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**One Day Multi-Disciplinary
National Seminar
On**

Viksit Bharat @ 2047 : Opportunities & Challenges



On
Saturday, 7th February 2026

Organized By

Tararani Vidyapeeth's

KAMALA COLLEGE, KOLHAPUR

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Special Issue No.II

'Viksit Bharat@2047-Opportunities and Challenges'

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From the Executive President Desk.....

Dr. Krantikumar Patil
Executive President,
Taranani Vidyapeeth, Kolhapur

It gives me great pleasure to know that a Special Issue is being published based on the National Seminar on ‘Viksit Bharat@2047-Opportunities and Challenges’ organised by Kamala College, Kolhapur (Autonomous). The vision of building a developed India by the year 2047 is both inspiring and challenging. It requires thoughtful discussion, research, and collective efforts from all sections of society.

India is progressing rapidly in many areas such as economic development, technology, education, and infrastructure. At the same time, there are several challenges that need careful attention, including inclusive growth, sustainable development, social equity, and effective policy implementation. Academic discussions and research play an important role in identifying these challenges and suggesting practical solutions.

I appreciate the efforts of all the contributors who have shared their research and insights through this publication. Their work will certainly help in strengthening academic understanding and inspire further research on important national issues. I also congratulate the editors and organising team for their dedication and hard work in bringing out this special issue.

I am confident that the ideas presented in this publication will contribute to the larger goal of building a strong, inclusive, and developed India. I hope this special issue will serve as a useful reference for students, researchers, academicians, and policymakers who are interested in understanding the opportunities and challenges in achieving the vision of Viksit Bharat@2047.

I extend my best wishes for the success of this academic initiative and for all future endeavours.

Date : 12/03/2026

Place : Kolhapur

From the Principal's Desk.....

It is matter of great pleasure and pride to publish research papers in a form of research Journal, which have been presented in one day Multidisciplinary National Seminar on 'Vikasit Bharat @2047: Opportunities and Challenges' Vikasit Bharat 2047 is the vision to transform India in to developed nation by its 100th anniversary of Independence in 2047, focusing on self-reliance, economic growth, social empowerment (Youth, Women, Farmers) and sustainability, driven by citizen participation and innovation in key sectors like technology, infrastructure and green energy. It's a comprehensive national mission involving major investments in education, healthcare, infrastructure, technology to achieve goals like zero poverty, 100% quality education and high female labor force participation.

Kamala College is one of the branches of Tararani Vidyapeeth, Kolhapur. Our college is established in 1984, with the noble vision of 'Women Empowerment'. The college is honored with 'College with Potential for excellence', by UGC in 2016 and re-accredited in the third cycle by NAAC with grade A(3.12 CGPA) status in 2017. The College is conferred the Autonomous Status by UGC, New Delhi from the academic year 2022-2023. Our college is doing galloping growth in every aspect. We have undertaken outstanding activities and one of the prideful things is our college has organized 07 International, 16 National and 02 state level Seminars, 01 International, 07 National webinars and more than 135 workshops very successfully.

On the occasion I wish to express my heartfelt thanks to Hon. Dr. Krantikumar Patil, Executive President, Tararani Vidyapeeth, Kolhapur who is the driving force behind all the achievements. He has kept the educational pace of the institution abreast of time with his noble vision. The institution is going ahead in the direction of excellence under his able guidance. I express my sincere gratitude to Hon. Shri. Prajkt Patil, the Secretary of the fruitful in every sense. It is my great pleasure to appreciate the efforts taken by Dr. Tanaji Ghagare (Convenor), Smt. Ashwini Kumbhar (Co-ordinator) of this seminar, Teaching and non-teaching staff for making the seminar successful.

Prof. Dr. Tejaswini B. Mudekar
Principal,
Kamala College, Kolhapur.

From the Editorial Desk.....

It gives us great pleasure to present this Special Issue based on the National Seminar on 'Viksit Bharat@2047-Opportunities and Challenges' organised by Kamala College, Kolhapur (Autonomous). The seminar created an important academic platform for scholars, researchers, teachers, and students to discuss the vision of a developed India by the year 2047.

The main theme of the seminar focused on understanding the opportunities and challenges in achieving the goal of Viksit Bharat. The discussions helped participants think about the steps needed for India's long-term development. Many scholars presented research papers and shared their ideas and experiences.

The papers presented in the seminar covered several important issues. These included economic growth, inclusive development, technological progress, sustainable development, and social equality. Some papers also discussed the need for effective policies and reforms to strengthen India's development process. These discussions helped in understanding how India can move towards becoming a developed nation.

This special issue includes selected research papers presented during the seminar. These papers reflect different perspectives and thoughtful analyses from academicians and researchers from various parts of the country. Each paper adds valuable ideas to the discussion on India's development. We believe that these contributions will help readers understand the challenges and opportunities in building a developed and inclusive India.

We sincerely thank all the resource persons, paper presenters, and participants for their valuable contributions and active participation in the seminar. Their efforts made the seminar meaningful and successful.

We also express our sincere gratitude to the management and administrative authorities of Kamala College for their constant support and encouragement.

We hope that this special issue will be useful for researchers, students, and policymakers who are interested in the vision of Viksit Bharat@2047. It will serve as a helpful reference for further study and discussion on India's development journey.

Dr. Tanaji Namdeo Ghagare
Assistant Professor
Kamala College, Kolhapur.

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I N D E X

Sr.	Title of Research Paper	Full Name	Pg. No.
1.	विकसित भारत : वास्तव आणि आव्हाने	श्री.एस . जे. पाटील डॉ .तेजस्विनी मुडेकर	1
2.	सांस्कृतिक धरोहर बनाम आधुनिकता : टकराव या समन्वय	डॉ .प्रविण विलास चौगले	7
3.	विकसित भारत २०४७ आणि आरोग्य : एक अभ्यास	डॉ.गंगासागर तुळसीदास चोले	11
4.	Viksit Bharat @2047: Opportunities and Challenges on India's Path to Inclusive and Sustainable Development	Dr. Jaydeep Uttamrao Dixit	14
5.	Integrating Physical and Digital Marketing: The Future of Commerce in Viksit Bharat @2047	Snehal Hirikude	18
6.	A Study on The Benefits and Drawbacks of AI Tools in Distance Education From Learners' Perspective	Smt.Supriya Udaykumar Mogale	23
7.	Impact of Rapid Urbanisation on Mental Health	Dr. Vijay Ramchandra Patil	29
8.	Health And Economic Development : A Case Study of India	Mr. Vijay Anandrao Kankekar	34
9.	Humanism, Diaspora, and Nation-Building: Indian English Literature and Swades as Converging Routes for National Growth	Dr. Shantanu Shivajirao Patil	42
10.	Impact of Social Media on Indian Society : Legal Challenges	Dr. Swati Prithviraj Gavade	46
11.	An Analytical Study of Consumer Rights Awareness in Latur Districts	Mr. Pate Deepak Pralhad Dr. Dongare Shivprasad Vaijanathrao	50
12.	A Study on Customer Perception and Satisfaction Towards Mobile Service Providers in Latur City	Dr. Manisha S. Ashtekar, Dr. R. N. Gilda	60
13.	A Study on The Role of Generative AI Tools in Enhancing Youth's Educational Performance	Ms. Sayali Vilas Mhatre	65
14.	Digital Workforce Transformation and The Vision of Viksit Bharat @ 2047: A Descriptive Review of Technology-Driven HR Ecosystems in India	Shri. Patil Vaibhav Vijay	71
15.	Cyber Security and Data Privacy in Digital India	Smt. Apurva Vishal Patil	76
16.	Sectoral Development and Transformation : A Commerce and Management Perspective on Business Strategy, Productivity, and Competitive Growth	Dr. Nital Kothari	83
17.	वाढत्या शहरीकरणाचा मानसिक आरोग्यावर होणारा परिणाम : एक अभ्यास	Dr. Purshottam DarrappaParit	87

Sr.	Title of Research Paper	Full Name	Pg. No.
18.	Transforming Academic Libraries Into Smart Knowledge Hubs	Mr. Mahadev Nagnath Chavan	91
19.	Transformation of Academic Libraries in Knowledge Hub	Mrs. Urmila Rajendra Kadam	95
20.	Viksit Bharat @ 2047: Opportunities and Challenges with Special Reference to Inclusive Development, Digital Transformation, Governance, Sustainability, and Human Values	Ms. Anjali Sachin Bhattad	99
21.	Bridging The Gap: A Case Study of Digital Payment Adoption, Fintech Innovation, and Public Infrastructure in Kolhapur City	Mr. Santosh Devekar	104
22.	A Study on Digital Marketing in Hotel Industry- A Literature Review	Mr. Rahul Balkrishna Malekar Dr. U. M. Deshmukh	108
23.	मराठी साहित्यामधून प्रतिबिंबित झालेले विकसित भारताचे स्वप्न	Smt. Shweta Shivajirao Parulekar	114
24.	Economics of Gram Farming in Dryland of Solapur District	Dr. Yogesh Balbhim Mane	121
25.	पोषण शिक्षण : जागरूकतेची गरज	डॉ.ऊर्मिला संजय खोत	130
26.	Impact of Joint Land Titles Under the Forest Rights Act (FRA) 2006 on Tribal Women's Empowerment	Smt. Mohini Arjun Deokar	134
27.	कोयना धरणाचा कृषीविकासावर झालेला परिणाम	Smt. Kajal Subhash Khumbhardare	138
28.	आर्थिक विकासासाठी हातमाग आणि खादीचा प्रचार	Smt. Siddhi Rajesh Khombare	144
29.	Cybersecurity & Privacy : Foundations of Viksit Bharat 2047	Ms. Naziya Nizam Mullani	150
30.	A Comparative Study of Emotional Maturity among Maharashtrian and Non-Maharashtrian Boys and Girls	Mr. Ashok Patil	155
31.	विकसित भारत @2047 ध्येय व धोरणाचा अभ्यास”	प्रियंका बाबासाहेब वर्णे डॉ. हनुमंत पोपट शिंदे	162
32.	Cinema and Literature as Instruments of Social Awareness and National Development in India	Dr. Maruti Hanamant Devkar	166
33.	Human Capital and Viksit Bharat @ 2047	Smt. Shobha R. Patil	169
34.	Indian Knowledge System Library& Its Essential Role in Education	Mrs. Madhumita Guha	173

Sr.	Title of Research Paper	Full Name	Pg. No.
35.	जागतिक आर्थिक एकात्मतेतून विकसित भारताची निर्मिती : संधी व आव्हाने	रवींद्र बाबुराव पाटील	177
36.	Cultural Heritage & Modernity In Indian Fashion: Legal, Social, and Developmental Perspectives Towards Viksit Bharat @ 2047	Dr. Shalini Kumari Ms. Sheetal Shandilya	182
37.	Digital Literacy and Cyber Security Awareness among College Students	Dr. Umesh D. Dabade Mrs. Manisha J. Pawar	188
38.	Transforming Indian Agriculture for Viksit Bharat @ 2047: A Comparative Global Analysis	Dr. Tanaji Namdeo Ghagare	194
39.	Financing India's Vision of Viksit Bharat @ 2047: Prospects and Constraints	Dr. Sagar Baburao Walvekar, Dr. Pratap Namdev Khot	205
40.	भारतातील लिंग समानता आणि महिला सक्षमीकरणातील खेळाची भूमिका	ज्योती विशाल लेंगरे	211
41.	Library Referral Service	Mr. Rajendra S. Savekar	217
42.	Artificial Intelligence and Machine Learning for National Development: Innovation, Opportunities, and Challenges	Mr. Ashish Vilasrao Ghate Dr. Santosh A. Shinde	222
43.	भारताचे जागतिक आर्थिक एकीकरण : संधी आणि आव्हाने	श्री. सौदागर सतिश भिसे	226
44.	Viksit Bharat 2047: Opportunities and Challenges	Dr. Santoshkumar B. Yadav	232
45.	The Role of Innovation in The Success of Early-Stage Startups	Mrs. Poonam Kishor Desai	236
46.	Yoga For Mental Health and Stress Management in Future India	Smt. Manisha Brihaspati Shinde	240
47.	पश्चिम महाराष्ट्र के सतारा जिले के चयनित क्षेत्रों में तंबाकू सेवन एवं तंबाकू से मुक्ति हेतु जागरूकता कार्यक्रम	Smt. Rijwana Firoj Khan	243
48.	Viksit Bharat 2047: A Century of Freedom, A Century of Excellence	Dr. Krishna Bhanudasrao Patil	247
49.	Preventive Nutrition and Functional Foods for A Healthy India: Vision 2047	Smt. Aarohi L. Moghe	252
50.	Next-Gen Food Processing For Nutrition Security	Smt. Ketaki Suhas Kulkarni	256
51.	Yoga for Mental Health and Stress Management in Future India	Smt. Sneha S. Birajdar	262
52.	Socio-Economic Conditions of Sindhudurg District in the Context of Viksit Bharat @2047	Mr. Prasad Rajaram Jadhav, Dr. Santoshkumar B. Yadav	268
53.	Reimagining Constitutional Governance in India: Legal and Institutional Reforms for Viksit Bharat @2047	Deepa Dhanaji Karambalkar	273

Sr.	Title of Research Paper	Full Name	Pg. No.
54.	Sustainable Business Practices And Corporate Environmental Responsibility: An Analytical Study	Mr. Dipak Arjun Chaudhari	277
55.	कोल्हापूर जिल्ह्यातील अनुसूचित जातीतील महिलांचा लोकसंख्यात्मक लाभांश आणि रोजगारस्थितीचा अभ्यास	यास्मीन हारून मुल्ला	284
56.	कोयना धरणाचा कृषी विकासावर झालेला परिणाम	काजल सुभाष कुंभारदरे	292
57.	Digital Payment Ecosystems and Financial Inclusion: Role of Public Infrastructure In India's Fintech Revolution	Mr. Nilesh L. Kshirsagar, Dr. Shivprasad V. Dongare	298
58.	Legal Advancement for Vikasit Naari in Reference to Vikasit Bharat	Aditi Abhijeet Desai	308
59.	भारतातील नाविन्यता, स्टार्टअप आणि उद्योजकता	डॉ. अर्चना दाभोळकर	317
60.	Psychological Challenges Of Rapid Urbanization And Pathways To Mental Well-Being In India	Supriya Madan Patil	324
61.	अन्नदाता ते निर्यातदार : २०४७ पर्यंत भारतीय कृषीक्षेत्राचे अर्थव्यवस्थेत योगदान एक विश्लेषणात्मक अभ्यास-	ऋतुराज रंगराव मिठारी	328
62.	जागतिक उत्पादन केंद्र म्हणून भारताचा उदय : थेट परकीय गुंतवणुकीचा प्रभाव आणि धोरणात्मक रोड मॅप २०४७	नम्रता आनंदराव निकम	340
63.	Role of Artificial Intelligence and Machine Learning in Achieving Viksit Bharat 2047	Ms. Dhanashri Mahadev Yadav	350
64.	Legal Reforms And Good Governance : Challenges and The Way Forward For Viksit Bharat @ 2047	Dr. Bhakti Sharad Bhosale	355
65.	Contribution of the Dairy Sector to Rural Livelihoods and Development	Mr. Jagdish Haribhau Patil	360
66.	Rule of Law and Administrative Discretion : A Critical Study	Dr. Sopan Digambar Jadhav	364
67.	Gig Workers and Indian Economy	Smt. Hemlata Amol Minchekar	368
68.	Policy Framework for Viksit Bharat 2047: Pathways to Inclusive and Sustainable Development	Deepti Madan Patil	374
69.	Caste, Class, and Power in India: A Sociological Analysis of Structural Challenges to Realizing Viksit Bharat @2047	Dr. Vishwanath Taral	378
70.	Cloud Security Challenges and Solutions for India's Digital Future	Smt. Shital Sandeep Wasamkar, Smt. Rohini P. Lokare	386
71.	Music as a Cultural Heritage helping for Nation Building	Dr Pooja Narendra Patil	389

Sr.	Title of Research Paper	Full Name	Pg. No.
72.	Inclusive Growth Pathways For Viksit Bharat @2047: A Review Of Sustainable Development Policies.	Smt. Sankpal Kranti Dilip	391
73.	भविष्यातील भारतामधील वस्त्रउद्योग, खरेदी आणि मानक आकार प्रणाली : एक अभ्यास	भारती मुडे	394
74.	From Reactive Compliance To Proactive Resilience: Evaluating The Transition Of India's Cybersecurity Frameworks Toward Zero Trust (2022–2026)	Smt. Rohini Prabhakar Lokare, Smt. Shital Sandeep Wasamkar	397
75.	A Study of Indian Cinema's Cultural and Social Function as a Catalyst for National Development and Consciousness	Mr. Maneshkumar Natthusing Chavhan	401
76.	AI In Higher Education	Dr. Amarveli Balasaheb Patil	405
77.	विकसित भारत २०४७ साठी धोरणात्मक आराखडा : संधी, आव्हाने आणि नियोजनात्मक दिशा	सुनिल बाबुराव भुईगडे	410
78.	Mindful Eating as a Tool of Nutrition Education: Impact on Hunger, Satiety, and Food Intake among College Students	Smt. Tanjila Vasim Momin, Smt. Shweta S. Shah	415



विकसित भारत : वास्तव आणि आव्हाने

प्रा. एस.जे.पाटील

अर्थशास्त्र विभाग प्रमुख

कला, वाणिज्य आणि विज्ञान महाविद्यालय, कोवाड

मोबाईल नं. ९७३८५०६२००

ईमेल ID – sjpatilsir71@gmail.com

प्राचार्या. डॉ. तेजस्विनी बी. मुडेकर

कमला कॉलेज कोल्हापूर

मोबाईल नं. ९६०४३४३४००

ईमेल ID- tbmudekar@gmail.com

प्रस्तावना:

विकसित भारत 2047 हे नक्कीच एक महान स्वप्न आहे .१८ व्या शतकाच्या मध्यापासून इंग्रजांनी भारतात आपले हात-पाय पसरायला सुरुवात केली अक्षरशः इंग्रजांनी भारताची अनेक मार्गांनी आर्थिक पिळवणुक केली .इंग्रजांनी भारताला दोनशे-सव्वादोनशे वर्षे अविकसित श्रेणीत ढकलले .इंग्रजांच्या सत्तेपूर्वी भारत हा जगातील प्रगत राष्ट्र म्हणून गणले जायचे कारण गणित, विज्ञान, संगीत आणि शिल्प अशा अनेक कलासोबत भारत आंतरराष्ट्रीय व्यापारांचे केंद्र होता .दुर्दैवाने इंग्रजांनी आपल्या भारतावरील सत्तेदरम्यान आपल्या देशाला पूर्णपणे लुटून दारिद्र्यांच्या खाईत लोटले .आर्थिक, सामाजिक, शैक्षणिक अशा सर्वच क्षेत्रात आपल्या देशाची पिछेहाट झाली. मात्र या सर्व प्रतिकूल घटकांवर मात करत गेल्या ३० से ३५ वर्षात आपण “विकसनशील ”देशाच्या पंगतीत येऊन बसलो आहोत .आतापूर्वत देशाचा भक्कम केलेला पाया देशातील नैसर्गिक साधन सामग्री, त्याचबरोबर मोठ्या संख्येने उपलब्ध असलेला युवा वर्गाच्या जोरावर, “विकसित भारत २०४७ ”हे स्वीकारले आहे .हे मिशन अशक्य नसले तरी हे अतिशय कठीण उद्दिष्ट आहे.

सन १९९१ मध्ये भारताने लागू केलेल्या आर्थिक सुधारणा कार्यक्रमांमुळे अर्थव्यवस्थेमध्ये औद्योगिक उत्पादनाला चालना मिळून अर्थव्यवस्था भक्कम होत गेल्याचे दिसून येते .भारताचे स्तुल देशांतर्गत उत्पादन उदारीकरणामुळे सतत वाढत गेल्याचे दिसून येते .कृषी आणि औद्योगिक क्षेत्रातील गतीमुळे आंतरराष्ट्रीय व्यापारात भारताची भूमिका महत्त्वपूर्ण ठरली होती .जागतिक निर्यातीमध्ये जरी भारताचा निर्यात वाटा कमी असला तरी विदेशी व्यापारातील दिशा व संरचना यात महत्त्वपूर्ण बदल घडून आले .भारताने अन्नधान्याच्या उत्पादनात लक्षणीय वाढ केली. अन्नधान्याच्या बाबतीत देश स्वयंपूर्ण झाला .अर्थव्यवस्थेमध्ये प्राथमिक क्षेत्र, द्वितीयक क्षेत्र आणि तृतीयक क्षेत्र यामध्ये तृतीयक क्षेत्राचा म्हणजेच सेवा क्षेत्राचा राष्ट्रीय उत्पन्नातील हिस्सा सातत्याने वाढत आहे .सेवा क्षेत्राचा अधिक विकास हे विकसित राष्ट्रांचे लक्षण मानले जाते .परंतु भारत एक विकसनशील राष्ट्र असूनही सेवा क्षेत्राचा अधिक विकास हे विकसित राष्ट्रांचे लक्षण मानले जाते.

विकसित राष्ट्र म्हणजे नक्की काय? या संज्ञेची सर्वसहमत व्याख्या नसली तरी सर्वसाधारणपणे आर्थिक, औद्योगिक, वैज्ञानिक, सांस्कृतिक, सामाजिक या सारख्या घटकांचा विकास होणे या संज्ञेत अभिप्रेत आहे . विकसित अर्थव्यवस्था, सर्वसमावेशक विकास, शाश्वत पर्यावरण संरक्षण, सुशासन, उच्च दर्जाचे राहणीमान व पायाभूत सुविधा या सर्व गोष्टींचा विकसित राष्ट्रांच्या संकल्पनेत समावेश होतो .

भारत एक विकसित राष्ट्र समजले जाण्यासाठी विविध निकषावर आपण कोणता पल्ला गाठायला हवा हे आज आपण निश्चित करायला हवे. हे “ मैलाचे दगड” आपण उद्दिष्टपूर्तीच्या जवळ किती पोहचलो आहोत हे समजून येण्यास मदत होईल.

अभ्यासातील उद्दिष्टे:

- भारतीय अर्थव्यवस्थेच्या आर्थिक वाटचालीचा अभ्यास करणे,
- आर्थिक वाढीचे प्रमुख घटक यांचा अभ्यास करणे,
- भारतीय GDP चा अभ्यास करणे,
- अर्थव्यवस्थेतील आव्हानांचा अभ्यास करणे,
- पायाभूत सुविधांचा अभ्यास करणे,
- सरकारी सुधारणांचा अभ्यास करणे,
- भारतीय कृषिक्षेत्राचा अभ्यास करणे.

संशोधनाचे प्रश्न:

१. विकसित राष्ट्र २०४५ हे मिशन पूर्ण होण्याच्या दृष्टीने भारताची वाटचाल सुरु आहे.
२. भारताच्या सर्वांगीण विकासासाठी अर्थव्यवस्थेतील आर्थिक विषमता , बेकारी, दारिद्र्य या आव्हानावर मात करणे आवश्यक आहे.
३. भारतीय अर्थव्यवस्थेतील काळा पैसा , खनिजतेलाची समस्या , विदेशी कर्जाचा भार या सारख्या समस्यांवर मात करणे आवश्यक आहे.

संशोधन पद्धती:

प्रस्तुत संशोधनात केवळ द्वितीय साधनसामग्रीचा वापर केला आहे माहिती गोळा करताना क्रमिक पुस्तके, संदर्भग्रंथ, इंटरनेट, वर्तमानपत्रे , मासिके इत्यादी स्त्रोतांचा वापर केला आहे.

भारतीय अर्थव्यवस्थेची सद्यःस्थिती-

भारतातील लोकशाही लवचीकतेमुळे विचारसरणीमध्ये सकारात्मक बदल झाल्यामुळे गेल्या काही वर्षात भारताने शिक्षण, आर्थिक, माहितीतंत्रज्ञान, संरक्षण, विज्ञान इत्यादी विविध क्षेत्रांमध्ये प्रचंड प्रमाणात प्रगती केली आहे तसेच उच्चशिक्षित आणि इंग्रजी बोलू शकणा-या वाढत्या तरुण पिढीमुळे भारत सर्व जगाला बाह्यस्रोताच्या) आउटसोर्सिंग (सेवा पुरवणारा देश म्हणून आज भारताची ओळख होत आहे . भारत हा अति-कुशल तंत्रज्ञ पुरवणारा जगातील सर्वात मोठा निर्यातक देश म्हणून ही भारताने ओळख निर्माण केली आहे . याचबरोबर उत्पादन, औषधनिर्माण, जैवतंत्रज्ञान, अतिसूक्ष्म तंत्रज्ञान , दुरसंचार , जहाज निर्माण, पर्यटन या क्षेत्रातील भारताची क्षमता ही वाढत असल्याचे दिसून येते.

भारतीय अर्थव्यवस्था अमेरिकन डॉलरच्या विनियमाच्या आधारे मापन केले असता जगातील १२व्या क्रमांकाची अर्थव्यवस्था आहे . वार्षिक सकल उत्पन्न दर) पीपीपी (च्या आधारे मापन केल्यास भारतीय अर्थव्यवस्थेचा जगात ४ वा क्रमांक लागतो . आंतरराष्ट्रीय नाणे निधी) IMF) च्या जागतीक आर्थिक आढाव्यानुसार २०२५ मध्ये भारत जगातील चौथ्या क्रमांकाची अर्थव्यवस्था ठरली आहे . ही पायरी भारताच्या वेगवान आर्थिक प्रगतीचे प्रतिक आहेत.

भारताच्या आर्थिक वाढीतील मुख्य घटक-

१. वेगाने वाढणारी अर्थव्यवस्था - भारत सर्वात वेगाने वाढणारी प्रमुख अर्थव्यवस्था आहे. पुढील काही वर्षात ६ % पेक्षा जास्त वाढीचा अंदाज आहे . ही वाढ भारताच्या घरगुती खर्चात वाढ झाल्यामुळे म्हणजेच GDP च्या

जवळ - जवळ ७० % खर्च आहे .तसेच विदेशी गुंतवणुकीत वाढ, GST, उत्पादन आधारित प्रोत्साहन का पायाभूत सुधारणा तसेच डिजिटल आणि उत्पादन क्षेत्राचा विस्तार या सारख्या सरकारचा उपक्रमामुळे भारतीय अर्थव्यवस्था वेगाने वाढत आहे.

२ .GDP मध्ये वाढ - हरितक्रांतीमुळे शेती उत्पादनात वाढ झाली .सिंचन, आधुनिक बियाणे तंत्रज्ञानाचा वापर यामुळे शेती उत्पादनात प्रचंड वाढ झाली .GDP मधील शेती क्षेत्राचा वाटा आज ही 15 टक्क्यापर्यंत आहे . औद्योगिक क्षेत्र ही झपाट्याने वाढत असल्यामुळे GDP मध्ये औद्योगिक क्षेत्राचाही वाटा वाढत आहे .तो आज २७% पर्यंत आहे .तसेच आज सेवाक्षेत्राची प्रगती पाहिली तर ती दैदिप्यमान असल्याचे दिसून येते .आज GDP तील सेवाक्षेत्राचा हिस्सा हा जवळ-जवळ ५९-६० %पर्यंत आहे .भारतातील प्राथमिक, दुय्यम आणि तृतीय क्षेत्राच्या प्रगतीमुळे भारताच्या GDP मध्ये सातत्याने वाढ होत असल्याचे दिसून येते .२०१५ मध्ये\$ ४.१९ ट्रिलियन डॉलर इतकी भारताच्या GDP त वाढ झाली.

३.आयात-निर्यात व्यापार - भारत पेट्रोलियम उत्पादन औषधे ,इंजिनिअरिंग वस्तू, कपडे, माहिती तंत्रज्ञान सेवा इत्यादी वस्तू व सेवांची निर्यात करतो .त्याच बरोबर कच्चे तेल, सोने /रत्ने, मशिनरी उच्चतंत्रज्ञान इत्यादी वस्तूची आयात करतो .भारताच्या आयात-निर्यात व्यापारात वाढ होताना दिसते .सन 2020 मध्ये भारताची निर्यात\$ 314.31 बिलियन इतकी होती , ती वाढून २०२४ मध्ये \$776.68 बिलियन इतकी झाली .याच काळात म्हणजेस 2020 मध्ये \$ ४६७.१९ बिलियन इतकी आयात होती ,ती \$854.80 बिलियन झाली .

४ .परकीय चलन साठा -भारताच्या निर्यात व्यापारात वाढ झाल्यामुळे विदेशी चलन साठा वाढत असून त्यामुळे रोजगारात सुद्धा वाढ होत आहे शिवाय उद्योग सशक्त होण्यास हातभार लागत आहे .सन २०२० या कालावधीत\$ 500 बिलियन इतका विदेशी साठा होता .त्यात वाढ होऊन जानेवारी २०२६ मध्ये\$ 701.36 बिलियन इतका विदेशी साठा वाढला .

५ .कृषी उत्पादनात वाढ - आज सरकारने शेती आधारीत उद्योगांचा विकास करणे, फळ झाडाच्या शेतीचा विकास करणे, शेतीसंशोधनाला चालना देणे तसेच लहान व सिमांत शेतकऱ्यांचे हित साधणे यासारख्या धोरणाचा अवलंब केल्यामुळे शेतीचा सरासरी वार्षिक वार्षिक दर 3% राहिला आहे .२०२०-२१ या कोरोना काळात सुद्धा स्थिर किमती नुसार शेती क्षेत्राचा वृद्धीदर ३.४ % इतका होता .तसेच २०२०-२१ या वर्षात अलधान्यांचे उत्पादन ३१०.७ मेट्रीक टन इतके होते ते वाढून २०२३-२४ मध्ये 328.9 मेट्रीक टन इतका झाला.

६. सेवा क्षेत्रात वाढ :- भारतातील सेवा क्षेत्राची प्रगती मोठ्या प्रमाणात होताना दिसत आहे .सेवाक्षेत्र भारतीय GDP च्या जवळपास 60% योगदान देत आहे .भारतची सध्या जगातील सर्वात वेगाने वाढणारी अर्थव्यवस्था आहे .२०१४-१५ मध्ये जागतिक सेवा निर्यातीत भारताचा वाटा 3.2% होता .सध्या भारत जगात सेवा निर्यातीमध्ये आठव्या स्थानावर आहे .माहिती तंत्रज्ञानाच्या बाबतीत भारत जागतिक क्रमांकाचा नेता आहे .सन २०२० मध्ये सेवाक्षेत्राला GDP चा हिस्सा ५४ %होता त्यात वाढ होऊन २०२५ मध्ये ६० %

वाढला आहे .सेवा क्षेत्र हे भारतातील रोजगारांचे प्रमुख स्रोत आहे .ते भारतीय लेकसंखेच्या ३०.७ % लोकांना रोजगार.

७ .पायाभूत सुविधांचा विकास - विकसित भारतासाठी पायाभूत सुविधा अत्यंत महत्वाच्या आहेत .कारण त्या आर्थिक विकासाचा कणा आहेत .रेल्वे ,रस्ते, विमानतळ, वीज, पाणी, दूरसंचर यासारख्या पायाभूत सुविधामूळे कनेक्टिव्हिटी, व्यापार, रोजगार निर्मिती आणि वेळचे जीवनमान उंचावले .सरकार अनेक योजनांच्या माध्यमातून सार्वजनिक आणि खाजगी गुंतवणुकीला चालना देत आहे. भारताच्या एकूण पायाभूत सुविधांवर खर्च झपाट्याने वाढ होत आहे. 2023-24 च्या अर्थसंकल्पामध्ये पायाभूत सुविधांवरील खर्चाचे वाटप 10 लाख कोटी रुपयांपर्यंत वाढले आहे .जेणे करून 2047 पर्यंत भारताला विकसित राष्ट्र बनवण्याचे उद्दिष्ट गाठता येईल.

अर्थव्यवस्थे पुढील आव्हाने-

देशात आर्थिक वाढीच्या महत्वाच्या मुख्य घटकांची प्रगती“ विकसित भारत 2047” या दिशेने होत असली तरी सध्या भारतीय अर्थव्यवस्थेपुढे काही आव्हाने सुद्धा आहेत .त्या आव्हानांची दिशा निर्धारित करून ती आव्हाने पेलण्यासाठी काही उपाययोजना करता येऊ शकतील काय? याची साधक-बाधक चर्चा, प्रस्तुत संशोधनात करण्याचा प्रयत्न केला आहे.

१.भारतीय अर्थव्यवस्थेतील काळा पैसा :- भारतीय अर्थव्यवस्थेच्या विकासातील मुख्य बाधा म्हणून काळ्या पैशाचा विचार करावा लागेल .अवैध मार्गाने मिळविलेला पैसा किंवा धनाला काळा पैसा म्हणतात .काळा पैसा हे असे उत्पन्न आहे जे उत्पन्न करपात्र असूनही त्याविषयी कर विभागाला माहिती दिली जात नाही . काळ्या पैशामुळे सरकारच्या उत्पन्नात खंड पडतो व एनआयपीएफपी एका अभ्यासानुसार 1983-84 मध्ये 32000 ते 37000 कोटी रुपये काळा पैसा अस्तित्वात होता .सन 2010 मध्ये ग्लोबल फायनान्शियल इंटिग्रीटीच्या अनुमानानुसार 1948 ते 2008 या खंडात भारतात 2462 अरब डॉलर इतकी धनाची रक्कम काळ्यापैशाच्या स्वरूपात देशाबाहेर गेली होती .सरकारने काळ्या पैशावर निर्बंध घाल्यासाठी एंटीमनी लॉन्ड्रिंग कायदा मजबूत केला .काळापैसा निर्मितीत रोक लवण्याकरिता यथार्थवादी कर रचना धोरण आमलात आणले गेले पाहिजे कारच्या दरात घट केली पाहिजे .करप्रक्रिया सोपी व सुलभ केजी पाहिजे . अधिकाऱ्यांच्या मध्ये इमानदारी निर्माण करण्यासाठी प्रयत्न केला पाहिजे .महत्वाने म्हणजे सरकारी क्षेत्रातील भ्रष्ट अधिकाऱ्यांच्या विरोधात योग्य आणि सक्षम कारवाई करावी. डॉ .राजा जे .चलैया यांच्या म्हणण्यानुसार कराये दर शून्य करून सर्व नियंत्रण हटवले तर काळा पैसा समूळ नष्ट होऊ शकेल.

२ .कर्जाचा वाढता भार :-अर्थव्यवस्थेवरील कर्जाचा भार वाढत आहे तो कसा कमी करावा हे देशापुढील एक गंभीर आव्हान आहे .विदेशी कर्जाच्या व्याजाची फार मोठी रक्कम परत करावी लागते .सन 2020 मध्ये \$558 बिलियन तर 2025 मध्ये वाढ होऊन ते \$747 बिलियन इतके वाढले .हे विदेशी कर्ज कशा प्रकारे कमी करावे हे भारतीय अर्थव्यवस्थेसाठी आव्हान आहे .हे विदेशी कर्ज कमी करायचे असेल तर देशाचा अंतर्गत संसाधनांमध्ये वाढ होणे महत्वाचे आहे.

3.भारतीय अर्थव्यवस्थेवरील तेल संकट :- भारतात पेट्रोल, तेल आणि लुब्रीकंटस चे उत्पादन मागणीपेक्षा कमी होते .अतिरिक्त तेलाची मागणी आयातीद्वारे पूर्ण केली जाते .सन 2021-22 मध्ये \$120.7 बिलियन तर 2025-26 (April-November) मध्ये \$80.9 बिलियन डॉलरच्या तेलाची आयात करण्यात आली .भारत तेलाची

आयात सौदी-अरेबिया, इराण, नायजेरीया, कुवैत, मेक्सिको, अमेरिका आणि रशिया या सारख्या देशातून करतो .त्यामुळे तेलाच्या बाबतीत अधिक अवलंबिल आहे .भारताचे तेल संकट दूर करण्यासाठी नवीकरणीय ऊर्जा वापर वाढविणे, इलेक्ट्रॉनिक वाहनांना प्रोत्साहन देणे, ऊर्जा कार्यक्षमता वाढविणे आणि विविध देशांकडून तेल आयात करणे आवश्यक आहे.

४ .लोकसंख्या नियंत्रणाचे आव्हान -: लोकसंख्येच्या बाबतीत भारत जगात पहिल्या स्थानावर आहे .भारतातील लोकसंख्या केवळ जास्तच नाही तर ती अतिरिक्त आहे .त्यामुळे भारतातील अतिरिक्त लोकसंख्या अनेक समस्यांना जन्म देते .वाढत्या लोकासंख्येमुळे बेरोजगारी ,गरीबी, विषमता घटते जीवनमान ,भ्रष्टाचार ,प्रदुषण यासारख्या अनेक समस्या निर्माण होतात.

५ .दरडोई उत्पन्न कमी -: भारताचे दरडोई उत्पन्न हे विकसित देशा पेक्षा खूप कमी आहे .त्यात वाढ होणे अपेक्षित आहे .दरडोई उत्पन्नानील वाढ ही देशाचा जलद आर्थिक वाढीला मदत करते .

६. शाश्वत विकास -: औद्योगिकरण आणि पर्यावरण संरक्षण यामध्ये समतोल राखून देशाला शाश्वत विकास घडवून आणणे आवश्यक आहे .

७ .मानवी विकास निर्देशांक -: मानकी विकास निर्देशांक या बाबतीत भारत खूप पाठीमागे आहे .तो सुधारावा या दुष्टीकोनातून शिक्षण, आरोग्य, कौशल्य विकासावर अधिक भर देणे आवश्यक आहेत .गेल्या दशकात मानवी विकास निर्देशांक यामध्ये प्रगती दिसते HDI .स्कोअर 0.644 (2022) ते 0.685 (2023) पर्यंत वाढला आहे . जागतीक रँक 134 वरून 130 पर्यंत सुधारली आहे .सरासरी आयुर्मान ६८ वर्ष इतके आहे .साक्षरता दर सुमारे ८०.९ %पोहचला आहे .कामासाठी पात्र लोकांचे कौशल्य व रोजगार क्षमता वाढली आहे .तरीही काही क्षेत्रात शिक्षण आणि कौशल्य सुधारणा आवश्यक आहे.

८ .बेरोजगारी -: भारतातील लोकसंख्येचे प्रमाण प्रचंड असल्यामुळे बेरोजगारीचे प्रमाणही मोठ्या प्रमाणात आहे .परंतू आपल्या देशाची औद्योगिक प्रगती ही होत असल्यामुळे गेल्या काही वर्षात बेरोजगारीचे प्रमाण कमी होताना पहायला मिळते .भारतातील बेरोजगारीचा दरात घट होत आहे .हा देशाच्या आर्थिक विकासाचा दर्शक मनाला जातो.

९ .गरीबी -: भारतात गरीबीचे प्रमाण सुद्धा मोठ्या प्रमाणात होते .देशाच्या आर्थिक विकासासमोरील हे एक महत्वांचे आव्हान आहे .परंतू सन २०१४ ते 2024 या दशकात भारताने गरीबी कमी करण्याच्या दिशेने प्रयत्न केल्यामुळे गरीबीच्या प्रमाणामध्ये खुद घट होण्यास मदत झाली आहे .सन २०१४ मध्ये ग्रामीण आणि शहरी भागातील गरीबीचे एकूण प्रमाण हे २१.९० %होते तर २०२५ मध्ये यात घट होऊन ते प्रमाण ४.५० %इतके कमी झाले आहे.

निष्कर्ष -:

अलिकडच्या काळात भारताची आर्थिक प्रगती प्रभावी राहिली आहे .गेल्या काही दशकात भारतीय अर्थव्यवस्था मोठ्या प्रमाणात वाढत गेल्यामुळे अमेरिका, चीन, जर्मनी नंतर आपल्या अर्थव्यवस्थेचा क्रमांक लागतो .अर्थव्यवस्थेतील आर्थिक वाढीचे जे महत्वाचे घटक आहेत त्या घटकांची विकासाची कागिरी खूप चांगली होत आहे .व्यवसायाच्या दृष्टीने योग्य आणि सहाय्यभूत धोरण सरकारने आखल्यामुळे व्यावसाय क्षेत्राची भरभराटी होत असल्याचे दिसून येते .भारत सरकारने स्मार्ट सिटी, मेक इन इंडिया योजनांच्या माध्यमातून विकासाला चालना दिली आहे .परंतु भारताचा ७५ वर्षांच्या वाटचालीनंतर "विकसित भारत

2047” हे मिशन पूर्ण होणार का? या प्रश्नाच्या उत्तराची अपेक्षा करताना अजूनही भारतीय अर्थव्यवस्थेची चांगली कामगिरी होणे अपेक्षित आहे .तसेच देशा समोरील जी काही आव्हाने आहेत उदा - काळा पैसा, भ्रष्टाचार विदेशी कर्जाचा वाढता भार ,लोकसंख्या नियंत्रण इत्यादी आव्हाने संपुष्टात आणली आणि ही आव्हाने पेलण्याची क्षमता अर्थव्यवस्थेत निर्माण केली तर निश्चितच विकसित भारत २०४७ हे मिशन पूर्ण होईल.

संदर्भ-

१. भारतीय अर्थव्यवस्था -दत्त गौरव ,महाजन अश्विनी
- २ .जागतिकीकरण भारतासमोरील आव्हाने - कराडे जगत ,डायमण्ड पब्लिकेशन
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- ५ .भारतीय अर्थव्यव डॉ .एस .एम भोसले ,डॉ.पी.एस .कदम ,डॉ .सी .आर, जाधव -फडके प्रकाशन
- ६ .इंटरनेट वेबसाईट



सांस्कृतिक धरोहर बनाम आधुनिकता : टकराव या समन्वय

डॉ. प्रविण विलास चौगले

सहायक प्राध्यापक एवं विभाग प्रमुख

हिंदी विभाग, कमला कॉलेज, कोल्हापुर (स्वायत्त)

मोबाइल नंबर - 9764470531,

ई-मेल – chougale.pravin246@gmail.com

सारांश :

मानव सभ्यता का विकास केवल भौतिक प्रगति की कहानी नहीं है, यह सांस्कृतिक निरंतरता और सामाजिक चेतना का भी दर्पण है। सांस्कृतिक धरोहर किसी भी समाज की स्मृति, पहचान और जीवन-दृष्टि को संरक्षित रखती है, जबकि आधुनिकता परिवर्तन, नवाचार और विकास का प्रतीक मानी जाती है। प्रायः इन दोनों को परस्पर विरोधी मान लिया जाता है, किंतु गहन अध्ययन से यह स्पष्ट होता है कि इनके बीच टकराव से अधिक समन्वय की संभावनाएँ विद्यमान हैं। प्रस्तुत शोधपत्र में सांस्कृतिक धरोहर और आधुनिकता के संबंधों का ऐतिहासिक, सामाजिक और वैचारिक विश्लेषण किया गया है। यह शोध इस प्रश्न पर केंद्रित है कि क्या आधुनिकता वास्तव में सांस्कृतिक धरोहर के लिए खतरा है, या फिर वह उसके संरक्षण और पुनर्परिभाषा का माध्यम बन सकती है। लेख में यह प्रतिपादित किया गया है कि संतुलित विकास के लिए परंपरा और आधुनिकता का संवाद आवश्यक है, जिसमें दोनों एक-दूसरे को समृद्ध कर सकें।

मुख्य शब्द :

सांस्कृतिक धरोहर, आधुनिकता, परंपरा, समन्वय, विकास, सांस्कृतिक पहचान।

प्रस्तावना :

किसी भी समाज की आत्मा उसकी सांस्कृतिक धरोहर में निहित होती है। भाषा, साहित्य, कला और जीवन-मूल्य समाज की सामूहिक स्मृति का निर्माण करते हैं। रामविलास शर्मा के अनुसार संस्कृति किसी समाज की ऐतिहासिक चेतना का जीवंत रूप होती है। “विद्वानों का मत है कि सांस्कृतिक चेतना के बिना कोई भी आधुनिक समाज संतुलित विकास की दिशा में आगे नहीं बढ़ सकता।”¹ किसी भी समाज की आत्मा उसकी सांस्कृतिक धरोहर में निहित होती है। भाषा, साहित्य, कला, लोकपरंपराएँ, रीति-रिवाज़ और मूल्य-बोध मिलकर उस धरोहर का निर्माण करते हैं, जो पीढ़ी दर पीढ़ी हस्तांतरित होती रहती है। दूसरी ओर आधुनिकता समय की माँग के अनुसार परिवर्तन, वैज्ञानिक दृष्टि और नई जीवन-शैली को अपनाने की प्रक्रिया है। जब समाज तीव्र परिवर्तन के दौर से गुजरता है, तब यह प्रश्न स्वाभाविक रूप से उठता है कि क्या आधुनिकता सांस्कृतिक धरोहर को नष्ट कर देती है या उसे नए संदर्भ प्रदान करती है।

भारतीय संदर्भ में यह प्रश्न और अधिक महत्वपूर्ण हो जाता है, क्योंकि यहाँ परंपरा और आधुनिकता दोनों ही अत्यंत सशक्त रूपों में विद्यमान हैं। प्रस्तुत शोधपत्र का उद्देश्य इसी द्वंद्व को समझना और यह स्पष्ट करना है कि सांस्कृतिक धरोहर और आधुनिकता के बीच टकराव की धारणा कितनी यथार्थपरक है।

सांस्कृतिक धरोहर की अवधारणा :

सांस्कृतिक धरोहर केवल ऐतिहासिक स्मारकों या प्राचीन परंपराओं तक सीमित नहीं है। इसमें समाज की सामूहिक स्मृति, जीवन-दृष्टि और रचनात्मक अभिव्यक्तियाँ सम्मिलित होती हैं। दिनकर रामधारी सिंह के अनुसार “संस्कृति किसी समाज की आत्मा होती है, जो उसकी परंपराओं, विश्वासों और जीवन-मूल्यों में निरंतर प्रवाहित रहती है।”² सांस्कृतिक धरोहर केवल ऐतिहासिक स्मारकों या पुरानी परंपराओं तक सीमित नहीं है। इसमें समाज की सामूहिक स्मृति, जीवन-मूल्य और रचनात्मक अभिव्यक्तियाँ सम्मिलित होती हैं। लोकगीत, लोकनृत्य, भाषा, धार्मिक आस्थाएँ और सामाजिक व्यवहार ये सांस्कृतिक धरोहर के घटक हैं। द्विवेदी हजारीप्रसाद सिंह के अनुसार “परंपरा जड़ नहीं होती; वह समय के साथ अपने स्वरूप में परिवर्तन करती हुई भी अपनी मूल चेतना को सुरक्षित रखती है।”³ यह धरोहर समाज को उसकी जड़ों से जोड़े रखती है और उसे पहचान प्रदान करती है। इसके अभाव में समाज दिशाहीन हो सकता है। इसलिए सांस्कृतिक धरोहर का संरक्षण केवल अतीत से लगाव का प्रश्न नहीं, भविष्य की दिशा तय करने का माध्यम भी है।

आधुनिकता : अर्थ और स्वरूप :

आधुनिकता का संबंध केवल तकनीक या पश्चिमी प्रभाव से नहीं है, यह तर्कशीलता, वैज्ञानिक दृष्टि और सामाजिक परिवर्तन की चेतना से जुड़ी हुई है। समाजशास्त्रियों का मानना है कि आधुनिकता व्यक्ति को परंपरा से संवाद करने की नई दृष्टि प्रदान करती है।⁴ आधुनिकता को प्रायः पश्चिमी प्रभाव या तकनीकी विकास से जोड़कर देखा जाता है, किंतु इसका वास्तविक अर्थ इससे कहीं व्यापक है। आधुनिकता का आशय है—परिवर्तन के प्रति खुलापन, तर्कशीलता, वैज्ञानिक दृष्टिकोण और व्यक्ति की स्वतंत्रता। नामवर सिंह के अनुसार “आधुनिकता का अर्थ परंपरा का निषेध नहीं, बल्कि उसका विवेकसम्मत पुनर्मूल्यांकन है।”⁵

आधुनिकता ने शिक्षा, संचार, स्वास्थ्य और सामाजिक संरचनाओं में अनेक सकारात्मक परिवर्तन किए हैं। इसने व्यक्ति को परंपरागत बंधनों से मुक्त होने का अवसर भी दिया है। फिर भी, यह तथ्य नज़रअंदाज़ नहीं किया जा सकता कि आधुनिकता के अंधानुकरण से सांस्कृतिक मूल्यों का क्षरण भी हुआ है।

टकराव की धारणा : कारण और परिणाम :

