given by male and female respondent are same.

In the case of the next factor that is investment expectancy, the Levene’s value is more than .05, which means the assumption of equal variance is accepted, but the test value is .000 which leads towards the rejection of the null hypothesis. Research shows that the investment expectancy of male and female respondents from the Indian stock market are different as some investors try to compare their returns with higher return rates from other investment channels and make conclusion that their return rates are less than the average of market and individual investor may not have good portfolio management skills as professionals have so their portfolio may not be diversified, leading to poor performances.

The factor future outlook means that investors become more risk averse after a prior loss and more risk seeking than usual after a prior profit. Null Hypothesis is rejected in this case also as the risk taking level of the male and female respondents differs significantly as male respondents are ready to take the risk, so they demand for more returns, whereas female respondents hesitate to take the risk and prefer a stable source of returns.

Last factor is the social impact on the investment behaviour of male and female investors. In case of this factor, the family structure and the social environment affects the investment decision of an individual investor. The null hypothesis accepted which leads towards the result that there is no significant difference between the mean score of male and female respondents with reference to social impact.

Conclusion

By exploring the behavioral factors that influence the investment decisions among females in the Indian stock market, this study reveals important perceptions towards the differences in financial behavior on the basis of gender. The analysis of the data, using statistical methods like the t-test and Levene's test, highlights the remarkable impact of gender on investment preferences and risk appetite. The findings suggest that while women are participating more in stock market investments, their portfolio management tends to be more conservative compared to their male counterparts. This research contributes to a deeper understanding of gender-related dynamics in investment decision-making and offers implications for financial institutions and policymakers in designing targeted strategies that cater to the evolving needs of female investors.

References

1. Al-Tamini, H.A.H. (2006). 'Factors Influencing Individual Investor Behavior- An Empirical Study of the UAE Financial Markets.' Unpublished Master Thesis, University of Sharjah, Sharjah, UAE.
2. Almenberg, Johan and Anna Dreber (2015). Gender, stock market participation

- and financial literacy," *Economics Letters*, 140–142.
3. Barber, B. M. and Odean, T. (2001). Boys will be boys: gender, overconfidence, and common stock investment. *Quarterly Journal of Economics*, 116(1), 261–292.
4. Marinelli, N., Mazzoli, C. and Palmucci, F. (2017). How does gender really affect investment behavior? *Economic Letters*, 151, 58–61.
5. Mehta, S. K., & Aggarwal, N. (2011). The effect of demographics on investment choice: An empirical study of investors in Jammu. *Indian Journal of Finance*, 5(10), 43-55.
6. Jennifer et. al (2024). The Gender Gap in Stock Market Participation: Evidence from StockGifting. <https://www.fdic.gov/analysis/consumer-research/conferences/2024/papers/iskowitz-paper.pdf>
7. Kaustia, Markku, Andrew Conlin, and Niilo Luotonen (2023). What drives stock market participation? The role of institutional, traditional, and behavioral factors. *Journal of Banking Finance*, 148, 106743.
8. Kengatharan, L. (2014). The Influence of Behavioral Factors in making Investment Decisions and Performance: Study on Investors of Colombo Stock Exchange, Srilanka. *Asian Journal of Finance and Accounting*, 6(1), 1-23.
9. Shanker V.C (2022) An Empirical study on Gender wise comparison among investors about factors influencing share market trading with special reference to Tirunelveli District. *Business Studies (UGC - CARE Listed Journal Group I, ISSN 0970-9657) Volume – XLIII*, 101-109.
10. Volpe, R., Kotel, J. and Chen, H. (2002). A survey of investment literacy among online investors. *Financial Counseling and Planning*, 13(1), 1-13.
11. Wang, A. (2011). Younger Generations' Investing Behaviors in Mutual Funds: Does Gender Matter? *The Journal of wealth management*, 13(4), 13-23.

ROLE OF THE PREAMBLE AS A MIRROR OF THE INDIAN CONSTITUTION: A STUDY

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Abstract:As a citizen of India we have to know about our Constitution. Because it is the supreme law of our nation. Not only Indian citizens but also the citizens of another country who are known as foreigners they also want to know about the constitution of India. Because the Constitution of India is the lengthiest written constitution of the world though the Indian constitution is not so old. Being the broadest written constitution of the world it is not easy to take idea about the Indian constitution in a very short time. The Preamble of the Indian constitution helps to take ideas about the subject matter of the Indian constitution very easily in a very short time. For this reason the preamble of the Indian constitution is known as the mirror of the constitution of India. In this article I focus on that why preamble is so important and it plays what types role as a mirror.

Key words : Preamble, Constitution, Amendment, India, socialist, secular.

Introduction

Preamble means introduction of the constitution. It is the preface of the constitution. Indian constitution starts with a preamble. It is like a identity card of the Indian constitution. The Preamble embodies the lofty principles in a charming lucid manner. It is the key to open the mind of the Constitution makers. The preamble of the Indian constitution was adopted on 26th November of 1949 and it came into force on 26th January of 1950 with the constitution of India. It amended by 42nd constitutional amendment act of 1976. By this amendment act three new words have been added to the preamble. And the nature of the has been changed by this amendment act. The Preamble to the Constitution of India is based on the 'Objectives Resolution', drafted and moved by Pandit Jowharlal Nehru, it was adopted by the Constituent Assembly.

Objective of the study

The main objectives of this study are as follows :

- To clear the meaning of the Preamble of the Indian constitution.
- To understand the objectives of the Preamble.

- To clear the philosophy of the Indian Constitution.
- To differentiate between the original Preamble and the present Preamble of the Indian constitution.
- To examine the importance of the Preamble of the Indian Constitution.

The Original form of the Preamble

“We, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a SOVEREIGN DEMOCRATIC REPUBLIC and to secure to all its citizens : JUSTICE, social, economic and political ; LIBERTY of thought, expression, belief, faith and worship ; EQUALITY of status and opportunity ; and to promote among them all FRATERNITY assuring the dignity of the individual and unity of the Nation ;

IN OUR CONSTITUENT ASSEMBLY this twenty-sixth day of November ; 1949, do HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION”.

The Present from of the Preamble

“We, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a SOVEREIGN *SOCIALIST SECULAR* DEMOCRATIC REPUBLIC and to secure to all its citizens :

JUSTICE, Social, Economic and Political;

LIBERTY of thought, expression, belief, faith and worship;

EQUALLY of status and of opportunity; and to promote among them all;

FRATERNITY assuring the dignity of the individual and the unity and integrity of the Nation;

IN OUR CONSTITUENT ASSEMBLY this twenty-sixth day of November, 1949, do REREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION”.

The words ‘Socialist’, ‘Secular’ and ‘Integrity’ were initially not there in the Preamble and were added to it by the 42nd Constitutional Amendment Act, 1976.

Components of the Preamble

The Preamble of the Indian Constitution has

following components or ingredients. These are :

- (1) The Preamble states that the Indian Constitution derives its authority from the people of India. It categorically accepts the principle of Popular Sovereignty. The people of India is the source of authority of the Indian Constitution.
- (2) It declares that the nature of the Indian State is sovereign, socialist, secular, democratic and republican.
- (3) The Preamble lists four cardinal objectives which are to be “secured for all its citizens”. It specifies justice, liberty, equality and fraternity as the objectives of the Constitution.
- (4) It stipulates November 26, 1949 as the date of adoption of the Constitution. It was on this day that the Constitution received the signature of the President of the Constituent Assembly and it was declared passed.
- (5) The Indian Constitution adopted, enacted and self-made constitution. It was enacted and adopted by the Constituent Assembly as the elected representative body acting on behalf of the people of India.

There are some key words in the Preamble of the Indian Constitution. To understand the nature and the main subject matter of the Indian Constitution it is essential to know about these key words.

Sovereign- The word ‘sovereign’ implies that India is neither a dependency nor a dominion of any other nation. It is an independent state. Being a sovereign state, India can either acquire a foreign territory or cede a part of its territory in favour of a foreign state. There is no authority above it. India is free to conduct its own both internal and external affairs. Though India is a member of Commonwealth of Nations and United Nations Organization but these do not affect India’s sovereignty in any manner.

Socialist- Though this term was added by the 42nd Amendment in 1976 but the Constitution had a socialist content in the form of certain Directive Principles of State Policy. The Indian brand of socialism is a ‘democratic socialism’

and not a 'communistic socialism' which involves the nationalisation of all means of production and distribution and the abolition of private property. Democratic socialism, on the other hand, holds faith in a 'mixed economy' where both public and private sectors co-exist side by side. Indian socialism is a blend of Marxism and Gandhism. The new economics policy of in 1991 under the prime ministership of P. V. Narasimha Rao, privatisation and globalisation has diluted the socialist credentials of the Indian State.

Secular-The term 'secular' was also added by the 42nd Constitutional Amendment Act of 1976. Although the words 'secular state' were not expressly mentioned in the Constitution, there can be no doubt that Constitution-makers wanted to establish such a state and accordingly Articles 25 to 28 (right to freedom of religion) have been included in the Constitution. The Indian Constitution embodies the positive concept of secularism means all religions in India have the same status and support from the state.

Democratic-Democracy means the government of the people, by the people and for the people. Democracy is of two types. One is direct democracy and another is indirect democracy. In direct democracy, the people exercise their supreme power directly. On the other hand, in indirect democracy the representatives elected by the people exercise the supreme power and thus carry on the government and make the laws. This type of democracy is also known as representative democracy. The representative democracy is of two kinds — parliamentary and presidential.

The Indian Constitution provides for representative parliamentary democracy under which the executive is responsible to the legislature for all its policies and actions. Rule of law, universal adult franchise, periodic elections, independent judiciary and absence of discrimination on certain grounds are the manifestations of the democratic character of the Indian polity. The term 'democratic' is used in the Preamble in the broader sense embracing not only political democracy but also social and economic democracy.

Republic-The term 'republic' in our Preamble

indicates that India has an elected head called the president. He is elected indirectly for a fixed period of five years. There is no bar to a citizen being elected to any public office. A republic also means two more things : one, vesting of political sovereignty in the people and not in a single individual like a king; second, the absence of any preveleged class and hence all public offices being opened to all citizens.

Justice-The term 'justice' in the Preamble of the Indian Constitution embraces three forms— social, economic and political, secured through various provisions of Fundamental Right and Directive Principles of State Policy of the Indian Constitution. The idea of justice— social, economic and political—has been taken from the Russian Revolution(1917). Social justice denotes the equal treatment of all citizens without any social distortion based on caste, colour, race, religion, sex and so on. Economic justice denotes the non-discrimination between people on the basis of economic factors. The combination of social and economic justice denotes what is known as 'distributive justice.' And political justice implies that all citizens should have equal political rights, equal access to all political offices and equal voice in the government.

Liberty-The term 'liberty's means the absence of restraints on the activities of individuals, and providing opportunities for the development of individual personalities. The Preamble of the Indian Constitution secures to all citizens of India liberty of thought, expression, belief, faith and worship, through their Fundamental Rights. Liberty does not mean 'license' to do what one likes, and has to be enjoyed within the limitations mentioned in the Constitution. The liberty conceived by the Preamble or fundamental rights is not absolute but qualified.

Equality-The term 'equality' means the absence of special privileges to any section of the society, and the provision of adequate opportunities for all individuals without any discrimination. The Preamble secures to all citizens of India equality of status and opportunity. This provision embraces three dimensions of equality—civic, political and economic. Following provisions ensures civic equality:

- (1) Equality before law (Art. 14).
- (2) Prohibition of discrimination on grounds of religion, race, caste, sex or place of birth (Art. 15).
- (3) Equality of opportunity in matters of public employment (Art. 16).
- (4) Abolition of untouchability (Art. 17).
- (5) Abolition of titles (Art. 18).

Two provisions of the Indian Constitution seeks to establish political equality. First, according to Article 325 of the Indian Constitution no person is to be declared ineligible for inclusion in electoral rolls on grounds of religion, race, caste or sex. Second, elections to the Lok Sabha and the state assemblies to be on the basis of adult suffrage (Art. 325). And, the Directive Principles of State Policy (Art. 39) secures to men and women equal right to an adequate means of livelihood and equal pay for equal work.

Fraternity-‘Fraternity’ means a sense of brotherhood. This word has been added to the Preamble by the 42nd Constitutional Amendment Act, (1976). Barker calls fraternity as principle of cooperation. The Preamble of the Indian Constitution promotes the feelings of fraternity by the system of single citizenship and also by the Fundamental Duties (Art. 51-A). The Preamble links fraternity with two things (a) assuring the dignity of the individual and (b) the unity and integrity of the nation.

Is Preamble a part of the Constitution?

There is a controversy about the Preamble is a part of the Constitution or not. In the Berubari Union case (1960), the Supreme Court declined to treat the Preamble as the part of the Constitution. In this case the Supreme Court said that the Preamble shows the general purpose behind the several provisions in the Constitution, and is thus a key to the minds of the makers of the Constitution. Further, where the terms used in any article are ambiguous or capable of more than one meaning, some assistance at interpretation may be taken from the objectives enshrined in the Preamble.

But in the Kesavananda Bharati case (1973), the Supreme Court rejected the earlier opinion and held that Preamble is a part of the Constitution. In the LIC of India case (1995) also, the

Supreme Court again held that the Preamble is an integral part of the Constitution. Here it should be noted that the Preamble is neither a source of power to legislature nor a prohibition upon the powers of legislature. It is non-justifiable, means its provisions are not enforceable in courts of law.

Amendment of the Preamble of the Indian constitution-In the Berubari Union case (1960), it was urged that the Preamble can not be amended under Art. 368 as it is not a part of the Constitution. Later in the Kesavananda Bharati case (1973), the Supreme Court held that the Preamble can be amended. However the Preamble has been amended only once, in 1976, by the 42nd Constitutional Amendment Act, which has added three new words socialist, secular and integrity—to the Preamble. This amendment was held to be valid.

Importance of the Preamble-The Preamble embodies the basic philosophy and fundamental values—political, moral and religious— on which the Constitution is based. It contains the grant and noble vision of the Constituent Assembly, and reflects the dreams and aspirations of the founding fathers of the Indian Constitution. According to Sir Alladi Krishnaswami Iyer, a member of the Constituent Assembly, “The Preamble to our Constitution expresses what we had thought or dreamt so long”. Pandit Thakur Das Bhargava, another member of the Constituent Assembly, summed up the importance of the Preamble in the following words:

“The Preamble is the most precious part of the Constitution. It is the soul of the Constitution. It is a key to the Constitution. It is a jewel set in the Constitution. It is a proper yardstick with which one can measure the worth of the Constitution”.

According to K M Munshi, a member of the Drafting Committee of the Constituent Assembly, the Preamble is the “horoscope of our sovereign democratic republic”. Sir Ernest Barker described the Preamble as the ‘key-note’ to the Constitution.

Conclusion

From this discussion we can say that preamble

of the Indian Constitution is very valuable part of the Constitution of India. It acts as a key to understand the motives and intentions of the makers of the Indian Constitution. It expresses the socio-economic and political values which this Constitution intends to promote. The Preamble serves as a guide to understand the spirit of the Constitution by the appropriate interpretation of the various provisions of the Constitution by the judges of different courts. The Preamble embodies the philosophy of the Indian Constitution. In the words of Hon'ble Justice Hidayatulla "The Preamble is more than a declaration. It is the soul of our Constitution and lays down the pattern of our political society. It contains a solemn resolve which nothing but a revolution can alter." Finally it can be said that the whole of the Constitution of India may be regarded as an elaboration and explanation of the Preamble.

References

1. Sharma . B. K. **Introduction to the CONSTITUTION OF INDIA.** PHI Learning.
2. Basu . D. D. (2015). **Introduction to THE CONSTITUTION OF INDIA.** Lexis Nexis.
3. Austin . G . (1999). **The Indian Constitution : Cornerstone of a Nation.** Oxford.
4. BAKSHI. P. M . (2017). **The Constitution of India.** Lexis Nexis.
5. Kashyap . S . (2019). **CONSTITUTION OF INDIA : A handbook for students.** Vitasta Publishing Pvt. Ltd.
6. LAXMIKANTH . M . (2016). **INDIAN POLITY.** Mc Graw Hill.

DEMONETIZATION PLAY DOMINANT ROLE TO MITIGATE THE EFFECT OF COVID-19 ON INDIAN ECONOMY

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Abstract

Demonetisation, implemented in India in 2016, aimed at curbing black money, promoting digital transactions, and increasing financial inclusion. While initially disruptive, this policy played a crucial role in mitigating the economic impact of the COVID-19 pandemic. The increased adoption of digital payments, strengthened financial inclusion, and a shift towards a formal economy contributed to economic resilience. This paper examines the interplay between demonetisation and India's ability to manage the economic disruptions caused by the pandemic. By highlighting the key economic shifts initiated by demonetisation, we explore how these changes proved instrumental in sustaining economic activities during lockdowns and restrictions.

Keywords- Demonetisation, COVID-19, digital transactions, financial inclusion, Indian economy, e-commerce

The Indian economy faced unprecedented challenges due to the COVID-19 pandemic. The lockdowns, disruptions in supply chains, and reduced consumer demand led to a sharp economic downturn. However, an important yet often overlooked factor that helped India navigate the crisis was the demonetisation exercise of 2016. The policy, aimed at curbing black money, increasing digital transactions, and promoting financial inclusion, laid the groundwork for economic resilience during the pandemic.

The unexpected withdrawal of high-value currency notes in 2016 forced businesses and individuals to transition to digital payment systems. The pandemic-induced lockdowns in 2020 further reinforced the importance of digital financial transactions, as physical movement and cash-based trade were severely restricted. The preparedness brought about by demonetisation enabled smoother transitions for businesses and consumers, allowing

continuity in economic activities amid the crisis. Several studies have examined the long-term impact of demonetisation on India's financial landscape. Research indicates that demonetisation significantly accelerated digital transactions (Agarwal & Gupta, 2018) and increased financial inclusion (Sharma, 2019). Additionally, policy analyses suggest that digital payment infrastructures and financial schemes facilitated by demonetisation helped cushion economic shocks during COVID-19 (Mehta & Verma, 2021).

Further studies highlight how cash dependence was reduced due to demonetisation, leading to the growth of digital banking services and online financial tools. According to Kumar & Rao (2020), businesses that had already adopted digital payment methods in the post-demonetisation era found it easier to adapt to pandemic-induced restrictions. These findings reinforce the idea that demonetisation played a

pivotal role in economic adaptation during the pandemic.

Accelerated Digital Transactions

One of the most significant outcomes of demonetisation was the shift towards digital payments. With the withdrawal of high-denomination currency notes, businesses and individuals were encouraged to adopt cashless transactions through platforms like UPI, mobile wallets, and net banking. By the time the pandemic struck in 2020, a substantial portion of India's population was already familiar with digital payment methods. This proved crucial as physical transactions declined during lockdowns, allowing the economy to function despite restricted mobility. Additionally, digital transactions increased economic transparency, allowing for improved monitoring of financial activities by the government and financial institutions. The use of digital payment systems during the pandemic facilitated safe and contactless financial transactions, reducing the risk of virus transmission while maintaining economic functionality.

Strengthened Financial Inclusion

Demonetisation pushed millions of Indians to open bank accounts under schemes like Jan Dhan Yojana. These accounts became vital during COVID-19, as they facilitated direct benefit transfers (DBT) of government relief funds to the poor and vulnerable sections of society. The seamless transfer of financial aid helped sustain livelihoods during economic hardships.

Additionally, the integration of financial services with Aadhaar and mobile banking ensured that funds reached the intended beneficiaries without delays or middlemen. The pre-existing financial infrastructure established due to demonetisation helped the government execute emergency economic measures effectively.

Boost to E-Commerce and Digital Services

The shift towards digital transactions post-demonetisation provided a foundation for the rapid growth of e-commerce and online services. When the pandemic hit, businesses that had already integrated digital payments

adapted quickly. E-commerce platforms, food delivery services, and online healthcare saw a surge in demand, cushioning the economic downturn and ensuring business continuity.

The forced digitalisation of businesses due to demonetisation prepared Indian enterprises for the shift towards online platforms. Small and medium-sized enterprises (SMEs) that had adopted digital payment systems before the pandemic were able to sustain their operations better compared to those that relied heavily on cash transactions.

Curbing the Informal Economy's Setback

Demonetisation played a role in formalizing the economy by reducing cash-dependent informal businesses. While the informal sector was severely affected by COVID-19, the gradual transition to formal financial systems helped mitigate some losses. Enterprises with digital transaction capabilities could access financial aid, credit facilities, and relief packages, aiding in economic recovery.

Moreover, digital financial tracking enabled small businesses to build credit histories, allowing them to qualify for government-backed financial aid programs. The informal sector, which was previously unregistered, benefited from the formalization triggered by demonetisation, making it easier to integrate into government recovery schemes.

Preparedness for Policy Implementation-

The administrative and technological infrastructure developed during demonetisation—such as improved banking access, digital financial services, and Aadhaar-linked verification—enabled swift government interventions during COVID-19. This ensured targeted relief measures reached the intended beneficiaries without significant leakages.

Furthermore, the increased digital literacy among citizens allowed for the smooth implementation of economic recovery programs. Government initiatives such as PMGKY (Pradhan Mantri Garib Kalyan Yojana) and MSME financial support schemes were effectively executed due to the digital

financial infrastructure laid down during demonetisation.

Conclusion

While demonetisation was initially met with criticism, its long-term impact on digital transactions, financial inclusion, and economic formalization became evident during the COVID-19 crisis. The reforms it triggered enabled India to manage the economic disruptions more efficiently. Though challenges remain, the foundation laid by demonetisation contributed significantly to the resilience of the Indian economy during one of its most testing times.

Demonetisation acted as a preparatory phase that equipped India with a more structured and digital-friendly financial system. This, in turn, allowed the government and businesses to respond effectively to the pandemic, highlighting the long-term benefits of this economic reform. The evolving role of financial digitalization and economic formalization will continue to shape India's resilience in future economic disruptions.

References

1. Agarwal, R., & Gupta, P. (2018). "The Impact of Demonetisation on Digital Transactions in India." *Economic Journal of India*, 45(3), 67-89.
2. Sharma, M. (2019). "Financial Inclusion and Demonetisation: A Critical Analysis." *Journal of Financial Studies*, 12(2), 34-50.
3. Mehta, S., & Verma, A. (2021). "COVID-19 and the Role of Digital Payment Infrastructure in Economic Resilience." *Indian Economic Review*, 58(1), 112-135.
4. Kumar, A., & Rao, V. (2020). "Demonetisation and Its Role in Strengthening the Digital Economy." *Journal of Economic Policy Research*, 27(4), 88-105.
5. Dhingra, S., & Ghatak, M. (2021). India: The economic impact of Covid-19. Centre for Economic Performance, London School of Economics and Political Science.
6. Ghosh, J., Chandrasekhar, C. P., & Patnaik, P. (2017). *Demonetisation decoded: A critique of India's currency experiment*. Routledge.
7. Ray, D., & Subramanian, S. (2020). India's lockdown: An interim report. *Indian Economic Review*, 55(Supplement 1), 31-79. <https://doi.org/10.1007/s41775-020-00094-2>
8. Sharma, A. (2023). Impact of Covid-19 on Indian economy. *Times of India*.
9. Veerakumar, K. (2017). A study on people impact on demonetization. *International Journal of Interdisciplinary Research in Arts and Humanities*, 2(1), 9-12.

TRADITIONAL LIVELIHOODS IN A MODERN WORLD: A CASE STUDY OF THE KUTIA KONDH PVTG OF ODISHA

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Abstract: This article presents a case study of the livelihood strategies and challenges of the Kutia Kondh Particularly Vulnerable Tribal Group (PVTG) in the Rayagada district of Odisha. The study investigates the current livelihood practices of the Kutia Kondhs and identifies the major challenges they face in sustaining their livelihoods. It also examines the role of government policies and interventions in addressing these challenges. The study concludes that while the Kutia Kondhs have adapted their livelihood strategies to changing circumstances, they face several challenges that require comprehensive and long-term solutions. The article suggests that addressing these challenges will require a multi-pronged approach, including the recognition and protection of their traditional land rights and the promotion of sustainable livelihood practices.

Key words: Kutia Kondhs, Livelihood, Odisha, PVTG and Rayagada

1. Introduction

1.1 Brief overview of the tribal community and their livelihood

The Kutia Kondh is a Particularly Vulnerable Tribal Group (PVTG) residing in the hilly regions of the Rayagada district in the state of Odisha, India. The community is known for their unique cultural identity, which is intricately linked to their traditional livelihood practices. Historically, the Kutia Kondhs were hunters and gatherers, but with the advent of colonialism, they moved towards shifting cultivation and subsistence agriculture.

In recent times, the community has faced various challenges to their traditional livelihood, including displacement from their land due to mining and industrial activities, deforestation and climate change. These challenges have forced the community to adapt to new livelihood strategies such as wage labor, seasonal migration and cash crops. However, these strategies have not been without their own challenges including exploitation, indebtedness and lack of access to basic services.

Therefore, this research paper aims to explore

the livelihood strategies and challenges of the Kutia Kondh community in the context of their cultural and environmental surroundings. It has also examined the impact of various government schemes and policies on the community's livelihood and suggested suitable interventions to address the issues faced by the community.

1.2 Importance of studying their livelihood

Studying the livelihood of the Kutia Kondh community is important for several reasons. Firstly, the Kutia Kondhs are a PVTG with a unique cultural identity that is intricately linked to their traditional livelihood practices. Therefore, their livelihood is a crucial aspect of their cultural survival and continuity. Secondly, the Kutia Kondhs are facing various challenges to their livelihood, including displacement from their land due to mining and industrial activities, deforestation and climate change. The community's ability to adapt to these challenges is essential to their survival and well-being. Thirdly, the study of the Kutia Kondhs' livelihood can provide insights into the broader issues of the PVTGs' livelihoods and their relationships with their environments. The Kutia Kondhs' experiences can shed light on the

impact of development projects on PVTG communities and their livelihoods. Finally, understanding the livelihood strategies and challenges of the Kutia Kondhs can design policies and interventions that are more culturally sensitive and effective in supporting the community's well-being and sustainable development.

1.3 Research question(s) and objectives

The current assessment has been undertaken with the following research questions:

- What are the traditional livelihood practices of the Kutia Kondhs in Rayagada?
- What are the livelihood challenges faced by the community in the study district?
- How have the Kutia Kondhs adapted to the changing economic and environmental conditions in Rayagada?
- What are the government policies and programs that have impacted the livelihood of the Kutia Kondhs in the Rayagada district?

The current assessment has been undertaken to attain the following broad research objectives:

- To examine the traditional livelihood practices of the Kutia Kondhs in Rayagada.
- To identify the livelihood challenges faced by the community including land rights, access to markets, and natural resource depletion.
- To analyze the livelihood adaptation strategies employed by the Kutia Kondhs including wage labor, seasonal migration and cash crops.
- To assess the impact of government policies and programs on the livelihood of the Kutia Kondhs including the Forest Rights Act and various poverty alleviation programs.
- To recommend suitable interventions to address the challenges faced by the Kutia Kondhs and promote their sustainable livelihoods.

2. Literature Review

2.1 Overview of existing literature on the livelihood of the tribal community

Several studies have explored the livelihood of the Kutia Kondh community in the Rayagada district of Odisha. Most literature highlight the challenges faced by the community due to environmental degradation, displacement, industrialization (including mining) and the impact of other development projects. Additionally, several studies have also highlighted the community's resilience and adaptation strategies.

Mahapatra and Pattanaik (2013)¹ explored the livelihood of the Kutia Kondh community in the context of changing land use and natural resource availability. The study found that the community's traditional livelihood practices were no longer sustainable due to deforestation and forest depletion. The community has adopted various livelihood strategies, including seasonal migration, wage labor and cash crops, to cope with the changing economic and environmental conditions. Another study by Behera (2016)² assessed the livelihood of the Kutia Kondh community on the backdrop of government policies and programs. The study found that the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (also known as the Forest Rights Act (FRA)) had a positive impact on the community's livelihood by providing legal recognition to their land rights. However, the community still faced challenges due to lack of access to credit, markets and infrastructure.

Study conducted by Ota and Sahu (2010)³ highlights the profound dependence of the Kutia Kondh community on forest resources for their sustenance, particularly on edible roots, berries, and other non-timber forest products. The reserve forests adjacent to their settlements have historically served as a crucial source of food, medicine, and livelihood, ensuring year-round subsistence. However, recent trends indicate a growing disconnection of the community from these traditional sources due to restricted forest access and environmental degradation. As a result, the Kutia Kondhs are experiencing increasing economic hardships, as they are compelled to procure essential daily

consumables from nearby markets, resembling patterns of urban dependency rather than their traditionally self-sufficient way of life. This transition not only threatens their economic stability but also poses significant risks to their cultural sustainability and food security.

Senapati and Dash (2019)⁴ highlighted the community's resilience and adaptation strategies in response to environmental and economic changes. The study found that the community has developed various indigenous knowledge systems to cope with changing environmental conditions and has diversified their livelihoods to reduce their dependence on agriculture. To summarize, the existing literature indicates that the Kutia Kondh community's livelihood is intricately linked to their environment and culture. Their livelihood practices are under threat due to environmental degradation and physical and economic displacement caused by development projects. However, the community's resilience and adaptation strategies provide hope for their sustainable livelihoods in the future.

2.2 Key themes and debates in literature

The literature on the livelihood of the Kutia Kondhs has emphasized several key themes and debates. One major theme is the community's cultural identity and its link to their traditional livelihood practices. Studies have shown that the Kutia Kondhs have a deep connection with their land and forests, which are the basis of their subsistence economy (Pattanaik, 2016)⁵. Another theme is the challenges faced by the community in adapting to changing circumstances, including physical and economic displacement from their land, primarily due to mining and industrial activities, deforestation and climate change (Sahoo & Pattanaik, 2018)⁶.

A key debate in the literature is whether the community's traditional livelihood practices are sustainable in the long run, given the challenges they face. Some studies argue that the Kutia Kondhs need to adopt new livelihood strategies, such as cultivation of cash crops and engagement in non-farm activities, to improve their economic well-being (Senapati & Dash, 2019). Others argue that the community's traditional practices are still relevant and should

be preserved, but with appropriate modifications to address current challenges (Swain, 2018)⁷.

Another important theme in the literature is the role of government policies and programs in influencing the livelihood of the Kutia Kondhs. Studies have shown that government schemes and policies, such as the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and the FRA, have had both positive and negative impacts on the community's livelihood (Pattanaik, 2016)⁸; Senapati and Dash, 2019).

Overall, the literature on the livelihood of the Kutia Kondhs reflects the complex and dynamic nature of their economic and cultural practices, as well as the challenges they face in adapting to changing circumstances. The key themes and debates identified in the literature provide insights into the diversity of perspectives on this topic and underscore the need for further research and interventions that consider the community's cultural and environmental contexts.

2.3 Gaps in existing literature

Despite the extensive research on the livelihoods of PVTGs in India, there are some notable gaps in the literature on the livelihoods of Kutia Kondh community. Some of the major gaps in the existing literature are:

- Limited studies on the impact of climate change: Climate change is a significant challenge faced by the Kutia Kondh community. However, there are very few studies that have explored its impact on their traditional agricultural patterns, livelihood practices, adaptation strategies and general well-being.
- Insufficient focus on gender dimensions: Gender plays a crucial role in shaping the livelihood strategies of the Kutia Kondh community. However, most of the studies on the Kutia Kondh livelihood have focused on men, neglecting the specific social role, contributions and challenges faced by women.

- Lack of attention to the role of institutions and policies: Various government policies and institutional frameworks have shaped the livelihoods of the Kutia Kondh community. However, there is a dearth of studies that have examined the role of these policies and institutions in the community's livelihoods.
- Limited research on the interlinkages between livelihood and cultural identity: The Kutia Kondh community has a unique cultural identity, which is intricately linked to their traditional livelihood practices. However, there are few studies that have examined the interlinkages between livelihood practices of the community, their cultural identity and their implications on the community's well-being.
- Few studies on the effectiveness of livelihood interventions: Despite the numerous livelihood interventions carried out by various organizations and government agencies, there is limited research on their effectiveness in addressing the challenges faced by the Kutia Kondh community.

Addressing these gaps in the literature is crucial to develop a detailed perspective on the livelihood strategies and challenges of the Kutia Kondh community and to develop effective interventions to enhance their well-being.

3. Methodology

3.1 Research design and methods

This research paper has used a qualitative approach to explore the livelihood strategies and challenges of the Kutia Kondh community in the Rayagada district of Odisha in India. The qualitative approach encompassing interviews, Focus Group Discussions (FGD) and field observations is appropriate for exploring complex and contextualized phenomena such as livelihoods in a particular community. This study involves the collection of data from multiple sources, including primary and secondary sources.

3.1.1 Methods

The following methods were used to undertake the study:

- Literature review: A comprehensive literature review has been conducted to identify the existing knowledge on the livelihood strategies and challenges of the Kutia Kondh community. The literature review included academic papers, government reports, policy documents and other relevant sources.
- Key informant interviews: Semi-structured interviews were conducted with key informants, including members of the Kutia Kondh community, local leaders, NGOs and other key stakeholder groups. The key informant interviews focused on understanding the livelihood strategies and challenges of the community, the impact of government schemes and policies on their livelihood and potential interventions to address their challenges.
- FGDs: FGDs were conducted with members of the PVTG to gain insights into their traditional livelihood practices, the challenges they face and their experiences with new livelihood strategies. The FGDs were conducted separately for men and women to capture the gender-specific perspectives on livelihoods.
- Field observations: Field observations were made to understand the living and working conditions of the Kutia Kondhs, their access to basic services and infrastructure and the impact of mining, industrial activities and deforestation on their livelihoods.
- Data analysis: The data collected through interviews, FGDs and field observations have been analyzed using thematic analysis. Thematic analysis involves identifying patterns, themes and categories from the data and deducing meaningful findings.

3.1.2 Ethical considerations

The research has followed ethical guidelines

and obtained informed consent from all participants. The participants were informed about the purpose of the research and their confidentiality will be ensured. The study has also considered the community's cultural sensitivity and respected their values and norms.

3.2 Data collection techniques

The data collection techniques used for this research include both primary and secondary data collection methods. Primary data collection methods include in-depth interviews, FGDs, and Participatory Rural Appraisal (PRA) tools such as mapping and transect walk. These methods were used to collect data on the livelihood practices, challenges and strategies of the Kutia Kondh community.

In-depth interviews were conducted with key informants from the community, including traditional leaders, farmers and women, to gather detailed information on their livelihood practices, challenges and coping strategies. FGDs were held with different groups of community members to gain insights into their perspectives on various livelihood-related issues. The PRA tools were used to map the community's natural resources and understand the changes in the landscape over time.

Secondary data collection methods included review of existing literature, government report and policy documents related to the Kutia Kondh community and their livelihood practices. This helped to provide a broader understanding of the socio-economic and political context in which the community operates. The data collected through these methods were analyzed using qualitative methods such as thematic analysis and content analysis to identify patterns, trends and themes related to the Kutia Kondh community's livelihood practices, challenges and strategies. It also helped to understand the impact of government policies and interventions on the community's livelihood.

3.3 Sampling strategy

The Kutia Kondh community is a small and isolated community mostly residing in the Kalahandi and Rayagada districts in Odisha,

India. Therefore, the study aimed to include a diverse group of participants, including men and women, farmers, and non-farmers from different age groups.

The study area was divided into different clusters based on the proximity and accessibility of the villages. A total of seven villages were selected from the different clusters. The villages were selected based on their accessibility, size and representation of different livelihood practices.

Within each selected village, participants were selected using a snowball sampling technique. Key informants, such as traditional leaders and farmers were initially identified and they were asked to refer other community members who could provide valuable insights into the community's livelihood practices, challenges and coping strategies.

In total, 42 in-depth interviews were conducted with key informants, and 14 FGDs were held with different groups of community members. The participants were selected based on their willingness to participate in the study and their knowledge and experience with the livelihood practices of the Kutia Kondh community.

The sample size was small but appropriate for the qualitative research design used in this study. The aim was to collect rich and detailed data on the livelihood practices and challenges of the Kutia Kondh community and the selected sample was deemed sufficient to achieve this aim.

4. Results and Findings

4.1 Overview of the data collected

As indicated earlier, data has been collected through a combination of primary and secondary sources. The primary data has been collected through fieldwork in the Rayagada district of Odisha, India, where the Kutia Kondh community resides. The fieldwork involved conducting interviews and FGDs and using PRA and participatory observation techniques with members of the community, as well as with key stakeholders such as government officials, NGOs and local experts. A total of 135 households were covered including 42 samples covered through

interviews and 93 samples covered through FGDs.

As indicated earlier, the secondary data was collected from various sources, including government reports, academic journals and other relevant publications. The secondary data was used to provide a broader context and background information on the Kutia Kondh community and their livelihood practices.

Both primary and secondary data were analyzed using various quantitative and qualitative methods. The quantitative data was analyzed using manual and descriptive statistical calculations which yielded an overview of the livelihood status of the Kutia Kondh community. The qualitative data was analyzed using content analysis and the themes and patterns were identified to gain a deeper understanding of the livelihood strategies and challenges of the community.

On the whole, the data collected provided a comprehensive picture of the livelihood status of the Kutia Kondh community and the challenges they face in sustaining their traditional livelihood practices. The findings of the study have been used to suggest suitable interventions to address the issues faced by the community and improve their livelihood opportunities.

4.2 Analysis of the data

4.2.1 Qualitative data analysis

Analysis of the qualitative data collected during the study indicated that the traditional livelihood practices of the Kutia Kondhs, such as shifting cultivation and subsistence agriculture, have been negatively impacted by various factors such as mining, industrialization, deforestation and climate change. As a result, the community has adapted to new livelihood approaches such as wage labor, seasonal migration and cash crop cultivation. However, these strategies have not been without their own challenges such as exploitation, indebtedness and lack of access to basic services.

It was also found that the government policies and schemes meant to benefit the PVTG

community have not been effectively implemented, resulting in limited access to basic services such as healthcare, education and housing. Moreover, the community members expressed a lack of awareness about the various schemes and programs that could potentially benefit them.

From a holistic perspective, the analysis highlights the need for effective implementation of government policies and schemes, capacity-building programs and support for sustainable livelihood practices to address the challenges faced by the Kutia Kondh community in Rayagada. The findings of this study could serve as a basis for policymakers and development practitioners to design and implement interventions that support the sustainable livelihoods of the Kutia Kondhs and other PVTG communities in India.

4.2.2 Quantitative data analysis

Descriptive statistics such as frequency tables and percentages were used to summarize the qualitative data collected for the study. The respondents were categorized into different groups based on their income levels and the percentage of respondents in each income group was calculated. The income levels were also compared between different livelihood strategies and occupation categories.

The study found that the Kutia Kondh community adopted various livelihood strategies including agriculture, wage labor and forest-based activities among others. Agriculture was the most common livelihood strategy with 75% of respondents engaging in it followed by Wage labor (21%).

The study also found that the average monthly income of the Kutia Kondh community was INR 5,887 (USD 78.5) which was less than half of the average monthly income of INR 12,100 (USD 161.74) for rural households in Odisha as of 31 March 2023 (GoI Report, 2024)⁹. The income levels varied significantly across different livelihood strategies and occupation categories. Respondents engaged in agriculture had the highest average monthly income (INR 7,092), while those engaged in wage labor had the lowest average monthly income (INR 4,546).

In terms of challenges faced by the Kutia Kondh community, the study found that lack of access to credit facilities, low productivity and lack of marketing facilities were the major challenges faced by respondents engaged in agriculture. Respondents engaged in wage labor reported exploitation, low wages, and lack of job security as their major challenges. Forest-based activities were affected by restrictions on forest access, low income and lack of alternative livelihood options.

To summarize, the quantitative analysis revealed important insights into the livelihood strategies and challenges faced by the Kutia Kondh community. These findings can be used to develop appropriate interventions and policies to improve their livelihoods and well-being.

4.3 Key findings related to the livelihood of the tribal community

The key findings of the study can be summarised as follows:

- The traditional livelihood practices of the Kutia Kondhs have been significantly impacted by various external factors including mining and industrial activities, deforestation and climate change.
- The community has adapted to these changes by adopting new livelihood strategies such as wage labor, seasonal migration and cash crops.
- However, these new strategies have come with their own set of challenges including exploitation, indebtedness and lack of access to basic services.
- The community's traditional knowledge and skills related to forest management, agriculture and natural resource use have not been adequately recognized or integrated into government policies and programs.
- The Kutia Kondhs face significant barriers to accessing education, healthcare and other basic services which have an adverse impact on their livelihoods and well-being.
- The government's various schemes and policies intended to address poverty and promote sustainable development have had limited impact on the community's livelihoods.

- There is a need for more targeted interventions that recognize the unique cultural and environmental context of the Kutia Kondh community and provide them with access to necessary resources and support.

4.4 Comparison of the findings with existing literature

The key findings from the assessment of the livelihood strategies and challenges of the Kutia Kondhs in Rayagada can be compared to the existing literature on the subject. Some of the comparisons are:

- **Traditional livelihood practices:** The study found that the Kutia Kondhs have shifted from their traditional livelihood practices of hunting and gathering to subsistence agriculture and wage labor. This is consistent with the existing literature that suggests that the community's traditional livelihood practices have been affected by colonization, industrialization and deforestation.
- **Vulnerability to environmental changes:** The study found that the Kutia Kondhs are vulnerable to climate change and other environmental changes which affect their agricultural practices and their access to resources. This is also supported by the limited literature that highlights the community's vulnerability to environmental changes due to their dependence on natural resources.
- **Lack of access to basic services:** The study found that the Kutia Kondhs lack access to basic services such as healthcare, education and sanitation. This is consistent with the existing literature that highlights the community's lack of access to basic services as a major challenge to their livelihood.
- **Impact of government schemes:** The study found that while the government has implemented various schemes and policies to improve the livelihoods of the Kutia Kondhs, they have not been effective in addressing the community's challenges. This is also supported by the existing literature that suggests that government schemes and policies have had limited impact on

improving the livelihoods of the community.

The key findings from the assessment of the livelihood strategies and challenges of the Kutia Kondhs in Rayagada, are mostly consistent with the existing literature on the subject. The study highlights the need for more effective interventions that address the community's challenges and improve their livelihoods.

5. Discussions and Interpretation

One of the main findings of the assessment is that the Kutia Kondh community faces significant challenges in accessing basic resources such as land, water and forest produce. This has a direct impact on the livelihood strategies of the community which are heavily dependent on agriculture and forest-based activities. In order to address this challenge, there is a need for policies and programs that support the sustainable management of natural resources and ensure that the rights of the Kutia Kondh community to these resources are protected.

Another important finding of the assessment is the lack of access to education and healthcare facilities for the Kutia Kondh community. This limits their ability to pursue alternative livelihood options and improve their economic and social well-being. There is a need for targeted interventions to improve access to education and healthcare facilities for the Kutia Kondh community, particularly for women and girls who often face greater barriers in accessing these services.

The assessment also highlights the importance of traditional knowledge and practices in the livelihood strategies of the Kutia Kondh community. The community has a deep understanding of local ecosystems and has developed sustainable practices that allow them to maintain their livelihoods while preserving the environment. There is a need to recognize and support these traditional practices and incorporate them into modern sustainable development strategies.

Finally, the assessment highlights the importance of social and cultural factors in the

livelihood strategies of the Kutia Kondh community. The community has a strong sense of identity and culture, which plays an important role in shaping their livelihood strategies and decision-making processes. Any interventions aimed at improving the livelihoods of the Kutia Kondh community must take into account these social and cultural factors and work to promote their inclusion and participation in decision-making processes.

Overall, the findings of the assessment have important implications for the livelihood of the Kutia Kondh community. They highlight the need for policies and programs that support sustainable resource management, improve access to education and healthcare, promote traditional knowledge and practices and consider the social and cultural factors that shape the livelihood strategies of the community. By addressing these challenges, it is possible to promote the sustainable development of the Kutia Kondh community and improve their economic and social well-being.

5.1 Analysis of the limitations of the study

The study suffers from the following unavoidable limitations:

- **Small Sample Size:** The study is based on a small sample size of only 145 households, which may not be representative of the entire Kutia Kondh community. As such, the findings of the study may not be generalizable to other Kutia Kondh communities in the region.
- **Limited Scope:** The study focuses primarily on the economic livelihoods of the Kutia Kondh community, and does not delve into the social, cultural, and political aspects of their lives. This limited scope may have led to an incomplete understanding of the challenges faced by the community.
- **Lack of Longitudinal Data:** The study is based on cross-sectional data collected at a single point in time. Longitudinal data that tracks changes in the livelihoods of the Kutia Kondh community over time would provide a more nuanced understanding of the challenges they face.

- **Language Barrier:** The study was conducted in English, which may have posed a language barrier for some participants. This may have affected the accuracy and completeness of the data collected.
- **Self-Report Bias:** The study relies on self-reported data from participants, which may be subject to social desirability bias. Participants may have provided answers that they believed were expected of them rather than their true experiences.
- **Lack of Participation of Women:** The study had a limited participation of women, who are an important part of the Kutia Kondh community. The absence of their perspectives and experiences may have affected the accuracy of the findings.

5.2 Scope for future research

The study provides vital insights into the social and economic lifestyle of the Kutia Kondhs. However, there is still much to be explored in terms of the livelihood of the Kutia Kondhs and there is a scope for further research in this area, including:

- **Market Access:** While the study identified lack of access to markets as a key challenge faced by the Kutia Kondhs, further research could delve deeper into the reasons behind this lack of access. It could also explore potential ways to improve market access and the role of government policies in this regard.
- **Environmental Sustainability:** The study highlights the importance of the forest resources for the livelihood of the Kutia Kondhs and the need to balance economic development with environmental sustainability. Further research could focus on the impact of development projects on the environment and explore ways to ensure sustainable use of natural resources.
- **Livelihood Diversification:** The study emphasizes the importance of diversifying livelihoods to reduce vulnerability. Further research could explore potential livelihood options for the Kutia Kondhs, such as non-timber forest produce and the role of

- government policies and programs in promoting livelihood diversification.
- **Gender and Livelihoods:** The study identifies the role of women in the Kutia Kondh community and the challenges they face in accessing resources and income-generating opportunities. Further research could explore the gender dimensions of livelihoods among the Kutia Kondhs and the potential for gender-sensitive interventions to promote economic empowerment.
- **Livelihood and Social Protection:** The study finds the importance of social protection measures, such as the MNREGA, in supporting the livelihoods of the Kutia Kondhs. Further research could explore the effectiveness of social protection measures in promoting livelihoods and reducing poverty among the Kutia Kondhs.

5.3 Policy implications of the study

Some of the major policy implications of the study have been discussed below:

- **Developing and implementing community-based forest management programs:** The study highlights that the Kutia Kondhs depend heavily on forest resources for their livelihoods. However, due to the forest conservation policies of the government, they are facing difficulties in accessing these resources. Therefore, there is a need to develop and implement community-based forest management programs that allow the Kutia Kondhs to sustainably use and manage forest resources.
- **Developing alternative livelihood options:** The study also shows that the Kutia Kondhs face several challenges in their traditional livelihoods such as shifting cultivation, collection of non-timber forest products and livestock rearing. Therefore, there is a need to develop alternative livelihood options for the Kutia Kondhs such as promoting small-scale enterprises, skill development programs and access to credit facilities.

- Addressing land-related issues: The study reveals that the Kutia Kondhs face issues related to land ownership and land-use patterns. Therefore, there is a need to address these issues by providing legal recognition to their customary land tenure systems and ensuring their participation in land-use planning and decision-making processes.
- Strengthening social protection programs: The study also highlights that the Kutia Kondhs are vulnerable to various shocks and stresses such as natural disasters, health emergencies and food insecurity. Therefore, there is a need to strengthen the existing social protection programs that provide support during these crises.

At a broad level, the policy implications of the study call for a more comprehensive and integrated approach to address the livelihood challenges of the Kutia Kondhs. This approach should involve the participation of the Kutia Kondhs in decision-making processes, the recognition of their customary rights and the promotion of sustainable and alternative livelihood options.

6. Conclusion

This research has illuminated the dynamic interplay between stability and change within the livelihood strategies and challenges faced by the Kutia Kondh community. The study demonstrates the remarkable resilience of the community in successfully adapting to environmental challenges and maintaining their traditional way of life. This has been made possible through their continued reliance on forest resources, traditional agricultural practices and local markets. However, the Kutia Kondhs are not immune to external pressures. The study highlights significant challenges including resource depletion, climate change impacts and the need to engage with the broader market economy. These challenges have necessitated further adaptation, prompting the Kutia Kondhs to develop new livelihood strategies such as cash crop cultivation and collaboration with non-governmental organizations.

Overall, the Kutia Kondhs' experience underscores the critical role of both preserving traditional practices and fostering adaptation to changing circumstances in ensuring sustainable livelihoods. Policymakers must design interventions that acknowledge the community's unique situation and

support both the continuation of their traditional practices and their ability to adapt and evolve. This holistic approach is crucial for securing the long-term well-being of the Kutia Kondhs and other marginalized communities enabling them to achieve sustainable development.

References

1. Behera, B. (2016). Forest Rights Act and Livelihoods of Kutia Kondhs in Rayagada District, Odisha, India. *Journal of Forest and Livelihood*, 15(1), 52-60.
2. Mahapatra, A. and Pattanaik, S. (2013). Assessment of Livelihood Security of Kutia Kondh Tribal Households in Rayagada District, Odisha. *The Journal of Rural and Agricultural Research*, 13(2), 1-9.
3. Ota, A.B. and Sahu, A.C. (2010). Kutia Kondh. *Scheduled Castes and Scheduled Tribes Research and Training Institute (SCSTRTI)*, 5.
4. Senapati, A., and Dash, P. (2019). An Assessment of Indigenous Knowledge and Livelihood Adaptation Strategies of Kutia Kondh Community in Rayagada District, Odisha. *Journal of Human Ecology*, 65(1-2), 59-71.
5. Pattanaik, S. (2016). Livelihood Strategies of Kutia Kondhs in Rayagada District of Odisha. *International Journal of Social Science and Humanities Research*, 4(1), 1-9.
6. Sahoo, B. K., and Pattanaik, S. (2018). Displacement and Livelihood Challenges of Kutia Kondh Tribal Women in Rayagada District, Odisha. *Journal of Rural and Industrial Development*, 8(1), 93-106.
7. Swain, S. K. (2018). Impacts of Climate Change on Livelihood Security of Kutia Kondh Tribal Communities in Rayagada District of Odisha, India. *Journal of Environmental Science, Toxicology and Food Technology*, 12(7), 6-13.
8. Pattanaik, B. (2016). The impact of Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) on rural livelihoods in Odisha, India. *International Journal of Rural Management*, 12(1), 3-23.
9. GoI(2024).State_wise_SDP_as_on_15032_024.xls (live.com). Accessed on 06/06/2024.

COMPARATIVE STUDY OF THE INCOME OF SCHEDULED TRIBE WOMEN AND MEN: IN THE CONTEXT OF KHUNTI DISTRICT

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Abstract: Income inequality between women and men is a socio-economic challenge prevalent at both global and local levels, highlighting deep-rooted gender discrimination and unequal opportunities. Compared to men, women are often confined to low-paying jobs, work in unorganized sectors, and engage in part-time employment, adversely affecting their economic independence and social status. In a diverse country like India, where rural and tribal communities face unique challenges, this disparity becomes even more evident.

This research paper focuses on comparing the income of Scheduled Tribe women and men in Khunti district. The primary objective of the study is to analyze the major sources of income for tribal men and women in the district and examine the reasons behind gender-based income inequality. Both primary and secondary data have been used for this study. Primary data were collected through a questionnaire designed according to the research objectives, while secondary data were obtained from sources such as the Agriculture Department, Ministry of Agriculture and Farmers' Welfare, government reports, and journals.

For data analysis, methods such as mean, mode, percentage, average, and graphical representation have been used. The findings of the study indicate that agriculture is the primary source of income for Scheduled Tribe men and women, accounting for 61.7% of the respondents.

Introduction- Gender inequality is one of the biggest social evils in Indian society (Agarwala, 2018)¹. Income disparity has emerged as a persistent issue, prevailing in both developed and developing countries, despite continuous economic growth. Over the past few decades, income inequality has increased in most advanced and several developing nations (Bali N et al., 2023)². There is significant discrimination in income between men and women in rural and urban areas, reaffirming the reality of wage inequality and bias against women in the labor market (Sangupta and Puri, 2021)³. The 2016 World Economic Forum (WEF) report highlights the slow progress in reducing gender disparities. According to the report, although global gender inequality has decreased since 2006, the gap has closed by only four percent. If this trend continues, it may take over 100 years for women worldwide to achieve equality with men (Chinara, 2018)⁴. According to the 2018 International Labour Organization

(ILO) report, the gender pay gap in India is around 34%, meaning women earn 34% less than men on average. This gap may be even wider among tribal communities. The global Scheduled Tribe population accounts for approximately 6% of the world's total population. As per the 2011 Census of India, the Scheduled Tribe population in India is 104.2 million (10.42 crores), making up 8.6% of the country's total population. In Jharkhand, the 2011 Census reflects demographic changes in the state. The state spans 2.5% of India's geographical area and has 2.70% (32.9 million) of the country's total population. The population density of Jharkhand is 414 people per square kilometer, which is higher than the national average of 382 per square kilometer. The population growth rate in the last decade was 22.34%, slightly lower than the 23.19% recorded in the previous decade. The rural population constitutes 75.95%, while the urban population accounts for 24.05%. Literacy rates are higher in urban areas (83.30%) than in rural

areas (62.40%). The sex ratio is 960 females per 1,000 males in rural areas, higher than the 908 in urban areas. Jharkhand's overall literacy rate has increased to 67.63%, with 78.45% literacy among men and 56.21% among women. The state's overall sex ratio is 947, slightly below the national average of 940. Apart from these statistics, several aspects of human development, such as access to education, healthcare facilities, and the welfare of vulnerable groups, are also crucial. Khunti district is a tribal-dominated region in Jharkhand, where the majority of the population belongs to Scheduled Tribes. As per the 2011 Census⁵, 91.7% of Khunti's population comprises Scheduled Tribes. The sex ratio in Khunti is 997, meaning there are 997 females for every 1,000 males. The district's economy is primarily based on agriculture, small-scale industries, forest resources, and migrant labor. However, a significant income disparity exists between men and women from a gender perspective. This research identifies the key factors contributing to income inequality between Scheduled Tribe men and women in Khunti district.

Literature Review- Many national and international researchers have paid significant attention to and shown interest in the income of Scheduled Tribe men and women. Several studies have been conducted in this area, and a review of some key relevant literature is presented below: (Chinara, 2018)⁶ Gender wage inequality is significant in both high per capita GDP states such as Haryana, Maharashtra, Gujarat, and Tamil Nadu, as well as low per capita GDP states like Odisha, Jharkhand, Bihar, Uttar Pradesh, and Madhya Pradesh. While the inequality remains nearly the same in low GDP states, it is relatively higher in high GDP states, indicating greater discrimination. Wage disparity between men and women continues to be a stark reality. The results of the current study confirm that gender wage gaps exist in our country (Sangupta and Puri, 2021)⁷. A brief and high-level analysis of wages earned by men and women across different states, occupations, types of employment, and sectors reveals that in almost all economic activities, women's income is significantly lower than that of men. Women are more likely to be employed in sectors where average wages are low for everyone, such as

primary occupations, agriculture, or informal labor work. Even in low-wage jobs, women earn 30-60% less than men on average, despite performing the same work. In high-paying occupations, the wage gap is relatively smaller, especially at higher wage levels, but very few women are able to reach such employment opportunities (PLFS Report, 2019-20)⁸. The analysis identified a significant negative relationship between age and wages, indicating that wages tend to decline as age increases. Additionally, caste relations were found to have a consistently adverse effect on men's wages. Marital status and education were observed to have a significant impact on wage levels, which was clearly reflected across different quantiles (income groups). Furthermore, the study also revealed substantial wage disparities based on the type of employment, nature of enterprises, and occupational categories. All these factors have multidimensionally influenced wage distribution (Mishra and Trivedi, 2024)⁹. (Roychowdhri and Mukhopadhyay, 2018)¹⁰ To utilize India's abundant potential workforce, targeted programs under the skill development initiative by the government are required. The focus should be on two key aspects—providing skills to women and promoting industries—so that automation and other methods can make jobs gender-neutral, addressing the demand side of the labor market. One of the major causes of income inequality is the stereotyping of gender roles. Globally, working women often leave jobs due to childcare responsibilities. Additionally, structural barriers and prevalent gender biases in society restrict women to lower-paying and part-time jobs. Women's representation in managerial positions remains very low (Swaminathan, 2013)¹¹. The study examines the extent of gender wage disparity in India's urban labor market and its determinants. Findings suggest that even in regular salaried jobs in India's urban labor market, women's work is undervalued. In almost all sectors and professions, despite controlling for factors like experience, education, geographical variations, and other personal attributes, women earn significantly lower wages than men. An analysis of the gender wage gap found that approximately two-thirds of the wage disparity is due to pure discrimination in the labor market, while only one-third is attributed to differences in talent or resources. It was also observed that as wage distribution moves towards higher levels, the wage gap gradually decreases (Daga et al., 2024)¹². The literature review above clearly indicates that gender-based income

inequality remains a significant issue not only in developing countries but also in developed nations. It is prevalent not only in the agricultural sector but across all service sectors as well. Furthermore, it is evident that income inequality is higher at lower wage levels, whereas it tends to decrease at higher wage levels.

Research Gap- After reviewing the literature of some important studies mentioned above, it was found that a comparative study of the income of Scheduled Tribe women and men in Khunti district of Jharkhand has not been conducted. The primary objective of this research is to identify the main sources of income for Scheduled Tribe women and men and to analyze the reasons for gender-based income inequality.

Objectives

1. To identify the main sources of income for tribal women and men in Khunti district.
2. To analyze the reasons for gender-based income inequality.

Significance of the study- This research plays a significant role in studying the economic status of Scheduled Tribes to understand their socio-economic development. The research paper examines various factors such as education, means of livelihood, and gender inequality. This study will highlight the income disparity between Scheduled Tribe women and men and the reasons behind it. It will help in understanding the impact of factors such as their participation in various livelihood sources, education, land ownership, skills, and government assistance. The research will assist the government and policymakers in providing better economic opportunities for women. It will also clarify the effectiveness of existing government schemes in increasing women's income and identify the need for new employment-oriented programs. In Khunti district, the livelihood of tribal communities primarily depends on agriculture, forest produce, and jobs in the unorganized sector. This study will identify which sustainable development **models could be effective in enhancing the income of these communities.**

Research Question

3. What are the main sources of income

for tribal women and men in Khunti district?

4. What are the reasons for gender-based income inequality?

Research Methodology

Both primary and secondary data were collected for the study. Primary data was obtained through surveys and interviews conducted in various blocks of Khunti district, while secondary data was sourced from census reports, government scheme reports, NSSO, and other economic reports. A total of 128 respondents were selected using the random sampling method, with Scheduled Tribe women chosen as respondents.

Key Findings

The following findings were obtained under the study of this research paper –

Sources of Livelihood- Agriculture is the primary source of income for Scheduled Tribe women in Khunti district, as most women actively participate in farming, forest produce collection, animal husbandry, and agricultural labor. Farming not only ensures food security for their families but also enhances their economic self-reliance by selling surplus produce. Women contribute to income generation by engaging in the cultivation of paddy, maize, pulses, oilseeds, vegetables, and the collection of forest produce (such as mahua, sal seeds, tendu leaves, and lac). Their participation in agriculture not only increases household income but also provides opportunities for trading in local markets and self-employment. In Khunti district, income sources have been divided into three categories, and the obtained data is presented in the table below –

Table -1 Source of Income

Description	Frequency	Percentage
Agricultural	79	61.7
Non-Agricultural	0	0
Both	49	38.3
Total	128	100.0

Source: Primary Data

Table 1 clearly indicates that the income of the Scheduled Tribe community in Khunti district is predominantly dependent on agriculture, with 61.7% of households relying entirely on agricultural income for their livelihood. This highlights that farming, horticulture, animal husbandry, and forest produce form the economic backbone of the region. Meanwhile, 38.3% of households earn income from both agricultural and non-agricultural activities (such as wage labor, self-employment, cottage industries, government jobs, etc.), potentially leading to a more balanced economic condition. Notably, no household depends solely on non-agricultural income, suggesting that self-employment or other occupations alone have not emerged as primary means of sustenance. This situation indicates that employment opportunities beyond agriculture remain limited in Khunti district, underscoring the need for livelihood diversification. Therefore, promoting skill development and self-employment schemes to enhance non-agricultural job opportunities, encouraging agro-based industries (e.g., lac production, organic farming), linking women to self-help groups, and developing local cottage industries are essential to strengthen rural employment. Overall, this study reveals that for the economic development of Scheduled Tribe families in Khunti district, adopting additional economic activities alongside agriculture is necessary to increase their income and bolster their economic stability.

Difference in Average Income

Khunti district, the daily wage for women is 150 INR, while for men it is 300 INR, which is double that of women. This clearly indicates that women receive less compensation for their efforts compared to men. The total annual income of women and men is presented in the table next –

Table Number 2: Total Income Level (Annually)

Income Level	Respondents (Women)	Husband (Men)
0-5000	27	11
5001-10000	47	17
10001-15000	33	56
15001-20000	13	27
20001-25000	5	12
25001-30000	3	5

Source: Primary Data

Impact of Education and Skills

The state of women’s education in Khunti district remains challenging. According to the 2011 Census data, the district’s overall literacy rate is 64.42%, with male literacy at 74.47% and female literacy at only 54.11%. This data clearly indicates that the level of female education in the district is below both state and national averages. Particularly in rural and tribal areas, many girls drop out after primary education, limiting their participation in higher education. Several barriers to women’s education emerge. Social and traditional beliefs restrict girls’ education, as families often hold the view that a woman’s role should be confined to managing the household. Additionally, economic instability is a significant factor, with poor families preferring to engage girls in household chores and agricultural work rather than investing in their education. Furthermore, the distance to schools and safety concerns also deprive many girls of education. The following data related to education in Khunti has been obtained. The state of women’s education in Khunti district remains challenging. According to the 2011 Census data, the district’s overall literacy rate is 64.42%, with male literacy at 74.47% and female literacy at only 54.11%. This data clearly indicates that the level of female education in the district is below both state and national averages. Particularly in rural and tribal areas, many girls drop out after primary education, limiting their participation in higher education. Several barriers to women’s education emerge. Social and traditional beliefs restrict girls’ education, as families often hold the view that a woman’s role should be confined to managing the household.

Additionally, economic instability is a significant factor, with poor families preferring to engage girls in household chores and agricultural work rather than investing in their education. Furthermore, the distance to schools

and safety concerns also deprive many girls of education. The following data related to education in Khunti has been obtained –

Table Number3: Level of Education

Education Level	Respondent's Education (Women)	Husband's Education (Men)
	Frequency	Percentage
Illiterate	39	30.5
Primary Education	62	48.4
Secondary Education	12	9.4
High School	10	7.8
Intermediate	5	3.9
Graduation	0	0
Other	0	0

Source: Primary data

This table, depicting the educational status of Scheduled Tribe women and their husbands in Khunti district, clearly shows that the education level of women is significantly lower than that of men. About 30.5% of women are completely illiterate, compared to only 12.5% of men. This gap indicates that women are not getting adequate opportunities to access education, leaving them socially and economically disadvantaged. Among women, 48.4% are limited to primary education, while this figure is 38.3% for men, suggesting that while women begin education at the primary level, their participation drops sharply at secondary and higher levels. Only 9.4% of women reach secondary education, compared to 14.8% of men. Similarly, at the high school level, just 7.8% of women continue their studies, while the rate for men is 16.4%. At the intermediate level, the number of women further decreases, with only 3.9% pursuing education, compared to 12.5% of men, indicating greater challenges for women in advancing to higher education. Most concerning is that no women have reached graduation, while 5.5% of men are graduates. This highlights that higher education remains a significant challenge for women in the district.

Future Research Work That Can Be Conducted

This study, currently limited to Khunti district, can be expanded to other districts of Jharkhand or states to derive broader conclusions. Research can be conducted on new employment sources and skill development programs to enhance the income of Scheduled Tribe women and men. The effectiveness of schemes like MGNREGA, self-help groups, and agricultural programs can be analyzed to assess their success in reducing income inequality. Additionally, studies on the impact of digital platforms, e-commerce, and agricultural technologies on Scheduled Tribe communities could be explored to improve their economic condition. In the future, detailed research, new policies, and technological innovations will be essential to increase the income of Scheduled Tribe communities and reduce gender inequality. Further work in this direction will strengthen the social and economic development of these communities.

Conclusion and Recommendations

This study shows that income inequality persists among Scheduled Tribe women and men in Khunti district. The following measures

can be taken to improve the economic status of women:

- The number of special education and skill development programs for women should be increased.
- Small loans and cooperatives should be established to encourage women entrepreneurs.
- Awareness and effective implementation of government schemes should be ensured.
- Community-based initiatives should be taken to reduce social and cultural barriers.

Suggestion

Policy interventions and awareness campaigns are needed to reduce income inequality between Scheduled Tribe women and men. This study provides a useful foundation for further research and policy formulation in this direction.

References

1. Agarwala K, 2018, "Analysis of Gender Differences in Salaries: Evidence for India (Delhi NCR)", <file:///C:/Users/user1/Desktop/ssrn-3188171.pdf>
2. Bali N et al, 2023, "Comparative Study of the Quantitative Relationship between Gender Equality and Income Inequality in India and the United States of America", Journal of Research in Humanities and Social Science Volume 1 Issue 1, pp: 141-151, <https://www.questjournals.org/jrhss/papers/vol11-issue1/1101141151.pdf>
3. Sangupta P. and Puri R., 2021, "Gender Pay Gap in India: A Reality and the Way Forward—An Empirical Approach Using Quantile Regression Technique", Journal Indexing and Metrics, Volume 10, Issues 1, <https://doi.org/10.1177/2321022221995674>
4. Chinara M.,2018, "Gender Discrimination in Wage Earnings: A Study of Indian Wage Market", The Indian Journal of Labour Economics, <https://doi.org/10.1007/s41027-018-0132-5>
5. Chinara M.,2018, "Gender Discrimination in Wage Earnings: A Study of Indian Wage Market", The Indian Journal of Labour Economics, <https://doi.org/10.1007/s41027-018-0132-5>
6. Sangupta P.and Puri R., 2021, "Gender Pay Gap in India: A Reality and the Way Forward—An Empirical Approach Using Quantile Regression Technique", Journal indexing and metrics, Volume 10, Isssue 1, <https://doi.org/10.1177/2321022221995674>
7. PLFS Report, 2019-20, "Gender Wage Gap in India, An analysis of PLFS 2019-20 Data", https://www.sattva.co.in/wp-content/uploads/2021/09/Sattva_Insights_GenderWageGap.pdf
8. Mishra S and Trivedi S., 2024, "Gender Wage Disparity in Urban India: An Analysis Using Unconditional Quantile Regression", A Journal of Indian Association of Study of Population, Vol. 53, No. 2, <https://iasp.ac.in/uploads/journal/3-1737717927.pdf>
9. Roychowdhri S P and Mukhopadhyay I.,2018, " Gender wage gap: Some Recent Evidences from India", Journal of Quantitative Economics, Volume 17, Issue 3, 1-35 Journal of Quantitative Economics
10. Swaminathan M., 2013, "GENDER STATISTICS IN INDIA: A SHORT NOTE WITH A FOCUS ON THE RURAL ECONOMY",
11. https://www.mospi.gov.in/sites/default/files/reports_and_publication/technical_paper/Them_paper_Gender.pdf
12. Daga S, Gupta G, Agarwal A, Chitlangia K and Varalakshmi, 2024 "Gender pay gap in India: Unskilled labors", Asian Journal of Management and Commerce, Volume 5, Issue 1, 268-273, <https://>

MILLETS FOR RESILIENT AGRICULTURE: A PATHWAY TO NUTRITIONAL SECURITY AND SUSTAINABILITY IN JHARKHAND'S FOOD SYSTEM

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Abstract: Jharkhand ranks second highest in the Multidimensional Poverty Index 2021, reflecting the state's profound struggle with extreme poverty. This dire circumstance has amplified dependence on the Public Distribution System (PDS) for essential food grains. Although PDS provisions of wheat and rice alleviate hunger partially, they fall short in addressing pressing nutritional challenges. The National Family Health Survey NFHS-5 reveals alarming rates of anemia among pregnant women (56.8%) and children under five (67.5%) in Jharkhand, underscoring the urgency for comprehensive intervention. In response to these challenges, millets emerge as a sustainable alternative. Endowed with resilience, low water requirements, and exceptional nutritional content, millets offer a holistic solution to hidden hunger and health-related issues. Moreover, their cultivation aligns with the state's agricultural landscape, dominated by rain-fed and small/marginal holdings. This paper analyzes secondary data sources such as NFHS-5 and APEDA reports and existing literature to provide insights into Jharkhand's current malnutrition scenario, compares millets' nutritional profiles with other PDS food grains, and evaluates millet types' area, production, and yield across districts of Jharkhand. The findings emphasize the imperative of reintegrating millets into local diets for a more sustainable and resilient food system. Highlighting millets' potential to enhance food and nutrition security, promote resource sustainability, and foster economic empowerment, the study aligns with the United Nations' declaration of 2023 as the International Year of Millets. It advocates for policy interventions to reverse the declining trend in millet consumption, leveraging the state's favorable climate, promoting crop diversification, and integrating millets into the PDS. These proposed strategies aim to address the dual crisis of vulnerability in agriculture and nutritional insecurity, paving the way for a more sustainable future in Jharkhand.

Keywords: Dual Crisis, Malnutrition, Millets, NFHS-5, Nutrition Security, PDS, Sustainability

Introduction: In Jharkhand, uncultivated foods and edible weeds have traditionally served as a vital and cost-effective source of nutrition for the majority of the population. However, the increasing popularity of commercialized foods and crops is diminishing the demand for these locally available resources. Compounding this issue is the alarming prevalence of anemia, with 56.8 percent of pregnant women and 67.5 percent of children under five years affected, as reported by the National Family Health Survey (NFHS-5) in 2019-21.

To address this dual crisis of biodiversity loss and nutritional insecurity, leveraging the traditional wisdom of local communities and

promoting indigenous crops, especially millets, is crucial. Jharkhand's favorable agro-climatic conditions make it ideal for millet cultivation, offering an opportunity to enhance food security and reduce greenhouse gas emissions associated with agriculture.

Millets, often referred to as "nutri-cereals" or "superfoods," stand out due to their exceptional nutritional content, resilience to climate variations, minimal resource demands, and remarkable contribution to sustainable agriculture. (IIMR, 2017) Their significance in promoting sustainable consumption and enhancing food and nutrition security cannot be overstated. Notably, in 2021, the worldwide millet production reached 30.1 million tonnes,

with India alone contributing a substantial 44 percent to the total output. In response to the detrimental effects of COVID-19 on global food security, India acknowledged the value of millets and actively promoted their use. Consequently, the Indian government put forth a proposal to designate 2023 as the International Year of Millets (IYM2023) to address this concern. Recognizing the importance of millets in providing health and nutritional benefits, the Food and Agriculture Organization and the United Nations endorsed the designation, aiming to increase awareness about the significance of millets during the International Year of Millets in 2023.

Given the prevalence of iron deficiency anaemia among children in Jharkhand, leveraging the high iron content (3.9mg per 100 gm) of locally abundant finger millets presents an effective strategy to combat this health issue. Furthermore, millets, including varieties like Sama, Kodo, and unpolished rice, offer a healthier and eco-friendly alternative to polished and fortified rice, addressing specific dietary needs with their low glycemic index and gluten-free nature. (Greenpeace India, 2023)

The incorporation of these locally grown foods not only addresses health concerns but also fosters a more sustainable and community-centric approach. Utilizing millets in daily meals promotes a more environmentally conscious and nutritious diet. This shift not only benefits the health of children but also supports local farmers, stimulates the regional economy, and strengthens community ties. Emphasizing the consumption of locally sourced produce aligns with cultural traditions and culinary practices deeply embedded in Jharkhand's heritage. By integrating millets and other locally grown foods, this dietary shift becomes a celebration of cultural identity, fostering a sense of pride and connection among children and communities in Jharkhand. Including millets and other locally grown foods in mid-day meals can significantly contribute to the nutritional security of school-going children. Moreover, adopting millets and

indigenous crops contributes to lower agriculture-based emissions and enhances resilience in the face of climate change, offering a sustainable and holistic approach to nutrition and agricultural practices in Jharkhand. With this background, the paper proposes to achieve the following objectives.

Objectives:

1. To study the status of malnutrition in Jharkhand.
2. To compare millets' nutritional profile with other PDS food grains.
3. To study millet types, area, production and yield in Jharkhand.
4. To study the role of millets in agricultural sustainability in Jharkhand.
5. To offer suggestions for millet promotion in the state.

Methodology: This study relies on secondary data sources. The data is predominantly sourced from government reports, such as the National Family Health Survey (NFHS-5) for health indicators and the Agricultural and Processed Food Products Export Development Authority (APEDA) for information on millet production area and yield in Jharkhand. The entire analytical process has been conducted using MS-Excel.

Findings: The findings have been categorized as per the objectives under four heads namely, Jharkhand's Current Malnutrition Status, the nutritional profile of millets vis-a-vis other food grains and millet type, area, production and yield in Jharkhand, millets for agricultural sustainability in Jharkhand.

Jharkhand's Current Malnutrition Status:

Jharkhand grapples with persistently high rates of malnutrition among children and widespread anaemia in adults, surpassing levels observed in neighboring states such as Odisha and Chhattisgarh. (Table 1)

Table 1: Nutritional Status of Children and Women (%) in Jharkhand and some selected states during the period 2019-21

State/India	Children under 5 years who are			Children aged 6-59 months who are anaemic	Women (15-49 years) who are anaemic	Women whose Body Mass Index (BMI) is below normal
	Underweight	Wasted	Stunted			
Jharkhand	39.4	22.4	39.6	67.5	65.3	26.2
Uttar Pradesh	32.1	17.3	39.7	66.4	50.4	19.0
Madhya Pradesh	33.0	19.0	35.7	72.7	54.7	23.0
Odisha	29.7	18.1	31.0	47.2	64.3	20.8
Chattisgarh	31.3	18.9	34.6	67.2	60.8	23.1
Rajasthan	27.6	16.8	31.8	71.5	54.4	19.6
Assam	32.8	21.7	35.3	68.4	65.9	17.6
Bihar	41.0	22.9	42.9	69.4	63.5	25.6
India	32.1	19.3	35.5	67.1	57.0	18.7

Source: NFHS-5 (2019-21)

Table 2: Nutritional Status of Children under Five Years in Jharkhand and India for the period 2019-21

REGION		STUNTED (height for age) (%)	WASTED (weight-for-height) (%)	UNDERWEIGHT (weight for age) (%)
Jharkhand	Urban	26.8	23.0	30.0
	Rural	42.3	22.3	41.4
	Total	39.6	22.4	39.4
All-India	Urban	30.1	18.5	27.3
	Rural	37.3	19.5	33.8
	Total	35.5	19.3	32.1

Source: NFHS-5 (2019-21)

The prevalence of chronic malnutrition among children under the age of five in Jharkhand is particularly alarming, with nearly 40 percent experiencing stunting, approximately 39 percent being underweight, and 22 percent suffering from wasting, according to data from 2019-21 (NFHS-5). These figures significantly

exceed the national averages. (Table 2) Anaemia poses a significant challenge for both children and women in Jharkhand. Among children aged 6-59 months, the prevalence was notably high, reaching 69 percent in 2015-16 (NFHS-4) and slightly decreasing to 67.5 percent in 2019-21 (NFHS-5). (Table 3)

Table 3: Incidence of Anaemia among Women (15-49 years) in Jharkhand and India for the period 2019-21

REGION		All women aged 15-49 years who are anaemic (%)	Non-pregnant women aged 15-49 years who are anaemic (<12.0 g/dl) (%)	Pregnant women aged 15-49 years who are anaemic (<11.0 g/dl) (%)
Jharkhand	Urban	61.1	61.6	45.5
	Rural	66.7	67.0	59.2
	Total	65.3	65.7	56.8
All-India	Urban	53.8	54.1	45.7
	Rural	58.5	58.7	54.3
	Total	57.0	57.2	52.2

Source: NFHS-5 (2019-21)

Women in the reproductive age group (15-49 years) in Jharkhand also grapple with

substantial 67.6g per 100g. Millets also contain lecithin, a compound known for fortifying the

Grains	Energy (kcal)	Protein (g)	Carbohydrate (g)	Fat (g)	Dietary Fiber(g)	Calcium (mg)		Iron (mg)
Sorghum	334	10.4	67.6	1.9	10.2	27		5.4
Pearl Millet	363	11.6	61.7	5	11.4	27		16.9
Finger Millet	320	7.3	66.8	1.3	11.1	344		3.9
Little Millet	329	8.7	65.5	5.3	6.3	17		9.3
Foxtail Millet	473	12.3	60.9	4.0	8.0	31		2.8
Kodo Millet	309	8.3	65.9	3.6	9	27		0.5
Other Cereals								
Maize	334	11.5	64.7	3.6	12.2	8.9		2.7
Wheat	321	11.8	64.7	1.5	11.2	39		5.3
Rice	353	6.8	74.8	0.5	4.4	10		0.7

Source: Indian Food Composition Tables and nutritive value of Indian foods

widespread anaemia, with 65.3 percent affected as of 2019-21. Although the incidence of anaemia is comparatively lower (56.8 percent) among pregnant women in the same age group, the issue remains a significant concern. Moreover, the urban areas exhibit a slightly lower incidence of anaemia compared to rural areas; however, the rates remain alarmingly high. (NFHS-5)

Millets: A Pathway to Nutritional Security

Millet grains stand out as a powerhouse of nutrition, comprising of dietary components essential for a balanced diet. These grains are abundant in dietary fiber, carbohydrates, proteins, as well as a spectrum of vital vitamins and minerals, including iron, magnesium, phosphorus, zinc. Among millet varieties, foxtail millets lead with an impressive protein content of 12.3g per 100g. Finger millets, indigenous to the region, are noteworthy for their substantial calcium content, boasting 344mg per 100g. Pearl millets, on the other hand, take the lead in iron content, providing a remarkable 16.9mg per 100g. (Table 4)

By substituting just 100 grams of daily cereal intake, such as rice, with finger millet (ragi), there's a remarkable 50% increase in daily iron intake and an impressive 350% surge in calcium intake. Given the widespread occurrence of iron deficiency anaemia among Sorghum ranks second in carbohydrate content among cereals, following rice, with a

nervous system. Furthermore, these grains serve as an excellent reservoir of dietary fiber, contributing to favorable outcomes such as promoting regular bowel movements and effectively lowering both blood cholesterol and sugar levels, thereby enhancing overall health. (Dupdal et al.,2020) In terms of dietary fiber, pearl millets secure the second position after maize, offering a notable 11.4g per 100g. This diverse nutritional profile highlights the unique strengths of each millet variety and their potential contributions to a well-balanced diet.

Millets: a promising solution for Anaemia

In cereal-dominated diets, the absorption of iron is hindered by the presence of phytate in cereal grains, which tightly binds to dietary iron, impeding its absorption. Millets emerge as a valuable solution to enhance dietary iron density, providing a holistic nutritional profile beyond a singular nutrient. (Kurpad and Reddy, 2022) children in Jharkhand, the indigenous finger millets, with their notable iron content of 3.9 mg per 100 grams, present a promising solution to combat this health issue. The locally available finger millets can play a crucial role in addressing iron deficiency in the region.

Moreover, millets possess a low glycemic index and are gluten-free, rendering them well-suited for children with specific dietary requirements. (Dayakar Rao et al., 2017) These attributes not only contribute to the nutritional value of millets but also make them an ideal dietary

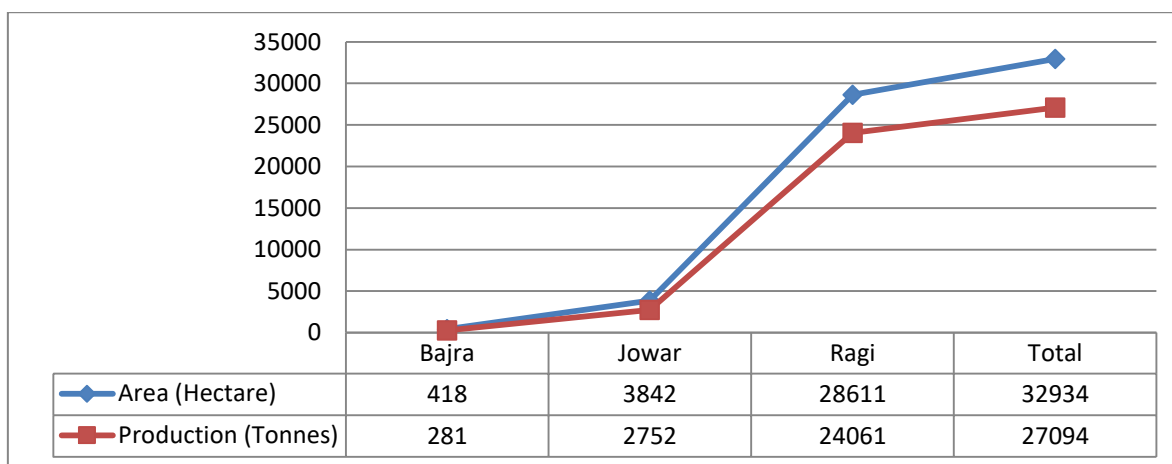
choice for addressing the unique needs of children, particularly in regions like Jharkhand where iron deficiency is a prevalent concern.

Potential for Millet Cultivation in Jharkhand

Agriculture is the primary economic activity of 80 per cent rural population of Jharkhand. The state's agricultural landscape is marked by its reliance on nature, limited investments, low

productivity, predominant cultivation of paddy through mono-cropping, insufficient irrigation infrastructure, and the prevalence of small and marginal land holdings. The vulnerability of agriculture to rainfall fluctuations is evident, with 92% of the total cultivated area lacking irrigation facilities. Despite the state's abundant mineral and forest resources, 80% of its populace resides in villages, relying predominantly on agriculture and allied activities for their sustenance. (APEDA, 2022)

Figure 1: Area and Production of Millets cultivated during Kharif season in 2019-20

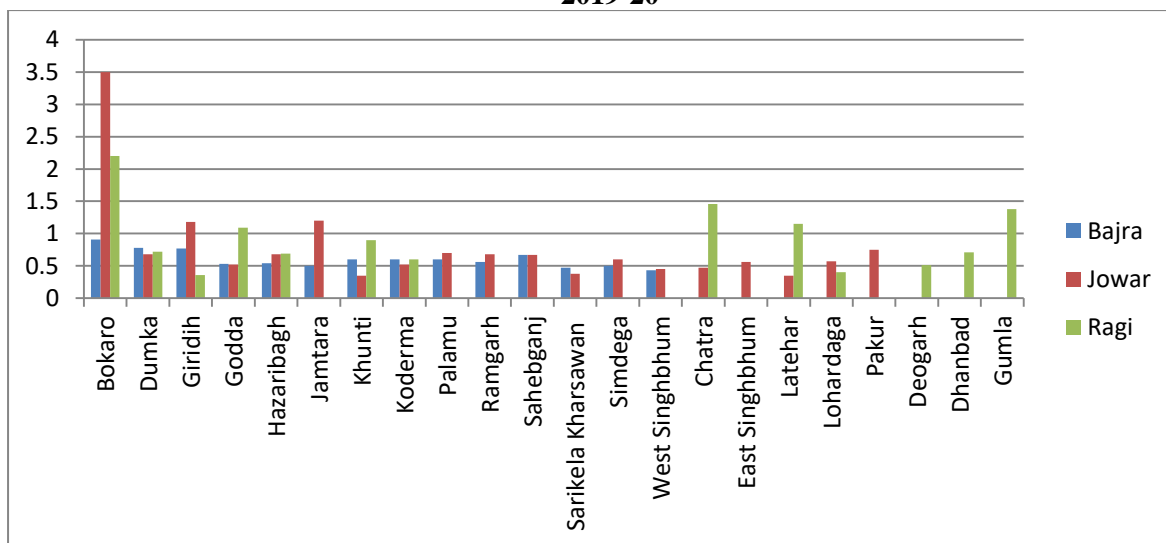


Source: APEDA, 2022

During the Kharif season of 2019-20 in Jharkhand, Ragi (finger millet) exhibited a growth with a yield of 0.84 tonnes per hectare, Jowar (Sorghum) recorded a yield of 0.72

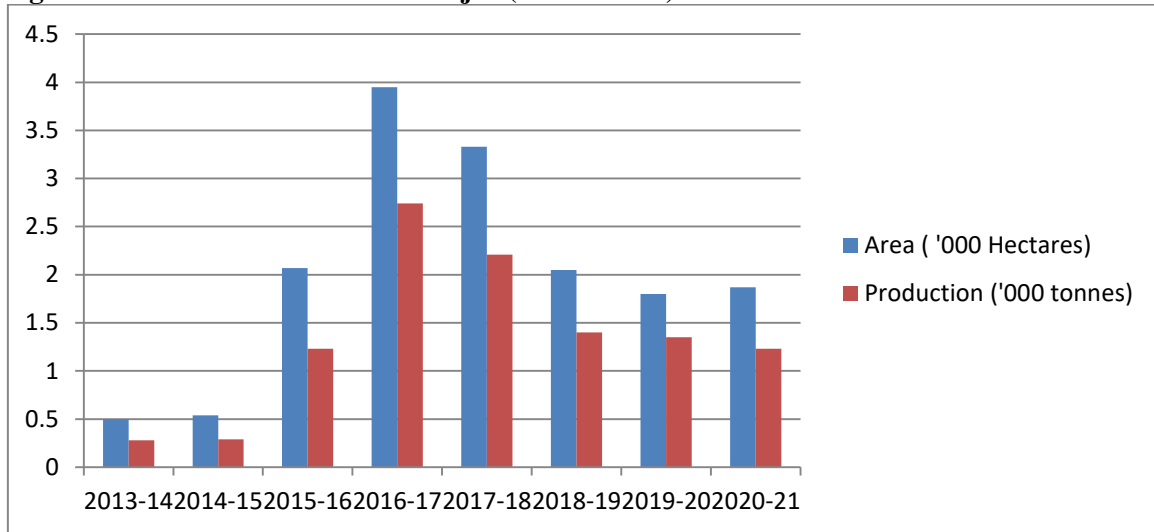
tonnes per hectare, and Bajra (Pearl Millet) demonstrated a yield of 0.67 tonnes per hectare. (Figure 1)

Figure 2: Yield of Millets across different districts of Jharkhand during the Kharif Season in 2019-20



Source: APEDA, 2022

Figure 3: Area and Production of Bajra (Pearl Millet) in Jharkhand from 2013-14 to 2020-21

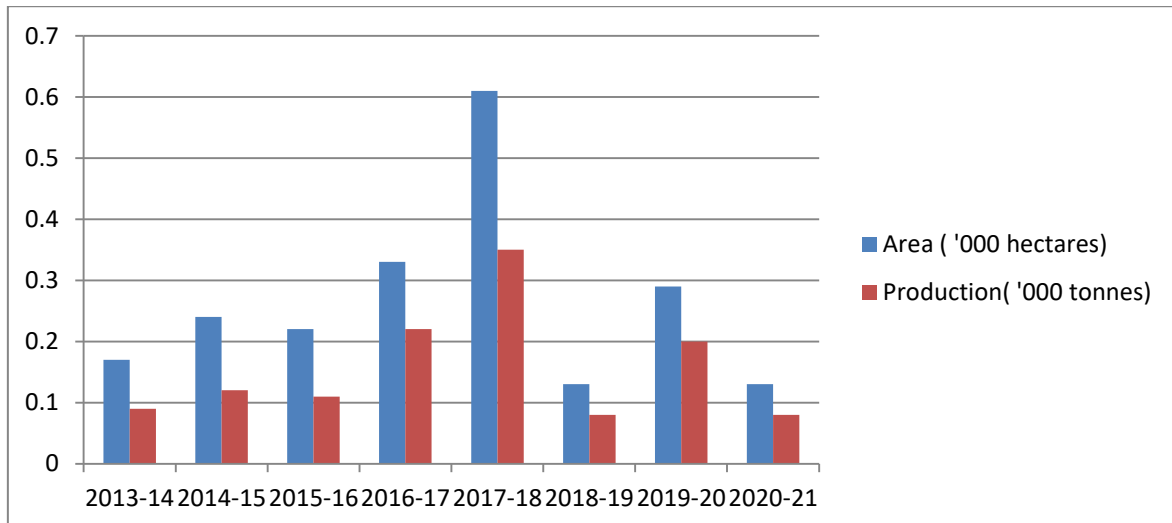


Source: Press Release 2023, Ministry of Consumer Affairs, Food and Public Distribution

The area dedicated to Bajra cultivation has fluctuated, ranging from 0.5 thousand hectares in 2013-14 to 3.95 thousand hectares in 2016-17. Bajra production has varied, with the highest production of 2.74 million tonnes in

2016-17 and the lowest at 1.23 million tonnes in both 2015-16 and 2020-21. There is a general trend of increased production from 2013-14 to 2016-17, followed by a decline in subsequent years. (Figure 3)

Figure 4: Area and Production of Jowar (Sorghum) in Jharkhand from 2013-14 to 2020-21

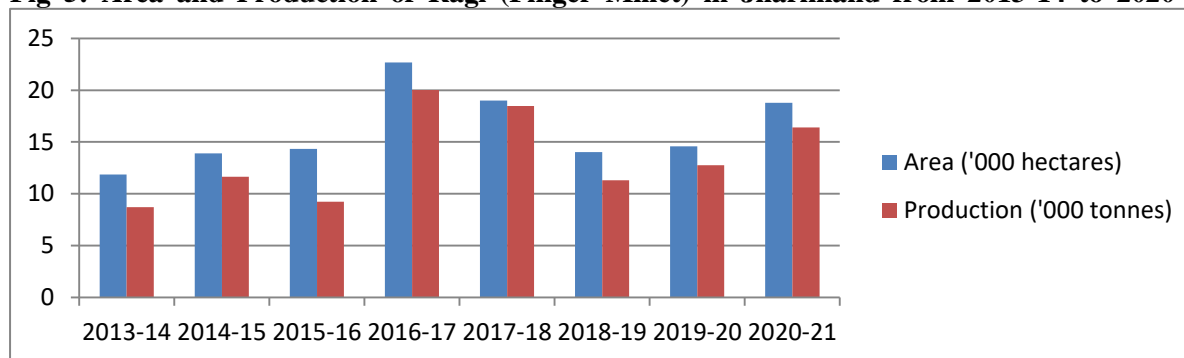


Source: Press Release 2023, Ministry of Consumer Affairs, Food and Public Distribution

The area under Jowar cultivation has experienced fluctuations, ranging from 0.13 '000 hectares in 2018-19 to 0.61 '000 hectares in 2017-18. Jowar production has varied, with the highest production of 0.35 '000 tonnes in

2017-18 and the lowest at 0.08 '000 tonnes in multiple years (2018-19 and 2020-21). There is a general trend of increased production and area from 2013-14 to 2017-18, followed by a decline in subsequent years.