सांस्कृतिक धरोहर और आधुनिकता के बीच टकराव की धारणा मुख्यतः तब उत्पन्न होती है, जब आधुनिकता को परंपरा-विरोधी माना जाता है। शहरीकरण, औद्योगीकरण और वैश्वीकरण के प्रभाव से पारंपरिक जीवन-शैली में परिवर्तन आया है। संयुक्त परिवारों का विघटन, लोकसंस्कृति का ह्रास और भाषा का बदलता स्वरूप इसके उदाहरण हैं। इस परिवर्तन को कई लोग सांस्कृतिक पतन के रूप में देखते हैं। दुबे श्यामाचरण के अनुसार “अंधी आधुनिकता जब परंपरा से कट जाती है, तब वह सांस्कृतिक शून्यता को जन्म देती है।”⁶ परिणामस्वरूप परंपरा और आधुनिकता के बीच एक काल्पनिक दीवार खड़ी कर दी जाती है, जो संवाद के स्थान पर टकराव को जन्म देती है।

समन्वय की संभावनाएँ :

यदि आधुनिकता को सांस्कृतिक धरोहर के विरोध में न रखकर उसके विकास के साधन के रूप में देखा जाए, तो परंपरा और आधुनिकता के बीच सार्थक संवाद संभव है। नामवर सिंह के अनुसार “परंपरा तभी जीवित रहती है, जब वह समय के साथ संवाद करती है।”⁷ यदि आधुनिकता को सांस्कृतिक धरोहर के विरोध में न रखकर उसके विस्तार के रूप में देखा जाए, तो समन्वय की अनेक संभावनाएँ उभरती हैं। तकनीक के माध्यम से लोककला, हस्तशिल्प और परंपरागत ज्ञान को वैश्विक मंच मिल रहा है। डिजिटल अभिलेखागार और ऑनलाइन मंच सांस्कृतिक संरक्षण के नए साधन बन चुके हैं।

शिक्षा और शोध के क्षेत्र में भी आधुनिक पद्धतियाँ सांस्कृतिक अध्ययन को अधिक व्यापक बना रही हैं। इस दृष्टि से आधुनिकता सांस्कृतिक धरोहर की शत्रु नहीं, सहायक सिद्ध हो सकती है।

भारतीय समाज में परंपरा और आधुनिकता :

भारतीय समाज में परंपरा और आधुनिकता का सह-अस्तित्व लंबे समय से देखने को मिलता है। यहाँ एक ओर प्राचीन धार्मिक अनुष्ठान और लोकपरंपराएँ जीवित हैं, वहीं दूसरी ओर विज्ञान, तकनीक और आधुनिक शिक्षा का तीव्र प्रसार भी हुआ है।

यह सह-अस्तित्व इस बात का प्रमाण है कि परंपरा और आधुनिकता अनिवार्य रूप से विरोधी नहीं हैं। समस्या तब उत्पन्न होती है, जब किसी एक को पूर्णतः नकार दिया जाता है। संतुलन बनाए रखना ही भारतीय समाज की विशेषता रही है।

वैश्वीकरण और सांस्कृतिक धरोहर :

वैश्वीकरण ने सांस्कृतिक धरोहर के समक्ष नई चुनौतियाँ प्रस्तुत की हैं। एक ओर इससे सांस्कृतिक समरूपता का खतरा बढ़ा है, वहीं दूसरी ओर स्थानीय संस्कृतियों को वैश्विक पहचान भी मिली है।

आज योग, आयुर्वेद और भारतीय संगीत विश्व स्तर पर स्वीकार किए जा रहे हैं। यह उदाहरण दर्शाते हैं कि यदि सांस्कृतिक धरोहर को आत्मविश्वास के साथ प्रस्तुत किया जाए, तो आधुनिक वैश्विक संदर्भ में भी उसकी प्रासंगिकता बनी रह सकती है।

संतुलित विकास की अवधारणा :

संतुलित विकास का अर्थ केवल आर्थिक उन्नति नहीं है, सामाजिक, सांस्कृतिक और नैतिक विकास भी है। ऐसा विकास, जिसमें परंपरा की जड़ें सुरक्षित रहें और आधुनिकता की शाखाएँ समाज को आगे बढ़ाएँ। दुबे श्यामाचरण के अनुसार “जो समाज अपनी सांस्कृतिक धरोहर को सुरक्षित रखते हुए आधुनिकता को अपनाता है, वही स्थायी विकास की ओर अग्रसर होता है।”⁸ नीतिगत स्तर पर भी सांस्कृतिक संरक्षण और आधुनिक विकास को साथ-साथ रखना आवश्यक है। शहरी नियोजन, शिक्षा नीति और पर्यटन विकास में सांस्कृतिक दृष्टि का समावेश इस दिशा में सहायक हो सकता है।

समकालीन चुनौतियाँ और समाधान :

आज की सबसे बड़ी चुनौती यह है कि युवा पीढ़ी सांस्कृतिक धरोहर को बोझ न समझे। इसके लिए आवश्यक है कि परंपरा को जड़ न मानकर जीवंत रूप में प्रस्तुत किया जाए। आधुनिक माध्यमों और भाषा में सांस्कृतिक मूल्यों की अभिव्यक्ति युवाओं से संवाद स्थापित कर सकती है।

संवाद, शिक्षा और संवेदनशील नीति-निर्माण के माध्यम से परंपरा और आधुनिकता के बीच संतुलन संभव है।

निष्कर्ष :

अंततः यह कहा जा सकता है कि सांस्कृतिक धरोहर और आधुनिकता के बीच टकराव अपरिहार्य नहीं है। समस्या आधुनिकता में नहीं, उसके दृष्टिकोण में है। यदि आधुनिकता को मानवीय और सांस्कृतिक मूल्यों के साथ जोड़ा जाए, तो वह धरोहर के संरक्षण और विकास दोनों में सहायक बन सकती है।

संतुलित विकास की दिशा वही है, जहाँ परंपरा और आधुनिकता संवाद में हों, संघर्ष में नहीं। यही संवाद समाज को अपनी जड़ों से जोड़े रखते हुए भविष्य की ओर अग्रसर करता है।

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विकसित भारत 2047 आणि आरोग्य : एक अभ्यास**डॉ.गंगासागर तुळसीदास चोले**प्रमुख, गृहशास्त्र विभाग, सहा. प्राध्यापक,
कला, वाणिज्य आणि विज्ञान महाविद्यालय, गडहिंग्लज जि.कोल्हापूर

Mo. No. 8668876044

Email - chole3ganga@gmail.com

प्रस्तावना:

भारत देश 15 ऑगस्ट 1947 रोजी स्वतंत्र झाला. 2047 या वर्षी आपल्या भारत देशाला स्वातंत्र्य मिळून शंभर वर्ष पूर्ण होतील. स्वातंत्र्यपूर्वीचा भारत आणि स्वातंत्र्यप्राप्तीनंतरचा भारत या दोन्हीही कालावधीमध्ये भारताच्या प्रगतीमध्ये अमूलाग्र बदल होत गेले. मग ते बदल औद्योगिक, व्यापार, व्यवसाय, शैक्षणिक, राजकीय, सामाजिक, आर्थिक आणि तंत्रज्ञान याविषयी होत गेले. इथून पुढेही हे बदल अतिशय वेगाने होतील या सर्व क्षेत्रातील होणाऱ्या बदलांचे चांगले व वाईट परिणाम हे आपण आज नाकारू शकत नाही ही आपली वास्तविकता आहे. देशाला विकसित भारत बनवण्याच्या दिशेने पावले उचलण्यास सरकारने सुरुवात केली आहे. विकासाचे चिरंतन व समावेशक प्रारूप विकसित करण्यासाठी स्त्रियांचा विकास, आरोग्य, शिक्षण, कौशल्य विकास, विज्ञान व तंत्रज्ञानातील प्रगती, रोजगार, कृषी उत्पादनात वाढ, औद्योगिक उत्पादन, नाविन्यता व स्थानिक उद्योगांना चालना इत्यादी घटकावर शासनाने कार्य करण्यास सुरुवात केली आहे.

विकसित भारत 2047 मध्ये भारताचे एक उद्दिष्ट आहे की, आरोग्य सेवेमध्ये मोठी क्रांती घडवून आणणे. ज्यात सरासरी आयुर्मान 71 वरून 85 वर्षापर्यंत वाढवणे, रोगांचा प्रतिबंध, डिजिटल आरोग्य सेवांचा वापर, परवडणारी आरोग्यसेवा आणि महिला व बाल आरोग्य सुधारणे. यावर भर दिला जाईल. ज्यामुळे एक निरोगी सक्षम आणि आर्थिक दृष्ट्या समृद्ध राष्ट्र निर्माण होईल.

उद्दिष्टे:

- 1) प्रत्येक व्यक्तीला चांगली आरोग्यसेवा उपलब्ध करून देणे.
- 2) माता व बाल आरोग्यात सुधारणा घडवून आणणे.
- 3) जीवनशैली विषयक जनजागृती करणे.

विकसित भारत 2047 आरोग्य योजनेअंतर्गत भारत सरकारने आरोग्य क्षेत्रात अनेक महत्वाची उद्दिष्टे निश्चित केली आहेत. सार्वजनिक आरोग्य खर्च जीडीपीच्या 2.5% पर्यंत वाढवण्याचा निर्णय घेण्यात आला आहे. पाच दशलक्ष डॉक्टर्स आणि 1.25 ते 1.5 कोटी नर्स यांची सुविधा उपलब्ध करून देण्यात येणार आहे. तीन दशलक्ष पेक्षा जास्त हॉस्पिटल बेडचा पुरवठा करण्यात येणार आहे. 100% आरोग्य विमा संरक्षण साध्य करण्यात येणार आहे. आयुष्यमान भारत डिजिटल मिशनद्वारे आरोग्य सेवांचे डिजिटलायझेशन करणे. 17 दशलक्ष आरोग्य मंदिर स्थापन करणे. वैद्यकीय महाविद्यालयांची संख्या वाढवणे आणि 157 नवीन नरसिंग महाविद्यालये स्थापन करणे इत्यादी उद्दिष्टे साध्य करण्यासाठी भारत सरकारने आयुष्यमान भारत, राष्ट्रीय आरोग्य अभियान आणि डिजिटल आरोग्य अभियान यासारखे अनेक उपक्रम सुरू केले आहेत.

गृहीतके:

- 1) प्रत्येक व्यक्तीला चांगली आरोग्यसेवा उपलब्ध होईल.
- 2) माता व बाल आरोग्यात सुधारणा घडून येईल.
- 3) जीवनशैली विषयक जनजागृती होऊ शकेल.

संशोधन पद्धती:

प्रस्तूत शोध निबंधात तथ्य संकलनासाठी द्वितीय तथ्य संकलनाचा वापर करण्यात आला आहे. त्यामध्ये पुस्तके, मासिके, वर्तमानपत्रे, इंटरनेट इ. चा वापर करण्यात आला आहे.

आव्हाने:

ग्रामीण व शहरी भागातील आरोग्य सेवेत असलेली दरी, वाढता आरोग्य खर्च, जीवनशैली व आरोग्यातील असमतोल, हवामानातील बदलामुळे निर्माण होणारे पर्यावरणीय संकट, सार्वजनिक आरोग्य व आपत्कालीन परिस्थिती अशा प्रकारची आव्हाने असलेली दिसून येतात.

विकसित भारत 2047 मध्ये आरोग्य या संकल्पनेला अत्यंत महत्त्वाचे स्थान आहे. कारण निरोगी नागरिकांशिवाय उत्पादनीय अर्थव्यवस्था, सामाजिक समावेशण व शाश्वत विकास शक्य नाही. भारतामध्ये स्वातंत्र्य काळानंतर आरोग्य क्षेत्रात जरी प्रगती झाली असली तरी माता व बालमृत्यूचे प्रमाण, कुपोषण, अतिपोषण, संसर्गजन्य आजार यांचे प्रमाण वाढतच आहे. त्याच पद्धतीने ग्रामीण व शहरी आरोग्यसेवामधील असमानता अशा पद्धतीची गंभीर आव्हाने अजूनही कायम आहेत.

भारतासारख्या विशाल आणि वैविध्यपूर्ण देशात आरोग्य समानता निश्चित करणे आव्हानात्मक असे कार्य आहे. कारण आयुष्यमान भारत यासारख्या आरोग्यसेवा, पायाभूत सुविधा आणि सेवांमध्ये विकास झालेला असूनही मोठ्या प्रमाणात असलेल्या लोकसंख्येमुळे समान आरोग्य सेवा उपलब्ध होण्याबाबत आव्हाने उभे आहेत. शहरी आणि ग्रामीण लोकसंख्या विविध सामाजिक, आर्थिक गट आणि अगदी भिन्न लिंगाच्या लोकांमधील आरोग्य सेवा पुरवठा यातील अंतर दूर करणे ही धोरणात्मक गरज आहे. आरोग्य असमानता दूर करणे म्हणजे एखाद्या दुर्गम भागातील व्यक्तीची शहरातील एखाद्या व्यक्तीप्रमाणे प्रतिबंधात्मक काळजी घेणे. पोषण आणि आरोग्यसेवा यांचे समान प्रमाण आहे का याची खात्री करणे. 1948 मध्ये डब्ल्यू एच ओ संघटनेने घोषित केले की, आरोग्याच्या सर्वोच्च प्राप्त मानकांचा आनंद घेणे हा प्रत्येक मानवाच्या मूलभूत अधिकारापैकी एक अधिकार आहे.

निष्कर्ष:

विकसित भारत 2047 ही संकल्पना भारताच्या भविष्यासाठी एक दीर्घकालीन दृष्टीकोन ठरते. आर्थिक सक्षमतेबरोबरच सामाजिक न्याय, मानवी विकास, आरोग्य क्षेत्र हे सुद्धा महत्त्वाचे आहे. निरोगी समाज हा विकसित राष्ट्राचा कणा आहे. सार्वत्रिक समावेशक व तंत्रज्ञानावर आधारित आरोग्य व्यवस्था

उभारल्यास भारत केवळ आर्थिक दृष्ट्याच नव्हे तर मानवी विकास व आरोग्याच्या दृष्टीनेही जागतिक नेतृत्व करणारा देश ठरू शकतो.

संदर्भ :

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- 4) World Health Report.
- 5) National Health Policy.
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Viksit Bharat @2047: Opportunities and Challenges on India's Path to Inclusive and Sustainable Development

Dr. Jaydeep Uttamrao Dixit,

Assistant Professor, Department of Economics, Venutai Chavan College, Karad 415124

Abstract

India's vision of *Viksit Bharat @2047* marks a transformative national aspiration to become a developed, inclusive, and resilient economy by the centenary year of its independence. This vision is grounded in rapid economic growth, social equity, technological advancement, and environmental sustainability. The present research paper critically examines the key opportunities that can accelerate India's development journey, such as demographic dividend, digital transformation, infrastructure expansion, and global economic integration. Simultaneously, it analyses major challenges including employment generation, regional disparities, environmental stress, skill gaps, and governance constraints. Using a qualitative and analytical approach, the study highlights policy imperatives and strategic pathways required to translate the vision of Viksit Bharat into reality. The paper concludes that balanced growth, institutional reforms, and inclusive policymaking are essential to achieving sustainable development by 2047.

Keywords : Viksit Bharat @2047, Economic Development, Inclusive Growth, Sustainability, Governance, Digital India

1. Introduction

India stands at a crucial juncture in its developmental journey. With a rapidly growing economy, a young population, and increasing global influence, the country has articulated an ambitious vision—*Viksit Bharat @2047*. This vision aims to transform India into a developed nation characterized by high income levels, social justice, technological leadership, and environmental sustainability.

While India has achieved significant progress since independence, several structural and institutional challenges persist. The success of Viksit Bharat @2047 depends on the nation's ability to harness emerging opportunities while effectively addressing long-standing developmental constraints. This paper attempts to provide a comprehensive analysis of these opportunities and challenges within an integrated development framework.

2. Objectives of the Study

The main objectives of this research are:

1. To analyze the concept and significance of Viksit Bharat @2047.
2. To identify key economic, social, and technological opportunities for India's development.
3. To examine the major challenges hindering India's path towards developed nation status.
4. To suggest policy measures for achieving inclusive and sustainable growth by 2047.

3. Research Methodology

The study is based on **qualitative and analytical research methodology**. Secondary data has been collected from government reports, policy documents, academic journals, and international development frameworks. Logical reasoning and thematic analysis have been used to interpret opportunities and challenges related to Viksit Bharat @2047.

4. Conceptual Framework of Viksit Bharat @2047

Viksit Bharat @2047 is a multidimensional development vision encompassing:

- **Economic prosperity** with sustained high growth

- **Social inclusion** and reduction of inequalities
- **Technological innovation and digital governance**
- **Environmental sustainability and green growth**
- **Efficient institutions and transparent governance**

The vision emphasizes citizen-centric development and collaborative participation of government, private sector, and civil society.

5. Opportunities for Viksit Bharat @2047

5.1 Demographic Dividend

India's population is estimated to reach **approximately 1.46 billion**, making it the most populous country globally. Around **68% of India's population falls within the working-age group (15–64 years)**, offering a potential demographic dividend that could drive economic growth if effectively harnessed. India's youthful population presents a significant opportunity. If adequately educated and skilled, this demographic advantage can boost productivity, innovation, and entrepreneurship, contributing to long-term economic growth.

5.2 Digital Transformation

Initiatives such as Digital India, fintech expansion, e-governance, and artificial intelligence adoption have enhanced efficiency, transparency, and financial inclusion. Digital platforms can bridge urban–rural gaps and empower marginalized communities.

5.3 Infrastructure Development

Large-scale investments in transportation, energy, logistics, and urban infrastructure can stimulate economic activity, improve connectivity, and attract domestic as well as foreign investment.

5.4 Global Economic Integration

India's growing role in global value chains, international trade, and strategic partnerships provides opportunities for export growth, technology transfer, and geopolitical influence.

5.5 Renewable Energy and Green Growth

India's commitment to renewable energy and climate action opens avenues for sustainable industrialization, green jobs, and energy security.

5.6 Economic Growth Prospects

India's economy is forecast to grow robustly in the medium term, with agencies like Moody's projecting **around 7.0% growth in 2025 and 6.4% in 2026**.

5.7 Employment Expansion

Between 2017-18 and 2023-24, India added **approximately 17 crore (170 million) new jobs**, raising total employment from 47.5 crore to 64.33 crore. The **unemployment rate declined from 6.0% to 3.2%** over the same period, indicating improved labour absorption.

5.8 Digital and Technological Advancement

India's ongoing digital transformation — including rapid expansion of digital infrastructure, fintech, and e-governance platforms — supports financial inclusion and business efficiency, projecting continued growth in digital economic activities.

6. Challenges in Achieving Viksit Bharat @2047

6.1 Employment and Skill Mismatch

Despite notable job growth, **only about 4.4% of Indian youth workers are formally skilled**, indicating a significant gap between workforce skills and industry requirements. Reports also show that

roughly **73% of employed individuals have only basic education**, with an employability rate of **54.8%**, highlighting structural skill deficiencies. Despite economic growth, job creation has not kept pace with labor force expansion. Skill gaps and informal employment remain critical concerns.

6.2 Unemployment Among Youth

While headline unemployment may be low, **educated unemployment is disproportionately high** — with rates among graduates around **29.1%** compared to 3.4% for the uneducated. Youth unemployment, particularly among ages 15–24, remains a concern, emphasizing the need for better job creation strategies.

6.3 Poverty and Inequality

Though poverty has declined over decades, **about 234 million people still lived in poverty as of 2023–24**, based on multidimensional poverty measures. Income and wealth distribution also exhibit stark inequality, with a significant share of national income concentrated among the top income brackets, limiting equitable development.

6.4 Gender and Workforce Participation

Despite growth, **female labour force participation remains low**, though it has improved in recent years. Persistent gaps in participation and earnings continue to pose obstacles to broader socioeconomic inclusion.

6.5 Health and Social Development Indicators

Key social indicators indicate ongoing human development challenges. For example, India's Human Development Index (HDI) score reached **0.644 in 2022**, but the nation still ranks **134th out of 193 countries**, lagging behind many peers.

6.6 Environmental Stress

Despite strides in renewable energy adoption, environmental concerns such as pollution, climate vulnerability, and greenhouse gas emissions persist, complicating sustainable growth strategies.

6.7 Regional and Social Inequalities

Wide disparities across states, rural–urban divide, gender inequality, and unequal access to education and healthcare hinder inclusive development.

6.7 Environmental Degradation

Rapid industrialization and urbanization have increased environmental stress, including pollution, resource depletion, and climate vulnerability.

6.9 Governance and Institutional Constraints

Issues such as bureaucratic inefficiency, policy implementation gaps, and regulatory complexity affect development outcomes.

6.10 Fiscal and Financial Constraints

Rising public expenditure, debt pressures, and limited fiscal space pose challenges to sustained investment in social and physical infrastructure.

7. Policy Imperatives for Viksit Bharat @2047

To overcome these challenges, the following measures are essential:

- Strengthening education and skill development aligned with future industry needs

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- Promoting labor-intensive manufacturing and MSMEs
 - Enhancing cooperative federalism and balanced regional development
 - Encouraging green technologies and sustainable practices
 - Improving governance through transparency, digitization, and institutional reforms

8. Conclusion

The vision of Viksit Bharat @2047 represents India's collective aspiration to achieve holistic and sustainable development. While the country possesses immense opportunities in terms of human capital, technology, and global integration, significant challenges must be addressed through strategic planning and inclusive policies. Achieving developed nation status by 2047 requires not only economic growth but also social justice, environmental responsibility, and effective governance. A coordinated and long-term approach will be crucial in transforming this vision into reality.

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Integrating Physical and Digital Marketing: The Future of Commerce in Viksit Bharat @2047

Snehal Hirikude

Lecturer, Department of Commerce,

K.L.E. Society's G. I. Bagewadi Arts, Science and Commerce College, Nipani-591237 Karnataka.

E-mail: snehalhirikude@rediffmail.com

Mob.No: 8277554951

Abstract :

The convergence of physical and digital Marketing - known as **phygital marketing** - is transforming how businesses engage with consumers in India. By blending immersive physical experiences with interactive digital strategies, phygital marketing enhances customer engagement, personalization, and brand loyalty. In the context of **Viksit Bharat @2047**, integrating offline and online marketing channels is critical due to India's demographic diversity, expanding digital infrastructure, and large informal economy. This paper explores the role of phygital marketing in driving inclusive and sustainable growth, examining technologies such as artificial intelligence, digital payments, augmented reality, and data analytics that enable seamless, customer-centric experiences. The study adopts a conceptual and descriptive approach, reviewing existing literature to highlight opportunities, challenges, and strategic implications for Indian businesses. Findings suggest that phygital marketing will be a cornerstone for future-ready commerce in India, enabling brands to deliver innovative, efficient, and trust-driven interactions across urban and rural markets.

Keywords : Phygital Marketing; Physical–Digital Integration; Consumer Engagement; Viksit Bharat @2047; Digital Public Infrastructure; Inclusive Growth; **Marketing Innovation.**

Introduction :

India's marketing and commerce landscape is undergoing a profound transformation, driven by rapid digitization, emerging technologies, and evolving consumer behavior. While traditional physical channels—such as retail stores, local markets, and service centers—remain essential for trust-building, accessibility, and community engagement, digital channels offer reach, personalization, and efficiency. The integration of these channels, known as **phygital marketing**, merges immersive physical experiences with interactive digital strategies to deliver seamless and engaging customer journeys.

In the context of **Viksit Bharat @2047**, phygital marketing assumes critical importance. India's demographic diversity, large informal economy, and expanding digital infrastructure present unique opportunities to create inclusive, scalable, and consumer-centric marketing strategies. Digitally enabled physical touchpoints—such as app-assisted retail, QR-based interactions, augmented reality experiences, and community hubs—allow businesses to connect with both urban and rural consumers, bridging the gap between online engagement and offline trust. This research examines how **integrating physical and digital marketing channels** can enhance customer experience, drive brand loyalty, and support sustainable commercial growth in India. It also explores the enabling role of technologies such as digital payments, artificial intelligence, data analytics, and platform-based ecosystems, as well as policy support and digital infrastructure, in facilitating effective phygital marketing. Ultimately, this study positions phygital marketing as a **strategic driver for India's inclusive and future-ready commerce ecosystem**, aligning with the nation's vision of a developed and digitally empowered economy by 2047.

Meaning of Phygital Marketing

“**Phygital marketing**” is a blend of the words **physical** and **digital**. It refers to marketing strategies that combine **physical experiences** with **digital technology** to create a seamless, interactive customer experience. The goal is to bridge the gap between offline and online interactions, making the customer journey more engaging, personalized, and connected.

Objectives :

1. To examine the impact of integrating physical and digital marketing channels on enhancing consumer engagement and brand experience in India.
2. To analyze the role of emerging digital technologies, such as AI, AR, and data analytics, in transforming traditional marketing practices.
3. To assess the effectiveness of physical–digital marketing integration in improving accessibility, personalization, and customer satisfaction across urban and rural markets.
4. To identify the challenges and opportunities for businesses in implementing phygital marketing strategies within the Indian commerce ecosystem.
5. To evaluate how phygital marketing can contribute to sustainable, inclusive, and future-ready commercial growth aligned with India’s Viksit Bharat @2047 vision.

Review of Literature

1. **Hänninen, Mitronen, & Kwan (2021)**: Highlight the importance of organizational alignment and customer-centric phygital integration in retail ecosystems. Physical touchpoints enhance experiential value while digital channels increase efficiency.
2. **Grewal, Hulland, Kopalle, & Karahanna (2021)**: Show that digital technologies integrated with physical environments enhance consumer trust, engagement, and loyalty.
3. **Verhoef & Bijmolt (2021)**: Demonstrate that omnichannel integration leads to superior commerce performance compared to single-channel models.
4. **Shankar et al. (2021)**: Highlight that hybrid physical–digital models improve inclusivity and accessibility, especially in emerging economies.
5. **Pantano et al. (2022)**: Emphasize that phygital environments strengthen experiential value and consumer trust, critical for markets with low digital literacy.

These studies justify examining phygital channels in India and highlight the importance of variables like **consumer trust, digital literacy, infrastructure, and technology utilization**.

Benefits of Phygital Marketing

1. Enhanced Customer Experience: Phygital marketing combines physical and digital interactions to create more immersive experiences. For example, a store might have AR mirrors or interactive kiosks, allowing customers to virtually try products while still being in a physical space. This makes shopping more engaging and memorable compared to traditional marketing.

2. Personalization: By collecting digital data on customer preferences, brands can tailor in-store or real-world experiences. For instance, a customer who browsed certain items online may receive personalized recommendations or offers when visiting a physical store. This makes customers feel understood and valued.

3. Increased Engagement: Phygital strategies actively involve customers rather than having them passively consume content. Examples include scanning QR codes, participating in online contests during in-store visits, or using apps to explore more product features. This interaction keeps customers interested and connected to the brand.

4. Brand Loyalty: Providing a seamless, engaging, and personalized experience helps build emotional connections with customers. When people have memorable and convenient experiences, they are more likely to return and stick with the brand over competitors.

5. Measurable Results: Digital components of phygital campaigns allow brands to track customer behavior and interactions. For example, scanning a QR code, trying an AR feature, or using an app can provide data that helps optimize future campaigns and improve ROI.

6. Competitive Advantage: Many brands focus only on online or offline marketing. Phygital marketing sets a brand apart by integrating both, offering customers a modern and innovative experience that competitors might not provide.

7. Higher Conversion Rates: When customers engage across digital and physical channels, they are more likely to make a purchase. For instance, browsing products online and trying them in-store can lead to faster buying decisions.

8. Flexibility and Adaptability: Phygital campaigns can easily adapt to trends or customer preferences. Brands can shift strategies between online and offline channels as needed, ensuring they stay relevant and responsive to customer needs.

Challenges in Phygital Marketing Implementation

While phygital marketing offers numerous opportunities for businesses to enhance consumer engagement and create seamless experiences, its successful implementation involves navigating several critical challenges. These challenges range from technological constraints to consumer adaptation issues and data security concerns. Understanding these barriers is essential for organizations aiming to fully leverage phygital strategies.

1. High Technological Costs: Implementing advanced technologies such as **artificial intelligence (AI), augmented reality (AR), virtual reality (VR), and the Internet of Things (IoT)** requires significant financial investment. Small and medium enterprises (SMEs) often face resource limitations that hinder the adoption of these technologies, placing them at a disadvantage compared to larger corporations that can afford state-of-the-art solutions. The high initial cost of infrastructure, software, and training can be a major deterrent, especially for enterprises operating on tight budgets.

2. Data Privacy and Security Risks: Phygital marketing relies heavily on collecting and analyzing consumer data to provide personalized experiences. This necessitates strict adherence to data protection regulations such as **GDPR** and **CCPA**. Additionally, cyber security threats—including data breaches and unauthorized access—pose serious risks to consumer trust. Businesses must implement robust cyber security protocols, encryption methods, and data governance practices to mitigate these risks while maintaining regulatory compliance.

3. Integration Complexity: Many businesses operate using legacy systems that are incompatible with modern digital technologies. Ensuring seamless integration between offline and online touch points can be technically challenging and resource-intensive. Organizations need to harmonize point-of-sale systems, customer relationship management platforms, and digital analytics tools to create a cohesive phygital ecosystem.

4. Consumer Resistance to Change: While younger generations readily adopt digital interactions, some segments of the population—particularly older consumers—may resist or struggle to adapt to technologically enhanced experiences. Ensuring accessibility, user-friendliness, and ease of navigation across all customer demographics is critical for successful phygital marketing.

5. Lack of Skilled Workforce: Implementing phygital strategies requires expertise in **AI, machine learning, data analytics, and digital strategy**. Many organizations face challenges in recruiting and training personnel with the technical skills necessary to design, deploy, and maintain effective phygital

initiatives. Developing in-house talent or outsourcing to specialized agencies often involves additional time and costs.

6. Measuring ROI and Effectiveness: Unlike traditional marketing approaches, phygital marketing outcomes are multidimensional and harder to quantify. Companies require advanced analytics tools to track engagement, conversion rates, and customer satisfaction across both physical and digital channels. Without accurate measurement mechanisms, assessing the **return on investment (ROI)** and effectiveness of phygital initiatives remains difficult.

7. Sustainability Concerns: The proliferation of digital devices in marketing—such as electronic kiosks, AR displays, and IoT-enabled systems—contributes to **electronic waste** and higher energy consumption. Companies need to balance technological advancements with sustainable practices to minimize environmental impact while ensuring the long-term viability of their phygital operations.

Addressing these challenges requires a **strategic approach** that combines investment in emerging technologies, regulatory compliance, workforce training, and consumer education. Organizations that effectively manage these barriers are better positioned to harness the full potential of phygital marketing.

Future Outlook and Scope

The future of phygital marketing is poised for substantial growth as technology evolves and consumer expectations shift towards **immersive, seamless, and personalized brand experiences**. Several emerging trends are expected to shape its trajectory:

1. Advancements in AI and Automation: AI and machine learning will enhance predictive analytics, automated interactions, and personalization, making phygital marketing increasingly efficient and data-driven.

2. Growth of AR and VR Applications: AR and VR technologies will enable immersive experiences such as virtual shopping assistants and 3D product visualizations, enhancing engagement across sectors.

3. Expansion of the Metaverse: As businesses explore the metaverse, phygital marketing will extend into virtual worlds, integrating digital storefronts and interactive experiences beyond physical spaces.

4. Blockchain and Digital Identity Verification: Blockchain can enhance transparency and security in phygital transactions, ensuring consumer trust and reducing fraud risks.

5. Widespread Adoption Across Industries: Beyond retail and hospitality, sectors such as healthcare, education, and real estate are expected to integrate phygital solutions, improving service delivery and customer engagement.

6. Sustainability and Ethical Considerations: Companies will need to align technological advancements with sustainable and ethical practices, minimizing environmental impact while delivering innovative experiences.

7. Hyper-Personalization and Predictive Analytics: Future phygital marketing will emphasize **real-time data-driven customization**, optimizing interactions to maximize customer engagement and satisfaction.

Conclusion

Phygital marketing is transforming brand-consumer interactions by seamlessly blending physical and digital experiences. Leveraging technologies like AI, AR, VR, IoT, and blockchain enables personalized, engaging, and efficient experiences. While challenges such as high costs, data privacy, integration issues, and skill gaps exist, businesses that address these and focus on immersive, consumer-centric strategies gain a competitive edge. By combining emerging technologies, data insights, and sustainable practices, companies can meet evolving consumer expectations, boost loyalty, and drive long-

term growth. Phygital marketing is more than a trend—it represents a fundamental shift in customer engagement for the future.

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A Study on the Benefits and Drawbacks of AI Tools in Distance Education from Learners' Perspective

Supriya Udaykumar Mogale
Shivaji University, Kolhapur

Email - supriya.mogale28@gmail.com

Contact - 8459127168

Abstract :

The rapid growth of Artificial Intelligence (AI) tools has significantly influenced the field of distance and online education. AI-based applications such as chatbots, virtual assistants, automated content delivery, and personalized learning platforms are increasingly used by learners to support their academic activities. The present study aims to examine the benefits and drawbacks of AI tools in distance education from learners' perspective. The study is based on primary data collected from 30 MBA students of the Centre for Distance and Online Education (CDOE), Shivaji University, Kolhapur. Data were collected using a structured questionnaire and analyzed using simple statistical tools such as percentages and averages. The findings reveal that AI tools help learners by improving access to learning resources, enhancing understanding of concepts, saving time, and providing flexibility in learning. However, the study also identifies certain drawbacks, including over-dependence on AI, lack of human interaction, chances of inaccurate information, and limited development of critical thinking skills. The study concludes that while AI tools offer substantial support to distance learners, their effective use requires proper guidance, ethical usage, and balanced integration with traditional teaching methods. The results of this study may help educational institutions and learners in adopting AI tools more effectively in distance education.

Keywords :

Artificial Intelligence, Distance Education, Online Learning, Learners' Perspective, MBA Students, Higher Education

1. Introduction :

Distance and online education has become an important mode of learning in higher education, especially for working professionals and students who cannot attend regular classes. With the advancement of technology, **Artificial Intelligence (AI) tools** are increasingly used in distance education to support learning activities. AI tools such as chatbots, virtual assistants, automated content generation tools, and personalized learning platforms help students in understanding concepts, completing assignments, and accessing study materials at any time.

In distance education, learners often face challenges such as limited interaction with teachers, delayed academic support, and difficulty in understanding complex subjects. AI tools help overcome some of these challenges by providing quick responses, customized learning support, and flexible access to educational resources. Due to these advantages, many distance learners depend on AI tools for their academic work.

However, the use of AI tools also has certain drawbacks. Excessive dependence on AI may reduce students' independent thinking, creativity, and problem-solving skills. There is also a risk of incorrect or misleading information provided by AI tools. Therefore, it is necessary to study both the **benefits and drawbacks of AI tools** used by distance learners.

The present study focuses on understanding the **learners' perspective** regarding the use of AI tools in distance education. The study is conducted among **MBA students of the Centre for Distance and Online Education (CDOE), Shivaji University, Kolhapur**, to analyze how AI tools support their learning and what challenges they experience while using them.

2. Objectives of the Study :

- i. To study the **benefits of AI tools** used by MBA students in distance education.
- ii. To identify the **drawbacks and limitations of AI tools** from the learners' perspective.
- iii. To understand the **overall perception of learners** towards the use of AI tools in distance education.

3. Research Methodology

The present study is based on **primary data** collected from MBA students of the **Centre for Distance and Online Education (CDOE), Shivaji University, Kolhapur.**

- i. **Research Design:** Descriptive research design was used to understand learners' opinions regarding AI tools.
- ii. **Sample Size:** The sample consists of **30 MBA students** studying under distance and online mode.
- iii. **Sampling Method:** Convenience sampling method was adopted for selecting respondents.
- iv. **Data Collection Method:** Primary data were collected using a **structured questionnaire** containing simple and relevant questions related to the use of AI tools in learning.
- v. **Tools for Data Analysis:** The collected data were analyzed using **simple statistical techniques** such as percentages and averages.
- vi. **Scope of the Study:** The study is limited to MBA students of CDOE, Shivaji University, Kolhapur, and focuses only on learners' views regarding AI tools.

4. Limitations of the Study :

The study is limited to 30 MBA students of the Centre for Distance and Online Education, Shivaji University, Kolhapur. It is based only on learners' self-reported responses, which may involve personal bias, and does not include the views of teachers or other stakeholders.

5. Data Analysis, Observation and Interpretation :

Data analysis is an important part of research as it helps in understanding, interpreting, and drawing meaningful conclusions from the collected data. In the present study, primary data collected from MBA students of the Centre for Distance and Online Education, Shivaji University, Kolhapur, has been systematically analyzed to examine learners' perceptions regarding the benefits and drawbacks of AI tools in distance education. The responses obtained through the structured questionnaire were classified, tabulated, and analyzed using simple statistical tools such as percentages and averages. The analysis helps in presenting the opinions of learners in a clear and meaningful manner.

5.1 Table 1: Awareness and Usage of AI Tools

It presents the awareness and usage of AI tools among MBA distance learners. It shows whether students are aware of AI tools used in education and whether they have used such tools for learning purposes. This table helps in understanding the basic exposure of learners to AI tools.

Particulars	No. of Students	Percentage
Aware of AI tools	22	73%
Not aware of AI tools	8	27%
Have used AI tools for learning	21	70%
Have not used AI tools	9	30%

Observation : The data shows that a majority of MBA distance learners are aware of AI tools used in education. Out of 30 respondents, nearly three-fourths of the students have basic knowledge of AI tools such as ChatGPT, Gemini AI, Canva, and other AI-based learning applications. A similar number of students have also actually used these tools for academic purposes like understanding concepts, preparing assignments, and gaining quick information.

Interpretation : This indicates that AI tools are widely recognized but not universally adopted among distance learners. Awareness does not always translate into active usage. Factors such as digital literacy, confidence in technology, and personal learning habits influence the adoption of AI tools. Educational institutions need to provide orientation and basic training to ensure inclusive use of AI tools for all learners.

5.2 Table 2: Frequency of Use of AI Tools

It shows the frequency of use of AI tools by MBA distance learners. It explains how often students use AI tools such as daily, weekly, monthly, rarely, or never. This table helps in understanding the level of dependence of learners on AI tools for their studies.

Frequency of Use	No. of Students	Percentage
Daily	9	30%
Weekly	5	17%
Monthly	3	10%
Rarely	9	30%
Never	4	13%
Total	30	100%

Observation : The responses show a mixed pattern in the frequency of AI tool usage. A significant portion of students use AI tools daily or weekly, mainly for doubt-solving, concept clarification, and quick summaries. At the same time, an equal number of students use AI tools rarely or never.

This variation reflects differences in learners' dependence on technology. Regular users are mostly working professionals and students who prefer flexible and fast learning support, while occasional users rely more on traditional study materials.

Interpretation : The findings suggest that AI tools are considered **supportive rather than compulsory** by many learners. Distance education students use AI tools based on need, not as a full replacement for textbooks or teachers. This balanced usage pattern shows that AI tools are currently acting as **assistive learning aids**, not dominant learning systems.

5.3 Table 3: Perception of Benefits of AI Tools

It presents the perception of MBA distance learners regarding the benefits of AI tools in learning. It highlights students' opinions on how AI tools help in understanding subjects, personalized learning, motivation, skill development, and time-saving. This table helps to analyze the positive impact of AI tools on distance education.

Statement	Agree (%)
AI tools help in understanding difficult topics	67%
AI tools support personalized learning	63%
AI tools increase learning motivation	53%
AI tools improve career-related skills	57%
AI tools save time and provide quick support	70%

Observation : A majority of respondents agree that AI tools help them understand difficult subjects more effectively. Students have reported that AI tools explain topics in simple language, provide examples, and allow repeated questioning without hesitation. Many learners also feel that AI tools support personalized learning, allowing them to study at their own pace and convenience.

Another strong observation is that AI tools save time by providing instant feedback, summaries, and ready-to-use content. However, fewer students strongly agree that AI tools increase motivation, indicating that while AI helps academically, motivation still depends on personal discipline.

Interpretation : These observations clearly show that AI tools are highly beneficial for distance learners, especially in self-learning environments. The ability to learn anytime and anywhere aligns perfectly with the nature of distance education. However, motivation and discipline remain internal factors that AI tools alone cannot fully control. Hence, AI acts as a learning enabler, not a motivator by itself.

5.4 Table 4: Perception of Drawbacks of AI Tools

It shows the perception of MBA distance learners regarding the drawbacks of AI tools. It highlights learners' opinions about issues such as technical problems, reduced interaction with teachers and peers, distraction, and lack of digital skills. This table helps in understanding the challenges faced by learners while using AI tools.

Statement	Agree (%)
AI tools create technical problems	47%
Reduce interaction with teachers/peers	60%
Cause distraction	43%
Require high digital skills	40%

Observation : The most significant drawback identified by students is the reduction in personal interaction with teachers and peers. Many respondents feel that excessive use of AI tools limits discussions, guidance, and emotional support that human interaction provides.

Some students also reported issues like technical errors, distraction, and difficulty in using advanced AI tools due to lack of digital skills. However, fewer students strongly agreed that AI tools are highly distracting, suggesting that distraction depends on individual usage behavior.

Interpretation : These results indicate that AI tools, while efficient, **cannot replace human mentoring and classroom interaction**. Distance learners still value teacher guidance and peer learning. Technical and skill-related challenges highlight the need for **digital literacy programs** and structured guidance on responsible AI usage.

5.5 Table 5: Most Preferred AI Tools

It shows the most preferred AI tools used by MBA distance learners for their studies. It highlights the AI tools commonly used by students for understanding concepts, preparing assignments, and creating presentations. This table helps in identifying the popular AI tools among learners.

AI Tool	Usage Trend
ChatGPT	Highly preferred
Gemini AI	Moderately preferred
Canva / Gamma AI	Used for presentations & visuals

Observation : ChatGPT is the most widely used AI tool among students, followed by Gemini AI and Canva. Students prefer ChatGPT because it provides quick, simple, and detailed explanations. Canva and Gamma AI are mainly used for presentations and visual learning. Students have also expressed that AI tools help overcome language barriers and allow learning in a stress-free environment.

Interpretation : The preference for conversational AI tools shows that learners seek clarity, simplicity, and instant support. Visual tools are supplementary and task-specific. This trend suggests that future distance education models should integrate AI-powered academic support systems officially within learning platforms.

Overall Findings from Data Analysis

- i. Majority of learners are **aware and users of AI tools**
- ii. AI tools help in **easy understanding, saving time, and flexible learning**
- iii. Over-dependence and **reduced human interaction** are major concerns
- iv. Students suggest **responsible and guided use** of AI tools
- v. AI tools are seen as supportive, **not a replacement for teachers**

6. Findings of the Study

- i. The majority of MBA distance learners are aware of AI tools and have used them for academic purposes.
- ii. AI tools are mainly used for understanding difficult topics, preparing assignments, and getting quick information.
- iii. ChatGPT is the most commonly used AI tool among students, followed by Gemini AI and Canva.
- iv. Most learners agree that AI tools save time by providing instant explanations, summaries, and feedback.
- v. AI tools support personalized learning and help learners study at their own pace.
- vi. Many students believe that AI tools improve their learning efficiency and support career-related skill development.
- vii. A major drawback identified is the reduction in interaction with teachers and peers.
- viii. Some learners face technical issues and lack sufficient digital skills to use AI tools effectively.
- ix. Over-dependence on AI tools may affect independent thinking and critical analysis skills.
- x. Overall, learners have a positive attitude towards AI tools but prefer balanced use along with teacher guidance.

7. Suggestions

- i. Distance education institutions should provide **basic training and orientation programs** on the effective and ethical use of AI tools.
- ii. AI tools should be used as **supporting learning aids**, not as substitutes for teachers.
- iii. Teachers should guide students on how to verify AI-generated information.
- iv. Institutions can integrate approved AI tools within official learning platforms for better academic support.
- v. Efforts should be made to improve **digital literacy** among learners, especially those from non-technical backgrounds.
- vi. Human interaction through online discussions, webinars, and mentoring sessions should be strengthened.
- vii. Clear policies should be framed regarding ethical use of AI tools in assignments and examinations.
- viii. AI tools should be designed to support multilingual learning to overcome language barriers.

8. Conclusion

Artificial Intelligence tools have emerged as valuable support systems in distance and online education. The present study, conducted among MBA students of the Centre for Distance and Online Education, Shivaji University, Kolhapur, reveals that AI tools provide significant benefits such as easy understanding of concepts, time-saving, personalized learning, and flexible access to educational resources. At the same time, the study highlights certain drawbacks, including reduced human interaction, technical challenges, and the risk of over-dependence.

The study concludes that AI tools should be **used wisely and responsibly**, under proper guidance, to enhance learning outcomes in distance education. A balanced integration of AI tools with traditional teaching methods can help institutions improve the quality of distance education while maintaining academic integrity and human involvement.

9. Scope for Future Study :

Future research can be conducted with a larger sample size across multiple universities and may include teachers' perspectives. Further studies can also examine the impact of AI tools on academic performance and learning outcomes in distance education.

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IMPACT OF RAPID URBANIZATION ON MENTAL HEALTH

Dr. VIJAY RAMCHANDRA PATIL

Assistant Professor, Department of Sociology at D. D. Shinde Sarkar College, Kolhapur (Maharashtra)

E-mail - vpatil255@yahoo.com

vrpatil661@gmail.com

Abstract

Stress is a commonly used term, typically understood as feeling overwhelmed or being unable to cope with mental or emotional pressure (Mental Health Foundation, 2021). There are two types of stressors that activate the stress response, physical and psychological. Physical stressors like chronic illness or pain put strain on the body, while psychological stressors like emotional or mental distress are considered negative or threatening experiences (Centre for Studies on Human Stress, 2019). The relationship between stress and mental illness is complex because the susceptibility to stress varies from person to person (Salleh, 2008). For children living in urban environments, the prolonged stress of urban living can be detrimental to their development. Numerous animal and human studies have shown that children are particularly sensitive to stress as they undergo important age-related changes.

Stress and Urban Living

Living in an urban environment has been repeatedly established as a risk factor for developing psychiatric disorders and to the increase in incidences of schizophrenia (Kelly et al., 2010). Urban living is associated with chronic stress from more demanding and stressful social environments, environmental stressors like overcrowding, and greater social disparities (Lederbogen et al., 2011). Environmental stressors associated with city living like “street exposure” to busy, noisy urban environments, high population density, crime exposure, and victimization can be attributed with increased risk for psychiatric disorders (Freeman et al., 2014; Kirkbride et al., 2012; Newbury et al., 2017). Chronic exposure to environments that evoke feelings of threat and lack of safety affect the structure, function. During critical periods of development, continuous exposure to these stressors can negatively impact neural circuitry related to fear conditioning, threat detection, identification, and learned fear (McLaughlin et al., 2014; Johansen et al., 2011).

Discrepancy :

Discrepancy describes environments that foster a sense of social exclusion, isolation, or lack of belonging (Vargas et al., 2020). Social, political, and economic structural factors have contributed to racial, ethnic, and class division, as well as social and economic disadvantage (Hutson et al., 2012). Studies have found associations between psychosis incidence and income inequality, ethnic density, and social fragmentation. Rapid urbanization caused by violence and forced displacement have contributed to growing income disparity, isolation, poverty, and discrimination, as people migrate to cities for better opportunities and to start new lives (López-Jaramillo et al., 2017; Robertson and Szabo, 2017). Income inequality represents the variation in income distribution within a neighbourhood with high income inequality meaning heterogeneity across incomes, and low-income inequality having a relatively homogenous income distribution. social fragmentation leads to experiences of social isolation, resulting in feelings of lack of trust and belonging, along with reduced social support.

Deprivation :

Deprivation is defined as environments that have a lack of the necessary stimuli for brain health and normative maturation including lack of resources with regards to employment, income, education,

health, living conditions, and barriers to housing and services (Vargas et al., 2020). While exposure to resource lacking environments has been associated with many negative health incomes, high deprivation has been specifically linked to increased risk for developing a psychotic disorder (Kirkbride et al., 2012).

Stress and Depression :

Major Depressive Disorder (MDD) is one of the most common mental disorders with symptoms that negatively affect how one feels, thinks, and acts. Depression causes feelings of sadness, loss of interest, motivation, and a variety of other emotional and physical problems that decrease one's ability to function (National Institute for Mental Health, 2018). Current research suggests that the onset of depression is caused by a combination of genetic, biological, environmental, and psychological factors (National Institute for Mental Health, 2018).