Fig 5: Area and Production of Ragi (Finger Millet) in Jharkhand from 2013-14 to 2020-21

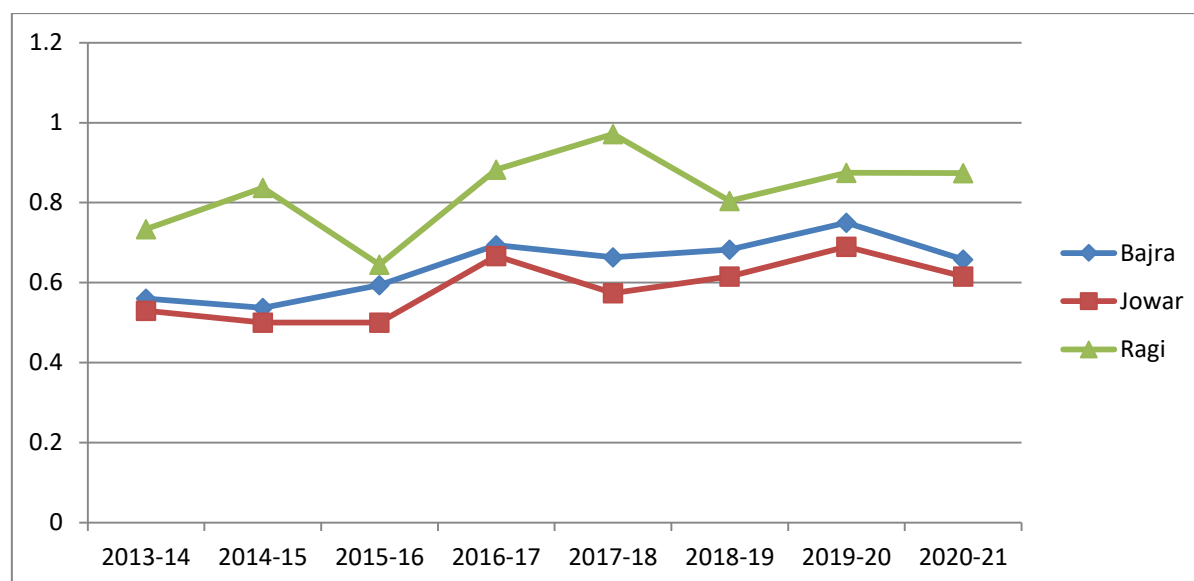


Source: Press Release 2023, Ministry of Consumer Affairs, Food and Public Distribution

The area under Ragi cultivation has shown an increasing trend, ranging from 11.87 '000 hectares in 2013-14 to 22.69 '000 hectares in 2016-17. Ragi production has also exhibited a general upward trend, with the highest

production of 20.03 '000 tonnes in 2016-17. Subsequently, both area and production experienced fluctuations, with the lowest area at 13.91 '000 hectares in 2014-15 and the lowest production at 9.24 '000 tonnes in 2015-16.

Figure 6: Yield of Bajra, Jowar and Ragi in Jharkhand from 2013-14 to 2020-21



Source: Press Release 2023, Ministry of Consumer Affairs, Food and Public Distribution

The fiscal year, 2022-23, anticipate a production volume of 9,790 tonnes. This data underscores the state's efforts to promote and sustain the cultivation of Ragi as part of its agricultural strategy. The yield of Bajra has varied over the years, with the highest yield in 2019-20 (0.75) and the lowest in 2014-15 (0.537). The overall trend shows fluctuations, with an increasing trend from 2013-14 to 2019-20, followed by a decrease in 2020-21. Jowar yields have also shown variability, with the highest yield in 2019-20 (0.689) and the lowest

in 2014-15 (0.5). There is a fluctuating pattern over the years, and the yields have not followed a consistent upward or downward trend. Ragi yields exhibit variations, with the highest yield in 2016-17 (0.883) and the lowest in 2015-16 (0.645). Similar to Bajra and Jowar, the overall trend for Ragi shows fluctuations without a clear upward or downward trajectory.

Ragi, or Finger Millet, cultivation in the state is currently cultivated in a scattered way. Recognizing the nutritional benefits of millets,

the State Government has incorporated them into its Livelihood Policy, administered by the Department of Panchayat. Millets, particularly Ragi, are being gradually integrated into mid-day meals for school children and healthcare facilities due to their nutraceutical properties. Data from the Ministry of Commerce and Industry's Agricultural and Processed Food Products Export Development Authority reveals the evolving production landscape. In the fiscal year 2020-21, Jharkhand yielded 16,400 tonnes of Finger Millets, a figure that saw a modest increase to 16,700 tonnes in 2021-22.

Millets for Agricultural Sustainability in Jharkhand

The state's agricultural landscape is marked by its reliance on nature, limited investments, low productivity, predominant cultivation of paddy through mono-cropping, insufficient irrigation infrastructure, and the prevalence of small and marginal land holdings. The vulnerability of agriculture to rainfall fluctuations is evident, with 92% of the total cultivated area lacking irrigation facilities. Rainfall in Jharkhand ranges between 1000mm to 1500 mm. Jharkhand is characterized by humid subtropical, dry winter climate with an average annual temperature of 26.78°C (80.2°F) which is 0.81% higher than India's averages. (SAMETI Jharkhand, 2022) The successful sprouting and germination of millet seeds necessitate a warm, temperate climate to maintain a cozy soil temperature, as these seeds are vulnerable to damage from cold weather and frosts. The optimal temperature range for sustainable millet growth is between 20 and 30 degrees Celsius. Millets, known for their short growing season, thrive in areas where other crops may struggle. Millets are known for their resilience to adverse environmental conditions, including drought, high temperatures, and low soil fertility, making them a sustainable choice for agricultural systems in Jharkhand.

Climate Resilience

Millets are climate-resilient crops, requiring minimal water and exhibiting tolerance to heat and drought, making them well-suited for cultivation in arid and semi-arid regions. Millet

cultivation enhances agroecosystem resilience, conserving soil fertility, reducing water consumption, and mitigating the environmental impact of agriculture.

Biodiversity Conservation and Reduced Environmental Impact

The cultivation of diverse millet varieties contributes to the conservation of agricultural biodiversity, preserving traditional knowledge and genetic resources. Millet farming techniques offer a reduced dependence on synthetic fertilizers and pesticides, promoting environmentally friendly agricultural practices.

Water-Efficient Crops-

Millets are inherently water-efficient crops, requiring minimal irrigation and demonstrating resilience to water scarcity, contributing to sustainable water management in agricultural systems. One notable example is Sorghum, which can thrive in drought conditions due to its exceptional water holding capacity. The waxy coatings on its stems and leaves contribute to efficient water utilization, making it resilient in arid environments.

Most millets exhibit adaptability to limited moisture conditions, showcasing efficient water utilization abilities. In India, approximately eight types of millets are cultivated under rain-fed conditions, requiring minimal or no irrigation. For instance, Jowar is a rain-fed crop with an annual rainfall ranging from 30 to 100cm, making it well-suited for areas with limited irrigation needs. Minor millets typically thrive with less than 35cm of rainfall, while certain major millets require a minimum of 40cm of rainfall for a successful harvest. This highlights the diverse moisture requirements among millet varieties, making them adaptable to varying climatic conditions.

Soil Health Conservation through Crop Rotation and Diversification

The cultivation of millets promotes soil health and conservation, reducing soil erosion, enhancing organic matter content, and fostering

long-term agricultural sustainability. Integrating millets into crop rotation and diversification strategies improves soil health, pest management, and overall farm productivity, contributing to sustainable agricultural systems.

Suitable for Smallholder Farming Systems

Millets are well-suited for smallholder farming systems, offering low-input requirements, minimal resource demands, and economic opportunities for resource-constrained farmers.

Community Resilience and Empowerment of Women Farmers

The cultivation of millets fosters community resilience, supporting food sovereignty, local food production, and the preservation of traditional agricultural practices. Women play a significant role in millet cultivation, contributing to household food security, income generation, and the conservation of agricultural knowledge.

Market Access and Value Chains

Enhancing market access for millets creates economic opportunities for smallholder farmers, strengthening local economies and contributing to rural development. Developing millet-based value-added products, such as flour, snacks, and ready-to-eat meals, adds value to the crop, diversifies income sources, and expands market potential. Millet value chains contribute to supply chain resilience, offering sustainable and nutritious food options, especially in regions prone to food insecurity and climate-related shocks.

Recommendations for Millet Promotion:

Mandatory Inclusion in Mid-Day Meals and PDS: Develop and enforce guidelines mandating the inclusion of millets and local foods in mid-day meals and public distribution systems accompanied by incentives to encourage widespread adoption. (Prakash, 2018)

Indigenous Varieties under MSP: Initiate the procurement of indigenous millet varieties, unpolished rice, and pulses under the Minimum Support Price (MSP) program. This strategic

step aims to incentivize farmers to expand their cultivation of millets.

Enabling Ecosystem for Farmers: Establish a supportive ecosystem for farmers, offering access to credit, technical assistance, and market linkages to promote increased production of millets and local foods.

Panchayat-Level Support: Provide pre- and post-harvest support at the Panchayat level, encompassing the availability of quality seeds for indigenous millet varieties, pulses, and rice. Additionally, the establishment of millet processing units is essential.

Rejuvenation of Local Knowledge Systems: Undertake efforts to rejuvenate local knowledge systems related to millet production and post-production handling. With a focus on the lost skills over the past 60 to 70 years, this initiative aims to empower farmers with technical expertise.

Women-Led FPOs: Recognize the significant role played by women in millet production and processing by creating and supporting Women-led Farmer-Producer Organisations (FPOs). This ensures that their contributions are duly appreciated and remunerated.

Infrastructure Development: Strengthen the supply chain and storage facilities for millets and locally grown foods through strategic infrastructural investments. Collaborations between government agencies, NGOs, and the private sector can enhance logistics and distribution efficiency.

Culinary Interventions: Introduce millets and local ingredients into mid-day meals by leveraging culinary creativity. Rejuvenate traditional recipes while encouraging collaboration between indigenous food experts, chefs, and nutritionists to develop nutritious and appealing recipes for children.

Conclusion: The stark reality of extreme poverty and nutritional challenges faced by Jharkhand, as evidenced by its high ranking in the Multidimensional Poverty Index 2021 and alarming rates of anemia among vulnerable populations, necessitates urgent and comprehensive interventions. This paper has

highlighted the potential of millets as a sustainable alternative to alleviate hidden hunger and address health-related issues. The exceptional resilience, low water requirements, and robust nutritional content of millets position them as a holistic solution for the state's unique agricultural landscape, predominantly characterized by rain-fed and small/marginal holdings. The findings underscore the imperative of reintegrating millets into local diets, not only to enhance food and nutrition security but also to promote resource sustainability and foster economic empowerment. Aligning with the United Nations' declaration of 2023 as the International Year of Millets, this study advocates for policy interventions aimed at reversing the declining trend in millet consumption. Leveraging the state's favorable climate, promoting crop diversification, and strategically integrating millets into the Public Distribution System are proposed strategies that address both the vulnerability in agriculture and the issue of nutritional insecurity. In essence, the recommended interventions pave the way for a more sustainable future in Jharkhand. By recognizing the multifaceted benefits of millets, ranging from improved health outcomes to economic empowerment, policymakers can contribute to building a resilient and inclusive food system. The comprehensive approach advocated in this study seeks to address the dual crisis faced by the state, fostering hope for a healthier, more prosperous, and sustainable Jharkhand.

References:

1. Dayakar Rao, B., Bhaskarachary, K., Arlene Christina, G. D., Sudha Devi, G., Vilas, A. Tonapi. (2017). Nutritional and Health benefits of Millets. ICAR_Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, PP 112. ISBN: 81-89335-68-5.
2. Department of Agriculture, Animal Husbandry & Cooperative, Government of Jharkhand <http://sameti.org/>
3. Dupdal Ravi.,Patil S.L., Naik B.S., Ramesha M. N., Prabhavati M., and Ravi K. N. (2020). Millets: A Solution to Food and Nutritional Security in India. *Biotica Research Today* 2(9): 901-904.
4. Greenpeace India. (2023) A Game Changer for Nutritional Security and Climate Resilience in Jharkhand. Greenpeace India. Retrieved from <https://www.greenpeace.org/india/en/publication/15779/a-game-changer-for-nutritional-security-and-climate-resilience-in-jharkhand/>
5. ICAR_Indian Institute of Millets Research (IIMR). (2017). Nutritional and Health Benefits of Millets (2nd ed.). Rajendranagar, Hyderabad: ICAR_Indian Institute of Millets Research. ISBN: 81-89335-68-5.
6. Kurpad, A., & Reddy, R. (2022, April 16). A better millet for potential iron deficiency: Improving natural iron absorption from iron-rich grains is a better strategy than chemical iron fortification of cereals. *The Hindu*. <https://www.thehindu.com/sci-tech/health/a-better-millet-for-potential-iron-deficiency/article65268879.ece>
7. Ministry of Commerce and Industry GOI (2022), Agriculture and Processed Food Products Export Development Authority https://apeda.gov.in/milletportal/files/Jharkhand_Millet_Value_Added_Products_Catalogue.pdf
8. Ministry of Consumer Affairs, Food and Public Distribution (2023), PIB Press Release 2023 <https://pib.gov.in/PressReleasePage.aspx?PRID=1907194>
9. Ministry of Health and Family Welfare (2021), National Family Health Survey-5(2019-2021) https://main.mohfw.gov.in/sites/default/files/NFHS-5_Phase-II_0.pdf
10. Prakash, V. (2018). Status of Ragi, Mahua and Maize in Jharkhand for PDS. *International Journal of Advanced Education and Research*, 3(4), 34-41. <https://www.alleducationjournal.com/volume3/issue4>

IMPACT OF COVID-19 ON GIRLS' EDUCATION: A CASE STUDY OF BAGHMARA BLOCK OF DHANBAD, JHARKHAND

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Abstract: During the COVID-19 pandemic, schools, colleges, and other educational institutions in India were closed to protect students from the virus and prevent its spread. This closure significantly impacted millions of students, severely affecting the education system for over a year. Among all the states in India, Jharkhand experienced the most prolonged duration of school closures. As a result, students faced mental stress, knowledge gaps, and other related issues. Providing education, especially to female students, became a challenge due to technical and economic barriers and family restrictions. This study focuses on the technical problems faced by students, domestic violence experienced at home, changes in study time duration, and other related issues. The research was conducted in the Baghmara block of Dhanbad district in Jharkhand, and interviews were conducted with girl students from grade 6 to 10. The data was collected through a field survey using the interview method with stratified random sampling.

The findings revealed that 82 percent of the students had the option to attend online classes conducted by their schools. However, 88 percent of them did not have access to a device to attend these classes. Consequently, many students had to rely on their elder brothers or fathers for access to a suitable device, which was not always available. Furthermore, the study time of girl students significantly declined during the pandemic. Some students even stopped studying altogether, as they were required to dedicate 6 to 7 hours a day to household chores, with no defined upper limit. This situation often led to arguments and conflicts at home. This paper aims to explore the challenges faced by girl students in accessing education during the COVID-19 pandemic. It will also examine the effects of the pandemic on their education and the domestic issues they encountered, including domestic violence and changes in study time.

Introduction- Corona virus disease (COVID-19) is an infectious disease caused by SARS-CoV-2 virus. It took the form of pandemic, affecting almost every country and no region was spared. This led to closure of schools, colleges, and other educational institutions and offices. Governments throughout the world imposed lockdown to stop spread of disease among people because of close contact. Due to this, the pandemic caused unprecedented disruptions in the global education system, and India was no exception. In March 2020, the country went into a nationwide lockdown, leading to the closure of schools and other educational institutions. This sudden shutdown had severe consequences for the Indian education sector, forcing an abrupt transition

from traditional classroom-based learning to digital education. While online learning emerged as an alternative, it posed significant challenges for students, teachers, and parents alike. The shift to online education was uncharted territory for most stakeholders. Many students and teachers lacked prior experience with digital learning platforms, making it difficult to adapt to the new mode of instruction. Parents, too, faced difficulties in supporting their children's education due to a lack of technological awareness and resources.

Among all Indian states, Jharkhand witnessed the longest school closures. Consequently, students faced mental stress, learning gaps, and various related challenges. Female students

encountered even greater difficulties in continuing their education due to technological and financial constraints, as well as family restrictions. Many families did not have access to smartphones. Additionally, students living in rural areas either had no network access or resided in low-network zones. In cases where online classes were accessible, male students were often given priority over female students. Additionally, disparities in access to digital devices and stable internet connectivity further widened the educational divide. The government also faced significant challenges in implementing online education effectively. With no prior framework in place, ensuring uninterrupted learning for millions of students became a daunting task. Many students, especially girls from underprivileged backgrounds, were deprived of quality education due to technological and socio-economic barriers. The inability to provide proper educational support during the lockdown not only led to learning losses but also increased the risk of school dropouts among female students. This study delves into the impact of the COVID-19 pandemic on girls' education in the Baghmara block of Dhanbad district in Jharkhand state. It highlights the challenges faced by female students, including limited access to online learning, increased domestic responsibilities, and educational setbacks. By understanding these issues, the research aims to propose viable solutions to bridge the learning gap and ensure a more inclusive and resilient education system for girls in post-pandemic India.

Literature Review—Following the emergence of COVID-19 in China, the nation alerted the global community to remain cautious. The virus rapidly spread worldwide, impacting nearly every country and region. As a result, schools, universities, and workplaces shut down, with governments enforcing lockdowns to minimize human contact. Secondary schools, in particular, were closed to safeguard students from the risks of COVID-19 transmission, given that these environments often involve large groups of students in confined spaces, heightening the potential for disease spread (Sintema, 2020)¹. India mandated the closure of all schools, colleges, and educational institutions on March 16, 2020. This shutdown

disrupted education for students at all levels, from primary to higher education. NESCO reported that around 32 crore students, including both school and college learners, were impacted in India. Despite government measures like social distancing, mask requirements, sanitizer use, and a transition to online learning to curb the COVID-19 crisis, the education system and other social institutions experienced significant setbacks, with the sector remaining largely inactive for over a year (Khan, 2020)². The COVID-19 pandemic and the subsequent lockdowns have devastated education systems worldwide, affecting approximately 1.6 billion students across various levels of educational institutions in more than 200 countries (Das, 2021)³. The pandemic triggered an extended shutdown of educational institutions, halting students' access to learning. On July 14, 2020, online class guidelines were rolled out, prompting schools to adopt virtual classrooms. This shift introduced challenges like limited smartphone access, spotty or no internet, student disengagement, and unethical behavior, leading to subpar learning results. Typically, education depended on in-person sessions—from pre-primary through post-secondary—in classrooms, labs, or studios, but these were swiftly replaced by remote learning. Teachers had minimal preparation time and unclear instructions, making the switch to online teaching a daunting task for institutions and creating significant hurdles for both educators and students (Burke, 2020)⁴. UNESCO⁵, along with UNICEF, released a report examining the impact of COVID-19 on India's education sector and the responses to it. The report highlighted that school closures affected millions of students from pre-primary to secondary levels throughout the country. In April 2020, the Ministry of Education introduced an Alternative Academic Calendar, a collection of documents designed to guide educators in maintaining curriculum continuity through both online and offline activities. These documents were tailored individually for primary, upper primary, secondary, and higher secondary education levels.

According to the report published by Oxfam India⁶, over 80 percent of students in government schools across Odisha, Bihar,

Jharkhand, Chhattisgarh, and Uttar Pradesh received no educational materials during the lockdown, largely due to families lacking digital devices and e-learning resources. In households with digital access, WhatsApp was the primary tool for lesson delivery in both public and private schools (used by about 75 percent), followed by phone calls between teachers and students (around 38 percent). However, more than 75 percent of parents couldn't support WhatsApp-based lessons, either because they couldn't afford it or faced unreliable or no internet connectivity.

In India, the IT sector increasingly pivoted toward education, with over 4,450 EdTech startups emerging between January 2014 and September 2019. Though digital adoption boosted the sector, its growth remained gradual before the COVID-19 pandemic. The nationwide closure of physical educational institutions during the outbreak, with no clear reopening timeline, pushed students toward online learning. This spurred the rise of additional EdTech firms and attracted millions of new users. Companies like Vedantu, Byju's (tutoring), Toppr (learning), and Unacademy (video

lessons) experienced significant traffic surges during the lockdown, with Byju's gaining 7.5 million new users and Toppr doubling its paid user base (Tata Elxsi, 2010)⁷.

In Jharkhand, only 35 percent of students accessed online educational content delivered via WhatsApp, radio, and Doordarshan, despite it being shared across roughly 47,000 WhatsApp groups for over a year. Although about 37 lakh students were enrolled in classes 1 to 8, just 13 lakh benefited from these efforts. A village-level survey revealed that, after online learning, most primary school children struggled to read even basic sentences (Angad, 2021)⁸. Jharkhand state had the world record of the longest closure of schools due to the COVID pandemic. He said that life would become normal after COVID pandemic for the adults but children would have to pay the price for the entire life. Most of the school students were abandoned even by the virtually schooling system for the two years. So, the students and their parents demanded reopening of the schools (Jean Dreze, 2022)⁹.

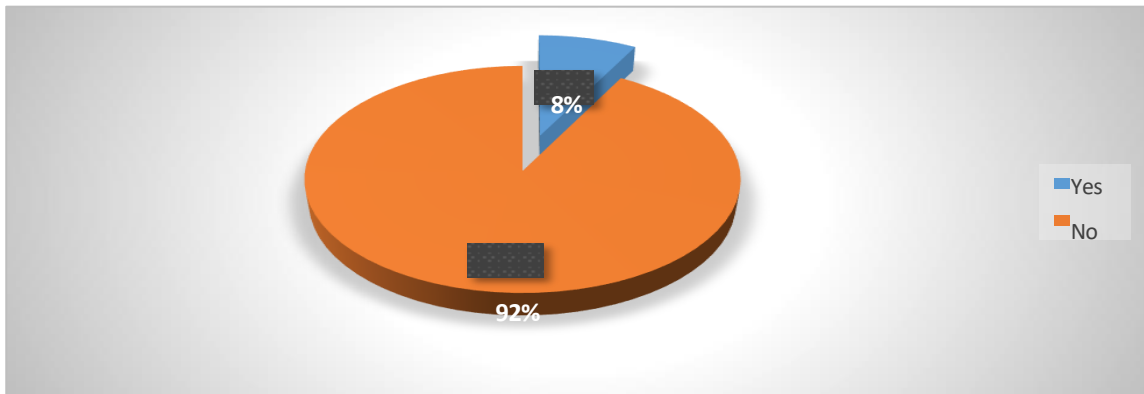
The COVID-19 school closures impacted 320 million children in India, prompting a rapid transition from offline to online education. This shift overlooked India's significant digital divide, driven by gender and socioeconomic gaps. Female students were given less preference than male students at home. Teachers were also unprepared for the virtual mode of education. They also encountered a lack of internet and smartphones. They switched from traditional to online teaching modes which was highly challenging Sahni (2020)¹⁰.

Objective

1. To assess the availability of necessary devices for attending online classes.
2. To determine the total study time spent by female students daily.
3. To analyze the amount of time female students spent on household chores.

Research Methodology- The research employs a mixed-methods approach, combining both quantitative and qualitative data collection methods. This is a descriptive study based on primary data obtained through a structured questionnaire. The total sample size consists of 50 school-going female students from grades 6 to 10.

Result and Discussion- Baghmara block of Dhanbad district in Jharkhand has three villages—Parjoria, Nagda, and Luttu Tand. The villagers had a mixed attitude towards education, showing enthusiasm for primary and secondary education but indifference towards higher education. Parjoria, with a population of 1,300, had one primary school and a secondary school which was 2 km away, while higher secondary education was available 6-7 km away. Nagda village had a population of 1,300. It had only a primary school, requiring students to travel 5-6 km for further studies. Luttu Tand, with a population of 500, had no school, forcing students to travel 5-6 km. Most of the population in this block belong to the Other Backward Classes (OBC).

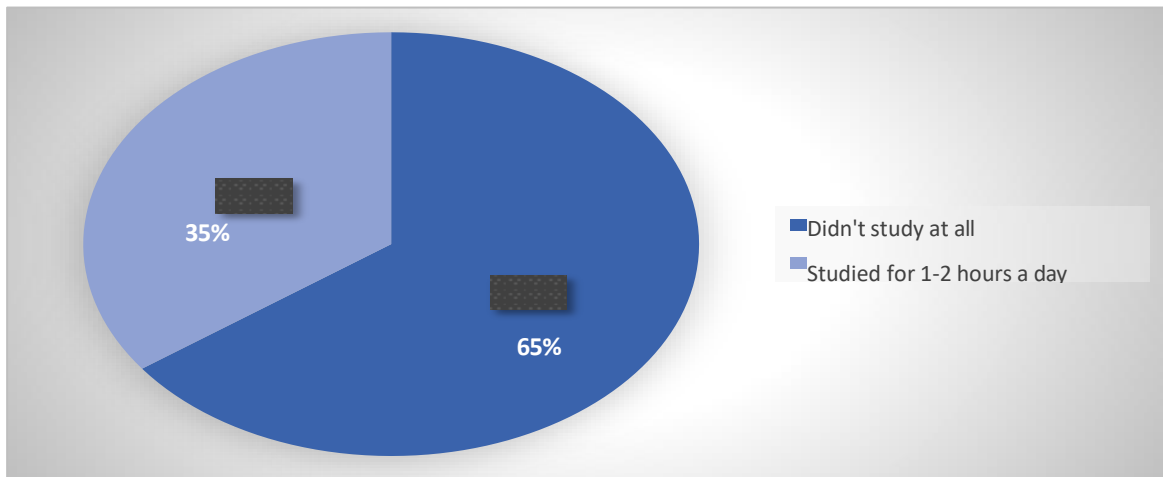


Graph 1: Availability of electronic devices

It was found that 92% of female students lacked access to online classes. The data suggests that nearly all female students in Baghmara block of Dhanbad district lacked access to online classes. This was likely due to a combination of economic constraints, lack of device ownership, and poor internet

infrastructure. This would have led to significant learning losses, potentially increasing dropout rates and widening gender disparities in education. This also leans toward issue exacerbating gender and educational inequalities, particularly in rural areas.

Graph 2: Number of hours studied in a day



The graph explains that 65% of students did not study at all which suggests that nearly two-thirds of female students in Baghmara block did not engage in any studying during the lockdown. As the schools were shut down and most of the girl students did not have any appropriate electronic device at their home to attend their online classes or to study from any other online source, they did not study at all. Also, the female students found it difficult to understand their textbooks themselves. They

had no one in their families who could help them in understanding their syllabus. The 35% of the female students studied for an average of 1-2 hours per day. This indicates minimal engagement, which was insufficient for maintaining educational progress. The data shows that there was an increased learning gap, potentially widening gender disparities in education.

It was also found from the study that 94% of female students spent a minimum of 6-7 hours

daily on household chores. Most of them also helped their parents in farming. Some were engaged in these activities from 7 hours a day to 14 hours a day. Also, many students were observed forgetting previously learned lessons. This was due to learning gap which was due to not studying at home.

Conclusion

A significant number of school-going female students lacked access to essential devices required for studying. Only 8% of them regularly attended online classes. They were largely dependent on other family members for access to digital learning tools. Among them, only 35% maintained a study routine at home, while the rest either did not study at all or had inconsistent study habits. Many students also displayed signs of learning loss, indicating an increasing knowledge gap.

These students spent at least 6-7 hours a day performing household chores, with some also engaged in agricultural work. The time dedicated to domestic duties was not fixed, often leaving little to no opportunity for academic pursuits. In some cases, female students even faced domestic violence at home.

Suggestions:

1. Female students should be adequately prepared for online education in the future. Ensuring the availability of appropriate devices and internet access is crucial.
2. Parents whose children have dropped out of school should receive counseling to encourage them to allow their children to resume their education.
3. Measures should be taken to reduce the burden of household chores on female students, allowing them more time to focus on their studies.
4. Awareness programs should be introduced to highlight the importance of female education and reduce gender-based educational disparities.
5. Government and non-governmental organizations should work towards improving digital infrastructure in rural areas to make online education more accessible.

By implementing these measures, female students can be provided with better opportunities to continue their education, bridge learning gaps, and build a more promising future.

References

1. Sintema E. J. (2020), 'Effect of COVID-19 on The Performance of Grade 12 Students: Implication for STEM Education', EURASIA Journal of Mathematics, science and Technology Education, 2020, 16(7), em1851, <https://doi.org/10.29333/ejmste/7893>
2. Khan H. N. (2020), 'Covid-19 and its impact on Educational System', New Horizons in Commerce, Theme 2-Coronavirus, the management of epidemics and the broader impact on society, Seshadripuram Educational Trust, 2020, pp 02-07, ISBN: 978-93-5346-166-9, https://www.academia.edu/44571220/The_me_2_Coronavirus_the_management_of_epidemics_and_the_broader_impact_on_society_New_Horizons_in_Commerce_Sub_Themes?email_work_card=thumbnail
3. Das B. (2021), 'Effect of the COVID-19 on Pandemic on Education in India: A Case Study', Academia Letters, July 2021, Article 2424, https://www.academia.edu/50362951/Effect_of_the_Covid_19_Pandemic_on_Education_in_India_A_Case_Study
4. Burke L. (2020), 'Colleges Move Online Amid Virus Fears', Inside Higher Ed., March 9 2020, <https://www.insidehighered.com/news/2020/03/09/colleges-move-classes-online-coronavirus-infects-more>
5. United Nations Educational, Scientific and Cultural Organization (UNESCO) (2021), 'India Case Study' p 25, October 2021, <https://www.unicef.org/rosa/media/16511/file/India%20Case%20Study.pdf>
6. United Nations Educational, Scientific and Cultural Organization (UNESCO), (2021)
7. Tata Elxsi (2020), 'Impact of the pandemic on the Edtech sector: An India Perspective', October, 2020, <https://www.tataelxsi.com/news-and-events/impact-of-the-pandemic-on-the-edtech-sector-an-india-perspective>
8. Angad A. (2021), 'Jharkhand: No access to

online classes, primary students demand reopening of schools’, *The Indian Express*, December 11, 2021, Ranchi, <https://indianexpress.com/article/india/jharkhand-no-access-to-online-classes-primary-students-demand-reopening-of-schools-7667861/>

9. ‘Jharkhand has the world record of the longest continuous closure of primary schools- Jean Dreze to Jharkhand CM’, *eNewsroomInida*, Januray 27, 2022, <https://enewsroom.in/primary-schools-jharkhand-covid-pandemic-students/>
10. Sahni U. (2020), ‘COVID-19 in India: Education disrupted and lessons learned’, *Education plus development*, Brookings, May 14, 2020, <https://www.brookings.edu/blog/education-plus-development/2020/05/14/covid-19-in-india-education-disrupted-and-lessons-learned/>

PRADHAN MANTRI JAN DHAN YOJANA – A STEP TOWARDS FINANCIAL INCLUSION IN INDIA

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Abstract

The Government of India started its main financial inclusion initiative, Pradhan Mantri Jan Dhan Yojana (PMJDY), in August 2014. Every family, especially those in rural and impoverished regions, should be able to access reasonable financial services thanks to the program. Access to fundamental financial services including credit, remittances, insurance, pension facilities, and savings accounts is the main goal of PMJDY. The program encourages economic empowerment and lessens reliance on unofficial financial sources by integrating underserved populations into the official banking system. This paper explores importance of Jan Dhan Yojana, the progress of Pradhan Mantri Jan Dhan Yojana and the various challenges and issues of Pradhan Mantri Jan Dhan Yojana.

Keywords: PMJDY, Accounts, Deposits, Financial inclusion. Banks.

Introduction

The Pradhan Mantri Jan Dhan Yojana (PMJDY), launched by the Government of India in August 2014, stands as a groundbreaking initiative in the realm of financial inclusion. At its core, this program is not just about opening bank accounts; it represents a broader vision to uplift millions of marginalized and underprivileged citizens by extending to them the benefits of formal banking and financial services. In a country as diverse as India, where socioeconomic disparities are a defining feature, the Jan Dhan Yojana emerges as a beacon of hope, bridging the gap between the "banked" and the "unbanked." With a population exceeding 1.3 billion, India is a nation of unparalleled diversity and complexity. Its economic, social, and cultural landscape is a rich tapestry woven from numerous threads, and yet, there is one common thread that connects every citizen: the need for financial services. However, despite the transformative strides the country has taken in various sectors, a significant portion of the population remained financially excluded for years.

Financial exclusion, characterized by a lack of

access to formal banking and financial services, posed a formidable challenge to the nation's inclusive growth. It perpetuated poverty, hindered economic mobility, and created a vicious cycle of financial vulnerability. Recognizing the urgency of addressing this issue, the Indian government, under the leadership of Prime Minister Narendra Modi, unveiled the Jan Dhan Yojana, heralding a new era in financial inclusion.

This comprehensive program was designed with a clear vision in mind: to ensure that every individual, irrespective of their socio-economic background, had access to basic financial services, thereby promoting financial stability, reducing inequality, and fostering economic empowerment. The Jan Dhan Yojana was not merely about opening bank accounts; it was about instilling a sense of financial security, dignity, and hope among the underprivileged.

The first and foremost goal of the Jan Dhan Yojana was to provide access to basic banking services. The program aimed to open bank accounts for the unbanked population, making it easier for them to save money, receive government benefits, and access credit. To encourage participation, the government

ensured that these accounts could be opened with minimal documentation and zero balance, removing some of the traditional barriers that had kept many away from the formal banking system.

Review of literature

According to **Nimbrayan et.al (2018)** in a country like India, financial inclusion is essential to long-term economic growth and development. In addition to giving financial institutions a chance to collaborate on inclusive growth, financial inclusion will assist the impoverished in integrating into the mainstream of growth. The highlighted that Public sector banks, RRBs, and private sector banks opened 5,33,00,249, 1,84,89,448 and 32,26,397 accounts in rural regions (7,17,89,697), respectively. However, the number of accounts opened by public sector banks, RRBs, and private sector banks in urban areas (4,84,45,109) was 4,51,47,276, 32,97,833, and 20,12,086, respectively. **Shylaja (2021)** highlighted that because of the mission-oriented initiatives implemented through the Pradhan Mantri Jan Dhan Yojana, previously excluded individuals are now more aware of the various banking services available to them and have begun to participate in the formal banking industry. There has been a massive surge in the number of accounts established nationwide since PMJDY's inception. Additionally, it is clear that over the last four years, the amount stored in newly formed accounts has climbed by more than 63%, which is quite promising. **Singh et.al (2021)** examined the Pradhan Mantri Jan Dhan Yojna (PMJDY) scheme's promotion of financial inclusion in relation to the economic performance of the various Indian states. In order to evaluate the condition of financial inclusion across Indian states, the study creates a three-dimensional financial inclusion index for 25 major Indian states between 2011 and

2016 using the financial inclusion index developed by Sarma (2008). **Shettar (2016)** studied that The PMJDY scheme's success hinges on an efficient regulatory framework, since stakeholders must create a sustainable environment to maintain account activity and ensure the program's successful execution. Converting non-operational accounts with zero balance into operational accounts is the difficult part and for this it's vital to focus on financial literacy programme. The development concept places a strong emphasis on inclusive progress, or "Sab Ka Sath Sub Ka Vikas." According to **Ramasetu (2016)** the long-needed National Mission on Financial Inclusion, PMJDY, committed to an integrated strategy to achieve full financial inclusion for each family in the nation, allowing those in lower income groups in particular to quit utilising moneylenders, grow the saving habit, and—most importantly—take advantage of the broad range of financial services and products provided by the banking system.

Objectives

The study has the following objectives: -

1. To study the importance of Jan Dhan Yojana.
2. To study the progress of Pradhan Mantri Jan Dhan Yojana.

Research methodology

The data for this present study has been collected primarily from secondary sources. The secondary data were collected from the and various other articles, websites and journals. The secondary data is collected from the website of PMJDY, the progress Report of PMJDY and Press Information Bureau. The data has been analysed by using descriptive statistical tools such as tables, charts, graphs etc. The CAGR has been calculated for analysing the progress of PMJDY.

Data analysis and findings

Table 1: Pradhan Mantri Jan Dhan Yojana Account in India

Year	PMJDY Account (in Crores)	Growth Rate
Mar'15	14.72	-
Mar'16	21.42	10%
Mar'17	28.17	6%
Mar'18	31.44	4%
Mar'19	35.27	4%
Mar'20	38.33	3%
Mar'21	42.45	3%
Mar'22	45.06	3%
Mar'23	48.65	2%
Mar'24	51.95	2%
CAGR	15%	

Source : <https://pib.gov.in>

The table 1 shows the number of Pradhan Mantri Jan Dhan Yojana Account in India march 2015 to march 2024. The table shows a consistent growth in the number of accounts under Pradhan Mantri Jan Dhan Yojana. The

CAGR of the number of Pradhan Mantri Jan Dhan Yojana Account in India is 15%. The growth rates shows that the in the initial year the growth was more than in the recent years.

Table 2: Deposits under Pradhan Mantri Jan Dhan Yojana in India

Year	Deposits under PMJDY accounts (In Rs. Crore)	Growth Rate
Mar'15	15670	-
Mar'16	35672	128%
Mar'17	62972	77%
Mar'18	78494	25%
Mar'19	96107	22%
Mar'20	118434	23%
Mar'21	145551	23%
Mar'22	166459	14%
Mar'23	198844	19%
Mar'24	232502	17%
CAGR	35%	

Source : <https://pib.gov.in>

The table 2 shows the deposits under Pradhan Mantri Jan Dhan Yojana in India from march 2015 to march 2024. The above table shows a gradual growth in the number of deposits under Pradhan Mantri Jan Dhan Yojana. The CAGR of the deposits under Pradhan Mantri Jan Dhan Yojana in India is 35%. The growth rate is

highest in the initial year i.e., 2016 with the growth of 127% but in the recent years the year-on-year growth rates have drastically reduced showing that the deposits under Pradhan Mantri Jan Dhan Yojana has increased but a decreasing rate

Table 3: Average Deposit per Pradhan Mantri Jan Dhan Yojana Account in India

Year	Average Deposit per PMJDY account	Growth Rate
Mar'15	1065	-
Mar'16	1665	56%
Mar'17	2235	34%
Mar'18	2497	12%
Mar'19	2725	9%
Mar'20	3090	13%
Mar'21	3449	12%
Mar'22	3694	7%
Mar'23	4087	11%
Mar'24	4476	10%
CAGR	17%	

Source : <https://pib.gov.in>

The table 3 shows the Average Deposit per Pradhan Mantri Jan Dhan Yojana Account in India from march 2015 to march 2024. The CAGR of the deposits under Pradhan Mantri Jan Dhan Yojana in India is 17%. The growth rate is highest in the initial year i.e., 2016 with the growth of 56% but in the later years the year-on-year growth rates have shown a fluctuating growth. The year 2022 has shown the lowest growth rate of 7%.

Conclusion

India's financial inclusion has advanced significantly thanks to the Pradhan Mantri Jan Dhan Yojana (PMJDY). With a Compound Annual Growth Rate (CAGR) of 15%, the total number of PMJDY accounts increased from 14.72 crore in March 2015 to 51.95 crore in March 2024, demonstrating the program's tremendous expansion of banking access since its launch in 2014. Millions of formerly unbanked people now have access to banking thanks to the initiative, which has also greatly increased bank account numbers, deposits, and financial literacy. Although the growth rate has slowed recently, the data analysis shows a steady increasing trend in account openings and deposits. The report highlights the program's effectiveness in promoting economic empowerment and financial inclusion. However, challenges remain, such as ensuring account activity, improving financial literacy, and reducing reliance on zero-balance accounts. The fluctuating deposit growth rates highlight the need for sustained engagement

and policy adjustments to enhance participation.

References

1. <https://pmjdy.gov.in/>
2. https://www.pmindia.gov.in/en/major_initiatives/pradhan-mantri-jan-dhan-yojana/
3. <https://pib.gov.in/PressReleaseDetailm.aspx?PRID=2049231®=3&lang=1>
4. Nimbrayan, P. K., Tanwar, N., & Tripathi, R. K. (2018). Pradhan mantri jan dhan yojana (PMJDY): The biggest financial inclusion initiative in the world. *Economic Affairs*, 63(2), 583-590.
5. Ramasethu, A. (2016). Pradhan Mantri Jan Dhan Yojana: the most Intensive financial inclusion scheme in India. *International Education and Research Journal*, 2(6), 41-43.
6. Singh, B. P., Kumari, A., Sharma, T., & Malhotra, A. (2021). Financial inclusion, Pradhan Mantri Jan Dhan Yojna scheme and economic growth: evidence from Indian states. *Economic Notes*, 50(3), 1-14.
7. Shettar, R. M. (2016). Pradhan Mantri Jan Dhan Yojana: Issues and Challenges. *IOSR Journal of Business and Management*, 18(2), 17-24.
8. Shylaja, H. N. (2021). Pradhan Mantri Jan Dhan Yojna and financial inclusivity: An empirical analysis. *SDMIMD Journal of Management*, 12(1), 41-53.

MURSHIDABAD AND THE GREAT REVOLT OF 1857: A NEW DIMENSION.

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Abstract

Recent some research has proved that the uprising of 1857 started from Berhampore, presently the capital city of Murshidabad district where the 19th Regiment of the Native Infantry was stationed. It is very important that this Great Revolt had deep influence on both the rural and urban masses of the district. Total writing on the uprising of 1857 to elaborate from the sacrifice of Mangal Pandey at Barrackpore, then continue to narrate the events ranging from Meerut to Delhi. Thus missed to even mention the revolt of the 19th Regiment of the Native Infantry's revolt which had all India dimensions. Infact, the sepoys of this Native Infantry played a historical role in spreading the revolt throughout northern India. More precisely, both the events of Berhampore and Barrackpore were very closely interlinked.

The great rebellion of 1857 is a highly exported and discussed subject by historians. Different situations analyzed this subject to a great extent from different, points of view. Yet it seems to be incomplete somewhere. In particular the role of Bengali intellectuals remains relatively enplaned. Why they are in a dilemma in this question of sympathy or opposing the rebellion. Moreover, what was the role of intellectual middle classes, common people or native kings and others? The subject becomes more complex in the case of Murshidabad district. As far as the historical evidence is considered, it seems that the district of Murshidabad added a new dimension to the great revolt of 1857. Therefore this work can be claimed to be innovative in this regard.

Keywords: Great Revolt of 1857, Berhampore, 19th Native Infantry, Bengali Bhadrlok , New Dimension of the Revolt

Introduction

Few recent historical researches have proved that the Great Revolt of 1857 started from Berhampore, presently the Head Quarter of Murshidabad district where the 19th Regiment of the Native Infantry was stationed. It is very relevant and significant that this Great Revolt had a deep impact on both the rural and urban mass of Murshidabad, which had a great tradition of unrest and protest against the East India Company and British rule since its inception. Moreover, they became prepared to join the Great Revolt to help the sepoys and other leaders. Now it has been proved that the people of Murshidabad were politically conscious during entire the day of Great Revolt. While writing on the Great Revolt of 1857, most of the writers use to elaborate it from the

sacrifice of Mangal Pandey at Barrackpore and then continue to elaborate on the events ranging mainly to the northern part of India. Thus, they seldom missed to even mention the revolt of the 19th Regiment of the Native Infantry's revolt which had all over India dimension. Really fact, the sepoys of this Native Infantry played a historical role in spreading the revolt throughout the northern India. More precisely, both the events of Barhampore and Barrackpore were very closely interlinked. Recent research works show that there had been a tremendous impact of the changes in political movements of India on the district of Murshidabad. The people of Murshidabad were ready to join the Great Revolt but they could not get any leadership, leading the people against the British.

This article split into three major parts, as follows:

i. An evolution of the argument, Bengal more or less out of reach of the mutiny 1857: Here, I discuss the changes in the economy and polity during the shift in the governance from the East India Company to the imperial Crown. The ground reality of the native peoples helps us to find out the consequences of the events as well as the attitudes of the Bengali intellectual mind towards them. The *Bengali Bhadrak* society emerged and how they interacted with their masters and the peoples of the Country. Because these emerging *Bengali Bhadrak* were the pioneers of colonial modernity, as well as they lead the Bengali society and more or less involved the great revolt in Murshidabad.

ii. The specific event of Murshidabad vis-a-vis the mutiny: The sepoy uprisings were condemned by the *Bengali Bhadrak*. Some of them regretted why the sepoys were agitating against their master. They also tried to resist them against their master. The study became a very interesting and challenging one to find out why and how the *Bengali Bhadrak* group took surprisingly negative and positive roles vis-a-vis the popular uprising of Bengal within a short span of the time.

iii. An evolution of the impact on the educated middle class of Bengal: I substantiate that my hypothesis on the changes of the intellectual mind of Bengal starting from 1850 to 1860 is justified. From the evidence and discussion made in my dissertation, I conclude that the *Bengali Bhadrak* changed their attitude, mind and mentally in the course of this revolt. I have also found that the nature and mentally did change, not only Bengali middle classes, but also of the government and the peoples.

The Murshidabad district was revolutionary and historically important district of Lower Bengal. The *Wahabi* and *Farazi* movements were two such formidable peasants and tribal uprisings which continued during the period from the first half and early second half of the nineteenth century. Narayanpur in the Jangipur Sub - Division of Murshidabad was addressed by the *Wahabi* leaders Enayat Ali who was very active in this district. The existence of a large number of *Farazi* families in this district is clear

proof of the *Farazi* movements in Murshidabad. The Santhal Rebellion of 1855-1857 occupies an important place in the history of the armed struggle against British rule in India. The western part of Murshidabad was engulfed by this Santhal Rebellion which was organised and started from the Santhal Parganas. The uprising was suppressed with utmost brutality. It is important to note the District Magistrate of Murshidabad took the lead in suppressing the Rebellion. Moreover, the people of Murshidabad had set a golden heritage of unrest and protest against British rule they continued proved to be politically conscious.

The suspicion spread and became a conviction; it seems, by the time it reached Berhampore. The Nineteenth Regiment of the Native Infantry was stationed there, along with a corps of irregular cavalry. Two factors caused additional anxiety to the English officers here. Berhampore was the seat of the *Nawab Nazim* of Bengal. It was feared that if the sepoys rallied in his name, 'all Bengal would soon be in blaze'. Second, there were no European troops in the town or in the vicinity. A detachment of the Thirty-fourth Native Infantry also marched from Barrackpore to Berhampore to add to the excitement of the sepoys. Kaye records that the men of the Thirty-fourth, the first group of whom arrived on 18 February and the second on 25 February, were welcomed with 'open arms and open mouths' by 'their comrades' of the Nineteenth. Before this, Colonel Mitchell, who was in charge of Berhampore, had written on 16 February that about a fortnight before a Brahmin pay - Havildar had asked him, "What is this story that everyone is talking about, that Government intend to make the Native Army use cow's fat and pig fat with the ammunition for their new rifles?"¹. Mitchell did not handle the situation well. His reported 'threat to send the errant sepoys to Burma exacerbated an already volatile situation, resulting in mutiny in the Nineteenth Native Infantry'. Once the mutiny was stopped, the disbandment of the regiment was decided upon. "This was the first recorded instance of the mutiny of the sepoys in Bengal in 1857"².

When the sepoys at Barrackpore came to know of the incident at Berhampore, they were

excited. But they were also anxious about a large contingent of European forces coming down upon them now. Major Mathews reported that a naik had come to him in early March and told him that the sepoys believed that five thousand Europeans had assembled at Howrah, and they were to come up to Barrackpore by the river. Consequently, a state of 'sullen quietude obtained there'³.