Stress, Schizophrenia, and Other Psychoses :

Schizophrenia affects 20 million people worldwide, and typically begins in late adolescence or early adulthood. Psychoses, including schizophrenia, are characterized by distorted thinking, perceptions, emotions, language, sense of self, and behaviour. Risk factors for developing a psychotic disorder include genetic and biological pre-existing vulnerabilities. The association between stress and psychosis may be a consequence of underlying vulnerability from stress sensitization. Stress sensitization refers to the increased emotional and psychotic response to stress (van Winkel et al., 2008).

Urbanization and its Implications

The rapid expansion of urban environments is causing a major shift in the economy, ecology, and the health of city residents. By the year 2050, it is estimated that 69% of the global population will live in urban areas (United Nations, 2012). Urbanization is characterized by the demographic shift where people, most notably young people, migrate from rural areas to more urban areas (Okkels et al., 2018). Thus, both the physical and mental health of city residents will be affected by exposure to the aforementioned physical features as well as changes in social interaction and physical activity (Lederbogen et al., 2013). Urbanization is associated with growth, socioeconomic transformation, and increased wealth, with urban environments generally having better access to education, health care, and higher rates of employment. Cities offer a wide range of opportunities but they are also places of increased access to drugs, crime, violence, poverty, homelessness, and isolation. Urbanization in its current form is highly unsustainable and closely related to many of the world's major problems. Cities thus pose as unique landscapes for challenges, especially psychological challenges, not found in other environments.

Historically, urbanization has been related to positive economic development and health outcomes. It was a process that started in North America and Western Europe, but is now mainly occurring in developing nations (Lederbogen et al., 2011). The challenges surrounding urbanization include rising inequalities, insecurity, and housing issues. There is an increasing number of people living in informal housing settlements or slums, which are characterized by nondurable or overcrowded housing that lack access to basic needs like water, sanitation, and security against eviction (Okkels et al., 2018). People living in poor urban areas statistically have worse mental and physical health, presenting a challenge to sustainable development and access to basic urban services. Related to mental health, informal settlements also present high levels of stress exposure from increased violence, drug trafficking, and extreme poverty. Land dispossession is further exacerbated by climate disasters like submerging islands, desertification, raging fires, soil erosion, hurricanes, ocean acidification, pollution, and strip mining, that are resulting in the fastest growing displacement (Walia, 2021). Without proper

infrastructure and governmental programs addressing public health issues, the rapid urbanization occurring from mass displacement will have increasingly negative consequences (Okkels et al., 2017).

Meta-analytic studies have repeatedly observed the association between living in urban environments and increased psychological distress, along with risk for mental illness including anxiety, depression, and psychosis (Vargas et al., 2020). A meta-analysis published in 2010 concluded that occurrence of mental illness is 38% higher in cities (Peen et al. 2010). Although living in urban vs rural environments is established as a risk factor for mental illness, epidemiological evidence is inclusive (Lecic-Tosevski, 2019). Findings have varied considerably depending on the city or country examined. Most studies on urban mental health as well as mental health research comes from high income countries. Thus, a vast majority of studies on prevalence of mental disorders are published in Europe and North America where trends indicate increased risk for developing mental disorders for people born and raised in urban environments. Several studies have actually reported higher occurrences of certain mental illnesses in rural areas compared to urban areas (Breslau et al., 2014). Therefore, findings from high income countries cannot be generalized and more research needs to be conducted in low-and middle-income countries where most of the urbanization is occurring today.

Initiatives in Urban Mental Health

Despite increasing urbanization and the growing number of people with mental health issues living in cities, there is no specific plan that clearly addresses the issues and needs of urban mental health, or strategies in place to improve and promote the health of city residents. Addressing needs like urban planning and city design, homelessness, and access to green and blue space are all solutions that could improve urban mental health (Okkels et al., 2018). Mental health issues have a large range of onset and symptomatology, and urban design can play a role in prevention, support, and promotion of health and wellbeing. With the growth of city populations, increase of people living with mental illness, and general risk factors city living poses for mental illness, the link between urban design and mental health is an important consideration for healthier cities. Today it includes policymakers, architects, urban planners, and engineers to name a few, in order to address the growing need for urban mental health interventions that support, improve, and prevent mental health and well-being through the built environment (McCay et al., 2017).

Additionally, urban planning and urban design can help combat the rapid and unplanned urban growth that leads to informal settlements and slums as these conditions are associated with worse mental health outcomes, extreme poverty, violence, and drug abuse. Urban planning deals with how and where houses, roads, institutions, parks, and sidewalks are built, as well as public transportation, access to green space, and opportunities for physical activity and social interaction. How an urban environment is planned can either promote or complicate one's health. As cities continue to grow, urban designers should keep in mind the four themes that provide a framework for better mental health: green, active, prosocial, and safe spaces (McCay et al., 2017). Proper urban design and planning combat stimulation from lack of safety, discrepancy associated with lack of belonging, and deprivation from a lack of resources that urban environments produce. Whether it be creating spaces where people feel safe and confident, reducing noise to improve sleeping, facilitating access to nature, promoting social interactions, or reducing stress from commuting, designing urban environments is essential for encouraging better health outcomes (McCay et al., 2017).

Homelessness is a growing problem accompanying urbanization linked to many causes like gentrification and rising rent, deinstitutionalization, worsening inequality, and the deterioration of social

networks and safety nets (Okkels et al., 2018). Although it remains mostly an urban phenomenon, the influence of capitalism continues to increase income disparity, poverty, and the number of people who are homeless. The disparity between earned income, housing costs, and lack of affordable housing has priced many out of the rental market and into homelessness (Tsemberis et al., 2017). For individuals with severe psychiatric disorders, the rising rent has resulted in a disproportionate increase in homelessness as they are at risk for remaining homeless for months or years compared to those facing homelessness due to economic or personal crises (Culhane et al., 2002).

Conclusion :

Urbanization is causing a demographic and cultural shift to the landscape of cities across the globe. Urban living can be advantageous for education, work, social communication and acceptance, health services, and culture. It is a chance for both individual and societal growth. However, while there are many benefits to urban living, it can also be a threat to mental health and wellbeing. Recent trends indicate that city environments are connected to the prevalence and severity of mental illnesses. Environmental stressors like lack of green space, homelessness, high rates of crime and violence, and easier access to drugs can cause chronic stress, which is a major risk factor for several neuropsychiatric disorders including depression and schizophrenia. On a positive note, the city may offer opportunities for the prevention and treatment of mental illness that rural areas cannot. However, the increasing number of psychiatric patients does pose a challenge to community mental health services, especially in low-and middle-income countries. In these locations with the steepest increase of urbanization, the current mental health services are not prepared to support the increase in mental disorders. Overall, there is much to consider regarding city landscapes and mental health as urbanization continues to rise around the world. However, with the cooperation of city makers it is possible to address the needs that have arisen due to the rise of urbanization to combat the stress of city living and reduce the burden of mental illness.

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HEALTH AND ECONOMIC DEVELOPMENT : A CASE STUDY OF INDIA*Author*

Mr. Vijay Anandrao Kankekar
Research Scholar, Department of Economics
Shivaji University Kolhapur
Mob-8208725857
Gmail vijaykankekar1995@gmail.com

Dr Amar Raju Jadhav
D. R. MANE COLLEGE, KAGAL
Mob. 8390213245, 9373890704

ABSTRACT:

I have mentioned the topic in one in every of my article on how the impacts of health on economic development. Here I've in particular mentioned approximately the function of health in monetary development and how it's far vast and additionally the significance of health in step with the world fitness corporation has been explained. The existing health in India defined. The nature of health in is Indian's economic development has also been determined and remedied. Health care of monetary development in India at gift is likewise defined. Ultimately a Bibliography is furnished in related to my article to complement it.

KEYWORDS : Role of Health in Economic Development, Recent Health status in India, Current status and potential in the Health care sector and Economic Development, Conclusion and so all..

INTRODUCTION:

In the early 1990s, economists started to emphasize the importance of human capital in determining growth and productivity. Since then, the importance of health and education in economic growth has received much attention (both theoretical and empirical), and a strong consensus has emerged in the last decade that human capital accumulation is an important determinant of economic growth. Health has a great significance from economic point of view. Healthy population is an asset for an economy while ill and aged population is a burden. From the point of view of an individual, health performs dual functions. On the one hand, good health represents a value of its own target that needs to be reached as closely as possible. On the other hand, there are other aims in life as well such as good health gives good income in labour market. In a developing economy like India, human capital can play a significant role in lifting people out of poverty and enabling them to lead a healthy and productive life. In statistical analysis revealed that, whether the nation is developed, developing or under developing there are strongly positive correlation between health expenditure and GDP. Meaning of Health: WHO constitution (1948) A state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity. Meaning of Economic Development: Meets the needs of the present compromising the ability of future generation to meet their own need.

The development of human capital, or a population's knowledge, skills, and abilities, is then aided by health and education. A workforce that is healthy and well-educated is more productive and flexible, both of which are critical for economic expansion. With both public and private sectors, India's healthcare system is a complex and varied network that provides a wide range of medical services to the 1.4 billion people living in the country. Now as the Supreme Court ordered that deliberates on standardizing medical procedure rates across government and private sectors, affordability remains a key consideration. However, imposing one-size-fits-all price caps could severely undermine healthcare quality. A study from the Health Care Management Review indicates that hospitals under financial

pressure from price caps report a 15% increase in patient dissatisfaction and rising health disparities and uneven access to medical services, the need for equitable and sustainable healthcare policies has never been more urgent. Ongoing discussions about setting rates for medical services are not merely bureaucratic exercises but they fundamentally shape how we perceive, access, and deliver healthcare across India.

OBJECTIVES OF THE STUDY:

- a) To study the health situation in India.
- b) To study the impact of health on economic development in India.
- c) To research the contribution of health to India's economic growth.
- d) To study the Current Health status in India.
- e) To study the Current status and potential in the Health care sector and Economic Development.

METHODOLOGY:

The fundamental applies health economics theories, concepts, and tools to the challenges and problems facing the healthcare industry. Tries to ascertain the most effective way to use the few resources at hand in order to achieve the intended health outcomes for society.

EXPLANATION:

It views health as a critical component of human capital and, as such, an essential component of economic expansion. Understanding health in a broad sense is essential to explaining the connection between economic growth and health. In addition to the absence of disease, health refers to a person's capacity to reach their full potential throughout their lifetime. It's an asset that people own that has both intrinsic and instrumental value. In practical terms, there are several ways that health influences economic growth. For instance Employees in better health are more robust and energetic both mentally and physically. They make more money and are more productive. Additionally, they are less likely to miss work.

Despite being primarily based on national income, health expenditures are rising more quickly than income, according to the WHO Commission on Macroeconomics and Health¹¹ for a panel of 167 countries. It is evident how development is impacted by health. Long-term growth is more difficult to attain in nations with poor health and educational systems. A 10% increase in life expectancy at birth is, in fact, linked to an annual increase in economic growth of about 0.3 to 0.4 percentage points, according to economic data. Institutional performance is also hampered by disease. Reduced life expectancy reduces productivity and deters adult training. In a similar vein, the rise of fatal infectious diseases has impeded the growth of industries like tourism, which are vital to so many nations.

ROLE OF HEALTH IN ECONOMIC DEVELOPMENT:

Economic development has both causes and effects on health. It is acknowledged that funding health care is a key component of economic growth. Significantly better health outcomes are necessary if developing nations are to escape the cycle of poverty, as demonstrated by the World Health Organization's (WHO) Commission on Macroeconomics and Health. Development is influenced by good health in several ways:

- 1) Increased productivity of employees: Healthier labors are more productive, earn higher wages, and neglect fewer days of work than those who are ill. This increases output, increases turnover in the workforce, and increases enterprise profitability and agricultural production.

- 2) Increased rates of both foreign and domestic investment: Increased labor productivity creates incentives for investment. Besides, controlling endemic and epidemic diseases, such as HIV/AIDS, is likely to encourage foreign investment, both by increasing growth opportunities for them and by reducing health risks for their personnel.
- 3) Improved human capital: Healthy children have better cognitive potential. As health improves, rates of absenteeism and early school drop-outs fall, and children learn better, leading to growth in the human capital base.
- 4) Higher rates of national savings: Healthy people have more resources to assign to savings. These savings in turn provide funds for capital investment.
- 5) Changes in the population: Improvements in both health and education contribute to lower rates of fertility and mortality. After a delay, fertility falls faster than mortality, slowing population growth and reducing the “dependency ratio” (the ratio of active workers to dependents). This “demographic dividend” has been shown to be an important source of growth in per capita income for low-income countries.
- 6) Improved Utilization of Natural Resources: Health investment contributes to better deployment of economic resources of a nation. Many developing economies waste huge sum of money on treatment of various diseases rather than their prevention. This leads to wastage of resources. Eradication of diseases also enhances labor productivity. The investment made in treating disease can be diverted to other productive uses.
- 7) Multiplier Effect of Health Expenditure Extending to Next Generation: Good health at the initial stage of life, i.e. among children from 1-6 years of age is a pre-requisite for future development of these children. A child who is physically and mentally fit at the age of 5 or 6 years is more likely to enroll for school and will develop a strong foundation through active learning and regularity in class. Again it is a well-established fact that a healthy and educated individual certainly generates more income than an uneducated individual, thereby making contribution to the national income of the nation.
- 8) Long run Reduction in Cost of Medical Care: Spending in healthcare for short run prevents and reduces the incidences of diseases in long run and results in giant savings in treatment costs. The expenditure pays for some diseases even when all the indirect benefits such as higher labour productivity, reduced pain and suffering are ignored for example Polio. In America prior to the eradication of polio showed that investing \$220 million over 15 years to eliminate the disease would prevent 22,000 cases and save between \$320 million to \$1.3 billion in annual treatment costs. In addition to their beneficial macro-economic impact, health improvements have intergenerational spill-over effects that are clearly shown in microeconomic activities, not least in the household itself. The “demographic dividend” is particularly important for the poor as they tend to have more children, and less to “invest” in the education and health of each child. With the spread of better health care and education, family size declines. Children are more likely to escape the cognitive and physical consequences of childhood diseases and to do better in school. These children are less likely to suffer disability and impairment in later life and so are less likely to face catastrophic medical expenses and more likely to achieve their earning potential. Then, as healthy adults, they have more resources to invest in the care, health and education of their own children.

RECENT HEALTH STATUS IN INDIA

I. Growing Acceptance of Telemedicine:

India has seen a growing acceptance of telemedicine post the pandemic. The telemedicine market in India was almost 830 million U.S. dollars in 2022 and is expected to grow at a CAGR of 24% from 2023 to 2030. The drive to increase the availability of affordable internet and mobile connectivity has made

it easier for patients to consult with doctors online. The use of AI and machine learning for medical data are helping to improve patient outcomes and increase access to care, while also reducing costs. This will be especially beneficial in rural and remote areas, where access to healthcare is often limited. In addition, telemedicine can also help reduce the burden on India's already strained healthcare system by providing quicker and more efficient access to medical care.

II. Proliferation of Remote Monitoring tools:

The patient monitoring market in India is expected to grow at a CAGR of 9.39% over the next five years. Remote monitoring tools are becoming increasingly popular in India as more and more people seek ways to improve their health and wellness. With these tools, patients can take a proactive role in their healthcare and receive timely interventions when necessary. Some of the most popular remote monitoring tools today include fitness trackers, blood pressure monitors, heart rate monitors, and glucometers. The patient can wear these devices or place them in their home, transmitting data to the healthcare provider regularly. This data can then be used to identify trends and make necessary changes to the care plan.

III. Diagnostics for Transformation:

The Indian transformational diagnostic market is expected to grow at a CAGR of 7.12% till 2025. Transformational diagnostics are pivotal in population health management, as they can help identify individuals at risk for certain diseases and conditions. Some of the most promising transformational diagnostic tests that played a crucial role during the pandemic include genomic sequencing, next-generation sequencing, whole-genome sequencing, and RNA-based tests. These tests have the potential to revolutionize healthcare in India and will continue to transform the healthcare industry by providing more accurate and timely information about diseases and conditions.

IV. The Rise of Healthcare SAAS

Healthcare software as a service (SAAS) has become an increasingly popular solution for healthcare organizations looking to improve their efficiency and quality of care. Healthcare providers need solutions to store electronic health records and population health management data. SAAS based solutions help healthcare providers manage patient medical records, appointments, and billing information. As healthcare organizations turn towards trusted-third party software providers to focus on patient care, the Indian healthcare SAAS industry is expected to increase at a CAGR of 19.5% and reach \$50 billion by 2028.

V. Expansion and Diversification

The Indian healthcare industry is expected to reach a valuation of USD 132 billion by 2023 growing at a CAGR of 16-17%. The sector needs to be more cohesive, with many small and medium-sized startups. In such a scenario, mergers and acquisitions (M&A) are expected to play a vital role in the growth and consolidation of the sector. Some of the key areas where M&A activity is expected to increase include expansion into new geographies, entering into new segments (senior care, wellness, and preventive care), and increasing focus on specialty care, promoting digital health, and consolidating the hospitals into healthcare chains.

ECONOMIC CURRENT STATUS:

- I. **Public Expenditure:** According to the Economic Survey 2022-23, India's public expenditure on healthcare reached 2.1% of Gross Domestic Product (GDP) in FY23 and 2.2% in FY22, up from

- 1.6% in FY21. Generating Employment: As of 2024, the healthcare sector is one of India's largest employers, with a workforce of 7.5 million people.
- II. **Broader Market:** The Indian healthcare market, valued at USD 110 billion in 2016, is projected to reach USD 638 billion by 2025.
 - III. **Medical Tourism:** India's healthcare sector has emerged as a global destination for medical tourism, attracting patients from around the world due to its skilled medical professionals, advanced healthcare facilities, and cost-effective treatments. The number of medical tourists visiting India is projected to be around 7.3 million in 2024, up from 6.1 million estimated in 2023. Potential:
 - IV. **AI-driven Employment:** A recent research report forecasts that the integration of Artificial Intelligence (AI) in the Indian healthcare sector will generate nearly 3 million new jobs by 2028.
 - V. **Telemedicine Market:** It has the maximum potential E-Health segment in India, which is expected to touch \$5.4 Bn by 2025, growing at a Compound Annual Growth Rate (CAGR) of 31%.
 - VI. **Human Resource:** India possesses a significant number of doctors, nurses, specialists, and other healthcare professionals who help make India a critical healthcare provider.
 - VII. **Credit Incentive:** The Indian government is planning to introduce a credit incentive programmer worth Rs. 50,000 crore (USD 6.8 billion) to boost the country's healthcare infrastructure.

SIGNIFICANCE AND CHALLENGES IN HEALTH CARE SERVICES AND ECONOMIC DEVELOPMENT OF INDIA

With both public and private sectors, India's healthcare system is a complex and varied network that provides a wide range of medical services to the 1.4 billion people living in the country. Affordability continues to be a crucial factor as the Supreme Court considers standardizing medical procedure costs across the public and private sectors. However, enforcing universal price caps may seriously compromise the quality of healthcare. According to a study published in the Health Care Management Review, hospitals that are facing financial strain due to price caps report a 15% rise in patient discontent. There has never been a more pressing need for sustainable and equitable healthcare policies due to growing health disparities and unequal access to medical care. Continuous debates over medical service pricing are more than just formalities; they have a significant impact on how people in India view, obtain, and provide healthcare.

- I. **Lack of Infrastructure:** India has been struggling with deficient infrastructure in the form of lack of well-equipped medical institutes. The government mandated that private medical colleges must be built on at least five acres of land hence, they were built in rural areas, where there was a lack of adequately qualified, full-time doctors due to living conditions, besides low pay scales. The National Medical Commission (NMC) has put forward the idea to do away with the requirement of minimum five acres of land.
- II. **Shortage of Efficient and Trained Manpower:** There is a severe shortage of trained manpower, this includes doctors, nurses, paramedics and primary healthcare workers. The doctor-to-patient ratio remains low, which is merely 0.7 doctors per 1,000 people whereas the World Health Organization (WHO) average is 2.5 doctors per 1,000 people. Population Density and Demographics: The sheer size and diversity of the population pose unique challenges in providing healthcare services to all. Aging population and the associated increase in chronic diseases add to the healthcare burden.
- III. **High out-of-pocket Expenditure:** While public hospitals offer free health services, these facilities are understaffed, poorly equipped, and located mainly in urban areas leaving no

alternatives but to access private institutions and incurring high out-of-pocket expenses in healthcare.

- IV. **Disease Burden:** High prevalence of communicable diseases (such as tuberculosis) and the increasing burden of non-communicable diseases (like diabetes, cardiovascular diseases) pose a dual challenge. Every year, roughly 5.8 million Indians die from heart and lung diseases, stroke, cancer and diabetes.
- V. **Lack of Diagnostic Services:** The penetration of diagnostic services in India is mainly concentrated around metros and big cities. Shortage of hygiene infrastructure, lack of awareness, limited access to facilities, lack of trained medical personnel, dearth of medicines and good doctors are the challenges faced by more than 70 percent of India's population living in rural areas.
- VI. **Public-Private Partnership Issues:** Challenges in fostering effective collaboration between the public and private sectors in healthcare. Ensuring that the private healthcare sector serves the larger public health goals.

RECENT ECONOMIC DEVELOPMENT IN INDIA'S HEALTHCARE SECTOR.

- I. **Accessibility to Remote Areas:** India's healthcare system aims to provide accessible and affordable healthcare services to those residing in remote and rural areas. Examples include the establishment of Primary Healthcare Centers (PHCs), Community Health Centers (CHCs) and the National Rural Health Mission (NRHM) to strengthen rural healthcare infrastructure.
- II. **Tackling Non-Communicable Diseases:** The National Programmed for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases, and Stroke (NPCDCS) was launched to address the issues of non-communicable diseases (NCDs) such as diabetes, cardiovascular diseases, and cancer.
- III. **Health of Mothers and Children:** Initiatives like the Janani Suraksha Yojana (JSY) and the Integrated Child Development Services (ICDS) have been implemented to improve maternal and child health outcomes, reduce infant and maternal mortality rates, and promote institutional deliveries.
- IV. **Pharmaceutical Sector:** India is a major producer and exporter of generic medications, contributing significantly to the global supply of affordable medicines.
- V. **Traditional Medicine Systems:** India has a rich heritage of traditional medicine systems like Ayurveda, Yoga, Unani, Siddha, and Homeopathy. The ministry of AYUSH promotes and regulates these systems, ensuring their integration into the mainstream healthcare system.
- VI. **Urban-Rural Inequalities and Inadequate Infrastructure:** Although over 75% of healthcare professionals are concentrated in metropolitan areas, which comprise just 27% of the population, the shortage of medical professionals is particularly severe in rural regions. According to the National Health Profile of 2021, India has 0.6 beds per 1000 population. Urban regions typically have better infrastructure, skilled professionals, and specialized care compared to rural areas.
- VII. **Lack of Medical Professionals:** According to WHO data, there are only 0.8 doctors per 1,000 people in India, falling short of the recommended ratio of 1 doctor per 1000. The government says there was a nearly 80% shortage of surgeons, physicians, gynecologists and pediatricians at community health centers in rural India as of March 2022.
- VIII. **Inadequate Finance for Public Health:** The lack of financial protection for individuals seeking healthcare services results in out-of-pocket expenditure accounting for over 60% of healthcare costs in India. With limited health insurance coverage, many delay or avoid treatments, leading to further health complications and issues. The latest NFHS-5 report indicates that the average

out-of-pocket expenditure per delivery in a public health facility is Rs. 2,916. In urban areas, this cost is Rs. 3,385, while in rural areas, it stands at Rs. 2,770 India's public expenditure on healthcare is only 2.1% of GDP in 2021-22 while Japan, Canada and France spend about 10% of their GDP

- IX. **The Increasing Disease Burden:** NCDs have seen a swift global rise, emerging as a primary cause of disability, morbidity, and mortality and they contributed to approximately 41 million deaths worldwide, representing nearly three-quarters of all fatalities.
- X. **Insufficient Mental Health Services:** India faces a shortage of mental health professionals per capita, which is among the lowest in the world and the government allocates minimal funding to mental health services.

CONCLUSION

Encouraging innovation and providing equal access to high-quality healthcare are essential if India is to become a global leader in healthcare. Prioritizing each person's well-being is crucial. Although there is ample evidence of a positive cross-country relationship between economic growth and health, the underlying mechanisms are intricate and challenging to identify. There are three main concerns. First, it is difficult to empirically evaluate and separate the causal relationship between economic growth and health. Second, the relation between health and economic growth changes over the process of economic development. Third, different dimensions of health (mortality vs. morbidity, children's and women's health, and health at older ages) may have different economic effects.

The process of economic growth as well as the major macro-economic policies depends largely on the key growth sectors in the economy. The inter linkages of sectors are particularly important as policy impetus for the growth of a high linked sector can automatically impact the interlinked sectors through both forward and backward linkages and can improve the growth prospectus manifolds. The State Government is actively taking initiative in obtaining accurate and reliable data, keeping record of infrastructure, amenities, education, health etc. This act as an important catalyst for enhancing public participation thus strengthening 'SabkaSaath, SabkaVikas' or 'Collective Efforts, Inclusive Growth'. Thus, this increases the overall growth rate in multi-dimensional prospects and different process individually. SDG's initiatives resulted in major changes in social and institutional areas. SDG ensures removal of poverty and removal of inequality and is gradually erasing all its influence on the State which creates barriers of growth and development within the State and country.

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Humanism, Diaspora, and Nation-Building: Indian English Literature and *Swades* as Converging Routes for National Growth

Dr. Shantanu Shivajirao Patil,

Assistant Professor in English, Department of Nanoscience,
Shivaji University, Kolhapur (MS)

E-mail: patilshantanu0066@gmail.com

Cell: +91 9860657677

Abstract:

This paper explores the links between Indian cinematic nationalism and English literary humanism through an analysis of Ashutosh Gowariker's film *Swades* (2004). It examines Indian English literature and Indian film as interconnected cultural forces that shape civic awareness, focusing on diasporic identity, humanistic ethics, and national development. The paper contends that *Swades* acts as a cinematic expression of shared values, presenting nation-building as both a personal and collective endeavour. It draws on literary traditions that highlight moral responsibility, such as the humanist ideals in the works of E.M. Forster and George Eliot, as well as postcolonial voices like Salman Rushdie. The journey of protagonist Mohan Bhargava's homecoming exemplifies grassroots development and also captures the literary and diaspora narrative stereotypical of the returning native.

Through comparative textual and visual research, the study shows that English literary humanism and *Swades* redefine national development as the development of empathy, responsibility, and active citizenship rather than just as the advancement of infrastructure. As a result, both the media collaborate to produce a national topic that is morally conscious and capable of re-evaluating India's future.

Keywords: humanity, diaspora, ethics, postcolonial, cinema, literature.

Introduction:

Humanism, diaspora consciousness, and nation-building have become closely related frameworks to comprehend modern Indian cultural growth, especially in Indian English literature and socially conscious movies. When taken as a whole, these areas show a fascinating intellectual and emotional environment that is used to conceive, critique, and recreate the country. Indian English literature has long examined the obligations of the individual to the group, influenced by colonial history, postcolonial concerns, and international immigration. Similar to this, Ashutosh Gowariker's *Swades* (2004) tells the tale of Mohan Bhargava, an Indian diaspora scientist who reorients his sense of identity and duty upon reconnecting with his origins, to examine the concepts of return, ethical citizenship, and grassroots development. The nation is portrayed humanistically in both literature and cinema, emphasizing moral duty, empathy, and dignity over political rhetoric or economic growth. By examining this convergence, it is possible to discriminate how these narratives collectively envision national development as a human-centered, emotionally driven, and morally required endeavor, rather than as a goal imposed by the state. Humanistic ideals that criticize societal hierarchies, political corruption, economic injustices, and cultural brutality have long been expressed in Indian English literature. Indian literature in English emphasizes the lived realities of those who are marginalized by caste, poverty, relocation, or maltreatment in politics, from the socially aware novels of Mulk Raj Anand and Raja Rao to the global tales of Arundhati Roy, Rohinton Mistry, and Amitav Ghosh. In these works, humanism appears as a plea to recognize each person's intrinsic value rather than as an abstract moral theory. The writers highlight the divisions in Indian society and the inconsistencies between the promises made in the

constitution and the actual conditions on the ground. For instance, Mistry's *A Fine Balance* illustrates how the lives of common people are shaped by structural cruelty, which has its roots in caste, class, and governmental violence. *The God of Small Things* by Arundhati Roy criticizes the oppressive force of political ideology and social conventions that quiet weak people. Amitav Ghosh illustrates how progress frequently ignores the vulnerability and dignity of underprivileged groups by fusing ecological and humanitarian issues in works like *The Hungry Tide*. These works of literature force readers to reconsider what development means by forcing them to face difficult realities about the socioeconomic structure of the country. Literature promotes nation-building by challenging injustice as well as by honouring cultural heritage. Indian English literature serves as a moral compass for the country by highlighting systematic inequity and providing voice to the voiceless. This humanistic approach promotes the notion that inclusive growth, accountability, and empathy are necessary for nation-building. The challenges of rural communities, internal migrations brought on by economic hardship, or the emotional upheaval experienced by minority groups are just a few examples of the grassroots realities that writers frequently draw attention to yet are ignored in mainstream political debate. The narrative space becomes a place for moral contemplation, inspiring readers to embrace a more sympathetic and socially conscious understanding of national identity. In this way, literature encourages a more profound and active kind of nation-building that is based on civic awareness, moral bravery, and respect for various genres.

Indian English Literature and Its Influence on Cinema

The Indian diaspora, which has expanded internationally in the postcolonial era, is another important aspect of this discussion. Diasporic literature examines the complications of identity, belonging, nostalgia, and cultural hybridity; examples include the writings of Jhumpa Lahiri, Bharati Mukherjee, Chitra Banerjee Divakaruni, V.S. Naipaul, and many others. These authors describe the cultural conflicts and emotional distances faced by migrants who live in several cultures at once. The diaspora's connection with India is frequently fractured, alternating between affection and alienation, desire and criticism. However, this gap turns into a useful area for reassessing Indian political and social institutions.

India is frequently portrayed in diasporic works as both a geographical birthplace and an ethical concept that necessitates participation, introspection, and accountability. Characters who emotionally or physically return to India often regain a sense of responsibility for societal change. As a result, diasporic awareness turns into a type of double vision in which one views India from both the inside and the outside, giving the diaspora a clearer understanding of both its strengths and weaknesses.

***Swades* and Indian English Literature**

The story of *Swades*, which depicts Mohan Bhargava's return trip from the United States to a small Indian village called Charanpur, is deeply consistent with this diasporic double consciousness. Mohan represents technical advancement, global modernity, and diasporic privilege as a NASA scientist. However, as he encounters India's inequalities in poverty, caste relations, electricity, and education, his return home causes a slow moral awakening. *Swades*'s foundation in humanity rather than nationalism sets it apart from traditional patriotic film. The movie emphasizes little deeds of kindness, listening, and group problem-solving rather than catchphrases or heroic spectacle. Mohan's metamorphosis starts when he witnesses firsthand the struggles that the villagers endure daily, long trips for water, the exclusion of lower-caste families, and the lack of basic infrastructure. When he assists with the construction of a hydroelectric generator, his empathy is put into practice, signifying how knowledge and technology, when combined with a humane goal, may empower communities. *Swades*' diasporic issue is neither romantic nor oversimplified. At first, Mohan is hesitant about staying in India; he views his trip as a

temporary duty and is emotionally cold. However, the movie shows how real interaction with people and their challenges may change a person's identity. Mohan's choice to establish himself in India is motivated by moral obligation rather than sentimentality, in contrast to flimsy representations of nationalism. The movie makes the case that the diaspora has enormous potential to support India's development, not just by sending money home or temporarily relocating, but also by applying global knowledge to regional problems and cultivating social consciousness based on humanistic principles. Moral action is sparked by the diaspora's outward viewpoint and emotional connections to their home country.

Examining *Swades* and Indian English literature together reveals a distinct similarity in how they address nation-building and humanism. Both media highlight the worth of common people and stress that ethical commitment and empathy are the foundations of meaningful growth. They expose that the real test of a country's development is how it handles its most disadvantaged individuals, challenging triumphalist tales of progress. Readers can immerse themselves in the inner lives of characters who experience social marginalization or political oppression through the complex and reflective interactions that literature provides. *Swades* demonstrates how revolutionary change may start in tiny, local contexts by bringing comparable issues to the general public through an approachable narrative. Both ask the audience to reevaluate their preconceptions about modernity and ask some vital questions: Is technology beneficial if it doesn't help the underprivileged? If globalization increases inequality, is it still a good thing? If development is devoid of compassion, is it meaningful?

The significance of the return journey, literal or metaphorical, as a transformational process is further highlighted by the intersection of *Swades* and diasporic literature. Characters in many diasporic books return home only to face unresolved pasts, strained familial bonds, or unsettling social realities. Renewed understanding and emotional reconciliation are frequently the results of this encounter. Similar to this, Mohan's decision to return to India is originally motivated by personal duty but ultimately results in a significant ethical shift. His rediscovery of India is based on real interaction and respect for one another rather than idealization or dismissal. This is similar to literary stories in which characters struggle with hybrid identities and cross-border belonging. Mohan's return becomes a symbol of national and personal healing, implying that India's development is contingent upon the reestablishment of connections between people and communities, between the past and present, and between local needs and global knowledge. This confluence is further highlighted by the theoretical frameworks of nation-building, diaspora studies, and postcolonial humanism. Human dignity, moral leadership, and social justice must be given top priority in any true national rebuilding, according to postcolonial scholars like Frantz Fanon and Rabindranath Tagore. These concepts have a strong connection to the humanistic ideals presented in *Swades* and literature. Diasporic identities are flexible, multifaceted, and frequently moulded by ongoing negotiation between homeland and host land, according to diaspora theorists like Stuart Hall and Avtar Brah. This versatility is demonstrated in Mohan's character as he balances emotional ties to his own country with aspirations for a worldwide career. Benedict Anderson's idea of nations as "imagined communities" provides more insight into how literature and film craft poignant stories that bring individuals from different origins and places together. Both media types use narrative to help create a common national consciousness that is moral, caring, and reflective.

Conclusion

The findings from *Swades* and Indian English literature together imply that nation-building is a deeply humanistic endeavour rather than just a political or economic one. Empathy, equality, and respect for all living things, human and ecological, must be the cornerstones of development. When people put aside their own interests and actively contribute to the welfare of the group, a country flourishes. As long as its involvement is motivated by humility, moral responsibility, and sincere compassion, the diaspora,

with its exposure to the world and distinct positionality, may play a transformational role in this process. In this trip, literature and film act as moral mentors, reminding us that genuine development necessitates not just technological growth but also emotional maturity, ethical clarity, and inclusive involvement.

The themes like nation-building, humanism, and diaspora emerge as convergent paths toward envisioning a more compassionate, progressive, and just India. Together, *Swades'* emotionally charged representation of grassroots involvement and Indian English literature's sophisticated portrayal of socio-economic realities demonstrate that nation-building is essentially a human endeavour. These accounts inspire people both inside and outside of India to consider their obligations and to see development as a cooperative, compassionate, and morally sound undertaking rather than as a top-down imposition. These cultural texts demonstrate that the strength of human relationships, the inclusiveness of social structures, and the moral courage of individuals dedicated to the common good are ultimately more important indicators of national growth than economic metrics. They do this by fusing the reflective depth of literature with the emotional immediacy of film.

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Impact of Social Media on Indian Society : Legal Challenges

Dr. Swati Prithviraj Gavade

Assistant Professor

Shahaji Law College, Kolhapur.

Abstract

Due to rapid growth of technology people are now more relied on the Internet and social media for communication and social connectivity. It helps us to connect with the people who are living in the remote places. We can share information, ideas with them by using cyber space and social media. Today every aspect of our day-to-day life is touched by social media from e commerce to political involvement. In India we have popular social media like what's app, you tube, Twitter, Instagram. The most popular social media is what's app in India. As per recent statistics of 2025, around 491 million population are using social media in India. It means nearly 34.25% population is social media users. About 68% users are male and 31.4% uses are female in India. It significantly transformed individual behaviour, Indian culture to the large extent. But the excessive use of social media has its own disadvantages also. This paper discusses the positive and negative impact of social media in India. It explores the social media challenges such as misinformation, spreading of fake news, cyber-crimes, mental health issues. These challenges have legal and moral implications on personal data protection, Freedom of speech. It also elaborates the legislative majors for controlling the negative impact of social media.

Keywords- Social media, Internet, Positive, Negative, Indian society, users.

I) Introduction

Now a days social media plays a significant role in our day-to-day life. Even the official notifications are sent through social media like what's app. It has both the positive and negative implications on Indian society. It may be used for connectivity, knowledge sharing, idea exchange etc. It provides the business opportunities where e commerce is important. The major social media platform widely used in India are You tube, Facebook, what's app, Instagram, Twitter. It has negative impact on human mind which leads to various problems like cyber-crimes, addiction of social media, personal data violation, misinformation, mental health issues etc. It affects the Indian values with the use of 24 hours status update and 15 second reel use. This research paper defines social media as a social development tool with its negative effects.

II) Research methodology

The doctrinal method is used for this study. The researcher used secondary sources like books, articles, blogs, website etc. Due to lack of time primary resources are not used by researcher.

III) Significance of research study

This research is significant as it has provided a thorough insight of positive as well as negative impact of social media on the Indian society. The researchers have provided certain Legislative majors to control the negative impact of social media.

IV) Aims and objectives of research

The objectives of research study are as follows :

- 1) To identify the role of social media and its positive and negative Impact on Indian society.
- 2) To analyse the legislative majors for controlling negative impact of social media.
- 3) To propose suggestions to control inappropriate use of social media.

V) Concept of social media

Social media can be defined as the online platform and technology which provide access to communicate, share, exchange information and ideas on the Internet. It includes Facebook, Twitter, Instagram, YouTube etc. In India these social media platform shapes the public opinion. Though it has both positive and negative implications too on society at large. Following are some popular social media sites widely used in India.

- 1) Facebook -It is social media which allows the registered user to post videos, pictures images, messages.
- 2) Twitter- It is blogging platform that allows users to broadcast short messages for their followers.
- 3) Instagram- It lets their users to post, share, photos through email.
- 4) YouTube- It allows user to post videos, rate, share, comment on videos etc. It is entertainment as well as educational tool used at large scale.

VI) Positive impacts of social media in India

In India the social media like Twitter, Facebook, YouTube, Instagram has following impacts on individuals.

- 1) Connectivity
With the help of social media, we can connect and communicate with people living at remote places. We can easily connect with friends and family via social media without any geographical barriers.
- 2) Social media as entertainment tool
Now a days social media like YouTube serves the purpose of entertainment. Various movies, online content, podcast help the individual for Entertainment purpose.
- 3) Online education
The social media platform is useful for gaining a vast information beyond classroom learning. Individual will have a good access of information, knowledge without any geographical constraint.
- 4) Business opportunities
The emergence of E Commerce avails a greater number of business opportunities to every individual. It also helps to build the network between business entities. The social media avails large audience to communicate and to expand business online.
- 5) Political awareness
The social media platform creates political awareness where each citizen can participate in civic matters. Each citizen will have platform for forming opinions on special issues which needs public participation.
- 6) Cultural exchange
Social media platform helps to share festive greetings, images etc. It is the virtual space for exchange of cultural ideas which is helpful in diverse country like India.

VII) Negative impact of social media in India

The excessive use of social media has negative effects on the minds of users. Some of them are discussed as follow;

- 1) Mental health
Excessive use of social media lead to mental health problems in the users. The problems like anxiety, depression have increased in the young generation.
- 2) Problems of low attention in the academics

No doubt the social media provides a vast variety of information. But constant use of it reduces the attention span among youngsters which affect their academics.

3) Emergence of cyber crimes

Due to cyberspace availability the cybercrimes are arising. The cyberbullying is the major concern which have emotional impact. In addition to that personal information shared on social media can be misused creating problems of privacy issues.

4) Addiction of social media

Easy availability of Internet provides opportunity for excessive use of social media. This creates addiction of social media among youngsters. It shifts their focus from academics and their personal growth is affected.

5) Lack of social and communication skill

Social media decreases the face-to-face interaction. The young ones lose ties with physical world. It leads to reduction in social and communication skills. It results into reduction in emotional attachment with others and living alone.

VIII) Legislative majors to control negative impact of social media in India

Inappropriate use of social media content has made the Internet unsafe for its users especially children's. Following legislations have been passed in India by the government for controlling social media ill effects.

1) Information Technology Act 2000

Information technology Act 2000 and amendment made in the act impose more obligation on the intermediates to ensure their accountability. Information Technology Act defines what are cyber offences and provides punishment for various cyber offences like Identity theft Cyber defamation, Cyber stalking, cyber terrorism, Cyber bullying etc. It also provides adjudicating machinery for regulating cyber space.

2) Digital personal data Protection Act 2023

The Digital Personal Data Protection Act 2023 protects the personal data of users.

Digital personal data protection act is the first legislation for protection of personal data. It also regulates misuse of personal data which is harmful to children and young generation.

3) Bhartiya Nyaya Sanhita 2023

The Bhartiya Nyaya Sanhita 2023 provides the punishment for offences like use of obscene acts and their spread on social media platforms. It keeps check on online content. It protects the individual from the ill impact of social media.

4) Protection of children from sexual offences act 2012

Protection of children from sexual offences act 2012 prevents the children below 18 years of age against sexual exploitation in any form of media specifically digital media.

IX) Suggestions for controlling negative impact of social media in India

Following are some of the suggestions for controlling negative implications of social media in India.

1) Time management

Individual should use social media for limited period of time and he should have self-control for the same. The hours spend on social media should be fixed by the user.

2) Digital Detox

To reduce addiction of social media the practice of Digital detox should be adopted. The days for adopting the digital detox practice should be strictly followed by social media users.

3) Strict enforcement of Cyber laws

The implementation of cyber laws shall be strict one to reduce cyber offences on social media.

4) Digital literacy

The children and young generation should be made aware about responsible use of social media at early age.

5) Parental control and supervision

In case of children the parental supervision will be helpful. Institutions should take majors for controlling use of social media in their premises.

6) Counselling sessions

In educational institutions counselling sessions should be organised for children and college students. The merits and demerits of excessive use of social media should be explained to them. So that they will be able to understand the inappropriate use of social media.

X) Conclusion

In digital world social media has become inseparable part in Indian society. Each country has their own laws and rules for controlling social media. In India we do not have the specific laws governing social media but through indirect legislations like Information Technology Act 2000, Bhartiya Nyaya Sahitha 2023, Protection of children from sexual offences act 2012, we are trying to Control social media in India. The users conscious use of social media will be helpful for eradicating negative impact of social media. In case of usage by child parent supervision is necessary. It is not harmful as it contributes for social and economic development. As social media is indispensable tool, we should use it responsibly to avoid its ill effects.

X) End notes

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An Analytical Study of Consumer Rights Awareness in Latur Districts

Research Scholar

Mr. Pate Deepak P.

Shivaji Mahavidyalaya, Renapur.

Research Guide

Dr. Dongare Shivprasad V.

Mahatma Basweshwar College Latur
Department of Commerce

Abstract:

Consumers are the largest economic group in any country. They are the central point of all economic activities. The ultimate aim of production, storage and distribution is to ensure consumption of goods and services to the satisfaction of the consumers. Consumer awareness means being conscious of having knowledge about the various consumer protection laws, redress mechanism and the consumer rights which include right to protection of health and safety from goods and services that the consumer buy, right to be informed about the quality, price, potency, purity and standard of good, right to choose the best from a variety of others, right to get representation if there is any grievance or suggestion, and right to seek redress against unfair trade practice or unscrupulous exploitation. Consumer rights awareness is a critical aspect of economic and social development, ensuring that individuals make informed decisions and are protected from unfair trade practices. This study examines the level of consumer rights awareness in Latur District, analyzing factors such as education, income, and legal knowledge. The research is based on primary data collected through surveys and secondary data from official reports and consumer forums. The study highlights the gaps in consumer awareness and suggests strategies to improve consumer protection mechanisms.

The objective of this research is to assess the people of different class in the society about different aspects of consumer awareness viz., price and quality of products used by them, standardization of products, knowledge of Consumer Forum, awareness of their Rights and Responsibilities, etc. Consumers will lead a happy, healthy and prosper life if they fully aware about the above-mentioned aspects.

Keywords : Consumer rights, awareness, Latur District, Consumer Protection Act, unfair trade practices.

Review of Literature:

To study the implications of different issues in the implementation of the Consumer Protection Act and also to identify the areas already investigated by other researchers, the Researcher has referred to important studies already undertaken on consumer movements, awareness, rights, protection, redressal, grievances, etc.

1. **Agrawal (2006)** - The process of development coupled with increasing liberalization and globalization across the country has enabled consumers to realize their increasingly important role in society and governance. The consumer movement in India is as old as trade and commerce. In Kautilya's Artha Shastra, there are references to the concept of consumer protection against exploitation by the trade and industry, short weight and measures, adulteration and punishment for these offences. In a developing country like India, where the incidence of poverty and unemployment is very high and the level of literacy is very low, the people face a volume of problems, particularly in the context of consumer related issues. This study brings into focus the role and status of Indian consumers and their problems arising from

the given socio-economic set up of our society. A critical appraisal of governmental policies and programmed has also been attempted.

2. **Nair (2012)** - This paper tries to suggest some measures that should be undertaken by the Government, business houses and consumer themselves to protect the interest of the consumers. An enlightened consumer is an empowered consumer. An aware consumer not only protects himself from exploitation but induces efficiency, transparency and accountability in the entire manufacturing and services sector.
3. **Kulkarni and Mehta (2013)** - This research focuses on the awareness of consumer rights amongst management students & study of buying patterns of them. Survey method and the random sampling technique are employed to collect the data. The Major findings of the research are that most of the management students are aware of consumer rights but they never lodge the complaints against traffickers. Therefore, they need to be educated by consumer organizations & government more about the procedure of registering complaints and seeking redressal.
4. **Paswan Ram Vilas (2015):** In his address highlighted the importance of the Conference. He mentioned that while appreciating the contributions of the Consumer Courts in dispensing justice, especially to the poor consumers, the Hon'ble Prime Minister views that the powers of the Consumer Courts should not be diluted. He said that several problems are being faced by the Consumer For a which hinder their smooth functioning such as lack of infrastructure other facilities, non-filling of vacancies of Presidents and Members. Unless these problems are given due attention and addressed at the earliest, it would not be appropriate to blame the Consumer Fora for the pendency of complaints. The Hon'ble Minister of Consumer Affairs informed that the Department proposes to bring about comprehensive amendments to the existing Act to remove the shortcomings and to make it capable of meeting the new challenges such as e-commerce that have emerged over the years. He briefly mentioned that in the new Bill it is proposed to have provisions for establishment of a Central Consumer Protection Authority which will have powers to investigate, taking cognizance, matters of unfair business practices and misrepresentative advertisements and take class action in such matter's mediation as an alternate grievance redress mechanism, simplification of the adjudication process etc. He asked all concerned to uphold the dignity of the system to in still confidence in the consumers.

Introduction:

Consumer rights are fundamental to a fair marketplace, ensuring protection against fraud, defective goods, misleading advertisements, and unfair trade practices. In India, the Consumer Protection Act, 2019, provides legal frameworks to safeguard consumer interests. However, awareness levels vary across different regions, especially in semi-urban and rural areas like Latur District, Maharashtra.

Consumers form the backbone of any economy and are the ultimate beneficiaries of all production and distribution activities. In today's competitive and digital marketplace, consumers face numerous challenges such as misleading advertisements, substandard goods, unfair trade practices, and online frauds. Therefore, the protection of consumer rights has become a crucial part of socio-economic development. In India, the concept of consumer protection has historical roots tracing back to the Artha shastra, which recognized the need to safeguard buyers from exploitation. However, with rapid globalization and technological advancement, the scope of consumer protection has significantly expanded.

The Consumer Protection Act, 2019 represents a landmark reform that replaced the old 1986 Act, introducing modern mechanisms like e-filing of complaints, mediation, and establishment of the *Central Consumer Protection Authority (CCPA)*. These provisions aim to provide a faster, more transparent, and consumer-friendly redressal system. Despite these legal safeguards, the effectiveness of consumer protection depends largely on the level of awareness among consumers regarding their rights and responsibilities.

In India, particularly in semi-urban and rural regions such as *Latur District*, the level of consumer awareness remains limited due to factors like illiteracy, lack of access to information, and limited outreach of awareness programs. This gap between legislation and consumer knowledge often results in continued exploitation and dissatisfaction among consumers. With the rise of e-commerce, online transactions, and digital payments, the risks have further multiplied. Hence, this research focuses on assessing the level of consumer rights awareness among different sections of society in Latur District. It examines their understanding of the Consumer Protection Act, 2019, the effectiveness of redressal mechanisms, and the common challenges they face in seeking justice. The study also aims to identify measures that can strengthen consumer education, empower individuals to exercise their rights, and promote a more transparent and accountable market environment in the region.

Need of the Study: -

1. Emerging E-commerce Landscape:

With the increasing penetration of e-commerce platforms in Latur City, there is a pressing need to assess the awareness of consumer rights among college students engaging in online shopping activities.

2. Protection of Consumer Interests:

College students represent a significant demographic of e-shoppers, yet they may lack adequate knowledge about their rights and protections afforded by consumer laws. Understanding their awareness level is crucial for ensuring their protection in online transactions.

3. Vulnerability to Exploitation:

Lack of awareness about consumer rights can leave college students vulnerable to various online scams, fraudulent practices, and unfair business tactics. Investigating their awareness level can highlight areas of vulnerability and inform educational initiatives to empower them.

4. Legal Compliance and Advocacy:

Assessing the understanding of consumer rights among college students can also shed light on the effectiveness of existing consumer protection laws and identify potential gaps or areas for improvement. This can aid in advocacy efforts for stronger consumer rights legislation and enforcement mechanisms.

5. Empowering Consumers:

By conducting this study, we aim to empower college students in Latur City by equipping them with knowledge about their rights and responsibilities as e-shoppers. Increasing awareness can promote informed decision-making, enhance confidence in online transactions, and contribute to a safer and more transparent digital marketplace.

Problems faced by Consumers:

In modern times, a lot of efforts have made to protect the interest of consumer by government. It must be remembered that their exploitation will not come to an end unless they themselves come forward

to protect and promote their own interest. The various problems faced by the consumers in the Market are as follows:

- 1. Health & Safety Hazards:** Many a time customers face problems of health hazards when they buy goods in the shops. For instance, shopkeepers sell products even after the expiry date; fruit vendors use chemicals to ripen the fruits faster; manufacturers use inferior quality of materials to keep the prices low; and so on.
- 2. Irregular Supply:** Consumer faces the problem of irregular supply. Especially in case of necessities unsystematic supplies create serious shortages. Many times, the irregularities are deliberate and exploitative, caused by hoarding and black marketing.
- 3. Lack of Information:** Very often consumers do not get proper and timely information. The information may be about the arrival of new product or service, availability of a product; Changes in the existing product, etc. In the absence of information consumers may not be able to make proper decisions of purchasing product or services.
- 4. Malpractices by Suppliers:** Malpractices by suppliers create serious problems for consumers. Suppliers engaged in antisocial activities like black marketing, hoarding, profiteering, etc. Spoil the relations between the buyer and sellers.
- 5. No proper Return for Money:** Many a time consumer feels that they do not get proper returns for the price they have paid to buy the products. This may be due to inferior quality, less durability, adulteration, unsatisfactory packing, etc.
- 6. Not Heard Properly:** Consumers often feel that they are not heard properly. Their complaints, grievances and doubts are not carefully attended to and not promptly redressed or clarified by suppliers of goods and providers of services.
- 7. Poor after-Sale-Service:** Consumer in this world, after sale service is very poor. Even the Multinational corporations in this world do not provide effective after-sale-service in the case of office equipment, and consumer durables. Customers have to give constant reminders for after-sale-service. At many times, customers have to get the equipment repaired or serviced by third party even during the service contract period due to poor after-sale-service.
- 8. Poor Quality of Sales Personnel:** Many times, customers find that the sales personnel cannot give proper information about the products because they are not given appropriate training by their employers. Sometimes such persons exaggerate the merits of the products and force the customers to buy products, which may not be needed by the customers.
- 9. Problem of Delivery of Goods:** Customers also face the problem of delivery of goods. There are cases, where customers have to book in advance certain products, and they are promised a specific.
- 10. Problem of Duplicate Goods:** Consumer in this world, the customers face a major problem of duplicate goods. Unethical producers duplicate popular brand names, and thereby customers get cheated. Even products like medicines are duplicated by illegal producers.
- 11. Unethical Advertising:** Many businessmen resort to unethical practices in advertising. They make fall claims about the benefits of the product. They do not disclose true information. Consumers fall prey for such practices and get cheated.
- 12. Wrong Weight & Measures:** Consumers in this world are cheated by traders and others with false weight and Measures. The customers are cheated with false weights and measures in an unorganized market. Even in the organized markets such as shopping malls, customers are cheated with wrong weights pasted on the packets.

Objectives of the Study:

1. To study about Awareness of Consumer Rights among the Consumers.
2. To know the percentage of consumers about their Rights and Consumer Protection Act-2019.
3. To evaluate the effectiveness of consumer complaint mechanisms.
4. To identify key challenges in consumer protection.
5. To identify challenges faced by consumers in filing complain.

Hypothesis of the Study: -

1. Most of the Consumers know about their consumer rights and Consumer Protection Act-2019.
2. Consumer in Latur districts is not aware of consumer redressal mechanism.

Limitations of the Study: -The study has following limitations –

1. The sample was selected Consumers from Latur districts only.
2. The sample Size was limited only 100 Respondents.
3. The range limited only age group-16 to 75 years.
4. Randomly selected respondents had been used for filling the questionnaire.

Research Methodology:

Both the primary and secondary data is used to collect the details from the respondents. Primary data are collected from 100 sample respondents with the help of well-structured questionnaire, which is pre-tested.

1. **Primary Data:** Collected through structured surveys from 100 respondents across urban, semi-urban, and rural areas of Latur.
2. **Secondary Data:** Sourced from government reports, legal case studies, and consumer forums, Journals, Books, Magazines, Publications, Report and Internet.
3. **Data Analysis:** Statistical tools like percentages, bar graphs, and to interpret findings.
4. **Sample size:** 100 respondents.
5. **Sampling Method:** Convenience sampling

Table No. 1
Classification of Respondents as per their Age.

Sr.	Age in Years	No. of Respondents	%
1	16 to 30	35	35
2	31 to 40	26	26
3	41 to 50	18	18
4	51 to 60	13	13
5	61 and above.	8	8
	Total:	100	100

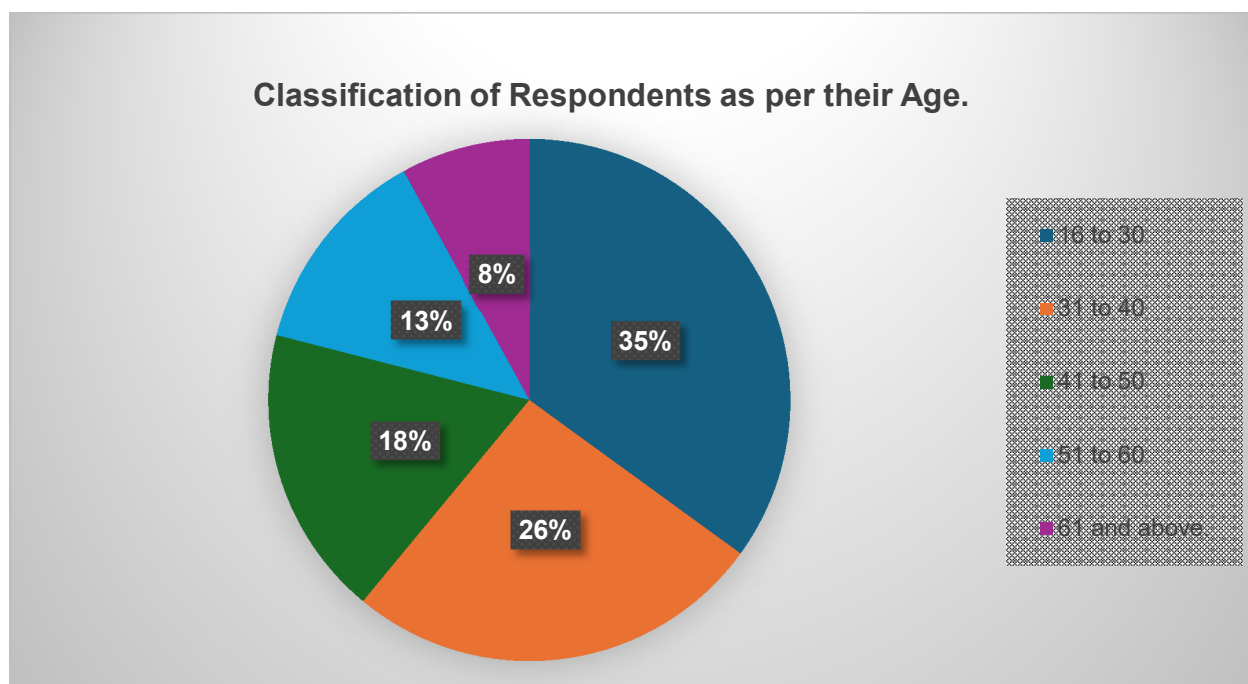


Table No. 2

No. of Respondents Awareness About Consumer Rights and Responsibilities.

Sr. No.	Awareness About Consumer Rights and Responsibilities.	No. of Respondents	Percentage %
1	Yes	60	60%
2	No	40	40%

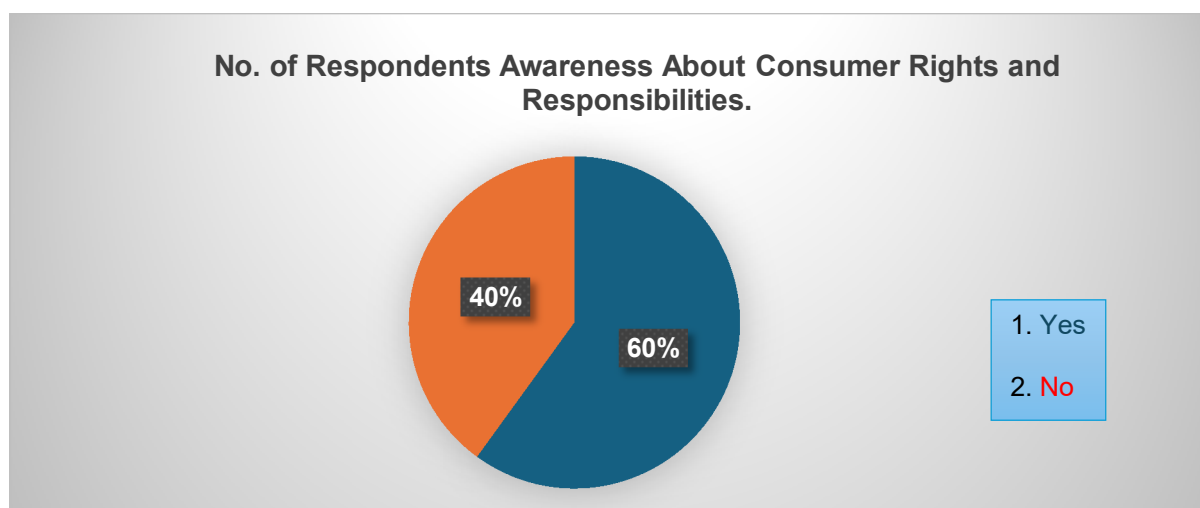


Table No. 3

No. of Respondents Knowledge about Consumer Protection Act -2019.

Sr. No.	Knowledge About Consumer Protection Act-2019	No. of Respondents	Percentage %
1	Yes	65	65%
2	No	35	35%

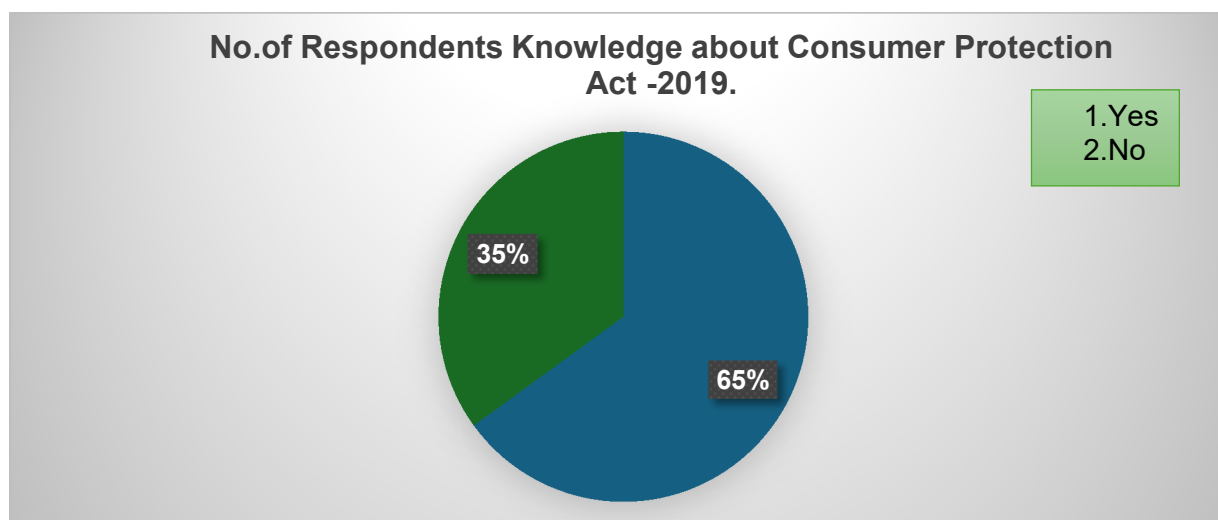
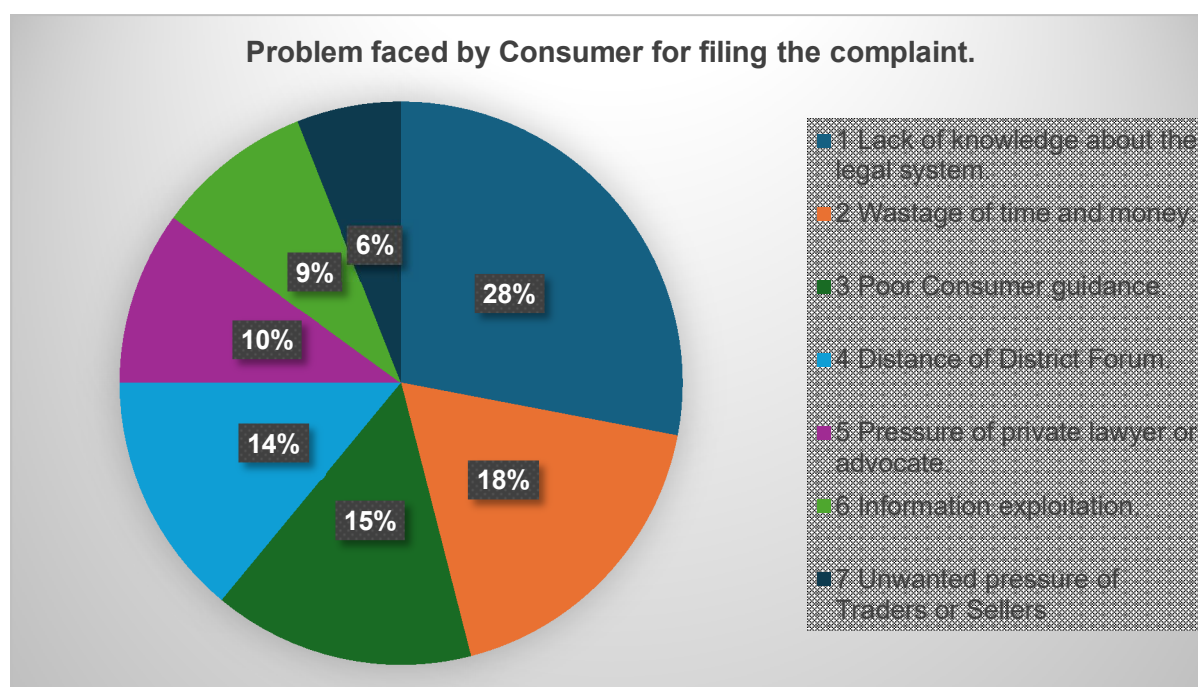


Table No. 4
Problem faced by Consumer for filing the complaint.

Sr. No.	Problem faced by Consumer for filing the complaint.	No. of Respondents	Percentage %
1.	Lack of knowledge about the legal system.	28	28%
2.	Wastage of time and money.	18	18%
3.	Poor Consumer guidance.	15	15%
4.	Distance of District Forum.	14	14%
5.	Pressure of private lawyer or advocate.	10	10%
6.	Information exploitation.	09	09%
7.	Unwanted pressure of Traders or Sellers	06	06%



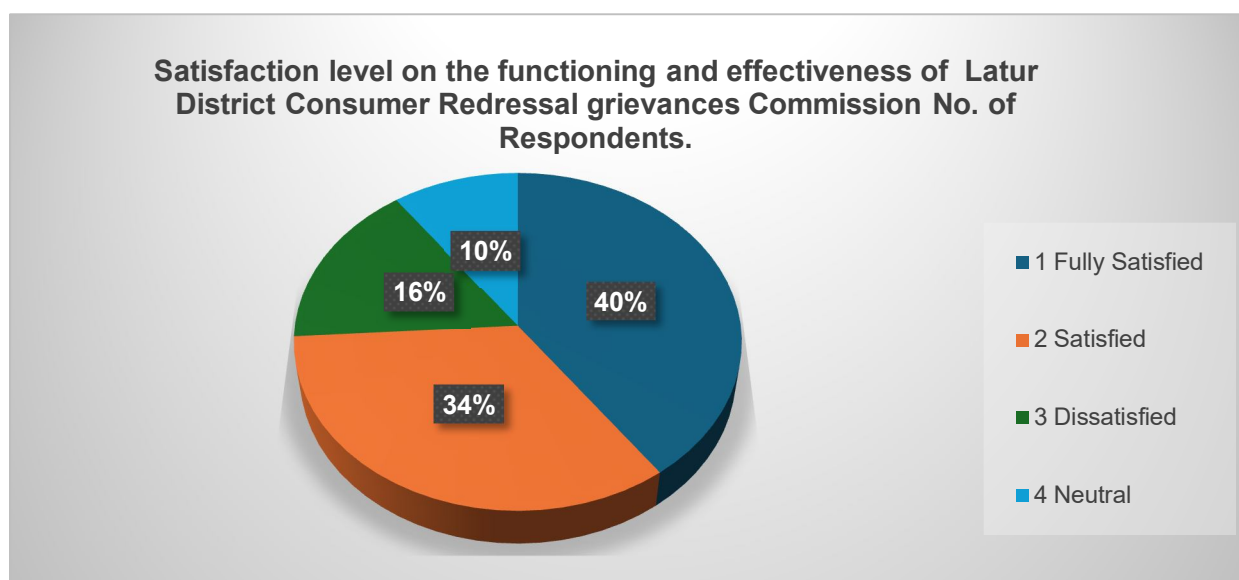
To know the problems faced by respondents for filing the complaint the relevant question was asked to all of them. The information in this regard was collected and tabulated in table.

1. 28 (28%) Respondents said that lack of knowledge about the legal system is one of the problems they faced for filing the complaint with Latur district consumer redressal grievances commission
2. 18 (18%) Respondents reported that time and money is wasting for complaint with the Latur district consumer redressal grievances commission .
3. 15 (15%) Respondents said that poor consumer guidance also they faced while complain.
4. 15(15%) Respondents reported that the distance of Latur district consumer redressal grievances commission is too far from their home.
5. 5.10(10%) Respondents reported that private lawyer is pressuring them unnecessary.
6. 9 (9%) Respondents expressed that information exploitation is also one of the problems they faced.
7. 6 (6%) Respondents reported that the traders or sellers are pressurising them to withdraw the complaint.

Table No. 5

Satisfaction level on the functioning and effectiveness of Latur district consumer redressal grievances commission.

Sr. No.	Satisfaction level	No. of Respondents	Percentage %
1.	Fully Satisfied	40	40%
2.	Satisfied	34	34%
3.	Dissatisfied	16	16%
4.	Neutral	10	10%
Total		100	100%



To know the satisfaction level of consumer about the functioning and effectiveness Latur district consumer redressal grievances commission. the relevant question was asked to them.

1. The information in this regard was collected and it is concluded from the table that 40 (40%) respondents were fully satisfied for functioning and effectiveness Latur district consumer redressal grievances commission.
2. followed by 34 (34%) respondents expressed that they were satisfied.
3. 16 (16%) respondents said that they were dissatisfied.
4. 10 (10%) respondents were neutral due to not lodged any complaint with Latur district consumer redressal grievances commission.

Consumer Protection Act -2019: -

Consumer protection laws are designed to safeguard the rights of consumers and ensure fair trade, competition, and accurate information in the marketplace. They often cover a wide range of issues, including product safety, advertising practice, and consumer rights in transactions. The Consumer Protection Act, 2019 provides six fundamental consumer rights to safeguard individuals from unfair trade practices, defective goods, and misleading services.

1. Right to Safety: Consumers have the right to be protected against goods and services that are hazardous to life and property. Example: A consumer can complain about faulty electrical appliances that may cause harm.

2. Right to Information: Consumers have the right to be informed about the quality, quantity, purity, standard, and price of goods and services. Example: A consumer must receive accurate labeling on food products, medicines, and electronic items.

3. Right to Choose: Consumers have the freedom to choose from a variety of products and services at competitive prices. Example: A seller cannot force a consumer to buy bundled products unnecessarily.

4. Right to be Heard: Consumers have the right to voice their complaints and concerns before appropriate authorities. Example: A consumer can file a complaint with a Consumer Commission or online portals like consumerhelpline.gov.in.

5. Right to Redressal: Consumers have the right to seek compensation or replacement in case of unfair trade practices or defective products.

6. Right to Consumer Education: Consumers have the right to access knowledge and information about their rights, responsibilities, and legal remedies. The government conducts the "Jago Grahak Jago" campaign to educate consumers.

Conclusion:

The present study entitled "An Analytical Study of Consumer Rights Awareness in Latur District" reveals that while a significant portion of consumers in the region possess a basic understanding of their rights, a considerable knowledge gap still persists—particularly regarding the Consumer Protection Act, 2019 and the redressal mechanisms available for grievance resolution. The findings indicate that 60% of respondents are aware of their consumer rights, whereas 40% remain unaware. Similarly, 65% have some knowledge of the Consumer Protection Act, yet only a small percentage have ever utilized formal complaint mechanisms.

Major obstacles faced by consumers include lack of legal awareness (28%), wastage of time and money (18%), poor guidance (15%), and limited accessibility to redressal forums. These barriers discourage consumers from asserting their rights and seeking justice. Furthermore, issues like misleading advertisements, duplicate goods, unethical trade practices, and inadequate after-sale services continue to affect consumer satisfaction and trust in the marketplace.

Despite the existence of strong legal frameworks such as the Consumer Protection Act, 2019, the study concludes that awareness and implementation remain uneven, especially in semi-urban and rural regions of Latur. However, it is encouraging to note that 74% of respondents expressed satisfaction to some extent with the functioning of the Latur District Consumer Redressal Grievance Commission, indicating growing trust in institutional mechanisms. To bridge the gap between law and awareness, there is a pressing need for intensive consumer education campaigns, inclusion of consumer studies in academic curricula, and strengthened government and NGO initiatives. Programs like “Jago Grahak Jago” should be more localized and interactive to reach grassroots populations.

Ultimately, empowering consumers with knowledge, access, and confidence will not only ensure fair trade practices but also promote transparency, accountability, and sustainable economic development in the Latur district and beyond.

Suggestions:

On the basis of finding and conclusions of the study the following important suggestions are offered.

1. Consumers must develop a sense in them to get latest information about his rights.
2. The present system of consumer protection act is satisfactory but in future this act should be amended to provide better service towards consumer protection.
3. The study recommended for a consumer education policy involving its introduction as a mandatory subject at secondary levels of education.
4. Consumer associations should organize activities that give information to the public about where to apply when needed.

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A Study on Customer Perception and Satisfaction Towards Mobile Service Providers in Latur City

Author:
Dr. Manisha S. Ashtekar,
Head, Department of Commerce,
Dayanand College of Commerce, Latur.

Dr. R. N. Gilda
Faculty, Dayanand College of Commerce,
Latur

ABSTRACT :

With the rapid growth of the Indian telecommunications market, mobile service providers are continuously competing to attract and retain subscribers. This study examines customer satisfaction towards two leading service providers — **Reliance Jio** and **Bharti Airtel** — among users residing in **Latur City, Maharashtra**. A structured questionnaire was distributed to **200 mobile users** (100 each of Jio and Airtel). The survey measured satisfaction dimensions such as **network connectivity, data speed, tariff plans, customer care, and value-added services**.

The findings reveal that while both providers achieve moderate to high satisfaction levels, **distinct differences emerge** across service attributes. Jio users reported higher satisfaction in **pricing and promotional offerings**, whereas Airtel users rated **network coverage and call connectivity** more favorably. Overall satisfaction levels were comparable between the two groups, though **brand loyalty** was higher among Airtel users.

KEYWORDS : Customer Satisfaction, Telecom, Reliance Jio, Bharti Airtel, Latur.

INTRODUCTION :

Telecommunications has become an indispensable part of modern life, with mobile services acting as a primary mode of communication and internet access. India is one of the largest telecommunications markets globally, and competition among service providers is intense. As services evolve — including 4G/5G connectivity, value-added offerings, and diversified tariff plans — understanding customer satisfaction becomes critical for retaining subscribers.

Reliance Jio and Bharti Airtel are two of the most significant players in the Indian telecom industry. Jio disrupted the market with competitive pricing since its launch, while Airtel maintained strong market performance through network quality and service reliability. This paper focuses on **Latur City**, a rapidly developing urban hub, to evaluate customer satisfaction and service preferences among users.

OBJECTIVE :

1. To compare the telecom services provided by Reliance Jio and Bharti Airtel in Latur City.
2. To assess customer satisfaction across selected service dimensions.
3. To analyze factors impacting customer choice between the two providers.

LITERATURE REVIEW :

Customer satisfaction has long been acknowledged as a critical determinant of competitive advantage and sustainable growth in the telecommunications industry. Over the past decade, researchers have examined various dimensions of satisfaction, including service quality, network reliability, pricing, customer support, and perceived value all of which influence consumer preferences and loyalty.

According to Oliver's Expectation-Confirmation Theory, customer satisfaction is formed when actual service performance meets or exceeds expected standards (Oliver, 1980). In the context of

telecom, expectations involve network coverage, data speed, tariff economy, and after-sales support. When experienced service falls short, dissatisfaction arises, leading to switching behavior. Conversely, when service either meets or supersedes expectations, it fosters loyalty and advocacy.

Umamaheswari (2020) conducted a comparative study on Jio and Airtel users in Coimbatore city and found that demographic variables (age, gender, income) did not significantly influence overall satisfaction. However, factors such as data speed, tariff plans, network coverage, and value-added services showed strong relationships with satisfaction levels. The study concluded that both Airtel and Jio had satisfactory ratings, with marginal differences in specific service areas.

Yadav and Dabhade (2019) investigated key determinants of customer satisfaction in the Indian mobile sector. They identified plan diversity, network signal quality, pricing, and brand image as key drivers of user satisfaction. The study highlighted that Jio's entry with disruptive pricing significantly altered market dynamics by forcing existing operators to reduce pricing and enhance service offerings. However, it stressed that quality factors like network strength and customer care remain pivotal for sustained user satisfaction.

In Malaysia, Nurysh, Naghavi, and Fah (2019) examined the impact of perceived value and service quality on telecom satisfaction. Their quantitative analysis highlighted that users attach importance not only to price but also to tangible service attributes like network consistency and post-sales support. Although alternative options increase choice, satisfaction and perceived value were key predictors of retention intention.

Similarly, Poulose, Sharma, and Joseph (2018) explored retention strategies in Central India. The research highlighted customer relationship management, switching barriers, and perceived value as important influencers of loyalty. Their findings underscored that customer satisfaction and loyalty are strongly linked, and switching costs act as moderators in the relationship. The literature consistently differentiates between technical service quality (network coverage, call quality, data speed) and economic factors (tariff plans, promotions, and discounts). Multiple studies emphasize that:

- Users with high data consumption preferences (e.g., streaming, social media) prioritize data speed and affordability (Kumar & Sharma, 2021).
- Users in less urban or semi-urban areas value network reliability and consistency more than pricing (Singh & Verma, 2020).

This is particularly relevant to Latur City — a combination of urban and peri-urban users with varied usage patterns — suggesting that satisfaction factors may diverge from metropolitan trends.

Telecom literature further posits that satisfaction contributes strongly to loyalty and reduced switching behavior. Research in Vietnam by Hoa & Ngog (2015) demonstrated that satisfied telecom customers are more likely to recommend the brand and remain loyal, even when attractive competitor offers are available.

In the Indian context, Das and Dey (2019) found that brand loyalty in mobile services emerges when users perceive continuous service quality improvements, personalized plans, and responsive customer support — beyond initial cost savings.

RESEARCH METHODOLOGY

The study uses a **descriptive research design**. Primary data were collected through structured questionnaires distributed both online and physically across popular residential and commercial areas of Latur City. The sample comprised **200 respondents**, 100 each for Airtel and Jio users selected via convenience sampling. Responses were recorded on a Likert scale and multiple-choice items.

DATA ANALYSIS AND INTERPRETATION

Table 1
Demographic Profile of Respondents

Variable	Category	Airtel (n=100)	Jio (n=100)
Gender	Male	58	60
	Female	42	40
Age Group	18–25	40	42
	26–35	32	30
	36–50	18	20
	50+	10	8
Occupation	Student	48	50
	Working	38	36
	Business	10	9
	Others	4	5

Interpretation: Respondents represent a balanced mix of gender and age groups, dominated by students and working professionals.

Table 2
Key Service Attributes Impacting Choice

Attribute	Airtel (%)	Jio (%)
Network Coverage	52%	46%
Call Quality	54%	40%
Data Speed	48%	55%
Tariff Plans	30%	40%
Promotional Offers	28%	42%

Interpretation: Jio users are influenced strongly by tariff and promotional offers, while Airtel users emphasize call quality and network coverage.

Table 3
Satisfaction Levels on Key Dimensions

Satisfaction Criteria	Highly Satisfied	Satisfied	Neutral	Dissatisfied
Network Coverage	Airtel 38%	44%	12%	6%
	Jio 30%	40%	20%	10%
Data Speed	Airtel 34%	42%	18%	6%
	Jio 40%	46%	10%	4%
Tariff Plans	Airtel 22%	38%	26%	14%
	Jio 45%	42%	10%	3%
Customer Care	Airtel 28%	46%	20%	6%
	Jio 26%	40%	28%	6%

Interpretation:

- **Tariff satisfaction** is significantly higher among Jio users.
- **Network and call quality** satisfaction is higher for Airtel.
- **Customer care** shows moderate satisfaction for both, but with room for improvement.

Table 4
Overall Satisfaction

	Airtel (n=100)	Jio (n=100)
Highly Satisfied	18	14
Satisfied	56	60
Neutral	20	20
Dissatisfied	6	6

Interpretation:

Overall satisfaction is similar for both providers, with Jio showing a slightly higher satisfied percentage.

Table 5
Brand Loyalty

Brand Loyalty	Airtel (%)	Jio (%)
Loyal (Will renew)	72	64
Not Loyal	28	36

Interpretation: Airtel users show **higher loyalty** than Jio users — potentially due to perceived service stability and network reliability.

FINDINGS:

1. **Network stability** is more satisfactory among Airtel users.
2. **Data speed and plan affordability** are key drivers for Jio users.
3. **Tariff and promotional attractiveness** significantly influence Jio users' choices.
4. **Customer care services** receive mixed reviews, indicating the need for improvement from both providers.
5. **Brand loyalty** is stronger in Airtel users.

CONCLUSION :

1. **Service Experience:** Airtel's historical presence and network structure contribute to stronger connectivity satisfaction compared to Jio in Latur City.
2. **Cost Perception:** Jio's competitive pricing and tailored schemes enhance user perceived value, especially among students and budget-conscious users.
3. **User Preferences:** Younger users (18–25) show a stronger preference for Jio, likely due to data-centric usage, while older segments prefer Airtel for coverage stability.
4. **Satisfaction Gap:** Despite similar overall satisfaction rates, **dimension-wise satisfaction differs**, highlighting area-specific competitive advantages.

SUGGESTIONS :

1. **Improve Customer Care:** Both providers should streamline grievance redressal and reduce delays.
2. **Enhance Value-Added Services:** Airtel and Jio should offer personalized plans for students and professionals in Latur.
3. **Better Promotion of Network Quality:** Airtel should amplify marketing of its strong network performance.
4. **Innovative Bundles:** Jio may introduce loyalty schemes to convert price-based users into long-term customers.

SUMMING UP :

The study concludes that both Reliance Jio and Bharti Airtel succeed in satisfying a majority of telecom users in Latur City. While Jio is preferred for affordability and attractive plans, Airtel excels in network and service consistency. Continued focus on customer service, localized offers, and network optimization will determine future competitive positioning in the Latur telecom market.

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A Study on the Role of Generative AI Tools in Enhancing Youth's Educational Performance

Ms. Sayali Vilas Mhatre

Assistant Professor

B. K. Birla College (Empowered Autonomous), Kalyan

Mob. 8433642373 sayalimhatre190@gmail.com

ABSTRACT:

Artificial Intelligence (AI) has become a transformative technology in education, offering innovative tools that support learning and academic development. AI-based applications, such as intelligent tutoring systems, virtual assistants, Chatbots, and writing assistance tools, are increasingly being used by students for educational purposes. These technologies have the potential to transform traditional learning methods into engaging sessions by improving understanding, engagement, and overall academic performance. The study aims to evaluate the **role of Artificial Intelligence in enhancing student academic performance** among undergraduate students. The study helps to analyse how AI tools lead to improved understanding of academic concepts, quality of assignments, time management, and overall learning efficiency. It also helps to know the students' perceptions regarding the opportunities and challenges associated with the use of AI in academics. A descriptive research method is used. Descriptive and analytical methods are used to interpret the collected data. The **primary data was collected through a structured questionnaire**. Secondary data was sourced from journals, articles and online reports. The findings of the study are expected to indicate that AI plays a significant role in enhancing academic performance and offers various benefits. However, challenges like over-dependency on AI tools, accuracy and reliability issues, data privacy and security risk were also identified. The study highlights the importance of proper guidance and awareness about ethical use of AI tools to maximise learning outcomes while minimising over-dependence. The results of this research may help educational institutions and policymakers in framing effective strategies for the responsible use of the AI in education and enhance academic development.

Keywords: Artificial Intelligence tools, Students, Academic development, Education, Over-dependency

INTRODUCTION :

Artificial Intelligence (AI) means the ability of computer systems to perform tasks that are normally performed by humans, such as learning, reasoning, problem-solving, decision-making, and language understanding (https://en.wikipedia.org/wiki/Artificial_intelligence, n.d.). AI systems are designed to analyse data and give recommendations with minimal human intervention. In recent years, rapid advancements in computing power and data availability have led to the widespread adoption of Artificial Intelligence across various sectors. Artificial intelligence in education has been a powerful tool to enhance the learning processes among students. There is a significant shift from traditional, uniform teaching methods to dynamic, data-driven systems that help an individual learner master the academic content. AI-based applications such as online tutoring systems, Chatbots, and writing assistance tools provide personalised learning experiences to students. The various AI tools help the students understand the complex contents in a simplified manner that ultimately helps them to improve their academic skills at their own pace. With the increasing integration of digital technologies in overall education, the use of Artificial Intelligence in academic activities has become more important and noteworthy. Students

increasingly rely on AI tools for assignment preparation, presentation and exam revision (Tomlinson, 2025). While AI possesses various benefits in enhancing academic performance, it also raises concerns related to ethical use, data privacy, and over-dependence. Thoughtful and genuine use of AI brings an opportunity for students in education to be transformed for a better future. Therefore, understanding the role of Artificial Intelligence in education is essential to ensure its effective and responsible application in academic environments. AI boosts academic performance through personalisation, where algorithms adjust difficulty levels based on real-time proficiency, resulting in higher retention and motivation. The future for AI in education **is bright**, because technology can personalise and effectively engage the learning experience. As a result, AI has the potential to improve student engagement, learning efficiency, and academic performance.

Benefits of AI :

1. Personalised learning: AI provides information based on the students' need and understanding level, which helps to improve the performance
2. Better understanding of Concepts: AI helps to understand the difficult concepts in very easy terms. Helps students to grasp the difficult subject more effectively.
3. Instant feedback and assessment: AI tools provide quick responses to the topics, assignments, quizzes, test that enable them to identify mistakes and improve continuously.
4. Improvement Presentation Skills: Tools like Grammarly help students to improve language, sentence structure and bring clarity in academics.
5. **Time Management and Productivity:** AI helps students save time in research, provides precise notes and tricks for revision, allowing them to focus more on learning and exam preparation.
6. Increased Student Engagement: AI applications make learning more interactive and engaging, which motivates them to grab more knowledge related to their interest.
7. **Support for Slow Learners:** AI tools provide additional learning support to students who require more time and practice, and help build confidence among them.

Challenges in AI :

1. Overdependence: Excessive reliance on AI tools reduces the creativity, critical thinking and informed decision-making ability among students.
2. Accuracy: Many of the times, AI tools give inaccurate and misleading responses, and students have to rely on the information provided.
3. Ethical concerns: AI-generated information without proper acknowledgement leads to plagiarism and ethical dishonesty.
4. Data privacy and Security: AI tools require personal data for accessing, raising concerns about privacy and data security.
5. Technical expertise: Some educators struggle with technical expertise, spending excessive time and effort trying to adapt AI tools.
6. **Digital Divide:** Paid AI tools and a lack of access to technology may create inequality among students from different socio-economic backgrounds.

Future Trends in AI and Education :

1. Adaptive learning systems: AI will increasingly offer customised learning paths based on individual student abilities, learning styles, and progress.

2. Augmented reality and virtual reality: AI will work together with Augmented Reality (AR) and Virtual Reality (VR) to make learning more engaging and realistic, where students can interact with virtual environments and learn by experiencing concepts instead of just reading or listening.
3. Natural language processing: Natural Language Processing helps AI understand and respond to human language. Advanced AI-Chatbots and virtual assistants will quickly answer students' questions, clear doubts, and provide instant academic support easily and naturally.
4. Increased Focus on AI Ethics and Governance: Future education systems will emphasise ethical AI use, data privacy, and academic integrity.

OBJECTIVES OF THE STUDY :

1. To study the awareness and usage of AI tools among students
2. To analyse the role of AI tools in improving the student academic performance
3. To examine students perception towards effectiveness of AI in education.
4. To identify how AI help students understanding the concepts and improving the learning outcomes.
5. To evaluate the benefits and challenges faced by the students while using AI Applications.

HYPOTHESES OF THE STUDY :

H₀ (Null Hypothesis): There is no significant relationship between the Artificial Intelligence tools and student academic performance.

H₁ (Alternative Hypothesis): There is a significant relationship between the Artificial Intelligence tools and student academic performance.

H₀ (Null Hypothesis): Artificial Intelligence tools does not significantly improve students understanding of academic concepts.

H₁ (Alternative Hypothesis): Artificial Intelligence tools significantly improves students understanding of academic concepts.

LITERATURE REVIEW :

(2025) Holmes, W., & Tuomi has studied that AI technologies and tools affects the learning process in positive manner. It discusses about the issues faced by the students like accuracy, reliability and over dependence while adapting to AI.

(Vivek, 2025)

(2025) Mishra Vivek has studied that future of AI in education depends upon the fair and ethical use, it can enhance academic performance without compromising educational values. A balanced use of AI will help students perform better and prepare them for a technology-driven world.

RESEARCH METHODOLOGY :

The present study represents the descriptive and analytical research design to examine the role of artificial intelligence in enhancing student academic performance. The descriptive research design helps in understanding the student awareness, usage patterns and reliance on the AI tools used for academic purpose. This study is quantitative in nature, as numerical data is collected through structured questionnaire. The responses are analysed using statistical tools. The random sampling technique has been adopted, where each respondent have equal chance of selection. The target group of the study consist of undergraduate students as they actively use AI tools like Grammarly, Chatbots for their academic activities like assignments, presentation and for exam.

Respondent: Data is collected from 87 respondents, which is considered to be adequate.

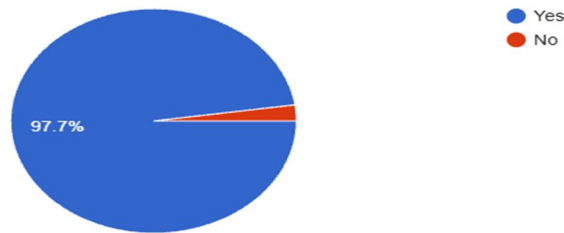
Data Collection Method

Primary Data: It was collected through structured questionnaire designed using Google form to understand the role of AI in developing the overall academic performances.

Secondary Data: Journals, websites, books and research articles used to support the study.

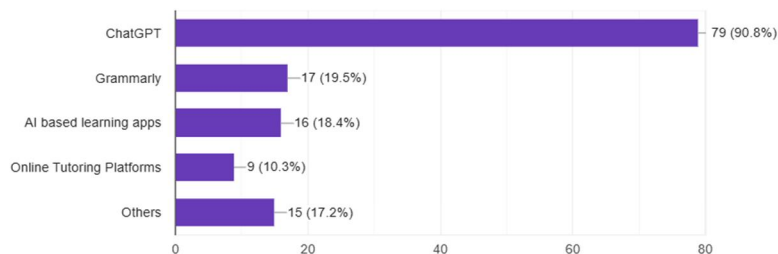
DATA ANALYSIS AND INTERPRETATION :

Are you aware of Artificial Intelligence (AI) tools used in education?
87 responses



The above chart represent the level of awareness of AI tools used in education among the students. Out of 87 respondents, 97.7% students are aware of AI tools used. Whereas 2.3% are not aware. The results clearly indicate that AI has become widely recognised and integrated into educational environment. High awareness also provides a strong base for the effective adoption of AI tools in enhancing academic performance.

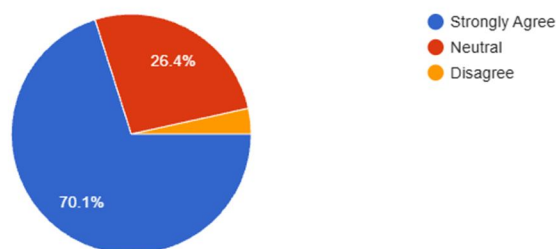
Which AI tools do you use for academic purposes?
87 responses



The above chart represents the AI tools used by the students for academic purposes. Out of 87 respondents, majority of respondents (90.8%) commonly use ChatGPT for Academics. This is followed by Grammarly (19.5%), which improves the language quality and accuracy. 16 Respondents (18.4%) use other AI based learning apps. Where 10.3% rely on Online Tutoring Platforms.

Use of AI tools has improved the quality of my assignments and projects and help me to save time in academic tasks.

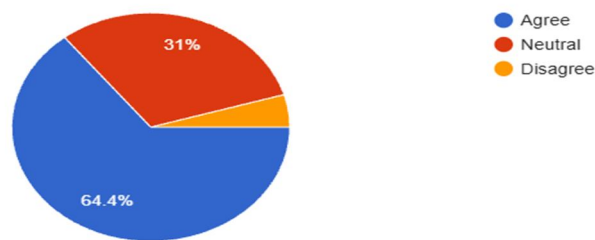
87 responses



The chart shows the student opinions on the use of AI tools has improved the quality of their assignments and projects and help them to save time in academic tasks. Out of 87 respondents, 70.1% strongly agree. About **26.4%** of respondents expressed a **neutral** opinion, indicating moderate or situational benefits of AI usage.

Heavy dependence on AI tools reduced students critical thinking, creativity, and independent problem-solving skills.

87 responses



The chart represents the heavy dependence on AI tools reduced students critical thinking, creativity and independent problem solving skills. Out of 87 respondents, a majority (64.4%) agree that excessive use reduces the ability to think creatively and negatively affects the cognitive skills. **31%** of respondents expressed a **neutral** opinion. Only a **small percentage** of respondents **disagree**, suggesting that very few students believe AI does not affect their thinking abilities. This indicates the need for **balanced and responsible use of AI**.

FINDINGS :

That majority of students are aware of AI tools used in education. Most commonly used AI tools are ChatGpt, followed by Grammarly and other online tutoring platforms. AI helps to understand the difficult concepts in simple terms, which enhances the confidence about subject. It helps to improve the quality and accuracy of the assignments and ultimately reducing the time spent on academic tasks. Students have faced major issues related to incorrect, inaccurate or confusing information generated through AI app and paid subscription act as a barriers to the effectiveness use of AI tools. Many students are not aware about the ethical guidelines for usage of AI in academics and express a need for proper training to upgrade their skills. Overall, AI tools are beneficial for academic productivity, but it also possesses drawbacks like overdependence, reduced critical thinking, creativity and other cognitive skills.

CONCLUSION :

The study concludes that Artificial Intelligence plays an important role in framing and enhancing the students overall academic performance. AI has significantly contributed to enhance the understanding of academic concepts. It has positive impact on assignment quality, accuracy and effectiveness in work. However the study also highlights the challenges such as over dependency, data security, reduced critical thinking and limited access due to paid subscriptions. Proper institutional training on ethical and effective use of AI will not only enhance student academic skills but also prepare them for professional exposure and future job opportunities. When used thoughtfully, AI can serve as a powerful support system that enhances learning without compromising educational values.

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Digital Workforce Transformation and the Vision of Viksit Bharat @ 2047 : A Descriptive Review of Technology-Driven HR Ecosystems in India

Shri. Patil Vaibhav Vijay

Ph.D. Research Scholar,

Department of Commerce and Management, Shivaji University, Kolhapur.

vaibhavpatil.bagani@gmail.com

Abstract:

India's vision of Viksit Bharat @ 2047 highlights the importance of digital transformation, skilled human resources and sustainable economic development. Human capital is recognised as a key driver in achieving this national goal. In recent years, digital workforce transformation through technology-driven human resource ecosystems has gained attention as an important enabler of productivity, employability and organizational efficiency. This paper presents a descriptive review of digital HR transformation in the Indian context, based entirely on secondary data.

The study aims to examine the role of emerging HR technologies such as artificial intelligence, HR analytics, automation and cloud-based HR systems in shaping the future workforce of India. It focuses on how digital HR ecosystems support talent development, performance management, employee engagement and data-driven decision-making. The paper also explores how these practices align with broader national objectives related to employment generation, ease of doing business and global competitiveness.

The study is based on an extensive review of secondary sources, including published research articles, government policy documents, economic surveys, NITI Aayog reports, industry reports and credible institutional publications. The descriptive approach helps in understanding current trends, opportunities and challenges related to digital HR adoption across Indian organizations. No primary data is used, making the study conceptual and analytical in nature.

The review indicates that digital HR systems play a significant role in building a future-ready workforce by improving efficiency, transparency and continuous skill development. However, challenges such as digital skill gaps, uneven technology adoption, data privacy concerns and organizational readiness continue to limit widespread implementation.

The paper concludes that strengthening digital HR ecosystems is essential for long-term workforce development in India. A focused policy approach and institutional support can help align digital workforce transformation with the vision of Viksit Bharat @ 2047.

Keywords: Digital Workforce Transformation; Human Resource Ecosystems; Digital HR Practices; Viksit Bharat @ 2047; Human Capital Development; Technology and Nation Building

Introduction

India is moving towards the vision of *Viksit Bharat @ 2047*, which aims to make the country developed, inclusive and globally competitive by the centenary year of independence. Achieving this vision requires strong economic growth supported by a skilled and adaptable workforce. In this process, digital transformation plays a vital role. Human resource management is an important function that directly influences workforce quality, productivity and employability.

In recent years, the use of digital technologies such as artificial intelligence, automation, data analytics and cloud-based systems has changed traditional HR practices. These technologies have led to

the development of technology-driven HR ecosystems that support efficient workforce management and informed decision-making. Digital HR systems also promote continuous learning and skill development, which are essential in a fast-changing work environment.

At the national level, initiatives such as Digital India and Skill India highlight the importance of technology-led workforce development. Therefore, understanding digital workforce transformation is necessary to align organizational HR practices with the broader national goal of *Viksit Bharat @ 2047*. This paper presents a descriptive review based on secondary data to examine this transformation.