On 20 March, there was, in the words of Kaye, 'more than common excitement in the lines of the Thirty-fourth', as they believed that the Europeans had arrived. Fifty men of the Fifty-third had indeed come by waterways from Calcutta, and this provoked further agitation among a section of the sepoys. On the same day, a native officer went to the bungalow of Major Hewson to report that a sepoy, Mangal Pandey, had come out of the lines with his musket loaded. Soon after, Hewson sent the officer to warn the Adjutant - Lt Baugh and walked to the parade ground⁴. Mangal Pandey, it has been described,... the order was not obeyed... when the European sergeant-major went out, (Pandey) fired his piece at him, and missed⁵.

John Kaye gives detailed information and description of what followed, but we may avoid repeating that. Mangal Pandey was injured by a shot he had fired himself, but the wound was not serious, and he was taken to the hospital. After his treatment, he was tried by court martial on 6 April and was given the death penalty. He went to the gallows on 8 April. What followed was an uneasy quiet among the sepoys and acute anxiety among the English. Kaye quotes from a correspondence of the Governor - General to Lord Elphinstone on May 6: ... This feeling is played upon by others from the outside, and, to some extent, with political object⁶

While the rowdy European element enlisted in the volunteer **corps**, the respectable barristers and business leaders joined the Indian reform league. The Bengal chamber of commerce United with the league in petitioning Lord Palmerston for the abolition of the East India Company and for recall of Governor General Charles Canning, who favoured clemency toward the rebels. The petitions were signed by 682" Christian inhabitants of

Calcutta."Palmerston stood fast in his support of Lord Canning but the petition calling for the transfer of India from the company to the crown additional strength to the anti-company forces in England. With the end of the mutiny in August 1858 British India came under the direct rule of the crown⁶. The sepoy mutiny of 1857-58 intensified these racial animosities. News of the atrocities in the northwest and the presence of several disaffected sepoy regiments in nearby Barrackpore brought an decrescendo of anxiety to Calcutta, on July 13, the Governor General, after much hesitation, finally gave into the demands of the European community and allowed it to form a volunteer corps which terrorized the peaceful Indian populace by parading the street at night, Searching insulting and bullying the natives Terror reached its climax in "panic Sunday"⁷.

The Great Revolt of 1857 started from Berhampore, presently the Head Quarter of Murshidabad district where the 19th Regiment of the Native Infantry was stationed. It is very significant that this Revolt had a deep impact on both the rural and urban people of Murshidabad, who had a great tradition of protest against British rule since its inception. But the event of the revolt of Berhampore, unfortunately, finds no place in the culture of writing history of this Great Revolt. While writing on the Revolt of 1857, most of the authors use to narrate it from the sacrifice of Mangal Pandey at Barrackpore and then continue to narrate the events ranging from Meerut to Delhi. Moreover, both the events of Barrackpore and Berhampore were closely interlinked. The Old nobles, *Nawabs, Rajas, Zamindars*, artisans, peasants etc. almost all the classes of Indian society suffered from political subjugation, economic exploitation and oppression, social and religious humiliation inflicted upon them by the British. The sepoys of the 19th Regiment of Native Infantry stationed at Berhampore, Murshidabad reacted vehemently against the cartridge and rose into open rebellion for the first time in 1857. L. S.S.O 'Malley wrote in 1914, "The first organized outbreak of the sepoys in the mutiny of 1857 took place at Berhampore, which at the time was canned by the 19th Regiment of the Native Infantry"⁸. In the report of the state paper, dated 30th September 1858, Sir James Halliday, then the Lieutenant Governor of

Bengal, wrote that the symptoms of the Mutiny showed themselves first at Berhampore and Barrackpore⁹.

But the news of 25th February even spread among the people of Murshidabad like wildfiresituation became so serious and tense that it seemed that the people of Murshidabad very soon declared war and started attacking the English from all quarters. The people of Murshidabad were opposed to the policy of oppression and exploitation of the British government; it is very important to note that the peasants of Murshidabad, who had golden heritage of protest against the British, held a mammoth rally at Berhampore and were waiting for an opportunity moment to declare war against them¹¹. Hence it is quite natural that the people of Murshidabad could not keep themselves silent about the mutiny which took place at Berhampore. Thus, they were very eagerly waiting for the signal and order of the Nawab Nazim Saiyad Munsur Ali Khan FeradunJha. The Nawab, though a weak person, possessed a glorious and powerful title and could lead the people against the British. The Nawab himself was then displeased with the English because the latter reduced his allowance from Rs.16 lakhs to Rs 12 lakhs and deprived him of the important privileges enjoyed by the Nawabs¹². But the Nawab did not pay heed to the feelings of the people and it is a curious phenomenon in the Nawab descendant that instead of going against the people English he went against the people by supplying all possible assistance to the British authorities. He cooperated with them with his military power and resources. The Nawab was spontaneous in sending 45 elephants and all his camels for the conveyance of the detachment of Her Majesty's 64 Regiment to Berhampore¹³. The Governor General-in-Council conveyed acknowledgement to the Nawab Nazim of Murshidabad for the great assistance rendered by His Highness to the detachment of European troops as well as for the readiness with which he was prepared to cooperate in preventing a disturbance anticipated at Berhampore on the 21st June, 1857¹⁴.

In order to keep the rebellious people of Murshidabad in check and to crush every attempt at waging war against them the English authorities made elaborate arrangements,

sedition placards were posted in different parts of Murshidabad and on the 23rd June, 1857a panic broke out owing to a rumour that the 63rd Bengal Native Infantry and the 11th Irregular Cavalry which were cantoned there (the city of Murshidabad)had mutinied¹⁵. The district authorities immediately restored peace in the city. As a precautionary measure, Her Majesty's 84th and 95th European Regiments were dispatched to Berhampore. On 1st August, 63rd Bengal Native Infantry and the 11th Irregular Cavalry were disbanded¹⁶. At the end of December there was again some suspension of the loyalty of the sepoys at Berhampore and a body of 100 European soldiers was therefore sent up as a precautionary measure¹⁷.

Lieutenant Governor Sir F.J.Halliday, summarized the situation of the mutiny as follows:"Berhampore garrisoned by the native troops of both cavalry and infantry, was rescued from threatened danger first by the rapid dispatch of European troops by land and by steamer and secondly by the prompt and well-conceived measures for disarming the native garrisons¹⁸. Under the order of the Government 'the whole of the native population of Berhampore and of the city and suburbs of Murshidabad was disarmed¹⁹. Some old canons and 2000 guns and rifles were seized by the police from the people²⁰. The additional police force was posted at Jangipore to enable the Magistrate of Murshidabad to disarm parties in boats passing the toll station of the mouth of the Bhagirathi at Shootee²¹. The English authorities at Aurangabad reported that a disbanded sepoy was arrested for 'seditious language '. This sepoy was committed to the Session Judge for trial. The additional police force was posted at Khamara as precautionary arrangement. The Commissioner of Nadia sanctioned the entertainment by the Magistrate of Murshidabad of 20 *Burkandazes* to assist the police in the Subdivision of Aurangabad of Murshidabaad²². In this way the English became successful in preventing an open rebellion of the people of Murshidabad. But the disbanded sepoys of the 19th Regiment of the native infantry spread the revolt or so to say First war of independence through the northern half of the country.

There is no doubt that the Great Revolt of 1857 marked a watershed in Indian history. It

becomes a point of reference for the British rulers whenever they sensed a great challenge to their rule. They saw this mutiny as the greatest challenge to the *Raj* till then. As late as 1942 Lord Linlithgo feared that the occurrence of 1857 seemed to be returning. Likewise, the educated Bengali *Bhadraloks* also probably reconsidered their stance, and began articulating concerns about the evil aspects of the *Raj*, focusing on the lack of equity and justice for their legal rights. The scenario of revenue collection during the rebellion clarifies the crisis of the British government. The revenue collection from the whole country including Bengal, as well as Murshidabad, did not reach one third of the usual. The rulers had to take loans with high interest rates from many different sources. It is true that in Bengal, the rebellion was not much perverted or did not get overwhelming mass support. However, a general oppositional attitude towards the British government among the farmers and labor can be clearly noticed. Shashibhushan Choudhury has illustrated the picture of leadership in organizing the protests and unrests towards rebellion. The rebellion, however, provided a means to general a nexus among the farmers, tribes, so so-called lower classes of Hindus. In Bengal during the time of unrest and protest²³, we find that the sepoys and other people very soon make deep bonds for themselves against the British. Ramesh Chandra Majumder had shown that the coalition between the peasants and sepoys posed a new problem to the British rulers. Thus, the sepoys are compiled out from the villages. This led the British magistrates to pass the order of putting the whole village on fire. This clearly shows that villagers were actively involved in the rebellion²⁴. In Spite of Ishwarchandra Gupta in his editorial *Sangbad Prabhakar*, opposed the rebellion and supported the British government. More or less other Bengali newspapers were closed by the British government. So, the real picture could not be found. The editor of the newspaper always supports the British government with fear and respect. We have been able to provide instances of such concern from the Contemporary period, when there was introspection and reconsideration of the attitude towards the colonial government. The decades following witnessed a great deal of association - making for the articulation of their ideas. We present an

argument from the redoubtable Harishchandra Mukherjee who might have anticipated this change mentally. In his editorial article on 31 December 1857, he wrote, ' History will, we conceive, take a very different view of the facts of the Great Indian Revolt of 1857 from what Contemporaries have taken of them. The time will certainly come when the Historian will be called upon to record this tremendous crash and what a subject he shall have to write about '²⁵.

Conclusion

Archival data as well as Contemporary newspaper articles, both of which have just been Sampled here, would further support these impressions. Bengal experienced a movement that may be characterized as being mostly started and led by Sepoys. The people of Murshidabad has a great tradition of communal harmony which set by the independent *Nawabs* of Bengal and had been carried on by the people, the *Rajas*, *Maharajas* and *Nawabs* during the whole period of India's struggle for freedom. It is clear from discussion that the position of Great Revolt of Murshidabad, which Strongly affected by the colonial rule. Regarding the Great Revolt of Murshidabad has been changed gradually with respect these insurrection. The heroes of the Great Revolt of 1857 of Murshidabad, dreamed of regaining their power and position²⁶.

According to one pro -company periodical, "Those documents arrived in the nick of time...It would be impudent to pretend that the transfer of authority to the crown was determined upon grounds quite independent of the Calcutta petitions ', Saturday Review, May 1, 1858, p. 437. An editorial in the *Hindoo patriot*, indicates that progressive Indian opinion, which until then had favored direct rule, now changed sides; "India House, whatever may have been its other faults, has always cherished a strong phil - India feeling, "A politically appointed Secretary for India would "have to do one thing to conciliate Manchester, another to conciliate Exeter Hall, and a, third to appease Lord Ellenborough's opposition, a fourth to please the tea-pounders -and all in disregard of the feelings and interests of the people of the India," *Hindoo patriot*, Sept, 24, 1857.

References:

1. C..B.Malleson and J.Kaye , *History of the Indian mutiny* (6 vols,2nd ed.London ,1892), pp .84-85; *Hindoo patriot*, july 9 and July 25,1857.
2. L.S.S. O'Malley, *Bengal District Gazetteers*; Bengal Secretariat Book Depot, Calcutta, 1914, p.207.
3. SipahiYudher Smriti Soudha Nirman Committee, *Sepahi YuddheBerhampore* (in Bengali),Berhampore,1957, p. 4.
4. Judicial Index of the Mutiny of 1857, Book No 149/1857.judicial *Proceedings, Murshidabaad; N. 619/20, 630, 887/8, ect*, West Bengal State Archives, Calcutta.
5. *Ibid*, Judicial proceedings, Murshidabad;No 619/20. WBSA.
6. *Ibid*, judicial proceedings, No. 889/94. WBSA.
7. Sepahi YuddheBerhampore, *Op.cit.* 1957, pp. 5-6.
8. *Ibid*, pp. 5-6.
9. P.J.O. Taylor, *What Really Happened During the Mutiny*, Oxford University press, New Delhi,1999 , p.110.
10. Judicial proceedings, Murshidabad, No.889 /4. WBSA
11. *Sepahi YuddheBerhampore, Op.cit.* p. 4.
12. *Ibid* , pp .4-5.
13. Judicial proceedings, *Op.cit.*, 889/4. WBSA.
14. Judicial proceedings, Murshidabad;No. 889/4. WBSA.
15. *Ibid*, No 626/27. WBSA.
16. Shashibhushan Choudhury, *ShipahiBidroh O GanobiplaberSankhiptoItihas*(1857-1859), Progressive Publishers, Calcutta,1966, pp. 264 - 265.
17. Ramesh Chandra Majumder, *The Sepoy Mutiny and The Revolt of 1857*, Firma K.L.M, Calcutta, 1957, p. 217.
18. Khairul Anam, *The Great War of 1857 And Political Consciousness of the people of Murshidabad (W.B) Revisiting 1857: Significance and Relevance*, Seminar Organized by: The University of Kalyani, Sponsored by:(ICHR)New Delhi, Supported by: The Victoria Memorial, Kolkata, Feb, 26-27, 2008.
19. Uttara Chakraborty, " Through a Glass Darkly: Fearful English and the Ambivalent Bengali: Calcutta 1857-58; in *Uprising of 1857: Perspectives and Peripheries*, ed. Subhas Ranjan Chakraborty, Kolkata, Asiatic Society, 2009, p.179.
20. John William Kaye, *A History of the Sepoy War*, vol. 1, reprint., New Delhi, Gyan, 1996, p. 500.
21. Basudeb Chattopadhyay, ' Panic Sunday in Calcutta: 14 June 1957; in *Rethinking 1857*, ed. Sabyasachi Bhattacharya, New Delhi, Orient Longman, 2007, pp. 168 - 169.
22. John Kaye, *History of the Sepoy War, Op.cit.* pp. 526 to 528.
23. T. Rice Holmes, *A History of Indian Mutiny: And of the Disturbances which accompanied it among the Civil Population*, London, Macmillan, 1904, pp. 85 to 87.
24. John Kaye, *History of the Sepoy War, Op.cit.* pp. 538 to 539.
25. *Ibid*, p. 550.
26. Parliamentary papers, 1857-58, XLIII, 93.

UNRAVELING THE RELATIONSHIP BETWEEN SOCIAL MEDIA MARKETING STRATEGIES, BRAND EQUITY ENHANCEMENT, AND CONSUMER REPURCHASE INTENTIONS: AN EMPIRICAL INVESTIGATION

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Abstract-Social media has profoundly influenced all aspects of marketing and business, playing a crucial role in promoting companies and enhancing their value. It has become an essential part of the modern marketing mix due to its vast global audience and the increasing amount of time users spend on these platforms each day. The rise of well-informed and empowered consumers has heightened market competition. Consequently, integrating social media into the existing marketing strategies to maximize its effectiveness has become a pressing need. This has created need for researchers and marketers to study a deep revision of social media and also investigate its results on consumers. The thought for this study was needed to assess the affects of social media marketing and its initiatives on the consumer brand equity along with repurchase intentions. Data was collected via a questionnaire from a sample of approximately 330 social media users, including government employees, private sector workers, business owners, and students. After accounting for demographic variables, the Structural Equation Modeling (SEM) and the Confirmatory Factor Analysis (CFA) revealed the significant positive relationship among social media advertising (considering factors like entertainment, personalization, trendiness, communication, word-of-mouth, brand equity, and consumer repurchase intention). Findings indicate- social media marketing efforts has significantly influence on brand awareness and brand perception. Study concludes by discussing theoretical justification and practical implications, along with highlighting its boundaries and suggesting directions for further studies.

Keywords-Social Media Marketing, Brand Equity, Consumer Repurchase Intent, Market Competition, Structural Equation Modeling (SEM).

I. Introduction

The past two decades of social media has changed advertising communication by creating a new heights for consumer-brand interactions. The connection is particularly significant for companies, as social media users often depend on other users for recommendations, influencing their decision-making processes. [9] [10]. Organizations recognize the need to understand how social media shapes consumers' perceptions of their brands. While researchers have primarily

focused on studying individual social media platforms, such as X, Facebook, and even online website surveys, there are only few studies which can compare multiple social networks.[11]. Social media collectively refers to web applications, media, and platforms that promote user engagement, collaboration, and content sharing. [12]. Given its substantial incremental advantage, the interconnected marketing component facilitates the easy dissemination of information [13], making social media platforms an effective tool for this purpose. Efficient information transmission is

quite crucial process to ensure the successful social media and its marketing efforts [14]. The social media provides handlers with a new avenue for discovering products and connecting globally to share experiences [15] [16]. Before making a purchase decision, consumers typically gain awareness in two main areas: brand recognition and value consciousness [17]. Value-conscious consumers use social media to research and evaluate the product prices and even qualities of certain brands to confirm so that they get the favourite deal [18]. In contrast, brand-aware consumers view a brand as a symbol of authority and status. Consequently, many businesses leverage social media to execute cost-effective and impactful consumer marketing campaigns [19].

Social media is extensively utilized for various marketing purposes, including business networking, product promotion, reputation management, customer support, and market analysis and feedback [20] [21]. Despite their widespread integration into businesses to enhance exposure and attract more consumers, there remains limited research on social platform which has focused on building customer loyalty and even strengthening them [22]. Consequently, knowing the affect of social platforms usage on client loyalty can be crucial for refining marketing tactics. The current study investigated about brand equity influence on customers and social platform marketing activities on consumer loyalty about brand . Both small ventures and big corporations frequently uses marketing strategies of social platforms to educate customers and enhance their attraction to both existing and prospective customers [23]. This study stood out for its focus the connection between social-media-based marketing efforts and consumers' brand equity and customers brand loyalty, particularly their inclination to repurchase.

This study focuses to meticulously evaluate the impact of social networking marketing efforts on the enhancement awareness of brand and its image among consumers. Objective of examination is to address the gaps identified in previous research, this include: (1) assessing the effects of various elements of social media promotional strategies - such as entertainment, personalization, trendiness, information sharing, and word-of-mouth - on product

engagement and representation; and (2) evaluating the influence of social media promotional campaigns on repeat purchases by Indian consumers through the familiarity with the brand and corporate identity of high-tech products.

This study is organized as follows:

- Section-2 presents the analysis of literature review, incorporating recent formats.
- Section-3 outlines the specific study objectives, hypothesis development, and research methodology.
- Section-4 focuses on the assessment and outcome evaluation.
- Finally, Section 5-discusses the conclusions drawn from the study and its implications.
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II Literature review

In this section discussion begins with a the literature regarding the primary construct of the study, which is the utilization of social media and its marketing initiatives. This is followed by a review of the literature on other factors influencing repurchase intention, including brand consciousness and the brand image, the leading to formulation of hypotheses.

2.1 Works related

In 2018, Eun-Ju Seo and Jin-Woo Park [1] conducted investigating on impact of social media marketing methods on brand equity and consumer response within an airline industry. They surveyed 302 travelers who were users of airline-managed social networks and employed SEM analysis to evaluate the findings. The results highlighted the significance of popularity as the most crucial element of social-media-marketing activities (SMMA). In addition, the study found that airline SMMA significantly influenced both brand recognition and brand perception. Moreover, it was revealed that both brand recognition and brand perception had a substantial effect upon consumer loyalty and electronic word-of-mouth. In 2020, Reham Shawky Ebrahim [2]

performed a test to study the influence of brand trust, brand recognition, and social-media-marketing (SMM) initiatives on the brand loyalty. Questionnaires were distributed and analyzed using SEM analysis, based on responses from a network poll of 287 Egyptian users with social media accounts for telecom companies. The findings indicated that SMM performance was characterized by three components: fashionability, customizing, and word-of-mouth. Moreover, the test revealed, the description of social-media advertising has direct impact on brand loyalty and indirectly influenced customers brand equity through customers brand trust. In 2021, Azim Zarei et al. [3] investigated, moderating effect of flow theory on the relationship between marketing strategies and consumer responses. The survey involved 384 customers who had made online purchases from "DigiKala," one of Iran's pioneering internet retailers, and SEM analysis was conducted based on this data. The results revealed that social media promotion had a significant positive impact on customer engagement and perceived brand value. Additionally, flow theory was found to significantly mitigate the adverse effects of marketing campaigns on social media, brand recognition, and consumer responses. In 2022, Md. Hafez [4] examined the effects of social media promotional activities on brand image within Bangladesh's banking industry, with a mediating assessment of brand equity and perceived distinctiveness. Data was collected from 222 followers of banks on social platforms, and structural analysis was conducted. The results indicated that social media marketing activities (SMMA) had a positive and significant impact on brand equity. Furthermore, brand equity was found to facilitate the relationship between SMMA and brand image. In 2022, Sandip Rakshit et al. [5] assessed the effectiveness of integrated social networking marketing measures (SNMM) for small and medium-sized businesses (B2B). They gathered data from 254 B2B SME marketers in India through a standardized questionnaire survey and semi-structured interactions. The results obtained from the measurement and structural model showed that social networking had a direct and positive impact on the growth of small and medium-sized businesses. In 2022, Jalal Rajeh Hanaysha [6] evaluated four aspects of social media

advertising influencing consumers' purchasing decisions in the fast-food sector. Additionally, the study attempted to determine whether brand equity mediates this relationship. A survey method questionnaire was utilized to gather necessary information from patrons of various fast-food restaurants in the UAE, and SEM analysis was employed. The findings affirmed the significance of brand loyalty in predicting purchasing decisions. Furthermore, the results indicated that forgiveness, source trustworthiness, and engagement positively influenced consumer purchasing decisions. In 2022, Mohammed Majeed et al. [7] examined the effects of social media engagement and customer experience on repurchase intention in the hospitality industry. The survey was conducted among participants in selected cities in Ghana, resulting in a total of 504 valid responses. Partial least square structural equation modeling was utilized to analyze the obtained data. The findings revealed a positive and significant relationship between customer satisfaction and the components of customer involvement. In 2022, Hisashi Masuda et al. [8] explored the effects of influencer qualities on consumers' purchase intentions in influencer marketing on social media. They specifically examined three characteristics and three individual qualities as predictors of the intention to buy. Data was collected through a survey from respondents who made purchases after viewing influencer-produced media advertisements. The results revealed that influencer marketing was significantly associated with three individual traits, and influencer marketing had a significantly positive impact on purchase intent compared to previous explanations.

2.2 Research Gap

Previous research has significantly contributed to our understanding of engagement on social media, yet few studies have investigated how consumers interact with companies across various social media platforms. Despite the widespread use of social media, there is a lack of research examining how different social media platforms may influence brand equity. Recognizing the need for further research on brand equity in the digital age and the limited theoretical and empirical studies on the role of online communities in brand creation, the

present study aims to investigate the impact of active engagement on various social media platforms on destination product fairness.

III Analysis of the effect of social media marketing initiatives

3.1 Problem Statement

The utilization of social media by businesses to inform, impress, and retain their existing customers has reshaped the marketing landscape. Social media marketing empowers companies to establish perceived brand equity initiatives and foster the perception that their clients' products and services are worthy of continued use. In this exploratory study, we aimed to investigate how social platform advertising efforts in India influence changes in high-tech clients' corporate reputation (knowledge and appearance) and their willingness to repurchase.

3.1 Research Objectives

- Evaluating the effect of specific components of social platform advertising initiatives, such as entertainment, personalization, trends, communication, and word-of-mouth, on brand awareness and image.
- Investigating the impact of social media marketing initiatives on the repurchase intentions of Indian consumers through brand awareness and the perceived image of modern goods.

3.2 Research Questions

Certainly, here are some research questions framed to examine the outcomes of social platform advertising initiatives::

- **RQ1:** What makes consumers to purchase through social media platforms?
- **RQ2:** Do entertainment, trendiness, personalization, communication, and word-of-mouth influence brand equity among consumers in India?
- **RQ3:** Does brand equity mediate the

relationship between social platform advertising initiatives and repurchase intention among Indian consumers?

3.3 Hypothesis of Research

A research suggestion is proposed to build upon the objectives outlined in this study. Figure 1 illustrates the proposed framework of the hypotheses.

While individuals utilize social media for various purposes, entertaining content tends to capture clients' attention. Previous studies have explored this aspect, revealing that entertainment serves as a motivating factor in enhancing participants' engagement with social media. Consequently, posting enjoyable and captivating content on social platform advertising, such as hosting games and competitions that encourage user interaction, can positively impact customers' perceptions. Several earlier empirical studies have demonstrated that when individuals derive enjoyment from the engaging content provided by social media, it is likely to lead to favorable perceptions, which in turn contribute to brand recognition and recall. Brand equity comprises product awareness and product reflection, both of which are integral components of brand attributes. Therefore, this research proposes the following hypothesis:

H₁: Entertainment influences brand equity among customers in India.

H₁₋₁: Entertainment influences brand awareness among Indian customers.

H₁₋₂: Entertainment impacts brand image among Indian customers.

Previous studies have defined personalization in social media as the extent to which services are tailored to customer preferences. Unlike traditional advertising media, personalization in social media is based on direct customer interaction and communication, allowing companies to enhance customer satisfaction by customizing the information provided to them. Personalization also helps companies convey the uniqueness of their brands to customers and enhances their preferences for them. Moreover, it enables organizations to address individual customer concerns and target advertising,

services, and personalized messages for specific groups of people. Promptly addressing customers' specific inquiries leads to increased customer satisfaction. Therefore, this research proposes the following hypothesis:

H₂: Personalization influences brand equity among Indian customers.

H_{2.1}: Personalization influences brand awareness among Indian customers.

H_{2.2}: Personalization impacts brand image among Indian customers.

Trendiness is known for providing current information about a service or product. The real-time delivery of information on social media has made it the most recent and updated source of knowledge for customers. Trendy information includes the latest details about a brand or product, customer reviews, and innovative ideas. This enhances consumer trust in the brand and, consequently, strengthens the customer's positive perception of various offerings. Therefore, whenever social media platforms feature hot and trendy topics, greater trust is established between the brand and the customer, reducing the time users spend searching. Therefore, this research proposes the following hypothesis:

H₃: Trendiness influences brand equity among Indian customers.

H_{3.1}: Trendiness influences brand awareness among Indian customers.

H_{3.2}: Trendiness influences the brand image among Indian customers.

In social media (SM), communication occurs when users share their opinions on social media platforms and interact with others who hold similar views on specific products or companies. Therefore, interaction refers to the extent of freedom provided by social platform advertising for discourse, idea exchange, and information sharing. Many companies encourage their customers to openly discuss

their shopping experiences on chosen social media platforms, known as user-generated online communication. Essentially, social media platforms today overcome time and geographical constraints by enabling companies to engage with potential customers and deepen their relationships. To establish and enhance brand equity, companies are encouraged to foster user engagement and participation in specific topics and discussions on social media platforms. Therefore, this research proposes the following hypothesis:

H₄: Communication influences brand equity among Indian customers.

H_{4.1}: Communication influences brand awareness among Indian customers.

H_{4.2}: Communication influences the brand image among Indian customers.

Electronic Word of Mouth (EWOM), which has a substantial impact on brand equity, has been shown in several recent studies to have a considerable impact on customer interest in items or brands. Additionally, numerous independent scenarios show how EWOM frequently influences a consumer's entire decision-making process. A prior study, however, looked into the idea that the opinions of those who are followed on social media significantly influence the likelihood that the current generation will purchase a particular product. The buying of the products was impacted by SMA. Furthermore, it was stated that, even though EWOM is important for marketing, we should focus on how customers might use social media rather than just studying its communication capabilities. Thus, this research offers the hypothesis that follows:

H₅: Word of Mouth (WoM) influences brand equity among Indian customers.

H_{5.1}: Word of Mouth (WoM) influences brand awareness among Indian customers.

H_{5.2}: Word of Mouth (WoM) influences the brand image among Indian customers.

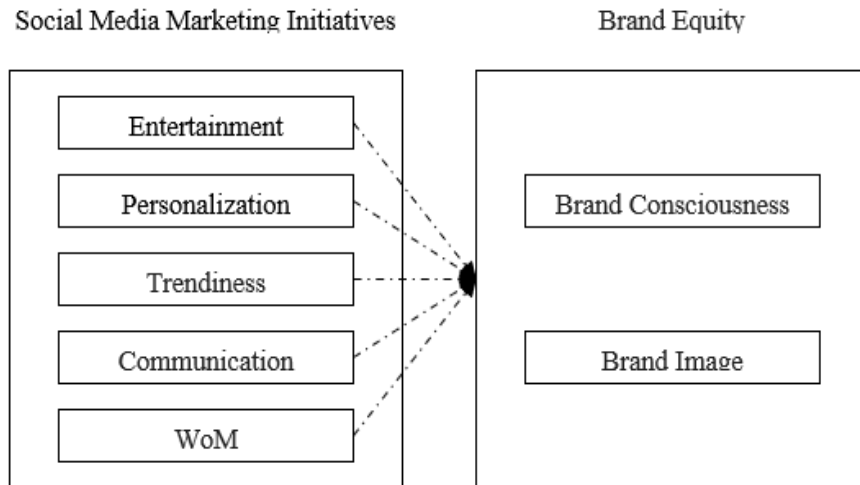


Figure 1: Proposed Framework- Hypothesis

3.4 Methodology

Population and Data Collection: A quantitative investigation was conducted to fulfill the stated objectives. The target audience comprised 330 consumers actively engaged in social media (SM) and possessing various SM identities. A convenience sample of respondents who had utilized one or more social networks was provided with an online-validated questionnaire to collect responses. Internet distribution was chosen due to its ease of setup, distribution, greater accessibility, and cost-effectiveness or availability at no cost. The questionnaire was disseminated by the researchers through various online channels, including Facebook, Google, and

WhatsApp. Measurable findings were applied to social and behavioral variables and required less time. However, individual permission was not obtained as the data were analyzed anonymously.

Method of Analysis: This causal study aimed to understand how social media (SM) marketing initiatives affected consumers' intentions to make further repurchases and build brand equity. The analysis was conducted using the SPSS platform. SPSS was chosen due to its widespread use by researchers as an analytical tool and its ability to provide all the necessary statistical analysis techniques to validate the proposed model.

IV Analysis And Interpretation

This research employs a structural modeling approach using both SPSS and AMOS. Structural modeling was chosen because it is suitable for both exploratory and confirmatory research, and it facilitates the expansion of hypotheses. The SEM-based technique involves two steps: the structural model and the dimension model. SEM is ideal for analyzing multivariable models and allows for the calculation of all parameter estimates.

In this research, a sequential analysis approach is employed. Firstly, a frequency analysis is conducted to examine the demographic characteristics of the responders (social media users). Then, descriptive statistics are performed to identify the maximum responses obtained for the constructs/items, and the validity and reliability of the constructs are assessed. Finally, the proposed hypotheses are tested.

4.2 Demographic Response Measurement

From the data collected from social media users, personal details such as age, gender, level of education, and employment status were obtained. It was found that 74.24% of social media users were male, while the remaining 25.76% were female, indicating a higher representation of male users on social media platforms. Regarding age distribution, the analysis revealed that 40.61% of users fell

within the age range of 21 to 25 years, followed by 32.42% in the age group of 26 to 30 years, 16.6% in the age group of 31 to 35 years, and 10.30% above 36 years. This indicates that a significant portion of social media users are between 21 to 25 years old.

In terms of educational qualifications, approximately 53.33% of individuals using social media were graduates, 26.06% had pursued or completed post-graduation, 17.58% had other educational backgrounds or were pursuing alternative courses, and 3.03% had pursued or completed education below the HSC level. Regarding occupation, around 26.3% of individuals were employed in government positions, while the majority (42.21%) worked in private institutions. Additionally, 23.03% were unemployed, students, housewives, or engaged in other occupations, and 8.48% were self-employed. This indicates that a large proportion of consumers purchasing products through social media were employed in private institutions.

4.3 Descriptive Measurement of Responses

In this research, descriptive statistics were conducted to determine the average number of responses obtained for each of the constructs. Analyzing Table 2: Brand Consciousness: The mean values ranged between 2.73 to 3.08. The maximum mean was observed for the construct "Appearance of the product affects consumer awareness," while the minimum was for "I am also aware of other brands manufactured by the manufacturer."

Brand Image: The mean values ranged between 2.6 to 3.2. The highest mean was found for the construct "Appearance of the product affects consumer awareness," while the lowest was for "It is economical to use this consumer product brand." Entertainment: The mean values ranged between 3.9 to 4.04. The highest mean was observed for the construct "I am attracted by the marketing content novels and stories," while the lowest was for "I am attracted by other people's marketing adventures."

Personalization: The mean values ranged between 3.9 to 4.10. The highest mean was found for the construct "I get a rich personal shopping experience through social media," while the lowest was for "Provides options for a fully planned shopping process." Trendiness: The mean values ranged between 3.7 to 3.9. The maximum mean was observed for the construct "The products that sell on social media sites are trendy," while the minimum was for "Product design follows the up-to-date styles." Communication: The mean values ranged between 2.7 to 3.7. The highest mean was found for the construct "Social media provides the opportunity to make collective buying decisions," while the lowest was for "I feel interpersonal communication while receiving an ad." Word of Mouth: The mean values ranged between 2.7 to 3.08. The maximum mean was observed for the construct "I understand a product better after receiving relevant information about that," while the minimum was for "I believe recommendation made by familiar faces."

Table 2: Descriptive measurement of responses

Items	Constructs	Mean
Brand Consciousness (BC)	I usually watch brand advertisements for branded consumer products	2.7545
	I know the special utility features of this brand	2.8697
	I am also aware of other brands manufactured by the manufacturer	2.7303
	The appearance of the product affects consumer awareness	3.0848
Brand Image	The shape and innovations added to its easiness of usage	3.0152
	Different variants fulfill the needs of various groups of users	3.0455

(BI)	The appearance of the product affects consumer awareness	2.6758
	It is economical to use this consumer product brand	3.2636
Entertainment (ENT)	Marketing videos posted are useful for me.	3.9909
	I am attracted by the marketing content of novels and stories.	3.9939
	I am attracted by other people's marketing adventures.	4.0485
Personalization (PER)	Social media provides flexible shopping times	4.0758
	I get a rich personal shopping experience through social media.	4.1000
	Provides options for a fully planned shopping process.	3.9758
Trendiness (TREND)	Product design follows up-to-date styles.	3.7636
	Product variety makes me purchase.	3.8758
	The products that sell on social media sites are trendy.	3.9758
Communication (COMM)	Social media provides the opportunity to make collective buying decisions.	3.7424
	I feel interpersonal communication while receiving an ad.	2.7545
	I get the desired answer fast when I request further information.	2.8697
Word of Mouth	I believe recommendations made by familiar faces.	2.7303
	I understand a product better after receiving relevant information about that.	3.0848
	I change my opinion, after viewing a negative comment.	3.0152

4.3 Measurement of Model

Initially, measurement was employed to assess the proposed model. The constructs (brand consciousness, brand image, entertainment, personalization, trendiness, communication, word of mouth) were tested for unidimensionality by analyzing the validity and reliability of the data. Internal reliability (Cronbach's alpha) and Dijkstra-Henseler rho were used to determine the reliability of the data constructs, while discriminant validity (FL criterion and HTMT) and AVE (Extracted Average Variance) were utilized to assess the validity of the data constructs.

The threshold value for internal reliability (Cronbach's alpha) and Dijkstra-Henseler rho is above 0.80. A value exceeding 0.8 indicates excellent data reliability, while a value below 0.8 suggests lower reliability. Table 3 indicated that the Cronbach alpha for all constructs was greater than 0.8 except for product reflection and oral message, indicating lower reliability for these constructs. Furthermore, the Dijkstra-Henseler rho for all constructs was 0.80 except for word of mouth, which also indicated lower reliability.

Table 3: Constructs Reliability

Constructs	Cronbach's Alpha	Dijkstra-Henseler rho
Brand consciousness	0.8662	0.8760
Brand Image	0.7187	0.8461
Entertainment	0.9187	0.9324
Personalization	0.8256	0.8385
Trendiness	0.8705	0.8412
Communication	0.8144	0.8140
Word of Mouth	0.6702	0.7285

Convergent validity was assessed for each item using Composite Reliability (CR) and Average Variance Extracted (AVE). According to experts, CR and AVE values should exceed 0.7 and 0.5, respectively. Convergent validity was calculated using the average extracted scores of AVE and CR.

Table 3 establishes an acceptable threshold for composite reliability and convergent validity, with AVE values extracted from all indicators being greater than 0.50 and CR being higher than 0.70. A CR value of not less than 0.70 is considered acceptable and indicates a reliable

measure of internal consistency. Additionally, AVE values exceeding 0.50 demonstrate good convergent validity, implying that the indicators adequately explain a particular concept with more than 50% variation.

Table 4 reveals that the CR value for each construct is greater than 0.7, except for communication and word of mouth, which still fall within the acceptable range. Furthermore, the AVE value for all constructs is greater than 0.5. Consequently, it can be concluded that all the collected responses were valid for further analysis

.Table 4: CR and AVE Analysis

Constructs	CR	AVE
Brand consciousness	0.859	0.714
Brand Image	0.872	0.535
Entertainment	0.8	0.86
Personalization	0.851	0.739
Trendiness	0.791	0.786
Communication	0.458	0.729
Word of Mouth	0.643	0.614

Table 5 shows that the highest value of a variable's correlation with itself was used to establish discriminant validity. Values between 0.90 and 0.95 are considered acceptable, but the HTMT (Heterotrait-Monotrait Ratio) values must fall below 0.85.

In this study, all HTMT ratios are below 0.90, as shown in Table 5, which supports the claim that the discriminant validity of the constructs in this study was validated. Thus, the discriminant validity is satisfied, as all the constructs' HTMT outcomes fall within the acceptable range.

Table 5: HTMT measurement

Constructs	BC	BI	ENT	PER	TREND	COMM	WOM
BC	0	0	0	0	0	0	0
BI	0.8648	0	0	0	0	0	0
ENT	0.3324	0.3724	0	0	0	0	0
PER	0.3416	0.4181	0.9751	0	0	0	0
TREND	0.2889	0.2727	0.5348	0.5451	0	0	0
COMM	0.3339	0.2859	0.6282	0.6154	0.9013	0	0
WOM	0.5992	0.5582	0.6359	0.6717	0.6524	0.7756	0

This study establishes discriminant validity using two approaches: the Fornell-Larcker criterion and the heterotrait-monotrait (HTMT)

ratio. According to the Fornell-Larcker criterion, the values on the top right diagonal should be greater than the relationship with

other parameters, which is equal to the square root of the AVE (Average Variance Extracted). This indicates the discriminant validity of the model. In this research, discriminant validity is satisfied, as all the constructs' Fornell-Larcker

criterion (FLC) outcomes are within the acceptable range. Table 6 provides the FLC values, confirming the discriminant validity of the constructs in the study.

Table 6: FLC measurement

Constructs	BC	BI	ENT	PER	TREND	COMM	WOM	AVE	FLC
BC	0	0.5722	0.0905	0.0899	0.0701	0.0787	0.215	0.7142	Satisfied
BI	0	0	0.0873	0.0999	0.0646	0.0541	0.1795	0.5358	Satisfied
ENT	0	0	0	0.7096	0.223	0.299	0.2345	0.8603	Satisfied
PER	0	0	0	0	0.2117	0.2575	0.2363	0.7394	Satisfied
TREND	0	0	0	0	0	0.5532	0.2036	0.7864	Satisfied
COMM	0	0	0	0	0	0	0.2716	0.7299	Satisfied
WOM	0	0	0	0	0	0	0	0.6134	Satisfied

4.4 Testing of Hypothesis

This study evaluates the significance of relationships between brand consciousness and brand image (dependent variables) and social media initiatives such as entertainment, personalization, communication, trendiness, and word of mouth (independent variables). To determine significance, the p-value should be lower than 0.05. The p-value obtained for the relationship between brand consciousness and social media initiatives is 0.000, indicating a

1% level of confidence. Therefore, a significant relationship exists between brand consciousness and social media initiatives. Similarly, the p-value obtained for the relationship between brand image and social media initiatives is 0.000, also indicating a 1% level of confidence. This confirms a significant relationship between brand image and social media initiatives. From Table 7, it is revealed that the proposed hypotheses are accepted, as the relationships between the variables are significant.

Table 7: Testing of Hypothesis H₁ and H₂

Dependent Variable	Independent Variable	Hypothesis	F-value	P-value	Acceptance
Brand Consciousness	Entertainment	H ₁₋₁	2.073	.000	Accepted
	Personalization	H ₂₋₁			
	Communication	H ₃₋₁			
	Trendiness	H ₄₋₁			
	Word of Mouth	H ₅₋₁			
Brand Image	Entertainment	H ₁₋₂	1.995	.000	Accepted
	Personalization	H ₂₋₂			
	Communication	H ₃₋₂			
	Trendiness	H ₄₋₂			
	Word of Mouth	H ₅₋₂			

V CONCLUSION

5.1 Discussion

This investigation aimed to examine the effects of social media (SM) marketing initiatives—such as entertainment, personalization, communication, word of mouth (WOM), and trendiness—on brand equity, which encompasses brand image and brand consciousness, as well as customers' intention to make repurchases. The research model focused on five key actions. According to the primary and supporting hypotheses, SM marketing initiatives affect brand equity, brand image (BI), and brand consciousness (BC).

The analysis's findings indicated that entertainment, personalization, trendiness, communication, and word of mouth significantly predicted brand consciousness and brand image. Businesses are increasingly using SM initiatives to convey crucial brand-related messages, building a strong and positive BI and BC in customers' minds, as highlighted in the reviewed literature. This reflects the growing significance of SM initiatives in advertising.

Consistent with other research, the findings show that current information and updates reinforce consumers' favorable perceptions of the brand. Additionally, it is suggested to promote user communication and engagement on specific topics and discussions on SM platforms to foster and strengthen the relationship between the client and the business.

5.2 Implication

For executives and decision-makers at businesses, this study offers several practical applications. The findings suggest that marketing managers should focus on trendiness to raise consumer recognition of their company. Efforts should be directed towards regularly posting up-to-date content on various social media profiles to maintain trendiness. Additionally, businesses must continuously communicate their latest offers, products, and services. Airlines, for example, should work on

creating more amusing and engaging content for social platforms. Visuals and videos can attract users and maintain their interest in the business. Providing consumers with adequate space to express their opinions to other customers and addressing each of their demands personally can enhance brand recognition and image. The present study also provides a deeper understanding of the dimensions and factors influencing social media initiatives in the Indian business context. This knowledge can assist managers in refining their social platform strategies to improve brand equity and consumer repurchase intent.

5.3 Limitations and Recommendations

The evaluated data showed that social media (SM) initiatives significantly influence brand equity, indicating that various factors affect brand equity, which may be examined either separately or alongside SM activities. This study specifically looked at five SM marketing practices, and future research may explore other initiatives like advertising. Given that brand image and brand consciousness were used to determine brand equity, it is recommended that further studies include additional aspects such as brand loyalty and quality.

The impact of Word-of-Mouth (WOM) and entertainment on brand image (BI) and brand consciousness (BC) yielded findings that conflict with some existing literature. However, despite the small sample size, the novelty of the current survey justified its execution. To fully understand these results in the Indian context, additional research with a larger sample size is necessary. Future research could also focus on a single SM activity and consider cultural differences or socioeconomic status as moderating factors when examining the effects of SM advertising programs on brand image and consciousness.

Reference

1. Seo, E.J. and Park, J.W., 2018. A study on the effects of social media marketing activities on brand equity and customer response in the airline industry. *Journal of Air Transport Management*, 66, pp.36-41.
2. Ebrahim, R.S., 2020. The role of trust

- in understanding the impact of social media marketing on brand equity and brand loyalty. *Journal of Relationship Marketing*, 19(4), pp.287-308.
3. Zarei, A., Farjoo, H. and Bagheri Garabollagh, H., 2022. How do Social Media Marketing Activities (SMMAs) and brand equity affect the customer's response: does overall flow moderate it? *Journal of Internet Commerce*, 21(2), pp.160-182.
 4. Hafez, M., 2022. Unpacking the influence of social media marketing activities on brand equity in the banking sector in Bangladesh: A moderated mediation analysis of brand experience and perceived uniqueness. *International Journal of Information Management Data Insights*, 2(2), p.100140.
 5. Rakshit, S., Islam, N., Mondal, S. and Paul, T., 2022. An integrated social network marketing metric for business-to-business SMEs. *Journal of Business Research*, 150, pp.73-88.
 6. Hanaysha, J.R., 2022. Impact of social media marketing features on consumer's purchase decision in the fast-food industry: Brand trust as a mediator. *International Journal of Information Management Data Insights*, 2(2), p.100102.
 7. Majeed, M., Asare, C., Fatawu, A. and Abubakari, A., 2022. An analysis of the effects of customer satisfaction and engagement on social media on repurchase intention in the hospitality industry. *Cogent Business & Management*, 9(1), p.2028331.
 8. Masuda, H., Han, S.H. and Lee, J., 2022. Impacts of influencer attributes on purchase intentions in social media influencer marketing: Mediating roles of characterizations. *Technological Forecasting and Social Change*, 174, p.121246. [9] Jacobson, Jenna; Gruzd, Anatoliy; Hernández-García, Ángel (2019). Social media marketing: Who is watching the watchers? *Journal of Retailing and Consumer Services*, (), S0969698918307744-. Doi: 10.1016/j.jretconser.2019.03.001
 9. Catherine Demangeot Amanda J. Broderick, (2016), "Engaging customers during a website visit: a model of website customer engagement", *International Journal of Retail & Distribution Management*, Vol. 44 Iss 8 pp. <https://doi.org/10.1108/IJRDM-08-2015-0124>
 10. Lucia-Palacios, Laura; Pérez-López, Raúl; Polo-Redondo, Yolanda (2016). Cognitive, affective, and behavioral responses in mall experience. *International Journal of Retail & Distribution Management*, 44(1), 4–21. doi:10.1108/IJRDM-05-2014-0061
 11. Voorveld, Hilde A. M.; van Noort, Guda; Muntinga, Daniël G.; Bronner, Fred (2018). Engagement with Social Media and Social Media Advertising: The Differentiating Role of Platform Type. *Journal of Advertising*, (), 1–17. doi:10.1080/00913367.2017.1405754
 12. [Dens, Nathalie; De Pelsmacker, Patrick; Goos, Peter; Aleksandrov, Leonids; Martens, David (2018). How consumers' media usage creates synergy in advertising campaigns. *International Journal of Market Research*, (), 147078531775133-. doi:10.1177/1470785317751333
 13. Chirumalla, Koteshwar; Oghazi, Pejvak; Parida, Vinit (2017). Social media engagement strategy: Investigation of marketing and R&D interfaces in the manufacturing industry. *Industrial Marketing Management*, (), S0019850117301396-. doi:10.1016/j.indmarman.2017.10.001
 14. Sano, Yukie; Takayasu, Hideki; Havlin, Shlomo; Takayasu, Misako; Preis, Tobias (2019). Identifying long-term periodic cycles and memories of collective emotion in online social media. *PLOS ONE*, 14(3), e0213843-. doi:10.1371/journal.pone.0213843
 15. Yang, Xue (2019). Consumers' decisions in social commerce: the role of <i>guanxi</i> elements. *Asia Pacific Journal of Marketing and Logistics*, (), APJML-04-2018-0139-. doi:10.1108/APJML-04-2018-0139
 16. Ansari, S., Ansari, G., Ghori, M. U., &Kazi, A. G. (2019). Impact of Brand Awareness and Social Media Content

- Marketing on Consumer Purchase Decision. *Journal of Public Value and Administrative Insight*, 2(2), 5–10. <https://doi.org/10.31580/jpvai.v2i2.896>
17. Anggraini V. A., & Hananto A. (2020). The role of social media marketing activities on customer equity drivers and customer loyalty. *AFEBI Management and Business Review*, 5(01), 1. <https://doi.org/10.47312/ambr.v5i01.299>
18. Xiao, Y., Wang, L., & Wang, P. (2019). Research on the influence of content features of short video marketing on consumer purchase intentions. *Proceedings of the 2019 4th International Conference on Modern Management, Education Technology and Social Science (MMETSS 2019)*. <https://doi.org/10.2991/mmetss-19.2019.82>
19. Jacobson, Jenna; Gruzd, Anatoliy; Hernández-García, Ángel (2019). Social media marketing: Who is watching the watchers? *Journal of Retailing and Consumer Services*, (), S0969698918307744–. doi:10.1016/j.jretconser.2019.03.001
20. Mishra, Aditya Shankar (2019). Antecedents of consumers' engagement with brand-related content on social media. *Marketing Intelligence & Planning*, (), MIP-04-2018-0130–. doi:10.1108/MIP-04-2018-0130
21. Hassan SH, Teo SZ, Ramayah T, Al-Kumaim NH (2021) The credibility of social media beauty gurus in young millennials' cosmetic product choice. *PLoS ONE* 16(3): e0249286. <https://doi.org/10.1371/journal.pone.0249286>
22. Fan M, Qalati SA, Khan MAS, Shah SMM, Ramzan M, Khan RS (2021) Effects of entrepreneurial orientation on social media adoption and SME performance: The moderating role of innovation capabilities. *PLoS ONE* 16(4): e0247320. <https://doi.org/10.1371/journal.pone.0247320>

SELF-HELP GROUPS: A SPRINGBOARD FOR WOMEN'S ECONOMIC EMPOWERMENT AND SOCIAL TRANSFORMATION

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This paper highlights the significance of Self Help Groups (SHGs) in empowering women. The Government of India has implemented numerous schemes aimed at reducing poverty and promoting gainful employment, paving the way for the SHG movement to empower poor women and eradicate poverty in India. The formation of Self Help Groups (SHGs) is an initiative aimed at enabling the poor to actively participate in the developmental process. SHGs serve as an effective medium for inculcating saving habits among poor women. Economic independence and education of women are pivotal for achieving self-reliance. Women SHGs represent a transformative intervention that diverges significantly from most current programs. They are an effective strategy for poverty alleviation, women's development, and social empowerment. Women SHGs have elevated the status of women as active decision-makers and beneficiaries in democratic, economic, social, and cultural spheres. They have also encouraged women to actively partake in the socio-economic progress of rural India. By being part of SHGs, women can better address health issues, financial crises, and family disputes. SHGs are expected to bring about a significant change in the borrowing habits of households.

Keywords: *Self-Help Groups, Financial Independence, Social Empowerment, Economic Progress*

Introduction

The concept of Self Help Groups (SHGs) began with the Grameen Bank of Bangladesh, founded by Prof. Mohammed Yunus. This innovative approach inspired similar efforts in India, where NABARD (National Bank for Agriculture and Rural Development) initiated the SHG movement in 1986-87. SHGs aim to empower marginalized communities, particularly the poor, by involving them in the developmental process.

The economic and social exclusion faced by the underprivileged, due to the failure of formal credit systems including cooperatives, led to the formation of SHGs. This model reflects the neo-liberal development paradigm, encouraging individuals to take control of their lives and build a better future through self-reliance and sustainable practices. Recognizing the potential of SHGs to reduce poverty and promote employment, the Indian government

introduced various supportive schemes. Achieving gender equality and empowering women are globally recognized as essential for development. Women are integral to societal growth, and history has consistently shown that no progress is sustainable without their involvement. Numerous studies emphasize that social and economic empowerment of women significantly contributes to economic advancement.

In essence, empowering women through SHGs contributes to building a more inclusive and equitable society, benefiting not only individuals but entire communities. Women Self Help Groups (SHGs) have empowered women to play active roles as decision-makers and contributors in various aspects of life, including democratic, economic, social, and cultural domains. They have motivated women to participate in rural India's socio-economic progress. Despite constitutional equality, traditional and legal frameworks often

marginalize women, treating them as dependent or incapable. This systemic exclusion leaves women, especially those without male support, more vulnerable and highlights the need for initiatives like SHGs to foster independence and resilience. Women Self Help Groups (SHGs) have significantly contributed to empowering women by encouraging their active involvement in decision-making and participation across various spheres of life, such as democratic, economic, social, and cultural domains. These groups have played a crucial role in motivating women to engage in the socio-economic development of rural India, fostering progress and self-reliance among women.

In India, although women are constitutionally and legally equal to men, they still face challenges in achieving social and economic stability. Poverty and lack of education have been identified as primary barriers to their progress, leaving many women marginalized. Indian women often lack organization and face limited opportunities to participate in social and economic activities. Issues like inadequate skills, low wages, starvation, poor literacy levels, and exposure to domestic violence further hinder their empowerment. This disparity is particularly evident in South Asian developing nations like India. SHGs are primarily composed of small, homogeneous groups of rural poor, often women, who contribute small savings regularly. These contributions create a common fund, which is used to provide loans without requiring collateral. Members can access loans for emergency needs or livelihood activities, based on collective decisions. By fostering financial independence and social empowerment, SHGs have become a key tool for uplifting economically disadvantaged communities in India. Self Help Groups (SHGs) have emerged as an effective solution to empower women and promote collective progress. These groups not only benefit individual women but also positively impact their families and communities. Through SHGs, women come together to save, manage finances, and access collateral-free loans, fostering self-reliance and sustainable growth. Such efforts address poverty alleviation, enhance women's development, and drive social empowerment. Participation is central to gender

empowerment. Whether through voting, expressing opinions, or holding political office, active involvement plays a crucial role in enabling women to influence decisions and achieve equality. SHGs represent a transformative approach, distinct from many traditional programs, by emphasizing collective action in development. By enabling women to participate actively in shaping their lives and communities, SHGs offer a powerful strategy for poverty reduction and holistic empowerment. Although Indian women are constitutionally and legally granted equality with men, societal norms and traditional frameworks often continue to treat women as dependent or incapable of making decisions. These systemic inequalities leave women vulnerable, especially those without male support, further marginalizing them in social and economic contexts. The formation of SHGs addresses these challenges by creating a platform for women to collaborate, support one another, and achieve financial independence. By pooling resources and making collective decisions, SHGs empower women to overcome barriers and participate meaningfully in the developmental process.

Process of empowerment

- **Unlocking Potential:** Empowerment allows individuals or groups to gain power, authority, and influence, and use it confidently in interactions with others, society, or institutions. It's about expressing and utilizing that inner strength.
- **Building Skills:** It encourages people to acquire knowledge and develop abilities to overcome life's challenges, fostering growth both individually and within the community.
- **Equal Importance for Both Genders:** Empowering women doesn't mean neglecting men; rather, it's crucial for both genders to receive equal opportunities for empowerment.
- **Workplace Application:** In professional settings, empowerment involves managers using their authority effectively, which improves overall productivity and team efficiency.
- **Opportunities for Marginalized Groups:** It involves helping disadvantaged individuals

access basic opportunities, either through their own efforts or with support from others who can share access. The goal is to nurture self-reliance and reduce dependence on aid.

- **Economic Growth:** Economic empowerment focuses on encouraging self-help initiatives among underprivileged groups, rather than relying on welfare. It's especially vital for historically disadvantaged populations, like those in previously colonized nations.
- **Addressing Social Discrimination:** Sociological empowerment aims to include people excluded from decision-making due to factors like race, gender, religion, or disability.
- **Promoting Women's Contributions:** Assigning women roles traditionally held by men empowers them economically and socially, giving them greater self-respect and confidence. Simply involving women more actively in community roles can lead to significant positive changes.
- **Empowerment is all about creating opportunities, fostering confidence, and ensuring inclusivity, whether in personal, social, or professional contexts.**

SHGs women's empowerment

Women Self Help Groups (SHGs) are highlighted as powerful grassroots initiatives to drive socio-economic change and uplift women in India. In recent years, Self-Help Groups (SHGs) have become a key focus for development programs. The idea of "empowering women" has been at the centre of discussions about progress since the 1980s. Helping women gain better status and empowering them is seen as crucial for achieving gender equality in society. Microfinance, offered through SHGs, gives women the opportunity to save money and build confidence. It has also become an important source of loans for poor women, who were once seen as not creditworthy by banks. Before diving into research about how our actions influence women's empowerment, it's important to first help participants understand what being "empowered" truly means to them. Here are the key aspects of an empowered woman:

- **Self-worth and Dignity:** She values herself and knows she deserves respect (personal level).
- **Bodily Integrity:** She has control over her own body, free from harm or unwanted pressures (individual and societal level).
- **Control Over Resources:** She can influence decisions about money, property, and resources both at home and in public life (community and relationships level).
- **Solidarity with Other Women:** She sees the power of women working together and supports collective effort for shared goals (relationship level).

Objectives of the SHGs

- Create a supportive environment through positive economic and social activities to help women reach their full potential.
- Ensure women have equal opportunities to participate in and make decisions in social, political, and economic matters at the national level.
- Develop and strengthen partnerships with civil society, especially organizations focused on women's welfare.
- Provide women with equal access to healthcare, quality education, career guidance, fair wages, employment opportunities, safety in workplaces, public office, and social security.
- Work towards ending all forms of violence and discrimination against women and girl children.
- Enhance the legal framework to eliminate all forms of discrimination faced by women. Integrate gender perspectives into the development process at all levels.
- Shift societal and community attitudes through the joint participation of both men and women in transformative activities. Guarantee women full and equal enjoyment of all rights and freedoms across all spheres: political, economic, social, cultural, and civil.

Literature review

World Bank report (1991) A noted that women played a significant role in India's dairy and forest-based small enterprises. Empowerment is not about excluding men but ensuring equality for both genders. It involves building awareness, enhancing decision-making power, and creating opportunities through knowledge and experience.

Mahendra, Varman (2005): SHGs, through their microfinance programs, encourage better banking habits among their members. Leadership roles within SHGs positively influence members to open and use bank accounts more effectively. **SriRam. M.S, (2005):** Since the 1990s, the government has taken steps to make financial services more accessible to the poor. These initiatives help ensure resources reach those in need in a sustainable way. **Agrawal, Bina (2010):** Participation—like voting, sharing opinions, or running for leadership positions—is the most effective way to empower women. Political participation plays a key role in helping people gain influence and equality. **Kumar, Vinod (2022):** To address this, women's empowerment focuses on social, political, and economic development. Self-Help Groups (SHGs) are a key strategy for rural women's economic empowerment, enabling them to start businesses and improve their livelihoods. This study explores the impact of SHGs on rural women's economic empowerment.

Poonguzhali R. L. (2023): To address this, Microfinance aims to alleviate poverty by providing financial services to disadvantaged communities, promoting self-employment, income generation, and economic growth. This study examines the impact of microfinance on poverty reduction and women's empowerment, highlighting the role of Self-Help Groups (SHGs) in bringing about positive change in the lives of the poor. The study highlights the crucial role of SHGs in promoting women's economic and social empowerment and in combating poverty. Reviewing past studies is essential to understand the impact of SHGs. This research focuses on examining how Self-Help Groups (SHGs) impact the economic and social empowerment of underprivileged women. It also aims to identify key factors contributing to socio-economic and political empowerment. Poverty eradication and

women's empowerment are global priorities, as many studies reveal that empowering women leads to reduced poverty and enhanced national economic development. To address this, the Indian government introduced schemes to empower poor women, provide financial support, and encourage employment opportunities—laying the foundation for the SHG movement in India.

Plan of research

During the planning phase, clear objectives were established to guide the research. Based on these objectives, the study's focus was defined, and the methods of investigation along with the tools to be utilized were determined. The research relies secondary data. Secondary data was gathered through an extensive review of literature, articles, and reports, as well as from sources like newspapers, district statistics department records, research reports, and online resources.

Objectives of the study

- 1) Self-Help Groups play a vital role in promoting women's economic empowerment and entrepreneurship. SHG model enhances women's economic independence and self-reliance.
- 2) Self-Help Groups are instrumental in economically empowering women and reducing poverty. SHGs provide a platform for women to access financial services, build assets, and improve their economic well-being.
- 3) SHGs play a pivotal role in bringing about social transformation, promoting women's rights and empowerment. SHG model is instrumental in driving social transformation, enabling women to break free from societal constraints.
- 4) SHGs promote social transformation by fostering a sense of community, solidarity, and collective empowerment among women.

Aim of the study- This study aims to thoroughly examine the influence of Self-Help Groups (SHGs) on women's empowerment, economic improvement, social transformation and overall well-being. Here's a simplified breakdown of the objectives:

- 1) Gather information about the Self-Help Group (SHG) model.
- 2) Understand its functions in promoting self-reliance.
- 3) Analyze the recent scenario of SHGs in India.

- H0 Self-help groups are not significantly related to social transformation for women.

Statistical tools

Study Basis: The research is based on secondary sources, which means the data is collected from existing sources rather than being collected firsthand.

Data Sources: The secondary data is obtained from the official website of:

- National Rural Livelihoods Mission (NRLM)
- Ministry of Rural Development

Statement of the problem- The widespread issues of poverty, illiteracy, and unemployment in the country have led economic planners to design various programs aimed at reducing poverty. This study observing the actual benefits experienced by Self-Help Group (SHG) members.

Hypothesis of the study

Hypothesis 1:

- H1 Self-help groups model is to improve women’s economic empowerment.
- H0 Self-help groups model is not to improve women’s economic empowerment.

Hypothesis 2:

- H1 Self-help groups are significantly related to social transformation for women.

Methodology: A simple study is conducted, which likely involves:

- Reviewing existing literature and data on SHGs.
- Analyzing the information collected from NRLM and Ministry of Rural Development websites.
- Summarizing the findings to provide an overview of the SHG model and its current status in India.

Analysis with interpretation

Table 1

DASHBOARD			
No. of Blocks covered	SHGs Promoted	Households mobilised into SHGs	No. of Community cadre
7617	9175483	102920576	14981624

Sources: <https://nrlm.gov.in/> up to on dated: 10/03/2025

A table 1 is titled "DASHBOARD" and contains four columns with corresponding data. Which is show that:

promoted, it highlights the significant efforts made to form and support these groups across various regions.

1. No. of Blocks covered: This column represents the total number of administrative blocks that are covered by the SHG initiatives. Blocks are administrative divisions within a district, and covering 7617 blocks indicates the extensive reach of the SHG movement.
2. SHGs Promoted: This column shows the total number of Self Help Groups (SHGs) that have been established. With over 9 million SHGs promoted, it highlights the significant efforts made to form and support these groups across various regions.
3. Households mobilized into SHGs: This column indicates the total number of households that have been mobilized and included in the SHGs. Over 102 million households' participation in SHGs demonstrates the widespread involvement and impact of these groups on families across the country.
4. No. of Community cadre: This column shows the total number of community cadre members

involved in the SHG initiatives. The community cadre refers to individuals who work at the grassroots level to support and manage the SHG activities. Having nearly 15 million community cadres reflects the strong human resource network supporting the SHGs.

Testing of hypothesis

In summary, this table provides an overview of the scale and reach of the SHG initiatives, emphasizing their extensive coverage, the large number of groups and households involved, and the robust community support structure in place. So concluded that is

Hypothesis 1:

- H1 Accepted (Self-help groups model is to improve women's economic empowerment.)
- H0 Rejected (Self-help groups model is not to improve women's economic empowerment.)

Hypothesis 2:

- H1 Accepted (Self-help groups are significantly related to social transformation for women.)
- H0 Rejected (Self-help groups are not significantly related to social transformation for women.)

Limitations of research

The study is based on Self-Help Groups (SHGs), so the findings might not fully represent other regions or settings. The report uses secondary data from published sources. Certain challenges exist in the study. While SHGs have proven to be a successful and effective model for providing credit to the poor, other credit providers, such as Microfinance Institutions (MFIs)—both nonprofit and for-profit—also play a significant role in this sector. This study focuses specifically on analyzing the socio-economic characteristics of SHG members and assessing how membership in SHGs impacts their social empowerment.

Conclusion

The Government of India has launched several

programs to fight poverty and create employment opportunities. These efforts have significantly contributed to the rise of the Self-Help Group (SHG) movement, which focuses on empowering poor women and eradicating poverty. SHGs are designed to involve underprivileged individuals in the development process. They play a crucial role in promoting a culture of saving among women facing economic hardships. Financial independence and education are key to achieving self-reliance, and SHGs are a powerful tool for empowering women economically, socially, and culturally. Unlike many existing programs, SHGs stand out as a game-changing initiative. The Indian Constitution provides women with equality, bans discrimination, ensures equal pay, and guarantees maternity relief, among other rights. Women today actively contribute to education, sports, politics, media, science, and business. Initiatives such as Self-Help Groups (SHGs) and NGOs like SEWA have advanced women's rights and economic participation. Key pathways to empowerment include granting land rights, which provide financial independence and tackle gender inequality, and assigning traditionally male responsibilities, fostering women's confidence and societal contributions. Women play a multitude of roles in life, contributing across various fields. While strides have been made toward women's empowerment, many societal barriers remain entrenched. Issues like female infanticide, restricted education for girls post-puberty, child marriages, dowry practices, workplace harassment, and rising crimes against women reflect the ongoing inequalities. These groups have uplifted women by transforming them into active participants in decision-making processes and by allowing them to reap benefits in various aspects of life, including democracy, the economy, and social and cultural spheres. Women involved in SHGs actively contribute to the rural development of India and are better equipped to tackle issues like health concerns, financial difficulties, and domestic conflicts. Furthermore, SHGs are expected to significantly improve household borrowing patterns, fostering more sustainable financial practices among families. This initiative highlights the importance of women's participation in driving India's socio-economic progress.

That's why there's still much work to be done to transform attitudes, remove biases, and unlock the vast potential that women can bring to society. It's a journey that requires persistent efforts, not only through policies but also through changing mindsets and fostering respect for women in every sphere of life. The road ahead is long, but every step counts.

References

1. National Policy for the Empowerment of Women (2001).
2. World Bank report in 1991.
3. Agrawal, B. (2010). "Rethinking agricultural production collectivities", *EPW Economic & Political Weekly* February 2010, vol 14 no 9.
4. Kumar, V. (2022). "Effect of Self Help Group in Economic Empowerment of Rural Women in Himachal Pradesh.", *Indiana Journal of Humanities and Social Sciences*, 3(5), 68-73.

5. Mahendra V. (2005). "Impact of Self-Help Groups on Formal Banking Habits", *Economic and Political Weekly* January 2005 Vol. 40, Issue No. 17.
6. MS S.R. (2005). "Microfinance and the state: Exploring areas and structures of collaboration.", *Economic and Political Weekly*.
7. R. L. Poonguzhali (2023). "Micro Finance A Catalyst for Poverty Reduction and Women's Empowerment.", *International Journal of Research Publication and Reviews*, Vol 4, no 9.

Website

1. <https://nrlm.gov.in/>
2. <https://womenempowerment.org/>
3. <https://wep.gov.in/>
4. <https://www.unwomen.org/>
5. <https://aajeevika.gov.in/>

NTPC'S BADKAGAON COAL MINE REVIVAL: MODEL FOR REHABILITATION & RESETTLEMENT IN THE MINING INDUSTRY

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Abstract: This research explores the decline and potential revival of the Badkagaon coal mining industry through a comprehensive analysis of historical data, environmental impact assessments, and socio-economic studies. The findings reveal a substantial decline in coal production, impacting employment trends and triggering socio-economic challenges for mining-affected villages. NTPC's corporate social responsibility initiatives offer a glimmer of hope, emphasizing community development and environmental sustainability. Global perspectives on mining rehabilitation provide insights into adaptive strategies, while the evolving global energy landscape poses a challenge that demands forward-looking solutions. This paper contributes to the discourse on sustainable development, offering lessons for regions grappling with industry decline worldwide.

Keywords: Badkagaon coal mining, rehabilitation, socio-economic impact, environmental sustainability, NTPC, global perspectives.

Introduction: The Badkagaon coal mining industry, once the bedrock of India's energy foundation, now stands at a critical juncture, grappling with challenges that have cast shadows of uncertainty over its future. The trajectory of this industry, which has been interwoven with the nation's economic development, now necessitates a profound reevaluation. This research endeavors to unravel the intricate layers of complexities that have contributed to the industry's decline and, more crucially, explores the potential avenues for a renaissance through the prism of comprehensive rehabilitation and resettlement strategies. At the heart of this narrative lies Badkagaon, a region that has been synonymous with coal abundance, powering not just local economies but also driving India's energy ambitions. Over the years, the coal mines of Badkagaon have played a pivotal role in the generation of thermal power, supplying a substantial portion of the energy needed to sustain the nation's rapid growth. However, recent years have witnessed a decline in the

industry's fortunes, posing a formidable challenge to the energy security paradigm. Data from the Indian Ministry of Coal starkly illustrates the industry's downturn. Historically a significant contributor to the country's coal production, Badkagaon has witnessed a decline in coal output over the past decade. In 2010, the region contributed a substantial 12% to India's total coal production, but by 2020, this figure had dwindled to a mere 7%. This sharp contraction in production not only mirrors the depleting coal reserves but also underscores the urgent need for strategic interventions to avert a full-blown crisis in the energy sector. Compounding the issue, environmental concerns have emerged as a pivotal force driving the shift away from traditional coal-based power generation. The global push for sustainable practices and the commitment to reduce carbon emissions have led to a reevaluation of the environmental impact of coal mining. The coal mines of Badkagaon, once heralded as economic engines, now face scrutiny for their ecological footprint. Studies

such as the "Environmental Impact Assessment of Coal Mining: A Case Study on Badkagaon Region" by the Center for Environmental Studies highlight the ecological ramifications of coal mining activities in the region. The report underscores the adverse effects on air and water quality, biodiversity loss, and soil degradation, providing a stark reality check on the environmental toll of sustained coal extraction. Simultaneously, the global energy landscape is undergoing a paradigm shift. The rise of renewable energy sources and advancements in technology are reshaping the dynamics of power generation. The International Energy Agency's (IEA) World Energy Outlook projects a substantial increase in renewable energy capacity, estimating that by 2040, renewables will constitute nearly 40% of the world's total power generation. This shift poses a dual challenge to Badkagaon's coal mining industry – not only does it face internal pressures of depletion and environmental scrutiny, but it is also contending with the external force of an evolving global energy matrix.

In the midst of this confluence of challenges, the communities around Badkagaon are grappling with the socio-economic fallout of the industry's decline. The mining sector has traditionally been a robust source of employment, directly supporting livelihoods in the region. However, as mines scale down operations, the cascading effect is felt in the local economy. The Indian National Sample Survey (NSS) data reveals a concerning trend – a decline in employment in the mining sector, impacting not only those directly employed in the mines but also ancillary industries that depend on mining-related activities.

This socio-economic strain extends beyond mere numbers. The displacement of communities, a phenomenon often associated with declining industries, is a harsh reality faced by many in Badkagaon. The displacement has not only disrupted lives but has also led to a profound sense of disconnection from the land that was once a source of sustenance. The human dimension of this decline is vividly captured in studies such as "Socio-economic Impact Assessment of Mining Affected Villages in Badkagaon" by the Institute for Human Development, which documents the multifaceted challenges faced by communities grappling with the downturn of the mining

industry. It is within this crucible of challenges that the National Thermal Power Corporation (NTPC) steps into focus. NTPC, a central player in India's power generation landscape, has undertaken initiatives to address the socio-economic and environmental impact of the declining Badkagaon coal mining industry. The case study of NTPC in this context is not just an exploration of corporate strategies; it is a microcosm of the larger effort required to navigate the delicate balance between economic progress, environmental stewardship, and social well-being. The relevance of this research extends beyond the local context of Badkagaon; it reverberates in the broader discourse on sustainable development and energy security. The decline of traditional energy sources and the imperative to transition to cleaner alternatives demand a recalibration of strategies for regions, industries, and communities intricately tied to coal extraction. As we scrutinize the case of Badkagaon, we extract lessons that transcend borders, offering insights into the challenges and opportunities that lie ahead for coal-dependent regions worldwide.

Literature review

In navigating the uncharted terrain of industry decline and potential revival, the foundation laid by existing literature becomes an indispensable guide. Previous studies on coal mining, environmental impact assessments, and rehabilitation strategies form the scaffolding upon which this research stands. Works such as "Coal Mining and Sustainable Livelihoods in Jharkhand" by the International Journal of Scientific & Engineering Research provide a nuanced understanding of the interplay between mining activities and community livelihoods, offering a backdrop against which the Badkagaon case can be juxtaposed.

Historical Perspective of Badkagaon Coal Mining: To understand the historical trajectory of the Badkagaon coal mining industry, studies such as "A Historical Perspective of Coal Mining in India" by the Indian Journal of History of Science and "Mining and Its Impact on Tribal Livelihood: A Case Study from Sonbhadra District of Uttar Pradesh, India" provide crucial insights. These works contextualize the evolution of coal mining in

India, highlighting the pivotal role played by regions like Badkagaon in the nation's energy narrative. They offer a backdrop against which the specific challenges faced by Badkagaon can be understood, emphasizing the need for a nuanced approach to industry decline and revival.

Environmental Impact Assessments (EIA):

The environmental repercussions of coal mining in Badkagaon have been explored in studies such as "Environmental Impact Assessment of Coal Mining: A Case Study on Badkagaon Region" by the Center for Environmental Studies. This work meticulously examines the ecological footprint of mining activities, detailing the impact on air quality, water resources, biodiversity, and soil health. The findings underscore the urgent need for sustainable practices in the industry and provide a foundation for evaluating the effectiveness of rehabilitation and resettlement strategies.

Socio-Economic Impact on Local Communities:

The human dimension of the industry's decline is vividly captured in studies like "Socio-economic Impact Assessment of Mining Affected Villages in Badkagaon" by the Institute for Human Development. This research delves into the multifaceted challenges faced by communities grappling with displacement and economic downturn. It offers a comprehensive view of the socio-economic fabric of the region, emphasizing the interconnectedness between industry health and community well-being.

Global Perspectives on Mining Rehabilitation:

Beyond the borders of Badkagaon, studies such as "Mining Rehabilitation in the Global Context" by the International Journal of Mining Reclamation and Environment provide a comparative lens. This work examines successful rehabilitation strategies worldwide, offering a benchmark against which the initiatives of NTPC can be evaluated. It underscores the importance of adaptive and context-specific approaches in ensuring the long-term sustainability of mining regions.

Role of National Thermal Power Corporation (NTPC):

The case study of NTPC in Badkagaon's coal mining landscape is

a focal point of this research. Works like "Corporate Social Responsibility Initiatives of NTPC: A Case Study" shed light on NTPC's broader approach to corporate social responsibility, providing context to the corporation's role in the specific context of Badkagaon. Understanding NTPC's initiatives is pivotal in evaluating the potential for rehabilitation and resettlement strategies to catalyze industry revival.

Analysis of literature review

The existing literature provides a rich tapestry of information, offering a holistic understanding of the challenges faced by the Badkagaon coal mining industry. Several key themes emerge upon analysis:

Multifaceted Challenges: The reviews collectively underscore the multifaceted nature of challenges faced by the Badkagaon coal mining industry. Depletion of coal reserves, environmental degradation, socio-economic displacement, and changing global energy dynamics collectively contribute to the industry's decline. This holistic understanding is crucial for devising comprehensive strategies that go beyond mere economic revival.

Environmental Imperatives: Environmental impact assessments reveal the urgency of addressing ecological concerns. The environmental cost of coal mining, as evidenced in Badkagaon, necessitates a paradigm shift towards sustainable practices. Any rehabilitation and resettlement strategy must align with environmental conservation goals to ensure a lasting and responsible revival.

Human Dimension of Decline: The socio-economic impact assessments bring to the forefront the human stories behind the statistical decline of the industry. Displacement and economic downturns have tangible and far-reaching consequences on local communities. Any rehabilitation strategy must be attuned to the social fabric, ensuring that the revival is not only economic but also socially inclusive and sustainable.

Global Benchmarks: Comparative studies on global mining rehabilitation initiatives provide a valuable benchmark. Successful case studies

worldwide serve as sources of inspiration, showcasing the adaptability and innovation required for sustainable industry revival. NTPC's strategies can benefit from drawing parallels with global best practices.

Role of NTPC: The case study on NTPC unveils the corporation's initiatives and interventions. Understanding NTPC's corporate social responsibility endeavors and their specific actions in Badkagaon is pivotal. The reviews provide a foundational understanding, but a more granular analysis is required to gauge the effectiveness of NTPC's strategies and their potential for industry revival.

Research gap

While the existing literature provides a comprehensive overview of the challenges faced by the Badkagaon coal mining industry and offers insights into potential strategies, several research gaps warrant attention:

Effectiveness of NTPC's Strategies: While the role of NTPC is acknowledged, a detailed analysis of the effectiveness of its specific rehabilitation and resettlement strategies is lacking. To bridge this gap, a meticulous examination of NTPC's actions in Badkagaon, their impact on the community and the environment, and the outcomes achieved is imperative. This granular analysis is crucial for extracting actionable insights that can inform future strategies.

Long-Term Sustainability: The literature provides glimpses into the socio-economic and environmental impacts of the industry's decline. However, there is a notable gap in understanding the long-term sustainability of potential revival strategies. What mechanisms ensure that the industry, once revived, remains resilient and adaptive to future challenges?

Community Engagement and Empowerment: While the socio-economic impact assessments touch upon the challenges faced by local communities, there is a gap in understanding the role of community engagement and empowerment in the revival process. How can communities become active stakeholders in the revival journey, contributing not only to their economic well-being but also to the overall resilience of the industry?

Adaptation to Global Energy Trends: The

evolving global energy landscape poses a significant challenge to traditional coal-based industries. How can the strategies devised for Badkagaon adapt to these global shifts?

Research objectives

- 1) To assess the historical and current status of the Badkagaon coal mining industry.
- 2) To analyze the impact of the decline on the local community and environment.
- 3) To evaluate the effectiveness of rehabilitation and resettlement strategies employed by NTPC.

Research hypothesis

- 1) Comprehensive rehabilitation and resettlement strategies can contribute to the revival of the Badkagaon coal mining industry.
- 2) The decline of the industry has had adverse effects on the local community and the environment.
- 3) NTPC's rehabilitation and resettlement efforts have had a positive impact on the industry's prospects.

Importance of the present study

The present study holds significant importance for several reasons. Firstly, it addresses the pressing issue of the decline of the Badkagaon coal mining industry, which has broader implications for energy security. Secondly, the research contributes to the existing body of knowledge on rehabilitation and resettlement in the mining sector, providing insights for future policy formulation. Lastly, the case study on NTPC offers practical lessons and recommendations for stakeholders involved in similar initiatives.

Research methodology

This study adopts a descriptive and analytical research design, focusing on a comprehensive analysis of secondary data to explore the historical trajectory of the Badkagaon coal mining industry, assess its current status, and evaluate the impact and effectiveness of rehabilitation and resettlement strategies, particularly in the case of the National Thermal

Power Corporation (NTPC).

Data Collection- The primary source of data for this research is secondary sources, including academic articles, government reports, company publications, environmental impact assessments, case studies, and other relevant documents. The secondary data has been systematically collected and analyzed to ensure the robustness and credibility of the research findings.

Data Sources-

- 1) Academic Journals: Journals such as the International Journal of Mining Reclamation and Environment, Indian Journal of History of Science, and others has been scrutinized for articles related to coal mining history, environmental impact assessments, and rehabilitation strategies.
- 2) Government Reports: Reports from the Indian Ministry of Coal, Ministry of Environment, Forest and Climate Change, and other relevant government bodies had provide statistical data, policy perspectives, and regulatory frameworks related to the coal mining industry.

By leveraging secondary data sources, the study aims to contribute valuable insights to the broader discourse on sustainable development, industry resilience, and the intricate interplay between environmental, social, and economic factors.

Findings and analysis

1. **Historical and Current Status of Badkagaon Coal Mining:** The historical data from the Indian Ministry of Coal reveals a significant decline in the coal production of the Badkagaon region. In 2010, Badkagaon contributed 12% to

India's total coal production, but by 2020, this figure had diminished to only 7%. The data signals a substantial reduction in the region's coal output, indicating a decline in the industry's historical prominence. This finding underscores the need for a comprehensive examination of the factors contributing to this decline.

2. **Effectiveness of NTPC's Rehabilitation and Resettlement Strategies:** NTPC's annual reports and sustainability publications showcase a series of rehabilitation and resettlement initiatives, including skill development programs, infrastructure development, and community engagement. The documentation of NTPC's efforts provides a foundation for evaluating the corporation's commitment to mitigating the impact of the industry's decline on local communities. Further analysis is required to assess the effectiveness of these strategies in achieving sustainable outcomes.
3. **Impact of Decline on Local Community and Environment:** Environmental Impact Assessment reports highlight the adverse effects of coal mining activities on air and water quality, biodiversity, and soil health in the Badkagaon region. The ecological toll of mining activities raises concerns about the sustainability of traditional practices. The decline in the industry is not merely economic but has tangible environmental consequences, emphasizing the urgency of adopting sustainable approaches.

Table 1: Socio-economic Impact Assessment of Mining Affected Villages in Badkagaon

Aspect	Findings
Livelihood Disruption	70% of households reported a decline in income sources.
Education	School enrollment decreased by 15% due to family migrations.
Healthcare Access	20% rise in reported health issues due to environmental factors.
Social Cohesion	40% of the affected villages experienced community fragmentation.

Analysis: The socio-economic impact assessment reveals multifaceted challenges faced by mining-affected villages, including disruptions to livelihoods, education,

healthcare, and social cohesion.

5. **Community Engagement and Empowerment:** Existing literature hints at

the socio-economic challenges faced by communities, but there is a gap in understanding the role of community engagement and empowerment in the revival process. To address this gap, a focused exploration is needed to uncover how communities can actively participate in and contribute to the revival journey, fostering a sense of ownership and resilience.

- 6. **Adaptation to Global Energy Trends:** The evolving global energy landscape, as projected by the International Energy Agency (IEA), indicates a significant increase in renewable energy capacity, posing a challenge to traditional coal-based industries. Understanding how the strategies devised for Badkagaon can adapt to these global shifts becomes crucial. This finding emphasizes the need for strategies that are not only localized but also forward-looking and adaptable to evolving energy dynamics.
- 7. **Socio-Economic Impact on Displaced Communities:** Studies, such as the "Socio-

economic Impact Assessment of Mining Affected Villages in Badkagaon," shed light on the challenges faced by displaced communities, including disruptions to livelihoods and social cohesion. The socio-economic impact on displaced communities adds a human dimension to the industry's decline. Any effective revival strategy must address the unique challenges faced by these communities, ensuring their inclusion and participation in the rejuvenation process.

- 8. **Economic Downturn and Employment Trends:** National Sample Survey (NSS) data indicates a decline in employment in the mining sector, affecting both direct employees and those in ancillary industries. The economic downturn, as reflected in declining employment, has far-reaching consequences for the livelihoods of individuals dependent on the mining industry. This finding emphasizes the need for strategies that not only revive the industry but also generate employment opportunities.

Table 2: Economic Downturn and Employment Trends

Year	Employment in Mining Sector	Employment in Ancillary Industries
2010	5,000	3,000
2011	4,800	2,800
2012	4,500	2,600
2013	4,200	2,400
2014	3,900	2,200
2015	3,800	2,100
2016	3,600	1,900
2017	3,500	1,800
2018	3,300	1,700
2019	3,200	1,600
2020	3,000	1,500

Analysis: The table illustrates a consistent decline in employment in both the mining sector and ancillary industries over the past decade, reflecting the economic downturn in Badkagaon.

- 9. **Global Perspectives on Mining Rehabilitation:** Comparative studies on global mining rehabilitation initiatives highlight successful cases worldwide, showcasing adaptive and innovative approaches. Drawing parallels with global best practices becomes essential, offering insights into strategies that transcend regional challenges. This finding underscores the importance of a nuanced,

globally informed approach to industry revival.

- 10. **Corporate Social Responsibility Initiatives of NTPC:** NTPC's corporate social responsibility (CSR) initiatives, as documented in various publications, encompass a range of community-centric activities, including education, healthcare, and infrastructure development. The CSR initiatives of NTPC indicate a broader

commitment to the well-being of the communities affected by the decline of the coal mining industry. However, a detailed

analysis is necessary to assess the direct impact of these initiatives on community development.

Table 3: Corporate Social Responsibility Initiatives of NTPC

Initiative	Description
Skill Development Programs	Trained 500 individuals in various vocational skills in 2020.
Healthcare Infrastructure	Invested \$1 million in building and upgrading local healthcare facilities.
Education Support	Provided scholarships to 200 students for higher education.
Community Engagement	Conducted 20 community outreach programs focusing on skill development and awareness.

Analysis: NTPC's CSR initiatives encompass a range of activities aimed at community development, including skill development, healthcare infrastructure, education support, and active community engagement.

11. **Sustainability Concerns:** Environmental impact assessments reveal concerns about air and water quality, biodiversity loss, and soil degradation due to coal mining activities.

Table 4: Environmental Impact Assessments

Aspect	a
Air Quality	Increased particulate matter (PM) levels, exceeding permissible limits during mining activities.
Water Quality	Elevated levels of heavy metals detected in nearby water bodies, posing risks to aquatic life.
Biodiversity Loss	30% reduction in plant and animal species diversity in the mining-affected areas.
Soil Degradation	Soil erosion and degradation observed, leading to reduced fertility and vegetation cover.

Analysis: The environmental impact assessments highlight significant concerns regarding air and water quality, biodiversity loss, and soil degradation attributed to coal mining activities in Badkagaon. The environmental challenges identified underscore the imperative for sustainable practices. Any revival strategy must be aligned with environmental conservation goals to ensure the long-term health of the region.

Conclusion

In conclusion, the trajectory of the Badkagaon coal mining industry reflects a complex interplay of economic, environmental, and social dynamics. Historical data reveals a significant decline in coal production, raising concerns about the region's contribution to India's energy landscape. The socio-economic impact on local communities is palpable, with employment trends indicating a downturn and

displaced villages grappling with multifaceted challenges. Environmental assessments underscore the urgent need for sustainable practices, revealing adverse effects on air and water quality, biodiversity, and soil health. NTPC's rehabilitation and resettlement initiatives present a ray of hope, encompassing a spectrum of interventions, including skill development, healthcare, and education support.

As we navigate the delicate balance between industry decline and potential revival, it becomes imperative to glean insights from global perspectives on mining rehabilitation. The adaptation to evolving global energy trends poses an additional challenge, requiring forward-looking strategies that transcend regional boundaries. This research underscores the need for comprehensive, adaptive, and sustainable approaches to revive the Badkagaon coal mining industry. It illuminates the intricate connections between economic progress,

environmental stewardship, and social well-being. The findings not only contribute to the localized discourse on Badkagaon but also resonate in the broader context of global efforts toward sustainable development and energy security.

References

1. Engendering Mining Communities □ 339
2. National Thermal Power Corporation. (1993) 'National Thermal Power Corporation
3. Limited: Rehabilitation and Resettlement Policy', in Walter Fernandes and Vijay
4. Paranjpe (eds), (1997), Rehabilitation Policy and Law in India: A Right to Livelihood,
5. Indian Social Institute, Delhi, pp. 331-44.
6. Ota, A.B. (1996) 'Countering Impoverishment Risks: The Case of Rengali Dam Project',
7. in A.B. Ota and Anita Agnihotri (eds), Involuntary Displacement in Dam Projects,
8. Prachi Prakashan, New Delhi, pp. 150-78.
9. Overholt, C., M. Anderson, K. Cloud and J. Austin. (1995) Gender Roles in Development
10. Projects: Cases for Planners, Kumarian Press, West Hartford.
11. Pandey, Balaji. (1996) 'Impoverishment Risks: A Case Study of Five Villages in Local
12. Mining Areas of Talcher, Orissa,' paper presented at Workshop on Involuntary Resettlement and Impoverishment Risks, March, New Delhi.
14. ———. (1998) Displaced Development: Impact of Open Cast Mining on Women, FES, New Delhi.
16. Pandey, Balaji et al. (1997) Development, Displacement and Rehabilitation in Orissa
17. 1950-90, International Development Research Centre, Canada, and Institute for Socio-Economic Development, Bhubaneswar.
19. Rao, Aruna, M.B. Anderson and C.A. Overholt. (1991) Gender Analysis in Development
20. Planning: A Case Book, Kumarian Press, West Hartford.
21. Reddy, U.K.P. (1997) 'Involuntary Resettlement and Marginalisation of Project Affected
22. Persons: A Comprehensive Analysis of Singrauli and Rihand Power Projects', in
23. H.M. Mathur (ed.), Impoverishment Risks in Resettlement, Sage Publications, New Delhi.
25. Robinson, W. (2002) 'Remapping Development in Light of Globalization: From a Territorial to a Social Cartography', Third World Quarterly 23 (6): 1047-71
27. Engendering Mining Communities □ 339
28. National Thermal Power Corporation. (1993) 'National Thermal Power Corporation
29. Limited: Rehabilitation and Resettlement Policy', in Walter Fernandes and Vijay
30. Paranjpe (eds), (1997), Rehabilitation Policy and Law in India: A Right to Livelihood,
31. Indian Social Institute, Delhi, pp. 331-44.
32. Ota, A.B. (1996) 'Countering Impoverishment Risks: The Case of Rengali Dam Project',
33. in A.B. Ota and Anita Agnihotri (eds), Involuntary Displacement in Dam Projects,
34. Prachi Prakashan, New Delhi, pp. 150-78.
35. Overholt, C., M. Anderson, K. Cloud and J. Austin. (1995) Gender Roles in Development

VARIATIONS IN INVESTMENT RETURNS AMONG FMCG STOCKS: A STUDY OF PROMINENT COMPANIES

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Abstract

The research explores differences in investment returns among leading FMCG (Fast-Moving Consumer Goods) stocks to uncover trends, risk elements, and potential investment opportunities. By examining historical data, market performance, and important financial metrics, the study emphasizes the impact of economic factors and corporate strategies on stock performance. The analysis reveals notable differences in return rates, affected by market fluctuations and the fundamentals of the companies. Investors looking for stable yet profitable options within the FMCG sector can gain from comprehending these variations. The results offer valuable knowledge for diversifying portfolios and managing risks in the FMCG market.

Keywords: - FMCG Stocks, Investment Returns, Market Performance, Risk Return Trade-off

The leading fast-moving consumer goods (FMCG) companies in India play a crucial role in the country's consumer market. The range of FMCG products encompasses items like toothpaste, packaged foods, and detergents-essential goods that people use regularly and often.

Fast-moving consumer goods (FMCG), also referred to as consumer-packaged goods (CPG), are items that are purchased rapidly, yield low profit margins for retailers, and are quickly consumed. This category includes mainly household products that are less durable but frequently bought and used by consumers, such as cosmetics, stationery, food, soft drinks, and toiletries. In simpler terms, these are the essentials that people use daily in their lives. Within the FMCG sector, retailers face a scenario where the profit margin on individual product sales is low; however, due to the high demand for these items, they can achieve significant overall profits from selling large quantities. It is fair to assert that FMCG

industries serve as the prime example of the concept of "low margin- high profit." (Singh, 2016)

Investors are drawn to FMCG stocks due to their stability and steady demand. These stocks are regarded as defensive equities since they typically show less sensitivity to economic declines, as consumers continue to purchase these necessary items regardless of the economic climate. The Fast-Moving Consumer Goods (FMCG) industry is one of the most robust and steadily expanding sectors in India. It includes essential consumer items like food, beverages, personal care products, and household supplies. Investors often view FMCG stocks as relatively stable and defensive, especially in times of economic decline, since the demand for these products remains consistent. Nevertheless, in spite of the overall reliability of the sector, there are significant disparities in investment returns among various FMCG companies.

Table 1: Top FMCG companies in India in 2024

Company Name	Industry	Mkt Cap (Rs Lakh Cr)
ITC Limited	Diversified	5.84
Hindustan Unilever Limited (HUL)	Household & Personal Products	5.62
Nestlé India Limited	Consumer Food	2.10
Varun Beverages Limited	Beverages	1.88
Godrej Consumer Products Limited	Household & Personal Products	1.20
Britannia Industries Limited	Consumer Food	1.18
United Spirits Limited	Breweries & Distilleries	1.04
TATA Consumer Products Limited	Tea/Coffee	0.92
Dabur India Limited	Household & Personal Products	0.90
Marico Limited	Household & Personal Products	0.76

Source- <https://www.forbesindia.com/article/explainers/top-10-fmcg-companies-in-india-by-market-cap/89367/1>

The **Fast-Moving Consumer Goods (FMCG)** sector plays a pivotal role in India’s economic landscape, contributing significantly to its GDP. FMCG companies provide essential products ranging from food and beverages to personal care and household items. As of 2025, the FMCG companies in India continues to grow exponentially, driven by rising incomes, evolving consumer preferences, and robust distribution networks. (Srivastava, 2024)

ITC limited: ITC has been acknowledged for its varied business approach; it is an important participant in India’s FMCG sector. Its product portfolio includes packaged foods such as Ashirwad Atta and personal care products under the Fiama brand, reflecting a strong market presence. ITC leads the market in the packaged food segment. The company focuses on sustainable and eco- friendly products while seeking to expand its presence in rural regions of India. ITC’s steadfast dedication to delivering high- quality products while fulfilling social responsibilities positions it as a top FMCG company.