Review of Literature

1. Digital Transformation and Human Resource Management

Several studies highlight that digital transformation has significantly changed traditional human resource management practices. Researchers have noted that the adoption of digital technologies enables HR departments to move from administrative roles to strategic partners within organizations (Ulrich, 2017). Digital HR systems improve efficiency, accuracy and speed in managing workforce-related activities (Bondarouk & Brewster, 2016). The literature also suggests that digital HR transformation is essential for organizations to remain competitive in a rapidly changing business environment (Marler & Fisher, 2013).

2. Technology-Driven HR Ecosystems

Technology-driven HR ecosystems refer to the integrated use of tools such as artificial intelligence, HR analytics, cloud platforms and automation across HR functions. Studies indicate that such ecosystems support data-driven decision-making and improve workforce planning and performance management (Bersin, 2018). According to Kavanagh et al. (2019), digital HR ecosystems enhance transparency and employee engagement by providing real-time access to HR information.

3. Digital Workforce Transformation and Skill Development

Literature emphasizes that digital workforce transformation plays a critical role in skill development and employability. The World Economic Forum (2020) reports that digital skills are becoming essential for future jobs. Continuous learning supported by digital HR platforms helps employees adapt to technological and economic changes (OECD, 2019). Indian policy documents also stress the importance of reskilling and upskilling to harness the demographic dividend (NITI Aayog, 2021).

4. Digital HR and Organizational Performance

Several studies report a positive relationship between digital HR adoption and organizational performance. Improved productivity, better talent retention and faster decision-making are commonly observed outcomes (Stone et al., 2015). Digital HR practices also support flexible work systems and improve employee satisfaction (Parry & Strohmeier, 2014).

5. Policy Perspective and Viksit Bharat @ 2047

Government reports underline that digital transformation of human capital is vital for achieving India's long-term development goals. Initiatives such as Digital India and Skill India focus on technology-led workforce development (Government of India, 2022). NITI Aayog emphasizes the role of digital HR systems in building a future-ready workforce aligned with the vision of *Viksit Bharat @ 2047* (NITI Aayog, 2023).

Objectives of the Study

1. To study the concept of digital workforce transformation in Indian organizations.

2. To examine the role of technology-driven HR ecosystems in workforce development.
3. To analyse the contribution of digital HR practices towards *Viksit Bharat @ 2047*.
4. To review policy documents and research literature related to digital HR in India.
5. To identify key opportunities and challenges in digital HR adoption.

Scope of the Study :

The present study is descriptive and conceptual in nature and is based entirely on secondary data. The scope of the study is limited to the review and analysis of published research papers, government policy documents, economic surveys, NITI Aayog reports and industry publications related to digital workforce transformation in India. The study focuses on technology-driven human resource practices such as artificial intelligence, HR analytics, automation and cloud-based HR systems. It does not involve primary data collection or organization-specific empirical analysis.

Research Methodology :

The present study adopts a descriptive and conceptual research design based entirely on secondary data. The objective of the study is to understand digital workforce transformation and technology-driven human resource ecosystems in India in the context of *Viksit Bharat @ 2047*. No primary data has been collected for this research.

Secondary data has been collected from a wide range of reliable and authentic sources. These include published research articles from national and international journals, conference papers, government policy documents, Economic Survey of India, NITI Aayog reports, Digital India publications, industry reports and reports from reputed national and international institutions. Relevant books and online databases have also been referred to for conceptual clarity.

The collected data has been analysed using qualitative descriptive and thematic analysis. Key themes such as digital HR practices, workforce transformation, skill development, productivity and implementation challenges have been identified and examined. The study mainly focuses on literature and reports published during the last ten years to ensure relevance to the current technological and policy environment. The findings are interpreted based on patterns and insights emerging from existing studies.

Findings and Discussion :

The review of existing literature shows that digital workforce transformation has become an important driver of organizational efficiency and workforce development in India. Studies indicate that technology-driven HR ecosystems improve accuracy, transparency and speed in HR processes such as recruitment, training, performance appraisal and employee engagement. The use of digital tools like HR analytics and cloud-based systems supports data-based decision-making and better workforce planning.

The literature also highlights that digital HR practices play a significant role in skill development and continuous learning. Digital learning platforms and automated training systems help employees update their skills and remain employable in a changing work environment. This supports national priorities related to productivity and employment generation.

However, several challenges are also reported. Uneven adoption of digital HR systems, lack of digital skills, resistance to change and concerns related to data privacy and security remain major issues. Small and medium organizations face greater difficulties due to limited resources and infrastructure.

Overall, the literature suggests that while digital HR ecosystems offer strong benefits, supportive policies, digital literacy and organizational readiness are essential for effective implementation in line with the vision of *Viksit Bharat @ 2047*.

Conclusion :

The objectives of the present study have been achieved through a systematic review and analysis of secondary data. The study has successfully explained the concept of digital workforce transformation in the Indian context by reviewing existing research and policy documents. It has examined the role of technology-driven human resource ecosystems in workforce development and highlighted their relevance to productivity, skill development and organizational efficiency. The study has also analysed the contribution of digital HR practices towards the vision of *Viksit Bharat @ 2047* by linking digital transformation with national development initiatives. Further, the review has identified key opportunities such as improved efficiency and continuous learning, as well as challenges including digital skill gaps and data security concerns. Thus, all stated objectives of the study have been adequately addressed and fulfilled.

The study concludes that digital workforce transformation through technology-driven human resource ecosystems is an important factor in achieving India's development vision of *Viksit Bharat @ 2047*. The review of literature shows that digital HR practices support workforce productivity, skill development and organizational efficiency. These practices also help organizations respond effectively to changing economic and technological conditions. However, challenges such as digital skill gaps, uneven technology adoption and data security concerns continue to limit their full potential. Therefore, a balanced approach that combines technology adoption with skill development and supportive policies is necessary. Strengthening digital HR ecosystems can contribute meaningfully to building a future-ready and inclusive workforce for India.

Policy Suggestions :

To support the vision of *Viksit Bharat @ 2047*, a focused policy approach is required to strengthen digital workforce transformation in India. Government agencies should promote digital skill development through continuous training and reskilling programmes. Incentives may be provided to encourage organizations, especially small and medium enterprises, to adopt digital HR systems. Clear guidelines for data privacy and cybersecurity must be strengthened to build trust in digital HR platforms. Collaboration between government, industry and educational institutions can help create a future-ready workforce aligned with national development goals.

Limitations of the Study :

The present study is based entirely on secondary data and does not include primary data collection or field-based analysis. The findings depend on the availability, quality and reliability of existing literature, government reports and policy documents. The study does not provide organization-specific or sector-wise empirical evidence. Since the research is descriptive in nature, it does not involve statistical testing or measurement of cause-and-effect relationships. Therefore, the conclusions drawn are conceptual and interpretative.

Future Scope of Research :

Future research may include primary data collection from organizations across different sectors to examine the practical impact of digital HR practices on workforce performance. Comparative studies

between regions, industries, or organizational sizes can provide deeper insights. Quantitative studies using statistical tools may be conducted to measure the relationship between digital HR adoption and productivity outcomes. Further research may also focus on emerging technologies such as artificial intelligence ethics, data governance and the role of digital HR in inclusive employment for achieving *Viksit Bharat @ 2047*.

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Cyber Security and Data Privacy in Digital India

Apurva V. Patil

(MCA – Computer Application)

Assistant Professor, Vivekanand College, Kolhapur.

Email ID: apurvasalokhe1999@gmail.com

ABSTRACT:

The rapid expansion of Digital India has transformed governance, commerce, healthcare, education, and financial services through increased Internet penetration, cloud computing, and data-driven technologies. Although these advancements have improved efficiency and accessibility, they have also intensified cybersecurity threats and data privacy concerns. This research paper examines the evolving cyber security landscape in India, highlighting key challenges such as cybercrime, data breaches, identity theft, ransomware attacks, and vulnerabilities in critical digital infrastructure. It also analyzes India's legal and regulatory framework, including the Information Technology Act of 2000 and emerging data protection policies, to assess their effectiveness in safeguarding personal and sensitive data. Furthermore, this study explores the role of emerging technologies, such as artificial intelligence, blockchain, and encryption, in strengthening cyber resilience. By evaluating current practices and proposing strategic recommendations, this study emphasizes the need for robust cybersecurity mechanisms, enhanced public awareness, and comprehensive data protection laws to ensure a secure and trustworthy digital ecosystem in India.

Keywords: Information Technology (IT), Artificial Intelligence (AI), Information and Communication Technology (ICT), Unified Payments Interface (UPI), Bharat Interface Of Money (BHIM), Internet of Thing (IoT), Distributed Denial of Service (DDoS), Computer Emergency Response Team (CERT).

1. INTRODUCTION:

The Digital India initiative, launched by the Government of India, aims to transform the nation into a digitally empowered society and knowledge-based economy through the widespread adoption of technologies such as e-governance platforms, digital payments, cloud services, social media, and mobile applications. While this rapid digitalization has enhanced efficiency, transparency, and accessibility across key sectors, including banking, healthcare, education, and public administration, it has also given rise to significant cybersecurity risks and data privacy challenges. The increasing frequency and sophistication of cyber threats, such as malware, phishing, ransomware, data breaches, and identity theft, have made cyber security a critical concern, particularly as India stands among the world's largest digital markets and remains vulnerable to attacks on personal data, financial systems, and critical information infrastructure. Simultaneously, the large-scale collection, processing, and storage of personal and sensitive data by public and private entities has intensified concerns related to consent, data ownership, surveillance, and cross-border data flows. Although legal mechanisms, such as the Information Technology Act of 2000, and emerging data protection frameworks exist, gaps in enforcement, awareness, and technological preparedness persist. In this context, this study examines the cyber security and data privacy landscape in Digital India by analyzing prevailing threats, regulatory frameworks, and technological measures, while proposing strategic solutions to strengthen cyber resilience and ensure effective protection of personal data in an increasingly digital society.

2. REVIEW OF LITERATURE:

1. Kumar and Bansal (2024) examine cybersecurity resilience within the Digital India framework, identifying critical challenges such as infrastructural vulnerabilities, threats to digital payment systems, and low public awareness of cyber risks, and propose strategic measures to enhance resilience.
2. Raza's (2025) research on cyber security and data privacy in e-governance emphasizes that while digital governance improves service delivery, it concurrently creates expanded attack surfaces for cybercrime and raises serious privacy concerns due to inadequate protective mechanisms in government ICT systems.
3. Gupta & Gupta (2025) analyze India's evolving cyber security legal framework, identifying overlaps, regulatory gaps, and implementation challenges in existing laws such as the Information Technology Act, highlighting the need for clearer statutory guidelines to protect data privacy effectively.
4. Additional studies underscore the importance of cybersecurity education and awareness programs, especially in rural and underserved regions, as essential for fostering protective behaviors and improving digital privacy outcomes.

3. IMPORTANCE OF STUDY:

1. The study of cyber security and data privacy is crucial in the context of Digital India because of the rapid digital transformation and increased dependence on technology-driven services.
2. Digital platforms are now integral to governance, commerce, healthcare, education, and financial systems, making the protection of digital assets and personal data essential to their use.
3. This study helps in understanding the nature and scale of the cyber threats faced by India.
4. This highlights the risks related to data breaches, cybercrimes, and unauthorized access to sensitive information.
5. Cybersecurity is closely linked to national security and economic stability.

4. OBJECTIVES:

- To analyse the current cyber security landscape in India and identify major cyber threats and vulnerabilities affecting digital platforms.
- To examine the impact of cyber security breaches and data privacy violations on individuals, organizations, and national security.
- To identify the challenges faced by the government and private sectors in implementing cyber security and data protection measures.

5. METHODOLOGY:

A. Identify & Analysis

The Digital India initiative marks a significant shift toward a technology-driven and inclusive governance framework. By expanding digital infrastructure, online public services, and digital literacy, India has increased its dependence on information and communication technologies (ICTs). However, this rapid digital transformation has also intensified concerns related to cyber security and data privacy, making them essential for the sustainability, trust, and credibility of Digital India.

1) Identification of Cyber Security in Digital India

1.1 Concept of Cyber Security

Cyber security refers to the protection of digital systems, networks, applications, and data from cyber threats such as unauthorized access, cyber-attacks, data breaches, and system disruptions. Within

Digital India, cyber security plays a vital role in safeguarding both national digital infrastructure and citizen-oriented digital services.

1.2 Cyber Security Landscape in Digital India

The Digital India ecosystem comprises e-governance platforms such as Aadhaar, DigiLocker, and UMANG, digital payment systems like UPI and BHIM, cloud computing infrastructure, data centers, and smart city initiatives based on IoT technologies. These platforms process vast volumes of sensitive data, making them attractive targets for cyber attackers.

1.3 Cyber Threats in Digital India

Major cyber threats identified in Digital India include phishing and social engineering attacks that target citizens through fake emails, messages, and applications. Ransomware attacks have affected government offices, hospitals, and enterprises, while malware and spyware are commonly used to steal financial and personal data. Additionally, Distributed Denial of Service (DDoS) attacks disrupt essential digital services, and identity theft involves the misuse of Aadhaar-linked and financial information.

1.4 Institutional and Legal Mechanisms

India's cyber security framework includes the Information Technology Act, 2000, CERT-In, the National Cyber Security Policy, and sector-specific security guidelines. Despite these measures, enforcement remains inconsistent, and preparedness levels vary across sectors.

2. Analysis of Cyber Security in Digital India

2.1 Impact of Rapid Digitalization

India's rapid digital adoption has outpaced the development of cyber security capabilities. Although digital platforms have improved efficiency and service delivery, insufficient security controls have expanded the attack surface. This imbalance between digital growth and cyber resilience increases vulnerability to cybercrime, threatening economic stability and public trust.

2.2 Infrastructure and Capacity Challenges

Many digital systems continue to rely on outdated infrastructure, while the country faces a significant shortage of skilled cyber security professionals. In addition, limited cyber risk assessments and security audits reduce preparedness. As a result, cyber security efforts in India are often reactive, focusing on incident response rather than proactive prevention.

2.3 Governance and Coordination Issues

Cyber security responsibilities are distributed across multiple government agencies and departments, leading to coordination challenges. Fragmented governance weakens national cyber defence mechanisms and delays effective responses to large-scale cyber incidents.

3. Identification of Data Privacy in Digital India

3.1 Concept of Data Privacy

Data privacy involves protecting personal and sensitive information to ensure it is collected, processed, stored, and shared lawfully, transparently, and with informed consent. In Digital India, data privacy is central to maintaining citizens' trust in digital services.

3.2 Sources of Data Collection

Large volumes of personal data are collected through Aadhaar and digital identity systems, digital payment and fintech platforms, e-commerce and social media services, and online health, education, and welfare portals.

3.3 Data Privacy Concerns

Key data privacy concerns include excessive data collection without clear purpose limitation, weak consent mechanisms, frequent data breaches, unauthorized data sharing, and risks of surveillance and profiling. Cross-border data transfers further complicate data protection efforts.

3.4 Regulatory Environment

India's data privacy framework has largely relied on the Information Technology Act, 2000, which provides limited privacy protections. Although several data protection frameworks have been proposed, India has historically lacked a comprehensive and enforceable data protection law comparable to international standards.

4. Analysis of Data Privacy in Digital India

4.1 Consent and User Awareness

Most users have limited awareness of how their personal data is collected, stored, and used. Consequently, consent mechanisms often remain symbolic, reducing individual control over personal data and increasing the risk of misuse.

4.2 Innovation versus Privacy

While Digital India prioritizes innovation, efficiency, and service delivery, privacy safeguards are sometimes overlooked. The absence of strong privacy-by-design principles can lead to the erosion of individual rights and long-term loss of public trust.

4.3 Surveillance and State Responsibility

Large-scale data collection by the state raises concerns about surveillance and proportionality. Without robust oversight and accountability mechanisms, data-driven governance may conflict with constitutional rights to privacy.

5. Interrelationship Between Cyber Security and Data Privacy

Cyber security and data privacy are closely interconnected. Weak cyber security systems increase the likelihood of data breaches, while inadequate data privacy governance amplifies the impact of cyber incidents. A secure digital ecosystem therefore requires both strong cyber defence's and effective privacy protections. Addressing one without the other creates systemic vulnerabilities within Digital India.

B. Case Study

The Aadhaar-based digital identity system serves as a critical component of India's Digital India initiative, enabling access to welfare schemes, banking, and e-governance services. While Aadhaar has improved service delivery and financial inclusion, it has also raised significant cyber security and data privacy concerns. Instances of unauthorized access and data leaks, primarily through third-party service providers and poorly secured databases, exposed vulnerabilities within the broader digital ecosystem. Additionally, phishing attacks and identity fraud targeting Aadhaar-linked services highlighted gaps in user awareness and cyber hygiene. The lack of clear consent mechanisms and limited transparency in data usage further intensified privacy concerns, particularly regarding surveillance and profiling risks. Although the government introduced measures such as virtual IDs, masked Aadhaar, and strengthened cyber incident response through CERT-In, these steps were largely reactive. This case demonstrates that the rapid expansion of digital public infrastructure without proportionate cyber security and data protection safeguards can undermine citizen trust, emphasizing the need for integrated cyber resilience and robust data privacy frameworks within Digital India.

C. Comparative Analysis

C.1. Positive Impact of Cyber Security and Data Privacy in Digital India

1. Strengthening Trust in Digital Governance

Effective cyber security measures and data privacy protections enhance citizen trust in digital platforms such as Aadhaar, UPI, DigiLocker, and e-governance portals. Secure systems encourage wider adoption of digital services, which is essential for the success of Digital India.

2. Protection of National Digital Infrastructure

Robust cyber security safeguards critical infrastructure, including banking systems, power grids, healthcare platforms, and government databases. This protection reduces the risk of cyber espionage, cyber terrorism, and large-scale service disruptions, thereby supporting national security.

3. Economic Growth and Innovation

Strong data privacy and cyber security frameworks create a safer digital environment for businesses, fintech startups, and global investors. Secure digital ecosystems promote innovation, digital entrepreneurship, and cross-border trade while ensuring responsible data usage.

4. Empowerment of Citizens

Data privacy protections give individuals greater control over their personal information. Secure authentication systems and privacy safeguards reduce identity theft and financial fraud, empowering citizens to participate confidently in the digital economy.

C.2. Negative Impact of Cyber Security and Data Privacy in Digital India

1. Increased Compliance and Implementation Costs

Implementing advanced cyber security infrastructure and data protection mechanisms requires significant financial and technical investment. Small businesses and startups may face challenges in meeting compliance requirements, potentially slowing innovation.

2. Restrictions on Data Utilization

Strict data privacy regulations can limit data sharing and analytics, affecting sectors such as artificial intelligence, healthcare research, and digital marketing. Excessive regulation may reduce the efficiency of data-driven governance and innovation.

3. Digital Exclusion Risks

Complex security procedures, such as multi-factor authentication and consent mechanisms, may pose difficulties for digitally illiterate populations. This can unintentionally exclude vulnerable groups from accessing essential digital services.

4. Surveillance and Misuse Concerns

Despite security frameworks, large-scale data collection by the state raises concerns about potential surveillance and misuse of personal data. Inadequate oversight and accountability can undermine constitutional privacy rights and public confidence.

D. Challenges Identifications

D1.1. Challenges:

1. Rapid Digitalization Outpacing Security Readiness

The Digital India initiative has accelerated the adoption of online services, such as e-governance, digital payments, cloud computing, and mobile applications. However, the speed of digital transformation has often exceeded the development of a robust cybersecurity infrastructure. Many government departments, small businesses, and startups lack adequate security frameworks, rendering them vulnerable to cyber threats.

2. Increase in Cybercrime and Sophisticated Attacks

India has witnessed a sharp rise in cybercrimes, including phishing, ransomware, identity theft, financial fraud and cyber espionage. Attackers increasingly use advanced techniques, such as social engineering, artificial intelligence-based attacks, and zero-day vulnerabilities. This growing sophistication challenges existing detection and response mechanisms.

3. Low Cybersecurity Awareness and Digital Literacy

A significant portion of India's population is now connected to the internet. Limited awareness of safe online practices, weak password habits, and a lack of understanding of privacy risks make users easy targets. Cyber hygiene education remains insufficient, particularly in rural and semi-urban areas of the country.

4. Data Privacy Concerns and Personal Data Misuse

The massive collection of personal data through platforms such as Aadhaar, digital health records, fintech apps, and e-commerce services raises serious privacy issues. Unauthorized data sharing, profiling, and surveillance threaten individual privacy, particularly in the absence of strong user consent mechanisms.

5. Inadequate Legal and Regulatory Frameworks

Although India has introduced data protection initiatives, their enforcement remains a challenge. Gaps exist in the clarity of data ownership, cross-border data transfers, breach notifications, and accountability. Delays in implementation and limited institutional capacity weaken the effectiveness of the data protection laws.

D2.2 Limitations:

1. Fragmented Policy Implementation

Although India has introduced multiple cybersecurity and data protection policies, their implementation remains fragmented across different states and sectors. The lack of uniform standards and coordination among regulatory bodies reduces the effectiveness of national cyber security initiatives.

2. Weak Enforcement Mechanisms

Existing cybersecurity and data protection laws have limited enforcement capabilities. Inadequate monitoring, low penalties, and slow legal processes reduce accountability for data breaches and cyber negligence, allowing violations to go unreported or unresolved.

3. Insufficient Data Privacy Safeguards

Many digital platforms collect extensive personal data without transparent consent mechanisms. Users often have limited control over how their data are stored, processed, or shared, highlighting weak privacy-by-design and privacy-by-default practices.

4. Limited Institutional Capacity

Government institutions responsible for cybersecurity and data protection face resource constraints, including a lack of skilled personnel, modern tools, and funds. This limits their ability to conduct audits, investigate breaches, and enforce compliance with data protection regulations.

5. Overdependence on Legacy Infrastructure

A significant portion of public-sector digital infrastructure relies on outdated systems that lack modern encryption, real-time monitoring, and automated threat-detection capabilities. This dependency restricts the adoption of advanced cybersecurity solutions.

D.2. Future Scope of Cyber Security and Data Privacy in Digital India

1. Advanced Threat Detection and AI Integration:

AI, machine learning, and predictive analytics can be used for real-time threat detection and automated monitoring.

2. Strengthening Legal and Regulatory Frameworks:

Continuously update laws, such as the IT Act, 2000, and Digital Personal Data Protection Act, 2023, to address emerging threats.

3. Cloud and IoT Security:

Secure cloud systems, IoT devices, and smart infrastructure using new protocols and frameworks.

4. Cybersecurity Awareness and Education:

Promote digital literacy, cyber hygiene, and awareness programs among citizens, organizations, and government employees.

5. Privacy-preserving Technologies:

Implement encryption, blockchain, and other privacy-enhancing tools for safe and ethical data sharing.

6. Public-Private Collaboration:

Foster cooperation between the government, private sector, and academia for resilient security solutions and threat intelligence sharing.

6. CONCLUSION

The Digital India initiative has revolutionized governance, business, and social services, enhancing efficiency and accessibility; however, it has also increased India's exposure to cyber threats and data privacy risks. As digital platforms become central to critical sectors such as finance, healthcare, education, and e-governance, robust cyber security and data privacy measures are essential. Cybersecurity is not only a technical issue but also a matter of national security, economic stability, and public trust. Although legal frameworks such as the IT Act, 2000, and the Digital Personal Data Protection Act, 2023, provide a foundation, gaps in enforcement and public awareness remain. Effective protection requires collaboration between the government, private organizations, and citizens, along with stronger laws, advanced infrastructure, digital literacy, and ethical data governance. Strengthening these areas is crucial for safeguarding digital assets, protecting personal data, and ensuring the long-term success and resilience of India.

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**SECTORAL DEVELOPMENT AND TRANSFORMATION : A COMMERCE AND
MANAGEMENT PERSPECTIVE ON BUSINESS STRATEGY,
PRODUCTIVITY, AND COMPETITIVE GROWTH**

Dr. Nital Kothari

Department of Commerce, Jai Hind College, Mumbai

Abstract

Sectoral development and transformation significantly influence business performance, managerial decision-making, investment strategies, and organisational competitiveness. Structural shifts across agriculture, manufacturing, and services are no longer driven solely by economic growth but increasingly by technological innovation, market dynamics, global value chains, and strategic management practices. From a commerce and management perspective, sectoral transformation reshapes business models, workforce requirements, supply chains, and competitive positioning of firms.

This research paper examines sectoral development through the lens of commerce and management, focusing on how businesses and industries adapt to sectoral shifts. The study analyses managerial drivers of sectoral transformation, including innovation, productivity enhancement, digital integration, and strategic diversification. Using a descriptive research design based on secondary data, the paper presents structured tabular analysis to evaluate sector-wise business implications, managerial challenges, and strategic opportunities. The study concludes by proposing management-driven pathways for sustainable and competitive sectoral development.

Keywords: Sectoral Development, Business Transformation, Management Strategy, Productivity, Competitive Advantage, Industrial Growth, Services Management

Significance of the Study

From a commerce and management standpoint, sectoral development determines market opportunities, investment attractiveness, employment patterns, and profitability across industries. Businesses do not operate in isolation; their performance is deeply influenced by sectoral growth trends, policy orientation, technological intensity, and consumer demand shifts. Managers must therefore understand sectoral transformation to design resilient strategies and allocate resources efficiently.

The study is significant for commerce students, management professionals, entrepreneurs, and policymakers as it bridges macro-level sectoral change with micro-level business decision-making. It highlights how sectoral transformation affects organisational structures, operational processes, human resource management, and long-term competitiveness. The paper also supports curriculum requirements in commerce, business management, strategic management, and industrial economics.

Review of Related Studies

Porter (2020) emphasised that sectoral competitiveness is shaped by productivity, innovation capacity, and firm-level strategies rather than factor endowments alone. His work highlights the role of management practices in sectoral success.

Prahalad and Krishnan (2021) examined how sectoral transformation is increasingly driven by digital business models, value chain integration, and customer-centric strategies.

McKinsey Global Institute (2023) reported that sectoral productivity growth depends heavily on managerial capability, technology adoption, and workforce upskilling.

Kotler and Keller (2022) highlighted that changes in sectoral structure influence marketing strategies, consumer behaviour, and competitive positioning of firms.

Objectives of the Study

1. To examine sectoral development from a commerce and management perspective.
2. To analyse how sectoral transformation impacts business strategy and organisational performance.
3. To identify managerial drivers influencing sectoral competitiveness and growth.
4. To study challenges faced by firms during sectoral transformation.
5. To suggest strategic management measures for sustainable sectoral development.

Hypotheses

H₁ : Sectoral transformation positively influences firm productivity and competitive advantage.

H₂ : Effective management practices enhance organisational adaptability during sectoral shifts.

Delimitation of the Study

- The study focuses on commerce- and management-related implications of sectoral development.
- It is based exclusively on secondary data.
- The analysis does not include firm-specific financial modelling.

Population and Sample

The population of the study includes business organisations operating across primary, secondary, and tertiary sectors.

As the study is descriptive in nature, no primary sampling is undertaken. The research relies on academic literature, industry reports, and management studies.

Tools Used

- Strategic and comparative analysis
- Management frameworks and sectoral models
- Tabular representation for clarity

Statistical Techniques Used

Comparative analysis and percentage-based interpretation are used wherever sectoral data trends are discussed.

Analysis of Data

Table – 1
Sectoral Development and Business Orientation

Sector	Business Focus	Managerial Priority
Primary	Resource efficiency	Cost & sustainability
Secondary	Manufacturing & processing	Productivity & quality
Tertiary	Services & knowledge	Customer experience

Table – 2
Managerial Drivers of Sectoral Transformation

Driver	Management Implication
Technology adoption	Process optimisation
Innovation capability	Product differentiation
Market integration	Competitive expansion
Skill development	Workforce productivity
Strategic investment	Long-term growth

Table – 3
Sectoral Transformation and Business Outcomes

Outcome	Business Impact
Higher productivity	Cost competitiveness
Diversified revenue	Risk mitigation
Digital integration	Operational agility
Value chain expansion	Market reach

Extended Results and Discussion

Sectoral development has increasingly become a strategic concern for business organisations rather than merely a policy issue. Firms operating within transforming sectors must continuously adapt their business models, operational structures, and managerial approaches. For instance, agribusiness firms are moving beyond traditional production to value-added processing, branding, and supply chain integration. Manufacturing enterprises are adopting automation, lean management, and digital manufacturing systems to remain competitive. Service-sector organisations are leveraging data analytics, platform-based models, and customer-centric innovations.

From a management perspective, sectoral transformation requires strategic foresight and organisational flexibility. Managers must anticipate sectoral trends and align internal capabilities accordingly. Investment decisions, technology adoption, and human resource planning play a crucial role in determining whether firms can successfully navigate sectoral shifts.

The findings indicate that organisations with proactive management practices and innovation-oriented cultures are better positioned to capitalise on sectoral transformation. Conversely, firms that fail to adapt experience declining competitiveness and market relevance.

Challenges in Sectoral Transformation for Businesses

Table – 4
Business Challenges and Managerial Implications

Challenge	Managerial Impact
Rapid technological change	Skill obsolescence
Cost pressures	Margin compression
Market volatility	Strategic uncertainty
Regulatory complexity	Compliance burden
Global competition	Competitive intensity

Sectoral transformation often creates transitional pressures for firms. Rapid technology adoption may outpace workforce skills, while global competition intensifies pricing pressures. Effective change management is therefore critical.

Strategic Implications for Commerce and Management

Sectoral development requires firms to adopt adaptive management strategies. Strategic planning must incorporate sectoral trend analysis, competitive intelligence, and risk assessment. Human resource management should focus on reskilling and performance alignment. Marketing strategies must respond to changing consumer expectations influenced by sectoral evolution.

Businesses that align sectoral opportunities with internal capabilities achieve sustainable competitive advantage. Sectoral transformation thus becomes a management-led process rather than an external economic phenomenon.

Recommendations

- Organisations should integrate sectoral analysis into strategic planning processes.
- Continuous innovation and technology adoption must be prioritised.
- Skill development initiatives should align with sector-specific requirements.
- Firms should diversify products and markets to manage sectoral risks.
- Collaboration across value chains should be strengthened.

Conclusion

From a commerce and management perspective, sectoral development and transformation are critical determinants of business success, competitiveness, and sustainability. Sectoral shifts influence organisational strategies, operational efficiency, and market positioning. Firms that proactively respond to sectoral transformation through strategic management, innovation, and workforce development are better equipped to achieve long-term growth. Sectoral development is therefore not merely an economic transition but a management-driven process shaping the future of business enterprises.

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वाढत्या शहरीकरणाचा मानसिक आरोग्यावर होणारा परिणाम : एक अभ्यास

डॉ.पुरुषोत्तम परीट.

सहयोगी प्राध्यपक मानसशास्त्र विभाग

राजर्षी छत्रपती शाहू कॉलेज, कोल्हापूर.

सारांश:

वाढत्या शहरीकरण ही आधुनिक युगाची एक परिभाषित जागतिक घटना आहे, जी सामाजिक संरचना, जीवनशैली आणि मानसिक अनुभवांना आकार देते. शहरी वाढ आर्थिक विकास, सुधारित पायाभूत सुविधा आणि सेवांमध्ये वाढ होण्यास हातभार लावते, परंतु ती महत्त्वपूर्ण मानसिक आव्हाने देखील निर्माण करते. हे पेपर मानसिक आरोग्य परिणाम, पर्यावरणीय ताणतणाव, सामाजिक संबंध आणि असुरक्षित लोकसंख्या यावर लक्ष केंद्रित करून वाढत्या शहरीकरणाच्या मानसिक परिणामांचे परीक्षण करतो. सदर अभ्यास हा अनुभवजन्य संशोधन आणि सैद्धांतिक दृष्टिकोन यावर आधारित असून सामाजिक अलगाव आणि जीवनशैलीतील बदल ताण, प्रदूषण, गर्दीचिंता, नैराश्य आणि इतर मानसिक आरोग्य समस्यांना यावर प्रकाश टाकतो. हे पेपर आरोग्यसेवा, शिक्षण आणि सामाजिक गतिशीलता यासारख्या शहरी राहणीमानाच्या संभाव्य मानसिक फायद्यांना मान्यता देण्यासाठी उपयुक्त आहे. दिवसेंदिवस वेगाने वाढणाऱ्या शहरांमध्ये मानसिक आरोग्य कमी करून मानसिक कल्याणाला प्रोत्साहन देण्यासाठी मानसिक आरोग्य-आधारित हस्तक्षेपांच्या गरजेवर भर देऊन हे पेपरचा शेवट करतो. संवेदनशील शहरी नियोजन आणि समुदाय

कीवर्ड शहरीकरण : , मानसिक आरोग्य, ताणतणाव, मानसिक कल्याण, शहरी वातावरण

प्रस्तावना :

शहरीकरण म्हणजे अशी प्रक्रिया ज्याद्वारे लोकसंख्येचा वाढता भाग शहरी भागात राहतो गेल्या काही दशकांमध्ये, वाढत्या शहरीकरण हा एक प्रमुख जागतिक ट्रेड बनला आहे, विशेषतः विकसनशील देशांमध्ये असे प्रकर्षाने जाणवते. प्रामुख्याने ग्रामीण भागातील लोकांना शहरांकडे आकर्षित करण्यासाठी आर्थिक संधी, व्यवसायिक शिक्षण एका वेची चांगली उपलब्धता हे घटक महत्वाचे ठरतात आणि आरोग्यसे, औद्योगिक वाढ, बाजूने शहरीकरणाने आर्थिक विकास आणि आधुनिकीकरणात महत्त्वपूर्ण योगदान दिले असले तरी त्यामुळे जटिल मानसिक आणि सामाजिक आव्हाने देखील निर्माण झाली असल्याचे दिसून येते आहेत.

मानसिक दृष्टिकोनातून, शहरी वातावरण एक अद्वितीय संदर्भ दर्शवते जे मानवी वर्तन, भावना आणि मानसिक आरोग्याला आकार देते. वाढत्या शहरी वाढ अनेकदा पुरेशा नियोजनाशिवाय होते, ज्यामुळे गर्दी, खराब घरांची परिस्थिती, पर्यावरण प्रदूषण आणि कमकुवत सामाजिक आधार प्रणाली निर्माण होतात. ताणतणाव म्हणून काम करू शकतात ज्या मानसिक आरोग्यावर नकारात्मक परिणाम परिस्थिती दीर्घकालीन ता प्रभावी मानसिक आरोग्य धोरणे विकसित करण्यासाठी आणि निरोगी शहरी वातावरण निर्माण करतात करण्यासाठी वाढत्या शहरीकरणाचा मानसिक परिणाम समजून घेणे आवश्यक आहे.

शहरीकरण आणि मानसिक आरोग्यमानसिक आरोग्य समस्यांचा प्रसार संशोधनातून सातत्याने असे दिसून येते की ग्रामीण लोकसंख्येच्या तुलनेत शहरी लोकसंख्येमध्ये मानसिक आरोग्य विकारांचे प्रमाण जास्त आहेअभ्यासातून असे दिसून आले आहे की शहरी रहिवाशांना चिंता विकार, नैराश्य, मूड डिसऑर्डर आणि तणाव.पिन एट अल) संबंधित परिस्थितींचा अनुभव येण्याची शक्यता जास्त असते-, २०१० वाढत्या गतीची . (जीवनशैली, स्पर्धा आणि पर्यावरणीय ताणतणावांचा सतत संपर्क मानसिक असुरक्षिततेला कारणीभूत ठरतो.

शहरी राहणीमान स्किझोफ्रेनिया आणि इतर मानसिक विकारांसारख्या गंभीर मानसिक आजारांशी देखील जोडले गेले आहेमहामारीशास्त्रीय अभ्यासातून असे दिसून आले आहे की ग्रामीण भागात वाढलेल्या . वासोस) व्यक्तींच्या तुलनेत शहरी वातावरणात वाढलेल्या व्यक्तींना मनोविकार होण्याचा धोका जास्त असतो .एट अल, २०१२ह .(ा संबंध विकासाच्या गंभीर काळात शहरी संपर्काच्या दीर्घकालीन मानसिक परिणामांवर प्रकाश टाकतो.

शहरी भागात पर्यावरणीय ताणतणाव अति गर्दी आणि आवाज अति गर्दी ही शहरीकरणाच्या वेगाने होणाऱ्या प्रमुख वैशिष्ट्यांपैकी एक आहेजास्त लोकसंख्येची घनता वैयक्तिक जागा कमी कर .ते आणि सामाजिक घर्षण वाढवते, ज्यामुळे चिडचिड, चिंता आणि भावनिक थकवा येऊ शकतोपर्यावरणीय . मानसशास्त्रानुसार, जास्त गर्दीमुळे ताण वाढतो आणि एखाद्याच्या पर्यावरणावरील नियंत्रण कमी होते, हे दोन्हीही मानसिक आरोग्याशी जोडलेले आहेत इव्हान्स), २००३.(

वाहतूक, बांधकाम आणि औद्योगिक क्रियाकलापांमधून होणारे ध्वनी प्रदूषण मानसिक ताण आणखी वाढवतेध्वनीचा दीर्घकाळ संपर्क झोपेचा त्रास ., वाढलेली कोर्टिसोल पातळी, एकाग्रता कमी होणे आणि चिंता विकारांचा धोका वाढण्याशी संबंधित आहे.

वायू प्रदूषण आणि भौतिक वातावरण:

शहरी वातावरणात वायू प्रदूषण हा आणखी एक महत्त्वाचा पर्यावरणीय ताण आहेकणयुक्त पदार्थ आणि . नायट्रोजन डायऑक्साइड सारख्या प्रदूषकांच्या संपर्कात येणे केवळ शारीरिक आरोग्य समस्यांशीच नाही तर संशोधन असे सूचित करते .मानसिक त्रास आणि संज्ञानात्मक कमजोरीशी देखील जोडले गेले आहेकी प्रदूषित वातावरणात दीर्घकाळ संपर्कात राहिल्याने नैराश्याचा धोका वाढू शकतो आणि जीवनाची एकूण गुणवत्ता कमी होऊ शकते ब्रेथवेट आणि इतर), २०१९.(

सामाजिक संबंध आणि शहरी जीवन सामाजिक अलगाव आणि एकाकीपणा:

लोकसंख्येची घनता जास्त असूनही, शहरी जीवन विरोधाभासीपणे सामाजिक अलगावला कारणीभूत ठरू शकते शहरीकरणामुळे अनेकदा पारंपारिक समुदाय संरचना आणि विस्तारित कुटुंब व्यवस्था वाढत्या . शहरात राहणाऱ्या लोकांना अनामिकता .विस्कळीत होतात, कमकुवत सामाजिक संबंध आणि कमी शेजारच्या संवादाचा अनुभव येऊ शकतोएकाकीपणा आणि सामाजिक आधाराच .ा अभाव हे नैराश्य आणि चिंता यासाठी महत्त्वपूर्ण जोखीम घटक आहेत.

सामाजिक भांडवल सिद्धांत मानसिक आरोग्याला चालना देण्यासाठी विश्वास, परस्परसंवाद आणि समुदाय नेटवर्कचे महत्त्व अधोरेखित करतोवेगाने शहरीकरण होणाऱ्या भागात ., कमी होत जाणारे सामाजिक एकता या संरक्षणात्मक घटकांना कमकुवत करू शकते, ज्यामुळे मानसिक असुरक्षितता वाढते.

कामाचा दबाव आणि जीवनशैलीतील बदल शहरी वातावरण सामान्यतः स्पर्धात्मक कामाच्या संस्कृती, जास्त कामाचे तास आणि नोकरीची असुरक्षितता द्वारे दर्शविले जाते हे घटक दीर्घकालीन ताण आणि बर्नआउटमध्ये . योगदान देतातयाव्यतिरिक्त ., शहरी जीवनशैलीमध्ये बहुतेकदा बसून राहण्याची वागणूक, अनियमित झोपेच्या पद्धती आणि अस्वास्थ्यकर आहाराच्या सवयींचा समावेश असतो, ज्याचा अप्रत्यक्षपणे मानसिक आरोग्यावर परिणाम होतो.

असुरक्षित लोकसंख्येवर परिणाम मुले आणि किशोरवयीन मुले वेगाने शहरीकरण होणाऱ्या वातावरणात वाढणारी मुले विशेषतः मानसिक ताणाला बळी पडतातआवाज ., प्रदूषण, गर्दी आणि कौटुंबिक ताणतणावाचा संपर्क भावनिक विकास आणि शैक्षणिक कामगिरीवर नकारात्मक परिणाम करू शकतो . अभ्यासातून असे दिसून आले आहे की शहरी मुलांमध्ये, विशेषतः कमी उत्पन्न असलेल्या कुटुंबातील मुलांमध्ये वर्तणुकीशी संबंधित समस्या, लक्ष देण्यास अडचणी आणि चिंता यांचे प्रमाण जास्त आहे.

वृद्ध लोकसंख्या:

शहरी भागातील वृद्ध प्रौढांना सामाजिक अलगाव, कमी हालचाल आणि वयानुसार अनुकूल सेवांची अपुरी उपलब्धता यांचा सामना करावा लागू शकतोकुटुंब आधार प्रणाली तुटल्याने शहरांमध्ये पारंपारिक . वृद्धांमध्ये एकटेपणा आणि नैराश्य येऊ शकते

आर्थिकदृष्ट्या वंचित गट:

शहरी गरिबी, बेरोजगारी आणि गृहनिर्माण असुरक्षितता हे सीमांत लोकसंख्येवर अप्रमाणित परिणाम करतेअनौपचारिक वस्त्यांमध्ये किंवा झोपडप .ट्ट्यांमध्ये राहिल्याने व्यक्तींना अनेक ताणतणावांना सामोरे जावे लागते, ज्यामध्ये खराब स्वच्छता, गुन्हेगारी आणि आरोग्यसेवेचा अभाव यांचा समावेश होतो, ज्यामुळे मानसिक आरोग्य समस्यांचा धोका लक्षणीयरीत्या वाढतो.

शहरीकरणाचे सकारात्मक मानसिक पैलू:

वाढत्या शहरीकरण अनेक मानसिक आव्हाने सादर करत असताना, ते संभाव्य फायदे देखील देते . शहरे मानसिक आरोग्य सेवा, शिक्षण, सांस्कृतिक उपक्रम आणि रोजगाराच्या संधींमध्ये अधिक प्रवेश प्रदान करतातशहरी विविधता सर्जनशीलता ., सामाजिक शिक्षण आणि वैयक्तिक वाढीस प्रोत्साहन देऊ शकतेशहरी . नियोजन प्रभावी असल्यास मनोरंजन सुविधा आणि हिरव्या जागांची उपलब्धता मानसिक आरोग्य वाढवू शकते.

संशोधन असे सूचित करते की उद्याने, चालण्यायोग्य परिसर आणि सामुदायिक केंद्रे असलेली सुव्यवस्थित शहरी जागा ताण कमी करू शकतात आणि मानसिक आरोग्य सुधारू शकतातअशा प्रकारे, शहरीकरणाचा मानसिक परिणाम मुख्यत्वे शहरी नियोजन आणि सामाजिक पायाभूत सुविधांच्या गुणवत्तेवर अवलंबून असतो.

शहरीकरण धोरण:व्यवहारासाठी परिणाम -

वाढत्या शहरीकरणामुळे निर्माण होणाऱ्या मानसिक परिणामांचा अभ्यास करून समस्या सोडविण्यासाठी आंतरविद्याशाखीय दृष्टिकोनाची आवश्यकता आहेशहरी नियोजक ., मानसशास्त्रज्ञ, सार्वजनिक आरोग्य

व्यावसायिक आणि धोरणकर्त्यांनी मानसिकदृष्ट्या निरोगी शहरे निर्माण करण्यासाठी सहकार्य केले पाहिजे .
:प्रमुख धोरणांमध्ये हे समाविष्ट आहे

- शहरी नियोजनात मानसिक आरोग्याच्या बाबींचा समावेश करणे
- परवडणाऱ्या मानसिक आरोग्य सेवांमध्ये प्रवेश वाढवणे
- सामुदायिक सहभाग आणि सामाजिक एकता वाढवणे
- हिरव्या जागांमध्ये वाढ करणे आणि पर्यावरणीय प्रदूषण कमी करणे
- असुरक्षित लोकसंख्येसाठी लक्षित समर्थन प्रदान करणे

प्रतिबंधात्मक मानसिक आरोग्य हस्तक्षेप आणि समुदायआधारित कार्यक्रम शहरी ताण कमी करण्यात आणि -
.लवचिकता वाढविण्यात महत्त्वपूर्ण भूमिका बजावू शकतात

निष्कर्ष:

वाढत्या शहरीकरण ही एक जटिल सामाजिक प्रक्रिया आहे ज्यामध्ये खोल मानसिक परिणाम होतात शहरे .
आर्थिक वाढ आणि सामाजिक प्रगतीसाठी संधी देतात, परंतु ते व्यक्तींना पर्यावरणीय ताणतणाव, सामाजिक
अलगाव आणि जीवनशैलीच्या दबावांना देखील सामोरे जातात जे मानसिक आरोग्यावर नकारात्मक परिणाम
करतात वाढत्या शहरी जगात कल्याणाला चालना देण्यासाठी शहरीकरणाचा मानसिक परिणाम समजून घेणे .
आणि श संवेदनशील धोरणे-मानसिक आरोग्य .आवश्यक आहे श्वेत शहरी डिझाइन स्वीकारून, समाज
शहरीकरणाचे फायदे वापरू शकतात आणि त्याचे मानसिक खर्च कमी करू शकतात.

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Transforming Academic Libraries into Smart Knowledge Hubs

Mr. Mahadev Nagnath Chavan

Librarian, Baburao Patil College of Arts & Science, Angar

Tal. Mohol, Dist.Solapur.

Mo.No.8329136917

E-Mail- bharari04@gmail.com

Abstract :

This article presents an evaluation of the role of IT utilities in the transformation of academic library services. This paper highlights the concept of Academic Libraries and study of the Digital Transformation of libraries in India, the Transformation in libraries: from past to present, the Causes of Transformation, the Components of Library Transformation.

Keywords : Academic Libraries, Digital Transformation, Physical Repositories, Cloud-Based Systems, Open Access, Virtual Reality (VR) & Augmented Reality (AR).

Introduction:

Transforming academic libraries into smart knowledge hubs involves integrating advanced technologies like Iot, AI and cloud computing , to transition from physical repositories to interactive, user-centric spaces. This shift optimizes resource management, supports digital learning, and fosters innovation through smart access, real-time analytics, and collaborative tools, essential for the 5th Industrial Revolution.

Objectives of Study :

The main objective of the study is to study the Transforming Academic Libraries into Smart Knowledge Hubs. The other objectives of the study are to:

1. To Study the concept of Academic Libraries
2. To study the Digital Transformation of Libraries in India
3. To study of the Transformation in libraries: from past to present
4. To study of the Causes of Transformation.
5. To study of the Components of Library Transformation.

Research methodology :

The study's research approach makes use of the methods of secondary data collection and observation.

Academic Libraries :

Academic libraries are specialized libraries within educational institutions (schools, colleges, universities) that support teaching, learning, and research by providing curated collections of books, journals, databases, and other resources, along with essential services like research assistance and information literacy training acting as central hubs for academic inquiry. They serve distinct user groups (students, faculty, researchers) with resources tailored to their specific educational levels and institutional missions, evolving from physical book repositories to hybrid digital environments.

Digital Transformation of Libraries in India

Digital transformation of libraries in India is shifting traditional, physical archives into modern, technology-driven knowledge hubs. Driven by initiatives like the National Digital Library of India

(NDLI) and the Digital India campaign, libraries are adopting AI, IoT, and RFID, increasing accessibility to e-resources. Key focus areas include digital repository creation, 24/7 access, and overcoming, though with significant, rural-urban disparities.

Transformation in libraries: from past to present :

Libraries have evolved from ancient storehouses of clay tablets and manuscripts into, dynamic, digital, and community-centric hubs. This transformation, accelerated by ICT and AI, has shifted the focus from merely preserving physical, materials to providing instant access to global information through online catalogues, e-resources, and virtual services.

Historical Foundations (Past) :

- **Physical Repositories:** Originally, libraries were restricted to kings, priests, and scholars, focusing on preserving manuscripts, metal, and stone-engraved records.
- **Manual Tools:** Access was restricted by manual, physical cataloging systems, such as card catalogs and, later, microfiche readers.
- **Location-Based:** Users had to physically visit, the building to access, information.