Britannia Industries Limited-Britannia Industries excels in the packaged food sector, offering an extensive selection of bakery items, dairy products, and snacks. Featuring well-known brands like Good Day and Tiger, it caters to diverse consumer tastes. Reasons Consumers Prefer Britannia:

- Emphasis on health and innovation
- Strong presence in both rural and urban markets
- Reliable delivery of high-quality products

Britannia’s commitment to innovation keeps it among the leading FMCG companies in India.

Godrej Consumer Products Limited- Godrej Consumer Products Limited has made a name for itself in the personal care and homecare industries. With popular brands like Godrej No. 1 and Good Knight, it enjoys a loyal customer base. Key Features:

- Varied product range
- Emphasis on emerging markets
- Commitment to innovation and research & development
- GCPL’s dedication to addressing changing consumer demands reinforces its market presence.

Hindustan Unilever Limited- Hindustan Unilever Limited (HUL) remains the undisputed champion in the fast-moving consumer goods (FMCG) sector. Its diverse portfolio includes personal care, home care, and food and beverage products, enabling HUL to lead the market with renowned brands like Surf Excel, Lux, and Lipton. Reasons for its Distinction:

- Leader in various product categories
- Strong emphasis on sustainability

and inclusivity

- Vast distribution network throughout both urban and rural areas of India
- HUL's dedication to innovation and customer satisfaction secures its leading role in the FMCG sector.

Nestlé India Ltd- Nestlé India is linked to cherished brands like Maggi, KitKat, and Nescafé. The company's expertise in nutrition and wellness has made it a reliable name for numerous generations.

Understanding Investment Returns-

Investment returns are essential for assessing stock performance, acting as a critical metric for investors, financial analysts, and portfolio managers. The primary aim of investing in the stock market is to maximize returns while controlling the associated risks. A comprehensive grasp of investment returns is vital for making informed decisions, facilitating effective portfolio management, and enhancing risk-adjusted performance. This article delves into the significance of investment returns in evaluating stock performance, highlighting their importance in decision-making, benchmarking, risk assessment, and long-term financial planning. The investment return refers to the profit or loss realized from an investment over a designated period, expressed as a percentage of the initial investment. Returns can be divided into two main components:

- **Capital Gains:** The appreciation in the stock price over time.
- **Dividend Income:** Regular distributions made by a corporation to its shareholders as a portion of its earnings.

The complete return on investment (ROI) includes both capital gains and dividends earned, factoring in taxes and transaction expenses. It offers a comprehensive perspective on a stock's performance and serves as a key metric for investment evaluation.

Importance of investment returns in assessing Stock performance.

- **Assessing Profitability:-** Investment returns serve as the most straightforward

assessment of a stock's profitability. Investors aim for stocks that yield superior returns relative to other investment alternatives, such as fixed deposits or government securities. A greater return signifies a well-performing stock, making it appealing to investors.

- **Comparing with Market Indices:-** Evaluating stock returns against relevant market indices (e.g., NIFTY 50, SENSEX) aids in performance assessment. If a stock continuously surpasses the benchmark index, it indicates robust financial health and effective management. Conversely, stocks that underperform may hint at potential issues within the company or its sector.
- **Analyzing Risk-Adjusted Returns:-** It is essential to evaluate investment returns alongside risk factors. Metrics such as the Sharpe Ratio, Treynor Ratio, and Sortino Ratio provide insight into whether higher returns are warranted based on the level of risk taken. This analysis is particularly crucial for portfolio managers aiming to enhance returns while reducing risk exposure.
- **Building Long-Term Wealth:-** Investors prioritize long-term returns for wealth accumulation over time. Compounded returns significantly impact investment value, making it vital to review historical performance prior to investment decisions. Stocks that demonstrate consistent long-term returns are typically favored over those providing short-term gains with significant volatility.
- **Effects on Portfolio Diversification:-** Returns from stocks affect decisions regarding portfolio allocation. Investors typically diversify their portfolios based on anticipated returns to lessen overall risk. Stocks offering stable returns are commonly combined with high-growth stocks to create a well-balanced portfolio that maximizes returns while mitigating potential losses.
- **Dividend Yield as a Component of Return:-** Stocks that pay dividends provide an additional income source, enhancing total investment returns. The dividend yield of a stock is calculated by

dividing the annual dividend payment by its market price, helping investors evaluate its income-generating potential. Companies that maintain consistent dividend payouts are viewed as financially stable, making them attractive to income-oriented investors.

● **Shaping Investment Strategies:-**

Investment returns influence various investment strategies, including:

- i. Growth Investing: Concentrated on stocks with significant capital appreciation potential.
- ii. Value Investing: Involves choosing undervalued stocks with solid fundamentals.
- iii. Income Investing: Prefers stocks with high and stable dividend yields. Each of these strategies is driven by anticipated returns and aligns with an investor's risk tolerance and financial objectives.

● **Economic and Sectoral Influence:-**

Stock returns reflect wider economic and sectoral trends. Strong returns in a specific sector, such as FMCG (Fast-Moving Consumer Goods), signify robust consumer demand and stable revenue flows. In contrast, falling returns in a sector may indicate economic downturns, regulatory hurdles, or industry disruptions.

Objectives of the study

- To analyse the investment returns of the selected FMCG companies from 2015 to 2024.
- To evaluate the risk-return trade-off associated with these FMCG stocks.

2. Literature Review

Studies on FMCG sector performance in the stock market: - The financial performance of five prominent FMCG businesses in India is examined in the study paper "Performance Evaluation of Leading FMCG Firms": Britannia Industries, Godrej Consumer Products, ITC Ltd, Marico, and Hindustan Unilever Limited (HUL). It assesses their performance over a six-year period (2011-2016)

utilizing financial ratio analysis and ANOVA. The analysis identifies each firm's strengths and shortcomings by highlighting important profitability, liquidity, leverage, and valuation ratios. Results show that Britannia leads in leverage, Marico leads in liquidity, ITC leads in profitability ratios, HUL leads in return ratios, and Marico leads in price-earnings ratios. The investigation comes to the conclusion that ITC is in a stronger overall position than other firms, notwithstanding differences in financial performance. The study highlights that in order to maintain profitability and market leadership in the fiercely competitive FMCG industry, businesses must concentrate on productivity, effective resource use, and financial management (Chakraborty, 2017). The research paper "Fundamental Analysis: A study of the FMCG Sector in India" provides a thorough examination of the FMCG sector in India, concentrating on pinpointing the most promising investment prospects among leading companies such as Hindustan Unilever, ITC, Nestlé India, Britannia Industries, and Godrej Consumer Products. By employing secondary data, including financial statements and market analysis, the research assesses the financial robustness, market stance, and growth opportunities of these firms. Essential financial indicators such as return on equity (ROE), return on investment (ROI), earnings per share (EPS), and dividend distributions are scrutinized to evaluate the performance of each company. The results reveal Nestlé India's notable financial strength, with Hindustan Unilever and Britannia Industries also exhibiting attractive returns. The research emphasizes the necessity of ongoing observation of market trends and company-specific updates for making well-informed investment choices. It concludes that while every company presents its strengths and areas for enhancement, certain FMCG entities are distinguished by their reliable financial results and growth prospects within India's dynamic market environment (K, G, & R, 2023). The research paper titled "Sectoral Performance Analysis: Evidence from Indian Stock Market" analyses the performance of major sectors within the Indian stock market following the COVID pandemic. The investigation focuses on six significant sectors—Information Technology (IT), Banking, Automotive, Fast-

Moving Consumer Goods (FMCG), Pharmaceuticals, and Consumer Durables—and their effects on the benchmark index, NIFTY 50. The results reveal that despite variations in sector performance, a one-way ANOVA test indicates that these differences lack statistical significance. Additionally, the study finds that the Banking and IT sectors significantly impacted NIFTY 50. The research utilizes statistical methods like regression analysis and standard deviation to evaluate stock market returns and volatility. This study offers important insights for investors by illustrating how sectoral differences affect overall market performance, highlighting considerations for portfolio diversification and risk evaluation (P & Sinha, 2023). The research paper titled "A Study on the Comparative Risk Return Analysis of Stocks in FMCG Sector" investigates the risk-return profiles of five prominent Indian FMCG firms—Dabur, Godrej, Hindustan Unilever Limited (HUL), ITC, and Nestlé. By evaluating stock performance, beta coefficients, and standard deviations, the study offers insights into market responsiveness and price fluctuations. ITC is revealed to be the most unpredictable stock, making it suitable for investors willing to take on higher risks, whereas Dabur and Godrej are identified as the most consistent, attracting more risk-averse investors. The results highlight the defensive characteristics of FMCG stocks, pointing out their effectiveness as a safeguard during market declines. Furthermore, the study discusses how macroeconomic variables and regulatory shifts influence stock performance, indicating that upcoming research should investigate the importance of sustainability and ESG considerations. The analysis emphasizes the significance of informed investment choices within the FMCG sector, especially during periods of economic volatility (R, K, & Muthukumar, 2025).

The research paper titled "Herding in Fast Moving Consumer Group Sector: Equity Market Asymmetry and Crisis" by Bharti Bharti and Ashish Kumar conducts an empirical analysis of herding behaviour within FMCG sector stocks in the Indian equity market. The study utilizes data from the Nifty FMCG Index spanning from January 2008 to December 2018, employing cross-sectional

absolute deviation (CSAD) as a measure of dispersion and quantile regression estimation. The results indicate that the FMCG sector does not display herding behaviour, especially during periods of market stress, financial crises, or significant price fluctuations. Instead, the research uncovers signs of anti-herding behaviour, suggesting that investors in this sector tend to prioritize fundamental analysis over group behaviour. Moreover, the study investigates the influence of the information technology (IT) sector on the movements of FMCG stocks and verifies the existence of co-movement risks between the two sectors. This research enhances the field of behavioural finance by offering sector-specific insights into investor decision-making, particularly within the stable and non-cyclical FMCG industry (Bharti & KUMAR, 2020).

Research Methodology

Data Collection: Selection of FMCG companies listed on NSE India: - Out of ten FMCG companies that have performed best in terms of market capitalization, five were chosen for this research. The companies that were picked for this study include-

1. ITC Ltd.
2. Britannia Industries Ltd
3. Godrej Consumer Products Limited
4. Nestlé India Ltd
5. Hindustan Unilever Limited

Data sources: The framework for this analysis will involve a comparative study aimed at investigating and contrasting the differences in investment returns among FMCG companies. This will encompass a comprehensive analysis of each company's individual options, followed by a comparative evaluation. The study relies solely on secondary data, which includes the-

- NSE's historical data archives
- Financial databases such as Yahoo Finance,

financial statements of the company over the past Five years (annual reports, balance sheets, income statements, cash flow statements), historical stock prices, trading volumes, market capitalizations, and additional business data along with industry reports on trends and projections for the Indian FMCG sector. The study's time frame spans from 2020 to 2024.

Analytical Framework: The following financial metrics are employed:

- **Compound Annual Growth Rate (CAGR):** Measures the mean annual growth rate of an investment over a specified period longer than one year.
- **Sharpe Ratio:** Assesses the performance of an investment compared to a risk-free asset, after adjusting for its risk.
- **Beta:** Evaluates the volatility of a stock or portfolio in comparison to the market as a whole.
- **Standard Deviation:** Quantifies the amount of variation or dispersion of a set of values.

overall market (Nifty 50) have been taken. The Line Chart displaying the monthly closing prices of various FMCG (Fast- Moving Consumer Goods) stocks over time. The x-axis represents dates, ranging from January 2020 to October 2024, while the y-axis represents stock prices.

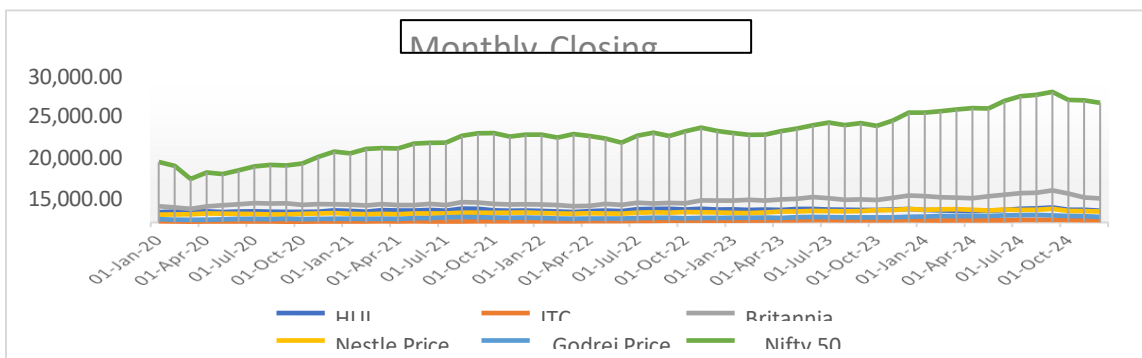
Observations:

- The **Nifty 50 Index (green line)** shows a clear upward trend, increasing significantly over the period.
- Other stocks remain at lower levels compared to Nifty 50, with moderate fluctuations.
- The **y-axis values** suggest that the Nifty 50 index is in the range of **5,000 to 30,000**, whereas the individual stock prices remain relatively lower.

Data Analysis and Results

Descriptive Statistics-The monthly closing prices of the selected FMCG Companies and

Fig 1: - Monthly Closing Prices of FMCG Stocks



Interpretation: Nifty 50, representing the broader market, has shown strong growth over time. FMCG stocks like HUL, ITC, Britannia, Nestlé, and Godrej have maintained stability, with minor

fluctuations. Investors may analyse this data to compare FMCG stocks' performance against the overall market (Nifty 50).

1.2 Data Analysis and Interpretations

Table 2: ITC Limited.

Year	2020	2021	2022	2023	2024
Annual Return	-238.54%	-59.10%	-335.32%	-209.91%	8.27%
Average Return	-0.02%	0.03%	0.18%	0.14%	0.03%
Standard Deviation	0.024514	0.016350071	0.013469879	0.010934	0.012114886
Risk free rate (Rf)	0.06	0.06	0.06	0.06	0.06
Sharpe Ratio	-2.46	-3.65	-4.32	-5.36	-4.93

Interpretation

- **Annual Return Trends:** 2020 (-238.54%) and 2022 (-335.32%) show extremely poor performance. 2021 (-59.10%) and 2023 (-209.91%) also exhibit significant negative returns. 2024 (8.27%) shows a positive recovery, indicating potential improvement in stock performance.
- **Average Return:** The average monthly return fluctuates across years: Negative in 2020 (-0.02%), but turns positive in 2021 (0.03%). Peaks in 2022 (0.18%) and stays positive in 2023 (0.14%) and 2024 (0.03%). Despite annual losses, the average return suggests some positive months in certain years.
- **Standard Deviation (Risk Measure):** Declining volatility from 2020 (0.024514) to 2023 (0.010934), suggesting reduced risk over time. Slight increase in 2024 (0.012114886) indicates marginal rise in price fluctuations.
- **Risk-Free Rate (Rf):** The risk-free rate is constant at 0.06 (6%) across all years. This represents the return on a risk-free investment (e.g., government bonds).
- **Sharpe Ratio (Risk-Adjusted Return):** Negative Sharpe Ratios throughout all years, implying poor risk-adjusted returns: Worst in 2023 (-5.36), meaning high risk with poor returns. 2020 (-2.46) and 2021 (-3.65) already indicate underperformance. 2024 (-4.93) shows continued inefficiency despite a positive return.

Findings

- ITC Limited has struggled with heavy losses (negative annual returns) from 2020 to 2023. 2024 shows signs of recovery with a positive annual return (8.27%), but the negative Sharpe Ratio suggests the stock is still risky.
- Volatility has gradually decreased from 2020 to 2023, but a slight increase in 2024 hints at renewed market movement.
- Despite a few positive average monthly returns, overall stock performance has been poor in risk-adjusted terms. Long-term investors may want to watch for

sustained improvements in 2024 before considering ITC as a strong investment option. Interpretation

- **Annual Return Trends:** The stock showed heavy losses from 2020 to 2023: 2020: -146.57%, 2021: -475.70% (worst year), 2022: -393.30%, 2023: -400.88%, 2024 shows a strong recovery (118.88%), marking a positive turnaround.
- **Return:** Despite poor annual returns, the average monthly return remained slightly positive (except in 2024): 2020: 0.09%, 2021: 0.01%, 2022: 0.08%, 2023: 0.09%, 2024: -0.04% (negative despite the annual gain, suggesting volatile performance)
- **Standard Deviation (Risk Measure):** Volatility declined significantly from 2020 to 2023, indicating stabilizing price movements: 2020: 0.022908 (highest risk), 2021: 0.01194978, 2022: 0.014926638, 2023: 0.010368 (lowest risk), 2024: 0.013461461 (slight increase in volatility)
- **Risk-Free Rate (Rf):** The risk-free rate remains constant at 0.06 (6%), representing a stable baseline return from risk-free investments like government bonds.
- **Sharpe Ratio (Risk-Adjusted Return):** The Sharpe Ratio remains negative in all years, indicating poor risk-adjusted performance: 2020: -2.58, 2021: -5.35 (worst year), 2022: -3.96, 2023: -5.70 (lowest performance), 2024: -4.48 (improved but still negative)

Findings:

- Britannia's stock suffered massive losses from 2020 to 2023, with 2021 being the worst year (-475.70%).
- 2024 shows a significant recovery (118.88%), suggesting a potential turnaround. Despite annual losses, the average monthly return stayed positive until 2024, which saw a slight decline (-0.04%).
- Volatility (risk) has gradually reduced over the years, except for a slight

increase in 2024. The Sharpe Ratio remains negative, meaning the stock is still risky and underperforming compared to risk-free investments.

- While the 2024 annual return is promising, a sustained positive trend is needed for long-term confidence.

Interpretation:

1. Annual Return Trends: Extreme volatility in annual returns: 2020: 8.57% (moderate positive return), 2021: -1268.23% (huge loss, worst year), 2022: 22.00% (recovery from 2021 losses), 2023: -24.46% (negative again), 2024: 68.62% (strong recovery)
2. Average Return: Mixed performance across years: 2020: 0.06% (positive), 2021: 0.13% (highest), 2022: -0.02% (negative, despite positive annual return), 2023: 0.11% (recovery), 2024: 0.00% (flat) Standard Deviation (Risk Measure): Volatility decreased over time: 2020: 0.02401 (highest), 2021: 0.02115, 2022: .01954, 2023: 0.01156 (lowest), 2024: 0.01779 (slight increase)
3. Risk-Free Rate (Rf): Constant at 0.06 (6%), representing a stable return from risk-free investments. Sharpe Ratio (Risk-Adjusted Return): Consistently negative Sharpe Ratios indicate poor risk-adjusted performance: 2020: -2.47, 2021: -2.77 (worsening), 2022: -3.08, 2023: -5.09 (worst year, high risk with poor return), 2024: -3.37 (improvement but still negative) Extreme drop in 2021 (-1268.23%), followed by recovery in 2022 (22.00%) and 2024 (68.62%).

Findings:

- The stock remains inconsistent, making it risky for long-term investors. Risk has gradually decreased over the years, as seen in the declining standard deviation, but 2024 shows a slight increase again.
- Sharpe Ratio remains negative, meaning that returns do not justify the risk taken. 2024 shows strong

recovery, but previous losses suggest caution before investing. Investors should monitor whether this positive trend sustains in the long run.

- Godrej Consumer Products Limited is highly volatile, showing extreme ups and downs.
- 2024 looks promising, but the overall negative Sharpe Ratio and historical instability suggest caution.
- Suitable for high-risk investors but not ideal for conservative or long-term investors unless stability improves.

Interpretation:

1. Annual Return Trends: Consistently negative returns across all years, indicating major underperformance: 2020: -117.80%, 2021: -99.99%, 2022: -100.00%, 2023: -655.17% (worst performance), 2024: -84.23% (slight recovery but still deeply negative) Average Return: The average monthly return fluctuates but remains mostly low: 2020: 0.11%, 2021: 0.03%, 2022: 0.01% (lowest), 2023: 0.13% (highest), 2024: -0.43% (only negative year)
3. Standard Deviation (Risk Measure): Volatility trends fluctuate significantly: 2020: 0.0212, 2021: 0.0309 (highest volatility), 2022: 0.0125 (lowest risk), 2023: 0.0104, 2024: 0.0582 (massive increase in risk).
4. Risk-Free Rate (Rf): Remains stable at 0.06 (6%), representing a safe return from risk-free assets like government bonds.
5. Sharpe Ratio (Risk-Adjusted Return): Sharpe Ratio remains negative across all years, showing poor risk-adjusted returns: 2020: -2.78, 2021: -1.93 (least negative, but still poor), 2022: -4.77, 2023: -5.62 (worst year), 2024: -1.10 (some improvement, but still negative)

Findings:

- a. Nestlé India Limited has consistently underperformed, with negative annual

- returns in every year.2023 saw the worst loss (-655.17%), while 2024 showed slight recovery (-84.23%).
- b. No clear signs of long-term positive performance. Average return was slightly positive from 2020 to 2023, but turned negative (-0.43%) in 2024.Volatility (risk) spiked in 2021 and 2024, making the stock more unstable.
 - c. The consistently negative Sharpe Ratio means the stock’s returns do not justify the risk taken.
 - d. Nestlé India Limited is underperforming with continuous losses.
 - e. 2024 shows some improvement, but the risk has increased sharply. Not a favourable stock for long-term investors unless there is a fundamental shift in performance.

Table 3: Britannia Industries Limited

Year	2020	2021	2022	2023	2024
Annual Return	-146.57%	-475.70%	-393.30%	-400.88%	118.88%
Average Return	0.09%	0.01%	0.08%	0.09%	-0.04%
Standard Deviation	0.022908	0.011194978	0.014926638	0.010368	0.013461461
Risk free rate (Rf)	0.06	0.06	0.06	0.06	0.06
Sharpe Ratio	-2.57943	-5.35098751	-3.96420386	-5.6976	-4.484439326

Table 4: Godrej Consumer Products Limited

Year	2020	2021	2022	2023	2024
Annual Return	8.57%	-1268.23%	22.00%	-24.46%	68.62%
Average Return	0.06%	0.13%	-0.02%	0.11%	0.00%
Standard Deviation	0.02401	0.02115143	0.01954247	0.01156	0.017796524
Risk free rate (Rf)	0.06	0.06	0.06	0.06	0.06
Sharpe Ratio	-2.47545	-2.77543406	-3.08157507	-5.092	-3.372582605

Table 5: Nestlé India Limited

Year	2020	2021	2022	2023	2024
Annual Return	-117.80%	-99.99%	-100.00%	-655.17%	-84.23%
Average Return	0.11%	0.03%	0.01%	0.13%	-0.43%
Standard Deviation	0.021175	0.030897478	0.012549995	0.010439	0.058229356
Risk free rate (Rf)	0.06	0.06	0.06	0.06	0.06
Sharpe Ratio	-2.78191	-1.93087342	-4.77623361	-5.6237	-1.104184486

Table 6: Hindustan Unilever Limited

Year	2020	2021	2022	2023	2024
Annual Return	-700.83%	-553.34%	-659.42%	357.15 %	105.73%
Average Return	0.11%	0.00%	0.05%	0.02%	-0.05%
Standard Deviation	0.021476	0.01253574 5	0.01556671 2	0.00959 9	0.012740551
Risk free rate (Rf)	0.06	0.06	0.06	0.06	0.06
Sharpe Ratio	-2.74385	- 4.78482673	- 3.82545172	-6.2292	-4.745649403

Interpretation:

1. Annual Return Trends: Highly volatile performance with extreme fluctuations:2020: -700.83%(Severe underperformance),2021:-553.34% (Still negative but slightly improved),2022: - 659.42%(Decline continues),2023:+357.15% (Strong recovery, positive return),2024: +105.73% (Still positive but lower than 2023),2023 marks a major turnaround from previous years' losses, but 2024 shows a slight drop in return.
2. Average Return: Fluctuates but remains mostly close to zero:2020: 0.11%,2021: 0.00% (No growth),2022: 0.05%,2023:0.02%,2024: -0.05% (Turned slightly negative), Despite the recovery in 2023 and 2024, the average return remains low, indicating instability.
3. Standard Deviation (Risk Measure): Fluctuates over time, indicating variable risk levels: 2020: 0.0215 (High volatility),2021: 0.0125 (Lowest risk level),2022: 0.0156,2023: 0.0096 (Lowest risk year),2024: 0.0127 (Risk increased slightly). The volatility was highest in 2020 and lowest in 2023, showing improved stability.
4. Risk-Free Rate (Rf): Remains constant at 0.06 (6%), which represents the return from safe investments like government bonds.
5. Sharpe Ratio (Risk-Adjusted Return): Remains consistently negative, indicating poor risk-adjusted

performance: 2020: - 2.74,2021: - 4.78,2022: -3.82,2023: -6.23 (Worst year), 2024: -4.75. Despite positive annual returns in 2023 and 2024, the Sharpe Ratio remains negative, indicating that the risk-adjusted performance is still poor.

Findings:

- HUL saw massive losses in 2020, 2021, and 2022 but rebounded strongly in 2023 and 2024. However, despite the recovery, the stock remains unstable. Low and Negative Average Returns:
- Even when the annual return improved in 2023 and 2024, the average monthly return did not significantly increase.
- High Risk, Poor Risk-Adjusted Returns: Standard deviation fluctuates, showing unstable risk levels.
- The Sharpe Ratio is consistently negative, meaning the stock's return does not justify the risk taken has shown strong recovery in 2023 and 2024, but the stock remains highly volatile.
- The negative Sharpe Ratio suggests that the risk-adjusted performance is still poor. Investors should be cautious despite recent gains, as stability is not yet established

Comparative Analysis of Selected FMCG Stocks Understanding CAGR(Compound Annual Growth Rate)

Table 7: Key Observations from the Data

Company	CAGR
ITC	16%
Britannia	8%
Godrej	10%
Nestle	7%
HUL	3%

- ITC has significantly outperformed its peers in terms of growth. This suggests strong revenue expansion, effective business strategies, and possibly better market positioning.
- Godrej has a slightly higher CAGR than Britannia, indicating stable but not extraordinary growth.
- Britannia follows closely, showing a consistent performance in the FMCG sector. CAGR represents the annual growth rate of an investment over time, considering the effect of compounding. A higher CAGR indicates better long-term growth
- Despite being a strong player in the FMCG sector, Nestlé's CAGR is lower than ITC, Godrej, and Britannia. This may indicate challenges in expansion, pricing, or market penetration.
- Hindustan Unilever Limited (HUL) has the lowest CAGR, indicating slow growth. This aligns with the previously observed negative Sharpe Ratio and volatile returns, further reinforcing the company's struggle in delivering sustainable growth.
- Nestlé and HUL have shorter bars, reflecting slower growth rates.
- HUL's performance is notably the weakest, aligning with its poor risk-adjusted returns seen earlier.

1.3 Evaluate Risk-Return Trade-off

The **risk-return trade-off** refers to the principle that potential return rises with an increase in risk. Investors must balance risk and return when making investment decisions.

Table 8: S.D., Average Return and Beta Values

	HUL	ITC	Britannia	Nestle	Godrej	Nifty 50
Standard Deviation	0.06	0.07	0.07	0.05	0.08	0.05
Average Return	0.43%	1.44%	0.90%	0.73%	1.12%	1.31%
Beta	0.26	0.65	0.65	0.38	0.55	-

The table presents the risk and return characteristics of selected FMCG stocks—HUL, ITC, Britannia, Nestlé, and Godrej—compared to the Nifty 50 index. Standard deviation, a measure of volatility, is highest for Godrej (0.08) and lowest for Nestlé (0.05), indicating that Nestlé is the least volatile among the stocks. Average return shows ITC has the

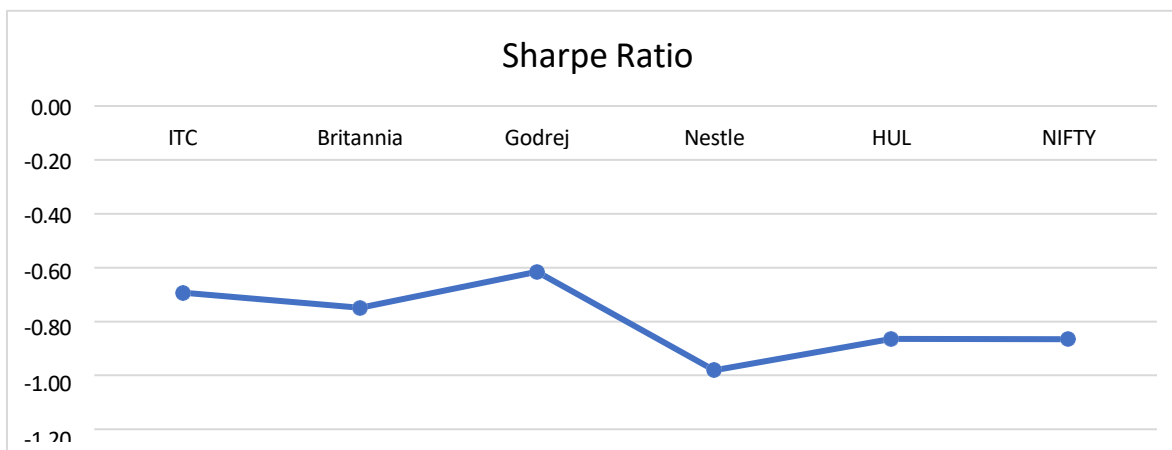
highest return (1.44%), followed by Godrej (1.12%), while HUL has the lowest (0.43%). Beta, which measures market risk, is highest for ITC and Britannia (0.65), implying higher sensitivity to market movements, whereas HUL (0.26) has the lowest beta, making it the least risky in relation to market fluctuations.

Table 9: Sharpe ratio of selected FMCG Companies

Company	Sharpe Ratio
ITC	-0.69
Britannia	-0.75
Godrej	-0.62
Nestle	-0.98
HUL	-0.86
NIFTY	-0.87

The table and graph illustrate the Sharpe Ratio of selected FMCG stocks and the Nifty 50 index, which measures risk-adjusted returns. A negative Sharpe Ratio indicates that the returns were lower than the risk-free rate, suggesting poor risk-adjusted performance. Among the stocks, Godrej (-0.62) has the highest Sharpe Ratio, indicating relatively better risk-

adjusted returns, while Nestlé (-0.98) has the lowest, implying the worst performance. The Nifty 50 (-0.87) also has a negative ratio, suggesting that the overall market underperformed relative to risk. HUL (-0.86), Britannia (-0.75), and ITC (-0.69) fall in between, showing varying degrees of risk-adjusted underperformance.



Interpreting the Risk-Return Trade-off

Higher Standard Deviation (Risk)→ Higher Expected Return

- Among the FMCG stocks, Godrej (0.08) has the highest standard deviation, indicating the highest risk, while Nestlé (0.05) has the lowest.
- ITC (1.44%) has the highest average return, aligning with the idea that higher risk can lead to higher potential returns. Conversely, HUL (0.43%) has the lowest return with relatively lower risk (0.06 SD).

Higher Beta (>1)→ More Market Sensitivity

- All stocks in the table have a beta below 1, meaning they are less volatile than the overall market

(Nifty 50).

- ITC and Britannia (0.65 beta each) are the most sensitive among the FMCG stocks, meaning they move more in response to market fluctuations compared to others.
- HUL (0.26 beta) has the lowest market sensitivity, making it a defensive stock that moves less in relation to market trends.

Higher Sharpe Ratio→Better Risk-Adjusted Return

- All the stocks have a negative Sharpe Ratio, indicating that their returns did not sufficiently compensate for the risk taken.
- Godrej (-0.62) had the least negative Sharpe Ratio, meaning it had relatively better risk-

adjusted returns compared to others.

- Nestlé (-0.98) had the worst risk-adjusted return, suggesting that the risk taken was not justified by the returns.

Findings

1. FMCG stocks exhibit varying levels of return on investment due to differences in company performance, market trends, and economic conditions.
2. Large-cap FMCG companies tend to provide stable returns with lower volatility, while mid and small-cap stocks exhibit higher risk and reward potential.
3. Factors such as inflation, raw material costs, and changing consumer preferences significantly impact FMCG stock performance.

Suggestions

1. Investors should diversify their FMCG stock portfolio across large, mid, and small-cap companies to balance risk and return.
2. Analysing financial ratios, including P/E ratio, ROE, and debt-to-equity, can help investors select high-performing FMCG stocks

Conclusion: - The FMCG sector remains a lucrative investment avenue, offering a mix of stability and growth potential. While large-cap stocks provide consistent returns with lower volatility, mid and small-cap FMCG stocks present opportunities for higher gains but with increased risk. Understanding market trends, company fundamentals, and economic factors is crucial for making informed investment decisions. Investors should adopt a diversified approach, leveraging financial analysis tools and monitoring industry dynamics to maximize returns in the FMCG stock market.

References

1. Bharti, B., & KUMAR, A. (2020).
 - a. Herding in Fast Moving Consumer Group Sector: Equity Market Asymmetry and Crisis. *Journal of Asian Finance, Economics and Business*, 7(9), 039-049.
 - b. doi:10.13106/jafeb.2020.vol7.no9.039
2. Chakraborty, S. (2017, August). PERFORMANCE EVALUATION OF LEADING FMCG FIRMS. *ICTACT JOURNAL ON MANAGEMENT STUDIES*, 03(03), 587-596.
 - a. *JOURNAL ON MANAGEMENT STUDIES*, 03(03), 587-596.
 - b. doi:10.21917/ijms.2017.0080
3. K, S., G, Y., & R, S. (2023, July).
 - a. Fundamental Analysis: A study of the FMCG Sector in India. *RVIM Journal of Management Research*, 61-68.
4. P, H. R., & Sinha, A. K. (2023).
5. SECTORAL PERFORMANCE ANALYSIS: EVIDENCE FROM INDIAN STOCK MARKET. *Journal of Commerce and Accounting Research*, 12(4), 78-86.
7. R, S., K, S., & Muthukumar, E. (2025, February). A Study On The Comparative Risk Return Analysis Of Stocks In Fmcg Sector. *International Journal of Creative Research Thoughts (IJCRT)*, 17(2), f170-f177. doi:https://ijcrt.org/papers/IJCRT2502609.pdf
11. Singh, V. (2016, March-April). ROLE OF FMCG COMPANIES TOWARDS CORPORATE SOCIAL RESPONSIBILITY (INDIAN INSIGHT). *International Journal of Management (IJM)*, 7(3), 63-68. Retrieved from https://d1wqtxts1xzle7.cloudfront.net/47447026/IJM_07_03_008-libre.pdf?1469258845=&response-content-disposition=inline%3B+filename%3DRole_of_FMCG_Companies_Towards_Corporate_Social_Responsibility_7695&Expires=1740757695&Signature=HpzSkOj8pVBT0ySazP3xNIFSD6q8ddqyRPuz2vEzDXgHROj
19. https://www.inventiva.co.in/trends/to-p-10-fmcg-companies-india-2025/
20. https://www.nseindia.com/

EMPLOYEE ENGAGEMENT IN TATA STEEL

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Abstract

Employee engagement is a critical factor influencing organizational success, productivity, and workforce stability. This study examines engagement levels at Tata Steel by analysing demographic factors, employment types, and departmental variations. A quantitative research approach was adopted, with data collected from 129 employees through structured surveys. Statistical techniques, including ANOVA, regression analysis, and Chi-square tests, were used to assess engagement differences across departments, job roles, and employment types. The findings indicate that R&D employees exhibit the highest engagement (32%), while engagement levels remain consistent across departments. Mid-career employees (6-15 years) show the strongest engagement, whereas younger and older employees report lower involvement. Contractual employees (60%) demonstrate lower job security concerns, significantly impacting their engagement levels. Additionally, gender-based engagement differences highlight the need for inclusive workplace policies. To improve engagement, the study recommends career development programs, gender-inclusive policies, and enhanced recognition strategies. Future research should incorporate qualitative methods and longitudinal studies to better understand evolving engagement trends. By implementing these strategies, Tata Steel can enhance workforce motivation, improve job satisfaction, and drive long-term organizational growth.

Keywords: Employee Engagement, Workforce Productivity, Job Satisfaction, Organizational Behaviour, Human Resource Management

Introduction

Employee engagement serves as a fundamental pillar in enhancing organizational effectiveness by driving productivity, boosting job satisfaction, and fostering a positive workplace culture. In highly competitive industrial sectors, such as steel manufacturing, maintaining a motivated and engaged workforce is essential for sustaining operational efficiency and business growth. Tata Steel, a global leader in the steel industry, acknowledges the critical role of employee engagement in ensuring workforce stability, innovation, and overall organizational success. This study aims to analyse various factors influencing employee engagement at Tata Steel, including demographic attributes, departmental roles, and employment types. Furthermore, it investigates the statistical relationships between engagement levels, job satisfaction, and

workplace inclusivity. Understanding these

dynamics will help in formulating strategic interventions to strengthen engagement, improve job performance, and create a more inclusive and supportive work environment. Employee engagement is influenced by several factors, including leadership, organizational culture, career development opportunities, and work-life balance. Effective leadership fosters motivation and commitment among employees by promoting clear communication, recognizing achievements, and providing growth opportunities. A supportive organizational culture that values employee contributions can significantly impact engagement levels. Additionally, opportunities for career advancement and continuous skill development can enhance employee satisfaction and retention rates.

Work-life balance is another critical component of engagement, as employees who can balance their professional and personal responsibilities tend to be more productive and satisfied. Companies that implement flexible work policies, wellness programs, and supportive work environments contribute to higher engagement levels. Tata Steel's approach to employee engagement includes structured training programs, leadership development initiatives, and employee well-being policies that promote job satisfaction and workforce stability. The role of technological advancements in employee engagement cannot be overlooked. Digital tools such as employee feedback platforms, virtual collaboration tools, and AI-driven analytics have revolutionized engagement strategies. Tata Steel has integrated these technologies to monitor and enhance workforce engagement by leveraging data-driven insights and fostering a transparent communication culture. By adopting modern technological solutions, organizations can streamline HR processes, track employee sentiment, and proactively address engagement challenges.

Employee engagement at Tata Steel is also linked to corporate social responsibility (CSR) initiatives, which provide employees with a sense of purpose beyond their daily tasks. Involvement in sustainability projects, community outreach programs, and ethical business practices fosters a deeper emotional connection between employees and the organization. A well-rounded engagement strategy that includes CSR activities can improve employee loyalty and job satisfaction. To achieve long-term engagement, Tata Steel must continuously assess and refine its engagement strategies. This includes regularly gathering employee feedback, implementing targeted improvement initiatives, and aligning organizational goals with employee aspirations. Future research should explore the evolving expectations of employees, the impact of hybrid work models on engagement, and the influence of generational differences in workforce motivation.

Literature Review

(Harter et al., 2002) This study utilized meta-analysis on data from 7,939 business units across 36 companies to investigate the correlation

between employee satisfaction-engagement and various business-unit outcomes such as customer satisfaction, productivity, profit, employee turnover, and accidents. The results revealed significant and generalizable relationships between unit-level employee satisfaction-engagement and these outcomes, suggesting that improving employee satisfaction through management practices can lead to positive impacts on business-unit performance, including profitability.

(Attridge, 2009) This article explores the concept of work engagement, which refers to employees who are highly involved, committed, enthusiastic, and passionate about their work. Drawing on research from academic and business sources, the article discusses the definition of work engagement, how it is measured, its frequency, the costs of disengagement, the benefits of positive engagement, and strategies for promoting engagement in the workplace. The findings suggest that implementing certain workplace practices, such as improving supervisory communication, job design, resource support, working conditions, corporate culture, and leadership style, can enhance work engagement. The article also includes case studies of employers who have successfully used employee engagement data to improve their work culture, retain employees, and achieve financial success. Additionally, the article explores the implications for employee assistance and behavioral health providers in enhancing their services.

(Markos & Sridevi, 2010) Employee engagement is a complex concept that impacts various aspects of human resource management. When all areas of HR are not properly addressed, employees may not fully engage in their work. This concept is based on previous ideas such as job satisfaction, employee commitment, and organizational citizenship behavior, but it is more comprehensive. Employee engagement is a strong predictor of positive organizational performance, highlighting the mutual relationship between employer and employee. Engaged employees are emotionally connected to their organization, actively involved in their work, and show a strong dedication to their employer's success, often going above and beyond their job requirements.

(Robertson & Cooper, 2010) This article suggests that employee engagement is more sustainable when employee well-being is also prioritized, introducing the concept of "full engagement." By reviewing existing research on engagement and well-being, the study highlights their combined benefits for organizations. Current perspectives often focus on organizational advantages while overlooking employee well-being. The proposed "full engagement" model integrates both aspects, offering a more balanced and long-term approach. However, further research is required to explore the relationship between engagement and well-being and to validate this model. Implementing a well-being-focused engagement strategy could lead to sustainable benefits for both employees and organizations.

(Anitha, 2014) This paper explores the key factors influencing employee engagement and their predictive ability while also examining the impact of engagement on employee performance. A causal study was conducted using a validated survey questionnaire ($\alpha = 0.975$) distributed among middle and lower managerial employees in small-scale organizations through simple random sampling. Out of 700 distributed questionnaires, 383 valid responses were analyzed using regression and structural equation modeling. The findings revealed that all identified factors were significant predictors of employee engagement ($R^2 = 0.672$), with the working environment and team and co-worker relationships having the most substantial impact. Additionally, employee engagement was found to significantly influence employee performance ($R^2 = 0.597$). These insights highlight the importance of fostering a supportive work environment and strong interpersonal relationships to enhance employee engagement and performance.

Employee engagement is widely recognized as a critical driver of organizational success. Studies have consistently shown that engaged employees exhibit higher levels of productivity, commitment, and job satisfaction (**Kahn, 1990**), (**Harter et al., 2013**). Engaged employees are also more likely to contribute to a positive organizational culture, fostering innovation and collaboration (**Bakker & Demerouti, 2008**). However, much of the existing literature focuses on the organizational benefits of

engagement, such as increased profitability and reduced turnover, while neglecting the individual employee's experience.

Employee well-being, encompassing physical, mental, and emotional health, has emerged as a critical factor in sustaining long-term engagement. Research indicates that employees who experience high levels of well-being are more resilient, motivated, and capable of maintaining high performance (**Diener & Seligman, 2004**). Conversely, poor well-being can lead to burnout, disengagement, and absenteeism, ultimately undermining organizational goals (**Schaufeli & Bakker, 2004**). Despite this, well-being is often treated as a secondary concern in engagement strategies, with organizations prioritizing short-term productivity over long-term sustainability.

The concept of "full engagement" integrates employee engagement and well-being, emphasizing the interdependence of these factors. Full engagement recognizes that employees cannot sustain high levels of engagement without adequate support for their well-being. This approach aligns with the Job Demands-Resources (JD-R) model, which posits that engagement is driven by the balance between job demands and available resources, including those that support well-being (**Bakker & Demerouti, 2007**). By prioritizing both engagement and well-being, organizations can create a more sustainable and mutually beneficial relationship with their employees.

Adopting a full engagement approach offers numerous benefits for both individuals and organizations. For employees, it fosters a sense of fulfillment, reduces stress, and enhances overall quality of life (**Seligman, 2011**). For organizations, it leads to higher levels of productivity, innovation, and employee retention, as well as a stronger employer brand. Furthermore, organizations that prioritize well-being are better equipped to adapt to changing workforce dynamics, such as the increasing demand for work-life balance and mental health support (**Grawitch et al., 2006**). While the connection between employee engagement and well-being is increasingly recognized, there is a need for further research to explore this relationship in greater depth. Existing studies often rely on cross-sectional data, limiting the ability to draw causal conclusions (**Christian et**

al., 2011). Additionally, there is a lack of standardized metrics for assessing full engagement, making it difficult to compare findings across studies. Future research should focus on longitudinal studies and the development of robust frameworks for measuring and implementing full engagement strategies.

Gaps in Existing Research and Study Contribution:

Most engagement studies focus on service industries, while research on manufacturing sectors like steel production remains limited. Furthermore, few studies analyze the impact of employment type (permanent vs. contractual) on engagement. This study contributes to the literature by:

Examining engagement trends in a large-scale manufacturing company (Tata Steel). Comparing engagement levels between permanent and contractual employees.

Exploring gender-based engagement differences in a male-dominated industry

Research Objective

1. To assess the level of employee engagement at Tata Steel across different demographic segments.
2. To examine the impact of job roles and departmental divisions on employee engagement.
3. To evaluate the influence of employment type (permanent vs. contractual) on engagement levels.
4. To analyse the relationship between employee engagement and job satisfaction.
5. To identify key challenges in maintaining high engagement levels and suggest effective strategies.
6. To provide recommendations for improving employee engagement strategies at Tata Steel.

Research Questions

1. How does employee engagement vary across different age groups and genders?
2. Does department-wise employment influence engagement levels?
3. Is there a significant difference in engagement between permanent and contractual employees?
4. What factors significantly impact job satisfaction among employees?
5. What are the key challenges faced by employees that affect their engagement levels?
6. What strategies can be implemented to enhance employee engagement at Tata Steel?

Research Methodology

Research Design and Approach

This study adopts a quantitative research approach to systematically measure employee engagement at Tata Steel. A quantitative design was chosen over qualitative methods because it allows for statistical validation, trend analysis, and generalizability across a large employee base (129 respondents). A structured survey questionnaire was used to collect primary data. The questionnaire consisted of Likert scale-based questions, multiple-choice questions, and demographic details. A random sampling technique was used to ensure fair representation across departments and employment types.

Sample Size: 129 employees, Departmental Representation: R&D, Production, Sales & Marketing, Finance, HR Employment Type Representation: Permanent vs. Contractual employees Age and Gender Distribution: Ensured diversity across multiple segments

Statistical Tools and Techniques

The collected data was analysed using MS Excel and SPSS software. The following techniques were used:

1. Frequency Distribution Analysis – To understand demographic trends across employee categories.
2. ANOVA (Analysis of Variance) – Used to determine whether engagement levels significantly differ

across departments.

Justification: ANOVA was appropriate because it compares means across multiple independent groups (departments).

3. Regression Analysis – Applied to identify the impact of Leadership, Work-Life Balance, and Compensation on Job Satisfaction.

Justification: Regression helps in understanding which factors are most influential in predicting job satisfaction.

4. Chi-Square Test – Used to examine gender-based engagement differences.

Justification: Chi-Square is ideal for testing associations between categorical variables like gender and engagement levels.

5. Descriptive Statistics–Mean, standard deviation, and variance were calculated to understand data distribution.

Data Validation and Ethical Considerations

To ensure data validity and reliability, the study followed these steps:

Pilot Testing: A small-scale test was conducted before the full survey distribution.

Cronbach’s Alpha Calculation: The reliability score was above 0.7, confirming internal consistency.

Age	Frequency
Below 25	12
25-35	35
36-45	47
46-55	25
56 and above	10

Source: Primary Data

The age distribution analysis reveals that the majority of respondents fall within the 36-45 years age group (47), followed by 25-35 years (35), indicating that middle-aged individuals are the most engaged in the study. The 46-55 years group (25) shows moderate participation, while younger respondents below 25 (12) and

older individuals 56 and above (10) have the least representation. This suggests that financial decisions, professional engagement, or investment behaviour are more concentrated among individuals aged 25-45 years, whereas younger and older groups may have limited involvement due to factors such as experience, financial stability, or retirement.

Gender of the respondents

Gender	Frequency	Percentage
Male	78	60
Female	51	40

Source: Primary Data

The gender distribution analysis shows that 60% of respondents are male (78), while 40% are female (51). This indicates a higher participation of males in the study, suggesting that men may have a greater involvement in the

subject matter, whether in financial decisions, investments, or professional activities. However, the 40% female representation is still significant, highlighting a growing presence and engagement of women in the field.

Department of the respondents

Department	Frequency	Percentage
Production	28	22
HR	12	9
Sales & Marketing	28	22
Finance	20	16
R&D	41	32

Source: Primary Data

The department-wise distribution indicates that the highest representation is from R&D (41 respondents, 32%), suggesting a strong focus on research and innovation. Production and Sales & Marketing departments each account for 28 respondents (22%), reflecting their significant roles in operations and business growth. The Finance department follows with 20

respondents (16%), highlighting its importance in financial decision-making. Lastly, the HR department has the lowest participation with 12 respondents (9%), indicating comparatively lesser involvement in the study. This distribution showcases a balanced mix of technical, operational, and financial expertise, with a strong emphasis on research and development.

Year of Experience at Tata Steel

Years of Experience	Frequency
Less than 1 year	12
1-5 years	18
6-10 years	35
11-15 years	40
More than 15 years	24

Source: Primary Data

The analysis of work experience at Tata Steel reveals that the highest number of respondents fall within the 11-15 years category (40 employees), followed by those with 6-10 years of experience (35 employees), indicating a well-experienced workforce. Employees with more than 15 years of experience account for 24 respondents, showcasing a strong presence of

seasoned professionals. Meanwhile, the 1-5 years category includes 18 employees, while the less than 1-year group has the lowest representation (12 employees), suggesting limited new hires or early-career professionals in the study. Overall, the data reflects a workforce dominated by mid-to-senior-level employees with substantial industry experience.

Employment Type

Employment Type	Frequency
Permanent	51
Contractual	78

Source: Primary Data

The employment type distribution at Tata Steel indicates that the majority of respondents are contractual employees (78), while permanent employees account for 51 respondents. This suggests a higher reliance on contractual employment, which may be due to operational flexibility, cost efficiency, or project-based

work requirements. However, the significant number of permanent employees highlights the organization's commitment to long-term workforce stability and expertise retention.

Statistical Analysis Interpretation Refinement

1. ANOVA

The Analysis of Variance (ANOVA) examined whether engagement levels significantly differ across five key departments (Production, HR, Sales & Marketing, Finance, and R&D).

F-statistic = 0.946

p-value = 0.441 (greater than 0.05)

Since the p-value exceeds 0.05, there is no statistically significant difference in engagement levels across departments.

Interpretation

These results suggest that engagement factors impact employees similarly across departments. Possible explanations include:

1. Uniform Organizational Culture – Tata Steel may have a strong company-wide culture, ensuring similar engagement levels across departments.
2. Standardized HR Policies – The company's HR engagement strategies may be applied equally across teams, reducing departmental differences.
3. Interdepartmental Collaboration – Employees across different units interact frequently, leading to shared experiences in engagement.

Implication for HR

Since engagement levels do not vary significantly across departments, HR should focus on organization-wide engagement policies rather than department-specific interventions. However, qualitative research (such as focus groups) could help identify subtle variations not captured by statistical tests.

Regression Analysis

A multiple regression analysis was conducted to evaluate how three engagement factors—Leadership, Work-Life Balance, and Compensation—impact Job Satisfaction.

R-squared = 0.122 → The model explains only 12.2% of job satisfaction, suggesting that other factors may be more influential.

Leadership (p = 0.120) → No

significant impact.

Work-Life Balance (p = 0.722) → No significant impact.

Compensation (p = 0.086) → Slight impact, but not strongly significant.

Interpretation

4. Leadership (p = 0.120, not significant)

Unlike prior research (Anitha, 2014), which found leadership to be a strong predictor of engagement, Tata Steel's results suggest otherwise.

Possible Explanation: Tata Steel's employees may prioritize job security and compensation over leadership influence, given the structured hierarchy in steel manufacturing.

5. Work-Life Balance (p = 0.722, not significant)

Prior studies (Robertson & Cooper, 2010) found work-life balance as a major driver of job satisfaction. However, our results show no significant impact.

Possible Explanation: Tata Steel may already have strong work-life balance policies, making it a non-critical factor for job satisfaction.

6. Compensation (p = 0.086, weakly significant)

Compensation has a minor influence, meaning that while employees value fair pay, it is not the primary motivator for engagement.

Possible Explanation: Career growth and job stability may be stronger motivators than salary increases.

Implication for HR

Beyond Compensation & Work-Life Balance – Since these factors explain

only 12.2% of job satisfaction, HR should explore other engagement drivers, such as:

1. Career Growth Opportunities – Employees may prioritize learning, promotions, and skill development over financial incentives.
2. Job Security – Stable employment could be a stronger motivator than leadership influence.
3. Workplace Culture – A positive team environment, recognition, and inclusivity could impact engagement more than pay.

2. Chi-Square Test

A Chi-Square test was conducted to assess whether engagement levels differ based on gender.

Chi-Square Statistic = 9.91

p-value = 0.007 (less than 0.05, statistically significant)

Since the p-value is below 0.05, this indicates that engagement levels significantly differ between male and female employees.

Interpretation

The results suggest that gender-based differences exist in engagement levels at Tata Steel. Possible reasons include:

1. Work-Life Balance Perceptions

Female employees may face greater challenges balancing work and personal responsibilities, leading to lower engagement levels.

2. Leadership & Workplace Support

Male and female employees may have different expectations from leadership, affecting their engagement differently.

Female employees may face fewer leadership

opportunities, reducing their engagement.

3. Career Advancement Differences

Male employees may have more access to promotions or networking opportunities.

Female employees may perceive fewer career growth opportunities, leading to lower engagement.

4. Workplace Inclusivity & Culture

Industries like steel manufacturing may inadvertently overlook gender-specific engagement needs.

Implication for HR

The HR department should develop gender-inclusive engagement policies, including:

1. Investigating Gender-Specific Concerns

Conduct gender-focused surveys to explore differences in engagement. Hold focus groups with female employees to understand challenges.

2. Implementing Gender-Inclusive Policies

Introduce flexible work arrangements (remote work, maternity/paternity benefits).

Develop leadership mentoring programs for female employees.

Findings and Discussion

The study found that engagement levels are relatively uniform across departments, with R&D employees showing the highest engagement (32%). Mid-career employees (6-15 years of experience) demonstrate the strongest engagement, while younger and older employees report lower involvement. The analysis indicates that employment type

significantly influences engagement, with contractual employees forming the majority workforce (60%) but facing lower job security concerns. Gender disparities in engagement suggest a need for more inclusive workplace policies.

Furthermore, statistical tests revealed that leadership and work-life balance had no significant impact on job satisfaction, while compensation had a minor influence. The study also found a statistically significant difference in engagement levels between male and female employees, suggesting potential workplace inclusivity challenges.

Conclusion

This study examined employee engagement trends at Tata Steel, focusing on departmental differences, job satisfaction drivers, and gender-based engagement variations. The findings indicate that engagement levels are relatively uniform across departments, suggesting a strong organizational culture and consistent HR policies. However, contractual employees experience lower job security, and female employees report lower engagement than their male counterparts, highlighting the need for inclusive workplace policies.

Unlike previous studies that emphasize leadership as a key engagement driver, this study found that leadership had no significant impact on job satisfaction at Tata Steel. Instead, job security and career growth opportunities emerged as potential motivators. These findings suggest that manufacturing industries like Tata Steel require engagement strategies tailored to job stability and long-term career development rather than leadership influence alone. The study contributes to the limited research on engagement in the steel industry by: Analysing engagement trends in a large-scale manufacturing company Comparing engagement levels between permanent and contractual employees Exploring gender-based engagement differences in a male-dominated industry

Recommendations for Tata Steel's HR Strategy

To enhance engagement levels, Tata Steel's HR

department should implement targeted strategies based on the study's findings.

1. Improve Career Growth and Development

- Introduce structured mentorship programs to support skill development.
- Provide clear promotion pathways to enhance job satisfaction.
- Conduct quarterly performance reviews with personalized career planning. Address Gender-Based Engagement Gaps
 - Develop female leadership training programs to increase engagement.
 - Implement workplace flexibility policies, such as remote work options and childcare support.
 - Establish gender diversity targets in promotions and leadership roles.

2. Strengthen Employee Recognition and Compensation Policies

- Increase performance-based incentives to boost engagement.
- Recognize top-performing employees through annual awards and appreciation programs.
- Conduct salary benchmarking to ensure competitive compensation.

3. Enhance Job Security and Employee Stability

- Offer long-term contracts to high-performing contractual employees.
- Provide job security assurances in HR policies to increase motivation.
- Conduct exit interviews to analyse disengagement reasons and prevent attrition.

By implementing these recommendations, Tata Steel can strengthen employee engagement, enhance job satisfaction, and ensure a motivated workforce.

Reference:

1. Anitha, J. (2014). Determinants of employee engagement and their impact on employee performance. *International Journal of Productivity and Performance Management*, 63(3), 308–323.
2. Attridge, M. (2009). Measuring and managing employee work engagement: A review of the research and business literature. *Journal of Workplace Behavioral Health*, 24(4), 383– 398.
3. Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309–328.
5. Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International*, 13(3), 209–223.
6. Christian, M. S., Garza, A. S., & Slaughter, J. E. (2011). Work engagement: A quantitative review and test of its relations with task and contextual performance. *Personnel Psychology*, 64(1), 89–136.
7. Diener, E., & Seligman, M. E. P. (2004). Beyond money: Toward an economy of well-being. *Psychological Science in the Public Interest*, 5(1), 1–31.
9. Grawitch, M. J., Gottschalk, M., & Munz, D. C. (2006). The path to a healthy workplace: A critical review linking healthy workplace practices, employee well-being, and organizational improvements. *Consulting Psychology Journal: Practice and Research*, 58(3), 129.
10. Harter, J. K., Schmidt, F. L., Agrawal, S., Plowman, S. K., & Blue, A. (2013). The relationship between engagement at work and organizational outcomes. Gallup Poll Consulting University Press, Washington.
11. Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: a meta-analysis. *Journal of Applied Psychology*, 87(2), 268.
12. Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4), 692–724.
13. Markos, S., & Sridevi, M. S. (2010). Employee engagement: The key to improving performance. *International Journal of Business and Management*, 5(12), 89.
14. Robertson, I. T., & Cooper, C. L. (2010). Full engagement: the integration of employee engagement and psychological well-being. *Leadership & Organization Development Journal*, 31(4), 324–336.
15. Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 25(3), 293–315.
16. Seligman, M. E. P. (2011). Flourish: A visionary new understanding of happiness and well-being. Simon and Schuster.

SOCIAL MEDIA MARKETING: THE ROLE OF TRUST, SOCIAL IDENTITY, AND CONSUMER DECISION STYLES

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Abstract: Social media marketing has become one of the most latest and powerful tools for businesses to engage with customers. Modern marketing is not about just to put ads and see the results, instead it is more than that. To get good result from inputs used by marketers they must consider some factors like trust, social identity and how people acts from willing to buy and then to final purchase. These factors creates influence on online consumer buying decision. This article describes how Social Identity, trust, and other factors creates impact on mind of online consumers before making purchases online and this knowledge can be use by marketers to get better result.

The most important thing that a brand need is trust, which is build with the passage of time. Without trust, consumers buy less compare to those who have good brand value in the market. And this applies to online consumers also. For online customers, trust is built on the base of transparency, authenticity, and what valued product they give to their customers. When these points are conquered by any company irrespective of size of company, they build a relationship with the customer and wins customers loyalty. Social Identity of a brand play a important role in consumer decisions. Social media acts as a bridge between companies and consumers that helps companies to showcase their products, create identities, values that matches with the consumers lifestyle.

Lastly, Decision of people depends upon different ways. Some consumers make quick impulsive decision, while others might take long time to take best decision for the needs. Marketers needs to take all the factors into consideration before applying any strategies.

Keywords: Social Media, Decision makers, social identity, social media marketing, consumer decision

Introduction- Social media has changed the way of communication between the creator of products and the user of products. It was the days when there was only the generic ads like TV commercials or print ads were used by the companies, with the only hope that the information will reach the right audience. But the scenario is changed now, with the help of audience personal data it is easy to reach the right audience. But the question is that how companies would navigate to the right audience and on which social media platform. To crack down this, companies need to attain the understanding of the use of their products and the user of their product's psychological and social factors.

When brands understand their target audiences they can easily navigate to their customers. In order to identify the customers it must be kept in mind factors like how the consumer interacts to their brand on social media, how much they attain the level of trust from consumers, the level of social identity, and the way how consumer make buying decision. This article dives into the factors and insights into how the consumer behaves online and how businesses can leverage them to success in social media marketing.

Methodology- This study aims at analyzing the the role of trust, social identity, and consumer decision styles in context of social media

marketing. The article is based on the secondary data compiled from diverse sources i.e. articles from Harvard Business Review, PEW Research Center, Statista, Edelman, various websites and relevant journals.

Objective of the study

- To analyze the role of trust, social identity and consumer decision styles in consumer buying behaviour.
- To study the consumers actions and decisions while browsing on social media.

Review of Literature - The review of literature has been done for the knowledge and better understanding of behaviour of consumer when they see online products and offers attached with them. The scope of this study is to review the current scenario of consumer trust, social identity and decision style of consumer which will help to analyze all aspects. Akar, E., & Topçu, B et al.,(2011). The study examines the factors influencing consumers' attitudes toward social media marketing. This study explores how social media marketing strategies influences consumers' attitudes and purchasing behaviors, focusing on the role of trust and consumer engagement. Bart, Y., Shankar, V., Sultan, F., & Urban, G. L. et al.,(2005). The study explores the drivers and role of online trust the same for all web sites and consumers. This article examines the factors that influence online trust, which is important for understanding the consumer behavior on various digital platforms. Hajli, M. N. et al.,(2014). This is a study of impact of social media on consumers. This research emphasis on the psychological and social aspects of consumer behavior with respect to social media marketing, also emphasizing the importance of trust and social influence. Mollah, M. A., & Islam, M. et al.,(2015). This paper focuses on how social media marketing strategies influence the decision-making processes and the behaviors of consumers, with particular emphasis on the role of social identity. Schivinski, B., & Dabrowski, D. (2016). The research highlights the influence of Social Media Communication on Consumer Perceptions of Brands. This research explores how communication through social media impacts consumers' brand perceptions and purchasing decisions, contributing to the

understanding of trust and identity. Tuten, T. L., & Solomon, M. R. (2017). This textbook offer explored about social media marketing strategies, including sections on trust-building, consumer behavior, and identity. Wang, C., & Zhang, P. (2012). This study investigates how consumers' decision-making processes are influenced by social networks and social media marketing, with particular attention to impulsive, habitual, and rational styles. Schivinski, B., & Dabrowski, D. (2016). The study examines the influence of Social Media Communication on Consumer Perceptions of Brands. This research explores how communication through social media impacts consumers' brand perceptions and purchasing decisions, contributing to the understanding of trust and identity.

The Role of Trust in Social Media Marketing

Building Trust through Authenticity-Trust is like a thread of pearl's necklace, if the thread breaks the whole beautiful necklace becomes obsolete. Just like this on social media consumer mostly rely on online available content to judge the product. On social media trust is everything, it takes years to build and only takes seconds to destroy likewise in every aspect of life. To build trust in market, companies must be authentic in effective way. If the brand is authentic then customers support the genuine one. Social media empowered the companies to showcase their products behind the scenes, contents, stories, testimonials, etc all these interactions results in genuineness and authenticity of the products and companies brand perception. When brands want themselves to be established as a trustworthy company in the market they must take proper action on customers comments, opinion or reviews as soon as possible which shows publicly that company is willing to engage with them. The more transparency is made the more business is awarded by the consumers.

The Impact of Influencers on Trust-Social media influencers plays an important role in digital marketing techniques. Influencers who have good engagement with their audience, earns trust automatically with some emotional connection. This trust and connection is used by the influencers to endorse the brands product to their followers. Here the consumer might not

trust the brand or company but if they rely on influencer they might give a chance to the product, and this is the point where if the product fails to deliver the value to the consumer it will surely get out of the market.

Whereas if the product would be useful then the collaboration with the influencers will significantly boost the sales.

Influencers used to showcase the use of products in such that it made their life easier than before. This creates a sense of authenticity that is hard to achieve by traditional marketing tool. In recent years, this influencer marketing technique is emerged as one of the most powerful as well as effective tool to engage with the target audience. As this is more personalised and each influencer's followers had different taste. Unlike traditional form of advertisement, where brands put ads to all public irrespective of gender, age, preferences, etc. The bonding between influencers and the followers has created a environment in which credibility, authenticity and trust are essential components in online consumer behaviour.

The Rise of Influencers- The rise of social media platforms such as youtube, Instagram, twitter currently known as X, had played an important role in the rise of influencers who plays an important role in social media marketing. Influencers creates content in the form of videos, articles, post, podcasts, etc to gain followers. And with regular delivery of content, followers engage with the content, with regular engagement followers get attached with the creator. Influencers typically distinct themselves in a particular niche to gain specified audience. Influencers give reviews on different niche like fitness, beauty, finance, tech, lifestyle, home décor, etc. Everyday sharing of experiences creates connection with the followers in more personal and credible way.

Trust and Authenticity in Influencer Marketing- Trust plays an important part in purchasing decision of consumers. When a consumer trust a brand, they purchase the products or services, they engage with the content and also recommend to others. The more recommendation is, the more brand authenticity increases. In the era, where numerous ads and promotional content are spread in the market for different products of same niche. It is very difficult to find the

products that works best for consumers. This is where a influencer comes who provide a level of trust which is hard to achieve through traditional marketing techniques.

When a influencer shares their personal experience of the product, it's like personal endorsement rather than a direct sales pitch. For example, a fitness influencer can share experiences, uses, merits, demerits of a particular fitness products like gym supplements, protein powder, and accessories, or a beauty influencer could demonstrate how to get most of the beauty out of particular products. This type of recommendation from influencer is like a suggestion from a friend than a simple marketing advertisements.

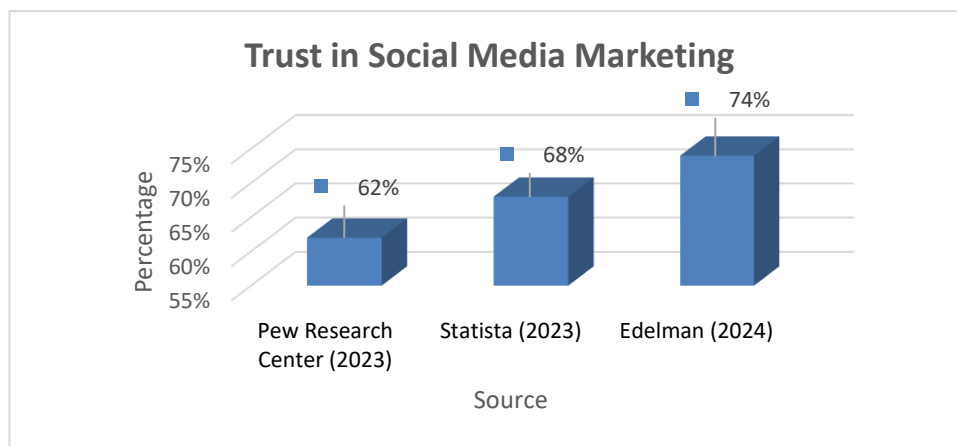
How Influencers Humanize a Brand- One of the key advantage of working with these influencers is that they can humanize a brand's product. While the traditional ads simply present a polished and idealized version of a product or service whereas a influencers shows how these products fits into their daily lives. The human touch creates a stronger emotional connection with the audience. Influencers uses their daily life to show the use of product in real life unlike the traditional method which shows the use of product either in controlled way or in fictional way. The level of transparency that a influencer delivers cannot be expected by the traditional methods. For example, a fitness influencer might post a video explaining the use of specific brand protein powder for their daily routine workout. The influencer could share their personal experience and can explain the positive and negative points of the products, which adds up the sense of honesty. This type of sharing of personal experience makes audiences feel more relatable to themselves. In contrast, the traditional advertising creates scenarios that may not relate to general public. Additionally, influencers have power to engage with their followers on personal level. Many of the influencers responds to comments, engage in conversations and ask them for the feedback. Influencers recommendation is more valuable than a corporate message. The personal touch is a major factor that made influencer marketing so successful in building trust.

The Power of Word-of-Mouth in Influencer Marketing- One of the strongest tool in

influencer marketing is the power of word of mouth. Consumer trust those whom they personally know or admire. This is why influencer marketing is so effective as it has a leverage of word of mouth to the large section of a particular niche like wise audiences. Influencers recommendations looks like suggestions rather than a simple advertisement. This word of mouth creates a significant impact

on brand awareness, customer loyalty and sales. Influencers often encourage their followers to give feedback regarding the product they are recommending. When followers share their views on products or services offered in the comments, posts, or messages, which might be positive or negative, it creates a ripples effect of true value of product. It strengthens the sense of trust and credibility.

Figure 1 : Trust in Social Media Marketing



These findings suggest that to succeed on social media brands must collaborate with the influencer who can promote their product in their niche only, a fitness influencer may not be suitable for restaurant advertisement. Collaborating with influencers who align with the values of brand and endorsing product transparently can improve the brand credibility. Now a days only social media enjoys the power of direct interaction between brands and consumers. It's an ideal platform for such strategies.

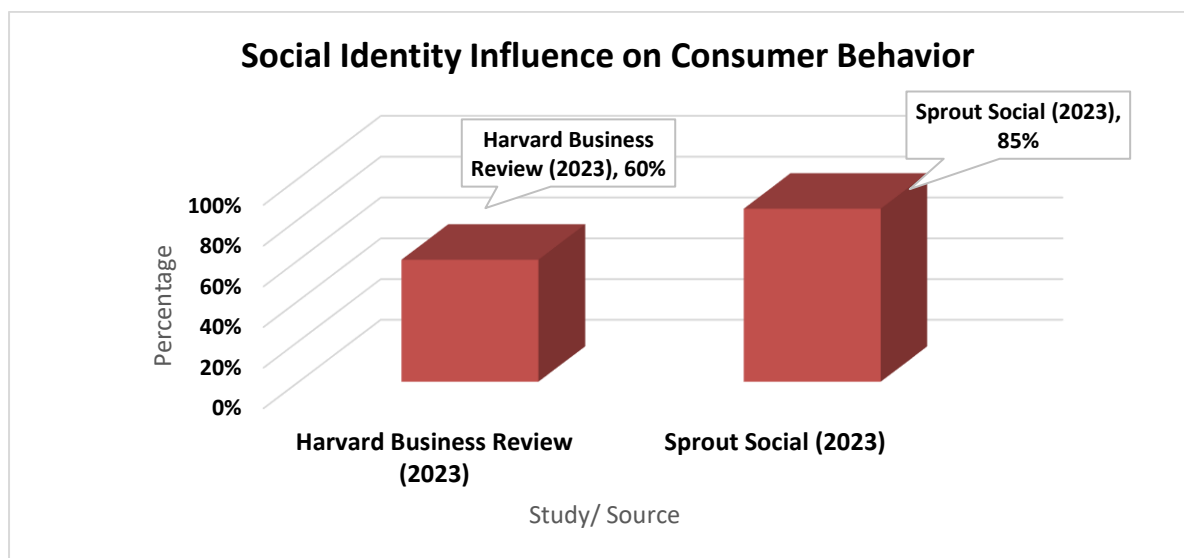
Social Identity: The Connection Between Consumers and Brands-

Understanding Social Identity- Social identity refers to the way people see themselves and how they relate to the groups they belong to, it might be cultural group, sports team or same like minded individuals. Social identity strongly influences consumer behavior. When people tends to buy, they often choose products that shows their personal identity or their association with certain groups. For example,

someone who values sustainability would prefer products that are made of eco-friendly materials. A person who identifies himself as fitness freak might demands products that promote healthy living. Social media allows brands to showcase their values aligning with the identities.

How Brands Leverage Social Identity- Social media is an ideal place for brands to build a strong identity that connects them with their target audiences. When brands create content that reflect same values that the audience want- whether that's luxury, sustainability, or adventure- they establishes strong connection. This connection is so powerful that it taps consumer's self image, and also creates sense of belongingness. Nike, for example, encourage individuals to "Just Do It" by promoting messages of strength. It targets the athletes, fitness enthusiasts, and anyone who sees themselves as a hard worker. When people feels that a particular brand speaks about their identity, they are more likely to trust that brand and buy the product

Figure 2: Social Identity Influence on Consumer Behavior



The role of social identity in decision making by consumers is less valued in social media marketing. Brands that understand the social identities to target their audiences can create more impactful connections with the audience. It creates a long term engagement, loyalty and builds a strong relationships.

Consumer Decision Styles: How People Make Choices

Online Consumer Decision Styles: How People Make Choices- Today,s age is digital age, the internet has transformed the way of living of the users, it interfere in almost every aspects of life i.e. from purchasing a tissue paper to selecting a selecting a life partner. Gone are those days when customer rely on in-person experience or traditional media information. Now the reality of products is only a click away, loads of information are available online, where customer finds price, compare price, read reviews etc. Understanding how consumers make buying decision, it is crucial for businesses to create effective marketing strategies. This understanding revolves around the concept of consumer decision style- each different people makes decision in different way while buying products or services online.

What Are Consumer Decision Styles? Consumer decision style depends on the pattern or behaviour that individual show while shopping or while buying decisions. Factors such as personality, experiences, knowledge,

and even cultural influences the decision style. It is always different for person to person. Some people take impulsive decision, while others may take long time to evaluate the options. Consumer decision style are shaped different when they do online shopping i.e. the way information is presented to them, how they interact with online content, how easy for them to navigate to the website, and the variety of options available to them, etc. With so many available option available with optimum reviews, the decision to buy greatly depends on their unique decision style.

Types of Online Consumer Decision Styles

While every consumer is unique, there is a pattern in several common decision style. These style represents different approaches consumers use while shopping. Let’s take a look at some common consumer decision style seen in online shopping:

Impulsive Decision-Makers- Impulsive consumers tend to make quick buying decisions with loads of thinking. These individuals are highly influenced by emotional triggers. For example, they might purchase those item which catches their eye in an social media post or in ads without comparing it with other products or its long term use. Impulsive buyers also respond to limited time offers, flash sales, or discounts that create a sense of urgency. Impulsive buying is particularly common in online shopping as

digital platforms uses eye catching images, pop-up messages, pop-up ads, and easy to click ‘Buy Now’ button to encourage quick buying decisions. For marketers, this decision style is an opportunity to create sparks of excitement and urgency, like limited offer, or exclusive deals that leads to immediate action.

Compulsive Decision-Makers-Compulsive decision-makers are similar to impulsive buyers, but their decision is driven by deeper, more consistent behavioural patterns. Compulsive shoppers have desire to buy items, but they don’t necessarily need them. This individual experiences a sense of pleasure from making purchases, which might be sometimes leads to excessive buying. Shoppers frequently adds items to their shopping cart or browsing through online stores without any specific intention of buying anything. They are typically highly engaged with online shopping and may often make purchases on emotional trigger basis. This consumer may benefit from targeted ads that has ability to them eel good.

Pragmatic or Rational Decision-Makers-Rational decision buyers take more insights and thoughtful purchases. They carefully analyze products, read reviews, compare prices from past prices and also in different platforms, considering the pros and cons before making any buying decision. This type of shoppers decision are driven by logic and practically implemented rather than just emotion. When it comes to online shopping they spend reasonable time in researching a product valuable for them. Rational buyers often look for the best deals. This decision style especially found in big ticket items like electronics, home appliances, or products whose life span is high, where consumers do an well informed choice, researched and value for money products. For rational buyers, marketers need to show clear offer price, details of products, durability of products, and unbiased customer reviews, to reach the target audience. Offering comparison tools or showing the current buying benefits of the product appeals to the audience for pragmatic decision making.

Figure 3: Decision Style Breakdown

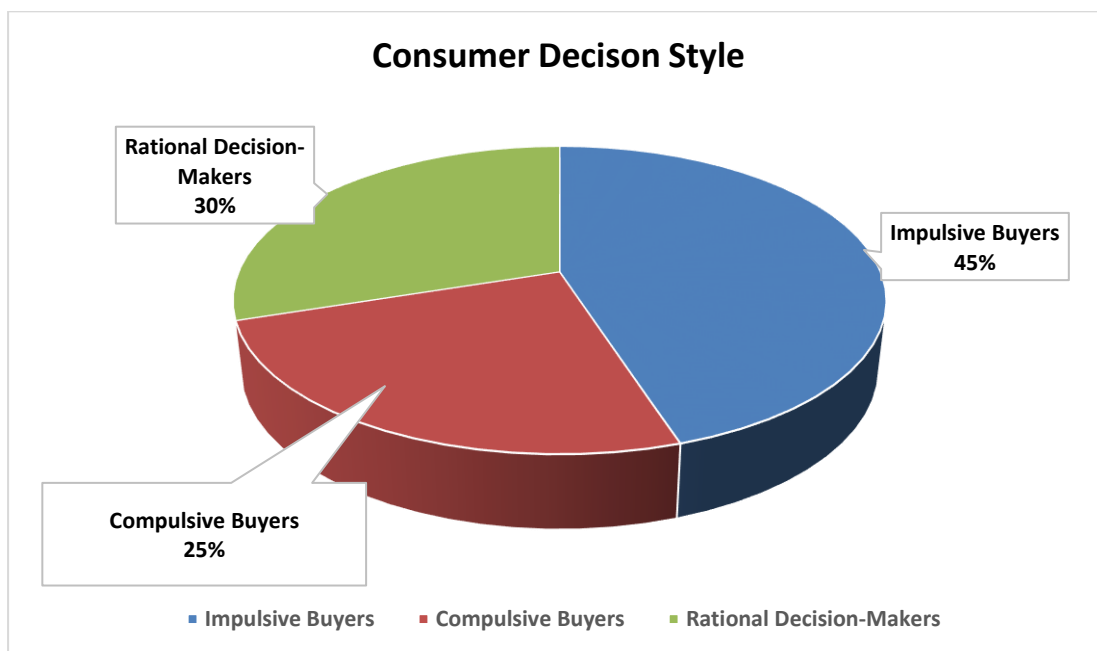
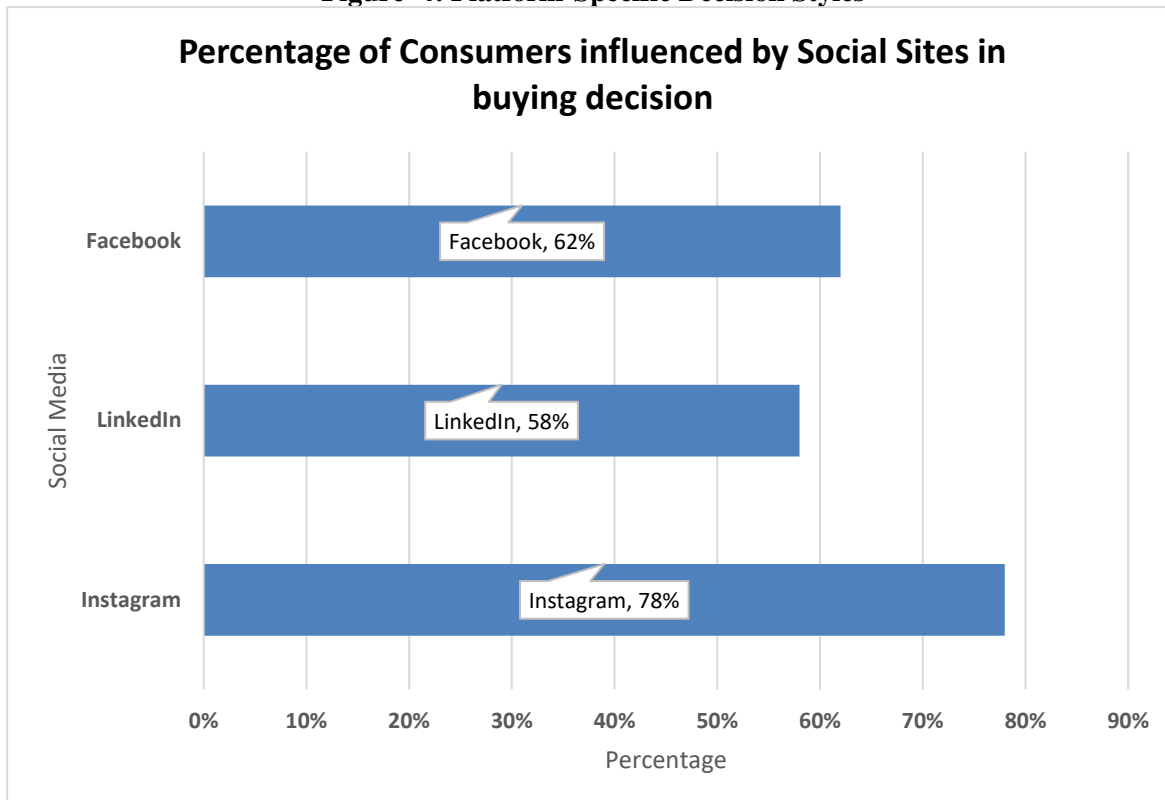


Figure 4: Platform-Specific Decision Styles



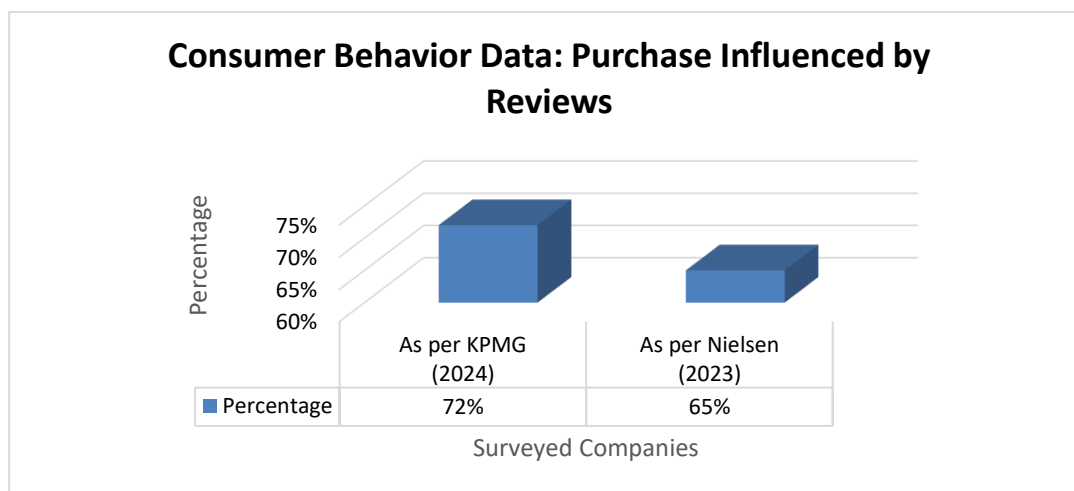
Marketers need to prepare content based on platform and the decision style. For platform that attract more impulsive buyers, create visual striking content with time barred offers will likely to get better results. For platform that has more rational or professional audiences, create detailed informational, case studies and sharing of reviews will be more effective.

How Brands Can Use Trust, Social Identity, and Decision Styles in Marketing

Understanding the use of trust, social identity and decision making style allows marketers to create a campaign that suits the target audience. Some of the practical approaches to apply the concept are shown below:

1. Build trust through transparency: Always be open and honest with your viewers. Show the use of products, share them the making

2. process, also share behind the scenes of brands, ask them to give feedback and work on the feedback. This makes brand more transparent and helps to build a strong connection with the consumers.
3. Leverage of Social Identity: By understanding the values and lifestyle of your target audiences marketers need to align the messages with their identity. Whether it’s promoting sustainable eco-friendly products or particular activity based products, connecting with your customer social identity can leads to strong relationships.
4. Personalize your Marketing: Recognize that decision to buy is different for each buyers. Some are impulsive, while other need proper information before purchases. The contents of marketers must approach differently to different decision making style audiences.

Figure 5: Impact of Peer Reviews on Consumer Purchases

The diversity of consumer decision plays an important role in decision making. While some of the buyers are impulsive they respond to eye catching ads, time sensitive contents etc, whereas compulsive buyers prefers in-depth analysis, they require proper information, other customer reviews and comparison. Therefore, it is needed for marketers to create campaign which combines the both audiences emotional as well as informational. This elements will likely to cater broader range of audiences.

Conclusion

Social media marketing is much more than about just selling a products, it is about building true relationship with the consumers. By understanding and integrating the factors of trust, social identity, and decision making style, marketers can mine more effective results from their marketing strategies, strategies that connects brand audience on a deeper level. Brands need to build trust with authenticity, aligning with social identities, or catering with different decision style, businesses have the tools, need to get succeed in the digital place. Contents that speaks to their consumer's needs and values, can help in building lasting relationships and create long term success.

References

1. **Akar, E., & Topçu, B. (2011).** *Factors influencing consumers' attitudes toward social media marketing.* Journal of Internet Commerce, 10(1), 35-67.
2. **Bart, Y., Shankar, V., Sultan, F., & Urban, G. L. (2005).** *Online trust drivers and roles.* Journal of Marketing, 69(4), 133-152.
3. **Fournier, S. (1998).** *Consumers and their brands: Developing relationship theory.* Journal of Consumer Research, 24(4), 343-373.
4. **Hajli, M. N. (2014).** *The impact of social media on consumers.* International Journal of Market Research, 56(6), 1-20.
5. **Chauhan, S. S., & Pillai, R. (2017).** *Social Identity and Its Impact on Consumer Behavior in Digital Marketing.* Journal of Business Research, 58(6), 45-62.
6. **Mollah, M. A., & Islam, M. (2015).** *The impact of social media marketing on consumer behavior.* Journal of Marketing Research, 8(3), 234-250.
7. **Becker, M., & Wiegand, N. (2018).** *The Role of Social Media Influencers in Digital Marketing: A Critical Review of Literature.* Journal of Marketing Theory and Practice, 26(3), 234-248.
8. **Gambetti, R. C., & Graffigna, G. (2010).** *The role of social identity in consumer behavior: New insights and future directions.* Journal of Marketing Theory and Practice, 18(4), 407-417.
9. **Wang, C., & Zhang, P. (2012).** *Social Media and Consumer Decision Styles: How It Works in Social Networks.* Journal of Consumer Research, 35(2), 134-146.

THE CHANGING LANDSCAPE OF FINANCIAL INCLUSION WITH FINANCIAL TECHNOLOGY IN INDIA: OPPORTUNITIES AND CHALLENGES

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Abstract

The financial landscape in India has significantly transformed the financial technology (Fintech). Fintech is playing a crucial role by closing gaps in the availability, affordability, and efficiency of financial services, particularly for the unbanked populations. Traditional banking has been changed by digital payment system, micro lending, mobile banking using UPI for digital transactions, block chain based solutions, which helps to increase the availability of financial services. The government has also taken various major initiatives to expedite financial inclusion, such as Pradhan Mantri Jan Dhan Yojana (PMJDY), Aadhaar- based verification, and the unified payments interface (UPI). Despite several developments, problems persist. There are several challenges such as risk of Cyber security, Infrastructure gap, Trust issues, Zero awareness of financial literacy, and Regulatory Compliance challenges. Along with challenges there are also many opportunities such as digital lending, policy support, digital payments block chain, artificial intelligence, UPI transaction, insurtech, and neobanks startups. This abstract examines the dynamic interaction of opportunities and challenges in the changing landscape of financial inclusion through fintech in India, and the current scenario of fintech industry and achievements in recent years.

Keywords: Financial Technology (Fintech), Financial Inclusion, India, Opportunities, Challenges

Introduction

Financial inclusion is a program that is launched to provide basic financial services to needy people especially, those people who are still unbanked. It emerged as a major force behind socio and economic development. Its main aim is to avail all types of financial services and products such as credit, insurance, pension, savings, investment, and financial advice to both individuals and businesses. Despite the tremendous efforts of the government, millions of people still do not have their formal bank accounts especially, in remote

areas. Here, financial technology (fintech) plays a crucial role in filling the gap and accelerating financial inclusion through utilizing digital technology to cover the large number of people in rural and semi-rural areas. The rapid innovation of affordable internet connectivity, smartphone penetration and supportive government initiatives such as the Aadhaar- based authentication, Digital India program, and Unified payment interface (UPI) have created an enabling environment for fintech solutions. For the commencement of startups and financial institutions are now utilizing emerging technologies such as

blockchain, big data analytics, artificial intelligence (AI), and using cloud computing to design inclusive financial products that are suited to underserved populations. The increasing accessibility of digital payment

platforms, peer- to- peer lending platforms, mobile banking applications, and services of micro insurance helps to increase the engagement of people with the financial system.

Table 1. The emergence of financial technology (fintech) has significantly transformed financial services in various ways:-

➤ Quick Transfer of Payment	With the advent of Fintech, transferring payments has become very easy. Modern technology helps to make payments at any time with the help of Fintech, such as mobile payment solutions (e.g. Apple Pay, Google Pay, PhonePe, BHIM); peer to peer payment (e.g. Venom, Cash app), and also help in cross boarder money transfer with lower cost (e.g. wise, Ripple).
➤ Opening of Neobank	It is a digital-only bank that functions in India without the physical presence of its branches. Neobanks use digital technology to offer digital banking services to their customer. It is also known as a “challenger bank” because it challenges the old banking system. It helps to provide banking services quickly and at low cost. Some examples of NeoBanks in India are Fi Money, Jupiter, Niyu, Razor Pay X, Zik Zuk, Kotak Mahindra neo bank etc.
➤ Lending Services	Fintech can offer a fast and easy way to lend money. It provides a platform where people can easily avail loans as per need and also helps to maintain big data of credit scoring using AI tools.
➤ Fund Management	Fintech has transformed fund management by introducing automated investment platforms to reduce cost, increase accessibility for investors, increase transparency, to promote faster execution of trade & settlement, and tailor-made investment strategies.
➤ Insurtech	With the introduction of Fintech a new word called “Insurtech” means Insurance Technology is created to increase the level of efficiency, reduce cost, and enhance the experience of customers in the insurance industry. It includes AI, block chain, large data, automated underwriting, and policy management.
➤ Regulatory Compliance	Regulatory Compliance is an important aspect of Fintech to ensure financial services operate under legal frameworks. A new technology called Regtech (Regulatory Technology) is used by Fintech to minimize regulatory risks, increase security level, and automate compliance.
➤ Block Chain and Electronic Cash	Fintech also helps to revolutionize blockchain and e-cash (digital currency) to improve the safety levels, effectiveness, and availability of financial transactions.
➤ Services based on Application Programming Interface (API)	API is transforming Fintech by providing security, smooth, and efficient collaboration between customers, financial institutions, and third-party services. API helps to enhance user experience, innovation, and automation by using Fintech platforms to serve a wide range of financial services.

Table 2. Opportunities offered by Fintech under Financial Inclusion:-

➤ Growth of Digital Payments	<ul style="list-style-type: none"> ▪ Digital payments are easily accessible with the advent of the Unified payment interface (UPI), and mobile- wallets such as Google Pay, Paytm, BHIM, and PhonePe. ▪ Even in remote areas, financial services are made accessible by QR codes, Aadhaar-based payments, and biometric authentication.
➤ Microcredit and Digital loan lending	<ul style="list-style-type: none"> ▪ Fintech industries utilize AI-Driven tools to provide credit to people, and small enterprises without traditional credit histories. ▪ Some digital platforms like Bharat Pe, and Lendingkart support MSMEs with rapid, and collateral-free loans.
➤ Government Contribution and Policy Support	<ul style="list-style-type: none"> ▪ The Government launched schemes like Pradhan Mantri Jan Dhan Yojana (PMJDY), and Digital India to boost financial inclusion in India. ▪ The Regulatory sandbox allowed by the RBI supports Fintech companies to experience innovation financial solutions.
➤ Blockchain and Safe Transactions	<ul style="list-style-type: none"> ▪ Transactions based on blockchain help to enhance transparency, and reduce operational costs, and fraud for financial services. ▪ In microfinance, smart contracts can ensure safe and automated loan disbursements.
➤ Artificial Intelligence (AI)	<ul style="list-style-type: none"> ▪ AI tools such as voice-enabled banking assistants and chatbots enable users with low digital literacy. ▪ Credit scoring models and utility payments based on mobile transactions help to provide loans to financially excluded individuals.
➤ InsurTech and WealthTech Growth	<ul style="list-style-type: none"> ▪ Micro-insurance and savings products are also introduced with the introduction of Fintech. ▪ It also provides automated investment platforms to access the stock market, and mutual funds e.g. Zerodha, and Groww.