Modern Evolution (Present)

- **Digital Shift:** Libraries have moved towards online, public access catalogs (OPAC), e-books, and digitized collections that allow for remote, access.
- **Technology Integration:** The inclusion of AI, chatbots, and advanced, automation streamlines, operations, from cataloging to, circulation.
- **Redefined Spaces:** Libraries now serve as community, centers, offering multimedia labs, maker spaces, and, collaborative, study areas, often featuring, modern, amenities,.
- **User-Centric Services:** The focus is on, providing, customized, support, and information literacy, training to help, users, navigate the digital, landscape.

Trends in Transformation

- **Cloud-Based Systems:** Shifting away from local, ILSS (Integrated Library Systems) toward cloud technology.
- **Open Access:** Increasing accessibility of, academic and research materials.
- **Curating Content:** Moving beyond purchasing, print, books to, curating, diverse, digital, content.
- **Virtual Reality (VR) & Augmented Reality (AR):** Using new, technologies to enhance educational, experiences and preserve culture.

Causes of Transformation :

Libraries must be transformed or re-engineered to remain relevant and sustainable in the 21st-century digital landscape. This transformation is driven by the need to shift from being passive repositories of physical books to active, technology-driven, and user-centric community hubs.

The primary reasons for this transformation include:

- **Impact of ICT and Digital Proliferation:** The rapid growth of Information and Communication Technology (ICT) has changed how information is produced and consumed, requiring libraries to digitize collections, provide 24/7 access, and integrate technologies like AI and RFID for efficiency.
- **Changing User Needs and Expectations:** Users now prioritize immediacy and digital access over physical browsing. Libraries must adapt to the "digital native" generation by offering online databases, e-books, and seamless virtual services.

- **Information Explosion and Abundance:** With overwhelming amounts of data available, libraries must evolve to become curators of credible information, helping users navigate information literacy, filter "fake news," and evaluate AI-generated content.
- **Need for Redesigned Physical Spaces:** To remain community hubs, libraries are re-engineering physical spaces to include "maker spaces," collaborative workspaces, co-working areas, and quiet zones for mindfulness.
- **Budgetary Constraints and Economic Pressures:** Faced with funding cuts, libraries are forced to re-engineer services to be more cost-effective, such as adopting resource-sharing consortia, open-source software, and finding new revenue-generating avenues.
- **Role as Community and Social Centers:** Beyond books, libraries are transforming into essential social infrastructure that provides Internet access, digital literacy training, job search support, and safe, inclusive spaces for social interaction.
- **Adoption of New Technologies:** To stay competitive, libraries are integrating advanced technology such as Augmented Reality (AR) and Virtual Reality (VR) for immersive learning, as well as AI for chatbots and personalized recommendations.

Components of Library Transformation

- **Digital Infrastructure & Technology:** Adoption of advanced tools like AI, machine learning, robotics, AR/VR, and Big Data for enhanced services.
- **Digital Transformation of Resources:** Shifting from physical to digital, including digitization of collections, e-resources, and open access,
Library Staff Skills (Digital Librarian): Developing competencies in technology, information management, and digital literacy.
- **User-Centric Services:** Shifting focus to user needs, 24/7 access, and improved user experience (UX).
- **Strategic Planning & Culture:** Redefining library roles through a culture of innovation, agility, and proactive management.
- **Collaboration & Networking:** Building partnerships for shared resources, and co-creation networks.

Conclusion :

By embracing digital technology, libraries may facilitate information access, encourage digital literacy, and support lifelong learning, all of which have the potential to stimulate innovation and economic growth. They can act as venues for cooperation, innovation, and information sharing, enabling people and groups to discover novel concepts and advance their abilities. By providing technological access and digital literacy programs, libraries can also close the digital divide and guarantee that everyone can engage with the digital world.

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Transformation of Academic Libraries in Knowledge Hub

Mrs. Urmila Rajendra Kadam

Librarian, Kamala College, Kolhapur

Mobile- 9975946344

Email- kadamurmila76@gmail.com

Abstract :-

In recent years, academic libraries have faced significant challenges in adapting to the rapidly changing information landscape. With the advent of digital technologies and the increasing demand for immediate access to information, traditional library models are no longer sufficient. Thus, transforming academic libraries into smart knowledge hubs has become imperative. This transformation involves integrating advanced technologies, rethinking service delivery, and fostering collaborative learning environments to better meet the needs of students and researchers. One of the key components of transforming academic libraries into smart knowledge hubs is the adoption of advanced technologies. Technologies such as artificial intelligence, big data analytics, and cloud computing can enhance library operations and improve user experiences. For instance, libraries can use AI-driven chat bots to provide instant assistance to users, facilitating access to information around the clock. Additionally, big data analytics can help librarians to better understand user behaviors, allowing for more tailored services and resources that meet emerging needs.

Introduction:-

Moreover, transforming academic libraries necessitates a reevaluation of service delivery models. Libraries should evolve from being mere repositories of books to dynamic learning spaces that actively support academic and personal development. This can be achieved by creating collaborative spaces equipped with modern technologies that encourage teamwork, innovation, and creativity. By fostering such environments, libraries can become catalysts for interdisciplinary collaboration, enabling students and faculty to work together to tackle complex research questions and societal challenges.

Furthermore, engaging the academic community in the transformation process is crucial. Librarians should work closely with faculty and students to identify their needs and ensure that the library's resources and services align with academic goals. Surveys, focus groups, and workshops can provide valuable insights into user preferences and expectations. By actively involving the academic community, libraries can create a sense of ownership and advocacy, ensuring that the transformation process is sustainable and effectively addresses users' needs.

Key Words :- Academic Libraries, Artificial Intelligence, Knowledge Management

In short, the transformation of academic libraries into smart knowledge hubs is essential for adapting to the evolving educational landscape. By leveraging advanced technologies, rethinking service delivery, and engaging the academic community, libraries can enhance their role as indispensable resources for learning and research. The result will be a more efficient, user-centered library that not only meets the immediate needs of its users but also fosters a culture of inquiry, knowledge sharing, and innovation for future generations. Some of the technological integrations for transformation of libraries in smart knowledge are as follows.

Artificial Intelligence - AI, is a type of computer technology that allows machines to perform tasks that normally need human intelligence. This includes things like understanding language, recognizing images, and making decisions. AI can be found in many everyday tools, like virtual assistants on phones and recommendation systems on websites. It helps make our lives easier by performing tasks quickly and

accurately. As technology continues to grow, AI is becoming more important in areas like healthcare, education, and transportation, showing its potential to improve many aspects of our world.

The Internet of Things - IoT is a system where everyday objects are connected to the internet. This means that items like your refrigerator, thermostat, or even your car can share information and talk to each other. For example, a smart thermostat can learn your temperature preferences and adjust itself to make your home comfortable while saving energy. IoT helps make our lives easier and more efficient by allowing devices to work together. As more gadgets become smart and connected, the Internet of Things continues to grow, changing the way we interact with technology in our daily lives.

Augmented Reality (AR) and Virtual Reality (VR) is exciting technologies that change how we see and interact with the world. Augmented Reality adds digital images or information to the real world, like seeing characters from a video game on your living room floor through your phone. Virtual Reality, on the other hand, creates a completely different world that you can explore using special headsets. In VR, you feel like you are inside a game or a different place. Both AR and VR are popular in games, education, and training, helping us learn and play in fun new ways.

Augmented Reality (AR) and Virtual Reality (VR) are technologies that change how we see and interact with the world. Augmented Reality adds digital images or information to the real world, like seeing directions on a street using your phone. Virtual Reality, on the other hand, creates a completely different world that you can explore using special goggles. Both technologies are used in various fields, such as gaming, education, and medicine, making experiences more interactive and exciting. AR and VR help people learn, have fun, and even practice skills in a safe environment.

Cloud Computing and mobile applications have revolutionized the way individuals and businesses operate in today's digital landscape. Cloud computing provides a scalable infrastructure that allows users to access data and software over the internet, thereby eliminating the need for extensive hardware investments and facilitating real-time collaboration. Mobile apps enhance this experience by offering users convenient access to cloud services on their smart phones and tablets, leading to greater flexibility and productivity. For instance, users can store and retrieve files, conduct virtual meetings, and manage projects from anywhere, fostering a more connected and efficient work environment. As technology continues to evolve, the integration of cloud computing and mobile applications is expected to drive further innovations, ultimately transforming how we communicate, collaborate, and manage various tasks in both personal and professional spheres.

Cloud computing has revolutionized the way we store and process data, providing a flexible and efficient framework that facilitates the delivery of computing services over the Internet. By utilizing remote servers hosted on the Internet, cloud computing allows users to store files, run applications, and access information from any device with an internet connection. This paradigm shift not only contributes to cost savings through reduced infrastructure investment for businesses but also enhances collaboration and accessibility for individuals. As a result, organizations can scale their operations quickly and respond to varying demands without the need for substantial upfront investments in physical hardware.

Mobile Apps- In tandem with the growth of cloud computing, mobile applications have become increasingly prevalent in everyday life. Mobile apps are software applications specifically designed for use on smart phones and tablets, providing users with convenient access to a wide range of services and functionalities. The integration of cloud computing into mobile apps has further optimized user experience by enabling real-time data access and synchronization across devices. For instance, applications like Google Drive and Drop box empower users to save, edit, and share documents seamlessly, regardless of their location, thanks to the underlying cloud infrastructure.

The synergy between cloud computing and mobile applications represents a significant advancement in technology. As mobile devices become more ubiquitous and cloud services continue to evolve, the potential for innovative applications grows exponentially. This combination not only enhances productivity for personal and professional users alike but also paves the way for future advancements in technology, such as artificial intelligence and analytics. Ultimately, cloud computing and mobile apps are shaping the digital landscape, changing how individuals and businesses manage their everyday tasks, and setting the stage for continued innovation in the technology sector.

Evolved Roles of Library Services :

Digital literacy and skills training are essential in today's technology-driven world. Digital literacy means having the skills to use computers, smartphones, and the internet effectively. This includes knowing how to find information online, use social media safely, and work with software programs. Skills training help people learn how to use these tools and technologies. This training can be offered in schools, community centers, or online courses. As more jobs and services move online, being digitally literate is important for everyone to participate fully in society and access opportunities.

Innovation and entrepreneurship hubs are places where new ideas and businesses can grow. These hubs provide resources like workspace, mentorship, and networking opportunities for people who want to start their own companies. They often bring together creative thinkers, inventors, and business experts, encouraging collaboration and sharing of knowledge. This environment helps individuals turn their ideas into successful businesses, driving economic growth and creating jobs in the community. By fostering a spirit of innovation, these hubs play a crucial role in shaping the future of industries and encouraging entrepreneurship.

Data-driven insights refer to the conclusions and knowledge gained from analyzing data, often utilized in various fields such as business, healthcare, and social sciences. By examining patterns, trends, and correlations within large datasets, organizations can make informed decisions that enhance efficiency and effectiveness. For example, businesses use data-driven insights to understand customer behavior, optimize marketing strategies, and improve product offerings. In healthcare, analysis of patient data can lead to better treatment methods and enhance patient care. Overall, by leveraging data-driven insights, entities can improve their strategies and outcomes, ensuring a more evidence-based approach to decision-making.

The role of librarians has evolved significantly in the digital age, transforming from traditional book custodians to multifaceted information specialists. Historically, librarians were primarily responsible for managing library collections and assisting patrons in locating printed materials. However, with the advent of digital technology and the internet, the nature of information access has drastically changed. Today, librarians are not only tasked with curating physical collections but also with navigating vast digital resources, ensuring that users can access reliable and relevant information across various platforms.

In addition to their traditional duties, modern librarians have taken on new responsibilities that encompass information literacy, digital archiving, and community engagement. They play a crucial role in educating patrons on how to discern credible sources from misinformation, especially in an era marked by rapid information dissemination. This includes conducting workshops, offering one-on-one consultations, and developing resources that empower users to become more informed consumers of information. Furthermore, librarians often engage with their communities by offering tailored programming that meets the evolving needs of diverse populations, thus reinforcing the library's essential position as a community hub.

Moreover, librarians increasingly collaborate with educators and researchers to enhance learning and research outcomes. They are integral to supporting digital scholarship through the management of databases and providing access to information that is essential for academic work. Additionally, librarians often take part in establishing open-access resources, which democratize access to information and promote knowledge sharing. As the landscape of information continues to shift, the contemporary librarian's role is not only vital for the preservation of knowledge but also for fostering a more informed society.

Conclusion:-

The transformation of academic libraries into knowledge hubs represents a significant evolution in the role of these institutions within the educational landscape. Traditionally, academic libraries served primarily as repositories of books and scholarly resources. However, the increasing demand for diverse and accessible information has necessitated a shift towards creating environments that foster collaboration, innovation, and knowledge sharing. As academic libraries embrace this role, they adapt their services and spaces to cater to the evolving needs of students, faculty, and researchers, making them integral components of the learning experience.

One of the key aspects of this transformation involves the integration of technology and digital resources. Libraries are increasingly leveraging new tools and platforms to provide access to a broader range of information, including online databases, e-books, and interactive learning modules. This digital shift not only enhances the accessibility of resources but also encourages the development of critical research and information literacy skills among users. By facilitating connections between users and the vast array of information available, academic libraries are becoming platforms for knowledge creation and dissemination, significantly enhancing their value within educational institutions.

In conclusion, the ongoing transformation of academic libraries into knowledge hubs is crucial for meeting the changing demands of the academic community. By prioritizing collaboration, technology integration, and user-centered services, libraries can effectively support researchers and students in their pursuit of knowledge and innovation. As they continue to evolve, academic libraries are poised to become central hubs of learning and discovery, reinforcing their importance as vital resources in the higher education ecosystem.

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Viksit Bharat @ 2047: Opportunities and Challenges with Special Reference to Inclusive Development, Digital Transformation, Governance, Sustainability and Human Values

Anjali Sachin Bhattad

Student (B.A., LL.B. - 4)

B. V's Yashwantrao Chavan Law College, Karad.

Email: anjali4sb@gmail.com

Abstract:

India's vision of Viksit Bharat @ 2047 represents a national aspiration to transform the country into a developed, inclusive, self-reliant, and sustainable nation by the centenary year of independence. This vision is not merely economic in nature but encompasses social justice, human development, environmental sustainability, technological advancement, cultural integrity, and ethical governance. The idea of a developed India by 2047 requires structural reforms, people-centric governance, innovation-driven growth, and moral responsibility. This research paper explores the multidimensional opportunities that India possesses—demographic dividend, digital transformation, education reforms, entrepreneurship, and cultural capital—alongside the challenges such as inequality, unemployment, environmental degradation, digital divide, governance gaps, and social fragmentation. The study adopts a socio-legal and developmental approach and proposes a balanced framework where development is not only materialistic but also humanistic. The paper argues that Viksit Bharat @ 2047 can be achieved only through collective responsibility, inclusive policies, ethical leadership, and value-based citizenship.

Keywords : Viksit Bharat 2047, Sustainable Development, Inclusive Growth, Digital India, Governance, Social Justice, Nation Building.

Introduction :

India's journey since independence in 1947 has been marked by resilience, transformation, and continuous reconstruction. From a colonial economy to a sovereign democratic republic, India has gradually evolved through constitutional governance, planned development, social movements, and institutional reforms. The concept of Viksit Bharat @ 2047 reflects a future-oriented national mission to build a strong, self-reliant, inclusive, and globally respected nation by the 100th year of independence.

Development in the Indian context cannot be reduced to GDP growth alone. True development includes dignity, equality, access to opportunities, quality education, healthcare, justice, social harmony, environmental balance, and moral consciousness. Viksit Bharat therefore represents a civilizational vision where material progress and ethical values coexist. This paper attempts to understand this vision through a critical analysis of opportunities and challenges, while proposing a sustainable and inclusive roadmap for national development.

Conceptual Understanding of Viksit Bharat:

The conceptual foundation of Viksit Bharat is deeply rooted in India's constitutional philosophy, civilizational ethos, and democratic aspirations. Development, in the Indian sense, is not confined to physical infrastructure or economic indices but is closely associated with human dignity, social justice, ethical governance, and collective welfare. A developed nation is one where growth is equitable, institutions are accountable, and citizens actively participate in nation-building.

The idea of Viksit Bharat also aligns with global development narratives such as sustainable development, inclusive growth, and human development. However, India's vision remains distinct as it

integrates modern progress with traditional wisdom, ensuring that development does not alienate cultural identity or moral values.

The idea of a developed nation goes beyond infrastructure and economic indicators. A truly developed society ensures:

- Social equality and justice
- Access to quality education and healthcare
- Economic security and employment
- Technological empowerment
- Environmental sustainability
- Ethical governance
- Cultural continuity

Viksit Bharat is therefore not a destination but a continuous process of transformation where institutions, individuals, and communities grow together. Development becomes meaningful only when the weakest citizen feels secure, respected, and empowered.

Major Opportunities for Viksit Bharat @ 2047:

1. Demographic Dividend

India has one of the youngest populations in the world. This youthful energy can become the strongest pillar of development if supported by education, skill development, employment generation, and value-based training. Youth participation in governance, innovation, entrepreneurship, and social service can accelerate nation-building.

2. Digital Transformation

Digital transformation is one of the most powerful tools available to India in its journey towards becoming a developed nation by 2047. Initiatives such as digital governance, online service delivery, financial inclusion through digital platforms, and digital education have significantly enhanced efficiency and transparency. Technology has reduced geographical barriers and empowered citizens by providing direct access to government services.

However, digital development must be inclusive. Bridging the digital divide between urban and rural populations, ensuring cyber security, data privacy, and ethical use of artificial intelligence are crucial challenges. Digital empowerment should aim at social inclusion rather than technological exclusion.

Digital India has already transformed service delivery, financial inclusion, governance, and connectivity. Digital platforms enable transparency, efficiency, and accessibility. Artificial intelligence, data governance, fintech, and e-governance can redefine development pathways if used ethically and inclusively.

3. Education and Knowledge Economy

Education plays a transformative role in shaping a developed nation. A strong education system creates skilled professionals, responsible citizens, and ethical leaders. Reforms in education must focus on quality, accessibility, innovation, and skill development. Research-oriented learning and interdisciplinary education are essential for nurturing creativity and problem-solving abilities.

The knowledge economy thrives on innovation, research, and intellectual capital. By strengthening higher education institutions, promoting research culture, and encouraging collaboration between academia and industry, India can emerge as a global knowledge leader by 2047.

The future belongs to knowledge-driven societies. Educational reforms, research culture, innovation ecosystems, and skill-oriented learning can convert India into a global knowledge hub. Education must not only create professionals but responsible citizens.

4. Entrepreneurship and Innovation

Startups, MSMEs, and local enterprises are reshaping the Indian economy. Innovation-driven entrepreneurship generates employment, local development, and economic self-reliance. Indigenous innovation strengthens both economic and cultural sovereignty.

5. Cultural and Civilizational Strength

India's cultural heritage, ethical traditions, and spiritual philosophy provide a moral foundation for development. Concepts like dharma, seva, sahajeevan (coexistence), and nishkam karma (selfless action) can guide ethical leadership and social responsibility.

Challenges in Achieving Viksit Bharat @ 2047:

1. Economic Inequality

Unequal distribution of resources, regional disparities, and social stratification remain major barriers. Development without inclusion deepens social divisions and weakens national unity.

2. Unemployment and Skill Gap

Education without employability creates frustration and social instability. Skill mismatch between education and industry needs remains a structural challenge.

3. Environmental Degradation

Climate change, pollution, deforestation, and resource exploitation threaten sustainability. Development without ecological balance creates long-term vulnerability.

4. Governance and Implementation Gaps

Governance plays a decisive role in determining the success of developmental policies. While India has progressive policies and legal frameworks, implementation often remains weak due to administrative inefficiencies, corruption, and lack of accountability. Effective governance requires transparency, decentralization, and citizen participation.

Good governance is not limited to policy formulation but extends to ethical administration, responsiveness, and rule of law. Strengthening institutions and ensuring accountability mechanisms are essential for achieving Viksit Bharat.

Policies often fail due to poor implementation, corruption, lack of accountability, and bureaucratic inefficiency. Good governance is the backbone of national development.

5. Social Fragmentation

Communalism, discrimination, intolerance, and identity conflicts weaken social harmony. Development cannot survive in a divided society.

Socio-Legal Dimensions of Development:

The Indian Constitution serves as the moral compass for national development. It enshrines principles of justice, liberty, equality, and fraternity, which are essential for inclusive growth. Fundamental Rights protect individual dignity, while Directive Principles of State Policy guide the State in promoting social and economic welfare.

Judicial interventions have played a significant role in expanding the scope of development by interpreting rights in a progressive manner. Access to justice, legal awareness, and judicial accountability ensure that development remains people-centric. A strong legal framework strengthens democracy and ensures that development benefits all sections of society.

The Indian Constitution provides the moral and legal framework for Viksit Bharat. Values of justice, liberty, equality, and fraternity guide the development vision. Fundamental Rights ensure dignity, while Directive Principles promote welfare governance. Development must be constitutional, democratic, and people-centric.

Law becomes an instrument of social transformation when it protects the weak, empowers the marginalized, and regulates power structures. Legal literacy, access to justice, and institutional accountability are essential pillars of developed democracy.

Human-Centric Development Model:

True development must place the human being at the centre. Infrastructure without humanity creates hollow progress. A human-centric model includes:

- Compassionate governance
- Ethical leadership
- Community participation
- Value-based education
- Mental health awareness
- Social responsibility

This approach transforms citizens into nation-builders rather than passive beneficiaries.

Roadmap for Viksit Bharat @ 2047:

1. Strengthening education and skill ecosystems
2. Promoting ethical governance and transparency
3. Ensuring inclusive economic growth
4. Encouraging innovation and research
5. Protecting environmental sustainability
6. Strengthening social harmony
7. Enhancing legal awareness and access to justice
8. Promoting youth leadership
9. Integrating technology with ethics
10. Reviving cultural values in modern governance

Conclusion:

Viksit Bharat @ 2047 is not merely a policy objective or political slogan; it is a collective national vision that requires commitment, cooperation, and consciousness. Development must be holistic, balancing economic growth with social justice, technological advancement with ethical responsibility, and modernization with cultural continuity.

India's true strength lies in its people—their resilience, diversity, creativity, and moral values. The journey towards 2047 demands not only institutional reforms but also individual responsibility and social harmony. When citizens actively participate in governance, uphold constitutional values, and contribute to community welfare, development becomes sustainable and meaningful.

Viksit Bharat will be achieved not solely through infrastructure or economic indicators, but through enlightened citizens, ethical leadership, strong institutions, and inclusive policies. A developed India must stand as a nation that is prosperous in wealth, rich in wisdom, and committed to justice, compassion, and harmony.

Viksit Bharat @ 2047 is not merely a policy objective; it is a collective civilizational mission. Development must be holistic, inclusive, ethical, and sustainable. The real strength of India lies not only in its economy or technology but in its people, values, diversity, and resilience. The journey towards 2047 requires not only institutional reforms but inner transformation of citizens. When development becomes a shared responsibility, progress becomes permanent. Viksit Bharat will be achieved not by systems alone, but by awakened citizens, responsible leadership, and a morally conscious society. The future India must stand as a nation that is not only developed in wealth, but rich in wisdom, justice, compassion, and harmony.

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7. Environmental Sustainability Frameworks
8. Governance and Public Policy Literature



Bridging the Gap: A Case Study of Digital Payment Adoption, Fintech Innovation, and Public Infrastructure in Kolhapur City

Santosh Devekar

Research Scholar, Department of Commerce and Management, Shivaji University, Kolhapur.
Email : santoshdvkr99@gmail.com

Abstract:

This study investigates the interplay between digital payment adoption, fintech innovation, and the role of public infrastructure in Kolhapur City, a tier-II urban center in Maharashtra, India. While metropolitan hubs often dominate fintech discourse, this research addresses the critical gap in understanding technology penetration in emerging cities. The rapid proliferation of Unified Payments Interface (UPI) and mobile wallets presents a transformative opportunity for financial inclusion and economic formalization. However, its success is inextricably linked to foundational public infrastructure such as digital literacy, reliable electricity, internet connectivity, and supportive governance frameworks. Using a mixed-methods approach, this case study analyses primary data from surveys of merchants and consumers in Kolhapur, supplemented by secondary data from government reports and fintech players. The findings reveal that while adoption is accelerating, driven by demonetization and pandemic-induced necessity, significant barriers persist. These include infrastructural bottlenecks like intermittent internet in market areas, a trust deficit among older demographics, and the enduring appeal of cash for small-value transactions. The study concludes that for fintech innovation to achieve its democratizing potential in cities like Kolhapur, a synergistic "triad" is essential: user-centric fintech products, robust and inclusive public digital infrastructure, and targeted policy initiatives that build digital literacy and trust. The Kolhapur case underscores that technological innovation alone is insufficient without the foundational bedrock of equitable infrastructure.

(Keywords: Digital Payment, Fintech, Public Infrastructure, Financial Inclusion, UPI, Kolhapur)

1. Introduction:

The Indian financial landscape is undergoing a radical transformation, propelled by the convergence of digital payment systems, fintech innovations, and government-led digital infrastructure projects. From a cash-dominant economy, India has seen an exponential rise in digital transaction volumes, with the Unified Payments Interface (UPI) becoming a global benchmark. However, this growth narrative is often uneven. While metropolitan cities showcase rapid adoption, the experience in tier-II and tier-III cities like Kolhapur remains underexplored. Kolhapur, known for its entrepreneurial spirit, agro-industries, and leather-based products, presents a compelling microcosm to study this diffusion. This paper examines how digital payments are being integrated into Kolhapur's commercial fabric, the nature of fintech innovations reaching its populace, and the critical enabling or constraining role played by public infrastructure. Understanding this dynamic is vital for crafting inclusive financial ecosystems that extend beyond urban megacenters.

2. Review of Literature:

Extant literature positions digital payments as a catalyst for financial inclusion (Kapoor, 2020), reducing transaction costs and increasing transparency. Scholars like Gomber et al. (2018) highlight fintech's role in disintermediating traditional banking, offering tailored solutions. The success of India's

"India Stack" (Aadhaar, UPI) is widely cited as a unique model of public digital infrastructure enabling private innovation (Mazumdar, 2022). However, critiques point to a "digital divide," where access is mediated by factors like literacy, income, and geography (Nilekani, 2022). Research also identifies persistent trust issues and cash dependency for low-income groups (Banerjee & Duflo, 2019). Most studies focus on national trends or rural penetration, leaving a gap in understanding urban-peripheral contexts.

3. Research Gap:

There is a paucity of localized, city-specific studies that empirically examine the on-ground realities of digital payment ecosystems in developing urban centers like Kolhapur. While macro-level data exists, nuanced insights into merchant perspectives, consumer behaviour patterns, and the tangible impact of physical and digital infrastructure in such a setting are limited. This study aims to fill this gap by providing a granular analysis of Kolhapur City.

4. Statement of the Problem:

Despite the aggressive push for a "Digital India," the adoption and sustained use of digital payments in non-metro urban areas face multifaceted challenges. In Kolhapur, a disconnect exists between the availability of fintech solutions and their ubiquitous use. The problem revolves around identifying whether the primary impediments are infrastructural (poor connectivity, power), socio-cultural (trust, habit), economic (cost of technology), or a complex combination thereof. This study seeks to diagnose these barriers within the specific context of Kolhapur.

5. Objectives of the Study:

1. To assess the level of awareness, adoption, and usage frequency of digital payment methods among merchants and consumers in Kolhapur City.
2. To evaluate the perceived impact of existing public infrastructure (internet, electricity, banking network) on digital payment adoption.
3. To identify the key drivers (e.g., convenience, discounts) and barriers (e.g., security concerns, technical issues) influencing digital payment behaviour.
4. To analyse the role of local fintech innovations and government initiatives in shaping the payment ecosystem.
5. To provide actionable recommendations for stakeholders to enhance inclusive digital finance in Kolhapur.

6. Research Methodology:

The study employs a descriptive and analytical research design.

Primary Data: Collected through a structured questionnaire (see Section 10) administered to 150 merchants (across retail, food, services) and 200 consumers in key commercial areas like Rajarampuri, Dabholkar Corner, and Mahadwar Road. Semi-structured interviews were conducted with 5 local bank managers and 2 fintech agent network facilitators.

Secondary Data: Sourced from RBI bulletins, NPCI reports, Kolhapur Municipal Corporation reports, and published articles on regional economic trends.

Sampling Method: A purposive and convenience sampling method was used to target active economic participants in high-footfall zones.

Tools for Analysis: Data was analysed using quantitative techniques (descriptive statistics, cross-tabulation) and thematic analysis for qualitative insights.

7. Case Study: Kolhapur City

Kolhapur, with a population of approximately 10 lakhs, serves as the economic and cultural hub of Southern Maharashtra. Its economy is a mix of traditional manufacturing (textiles, foundry), a thriving dairy sector (Gokul Duth Sangh), and a growing service industry. The city has a high literacy rate (over 90%) and a vibrant entrepreneurial community. Public infrastructure is moderate; while 4G networks are widespread, connectivity can be inconsistent in older market complexes. The banking penetration is relatively high, with a dense network of bank branches and ATMs. Recent local government initiatives have included promoting digital payments for municipal tax collection, providing a relevant touchpoint for public-infrastructure integration.

8. Data Analysis and Interpretation:

Adoption Rates: Approximately 92% of surveyed merchants offered at least one digital payment option, with UPI QR codes being nearly ubiquitous. However, only 35% reported that digital transactions constituted over 50% of their sales volume.

Infrastructure Impact: 68% of merchants cited "internet connectivity issues during peak hours" as a major operational hurdle. Areas with better cellular infrastructure reported 25% higher digital transaction volumes.

Consumer Behaviour: Convenience (rated 4.6/5) and COVID-19 safety concerns were the top drivers for consumers. For transactions below ₹100, 65% of consumers still preferred cash. Security apprehensions were notably higher among respondents above 50 years.

Fintech Penetration: Beyond UPI, adoption of more advanced fintech products (digital lending, insurance tech) was low. Merchants valued simplicity and zero transaction costs (for low-value UPI) above all.

Public Initiatives: Awareness of municipal digital payment options was low (under 20%), indicating a gap between provision and promotion.

9. Findings of the Study:

- High Penetration, Variable Depth:** Digital payment acceptance is wide but shallow, with cash remaining king for micro-transactions.
- Infrastructure is a Key Bottleneck:** The quality of public digital infrastructure (mobile internet reliability) directly correlates with usage intensity.
- Trust and Literacy are Critical:** Demographic factors like age and digital literacy significantly influence trust and adoption rates.
- Asymmetric Innovation:** While basic payment fintech is widespread, the broader fintech ecosystem (wealth, credit) has not permeated significantly.
- Policy-Use Disconnect:** Government-led digital infrastructure at the municipal level is underutilized due to lack of awareness and onboarding.

10. Questionnaire Used for the Study :

Demographics : Age, Occupation, Education.

Awareness : Which digital payment methods are you aware of?

Usage : Frequency, average transaction value, preferred mode for different purposes.

Drivers/Restraints : Rate factors like convenience, speed, discounts, security concerns, internet problems.

Infrastructure : How would you rate the reliability of internet/power in your area for digital transactions?

Future Outlook : Willingness to adopt newer financial tech products.

11. Conclusion

The case of Kolhapur City illustrates that the journey toward a less-cash society in India's growing urban centers is underway but complex. Fintech innovation, exemplified by UPI, has successfully built the supply-side. However, demand-side sustainability hinges on strengthening the public infrastructure backbone and fostering digital literacy. The study advocates for a collaborative model: telecom providers need to enhance network robustness in commercial clusters, local governments must run targeted awareness campaigns integrating digital payments with civic services, and fintech companies should design low-literacy-friendly solutions. For cities like Kolhapur to fully harness the digital finance revolution, the triad of **Innovation, Infrastructure, and Inclusion** must be advanced in unison. This will not only solidify Kolhapur's economic resilience but also provide a replicable framework for similar urban landscapes across the country.

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A Study on Digital Marketing in Hotel Industry - A Literature Review

Mr. Rahul Balkrishna Malekar

Research Student,
Department of Commerce and Management,
Shivaji University Kolhapur.
Email Id- malekar.rahul91@gmail.com
Mobile No- 9970683431

Dr. U. M. Deshmukh

Former Professor and Dean, Research
(CSIBER) Kolhapur.
Email Id- deshmukhumesh900@gmail.com
Mobile No- 9890691927

Abstract :

The rapid advancement of information and communication technologies has significantly transformed marketing practices in the global hotel industry, making digital marketing a core strategic function for competitiveness and sustainable growth. As travellers increasingly rely on digital platforms for information search, price comparison, reservations, and post-consumption evaluations, hotels have adopted a wide range of digital marketing tools to enhance brand visibility, customer engagement, and booking performance. This paper presents a comprehensive review of existing literature on digital marketing in the hotel industry, drawing from seminal books, peer-reviewed journal articles, and doctoral studies. The review synthesizes prior research on key digital marketing practices such as hotel websites and direct booking optimization, search engine marketing, online travel agencies, social media marketing, content marketing, email marketing, customer relationship management systems, analytics, online reputation management, mobile optimization, and emerging technologies including artificial intelligence and personalization tools.

The literature consistently indicates that digital marketing significantly influences customer perceptions, trust formation, booking intentions, and long-term loyalty, while online reviews and electronic word-of-mouth play a decisive role in hotel selection and revenue performance. Studies also highlight that effective integration of digital marketing with revenue management and dynamic pricing strategies helps hotels reduce dependence on intermediaries and improve financial outcomes. Additionally, digital platforms support sustainability communication, crisis management, and relationship building through personalized and data-driven interactions. However, the review identifies several critical research gaps. Most empirical studies focus on developed economies and large or luxury hotel chains, with limited evidence from developing countries such as India, particularly at regional or district levels. Small and medium-sized hotels remain under-represented, and integrated studies examining the combined impact of multiple digital marketing tools on hotel performance are scarce.

The paper concludes by emphasizing the need for context-specific, field-based empirical research evaluating digital marketing adoption, effectiveness, and return on investment in the hotel industry, with greater focus on integrated frameworks, sustainability, and long-term customer loyalty outcomes.

Key words: Digital Marketing; Hotel Industry; Hospitality Marketing; Online Reviews; Social Media Marketing; Revenue Management; Customer Loyalty; Artificial Intelligence; India etc.

1. INTRODUCTION:

The rapid growth of information and communication technologies has significantly reshaped marketing practices in the global hospitality industry. Digital marketing has become a vital strategic tool for hotels to enhance brand visibility, engage customers, and influence booking decisions through online platforms. With travellers increasingly relying on digital channels for information search, reservations, and post-purchase evaluations, the adoption of digital marketing practices is essential for hotel

competitiveness and growth. Digital marketing in hotels includes website optimization, search engine marketing, social media engagement, email campaigns, online travel agencies, mobile applications, and online reputation management, all of which enable personalized communication and real-time customer interaction. Previous studies reveal that digital marketing strongly affects customer perceptions, booking intentions, and loyalty, while online reviews and electronic word-of-mouth play a decisive role in shaping hotel choice (Chaffey & Ellis-Chadwick, 2019; Xiang & Gretzel, 2010). Although digital marketing is widely adopted, its effectiveness varies across hotel categories and markets, highlighting the need for systematic evaluation. Accordingly, the present study reviews and synthesizes existing literature on digital marketing in the hotel industry to identify key practices, research trends, and gaps, and to provide insights for researchers and hotel practitioners (Leung et al., 2013).

2. CONCEPT OF DIGITAL MARKETING:

Digital marketing refers to the use of digital technologies, internet platforms, and electronic media to promote products, services, and brands by engaging with current and potential customers through online channels such as websites, search engines, social media, email, and mobile applications. It enables organizations to reach targeted audiences, measure marketing performance in real time, and build long-term customer relationships through interactive and data-driven strategies.

3. DIGITAL MARKETING TOOLS AND STRATEGIES USED BY HOTELS:

1. **Hotel website and direct booking optimisation:** A well-designed hotel website improves direct bookings, reduces dependence on intermediaries, and strengthens brand credibility.
2. **Search engine optimization (SEO):** SEO increases organic visibility in search engines, helping hotels attract high-intent travellers at a lower long-term cost.
3. **Paid search and hotel metasearch advertising:** Paid and metasearch ads provide immediate visibility and influence booking decisions during price comparison stages.
4. **Online Travel Agencies (OTAs) and channel management:** OTAs enhance global reach and demand generation, while channel management ensures pricing and inventory consistency.
5. **Display advertising and retargeting:** Display and retargeting ads reinforce brand recall and convert visitors who initially abandon bookings.
6. **Social media marketing and influencer collaborations:** social media and influencers enhance engagement, trust, and brand awareness through experiential content.
7. **Content marketing:** Content marketing builds brand authority, supports SEO, and assists travellers during early planning stages.
8. **Email marketing and CRM:** Email and CRM systems enable personalized communication, increasing repeat bookings and customer loyalty.
9. **Revenue management and dynamic pricing integration:** Dynamic pricing aligns marketing efforts with demand, occupancy, and seasonal trends to maximize revenue.
10. **Online reputation management and review marketing:** Online reviews influence booking decisions by building trust and demonstrating service quality.
11. **Analytics, performance tracking, and attribution:** Analytics help hotels evaluate marketing effectiveness and allocate budgets based on performance.
12. **Personalization and loyalty programs:** Personalization and loyalty programs strengthen customer relationships and encourage repeat stays.
13. **Chatbots, messaging, and conversational marketing:** Conversational tools improve service efficiency, response speed, and booking conversion.

14. Mobile optimisation and accessibility: Mobile-friendly and accessible platforms reduce abandonment and support on the go bookings.

15. Local partnerships and experiential digital marketing: Local collaborations differentiate hotels by promoting unique, experience-based offerings.

4. REVIEW OF LITERATURE:

1. Buhalis (2008), in his seminal book and related journal work, explains that digital technologies have fundamentally transformed hotel marketing by shifting it from mass promotion to interactive, relationship-based communication. The study emphasizes that hotels now compete on digital visibility, customer experience, and online reputation rather than only on physical facilities. Digital marketing tools such as websites, search engines, and customer databases have become strategic assets, enabling hotels to personalize offerings and maintain long-term relationships with guests. This foundational work provides a conceptual base for understanding digital marketing as an integrated management function in hotels.

2. Law, Buhalis, and Cobanoglu (2014) highlight that the adoption of ICT in hospitality marketing enhances operational efficiency and improves customer engagement. Their book synthesizes research showing that online distribution channels and digital communication platforms have redefined hotel marketing strategies. The authors argue that digital marketing enables real-time interaction, dynamic pricing, and better market segmentation. This work is particularly relevant for understanding how hotels integrate marketing with technology to remain competitive.

3. Xiang and Gretzel (2010) examine how social media platforms influence travellers' information search and hotel selection behaviour. Their empirical research demonstrates that user-generated content such as reviews, ratings, and shared experiences significantly affects hotel brand perception. For hotel marketers, the study highlights the importance of engaging actively on social media platforms to shape consumer perceptions and influence booking decisions.

4. Leung et al. (2013) provide a comprehensive review of social media research in tourism and hospitality. Their study identifies major research themes, including consumer behaviour, organizational adoption, and performance outcomes. The authors conclude that social media marketing improves brand awareness, customer engagement, and trust in hotel services. The review also calls for more empirical studies linking social media activities to financial performance indicators such as occupancy and RevPAR.

5. Ye, Law, and Gu (2009) empirically establish a positive relationship between online consumer reviews and hotel room sales. Their findings show that a small increase in review ratings leads to a significant rise in booking volume. This research underscores the strategic importance of digital reputation management as a core component of hotel digital marketing strategies.

6. Noone, McGuire, and Rohlfs (2011) explore how social media and digital marketing data can be integrated into hotel revenue management systems. Their study argues that online reviews and social signals influence demand patterns and price sensitivity. This integration enables hotels to optimize pricing decisions and promotional strategies, linking digital marketing efforts directly with financial outcomes.

7. Sigala (2018) emphasizes that digital CRM systems enable hotels to collect, analyse, and use customer data for personalized marketing communication. Her work suggests that CRM-driven digital marketing improves customer loyalty, repeat visits, and cross-selling opportunities. This research highlights CRM as a bridge between digital marketing and long-term relationship building in hotels.

8. Verma, Stock, and McCarthy (2012) analyse how digital content such as photos, online descriptions, and reviews influence hotel booking intentions. Their findings reveal that visual and informational cues

significantly affect perceived value and purchase decisions. This study reinforces the role of content marketing in hotel digital strategies.

9. Buhalis and O'Connor (2005) discuss how online travel agencies (OTAs) have reshaped hotel distribution and marketing practices. Their research indicates that while OTAs increase market reach, excessive dependence reduces hotels' pricing control. The study suggests that hotels should balance OTA use with strong direct digital marketing strategies.

10. Thomas (2017) examines digital marketing adoption among small and medium hotels. The study identifies barriers such as lack of technical skills and budget constraints. However, it concludes that even basic digital marketing tools significantly improve visibility and occupancy rates, highlighting the importance of capacity building.

11. Wang, Xiang, and Fesenmaier (2016) highlight the growing importance of mobile marketing in hotels. Their research shows that mobile-friendly websites and apps enhance customer convenience and booking likelihood. The study emphasizes mobile optimization as a critical component of hotel digital marketing strategies.

12. Tussyadiah (2020) reviews the role of artificial intelligence in tourism and hospitality marketing. The study explains how AI-driven chatbots, recommendation engines, and personalization tools enhance customer engagement. For hotels, AI enables more efficient and targeted digital marketing communication.

13. Gössling, Scott, and Hall (2020) analyse how hotels used digital platforms during the COVID-19 crisis. Their study reveals that hotels relied heavily on social media and email marketing to communicate safety measures and maintain customer trust. This research highlights digital marketing as a resilience and crisis-management tool.

14. Font, Elgammal, and Lamond (2017) explore how hotels communicate sustainability initiatives through digital channels. Their findings suggest that transparent and credible online communication improves brand image and customer trust. Digital marketing thus becomes a medium for promoting responsible tourism practices.

15. Pan and Fesenmaier (2006) demonstrate that search engines play a critical role in hotel information search and booking decisions. Their research emphasizes the importance of SEO and paid search advertising in increasing hotel visibility and direct bookings.

16. Hays, Page, and Buhalis (2013) examine branding through digital media in the hospitality industry. Their study finds that consistent visual storytelling across digital platforms strengthens brand identity and customer engagement. These highlights branding as a strategic outcome of digital marketing.

17. Chaffey and Ellis-Chadwick (2019), in their digital marketing textbook, discuss metrics and analytics used to evaluate digital marketing performance. Applied to hotels, these metrics help assess campaign effectiveness, customer acquisition cost, and return on investment.

18. Kim, Ferrin, and Rao (2008) examine trust formation in online transactions. Their findings indicate that secure websites, transparent information, and credible reviews increase trust and booking intentions. Trust is therefore a key mediating variable in hotel digital marketing success.

19. Porter (2001) argues that the internet reshapes competitive strategy rather than replacing traditional strategy. Applied to hotels, digital marketing must align with overall business strategy to create sustainable competitive advantage.

5. RESEARCH GAP:

A review of existing research, books, and doctoral theses on digital marketing in the hotel industry reveals several notable gaps. Most studies are concentrated on developed countries and large or luxury hotel chains, with limited empirical evidence from developing economies such as India,

particularly at the regional or district level. The literature largely examines individual digital marketing tools such as social media, online reviews, OTAs, and mobile marketing independently, while integrated models assessing their combined impact on hotel performance are scarce. Furthermore, many studies are conceptual or review-based, highlighting a lack of primary, field-based empirical research measuring actual adoption, effectiveness, and return on investment of digital marketing practices. Small and medium hotels remain under-represented, despite their significant contribution to the hospitality sector. In addition, empirical validation of advanced digital technologies, sustainability communication, and long-term outcomes such as customer loyalty is limited. These gaps indicate the need for comprehensive, context-specific research to evaluate digital marketing practices and their performance implications in the hotel industry. Recent doctoral theses and review papers emphasize the need for integrated research linking digital marketing, revenue management, sustainability, and customer experience. The literature suggests future research should focus on AI-driven personalization, ethical data use, and digital inclusion of small hotels.

6. CONCLUSION:

The present review clearly establishes that digital marketing has evolved into a core strategic function within the hotel industry, fundamentally reshaping how hotels communicate with, attract, and retain customers. The literature consistently demonstrates that digital marketing tools ranging from hotel websites, search engines, social media, OTAs, and email marketing to advanced applications such as analytics, CRM systems, artificial intelligence, and personalization play a decisive role in influencing customer perceptions, booking intentions, and long-term loyalty. Online reviews, electronic word-of-mouth, and social media engagement have emerged as particularly powerful determinants of hotel choice, highlighting the growing importance of online reputation management and interactive communication. The review further indicates that effective digital marketing enables hotels to reduce dependence on intermediaries, optimize revenue through dynamic pricing, and build stronger customer relationships through data-driven and personalized strategies. At the same time, the integration of digital marketing with revenue management, sustainability communication, and customer experience management is increasingly recognized as a source of competitive advantage. However, the effectiveness of these practices varies significantly across hotel categories, sizes, and market contexts, underscoring that digital marketing is not a one-size-fits-all solution.

Despite the growing body of research, this review identifies clear gaps in the existing literature. Empirical evidence from developing economies, particularly at regional and district levels in India, remains limited. Small and medium-sized hotels are under-represented, and there is a shortage of integrated studies examining the combined impact of multiple digital marketing tools on financial and non-financial performance outcomes. Moreover, while emerging technologies such as AI-driven personalization, chatbots, and sustainability-focused digital communication show strong potential, their long-term effectiveness and ethical implications are not yet adequately validated through field-based research. In conclusion, the review highlights the need for comprehensive, context-specific empirical studies that evaluate digital marketing adoption, effectiveness, and return on investment in the hotel industry. Future research should focus on integrated digital marketing frameworks, the inclusion of small and medium hotels, and the linkage between digital marketing, revenue management, sustainability, and customer loyalty. Such research will not only enrich academic understanding but also provide actionable insights for hotel practitioners seeking to design effective, resilient, and customer-centric digital marketing strategies in an increasingly competitive hospitality environment.

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मराठी साहित्यामधून प्रतिबिंबित झालेले विकसित भारताचे स्वप्न

श्वेता शिवाजीराव परुळेकर

संशोधक विद्यार्थी मराठी विभाग,
सावित्रीबाई फुले पुणे विद्यापीठ पुणे.

मो८६२६००२५५५.

सारांश (Abstract)

भारताच्या सामाजिक, आर्थिक, सांस्कृतिक व नैतिक उन्नतीचे स्वप्न म्हणजे 'विकसित भारत' हे स्वप्न केवळ राजकीय घोषणांपुरते मर्यादित न राहता साहित्य, कला व विचारप्रवाहांमधून सातत्याने अभिव्यक्त होत आले आहे. साहित्याच्या विविध कालखंडांतील काव्य मराठी, कथा, कादंबरी, नाटक व वैचारिक लेखनात भारताच्या प्रगतीचे, समतेचे, स्वावलंबनाचे व मानवी मूल्यांवर आधारित राष्ट्रनिर्मितीचे स्वप्न दिसून येते. या संकल्पनेचे 'विकसित भारत' प्रस्तुत शोधनिबंधात संत साहित्यापासून ते समकालीन मराठी लेखनापर्यंत प्रतिबिंब कसे उमटले आहे, याचा सखोल अभ्यास करण्यात आला आहे. सामाजिक सुधारणांचा आग्रह, शिक्षणाचा प्रसार, स्त्रीपुरुष समानता, आर्थिक स्वावलंबन, वैज्ञानिक दृष्टिकोन आणि सांस्कृतिक आत्मभान या सर्व घटकांच्या माध्यमातून मराठी साहित्याने भारताच्या विकासाच्या स्वप्नाला वैचारिक अधिष्ठान दिले आहे, असा निष्कर्ष या संशोधनातून मांडण्यात आला आहे.