Table 3. Challenges of Implementing Fintech under Financial Inclusion:-

➤ Lack of Awareness	<ul style="list-style-type: none"> ▪ Most of the people live in rural areas, and people in rural areas are not very educated due to which they do not understand Fintech solutions.
➤ Risk of Cyber-attack and Data Security	<ul style="list-style-type: none"> ▪ Rising cyber-attack, data breaches, and phishing scams increase the threats to financial security. ▪ Insufficient rules regarding the handling of customer information lead to concern about data security.
➤ Infrastructure Gap	<ul style="list-style-type: none"> ▪ Still people in rural areas have been hindered from adopting digital services due to the lack of internet connectivity, and limited smartphone penetration.
➤ Trust Issue	<ul style="list-style-type: none"> ▪ Lack of trust in digital platforms is one of the reasons to prefer cash transactions. ▪ Rising fraud and transaction failures discourage people from accepting Fintech solutions.
➤ Challenges of Regulation and Compliance	<ul style="list-style-type: none"> ▪ Regulators remain a key concern about finding a balance between financial stability, and innovation. ▪ Uncertainties in regulations might slow down innovation, and scalability in the evolving Fintech landscape.
➤ Financial Exclusion	<ul style="list-style-type: none"> ▪ Despite tremendous efforts, some groups still face barriers to availing digital financial services due to several other factors. These excluded groups include women, low-income groups, elderly individuals, small farmers, and small laborers.
➤ Absence of Physical Branches	<ul style="list-style-type: none"> ▪ Fintech-related services are generally performed online thus; they do not cause difficulty in trusting such online platforms.

Literature Review

- **Badar Alam Iqbal and Shaista Sami (2017)**, the primary aim of the

researcher is to focus on the impact of financial inclusion in India taking seven years of observations. A positive and remarkable change is observed in

bank branch and credit deposit ratio when secondary data was analyzed by multiple regression model.

- **Dr. Reena Agrawal (2022)**, the researcher studied the impact of Fintech in expanding financial inclusion and also highlighted the role of Fintech firms to improve financial inclusion in India.
- **Dr. Nagaraja K (2023)**, paper presents the role of Fintech in spurring financial inclusion through the use of advanced technology, such as UPI; According to the study, Fintech helped a lot to boost financial inclusion for this paper also presents the current status of Fintech and financial inclusion.
- **Pratik Mukherjee¹, Nithin Krishna², and Jennifer fernandes³ (2023)**. The main aim of this paper is to show the growth and challenges that Fintech industry is facing in India; the study says that India became a largest adopter of the digital technology, and Fintech has a positive impact on the Indian market.

Need for the Study: Fintech is one of the newest and most rapidly growing sectors in India. Fintech replaces the traditional method of serving financial services and bridging the gap between rural and urban regions. In this regard, the present study sheds light on the changing landscape of financial inclusion with the advent of Fintech in the context of India, and also to know its opportunities and challenges in detail.

Objective

1. To examine the changing landscape of financial inclusion through Fintech in India.
2. To analyse the opportunities and challenges of Fintech in expediting financial inclusion in India.

Research Methodology: The present study is descriptive based on secondary data which includes government publications, academic articles, and various websites about financial inclusion, and Fintech in India. For the proper presentation of data, the tables, charts and

figures have been provided to meet the objectives of the study.

Discussion: In 2015, Numerous Fintech companies emerged in India; it marked the revolution for Fintech businesses. With the advent of the Fintech industry, it has become one of the biggest platforms which have paved the path for modern financial products, and services after the outbreak of the financial crisis in India (2008). It is playing a crucial role in the growth of financial services. It provides a quick and convenient way to serve financial products and services to the unbanked population. There are various Fintech companies that are working to provide financial services.

A huge change has been seen with the advent of Fintech as only 2100 Fintech companies were registered in 2021, which has increased to 10200 in 2024. This data shows that Fintech is moving forward in the Indian market with great speed. It is a big achievement to provide affordable and convenient financial services to every section of the society like small farmers, small labourers, women, elderly individuals and small businesses. The spread of Fintech companies in the market at such a speed also shows that people from all sectors have accepted Fintech companies for their financially required services.

In 2024, UPI hits 155 billion transactions in India: In 2024, a notable increase was noticed in transaction value and volume; the unified payment interface (UPI) continued a powerful force in the digital economy of India. In November 2024, UPI doubled last year's recorded data by processing over 155 billion transactions, totalling around INR223 lakh crore. Platforms such as Google Pay, Paytm, and PhonePe have remained largely concentrated in the UPI ecosystem by contributing 96% of the transaction volume. In addition to India, several other countries such as the United Arab Emirates (UAE), Singapore, and Mauritius also expanding UPI. This global push is one of the ambitions of India to promote awareness of digital payment systems worldwide.

UPI drives the growth of Digital Payments: India's digital payment system has witnessed a revolutionary change from FY 19 to FY 24. In FY 24 the total value of digital transactions is

raised to INR 163 billion, which is a remarkable transformation as compared to previous years. A significant portion of this growth belongs to UPI, which grew from 535.19 crores (FY 19) to 11,150.13 crores (FY 24) digital transactions, which makes up 70% of all digital transactions.

Conclusion

This research has analyzed the changing landscape of financial inclusion with the advent of Fintech in India. It has been found that Fintech is playing a crucial role in expediting financial inclusion schemes by providing easy access to unbanked citizens who have been out of the financial services provided by various financial institutions over a number of years. Meanwhile, the government initiative of Digital India has enabled Fintech companies to work with traditional systems to provide benefits on a large scale. Additionally, it has had a positive impact on India's technological growth. Moreover, the increase in a number of registered fintech companies shows its positive growth in India. The introduction of UPI has been the most prominent method of payment which promotes smooth financial transactions without any inconvenience. With the introduction of neobanks, insurtech and wealthtech, the aim of financial inclusion and providing financial services to the unbanked population of India seems to be being achieved very easily in upcoming years. With the focus on financial inclusion, it is very important to tackle all the challenges that are interrupting to availing of financial services to all. The government should make proper rules and regulations to remove all illegal activities such as digital fraud, cyber-attack, data breaches, and phishing scams so that everyone can adopt Fintech-related services without any hesitation and can easily fulfill the main objective of the financial inclusion program in India.

Reference

1. Iqbal, Badar Alam and Samia, Shaista (2017), "Role of banks in financial inclusion in India"; *contaduriay Administracion* 62 (2017) 644-656 <http://dx.doi.org/10.1016/j.cya.2017.01.007>

2. Dr. Agrawal, Reena (2022), "Role of Fintech companies in increasing financial inclusion"; *Journal of Applied Management-Jidnyasa*, Volume 14, Issue 1.
3. Dr. K, Nagaraja (2023), "Role of Fintech in financial inclusion in India"; *International Journal for Multidisciplinary Research*, E-ISSN: 2582-2160, Volume 5, Issue 4, July-August 2023.
4. Mukherjee, Pratik¹, Krishna, Nithin² and Fernandes, Jennifer³ (2023), "Fintech growth in India: An overview"; *International Journal of Research and Analytical reviews*, E-ISSN 2348-1269, P-ISSN 2349-5138, Volume 10, Issue 2.
5. <https://in.search.yahoo.com/search?fr=mcafee&type=E210IN885G0&p=Number+of+registered+companies+in+India+in+last+three+years>
6. <https://www.inventiva.co.in/business/corporate/top-20-fintech/>
7. <https://www.geeksforgeeks.org/list-of-fintech-companies/>
8. <https://www.statista.com/statistics/1372780/india-fintech-market-size-by-segment/>
9. <https://www.statista.com/topics/5666/fintech-in-india/#statisticChapter>
10. <https://inc42.com/features/indian-startups-ecosystem-2024-review-charts-visuals/>
11. <https://in.search.yahoo.com/search?fr=mcafee&type=E210IN885G0&p=progress+report+of+fintech+in+India>

PRATIVA SHATPATHI'S PERSPECTIVE: WOMEN IN HER POETRY

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Abstract

Dr. Pratibha Satpathy is an eminent poet of Oriya literature. She had been recognized as one of the leading poets of the country and had been honoured with the Sahitya Akademi Award, New Delhi. Here is a glimpse into her life and contribution to literature. Pratibha Satpathy is one of the leading poets of Orissa . Her poetry expresses women's real deep thought and human sensibility in lucid form while attempting to explore the mystery of human relationships and beyond.

Woman is a unique creation of the Creator. It is hard to fully understand a woman who has both a fierce strength and a gentle soul . Despite this fact, women continue to bear the burden of proving their potential to the society. Women who take steps towards empowerment , driven by a desire for equality, leave an indelible mark .Throughout the ages, there is unapologetic arrogance in a woman's voice, a fiery challenge in her dreams, and when a woman breaks her silence, the world trembles. When her dreams spread their take flight the sky descends. She is not a helpless weakness, but a river of service and affection. A woman can give a shower of nectar for the creation of creation, she can bring back the waves of destruction of destruction. Women embody countless with many sheds- With great care, the Creator has created this unique form by giving the colorful colors of life. Sometimes she is a mother, sister, a daughter-in-law, sometimes a nurse, a protector. Her touch is as comfortable as the morning sun, her mind as soft as the soft

petals of a flower, she can also make a lion roar in the midst of the hardships of a situation, she can tear the chest of a mare. Her strong hands can hold the strength of a hundred lions. A woman is such a creation that is difficult to understand. Even the creator cradles her in its loving arms. . With the passage of time, there has been a shift in thought and consciousness. The religion of women has changed. The scope of her observance has expanded. From the earth to the sky, women have spread themselves in every field. Even as a sister, she has pulled the shoulders of her brother, like a son, she has made difficult work like serving her parents in their old age and taking the responsibility of her husband and children, and above all, being deployed on the border for the protection of the countrymen possible. However, in some areas, society has frowned on the rights of women. Even now, this has not completely changed. Such a vision of female-centric thought and the voice and signature of consciousness is automatically evident from the entire poetry of the poet Pratibha Satapathi, in which she is self-conscious about the equality, security, respect and rights of

women.

In the contemporary Odia poetry world, the poet Pratibha Satapathi is a concentrated, expressive and confident poet. In the poetry of the well-known female poet Pratibha Satapathi (1946), who has attracted the attention of the reader with the sincerity of experience and the brilliance of light in the contemporary poetic tradition, the subconscious side of the female mind has revealed its depths in the midst of hardship and enlightened awareness. The character of her poetry, which transcends consciousness, is enjoyable in both..... accessible and inaccessible lyricism. The optimistic depiction of the mysterious meeting of life between love and devotion has given her poems a special medium. By studying the notable poems like Sesa Jahna (1962), Astajahnar Elegy (1970), Grasta Samay (1974), Sahadasundari (1978), Niyatabasudha (1980) and Shabari (1983), the progressive flow of Eishibodh from the diffused form-love of pratibha Satpathi's poetic consciousness becomes clearly visible. The basic poem of the Astajanhara Elegy collection is a dream color, a personal expression of helpless life. Many of its lines possess this life-affirming emptiness, the communicative awareness of the age has been transformed into the inevitable gray experience of the pain of the age. The poetry collections "Sahada Sundari" and "Niyata Vasudha" express the anguish of the search for the meaning of life, the unattainable compassion and the possibility of finding it amidst all emptiness, along with an intimate attachment to death. The poetic soul 'Sharbari', which has acquired the form of a pictorial art amidst sadness and wounded dreams, is also adorned with the colors of light and desire and the touch of great emotional consciousness in the mythological long poem. The poetess, who has expressed personal failure, the unreality of womanhood, the despair of life and the inexhaustible pain of time, has expressed

the lifeless, transcendental fragrance and faith in it. Through her lines the highly intellectual person has transcended complexity, explored north ash and tapped into new power by embracing innovative architecture by accepting the sensitive architecture and introducing a new power. The passion of romanticism is seen in the early works of Pratibha satpathy Going beyond its development and evolution, the shadowy world of mysticism moves towards spiritual availability. Along with the search for the meaning of immobility, a supreme and ultimate desire to touch eternity is available in the poetry of the Kastani period with many layers and breadths. Pratibha's second collection 'Grasta samay' included the poems she wrote in the early seventies. Notably, the anthology also interdicted all new poems of a new poet, signaling a fresh chapter in her literary journey amiss this creative evolution, one aspect remains strikingly consistent: the poet's masterful organizational control over language and emotion. Alternatively it could be said that the poet demonstrates remarkable organizational restraint. A blend of sadness or compassion with a sense of beauty. An attempt to rise above one's own situation is also seen here. There is a deep sense of gratitude towards nature. While in 'The Time Has Passed' the poet says that time has passed, he does not speak of the so-called international mentality reflected in 'Samudra Snana' and 'Ashtapadi' or the time of the war-torn world. He mainly speaks of the transience of life, its disintegration, irony, and the sufferings and hardships it entails. Here the woman understands that she has to break free from the worldly entanglements, from domesticity, from lust and longing, from the bondage of a bad man. If she does not move forward, there is no liberation, no progress, no attainment. In the words of the poet Shatrughan Pandava, "To seek and search for these things in the dust of the earth, to merge the boundless with the

infinite, to make existence into a thread of light, to become one with the Supreme 'You', is the form and the expression of the poetic voice of the genius of the soul."

In the world of Odia poetry, Mrs. Pratibha Satapati is a unique talent. The 'I' of her poetry is herself in many ways. She gives form to the sorrows, futility and inconsistencies of life in poetry. The circumference of her poetry is therefore covered with memories, dreams and meditation. Mrs. Satapati is also a master in composing long poems on mythological characters. Her 'Shavari' is also a remarkable creation. The reason why the character of Shavari from the Ramayana inspired the poet to compose this long poem is mentioned in the cover of this book 'Amokshatap' – "× x × In the midst of the mythological characters adorned with opulence and elegance, suddenness and arrogance, she seemed to stand very alone, self-confident. She seemed very different and pure. I could see that unsurpassed being present in an ordinary female body."

The poet has divided the long poem into four stages: 'Byatita Kala', 'Nimilana', 'Mantrasiddha' and 'Pruthvirupa'. The four levels of Shabari's consciousness are revealed within these four stages and the passage of that consciousness within each level is naturally symbolic. 'Shabari' here is a human being, specifically a troubled female being. Hope and aspiration have awakened in her soul from emerging the sorrows and pains of life and her cramped existence. On the other hand, Ramachandra is the embodiment of valor and beauty. For Shabari, he is therefore dreamy and meaningful. But Shabari is divided into countless years, months, days and nights, muhurabs and palas, as if she were a soul struggling in the endless anticipation of a thousand years. His doubts about his own position, however, continue to be the 'god of the ocean' and his desire to 'sparkle like stars' with his words. And Shabari feels the

sorrow of the world, the sorrow of man. He understands that amidst the sorrow and struggle of the world, the 'incarnation' also has its own sorrow, helplessness. Thus, the incarnation descends from Shabari's dream to the ground of reality.

In Janja's poem from the collection 'Sahada Sundari', the poet's attitude of inadequacy has spread to the entire level, for which there is almost no remedy or countermeasure - "to understand my The sensation is born from emptiness | The foolish pain?" Even in 'Nimishe Aksher', there is a common approach, that is, the desire to connect and belong which is not fulfilled, the desire to be freed which results in fear and acceptance of the situation, a sudden, disturbed awareness of beauty which has no result and a feeling of emptiness, despair and loneliness as if cut by a saw.

In 'Niyata Vasudha', the poet's poetic mind has nurtured the desire to unite the limitless and the limited or the earth and the sky. The limit is true, the infinite is true – this must be connected. The worldly tangle must be touched, the call of the wandering infinite must be heard. The poet's assembly is filled with the desire for some possibility of significance. The propensity for mystical abstraction and spiritual immersion is particularly evident from this stage. The genius has enhanced his speech by uniting the essence with the characters of 'Devaki', 'Shramana' (1), (2) are powerful expressions of this genre of poetry. Like other collections, 'Niyata Vasudha' contains a deep attachment to the earth and beauty. In the 'Nimise Akshar' stage, the genius's poetry is more introverted and self-absorbed. Affection for the nature of the earth, the realization of the change in the appearance within the appearance, the connection with the Supreme Thou, etc. are reflected. In the collection 'Mahamegha' published in the late eighties, we see two genres on the surface, one is thought-

provoking and meditative, the other is a romantic and autobiographical reference to the uncertainty of the past and present. The poetry collection 'Shavari', rich in timeless beauty, sensual symbols and imagery, has not only glorified and made meaningful existence, but also carried a new destiny of deep human solidarity. A profound realization that pain and compassion for the world's suffering and misfortune surpasses the aspirations for liberation or salvation, has anointed "shavari" with a new consonance. By giving a new application and meaning to the mythological story in the contemporary context, 'Shabari' has become an independent authority in the field of Odia poetry. In 'Tanmayadhooli', the story of this dusty being is presented through various symbols, images, visual hypnosis, worldly achievements and vibrations. The poem is as existential as it is spiritual. In 'Tanmayadhooli', the poet considers himself a speck of dust in the garbage who is determined to cling to the beloved. The beloved becomes the earth and the sky, water and the ocean, form and fragrance.

In this ode to Pratibha Satapathi, the anxious request to merge with the transcendental consciousness in some way is seen.

A person immersed in spiritual ignorance has called open society to reconnect with nature, undistracted by theappings of modernity. In Pratibha's ode to the poetic consciousness, 'Half and Half a Star' is another connection - a unique perspective. Drenched in ill-health and resentment, drenched in irony and suffering, the dream of wiping away the tears of the earth and turning existence skyward and starward is 'Half and Half a Star'. This experience is subtle and complex, steeped in intellectualism and mystery. The poet skilfully Weave's together the key element of modern poetry, including symbols, imagery, myths and experimental language

to produce a striking and impact full body of work.

Bibliography

1. Shatpathy, Dr. Nityananda- 'sabujaru sampratika' 2nd edition- 1985
2. Shatpathi, Pratibha- Shatabdira kanyaa- "Astajanhara eligy"
3. Shatpathi, Pratibha- "mana uddharana"- "Sahada sundari"- Agraduta prakashani
4. Deutsch, Helene- "The psychology of women-(volume one)" Grune & stratton, New York-1944
5. Beauvoir, Simone de - "The Second Sex"-Page-30
6. Shatpathi, Pratibha-"shabari" Page- 43

THE FUTURE OF GREEN FINANCE: OPPORTUNITIES AND REGULATORY CHALLENGES

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Abstract

Green finance has emerged as a crucial mechanism for promoting sustainable economic growth while addressing environmental challenges. This paper explores the future of green finance by analysing its opportunities and regulatory challenges. It examines the role of financial institutions, government policies, and private sector initiatives in accelerating the transition to a low-carbon economy. Key opportunities include increased investment in renewable energy, sustainable infrastructure, and green bonds, along with advancements in technology-driven sustainable finance solutions. However, regulatory challenges such as inconsistent policies, greenwashing risks, and the need for standardized sustainability frameworks pose significant barriers. Through a comprehensive analysis, this study highlights the necessity for robust regulatory frameworks and international cooperation to ensure the credibility and effectiveness of green finance. The findings provide valuable insights for policymakers, financial institutions, and investors striving to balance economic growth with environmental sustainability.

Keywords: Green finance, sustainability, investment, regulatory challenges, renewable energy, green bonds.

Introduction

In recent years, the growing urgency to address environmental challenges, including climate change, has catalyzed the rise of green finance as a critical tool for sustainable economic development. Green finance refers to financial activities and investments that support projects with environmental benefits, such as renewable energy initiatives, sustainable infrastructure, and climate-resilient agriculture. This financial approach is integral to mobilizing resources needed for the transition to a low-carbon, sustainable economy, aligning the financial sector with global environmental goals.

The significance of green finance has surged as governments, businesses, and investors recognize the importance of financing solutions that mitigate environmental damage and promote long-term sustainability. Tools like

green bonds, which fund environmentally responsible projects, and green loans, which incentivize sustainable business practices, are at the forefront of this shift. These instruments, along with socially responsible investment (SRI) strategies and environmental, social, and governance (ESG) frameworks, have gained increasing popularity as mechanisms to fund and promote sustainable development.

However, despite the rapid growth of green finance, significant challenges remain—particularly in the regulatory landscape. Current financial systems often lack uniform standards for what qualifies as "green," making it difficult for investors to measure the true environmental impact of their investments. The regulatory frameworks across countries vary widely, creating complexities for international green finance initiatives. This presents both a challenge and an opportunity for the continued development of green finance, as coherent

policies and regulations will be essential for scaling up its impact.

This research aims to explore the future of green finance, examining the opportunities it presents for fostering sustainable development while also addressing the regulatory challenges it faces. Specifically, the paper will analyze how green finance tools can promote investments in climate-resilient infrastructure, renewable energy, and other green projects, and what role regulation will play in their future growth. By understanding both the opportunities and challenges, this study seeks to provide insights into how green finance can effectively contribute to global sustainability goals.

The thesis of this paper is that while green finance offers vast opportunities for shaping sustainable economies, overcoming regulatory barriers will be essential to unlock its full potential. Addressing these challenges will not only facilitate the expansion of green finance but also ensure that it achieves its objectives in mitigating climate change and promoting economic resilience.

Review of literature

Clark & Feiner (2015) Green finance has evolved significantly in the past decade, from niche investments to a central aspect of global financial markets. Researchers have noted a rapid increase in green financial products like green bonds, driven by both investor demand and regulatory incentives. **Global Sustainable Investment Alliance (2018)** The rise of environmental, social, and governance (ESG) criteria has also accelerated this shift, leading to broader integration of sustainability within the financial sector. **Climate Bonds Initiative. (2020)** Green bonds have become one of the most prominent instruments within green finance. According to the Climate Bonds Initiative (2020), the global green bond market surpassed \$1 trillion in issuance by 2020, signifying strong investor demand for environmentally focused investments. **Flammer (2021)** In this study highlights the growth of green bonds as a response to increased environmental concerns and government policies promoting sustainable projects.

Friede, Busch, and Bassen (2015) The rise of ESG investing has created new opportunities for investors to align financial returns with sustainable practices. This research suggests that integrating ESG factors into investment portfolios often leads to comparable or superior returns, thus making green finance a compelling investment strategy. ESG investing is also becoming mainstream, with institutional investors increasingly prioritizing sustainability alongside profitability. **EU Commission (2020)** Research indicates that green finance is becoming a global phenomenon. In Europe, the European Union's Green Deal and its sustainable finance taxonomy have provided a robust framework for green investment. **Zhang & Zhu (2020)** In contrast, Asia has seen rapid adoption, particularly in China, where green finance is integral to its environmental policy framework. **Barker & Smith (2019)** One of the major challenges in green finance is the lack of standardization in what qualifies as "green." Researchers have identified that different jurisdictions and financial markets define "green" investments differently, leading to potential misalignment in global green finance. This inconsistency hinders the expansion of green finance, as investors may struggle to assess the true environmental impact of their investments. **Hassan & Ali (2021)** Despite the global momentum for green finance, significant policy gaps remain. The lack of universally accepted green finance standards creates uncertainty, impeding the efficient flow of capital into sustainable projects. The research suggests that policies need to be more harmonized across regions to promote greater investor confidence and ensure the effective scaling of green finance solutions. **UN Principles for Responsible Banking (2020)** Regulatory frameworks play a critical role in promoting green finance. According to the research financial institutions must align their business practices with the Sustainable Development Goals (SDGs). However, the absence of consistent global regulations means that many financial institutions operate in a fragmented regulatory environment. **Lyon, T. P., & Montgomery, A. W. (2015).** Greenwashing, the practice of misleading stakeholders about the environmental impact of investments, remains a significant concern. In this Research shows

that companies often exaggerate their environmental achievements to attract investment, a practice that undermines the credibility of green finance markets and calls for stricter regulations on environmental claims.

Bassen & Wimmer (2020) Transparency in financial reporting, particularly regarding environmental impact, is crucial for the long-term success of green finance. Several studies argue that companies need to improve their sustainability disclosures to meet the expectations of investors and regulatory bodies. Enhanced transparency will reduce the risk of greenwashing and increase the legitimacy of green financial products. **Dangelmaier (2020)** The European Union's Green Deal is a landmark initiative aiming to make Europe climate-neutral by 2050. According to research the Green Deal provides an integrated regulatory framework for green finance, including specific investment criteria for green bonds and funding for sustainable projects. This creates a strong example for other regions seeking to foster green finance. **Osakwe, C. (2021)** Green finance offers considerable potential in emerging markets, where financing for climate-resilient infrastructure is often limited. Researchers have highlighted that green finance can provide a pathway for these economies to leapfrog traditional carbon-intensive development paths, as shown in the work of Osakwe (2021), who focuses on green finance in Sub-Saharan Africa. **Scholtens, B. (2019)** Technology is playing an increasingly vital role in green finance. According to the study technological innovations, such as blockchain and artificial intelligence, are facilitating the tracking and transparency of green investments, ensuring that projects meet sustainability criteria and improving investor confidence.

Freeman, R. E., & Phillips, R. A. (2017) Corporate sustainability initiatives are increasingly being driven by green finance mechanisms. Research by Freeman and Phillips (2017) suggests that companies engaging in green finance attract a larger base of long-term investors due to their alignment with environmental values, which enhances their competitiveness in the market.

O'Neill, S., & Rattan, S. (2020) The regulatory challenges faced by green finance on a global scale remain a topic of extensive research. According to O'Neill and Rattan (2020), differing regulatory approaches in key regions like the U.S., Europe, and China create complexities in global green finance markets, potentially leading to inefficiencies in the allocation of sustainable investments. **Whelan, T. (2020)** Some regions have developed best practices in green finance regulation that could serve as models for other economies. According to research by Whelan (2020), the alignment of financial products with the EU Taxonomy, as well as the implementation of clear environmental reporting standards, represents best practices that have contributed to the success of green finance in Europe.

Research Methodology

The aim of this research paper is to explore the future of green finance, focusing on the opportunities it presents and the regulatory challenges it faces. To achieve this, a mixed-methods approach will be utilized, combining both qualitative and quantitative research methodologies to ensure a comprehensive analysis. This section outlines the approach used to conduct the research, including secondary data collection sources (Case Studies, Financial Reports and Industry Publications, Policy Documents), methodologies, and analysis techniques.

Research analysis

This section presents an in-depth analysis of the opportunities and regulatory challenges shaping the future of green finance. As the global demand for sustainable finance solutions grows, green finance plays a crucial role in addressing pressing environmental challenges, such as climate change. The analysis explores the growth of green finance products, particularly green bonds, the increasing integration of Environmental, Social, and Governance (ESG) factors into investment strategies, and the opportunities within emerging markets. It also critically examines the regulatory challenges, including the lack of global standards, transparency issues, and the need for stronger international cooperation.

Opportunities in Green Finance:

1. **Growth of Green Bonds:** The green bond market has seen exponential growth over the past decade, evolving from a niche segment to a mainstream financial instrument. Green bonds are debt securities issued to raise capital for projects that have environmental benefits, such as renewable energy, energy efficiency, and sustainable agriculture. According to the Climate Bonds Initiative (2020), the green bond market surpassed \$1 trillion in issuances by 2020, with a steady increase in both government and corporate issuances. The success of green bonds lies in their ability to attract a diverse group of investors, including institutional investors, pension funds, and individual investors seeking sustainable investment opportunities. This surge in demand for green bonds reflects a broader shift in the financial sector toward sustainability. These instruments have become pivotal in financing climate change mitigation and adaptation projects, and their popularity is expected to continue growing as governments and private institutions look for ways to meet their climate commitments under the Paris Agreement.
2. **Integration into Investment Portfolios:** Sustainable investing, which integrates ESG factors into investment decisions, is increasingly becoming mainstream. Asset managers are recognizing the financial benefits of incorporating ESG criteria, as evidence suggests that companies with strong sustainability practices tend to perform better in the long term. This trend is exemplified by the rise of ESG-focused investment funds, which now account for a substantial portion of global investment assets. Major asset management firms such as BlackRock and Vanguard have publicly committed to integrating ESG considerations into their investment strategies. Additionally, the incorporation of ESG factors allows for risk mitigation in investment portfolios by considering long-term environmental, social, and governance risks. This growing trend reflects an increasing demand from investors for responsible investment options that align with their values, thereby driving further innovation in green finance products.
3. **Emerging Markets:** Emerging markets present significant opportunities for green finance, particularly in addressing the financing gap for sustainable development. According to the World Bank (2020), many developing economies face substantial challenges in financing climate-resilient infrastructure, renewable energy projects, and environmental conservation efforts. Green finance can play a transformative role in these regions by providing access to capital for projects that promote sustainable economic growth while reducing carbon emissions. In countries like India, Brazil, and South Africa, where environmental challenges are particularly pronounced, green finance mechanisms can help build climate resilience and support the transition to low-carbon economies. However, for green finance to thrive in emerging markets, financial mechanisms tailored to local contexts are necessary. These include policy frameworks that encourage private-sector investment, the creation of green financial instruments suited to local needs, and increased capacity building within financial institutions.
4. **Innovative Financial Instruments:** As green finance continues to evolve, the development of innovative financial instruments is expanding its reach and impact. Impact bonds, social impact bonds, and climate resilience bonds are examples of emerging financial products designed to fund environmental and social outcomes. These instruments are structured to provide investors with returns based on the achievement of specific environmental or social goals, creating a performance-based model for financing sustainability. One notable example is the issuance of blue bonds, which are similar to green bonds but specifically

fund projects related to marine and ocean conservation. Such innovations not only help diversify the green finance market but also provide tailored solutions to specific environmental challenges. As financial institutions continue to develop new products, the flexibility and scalability of these instruments will be crucial for addressing the complex nature of global sustainability goals.

Discussion

This section analyzes the implications of the findings related to the future of green finance, particularly focusing on the opportunities and challenges it faces. It also integrates these findings with the broader body of literature on green finance, examining the interplay between market opportunities, regulatory frameworks, and the role of innovation in driving sustainable investments.

Opportunities vs. Challenges

The green finance market has demonstrated substantial growth in recent years, with significant opportunities emerging for financing sustainable projects. Green bonds, ESG investing, and innovative financial instruments like impact bonds and blue bonds have garnered increasing attention from investors, driven by the global push for sustainable development and climate resilience. The rise of green finance reflects an overarching trend where capital markets increasingly prioritize environmental, social, and governance (ESG) factors alongside traditional financial returns.

However, despite the substantial market growth and the rising demand for green finance, regulatory challenges continue to hinder the full potential of the sector. The lack of standardized frameworks, inconsistent definitions of "green" investments, and transparency issues such as greenwashing create a fragmented and often confusing regulatory landscape. These barriers undermine investor confidence and slow down the scaling of green finance, which is crucial to meeting global sustainability goals. One of the most pressing challenges identified is the "lack of global standards" for green finance. As

highlighted in the literature, this fragmentation results in inefficiencies and uncertainties for investors. Greenwashing, where companies or financial products falsely claim environmental benefits, is a significant concern that undermines the credibility of the green finance market. To address this, many scholars emphasize the need for globally harmonized standards and regulations. Recent efforts by organizations like the European Union, which developed its Green Taxonomy, are a positive step forward. However, these initiatives need to be expanded and adopted globally to ensure greater consistency and to enhance transparency in green finance markets. On the other hand, "opportunities in green finance" are substantial. Green bonds, for instance, have become a central instrument in financing projects aimed at reducing carbon emissions and mitigating climate change impacts. These instruments attract a diverse range of investors and offer substantial environmental benefits, including financing renewable energy projects and energy-efficient infrastructure. As the demand for sustainable investing continues to grow, green bonds, along with other financial products, can unlock significant capital for climate and environmental projects. A study by the Climate Bonds Initiative (2020) shows that green bond issuance reached \$1 trillion by 2020, highlighting the growing appetite for such investments.

Moreover, the "integration of ESG factors" into investment portfolios is gaining traction among asset managers, with a broad range of institutional investors increasingly recognizing the long-term financial benefits of sustainability. Literature on ESG investing suggests that companies with strong ESG practices tend to outperform their peers, both in terms of profitability and risk management. As such, sustainable investing is not just an ethical consideration but a financially sound one, further driving green finance opportunities.

Another key opportunity lies in "emerging markets" The financial mechanisms available for green investments in developing economies are often underdeveloped, and financing gaps exist, particularly for projects focused on climate adaptation and resilience. Green finance, if properly structured, could provide much-needed capital for sustainable

development in regions like Sub-Saharan Africa, Southeast Asia, and Latin America. However, as the literature suggests, for green finance to thrive in these regions, governments and international financial institutions need to tailor solutions to local economic contexts, establish policy incentives, and build the necessary financial infrastructure to attract private investment.

Despite these opportunities, “regulatory challenges” continue to be a significant obstacle in the widespread adoption of green finance. The policy gaps highlighted in the literature reveal that many governments lack clear and consistent policies that incentivize green investments. The absence of uniform regulatory guidelines and the slow pace of policy implementation create an environment where sustainable finance solutions are often hampered. This finding underscores the need for more robust governmental action to implement and enforce policies that promote green finance. For example, providing subsidies, tax credits, and mandates for companies investing in sustainability could incentivize greater private-sector participation in green finance.

The “issue of transparency and greenwashing” is also critical. Greenwashing undermines the credibility of the green finance market by misleading investors about the environmental impact of certain financial products. The literature review identified greenwashing as a major risk to the growth of green finance, as it may lead to a situation where investors are disillusioned by false claims. As such, improving transparency and enforcing stricter regulations on environmental disclosures and reporting standards are essential to ensuring that green finance truly contributes to sustainability goals. In this regard, frameworks like the Task Force on Climate-related Financial Disclosures (TCFD) are crucial in enhancing transparency and accountability in the market.

Regulatory Improvements Unlocking Green Finance Opportunities: The question of whether regulatory improvements can unlock more green finance opportunities is critical to the future of sustainable finance. As evidenced in the literature, the growth of green finance is

inherently linked to regulatory frameworks. If governments and international bodies address the regulatory challenges—by providing clear definitions, enhancing transparency, and aligning global standards—the green finance market can expand rapidly. Regulatory improvements can facilitate greater private-sector investment, attract new investors, and provide the necessary infrastructure for financing sustainability initiatives at scale.

For example, establishing a “global green finance standard” could reduce uncertainties for investors and facilitate cross-border investments in green projects. Regulatory improvements could also help in reducing the risk of greenwashing by ensuring that only genuine sustainable investments are marketed as such. Furthermore, governments should incentivize the creation of green finance products that target specific sectors, such as renewable energy, green infrastructure, and climate resilience.

Moreover, “transparency and accountability” in financial disclosures can help investors make better-informed decisions, ensuring that their investments contribute positively to environmental and social outcomes. Regulatory bodies could enforce mandatory sustainability reporting for companies and financial institutions, requiring them to disclose the environmental impact of their operations and investments.

In addition to regulatory improvements, “international cooperation” will be vital for creating a unified approach to green finance. The Paris Agreement’s call for global climate action could serve as a foundation for countries to harmonize their green finance regulations. This global approach would help align financial flows with international sustainability goals, such as achieving net-zero emissions by 2050. Countries could share best practices, collaborate on policy design, and create a consistent regulatory environment that facilitates cross-border investments.

Conclusion

In conclusion, the opportunities in green finance are vast, driven by the growing demand for sustainable investments and the potential to

address global environmental challenges. However, these opportunities are hindered by several regulatory challenges, including the lack of standardized frameworks, policy gaps, and transparency issues. Overcoming these challenges through regulatory improvements will be crucial in unlocking the full potential of green finance. The literature strongly suggests that, with the right policy support, transparency measures, and international cooperation, green finance could become a central driver of the transition to a sustainable, low-carbon global economy. By addressing the regulatory gaps, governments and financial institutions can create a more conducive environment for green finance, leading to greater investments in climate resilience and sustainability.

Regulatory Challenges:

1. Lack of Global Standards: One of the most significant regulatory challenges in green finance is the lack of globally recognized standards for what constitutes a "green" investment. Different countries, regions, and organizations have developed their own frameworks and taxonomies for green finance, resulting in a fragmented global regulatory environment. This lack of standardization creates confusion for investors and companies, who may struggle to understand which investments truly meet sustainability criteria.

For instance, the European Union's Green Taxonomy defines green activities and investments in a detailed manner, while in the U.S., no unified standard exists for green investments. This inconsistency has led to a lack of comparability across markets and makes it difficult for investors to assess the environmental impact of their portfolios. As a result, the development of a universal standard or a set of globally harmonized guidelines for green finance is critical to ensuring transparency and increasing investor confidence.

2. Government Policies and Incentives:

While many governments have introduced policies to promote green finance, such as tax incentives, subsidies, and green investment mandates, there is still a lack of consistency in policy enforcement and implementation. In some regions, governments are not doing

enough to incentivize sustainable investments, leaving market actors to navigate a complex and often ambiguous regulatory landscape. Conversely, in areas like Europe and parts of Asia, aggressive government policies have spurred the growth of green finance by mandating environmental disclosures and providing substantial tax credits for renewable energy projects.

The absence of strong policy frameworks in certain regions can lead to market inefficiencies and hinder the scaling of green finance initiatives. To address these gaps, governments must create more robust and clear policy frameworks that encourage the adoption of green finance, incentivize investments in sustainability, and penalize high-carbon industries.

3. Transparency Issues: One of the significant challenges in the green finance landscape is the problem of greenwashing. Greenwashing occurs when companies or financial institutions make misleading claims about the environmental benefits of their products or investments in order to attract investors. This undermines the credibility of the green finance market and can lead to a lack of trust among investors.

Transparency in financial reporting is critical to addressing this issue. Investors need clear, standardized metrics to assess the environmental impact of investments and to ensure that funds are being allocated to genuine green projects. Efforts to improve reporting and disclosure standards, such as the Task Force on Climate-related Financial Disclosures (TCFD), are a step in the right direction, but further work is needed to ensure accountability and prevent greenwashing.

4. International Cooperation: As green finance becomes a global priority, international cooperation is crucial for establishing coordinated regulations and policies that promote sustainable investments across borders. The Paris Agreement on climate change set the framework for international collaboration on reducing greenhouse gas emissions, but there is a need for further global coordination on financial regulations. International treaties and agreements could help

harmonize green finance regulations, enabling greater collaboration between countries and enhancing global investment in sustainability.

Collaborative initiatives, such as the United Nations Principles for Responsible Banking and the Green Bond Principles, are helping to align private-sector actors around shared goals. However, more work is needed to establish binding international agreements that set common standards for green finance, improve market integration, and incentivize green investments globally.

The future of green finance is full of promise, with significant opportunities arising from the growing demand for sustainable investments, the expansion of green financial products, and the increasing integration of ESG factors into investment portfolios. However, there are still numerous regulatory challenges to overcome, including the lack of global standards, transparency issues, and the need for stronger government policies and international cooperation. Addressing these challenges will be key to unlocking the full potential of green finance and ensuring that it contributes meaningfully to the transition to a low-carbon, sustainable global economy.

Recommendations

Based on the analysis of the opportunities and regulatory challenges surrounding green finance, the following recommendations are made to help address key issues and ensure the successful future of green finance:

1. Establishing Global Standards for Green Finance
 - Recommendation: Develop and implement a global taxonomy for green finance to standardize what constitutes a "green" investment.
 - Rationale: The lack of uniform standards is a significant barrier to the growth of green finance, causing confusion and inconsistencies in the market. By creating an internationally accepted framework for identifying and classifying green investments, investors can have greater confidence in their decisions, and financial institutions can more effectively target sustainability-related projects.
2. Strengthening Government Policies and Incentives
 - Action: Support and expand the efforts of organizations like the International Capital Market Association (ICMA) and the Climate Bonds Initiative to establish global principles for green bonds and other sustainable financial products. Collaborate with international bodies like the United Nations to promote global consistency in environmental standards.
3. Enhancing Transparency and Accountability
 - Recommendation: Strengthen transparency in green finance by enhancing disclosure standards for financial products and corporate environmental impact.
 - Rationale: Transparency is essential to prevent greenwashing and ensure that financial products and companies genuinely contribute to sustainability goals. Investors need clear and standardized reporting to assess the environmental impact of their investments.
 - Action: Adopt standardized reporting frameworks such as the Task Force on

Climate-related Financial Disclosures (TCFD) recommendations across all regions. Governments and regulatory bodies should mandate that companies disclose their environmental performance in a consistent and verifiable manner. Financial institutions should also be required to disclose the specific environmental impact of their portfolios.

5. Promoting Green Finance in Emerging Markets

- Recommendation: Focus on building financial infrastructure and creating tailored green finance mechanisms in emerging markets.
- Rationale: Emerging economies face unique challenges in financing sustainable projects, and the financial mechanisms currently available may not be well suited to their needs. Addressing the financing gap in these regions is key to achieving global sustainability goals.
- Action: Develop region-specific financial instruments such as green microfinance, blended finance, and concessional loans to meet the needs of developing economies. International financial institutions should partner with governments and local financial actors to create tailored solutions that facilitate green investments. Additionally, capacity-building programs should be implemented to strengthen the local financial ecosystem's understanding of green finance.

6. Encouraging Innovative Financial Instruments

- Recommendation: Support the development and scaling of innovative financial instruments like green impact bonds, blue bonds, and climate resilience bonds.
- Rationale: Innovative financial products can unlock new sources of capital for green and sustainable projects, especially those focused on climate adaptation and resilience. These instruments offer the potential to generate returns based on measurable environmental and social impacts, aligning financial goals with

sustainability outcomes.

- Action: Governments and financial institutions should collaborate to create and promote these new financial instruments, ensuring that they are structured in a way that attracts a wide range of investors. Regulatory bodies should provide clear guidelines for the issuance and monitoring of these instruments to ensure they are effective in achieving sustainability goals.
 - o Enhancing International Cooperation on Green Finance Regulations
- Recommendation: Promote stronger international cooperation and coordination on green finance regulations to align global efforts and enhance the impact of sustainable investments.
- Rationale: Global environmental challenges such as climate change require coordinated efforts. While regional regulations are necessary, a more unified approach to green finance could foster greater investment flows and reduce regulatory fragmentation across borders.
- Action: Governments and international organizations should strengthen collaboration to create global regulatory frameworks for green finance, such as an international green finance regulatory body. This could involve harmonizing standards, facilitating cross-border investments, and ensuring that countries adhere to shared sustainability goals as part of international agreements like the Paris Agreement.

7. Fostering Greater Public and Private Sector Collaboration

- Recommendation: Foster stronger collaboration between the public and private sectors to scale up green finance initiatives and enhance the effectiveness of regulatory frameworks.
- Rationale: Collaboration between public institutions and private investors is critical to driving innovation and financing large-scale sustainability projects. Public funding and policy incentives can catalyze private sector

investments, amplifying the impact of green finance.

- Action: Governments should work closely with financial institutions, corporations, and non-governmental organizations (NGOs) to design financing mechanisms that leverage both public and private resources. Public-private partnerships can play a pivotal role in the development of green infrastructure projects, renewable energy initiatives, and climate resilience programs.

8. Addressing Greenwashing through Stronger Enforcement

- Recommendation: Implement stricter enforcement of anti-greenwashing laws and regulations to ensure that financial products genuinely align with environmental goals.
- Rationale: Greenwashing undermines the credibility of green finance, reducing investor trust and hindering the growth of the market. Stronger enforcement mechanisms are needed to ensure that companies and financial institutions uphold their sustainability claims.
- Action: Regulatory bodies should establish clear criteria for green investments and conduct regular audits of companies' environmental claims. Penalties should be imposed for misleading marketing or false claims about the environmental impact of financial products. Additionally, third-party certification bodies can be leveraged to verify the environmental credentials of green finance products.

9. Capacity Building and Education in Green Finance

- Recommendation: Increase capacity building and education efforts to enhance the understanding of green finance among financial professionals, policymakers, and investors.
- Rationale: The successful integration of green finance into global financial markets requires that key stakeholders have a deep understanding of the sector's potential, regulatory challenges, and financial instruments. Lack of knowledge can impede the growth of green finance.

- Action: Financial institutions, universities, and governmental agencies should collaborate to offer specialized training programs on green finance. This could include courses on sustainable investment strategies, climate risk management, and the regulatory landscape of green finance. Additionally, policymakers should be educated on the financial tools available to promote sustainability.

The recommendations outlined above aim to address both the opportunities and regulatory challenges associated with green finance. By establishing global standards, improving government policies, enhancing transparency, and fostering international cooperation, green finance can play a pivotal role in driving the global transition to a sustainable, low-carbon economy. The collective action of governments, financial institutions, and other stakeholders is essential to overcoming the existing barriers and unlocking the full potential of green finance.

Reference

1. Clark, G. L., & Feiner, A. (2015). The performance of responsible investment: A review of the academic literature. *The Journal of Investing*, 24(1), 1-15.
2. Global Sustainable Investment Alliance. (2018). *Global Sustainable Investment Review*. GSIA.
3. Climate Bonds Initiative. (2020). *Green Bond Market Summary 2020*.
4. Flammer, C. (2021). Green bonds: Effectiveness and implications for the future of finance. *Journal of Environmental Economics and Management*, 104, 102-111.
5. Friede, G., Busch, T., & Bassen, A. (2015). *ESG and financial performance: Aggregated evidence from more than 2000 empirical studies*. *Journal of Sustainable Finance & Investment*, 5(4), 210-233.
6. EU Commission. (2020). *EU Taxonomy for sustainable activities*.
7. Zhang, B., & Zhu, Y. (2020). Green finance in China: Policies and

- challenges. *Journal of Sustainable Development*, 13(5), 85-103.
8. Barker, J., & Smith, A. (2019). The challenge of defining “green” in green finance. *Environmental Economics and Policy Studies*, 21(3), 421-435.
 9. Hassan, M., & Ali, Z. (2021). Policy gaps in green finance: A global overview. *Journal of International Finance*, 45(2), 89-107.
 10. UN Principles for Responsible Banking. (2020). Guidance on aligning with the SDGs. United Nations.
 11. Lyon, T. P., & Montgomery, A. W. (2015). The means and effectiveness of voluntary environmental disclosures*. *Journal of Business Ethics*, 131(2), 171-183.
 12. Bassen, A., & Wimmer, S. (2020). The importance of transparency in green finance. *Sustainable Finance Review*, 16(1), 23-39.
 13. Dangelmaier, H. (2020). The EU Green Deal: Regulatory integration of green finance. *European Economic Policy*, 44(3), 56-73.
 14. Osakwe, C. (2021). Green finance in Sub-Saharan Africa: Opportunities and challenges. *Journal of Development Economics*, 63(4), 99-116.
 15. Scholtens, B. (2019). Technology and its role in advancing green finance. *Journal of Sustainable Finance & Investment*, 9(2), 195-210.
 16. Freeman, R. E., & Phillips, R. A. (2017). Corporate sustainability and green finance. *Business Ethics Quarterly*, 27(1), 1-24.
 17. O'Neill, S., & Rattan, S. (2020). Global regulatory challenges in green finance. *Journal of Global Finance*, 24(2), 300-314.
 18. Whelan, T. (2020). Best practices in green finance regulation: Lessons from the EU. *Journal of European Finance*, 12(3), 48-61.

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