कीवर्ड्स (Keywords)

मराठी साहित्य, विकसित भारत, संत साहित्य, सामाजिक सुधारण, राष्ट्रनिर्मिती, समावेशक विकास, स्त्रीवाद, दलित साहित्य, आधुनिकता

प्रस्तावना

भारत हा प्राचीन संस्कृती, समृद्ध परंपरा व विविधतेने नटलेला देश आहे. स्वातंत्र्यानंतर भारताने स्वतःला एक सार्वभौम, लोकशाही व प्रगत राष्ट्र म्हणून घडविण्याचे स्वप्न पाहिले. 'विकसित भारत ही संकल्पना आज राजकीय, सामाजिक व आर्थिक चर्चेचा केंद्रबिंदू असली तरी तिची बीजे फार पूर्वीच साहित्यामध्ये रोवली गेली होती. मराठी साहित्याने समाजाचे वास्तव प्रतिबिंबित करताना भविष्याचा मार्गही त्यामुळे साहित्य हे केवळ मनोरंजनाचे साधन नसून समाजपरिवर्तनाचे प्रभावी माध्यम आहे. सूचित केला आहे 'विकसित' मराठी साहित्यामध्ये भारताचे स्वप्न कसे मांडले गेले आहे', याचा अभ्यास करणे अत्यंत महत्त्वाचे ठरते.

मराठी साहित्याचा इतिहास पाहिला असता, संत साहित्यापासून आधुनिक आणि समकालीन साहित्यापर्यंत समाजसुधारणेचा, मानवी मूल्यांचा, सामाजिक न्यायाचा आणि राष्ट्रीय एकात्मतेचा सतत आग्रह दिसून येतो. रामसंत तुका, ज्ञानेश्वर, नामदेव यांसारख्या संतांनी भक्तीच्या माध्यमातून सामाजिक समता व

नैतिक शुद्धतेचा संदेश दिलापुढे लोकहितवादी ., महात्मा फुले, गोपाळ गणेश आगरकर, लोकमान्य टिळक यांसारख्या विचारवंतांनी सामाजिक सुधारणा, शिक्षण, स्वातंत्र्य व राष्ट्रनिर्मितीचा विचार साहित्याच्या माध्यमातून मांडलास्वातंत्र्योत्तर काळात ग्रामीण साहित्य ., दलित साहित्य, स्त्रीवादी साहित्य व समकालीन लेखनातून विकसित, समतावादी व मानवी मूल्यांवर आधारित भारताचे स्वप्न अधोरेखित झाले.

या शोधनिबंधाचा उद्देश म्हणजे मराठी साहित्याच्या विविध प्रवाहांमधून प्रतिबिंबित झालेल्या या अभ्यासातून हे स्पष्ट होते की मराठी साहित्य हे .या संकल्पनेचा सखोल अभ्यास करणे 'विकसित भारत' .केवळ सामाजिक वास्तवाचे वर्णन करणारे नसून परिवर्तनाचा मार्ग दाखवणारे दिशादर्शक साहित्य आहे

संशोधनाची उद्दिष्टे व गृहितके

उद्दिष्टे :

1. मराठी साहित्यामधून .या संकल्पनेचे स्वरूप स्पष्ट करणे 'विकसित भारत'
2. विविध साहित्यप्रवाहांतून राष्ट्रनिर्मिती व समाजविकासाचा विचार कसा मांडला गेला आहे, याचा अभ्यास करणे.
3. संत साहित्यापासून समकालीन साहित्यापर्यंत विकासविचारातील सातत्य व परिवर्तन अधोरेखित करणे.
4. मराठी साहित्याचा सामाजिक, सांस्कृतिक व वैचारिक विकासाशी असलेला संबंध स्पष्ट करणे.

गृहितके :

1. मराठी साहित्याने समाजपरिवर्तन व राष्ट्रनिर्मितीच्या प्रक्रियेत महत्त्वाची भूमिका बजावली आहे.
2. 'विकसित भारत ही संकल्पना आधुनिक काळापुरती मर्यादित 'नसून तिची मुळे प्राचीन व मध्ययुगीन साहित्यपरंपरेत आढळतात.
3. समकालीन मराठी साहित्यामध्ये समावेशक, वैज्ञानिक व मानवी मूल्यांवर आधारित भारताचे स्वप्न अधिक स्पष्टपणे व्यक्त झाले आहे.

संशोधन पद्धती

प्रस्तुत शोधनिबंधासाठी वर्णनात्मक व विश्लेषणात्मक पद्धतीचा अवलंब करण्यात आला आहेमराठी . साहित्याच्या विविध कालखंडांतील निवडक साहित्यकृतींचा अभ्यास करण्यात आला असून दुय्यम संदर्भग्रंथ, संशोधन लेख, समीक्षात्मक लेखन व साहित्य इतिहासाचा आधार घेण्यात आला आहेतुलनात्मक विश्लेषणाच्या . माध्यमातून विविध साहित्यप्रवाहांमधील विकासविचाराचे साम्य व भेद स्पष्ट करण्यात आले आहेत.

'विकसित भारत' अर्थ व व्याप्ती : संकल्पना '

'विकसित भारत' ही सामाजिक समता.ही संकल्पना केवळ आर्थिक प्रगतीपुरती मर्यादित नाही ', शिक्षणाचा प्रसार, आरोग्य सुविधा, स्त्रीपुरुष समानता-, वैज्ञानिक दृष्टिकोन, सांस्कृतिक समृद्धी व नैतिक मूल्यांची जोपासना यांचा समन्वय साधणारी व्यापक संकल्पना आहेविकसित राष्ट्र म्हणजे केवळ भौतिक . समृद्धी असलेला देश नव्हे, तर मानवी प्रतिष्ठा जपणारा, सामाजिक न्याय प्रस्थापित करणारा व प्रत्येक नागरिकाला विकासाच्या प्रक्रियेत सहभागी करणारा देश होय.

मराठी साहित्याने या व्यापक विकास विचाराला सातत्याने अधोरेखित केले आहेसंत साहित्याने . आध्यात्मिक समतेचा, भक्ती व करुणेचा संदेश दिला;आधुनिक साहित्याने सामाजिक सुधारणा, शिक्षण व स्वातंत्र्याचा आग्रह धरला; तर समकालीन साहित्याने विज्ञान, तंत्रज्ञान, जागतिकीकरण व मानवी हक्क यांचा विचार मांडला आहेही संकल्पना मराठी साहित्याच्या विविध टप्प्यांत वेगवेगळ्या 'विकसित भारत' त्यामुळे . .स्वरूपात प्रतिबिंबित झाली आहे

प्राचीन मराठी साहित्य व समाजजागृती

मराठी साहित्याची सुरुवात धार्मिक व भक्तिपर साहित्यापासून झाली असली तरी त्यामध्ये समाजजागृतीचे बीज दडलेले दिसतेही केवळ गीतेवरील भाष्य नसून सामान्य 'ज्ञानेश्वरी' ज्ञानेश्वरांची . ज्ञानेश्वरांनी संस्कृतातील तत्त्वज्ञान .माणसाला अध्यात्माचा मार्ग समजावून देणारी सामाजिक क्रांती होती हे ज्ञानल.मराठीत आणून सामान्य जनतेसाठी खुले केलेोकशाहीकरण म्हणजेच ज्ञानाच्या समान वितरणाची सुरुवात होती,जी विकसित समाजाचा एक महत्त्वाचा पाया मानली जाते.

नामदेव, एकनाथ व तुकाराम यांसारख्या संतांनी जातीभेद, कर्मकांड व अंधश्रद्धा यांना विरोध केला . तुकारामांचे अहंग मानवी मूल्ये, करुणा, प्रामाणिकपणा व सामाजिक समतेचा पुरस्कार करतातत्यांचे . संत साहित्याने केवळ भक्तीचा मार्ग .साहित्य समाजाला नैतिक व आध्यात्मिक उन्नतीच्या दिशेने नेणारे ठरले दाखवला नाही, तर समतेवर आधारित समाजरचनेचा आदर्श समोर ठेवलाहा आदर्शच पुढे विकसित . लखया का.भारताच्या संकल्पनेचा नैतिक पाया ठरतोंडातील साहित्यामध्ये भौतिक विकासापेक्षा मानवी मूल्यांना अधिक महत्त्व दिले गेले असले तरी समाजातील विषमता दूर करून सर्वांना समान संधी देण्याचा विचार स्पष्ट दिसतोया संकल्पनेच्या नैतिक व सांस्कृतिक 'विकसित भारत' त्यामुळे प्राचीन मराठी साहित्य हे . कापायाभूत घटचे प्रतिनिधित्व करते.

संत साहित्य व सामाजिक समतेचे स्वप्न

संत साहित्य हा मराठी साहित्याचा एक अत्यंत महत्त्वाचा प्रवाह आहेया साहित्याने सामाजिक . समतेचा, मानवी बंधुत्वाचा व आत्मिक उन्नतीचा संदेश दिलासंत तुकाराम., नामदेव, एकनाथ, चोखामेळा, जनाबाई यांसारख्या संतांनी समाजातील दुर्बल घटकांना आत्मसन्मान दिलाचोखामेळ्यासारख्या दलित . हे साहित्य जातिभेदाच्या पलीकडे .संतांच्या अहंगांमधून सामाजिक विषमतेविरुद्धचा आक्रोश व्यक्त होतो .ग्रह धरलासंत एकनाथांनी आपल्या कीर्तनांतून समाजसुधारणेचा आ.जाऊन मानवी समतेचा विचार मांडते त्यांनी कर्मकांड, अंधश्रद्धा व अन्यायकारक सामाजिक रूढींवर टीका केलीसंत साहित्याच्या माध्यमातून . लोकांमध्ये विवेकबुद्धी जागृत झाली आणि समाज अधिक मानवतावादी होण्याच्या दिशेने वाटचाल करू हिले पाऊल हहे परिवर्तन म्हणजेच विकसित समाजाच्या दिशेने टाकलेले प.लागलाोय.

या साहित्यप्रवाहात राजकीय किंवा आर्थिक विकासाचा थेट उल्लेख नसला तरी मानवी मूल्यांची जोपासना, समतेचा आग्रह व नैतिक शुद्धता यांमुळे समाजाच्या विकासासाठी आवश्यक मानसिकता निर्माण झाली क व नैतिकविकसित भारताच्या स्वप्नाचा आध्यात्मिक' त्यामुळे संत साहित्याला .पायाअसे म्हणणे वावगे ' .ठरणार नाही

आधुनिक मराठी साहित्य व राष्ट्रनिर्मिती

एकोणिसाव्या शतकात इंग्रजी शिक्षणाच्या प्रभावामुळे मराठी साहित्यामध्ये आधुनिकतेचा उदय झाला. या काळातील साहित्यकारांनी समाजसुधारणेचा, शिक्षणप्रसाराचा व राष्ट्रनिर्मितीचा विचार मांडला. लोकहितवादी गोपाळ हरि देशमुख यांनी आपल्या मधून जातिभेद 'शतपत्रां', स्त्रीशिक्षणाचा अभाव, अंधश्रद्धा व सामाजिक अन्याय यांवर कठोर टीका केली. त्यांनी विवेकनिष्ठ समाजरचनेचा आग्रह धरला, जो विकसित राष्ट्रासाठी अत्यावश्यक आहे. यांनी आपल्या साहू महात्मा ज्योतिराव फुले. इत्यकृतींमधून शूद्रातिशूद्रांच्या - 'पुरुष समानतेचा पुरस्कार केला-शिक्षणाचा व स्त्रीगुलामगिरीया ग्रंथातून त्यांनी सामाजिक गुलामगिरीवर ' रित सावित्रीबाई फुले यांच्या कवितांमधून स्त्रीशिक्षण व स्त्रीस्वातंत्र्याचा संदेश प्रसा. घणाघाती प्रहार केला या सा. झाला. साहित्यामुळे समाजातील दुर्बल घटकांना आत्मभान प्राप्त झाले आणि सामाजिक परिवर्तनाची चळवळ वेगाने पुढे सरकली.

गोपाळ गणेश आगरकर यांनी विवेकवाद, वैज्ञानिक दृष्टिकोन व समाजसुधारणेचा पुरस्कार केला. भावना साहित्य व लोकमान्य टिळक यांनी राष्ट्रीय अस्मिता व स्वराज्याची पत्रकारितेच्या माध्यमातून जागृत केली. या काळातील साहित्याने केवळ सामाजिक सुधारणाच नव्हे तर राजकीय स्वातंत्र्य व राष्ट्रनिर्मितीचा. विकसित भारताच्या स्वप्नाचा राजकीय व सामाजिक ' त्यामुळे आधुनिक मराठी साहित्य हे. मार्गही दाखवला. ठरले घडविणारे 'पाया

स्वातंत्र्योत्तर साहित्य व विकासाची दिशा

१९४७ नंतर भारत स्वतंत्र झाला, पण देशासमोर अनेक सामाजिक व आर्थिक आव्हाने उभी राहिली. या काळातील मराठी साहित्याने नव्या राष्ट्रनिर्मितीच्या प्रक्रियेतील समस्या, आशा व अपेक्षा यांचे प्रतिबिंब दाखवले. देशपांडे. ल. पु., गमाडगू. दि. ळकर, व्यंकटेश माडगूळकर यांसारख्या लेखकांनी सामान्य माणसाच्या जीवनातील संघर्ष, मूल्ये व आशा आपल्या साहित्यातून मांडल्या. स्वातंत्र्योत्तर काळात ग्रामीण साहित्याचा. या साहित्यप्रवाहात ग्रामीण जीवनातील दारिद्र्य. विशेष उदय झाला, शोषण, अज्ञान व अन्याय यांचे वास्तववादी चित्रण आढळते. परंतु त्याचबरोबर ग्रामीण समाजाच्या विकासाची, शिक्षणप्रसाराची व सामाजिक न्यायाच्या प्रस्थापनेची आकांक्षा देखील व्यक्त झाली आहे. साहित्याने भारताच्या विकासासाठी. ग्रामीण भागाच्या उन्नतीचे महत्त्व अधोरेखित केले. या काळातील साहित्यामध्ये राष्ट्राच्या प्रगतीबद्दल आशावाद व चिंता दोन्ही आढळतात. औद्योगिकीकरण, शहरीकरण व आधुनिकतेच्या प्रक्रियेत मानवी मूल्ये हरवू नयेत, असा इशाराही साहित्यकारांनी दिला. त्यामुळे स्वातंत्र्योत्तर मराठी साहित्य हे भौतिक. स्फुटिक विकासाचा समतोल विकासाबरोबरच नैतिक व सां. राखण्याचा आग्रह धरणारे ठरते.

ग्रामीण व दलित साहित्य समावेशक भारताचा विचार :

ग्रामीण साहित्य व दलित साहित्य हे मराठी साहित्याचे दोन अत्यंत प्रभावी प्रवाह आहेत, जे विकसित ' दा — ग्रामीण साहित्याने गावातील वास्तव समस्या. या संकल्पनेला समावेशक अर्थ देतात 'भारतरिद्र, बेरोजगारी, शोषण, अज्ञान, पाणीटंचाई, आरोग्यसेवेचा अभाव यांचे जिवंत चित्रण केले. या साहित्यामधून.

व्यंकटेश माडगूळकर .ग्रामीण भागाच्या सर्वांगीण विकासाची आवश्यकता अधोरेखित झाली, राबोराडे .रं ., बाळ सामंत यांसारख्या लेखकांनी ग्रामीण समाजातील परिवर्तनाची गरज आपल्या लेखनातून मांडली.

दलित साहित्याने समाजातील शोषित व वंचित घटकांचा आवाज बुलंद केलाबाबूराव बागूल ., दया पवार, नामदेव ढसाळ, लक्ष्मण माने यांसारख्या लेखकांनी दलितांच्या दुःख, संघर्ष व आकांक्षा यांचे वास्तववादी चित्रण केलेया साहित्याने सामाजिक न्य .ाय, समानता व मानवी प्रतिष्ठेचा आग्रह धरला .डॉ . जातिव्यवस्थेच्या .बाबासाहेब आंबेडकरांच्या विचारांचा प्रभाव दलित साहित्यावर स्पष्टपणे दिसून येतो असल्याचे हे साहित्य ठामपणे अन्यायकारक रचनेविरुद्धचा संघर्ष हा विकसित समाजासाठी अत्यावश्यक .मांडते

ग्रामीण व दलित साहित्याच्या माध्यमातून ही संकल्पना केवळ आर्थिक 'विकसित भारत' विकासापुरती मर्यादित न राहता सामाजिक न्याय, समावेशिता व मानवी हक्क यांचा समन्वय साधणारी बनते . टकांचा सहभाग आवश्यक असल्याचे ठामपणे अधोरेखितया साहित्यप्रवाहांनी विकासाच्या प्रक्रियेत वंचित घ केले आहे.

स्त्रीवादी साहित्य व विकसित भारत

स्त्रीवादी मराठी साहित्याने विकसित भारताच्या संकल्पनेत स्त्रीपुरुष समानतेचा महत्वाचा पैलू - क भूमिका व मर्यादित चौकटींत आढळतेपूर्वीच्या साहित्यामध्ये स्त्रीचे चित्रण प्रामुख्याने पारंपरि .जोडला आहे; परंतु आधुनिक व समकालीन स्त्रीवादी लेखनाने स्त्रीच्या स्वातंत्र्याचा, आत्मसन्मानाचा व समान हक्कांचा पुरस्कार केला आहेविभावरी शिरूरकर., दुर्गा भागवत, शांता गोखले, सुनीता देशपांडे, मेधा काळे यांसारख्या लेखिकांनी स्त्रीच्या मानसिक, सामाजिक व आर्थिक संघर्षांचे वास्तववादी चित्रण केलेल्यांच्या साहित्यामध्ये . विवाहसंस्था, कौटुंबिक बंधने, लैंगिक विषमता व सामाजिक अन्याय यांवर सखोल चिंतन आढळतेया . साहित्याने स्त्रीला केवळ सहनशील व त्यागी व्यक्ती म्हणून नव्हे, तर स्वतंत्र विचार करणारी, निर्णयक्षम व आत्मभान असलेली व्यक्ती म्हणून मांडलेस्त्रीवादी साहित्याने शिक्षण., रोजगार, आरोग्य व सामाजिक सहभाग या क्षेत्रांत स्त्रीसमानतेचा आग्रह धरलात्यामुळे स्त्रीवादी .हे सर्व घटक विकसित राष्ट्रासाठी अत्यावश्यक आहेत . भारताच्या स्वप्नातील लैंगिक समानतेचा व मानवी अधिकारां विकसित' मराठी साहित्य हेचा पायामजबूत ' .करणारे ठरते

समकालीन साहित्य व जागतिक भारत

एकविसाव्या शतकातील मराठी साहित्य जागतिकीकरण, तंत्रज्ञान, स्थलांतर, शहरीकरण व सांस्कृतिक बदल यांच्या पार्श्वभूमीवर विकसित होत आहेआधुनिक जीवनशैली या साहित्यामध्ये ., बदलती मूल्यव्यवस्था, रोजगाराच्या संधी, शिक्षणाची जागतिकीकरणाकडे झुकणारी दिशा व मानवी नातेसंबंधांतील परिवर्तन यांचे प्रतिबिंब दिसतेसमकालीन कादंबऱ्या., कथा व कविता जागतिक स्तरावर भारताची ओळख, बहुसांस्कृतिक समाजरचना व नव्या पिढीच्या आकांक्षा मांडताततंत्रज्ञानाच्या विकासामुळे माहिती व . ज्ञानाची उपलब्धता वाढली आहे; त्याचबरोबर एकाकीपणा, स्पर्धा व मानसिक ताण यांसारख्या समस्याही उद्भवल्या आहेतसमकालीन मराठी साहित्य या सकारात्मक व नकारात्मक दोन्ही पैलूंचे वास्तववादी चित्रण .

भारत केवल प्रा .या संकल्पनेचा उदय दिसतो 'जागतिक भारत' या साहित्यामध्ये.करतेदेशिक किंवा राष्ट्रीय स्तरावर नव्हे तर जागतिक स्तरावरही प्रभावशाली राष्ट्र म्हणून उदयास येत आहेपरंतु या प्रक्रियेत मानवी . मूल्ये, सामाजिक न्याय व सांस्कृतिक आत्मभान अबाधित राहावे, असा संदेश समकालीन साहित्य देत आहे . त्यामुळे हे साहित्य विकसित भारताच्या संकल्पनेला जागतिक परिमाण देते.

निष्कर्ष -

प्रस्तुत शोधनिबंधाच्या अभ्यासातून हे स्पष्ट होते की मराठी साहित्याने ला 'विकसित भारताच्या स्वप्ना' केवळ प्रतिबिंबितच केले नाही, तर त्या स्वप्नाला वैचारिक अधिष्ठानही दिले आहेसंत साहित्याने समता ., करुणा व नैतिक शुद्धतेचा पाया घातला; आधुनिक साहित्याने समाजसुधारणा, शिक्षणप्रसार व राष्ट्रनिर्मितीचा मार्ग दाखवला; स्वातंत्र्योत्तर साहित्याने विकासाच्या प्रक्रियेत मानवी मूल्यांचा समतोल राखण्याचा आग्रह धरला; ग्रामीण व दलित साहित्याने समावेशक व न्यायाधिष्ठित भारताचा विचार मांडला; स्त्रीवादी साहित्याने लैंगिक समानतेचा व मानवी हक्कांचा पुरस्कार केला; तर समकालीन साहित्याने जागतिक स्तरावर भारताच्या भूमिकेचा व आधुनिकतेच्या आव्हानांचा वेध घेतला.

यावरून असे म्हणता येईल की मराठी साहित्य हे केवळ सामाजिक वास्तवाचे प्रतिबिंब नसून परिवर्तनाचे साधन आहे' .विकसित भारतही संकल्पना साहित्यामध्ये केवळ भौतिक प्रगतीपुरती मर्यादित न ' राहता मानवी मूल्ये, सामाजिक न्याय, समता, स्वातंत्र्य, विवेकनिष्ठता व सांस्कृतिक समृद्धी यांचा समन्वय साधणारी व्यापक संकल्पना म्हणून व्यक्त झाली आहे त्यामुळे मराठी .साहित्याचा अभ्यास म्हणजे भारताच्या विकासविचाराचा सांस्कृतिक व वैचारिक इतिहास समजून घेण्याचा मार्ग होय.

आजच्या काळात जेव्हा भारत विकसित राष्ट्र होण्याच्या दिशेने वेगाने वाटचाल करत आहे, तेव्हा मराठी साहित्याने मांडलेले मूल्याधिष्ठित विकासाचे स्वप्न अधिकच सुसंगत ठरतेने दाखवलेला साहित्या . समतेचा, न्यायाचा, मानवतेचा व विवेकाचा मार्गच खऱ्या अर्थाने भारताला सर्वांगीण विकासाच्या दिशेने नेऊ शकतो, असा निष्कर्ष या संशोधनातून निघतो.

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Economics of Gram Farming In Dryland of Solapur District

Dr. Yogesh Balbhim Mane

Assistant Professor, Department of Commerce

Vivekanand College Kolhapur, (An Empowered Autonomous Institute)

Email Id- yogeshmane055@gmail.com

Mobile No. 9049490513

Abstract:

Gram (chickpea) is an important pulse crop cultivated in dryland regions of India due to its drought tolerance, low water requirement, and contribution to soil fertility and nutritional security. The present study examines the economics of gram farming in the dryland areas of Solapur district, Maharashtra, with the objective of analysing cost of cultivation, production costs, price realization, profitability, and benefit–cost relationship. Primary data were collected from 50-gram growers across all eleven tehsils of the district using purposive quota sampling. The results reveal that the average total cost of gram cultivation is ₹17,908 per acre, with operational costs accounting for 65.64 percent and fixed costs contributing 32.68 percent. Human labour and machine labour form the major components of operational expenses. Average productivity was observed to be 3.35 quintals per acre, while farmers received an average market price of ₹4,704 per quintal. The gross return per acre was ₹15,735, resulting in a net loss of ₹2,173 per acre and a benefit–cost ratio of 0.88, indicating economic loss under prevailing conditions. Hypothesis testing through a one-sample t-test further confirms that gram cultivation in the study area is statistically not profitable, with significant variation in returns among farmers. The study suggests that profitability can be improved through adoption of improved drought-resistant varieties, efficient input use, mechanization support, better extension services, and improved market access. Despite current economic challenges, gram remains important for dryland farming due to its resilience and nutritional importance. Policy support and productivity-enhancing measures are therefore essential to improve farm income and sustain gram cultivation in drought-prone regions.

Keywords : Gram cultivation, dryland farming, cost of cultivation, profitability, benefit–cost ratio, Solapur district, pulse crop economics.

1. INTRODUCTION:

Gram, commonly known as chickpea or Bengal gram (*Cicer arietinum*), is one of the most important pulse crops cultivated in India. Gram has been grown in the Indian subcontinent since ancient times and plays a crucial role in the country's food and nutritional security. India is the largest producer and consumer of gram in the world, contributing a major share to global production. Gram is well suited to semi-arid and dryland conditions due to its drought tolerance and ability to grow under limited rainfall, making it an important crop in rainfed agricultural regions. Gram is widely cultivated across several states, with Maharashtra being one of the major producers. The crop is particularly suitable for dryland farming systems where irrigation facilities are limited. Gram requires relatively low water, improves soil fertility through nitrogen fixation, and fits well into crop rotations after kharif crops, making it economically beneficial for farmers in moisture-stress regions. Nutritionally, gram is a rich source of protein, containing about 20–22 percent protein, and serves as a vital protein supplement for the vegetarian population. It is consumed in various forms such as whole grain, split dal, flour (besan), and processed food products. Apart from human consumption, gram straw is also used as nutritious fodder for livestock, adding further economic value to the crop.

Gram is generally cultivated as a Rabi crop, sown during October November after the monsoon season and harvested between February and March. The crop duration typically ranges from 100 to 120 days depending on the variety and climatic conditions. In India, gram occupies a significant share of total pulse area and production, though productivity varies across regions due to differences in rainfall, soil type, and farming practices. Solapur district is predominantly a dryland agricultural region characterized by low and uncertain rainfall, making drought-tolerant crops like gram particularly important for farmers' livelihoods. Gram is cultivated across most tehsils of the district and serves as a major Rabi crop contributing to farm income in rainfed areas. However, variations in yield, input use, market prices, and production costs influence the profitability of gram cultivation. Thus, the present study on the Economics of Gram Farming in the Dryland Areas of Solapur District aims to examine the cost of cultivation, input utilization pattern, productivity levels, price realization, profitability, and cost benefit relationship of gram production in the study area. The analysis will help understand economic viability and provide insights for improving income of dryland farmers through efficient gram cultivation practices.

2. OBJECTIVES OF THE STUDY:

The main objective of study is to study the economics of Gram farming in dryland of Solapur district and specific objectives of the present study are as follows-

1. To analyse the cost of Gram Production in the area under study.
2. To study the prices for Gram Production in area under study.
3. To study the profitability of Gram Production in the area under study.
4. To estimate the benefit cost ratio of Gram production in study area.

3. HYPOTHESIS:

For the purpose of present research paper researcher has formulated following hypothesis

1. Gram crop is not profitable.

4. RESEARCH METHODOLOGY:

For the study undertaken researcher has used the multistage sampling. For the selection of sample farmers researcher has used the purposive sampling method. For selection of farmers researcher has selected non-irrigated land farmers purposefully and quota sampling method is used to select the gram crop farmer. Therefore, the researcher has used the purposive quota sampling method because there is no exact data of dryland gram farmers in Solapur district. The study was conducted in Solapur district as whole. From Solapur district all 11 tehsils i.e. Pandharpur, Mangalwedha, Malshiras, Madha, Karmala, Akkalkot, Barshi, Mohol, Sangola, Solapur North & Solapur South having maximum area under Gram cultivation were selected. The study was based on primary data. Thus, for present study 50 Kharif Gram growers were selected as per the quota sampling method. These 50 respondents were selected from each tehsil. Data collection was made by preparing separate questionnaire/ interview schedule for Gram producer.

5. RESULT AND DISCUSSION:

5.1. Estimated Cost of Cultivation and Total Cost of Gram in Solapur District

Table 1
Estimated Cost of Cultivation and Total Cost of Gram in Solapur District (Rs. Per Acre)

Sr. No.	Elements of cost	ATC	%	Min.	Max.	SD
1	Human Labour- Hired	1809	10.10	0	6000	1491

Sr. No.	Elements of cost	ATC	%	Min.	Max.	SD
2	Human Labour- Family	3692	20.62	222	12800	3030
3	Bullock Labour - Hired	394	2.20	0	4000	978
4	Bullock Labour - Owned	0	0.00	0	0	0
5	Machine Labour - Hired	1888	10.54	0	10000	1833
6	Machine Labour - Owned	0	0.00	0	0	0
7	Seeds	896	5.00	120	2667	511
8	Fertilizer	948	5.30	0	4400	1034
9	Manure	922	5.15	0	26667	3998
10	Insecticides	591	3.30	0	3000	695
11	Irrigation (Water + Electricity Charges)	234	1.31	0	1333	233
12	Crop Insurance	29	0.16	0	533	85
13	Interest on Working Capital	345	1.93	131	3900	522
14	Miscellaneous	6	0.04	0	120	28
I)	Operational Cost (1 to 14)	11756	65.64	4518	39693	6872
15	Rental Value of Owned Land	4609	25.74	2500	9333	941
16	Rent Paid on Leased land	0	0.00	0	0	0
17	Land Revenue, Cesses & Taxes	102	0.57	0	1251	197
18	Depreciation of Farm Builds & Implements	217	1.21	0	1000	193
19	Interest on Fixed Capital	924	5.16	311	4000	873
II)	Fixed Cost (15 to 19)	5853	32.68	3810	13333	1599
III)	Total Cost of Cultivation (I + II)	17608	98.33	9588	46433	7780
20	Packaging cost	85	0.48	20	400	69
21	Transportation Cost	171	0.96	0	400	90
22	Sales Expenses in Market Committee	43	0.24	0	200	35
IV)	Selling and Distribution Cost (20 to 22)	300	1.67	40	640	139
	Total Cost / Cost of Sales (III + IV)	17908	100.00	9721	46859	7822

(Source: Field Survey)

Variable Cost/ Operational Cost of Gram -

In Gram production human labour cost is the major variable cost. Hired Human labour cost incurred was Rs. 1809 (10.10%) per acre, and family labour cost incurred was Rs. 3692 (20.62%) per acre. Family labour cost is more as compared to hired human labour cost. Hired Bullock labour cost incurred was Rs. 394 (2.20%) per acre and there was no owned bullock labour cost because the farmers have not owned the bullock labour. Hired machine labour cost incurred was Rs. 1888 (10.54%) per acre and there was no owned machine labour cost because the farmers are not owned the machine labour. Seeds cost incurred was Rs. 896 (5.00%) per acre for Gram production. Fertilizer cost incurred was Rs. 948 (5.30%) per acre. In case of Gram production manure cost incurred was Rs. 922 (5.15%) per acre. Insecticides cost incurred was Rs. 591 (3.30%) per acre. Irrigation cost incurred was Rs. 234 (1.31%) per acre which includes water and electricity charges. In Urad production crop insurance cost incurred was Rs. 29 (0.16 %) per acre. Interest on Working capital cost incurred was Rs. 345 (1.93%) per acre and miscellaneous cost incurred was Rs. 6 (0.04%) per acre in the sample study area. The average total operational or variable cost incurred was Rs. 11756 (65.64%), minimum cost incurred was Rs. 4518,

maximum cost incurred was Rs. 39693 per acre and standard deviation was 6872 in the sample study area. So, from the variable cost analysis it was observed that human labour cost (30.72%) and machine labour cost (10.54%) was the major components of operational or variable cost.

Fixed Cost of Gram-

In the case of Gram production rental value of owned land is the major component of fixed cost. Rental value of owned land cost incurred was Rs. 4609 (25.74%) per acre in sample study area. There is no cost of rent paid on leased land because in sample area no any farmer was taken land on lease. Land revenue, cesses and taxes cost incurred was Rs. 102 (0.57%) per acre. Depreciation of farm builds and implements cost incurred was Rs. 217 (1.21%) per acre. Interest on fixed capital cost incurred was Rs. 924 (5.16%) per acre. The average total fixed cost of Urad cultivation incurred was Rs. 5853 (32.68%), minimum cost was Rs. 3810, maximum cost was Rs. 13333 per acre and standard deviation was 1599. So, from the analysis of fixed cost it was observed that rental value of owned land (25.74%) was the major component of cost in case of fixed costs. It was also observed that there was no cost of rent paid on leased in land because all the selected farmers have their own land. Land revenue, cesses and taxes cost (0.57%) was very less in fixed costs.

Total Cost of Cultivation of Gram-

The average total cost of cultivation of Gram was Rs. 17608 (98.33%), minimum cost was Rs. 9588, maximum cost was Rs. 46433 and standard deviation was 7780. Out of total cost of cultivation operational cost was Rs. 11756 (65.64%) and fixed cost was 5853 (32.68%).

Selling and Distribution Cost of Gram-

This table shows the marketing cost of per acre Gram production. The packaging cost was incurred Rs. 85 (0.48%) per acre in drought area of Solapur district. Majority of the Urad farmers sale their production at local markets (block and district market) the transportation cost from farm to local market was Rs. 171 (0.96%) per acre. The average sales expenses in market committee (portage, weigh & other cost) incurred was Rs. 43 (0.24) per acre. The average total selling and distribution cost of Gram was Rs. 300 (1.67%), minimum cost was Rs. 40, maximum cost was 640 per acre in study area and standard deviation was 139.

Total Cost /Cost of sales of Gram-

In Gram farming, per acre average total cost or cost of sales was (total cost of cultivation + total marketing cost) Rs. 17908, minimum cost was Rs. 9721, maximum cost was Rs. 46859 and standard deviation was 7822 in the study area. The share of variable cost in total cost or cost sales was Rs. 11756 (65.64%), fixed cost was Rs. 5853 (32.68%) and selling and distribution cost was Rs. 300 (1.67%). From this table it was observed that per acre cost of Gram production was Rs. 17908.

5.2. Estimated Cost of Production of Gram in Solapur District:

Table 2
Estimated Cost of Production of Gram in Solapur District

Sr. No.	Elements of cost	ATC	%	(Rs. Per Quintal)		
				Min.	Max.	SD
1	Human Labour- Hired	540	10.10	0	2667	631
2	Human Labour- Family	1103	20.62	45	9000	1469
3	Bullock Labour - Hired	118	2.20	0	1667	368
4	Bullock Labour - Owned	0	0.00	0	0	0

Sr. No.	Elements of cost	ATC	%	Min.	Max.	SD
5	Machine Labour - Hired	564	10.54	0	3000	631
6	Machine Labour - Owned	0	0.00	0	0	0
7	Seeds	268	5.00	60	1000	250
8	Fertilizer	283	5.30	0	1733	388
9	Manure	276	5.15	0	5000	1099
10	Insecticides	177	3.30	0	1400	279
11	Irrigation (Water + Electricity Charges)	70	1.31	0	400	78
12	Crop Insurance	9	0.16	0	200	31
13	Interest on Working Capital	103	1.93	29	1300	187
14	Miscellaneous	2	0.04	0	40	8
I)	Operational Cost (1 to 14)	3512	65.64	983	18334	3112
15	Rental Value of Owned Land	1377	25.74	733	4800	983
16	Rent Paid on Leased land	0	0.00	0	0	0
17	Land Revenue, Cesses & Taxes	30	0.57	0	250	51
18	Depreciation of Farm Builds & Implements	65	1.21	0	225	57
19	Interest on Fixed Capital	276	5.16	64	1600	345
II)	Fixed Cost (15 to 19)	1749	32.68	866	6600	1249
III)	Total Cost of Cultivation (I + II)	5260	98.33	2040	24934	4192
20	Packaging cost	25	0.48	10	100	14
21	Transportation Cost	51	0.96	0	200	32
22	Sales Expenses in Market Committee	13	0.24	0	50	10
IV)	Selling and Distribution Cost (20 to 22)	89	1.67	20	270	39
	Total Cost / Cost of Sales (III + IV)	5350	100.00	2115	25004	4196

(Source: Field Survey)

Variable Cost/ Operational Cost of Gram-

In Gram production human labour cost is the major variable cost. Hired Human labour cost incurred was Rs. 540 (10.10%) per quintal, and family labour cost incurred was Rs.1103 (20.62%) per quintal. Family labour cost is more as compared to hired human labour cost. Hired Bullock labour cost incurred was Rs. 118 (2.20%) per quintal and there is no owned bullock labour cost. Hired machine labour cost incurred was Rs. 564 (10.54%) per quintal and there is no owned machine labour cost incurred due to farmers have not owned machines. Seeds cost incurred was Rs. 268 (5.00%) per quintal for Gram production. Fertilizer cost incurred was Rs. 283 (5.30%) per quintal. In case of Gram production manure cost incurred was Rs. 276 (5.15%) per quintal. Insecticide's cost incurred was Rs. 177 (3.30%) per quintal. Irrigation cost incurred was Rs. 70 (1.31%) per quintal which includes water and electricity charges. In Gram production crop insurance cost incurred was Rs. 9 (0.16%) per quintal. Interest on Working capital cost incurred was Rs. 103 (1.93%) per quintal and miscellaneous cost incurred was Rs. 2 (0.04%) per quintal in the sample study area. The average total operational or variable cost incurred was Rs. 3512 (65.64%), minimum cost was Rs. 983, maximum cost was Rs. 18334 per quintal and standard deviation was 3112 in the selected study area. So, from the variable cost analysis it was observed that human labour cost (30.72%) and machine labour cost (10.54%) were the major

components of operational or variable cost. Cost of miscellaneous (0.04%) and crop insurance (0.16%) were very less in case of Gram production.

Fixed Cost of Gram-

In the case of Gram production rental value of owned land is the major component of fixed cost. Rental value of owned land cost incurred was Rs. 1377 (25.74%) per quintal in sample study area. There was no cost of rent paid on leased land because in sample area no any farmer was taken land on lease. Land revenue, cesses and taxes cost incurred was Rs. 30 (0.57%) per quintal. Depreciation of farm builds and implements cost incurred was Rs. 65 (1.21%) per quintal. Interest on fixed capital cost incurred was Rs. 276 (5.16%) per quintal. The average total fixed cost of Gram cultivation incurred was Rs. 1749 per quintal which was 32.68% of total cost. Minimum fixed cost of gram was Rs. 866 maximum cost was Rs. 6600 and standard deviation was 1249. So, from the analysis of fixed cost, it was observed that rental value of owned land (25.74%) was the major component of cost in case of fixed costs. It was also observed that there was no cost of rent paid on leased in land because all the selected farmers have their own land. Land revenue, cesses and taxes cost (0.57%) was very less in fixed costs.

Total Cost of Cultivation of Gram-

The average total cost of cultivation of Gram was Rs. 5260 per quintal which was 98.33% of total cost or cost of sales. The minimum total cost of gram was Rs. 2040, maximum cost was Rs. 24934 per quintal and standard deviation was 4192. Out of total cost of cultivation operational cost was Rs. 3512 (65.64%) and fixed cost was Rs. 1749 (32.68%).

Selling and Distribution Cost of Gram-

This table shows the selling and distribution cost of per quintal Gram production. The packaging cost was incurred Rs. 25 (0.48%) per quintal in draught area of Solapur district. Majority of the Gram farmers sale their production at local markets (block and district market) the transportation cost from farm to local market was Rs. 51 (0.96%) per quintal. The average sales expenses in market committee (portage, weigh & other cost) was incurred Rs. 13 (0.24%) per quintal. The average total selling and distribution cost of Gram was Rs. 89 (1.67%) per quintal, minimum cost was Rs. 20, maximum cost was Rs. 270 and standard deviation was 39 in the study area of Solapur district.

Total Cost /Cost of sales of Gram-

In Gram farming, the average total cost or cost of sales was (total cost of cultivation + total selling and distribution cost) Rs. 5350, minimum cost was Rs. 2115, maximum cost was Rs. 25004 and standard deviation was 4196 in the study area. The share of variable cost in total cost or cost sales was Rs. 3512 (65.64%), fixed cost was Rs. 1749 (32.68%) and marketing cost was Rs. 89 (1.67 %). From this table it was observed that per quintal cost of Gram production was Rs. 5350.

5.3. Gross Returns, Net Return and Benefit-Cost Ratio of Gram:

Table 3
Gross Returns, Net Return and Benefit-Cost Ratio of Gram
(Rs. Per Acre)

Sr. No	Factor	Details	Returns
1.	Gross Return	A) Own Consumption (in quintal)	0.07
		Price (in Rs.)	4550
		Gross Return (output* price)	318
		B) Production Sold (in quintal)	3.28
		Price (in Rs.)	4704
		Gross Return (output* price)	15417

Sr. No	Factor	Details	Returns
		C) Total Production A+B (in quintal)	3.35
		Gross Return (output* price) A+B	15735
2.	Net Return	Total Cost of Production	17908
		Gross Return	15735
		Net Returns (gross return- total cost)	-2173
3.	Benefit-Cost Ratio	Gross Return / Total Cost	0.88

(Source: Field Survey)

In case of Gram farming, productivity of non- irrigated Gram is 3.35 quintal per acre and farmers get averagely Rs.4704 price per quintal at local market. Out of total production own consumption of Gram is 0.07 quintal per acre and production sold is 3.28 quintal per acre. Gross return of Gram is Rs. 15735 per acre out of which Rs. 15417 (97.98%) is from sell of Gram production and Rs. 318 (2.02%) is from own consumption of Gram by farmers. During the filed survey it was observed that farmer keep some Gram production for own consumption but in very less quantity. Net return of Gram production is Rs. (-) 2173. It means that Gram growers have a burden (loss) of Rs. 2173 per acre. The benefit-cost ratio of non-irrigated Gram in sample area is 0.88. It means that farmers have invested rupee 1 in Gram production but they bear 0.12 paise net loss per rupee.

6. HYPOTHESIS TESTING:

Researcher has formulated the hypotheses on the profitability of Gram in area under study. This hypothesis is-

H₀ : Gram Crop is not profitable.

H₁ : Gram Crop is profitable.

To study the hypothesis Gram Crop is not profitable, Researcher has used the one sample t-test to test the hypothesis and taken test value = 0.

Table 4
Profitability of Gram Crop

Variable	Test value = 0						
	N	Mean	SD	SE Mean	95% Lower Bound	T	P
Gram	50	-3667	13437	1900	-6853	-1.93	0.97

The analysis examines whether the gram crop is profitable by comparing the average profit with the test value of zero. The results show that the mean profit is **-3667**, indicating an average **loss per farmer**. The standard deviation of **13437** suggests wide variation in profit and loss among farmers. The standard error mean is **1900**, showing the estimated accuracy of the mean value. The **95% confidence lower bound is -6853**, which also lies below zero, further suggesting that profitability tends toward loss rather than gain. The calculated **t-value is -1.93**, and the **p-value is 0.97**, which is much higher than the commonly accepted significance level of 0.05. The study hypothesis states: **“Gram crop is not profitable.”** Since the **p-value (0.97) > 0.05**, there is **no statistical evidence to reject the null hypothesis. Decision:** The study Fail to reject the null hypothesis and accept the alternative hypothesis. The study concludes that **the gram crop is not profitable** for the sampled farmers.

7. FINDINGS, SUGGESTIONS AND CONCLUSION:

The study reveals that gram cultivation in the dryland areas of Solapur district involves substantial production costs, with an average total cost of Rs.17,908 per acre. Operational or variable

costs constitute the major portion (65.64%) of total cost, among which human labour alone accounts for nearly one-third of the expenditure, followed by machine labour and input costs such as fertilizers, seeds, and manure. Fixed costs account for 32.68% of total costs, with rental value of owned land being the dominant component. The average productivity recorded was 3.35 quintals per acre, which is relatively low due to dryland conditions and rainfall variability. Farmers received an average market price of Rs.4,704 per quintal; however, total gross return amounted to only Rs.15,735 per acre, which is lower than total production cost, resulting in a net loss of Rs.2,173 per acre. The benefit–cost ratio was found to be 0.88, indicating that farmers incur a loss of about Rs.0.12 for every rupee invested. Hypothesis testing further confirms that gram cultivation in the study area is statistically not profitable, as the mean profit is negative and the null hypothesis could not be rejected. Considerable variation in profit and cost among farmers suggests differences in input use efficiency and production conditions.

To improve the economic viability of gram cultivation in dryland areas, efforts should be directed toward increasing productivity through adoption of improved drought-tolerant varieties, better agronomic practices, and timely crop management. Promotion of mechanization services through custom hiring centres may reduce labour costs, which currently form a major share of expenditure. Farmers should be encouraged to adopt integrated nutrient and pest management practices to optimize input use and reduce unnecessary expenses. Strengthening extension services and farmer training programs can improve resource-use efficiency. Better price support mechanisms and market linkages, including storage facilities and collective marketing through farmer producer organizations, can help farmers secure better price realization. Crop insurance coverage and timely compensation mechanisms should also be strengthened to reduce risk in dryland farming. Additionally, diversification with complementary crops or livestock activities may stabilize farm income.

The study concludes that gram cultivation in the dryland areas of Solapur district is presently not economically profitable due to high cultivation costs, low productivity, and moderate price realization. Operational costs, particularly labour expenses, significantly influence total production cost, while uncertain rainfall conditions further limit yield levels. As a result, farmers incur net losses and obtain a benefit–cost ratio below unity, making gram cultivation economically challenging under current conditions. However, with improved farming practices, cost management, productivity enhancement, and better marketing support, gram cultivation can still remain an important component of dryland farming systems due to its low water requirement, soil fertility benefits, and nutritional importance. Appropriate policy support and efficient production practices are therefore essential to enhance profitability and sustain farmers' livelihoods in drought-prone regions.

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पोषण शिक्षण : जागरूकतेची गरज

प्रा.डॉ.ऊर्मिला एस.खोत
गृहविज्ञान विभाग, विवेकानंद कॉलेज,कोल्हापूर.
uskhot1008@gmail.com

गोषवारा :

पोषण शिक्षण हे सार्वजनिक आरोग्य सुधारण्यासाठी एक महत्त्वपूर्ण व प्रभावी साधन आहे कारण पोषण हे मानवी आरोग्याचे मूलभूत आधारस्तंभ आहे. बदलती जीवनशैली, वाढते शहरीकरण, प्रक्रिया केलेल्या अन्नाचे वाढते सेवन आणि शारीरिक हालचालींचा अभाव यामुळे आज पोषणाशी संबंधित आरोग्य समस्या जागतिक पातळीवर गंभीर स्वरूप धारण करत आहेत. एकीकडे स्थूलता, मधुमेह, हृदयविकार यांसारख्या असंसर्गजन्य आजारांचे प्रमाण वाढत आहे, तर दुसरीकडे कुपोषण व सूक्ष्म पोषकतत्वांच्या कमतरतेमुळे विशेषतः मुले व किशोरवयीन गट बाधित होत आहेत.अशा परिस्थितीत पोषण शिक्षणाद्वारे व्यक्ती व समाजाला योग्य आहार निवड, संतुलित आहाराचे महत्त्व आणि आरोग्यदायी सवयी अंगीकारण्यासाठी मार्गदर्शन करता येते.

हा शोधनिबंध पोषणाचे महत्त्व, विविध जीवनटप्प्यांतील पोषण गरजा, अति-पोषण व कुपोषण, साखर व मीठाचे दुष्परिणाम, पोषण संक्रमण (Nutrition Transition) तसेच पोषण शिक्षणाची भूमिका यांचा सविस्तर आढावा घेतो. राष्ट्रीय शिक्षण धोरण 2020 च्या दृष्टीकोनानुसार मातृभाषेतून आरोग्यविषयक शिक्षण देऊन विद्यार्थ्यांमध्ये पोषणाविषयी जागरूकता निर्माण करण्याची गरज या लेखात अधोरेखित करण्यात आली आहे.

मुख्य शब्द : पोषण शिक्षण, सार्वजनिक आरोग्य, संतुलित आहार

१. प्रस्तावना : “आरोग्य हीच खरी संपत्ती आहे” ही म्हण आजच्या काळात अधिकच अर्थपूर्ण ठरते. मानवी शरीराचे योग्य कार्य, बौद्धिक विकास, रोगप्रतिकारक शक्ती आणि दीर्घायुष्य यासाठी संतुलित पोषण अत्यावश्यक आहे.

मात्र, आधुनिक युगात झपाट्याने बदलणाऱ्या आहारपद्धतींमुळे पोषणाशी निगडित अनेक समस्या उद्भवत आहेत. फास्ट फूडचे वाढते प्रमाण आणि शारीरिक हालचालींचा अभाव यामुळे विविध जीवनशैलीजन्य आजारांमध्ये वाढ होत आहे. फास्ट फूड, साखरयुक्त पेये, जास्त मीठ व चरबी असलेले पदार्थ यांचा अतिरेक आणि शारीरिक हालचालींचा अभाव यामुळे आरोग्यावर गंभीर परिणाम होत आहेत.अशा परिस्थितीत पोषण शिक्षणाचे महत्त्व अधिकच वाढले आहे. पोषण शिक्षणाद्वारे व्यक्तींना अन्नघटकांचे महत्त्व, योग्य आहार निवड

आणि आरोग्यविषयक निर्णय घेण्याची क्षमता प्राप्त होते. त्यामुळे समाजातील आरोग्य जागरूकता वाढविण्यास पोषण शिक्षण मोलाची भूमिका बजावते.

पोषण शिक्षणाचे उद्दिष्टे

1. आरोग्यदायी आहार सवयी विकसित करणे
2. पोषणअभाव व अति-पोषणामुळे होणाऱ्या आजारांचा प्रतिबंध
3. जीवनशैलीजन्य आजारांचे व्यवस्थापन
4. समाजामध्ये पोषणविषयक जागरूकता निर्माण करणे

राष्ट्रीय शिक्षण धोरण 2020 नुसार विद्यार्थ्यांना जीवनोपयोगी शिक्षण (Life Skills), आरोग्यविषयक साक्षरता आणि मातृभाषेतील शिक्षण देणे अत्यंत महत्त्वाचे आहे.

२. **पोषकतत्त्वांची भूमिका** : मानवी शरीर हे एक अत्यंत सूक्ष्म आणि समन्वयाने कार्य करणारे यंत्र आहे. या यंत्राच्या सुरळीत कार्यासाठी विविध पोषकतत्त्वांची आवश्यकता असते. कर्बोदके, प्रथिने, मेदद्रव्ये, जीवनसत्त्वे आणि खनिजे ही सर्व पोषकतत्त्वे शरीराच्या विविध जैविक क्रियांमध्ये महत्त्वाची भूमिका बजावतात. कर्बोदके ही शरीराची मुख्य ऊर्जा स्रोत असून ती दैनंदिन हालचाली, शारीरिक श्रम व मेंदूच्या कार्यासाठी आवश्यक ऊर्जा पुरवतात. प्रथिने ही शरीराच्या वाढीसाठी, पेशींची निर्मिती व झीज भरून काढण्या साठी तसेच एन्झाईम्स, हार्मोन्स आणि प्रतिजैविक निर्मितीसाठी आवश्यक असतात. मेदद्रव्ये (स्निग्ध) अनेकदा चुकीच्या अर्थाने पाहिली जातात, परंतु योग्य प्रमाणात घेतलेली चांगली स्निग्ध (असंतृप्त) शरीरासाठी अत्यावश्यक असते. ती ऊर्जा साठवणे, पेशींची रचना टिकवणे आणि काही जीवनसत्त्वांचे शोषण करण्यास मदत करतात. जीवनसत्त्वे व खनिजे ही अल्प प्रमाणात आवश्यक असली तरी शरीराची रोगप्रतिकारक शक्ती, हाडांची मजबुती, रक्तनिर्मिती आणि चयापचय प्रक्रियांसाठी अत्यंत महत्त्वाची असतात. त्यामुळे सर्व पोषकतत्त्वांचा समतोल असलेला आहार आरोग्याच्या दृष्टीने अत्यावश्यक ठरतो.

३. **जीवनाच्या विविध टप्प्यांतील पोषण गरजा** : मानवी आयुष्याच्या प्रत्येक टप्प्यावर पोषणाच्या गरजा बदलत जातात. गर्भावस्थेत आईच्या आहारावर गर्भाच्या वाढीचा आणि भविष्यातील आरोग्याचा थेट परिणाम होत असतो. या काळात फॉलिक ॲसिड, लोह, कॅल्शियम आणि प्रथिनांची पुरेशी मात्रा आवश्यक असते. बाल्यावस्था हा शारीरिक व बौद्धिक विकासाचा अत्यंत संवेदनशील काळ असून या काळातील कुपोषणाचे परिणाम आयुष्यभर राहू शकतात. किशोरावस्थेत शरीरात जलद वाढ, हार्मोनल बदल आणि मानसिक विकास घडत असल्याने संतुलित आणि पोषक आहाराची गरज अधिक असते. प्रौढावस्थेत आरोग्य टिकवण्यासाठी आणि मधुमेह, उच्च रक्तदाब, हृदयरोग यांसारख्या आजारांपासून बचावासाठी आहारावर नियंत्रण आवश्यक ठरते. वृद्धावस्थेत हाडे ठिसूळ होणे, स्नायूंची ताकद कमी होणे आणि पचनशक्ती घटणे यांसारख्या समस्या उद्भवतात, त्यामुळे पोषक आणि सहज पचणारा आहार अत्यंत महत्त्वाचा ठरतो.

४. **संतुलित आहाराचे महत्त्व** : संतुलित आहार म्हणजे शरीराला आवश्यक असलेली सर्व पोषकतत्त्वे योग्य प्रमाणात मिळणे. असा आहार शरीराच्या कार्यक्षमतेला चालना देतो, रोगप्रतिकारक शक्ती वाढवतो आणि विविध पोषणतूट जन्य आजारांपासून संरक्षण करतो. जीवनसत्त्वे किंवा खनिजांची कमतरता झाल्यास अॅनिमिया, स्कर्व्ही, हाडांचे आजार यांसारख्या समस्या उद्भवतात.

संतुलित आहारामुळे वजन नियंत्रणात राहते, कारण त्यात योग्य प्रमाणात कर्बोदके, प्रथिने व मेदद्रव्ये असतात. तसेच दीर्घकालीन असंसर्गजन्य आजारांचा धोका कमी होतो. त्यामुळे आरोग्यदायी जीवनशैलीसाठी संतुलित आहार हा मूलभूत घटक मानला जातो.

५. **अति-पोषण व स्थूलता** : आधुनिक जीवनशैलीमुळे अति-पोषण ही गंभीर समस्या निर्माण झाली आहे. जास्त कॅलरीयुक्त, प्रक्रिया केलेले अन्न, साखरयुक्त पेये आणि फास्ट फूडचे वाढते सेवन यामुळे स्थूलतेचे प्रमाण झपाट्याने वाढत आहे. जागतिक आरोग्य संघटनेनुसार स्थूलता ही आज जगातील एक मोठी सार्वजनिक आरोग्य समस्या बनली आहे. स्थूलतेमुळे मधुमेह प्रकार-२, उच्च रक्तदाब, हृदयरोग, पक्षाघात आणि काही प्रकारचे कर्करोग होण्याचा धोका वाढतो. विशेष म्हणजे, लहान वयातच स्थूलता आढळल्यास भविष्यातील आरोग्यावर त्याचे गंभीर परिणाम होतात. त्यामुळे विद्यार्थ्यांमध्ये योग्य आहार व सक्रिय जीवनशैलीविषयी जागरूकता निर्माण करणे अत्यंत आवश्यक आहे.

६. **कुपोषण व सूक्ष्म पोषकतत्त्वांची कमतरता** : अति-पोषणाइतकेच कुपोषण हे ही गंभीर आव्हान आहे. कुपोषणामुळे विशेषतः मुलांमध्ये वाढ खुंटणे, वजन कमी होणे आणि या बरोबर त्याच्या बौद्धिक विकासावर परिणाम होतो. जीवनसत्त्व अ ची कमतरता दृष्टीदोष निर्माण करू शकते, लोहाच्या कमतरतेमुळे अॅनिमिया होतो, तर आयोडीनच्या अभावामुळे मेंदूच्या विकासावर परिणाम होतो. ही समस्या प्रामुख्याने गरीब व वंचित घटकांमध्ये दिसून येते. त्यामुळे पोषणपूरक आहार, अन्नसुरक्षा योजना आणि जनजागृती कार्यक्रमांची गरज अधिक आहे.

७. **साखर व मीठाचे दुष्परिणाम** : अतिसाखर सेवनामुळे शरीरात चरबी साठते आणि मधुमेहाचा धोका वाढतो. साखरयुक्त पेये आणि पॅकबंद अन्नपदार्थ हे याचे प्रमुख स्रोत आहेत. त्याचप्रमाणे, जास्त मीठ सेवनामुळे उच्च रक्तदाब, हृदयरोग आणि मूत्रपिंडाचे विकार उद्भवू शकतात. जागतिक आरोग्य संघटना मीठाचे सेवन मर्यादित ठेवण्याची शिफारस करते, परंतु आजच्या आहारपद्धतीत हे प्रमाण अनेकदा ओलांडले जाते. त्यामुळे मीठ व साखर कमी करण्याविषयी विद्यार्थ्यांमध्ये जाणीव निर्माण करणे आवश्यक आहे.

८. **पोषण शिक्षणाचे सार्वजनिक आरोग्यातील महत्त्व** : राष्ट्रीय शिक्षण धोरण 2020 मध्ये मातृभाषेतून शिक्षण, जीवनकौशल्ये आणि आरोग्य शिक्षण यावर विशेष भर देण्यात आला आहे. पोषण शिक्षण हे केवळ अभ्यासक्रमापुरत मर्यादित न राहता प्रत्यक्ष जीवनाशी जोडलेले असावे, असा या धोरणाचा दृष्टिकोन आहे. शाळा व महाविद्यालयांमधून पोषणविषयक माहिती मातृभाषेत दिल्यास ती अधिक प्रभावीपणे विद्यार्थ्यांपर्यंत पोहोचू शकते. त्यामुळे विद्यार्थ्यांमध्ये आरोग्यदायी सवयी रुजून समाजाच्या सर्वांगीण विकासास हातभार

लागेल.योग्य पोषण शिक्षणामुळे केवळ व्यक्तीचेच नव्हे तर संपूर्ण समाजाचे आरोग्य सुधारते. आरोग्य खर्चात घट, काम करण्याची क्षमता वाढ आणि जीवनमान उंचावणे हे त्याचे महत्त्वाचे फायदे आहेत. शाळा, महाविद्यालये, अंगणवाडी व आरोग्य केंद्रांद्वारे दिले जाणारे पोषण शिक्षण दीर्घकालीन परिणाम घडवून आणते.

निष्कर्ष : पोषण शिक्षण हे सार्वजनिक आरोग्य सुधारण्यासाठी एक प्रभावी, किफायतशीर आणि दीर्घकालीन उपाय आहे. धोरणकर्ते, शैक्षणिक संस्था व आरोग्य यंत्रणा यांनी एकत्रितपणे पोषण शिक्षण कार्यक्रम राबविल्यास "आरोग्यदायी समाज" घडविणे शक्य आहे.

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Impact of Joint Land Titles under the Forest Rights Act (FRA) 2006 on Tribal Women's Empowerment

Deokar Mohini Arjun

Junior Research Fellow (JRF) (PhD)

Shivaji University, Kolhapur

Email- deokarma111@gmail.com

Abstract

The Forest Rights Act (FRA) of 2006 represents a landmark shift in India's forest governance by formally recognizing the rights of Scheduled Tribes (STs) and Other Traditional Forest Dwellers (OTFDs), communities historically marginalized through colonial forest policies and post-independence conservation laws. One of its most progressive features is the mandatory provision of joint land titles for married couples, which directly challenges longstanding patriarchal norms that restricted tribal women's access to land ownership (Government of India, 2006). This research paper examines how joint land titles influence various dimensions of tribal women's empowerment, including economic independence, control over livelihood resources, decision-making power within the household and community, social status, and psychological well-being.

The proposed study uses an evaluative research design. Drawing on secondary sources, including academic studies, policy analyses, and NGO reports, the paper finds that joint titles have enhanced women's capacities, visibility, and legal standing, contributing to increased participation in agricultural decision-making, improved access to institutional support at the village level, and strengthened involvement in local governance spaces such as Gram Sabha meetings (Bose, 2019; Ghosh, 2017). The psychological impact is equally significant, as women experience greater identity, dignity, self-respect, and security when recognized as legal landowners (Sharma, 2020).

However, persistent challenges—including low awareness among the tribal women at the village levels, bureaucratic barriers, limited literacy, and entrenched gender norms—continue to obstruct the transformative potential of joint land ownership (Sarin et al., 2010). The study argues that appropriate social interventions, including legal literacy, gender sensitization for gender equality, and community mobilization, are critical to ensuring that joint land titles translate into meaningful empowerment for tribal women.

Keywords : Forest Rights Act 2006, land ownership, Joint land titles, women participation, tribal women empowerment, Gender equality and gender sensitization, community mobilization.

1. Introduction

Land ownership is a critical determinant of social and economic power in most societies, including tribal communities across India. Historically, despite their deep and sustained relationship with forests, tribal women have been systematically excluded from formal land ownership due to customary norms, patriarchal inheritance patterns, and colonial forest governance systems that ignored women's contributions to forest management (Agarwal, 1994). This lack of ownership limited their ability to influence household decisions, restricted their participation in community institutions, and made them vulnerable to displacement, poverty, and exploitation.

The enactment of the **Forest Rights Act (FRA), 2006**, sought to rectify these historical injustices by recognizing individual and community rights over forest land and forest resources (Government of India, 2006). A crucial provision of the Act mandates **joint land titles for married couples**, ensuring

that women's names appear alongside men on titles to forest land. This provision represents a structural intervention aimed at transforming gender relations within tribal households by giving women legal recognition as co-owners of productive land.

This paper analyses how these joint land titles influence tribal women's empowerment across four major dimensions that help to achieve Viksit Bharat 2047 goals. The tribal women's empowerment promotes inclusive social development, sustainable development, and economic growth.

1. **Economic empowerment**—control over land and livelihood assets.
2. **Decision-making power**—participation in household and community decisions.
3. **Social status and gender equality**—visibility and recognition in community structures.
4. **Psychological empowerment**—confidence, identity, and sense of belonging.

Existing research indicates positive effects, but also highlights uneven implementation and limitations associated with literacy, awareness, and gender norms (Bose, 2019; Ghosh, 2017). Government initiatives play a vital role in ensuring that tribal women can fully claim and exercise these rights through community-based interventions, gender sensitization, and rights education.

2. Objectives

1. To assess the impact of joint land titles under the Forest Rights Act (FRA), 2006, on the economic empowerment of tribal women.
2. To examine how joint land title influences tribal women's participation in household and community decision-making processes.
3. To evaluate the role of joint land ownership in enhancing tribal women's social status, gender equality, and recognition within community structures.
4. To analyse the psychological effects of joint land titles on tribal women, including confidence, identity, and sense of security.

3. Review of Literature

(Sarin M. 2010) The present study cautions that joint titles may remain largely **symbolic** unless accompanied by strong awareness campaigns and gender-sensitive implementation. In this study, he also pointed out the need of suitable implementation strategy to achieve tribal women's empowerment through joint land titles in India.

(Ghosh, 2017) In *Gender, Land, and Livelihood: Impact of FRA on tribal women*, he emphasizes the role of community-based interventions, legal-literacy initiatives, and participatory governance in ensuring that women fully benefit from joint land ownership.

(Munda, 2018) *Tribal rights and development in India*. Munda argues that joint land titles challenge patriarchal norms that place men in a dominant position of ownership and authority. The provision of joint land titles has given tribal women the right to use land, which has had a positive impact on their livelihood security and ownership rights.

(Bose, 2019) *The Forest Rights Act and tribal women: A gendered perspective*. This present study on FRA implementation indicates that women who received joint titles reported an increased sense of security over their homes and agricultural land. The provision of joint land titles under the FRA 2006 has a positive impact on women's development in tribal and remote areas.

(Agarwal, 1994; Sharma, 2020) The present study shows that land ownership rights have a positive impact on the lives of tribal women in India. The Agarwal and Sharma argue that land ownership enhances women's autonomy, reduces vulnerability to exploitation, and improves decision-making.

4. Theoretical Framework

4.1 Empowerment Theory

Empowerment theory focuses on enhancing individuals' ability to make choices and control their lives. Joint land titles strengthen women's legal standing and provide them with direct control over land resources, fostering both psychological and economic empowerment (Sharma, 2020).

4.2 Gender and Development Approach

The GAD approach emphasizes transforming unequal gender relations rather than simply integrating women into existing structures. Joint titles under FRA represent a structural transformation in land rights (Agarwal, 1994).

4.3 Rights-Based Approach

A rights-based approach views land as a matter of justice, dignity, and equality. FRA adopts this framework by legally recognizing forest dwellers' rights, and joint titles operationalize women's rights within forest governance systems (Government of India, 2006)

5. Methodology

The proposed study employs an evaluative research design and a qualitative review of secondary data from academic research, government documents, NGO case studies, and policy analyses. Secondary data analysis is appropriate for understanding broad patterns, interpreting policy impacts, and analysing sociocultural contexts. This approach enables a holistic understanding of the impact of joint titles on tribal women's empowerment.

6. Findings and Discussion

6.1 Economic Empowerment

Joint land titles give tribal women legal control over productive land, thereby enhancing their financial stability and bargaining power within households (Sharma, 2020). Women's involvement in decisions regarding agriculture, forest produce collection, and income allocation has increased substantially (Ghosh, 2017). Land ownership also reduces the threat of displacement, offering long-term livelihood security (Sarin et al., 2010).

However, empowerment varies across communities. In some areas, women are co-owners on paper but still lack practical control due to limited literacy and persistent gender norms (Ghosh, 2017). Thus, legal reform must be paired with awareness and capacity-building.

6.2 Decision-Making Power

Historically, land-related decisions were dominated by men (Munda, 2018). The introduction of joint titles has increased women's participation in Gram Sabha meetings, forest committees, and household decision-making processes (Bose, 2019). Women express increased confidence in voicing their opinions in public forums (Ghosh, 2017).

Yet, true influence remains limited in communities where male leaders continue to dominate public decision-making. Participation can be symbolic rather than substantive.

6.3 Social Status and Gender Equality

Joint titles challenge patriarchal power structures by recognizing women as equal rights holders. This recognition improves women's social standing and enhances their visibility within community institutions (Agarwal, 1994; Sharma, 2020). Such changes contribute to more equitable gender relations.

Despite this progress, resistance persists in communities where traditional gender roles are deeply embedded (Sarin et al., 2010). Hence, cultural transformation remains gradual.

6.4 Psychological Empowerment

Women who receive joint titles report stronger feelings of identity, dignity, self-confidence, and self-worth (Sharma, 2020). The inclusion of their names on legal documents symbolizes equality and belonging, contributing to increased confidence and community participation (Bose, 2019).

7. Recommendations for Strengthening Women's Empowerment

- Social workers play a pivotal role in ensuring that tribal women realize the benefits of joint land titles.
- Conducting legal literacy and awareness programs
- Assisting with documentation and claim filing
- Facilitating women's participation in Gram Sabha processes
- Providing gender-sensitization training within communities
- Mediating between women and local governance structures
- Supporting livelihood development programs

These interventions help ensure that legal rights translate into real empowerment (Ghosh, 2017; Sarin et al., 2010).

8. Conclusion

Joint land titles under the Forest Rights Act have created important opportunities for tribal women to gain recognition, confidence, and a stronger voice in their households and communities. By having their names included on land documents, women experience greater security and a clearer sense of ownership over the resources they depend on. This has improved their participation in decision-making, enhanced their social status, and supported their economic independence.

At the same time, challenges such as low awareness, traditional gender norms, and administrative barriers still limit the full impact of joint titles. Overall, the FRA has taken a meaningful step toward gender equality. Continued support, awareness efforts, and community engagement are needed to ensure that tribal women can fully exercise and benefit from their land rights.

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कोयना धरणाचा कृषी विकासावर झालेला परिणाम

काजल सुभाष कुंभारदरे
संशोधक विद्यार्थिनी
अर्थशास्त्र अधिविभाग, शिवाजी विद्यापीठ, कोल्हापूर.
मो.नं. ९४२३३९०९६६
इ. मेल.- kumbharadarekajal@gmail.com

प्रा. डॉ. एस. एस. पोटभरे
प्राध्यापक आणि संशोधक मार्गदर्शक
अर्थशास्त्र अधिविभाग, प्रा. संभाजीराव कदम
महाविद्यालय देऊर, सातारा
मो. नं. ९९२१९३३७२८
इ.मेल. dr.sspotbhare3584@gmail.com

सारांश :

कोयना धरण हे महाराष्ट्रातील एक महत्वाचे जलसिंचन व जलविद्युत प्रकल्प असून, राज्याच्या कृषी व ग्रामीण विकास प्रक्रियेत त्याचे योगदान अत्यंत महत्वाचे आहे. विशेषतः पावसावर अवलंबून असलेल्या कृषी व्यवस्थेत सिंचन सुविधांची उपलब्धता झाल्यामुळे शेतीच्या स्वरूपात गुणात्मक बदल घडून आलेले दिसून येतात. प्रस्तुत संशोधन लेखाचा उद्देश कोयना धरणामुळे कृषी विकासावर झालेल्या परिणामांचा सखोल अभ्यास करणे हा आहे. अभ्यासासाठी पूर्णतः दुय्यम माहितीचा वापर करण्यात आला आहे. विविध शासकीय अहवाल, कृषी विभागाची सांख्यिकी माहिती, नियोजन आयोग व जलसंपदा विभागाचे दस्तऐवज, संशोधन लेख, पुस्तके तसेच संबंधित संकेतस्थळांवरील माहिती यांच्या आधारे विश्लेषण करण्यात आले आहे. कोयना धरणाच्या माध्यमातून उपलब्ध झालेल्या सिंचन सुविधांमुळे पीक पद्धतीत लक्षणीय बदल घडून आलेले दिसून येतात. पारंपरिक अन्नधान्य पिकांबरोबरच ऊस, भात, भाजीपाला व इतर व्यापारी पिकांचे क्षेत्र वाढले असून, त्यामुळे पीक विविधता आणि पीक तीव्रता वाढीस लागलेली आहे. सिंचन सुविधांमुळे पीक उत्पादकतेत वाढ झाल्याचेही दिसून येते. नियमित व खात्रीशीर पाण्याच्या उपलब्धतेमुळे आधुनिक शेती तंत्रज्ञानाचा अवलंब शक्य झाला असून, याचा सकारात्मक परिणाम उत्पादनक्षमता व शेतकऱ्यांच्या उत्पन्नावर झालेला आहे. दुष्काळी परिस्थितीचा प्रभाव कमी होऊन कृषी जोखमीमध्ये घट झालेली आहे. याशिवाय, कृषीवर आधारित प्रक्रिया उद्योग, रोजगारनिर्मिती व ग्रामीण अर्थव्यवस्थेला चालना मिळालेली दिसून येते. या प्रकल्पाशी संबंधित काही आव्हानेही समोर आली आहेत. पाण्याचा असमतोल वापर, पर्यावरणीय परिणाम, प्रादेशिक विषमता तसेच दीर्घकालीन शाश्वततेचे प्रश्न याकडे धोरणात्मक दृष्टिकोनातून लक्ष देणे आवश्यक आहे. जलसंपदा व्यवस्थापन अधिक प्रभावी व समतोल पद्धतीने केल्यास कृषी विकासाचे लाभ अधिक व्यापक स्वरूपात मिळू शकतात. एकूणच, कोयना धरणाने कृषी विकासाच्या प्रक्रियेला गती दिली असून, शाश्वत, समावेशक व संतुलित ग्रामीण विकासासाठी त्याची भूमिका महत्वाची ठरते. 'विकसित भारत @२०४७' या राष्ट्रीय दृष्टीकोनाच्या पार्श्वभूमीवर कृषी उत्पादनवाढ, जलसंपदा व्यवस्थापन व ग्रामीण अर्थव्यवस्थेच्या बळकटीकरणासाठी अशा सिंचन प्रकल्पांचे योगदान निर्णायक ठरते, असा निष्कर्ष या अभ्यासातून काढता येतो.

मुख्य शब्द : कोयना धरण, कृषी विकास, सिंचन व्यवस्था, कृष्णा नदीखोरे, पीक पद्धती, शाश्वत शेती, ग्रामीण विकास

प्रस्तावना:

भारत हा प्राचीन काळापासून शेतीप्रधान देश म्हणून ओळखला जात असून, देशातील बहुतांश लोकसंख्या उपजीविकेसाठी शेतीवर अवलंबून आहे. कृषी विकास म्हणजे फक्त उत्पादन वाढविणे नव्हे, तर पीक उत्पादकता, पीक पद्धती, सिंचन सुविधा, आधुनिक तंत्रज्ञान आणि शेतकऱ्यांच्या आर्थिक व सामाजिक जीवनात सुधारणा करणेही त्याचा भाग आहे. या सर्व घटकांमध्ये सिंचन सुविधा हा कृषी विकासाचा एक महत्त्वाचा आधारस्तंभ मानला जातो.

भारतीय शेती मोठ्या प्रमाणावर मान्सूनवर अवलंबून असल्यामुळे पर्जन्यमानातील अनिश्चितता, दुष्काळ व पाण्याचा असमान वितरणासारख्या समस्या वारंवार निर्माण होतात. या समस्यांवर मात करण्यासाठी स्वातंत्र्योत्तर काळात देशात विविध मोठे, मध्यम व लघु सिंचन प्रकल्प उभारण्यात आले. या प्रकल्पांमुळे कोरडवाहू व दुष्काळग्रस्त भागांमध्येही बागायती शेतीचा विकास शक्य झाला असून, पीक उत्पादनात लक्षणीय वाढ झाल्याचे दिसून येते.

महाराष्ट्रातील कोयना धरण हा एक महत्त्वाचा बहुउद्देशीय प्रकल्प आहे. हा प्रकल्प प्रामुख्याने जलविद्युत निर्मितीसाठी ओळखला जात असला तरी त्याचा कृषी विकासावर झालेला परिणाम तितकाच महत्त्वाचा आहे. कोयना नदी ही कृष्णा नदीची प्रमुख उपनदी असून कोयना धरणातून कृष्णा नदीत सोडल्या जाणाऱ्या पाण्यामुळे खालच्या भागातील सिंचन योजनांना पाणी उपलब्ध होते. परिणामी सातारा, सांगली व परिसरातील कृषी क्षेत्राला मोठ्या प्रमाणावर लाभ झाला आहे.

सिंचन सुविधा वाढल्यामुळे या भागातील शेती कोरडवाहूपासून बागायती शेतीकडे वळली असून, पीक पद्धती, पीक उत्पादन आणि शेतकऱ्यांच्या आर्थिक स्थितीत सुधारणा झाली आहे. मात्र पाण्याचा योग्य वापर, पीक विविधिकरण आणि पर्यावरणीय समतोल यांसारख्या बाबींकडे दुर्लक्ष झाल्यास कृषी विकासावर मर्यादा येण्याची शक्यता आहे. त्यामुळे कोयना धरणाचा कृषी विकासावर झालेला परिणाम अभ्यासणे आवश्यक आहे.

अभ्यास क्षेत्र :

या अभ्यासासाठी कोयना धरण व त्याचा कृष्णा नदीखोऱ्यातील कृषी विकासावर होणारा परिणाम विचारात घेतला आहे. कोयना धरण महाराष्ट्रातील सातारा जिल्ह्यात कोयना नदीवर बांधण्यात आले असून ही नदी कृष्णा नदीची प्रमुख उपनदी आहे. या प्रदेशाची भौगोलिक रचना डोंगराळ व पठारी स्वरूपाची असून काळी व लाल माती आढळते. पर्जन्यमान जास्त असले तरी पाण्याचा असमान वितरणामुळे पूर्वी शेती मोठ्या प्रमाणावर पावसावर अवलंबून होती. सिंचन प्रकल्पांच्या विकासांमुळे या परिस्थितीत बदल घडून आले आहेत.

अभ्यासाची उद्दिष्टे :

- १) कोयना धरणाचा कृषी विकासातील वाटा अभ्यासणे.
- २) सिंचनामुळे पीक उत्पादन व पीक पद्धतीतील बदलांचा अभ्यास करणे.
- ३) सिंचनाशी संबंधित समस्या ओळखणे.
- ४) शाश्वत कृषी विकासासाठी उपाय सुचविणे.

संशोधन पद्धती व माहिती संकलन :

हा संशोधन अभ्यास दुय्यम माहितीवर आधारित आहे. संशोधनासाठी आवश्यक माहिती शासनाचे अधिकृत अहवाल, जिल्हा सामाजिक व आर्थिक समालोचन, विविध संशोधन लेख, संदर्भ ग्रंथ आणि अधिकृत

संकेतस्थळांमधून गोळा करण्यात आली आहे. माहितीच्या विश्लेषणासाठी वर्णनात्मक पद्धतीचा अवलंब करण्यात आला असून, आवश्यक त्या ठिकाणी साध्या सांख्यिकीय गणनेचा उपयोग करण्यात आला आहे.

कोयना धरण प्रकल्प :

कोयना धरण हे कोयना नदीवर उभारलेले असून महाराष्ट्रातील सर्वात महत्वाच्या बहुउद्देशीय जलसिंचन व जलविद्युत प्रकल्पांपैकी एक आहे. कोयना धरण हे मुख्यतः जलविद्युत निर्मितीसाठी प्रसिद्ध आहे आणि राज्यातील वीज पुरवठ्यात मोठे योगदान देतो. कोयना धरण १९६२ मध्ये पूर्ण झाले यामुळे कोयना नदीवर एक स्थिर जलसाठा निर्माण झाला. जो दुष्काळग्रस्त भागांमध्येही पाण्याची उपलब्धता वाढविण्यासाठी अत्यंत महत्वाचा ठरतो. कोयना प्रकल्प हा थेट सिंचनासाठी मर्यादित स्वरूपात वापरला जात असला तरी कृष्णा नदीत कोयना धरणाचे पाणी सोडल्यामुळे खालच्या भागातील सिंचन व्यवस्थेला बळकटी मिळते. यामध्ये कृष्णा खोऱ्यातील उचल सिंचन योजना, जलसाठे व कालवा प्रणाली यांना कोयना धरणाच्या पाण्याचा अप्रत्यक्ष लाभ होतो. त्यामुळे शेतीसाठी पाण्याची उपलब्धता अधिक नियमित व स्थिर झाली आहे. कृष्णा-कोयना उपसा सिंचन योजना तसेच टेंभू सिंचन योजना यासारख्या खालच्या प्रकल्पांद्वारे जलसिंचन योग्य प्रकारे होते कृष्णा-कोयना उपसा सिंचन योजनेतून एकूण १,०९,१२७ हे. (ICA) क्षेत्रास सिंचनाचा लाभ होतो. या प्रकल्पास एकूण पाणी वापर २६.७८ अ.घ.फू. इतका असून, यापैकी कोयना धरणातून १९.०७ अ.घ.फू व कृष्णा नदीतून ७.७१ अ.घ.फू इतका पाणी वापर नियोजित आहे. तसेच टेंभू सिंचन योजनेमुळे १२१४७५ हेक्टर क्षेत्राला सिंचनाचा लाभ होणार असून एकूण पाणी वापर हा ३०.०० अ.घ.फू असून यासाठी कोयना धरणातून १८.४६ अ.घ.फू पाणी उपलब्ध केले जाते. या योजनांमुळे भात, ऊस, सोयाबीन, कापूस आणि गहू यांसारख्या पिकांची उत्पादकता सुधारली आहे. याशिवाय पाण्याची उपलब्धता नियमित झाल्यामुळे पीक उत्पादन, पीक पद्धती व शेतकऱ्यांच्या उत्पन्नावर सकारात्मक परिणाम झालेला दिसून येतो.

तसेच कोयना धरण प्रकल्प केवळ ऊर्जा निर्मितीपर्यंत मर्यादित नसून, जलसाठा नियमन, पूर नियंत्रण, पाणी व्यवस्थापन आणि ग्रामीण विकास या क्षेत्रांमध्ये महत्त्वपूर्ण योगदान मिळाले आहे. या बहुआयामी लाभांमुळे कोयना धरण प्रकल्प महाराष्ट्राच्या कृषी, ग्रामीण तसेच आर्थिक विकास प्रक्रियेला एक महत्वाचा आधारस्तंभ ठरतो.

कोयना धरणाचा कृषी विकासावर झालेला परिणाम :

१) सिंचन क्षमतेत वाढ

कोयना धरणाच्या उभारणीनंतर कृष्णा नदीखोऱ्यातील पाण्याची उपलब्धता अधिक स्थिर आणि नियमित स्वरूपाची झाली आहे. धरणातून नियंत्रित व नियोजित पाणी सोडल्यामुळे उचल सिंचन योजना तसेच कालवा प्रणालींना आवश्यक पाणी वेळेवर उपलब्ध होऊ लागले आहे. परिणामी शेतीसाठी वेळेवर पाणी उपलब्ध होण्याची शक्यता वाढली असून पावसावरील अवलंबित्व काही प्रमाणात कमी झाले आहे. यामुळे कोरडवाहू शेतीतही सिंचनाची सुविधा निर्माण होऊन कृषी विकासाचा चालना मिळाली आहे.

२) पीक पद्धतीतील बदल

सिंचन सुविधांचा विस्तार झाल्यानंतर पारंपारिक एकपिक आणि कोरडवाहू शेतीपद्धतीत लक्षणीय बदल घडून आले आहेत. पाण्याची उपलब्धता वाढल्यामुळे शेतकऱ्यांनी बागायती तसेच नगदी पिकांच्या लागवडीकडे कल वाढला आहे. परिणामी पीक पद्धतीचा अवलंब अधिक प्रमाणात करण्यात येत आहे. शेती

अधिक नियोजनबद्ध व उत्पादनक्षम झाल्याने जमिनीचा कार्यक्षम वापर शक्य झाला असून, पीक पद्धतीतील या बदलांचा थेट व सकारात्मक परिणाम कृषी विकासावर झालेला आहे.

३) पीक उत्पादनात वाढ

सिंचन सुविधा उपलब्ध झाल्यानंतर पीक अपयशाचा धोका कमी होऊन कृषी उत्पादनात स्थिरता प्राप्त झाली आहे. पाण्याच्या नियमित व खात्रीशीर पुरवठ्यामुळे शेतकऱ्यांना सुधारित बियाणे, खतांचा योग्य वापर तसेच आधुनिक शेती तंत्रज्ञानाचा अवलंब करणे शक्य झाले आहे. याचा परिणाम प्रती हेक्टर उत्पादनात वाढ झालेली दिसून येते. वाढलेल्या कृषी उत्पादनामुळे शेतकऱ्यांच्या आर्थिक स्थितीत सुधारणा झालेली आहे.

४) शेतीपूरक व्यवसायांचा विकास

कोयना धरणामुळे निर्माण झालेल्या सिंचन सुविधांचा लाभ केवळ शेतीपुरताच मर्यादित न राहता शेतीपूरक व्यवसायांनाही झाला आहे. दुग्धव्यवसाय, भाजीपाला उत्पादन, प्रक्रिया उद्योग तसेच इतर ग्रामीण उद्योगांना या सुविधांमुळे चालना मिळाली आहे. या पूरक व्यवसायांमुळे शेतकऱ्यांचे उत्पन्नाचे स्रोत वाढले आहेत. या बदलांमुळे ग्रामीण अर्थव्यवस्था अधिक सक्षम व गतिमान झालेली आहे.

५) ग्रामीण व सामाजिक विकासावर परिणाम

कृषी विकासामुळे ग्रामीण भागातील रोजगाराच्या संधी वाढल्या असून स्थलांतराचे प्रमाण कमी झाले आहे. शेतीतून मिळणाऱ्या उत्पन्नात वाढ झाल्यामुळे जीवनमानात सुधारणा झालेली दिसून येते. सिंचन प्रकल्पांमुळे कृषी क्षेत्र अधिक स्थिर झाल्याने ग्रामीण विकास प्रक्रियेला गती मिळालेली आहे.

समस्या : कोयना धरणामुळे कृषी विकासासोबत काही समस्या निर्माण झालेल्या दिसून येतात.

१) कोयना धरणातून कृष्णा नदीत सोडल्या जाणाऱ्या पाण्याचा लाभ सर्व भागांना समान प्रमाणात मिळत नाही. धरणाच्या वरच्या व खालच्या भागांमध्ये पाण्याच्या उपलब्धतेत तफावत आढळते. काही क्षेत्रांमध्ये पुरेसे पाणी उपलब्ध होत असताना काही भागांमध्ये सिंचनाची कमतरता आढळून येते. या असमान वितरणामुळे कृषी विकासात प्रादेशिक विषमता निर्माण होण्याची शक्यता आहे.

२) सिंचन सुविधा उपलब्ध झाल्यानंतर ऊसासारख्या अधिक पाणी लागणाऱ्या पिकांची लागवड वाढलेली दिसून येते. यामुळे जलस्रोतांवर वाढता ताण निर्माण होण्याची शक्यता असून, भविष्यात पाणी टंचाईची समस्या निर्माण होऊ शकते. त्यामुळे दीर्घकालीन दृष्टीने हा प्रकार शाश्वत कृषी विकासाच्या दृष्टीने अडचणीचा ठरू शकतो.

३) सिंचन क्षेत्राच्या वाढीमुळे काही भागांमध्ये मृदा क्षारता, पाणथळ तसेच पर्यावरणीय असमतोल निर्माण होण्याची शक्यता वाढते.

४) सिंचन सुविधा उपलब्ध असल्या तरी सर्व शेतकऱ्यांना त्या समान प्रमाणात वापरता येतीलच असे नाही. आर्थिक मर्यादा, तांत्रिक माहितीचा अभाव व साधनसामग्रीची कमतरता यामुळे काही शेतकरी या सुविधांचा पुरेसा लाभ घेऊ शकत नाहीत.

उपाय : या समस्यांवर मात करण्यासाठी संभाव्य उपाय शोधण्याचा प्रयत्न करण्यात आला असून, ते पुढीलप्रमाणे सादर करण्यात आले आहेत.

१) पाणी वाटपाचे नियोजन शास्त्रीय पद्धतीने करणे तसेच जलनियमन व पाणीवाटपावर प्रभावी नियंत्रण ठेवणे आवश्यक आहे. नदीखोरे पातळीवरील जलव्यवस्थापन दृष्टीकोन स्वीकारल्यास या समस्या काही प्रमाणात कमी करता येऊ शकतात.

- २) पीक विविधीकरणास प्रोत्साहन देणे तसेच कमी पाणी लागणाऱ्या पिकांचा प्रसार करणे आवश्यक आहे. यासोबतच जलसाक्षरता व शाश्वत शेतीविषयक जनजागृती कार्यक्रम राबविणे उपयुक्त ठरू शकते.
- ३) ठिबक व तुषार सिंचनासारख्या आधुनिक जलसंधारण पद्धतींचा वापर वाढविणे आवश्यक आहे. पाण्याच्या कार्यक्षम वापर व पर्यावरणीय समतोल राखण्यावर भर दिल्यास या समस्या नियंत्रित करता येऊ शकतात.
- ४) शेतकऱ्यांसाठी प्रशिक्षण कार्यक्रम, तांत्रिक मार्गदर्शन व शासकीय सहाय्य योजना राबविणे आवश्यक आहे. यामुळे सिंचन सुविधांचा अधिक व्यापक व समतोल वापर शक्य होईल.

निष्कर्ष :

प्रस्तुत संशोधनातून असे स्पष्ट होते की कोयना धरणाने कृषी विकासात महत्त्वपूर्ण भूमिका बजावलेली आहे. पावसावर अवलंबून असलेल्या शेतीत सिंचन सुविधांच्या उपलब्धतेमुळे सकारात्मक बदल घडून आले असून, पीक पद्धतीत विविधता आणि पीक उत्पादकतेत वाढ झालेली दिसून येते. विशेषतः ऊस, भात, भाजीपाला व इतर व्यापारी पिकांच्या लागवडीत वाढ होऊन कृषी अर्थव्यवस्थेला चालना मिळालेली आहे. सिंचनामुळे कृषी जोखीम कमी झाली असून दुष्काळी परिस्थितीचा परिणाम मर्यादित झालेला आहे. खात्रीशीर पाण्याच्या उपलब्धतेमुळे शेतकऱ्यांना आधुनिक शेती तंत्रज्ञानाचा वापर करता येऊ लागला आहे. याचा परिणाम शेतकऱ्यांच्या उत्पन्नवाढीवर तसेच ग्रामीण जीवनमानाच्या सुधारणेवर झालेला आढळतो. कृषीवर आधारित प्रक्रिया उद्योग, रोजगारनिर्मिती आणि ग्रामीण अर्थव्यवस्थेचा विस्तार हे कोयना धरणाचे अप्रत्यक्ष पण महत्त्वाचे परिणाम आहेत. तथापि, पाण्याचा असमतोल वापर, पर्यावरणीय परिणाम आणि प्रादेशिक विषमता यांसारखी काही आव्हानेही या प्रकल्पाशी संबंधित असल्याचे आढळते. त्यामुळे सिंचन प्रकल्पांचा लाभ अधिक शाश्वत व समतोल स्वरूपात मिळवण्यासाठी प्रभावी जलसंपदा व्यवस्थापन आवश्यक ठरते. एकूणच, कोयना धरणाने कृषी विकासाला गती दिली असून, शाश्वत व समावेशक ग्रामीण विकासासाठी त्याचे योगदान महत्त्वाचे आहे. 'विकसित भारत @2047' या राष्ट्रीय दृष्टीकोनाच्या अनुषंगाने कृषी उत्पादनवाढ, जलसुरक्षा व ग्रामीण अर्थव्यवस्थेच्या बळकटीकरणासाठी अशा सिंचन प्रकल्पांची भूमिका निर्णायक ठरते, असा निष्कर्ष काढता येतो.

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आर्थिक विकासासाठी हातमाग आणि खादीचा प्रचार

सिद्धी राजेश खोंबारे

सहाय्यक प्राध्यापक, श्रीमती. मथुबाई गरवारे कन्या महाविद्यालय, सांगली
srkhombare2001@gmail.com

सारांश

भारताची अर्थव्यवस्था बळकट करण्यासाठी ग्रामीण आणि पारंपरिक उद्योगांचा विकास अत्यंत महत्वाचा आहेत. हातमाग आणि खादी उद्योग हे रोजगारनिर्मिती, महिला सक्षमीकरण, ग्रामीण स्वावलंबन आणि शाश्वत विकासासाठी प्रभावी साधन ठरतात. प्रस्तुत संशोधन निबंधाचा उद्देश हातमाग व खादीच्या प्रचारांमुळे आर्थिक विकासावर होणारा परिणाम अभ्यासणे हा आहे.

या संशोधनात हातमाग व खादी उद्योगातील कारागीर, स्वयंरोजगार गट, महिला बचत गट आणि ग्राहक यांच्याकडून प्राथमिक माहिती गोळा करण्यात आली. शसकीय अहवाल, संशोधन लेख, आणि खादी ग्रामोद्योग आयोगाच्या (KVIC) आकडेवारीचा दुय्यम माहितीस्रोत म्हणून वापर करण्यात आला. संशोधनातून असे आढळून आले की, हातमाग व खादी उद्योगांमुळे ग्रामीण भागात रोजगाराच्या संधी वाढल्या, कारागिरांचे उत्पन्न सुधारले आणि स्थानिक अर्थव्यवस्थेला चालना मिळाली.

अभ्यासात असेही स्पष्ट झाले की, फॅशन डिझाइन, डिजिटल मार्केटिंग, ईकॉमर्स, आणि शासकीय योजनांच्या प्रभावी अंमलबजावणीमुळे हातमाग व खादी उत्पादनांना नवसंजीवनी मिळू शकते. , , स्पर्धात्मक बाजारपेठ, मध्यस्थांचे वर्चस्व आणि मर्यादित जाहिरात या अडचणीही समोर आल्या.

प्रस्तावना

भारत हा विविधतेने नटलेला देश असून त्याची अर्थव्यवस्था मोठ्या प्रमाणावर ग्रामीण भागावर अवलंबून आहे. ग्रामीण अर्थव्यवस्थेचा कणा म्हणून ओळखले जाणारे हातमाग आणि खादी उद्योग हे केवळ वस्त्रोद्योगाचेच नव्हे, तर स्वावलंबन, रोजगारनिर्मिती, महिला सक्षमीकरण आणि शाश्वत आर्थिक विकासाचे प्रभावी साधन आहेत. महात्मा गांधींनी स्वातंत्र्य चळवळीत खादीला आत्मनिर्भरतेचे प्रतीक म्हणून पुढे आणले, आणि आजही खादी व हातमाग उद्योग "आत्मनिर्भर भारत" व "विकसित भारत @2047" या राष्ट्रीय उद्दिष्टांमध्ये महत्वाची भूमिका बजावत आहेत.

हातमाग व खादी उद्योगांमध्ये कमी भांडवलात अधिक रोजगारनिर्मितीची क्षमता असून ग्रामीण व अर्धशहरी भागातील कुशल-अकुशल कारागिरांना उपजीविकेची संधी उपलब्ध होते. विशेषतः महिला, मागासवर्गीय घटक आणि लघुउद्योग करणाऱ्यांसाठी हा उद्योग आर्थिक स्थैर्य व सामाजिक सक्षमीकरणाचे माध्यम ठरतो. याशिवाय, नैसर्गिक तंतूंचा वापर, पर्यावरणपूरक उत्पादन प्रक्रिया आणि पारंपरिक कौशल्यांचे जतन ही या उद्योगाची वैशिष्ट्ये आहेत.

मात्र, औद्योगिकीकरण, यंत्रमाग उत्पादनांची स्पर्धा, बदलती ग्राहक अभिरुची, मर्यादित विपणन व्यवस्था आणि डिजिटल जागरूकतेचा अभाव यांमुळे हातमाग व खादी उद्योगास अनेक आव्हानांचा सामना

करावा लागत आहे. अशा परिस्थितीत या उद्योगाचा प्रभावी प्रचार, आधुनिक डिझाइनचा समावेश, ई-कॉमर्स व शासकीय योजनांची परिणामकारक अंमलबजावणी अत्यावश्यक ठरते.

साहित्याचा आढावा

हातमाग व खादी उद्योगाचा आर्थिक, सामाजिक व सांस्कृतिक विकासाशी असलेला संबंध विविध संशोधक, संस्था व धोरणकर्त्यांनी अभ्यासलेला आहे. उपलब्ध साहित्याचा आढावा घेतल्यास असे दिसून येते की, हा उद्योग ग्रामीण रोजगारनिर्मिती, महिला सक्षमीकरण आणि शाश्वत विकासासाठी महत्त्वाचा घटक आहे.

Desai (2018) यांच्या अभ्यासानुसार हातमाग उद्योग हा कृषीनंतर ग्रामीण भागातील दुसऱ्या क्रमांकाचा रोजगारनिर्माता असून कमी भांडवलात मोठ्या प्रमाणावर रोजगार उपलब्ध करून देतो. त्यांच्या संशोधनात असे नमूद करण्यात आले आहे की, हातमाग उद्योगामुळे ग्रामीण स्थलांतर कमी होण्यास मदत होते. Sharma आणि Verma (2019) यांनी खादी उद्योगाचा सामाजिक-आर्थिक परिणाम अभ्यासताना असे स्पष्ट केले की, खादी उत्पादनामुळे महिला व दुर्बल घटकांच्या उत्पन्नात वाढ झाली असून स्वयंरोजगाराच्या संधी वाढल्या आहेत. त्यांच्या अभ्यासात शासकीय सहाय्य योजनांचा सकारात्मक प्रभावही अधोरेखित करण्यात आला आहे.

Khadi and Village Industries Commission (KVIC) (2020) च्या अहवालानुसार, खादी व ग्रामोद्योग क्षेत्रात उत्पादन व विक्रीत सातत्याने वाढ होत असून प्रधानमंत्री रोजगार निर्मिती कार्यक्रम (PMEGP) आणि इतर योजनांमुळे ग्रामीण अर्थव्यवस्थेला चालना मिळाली आहे. तथापि, विपणन आणि ब्रँडिंगचा अभाव ही मोठी अडचण असल्याचेही नमूद केले आहे.

Patil (2021) यांनी त्यांच्या संशोधनात हातमाग व खादी उत्पादनांच्या प्रचारासाठी डिझाइन इनोव्हेशन, फॅशन टेक्नॉलॉजी आणि डिजिटल मार्केटिंग यांचा समावेश आवश्यक असल्याचे अधोरेखित केले आहे. आधुनिक ग्राहकांच्या गरजेनुसार उत्पादनात बदल केल्यास या उद्योगाला राष्ट्रीय व आंतरराष्ट्रीय बाजारपेठ मिळू शकते, असे त्यांनी नमूद केले.

Joshi आणि Kulkarni (2022) यांनी शाश्वत विकासाच्या दृष्टीकोनातून खादी उद्योगाचा अभ्यास करताना असे आढळून आले की, खादी उत्पादन प्रक्रिया पर्यावरणपूरक, ऊर्जा बचत करणारी आणि कार्बन उत्सर्जन कमी करणारी आहे. त्यामुळे हरित अर्थव्यवस्थेसाठी खादी उद्योग महत्त्वाचा ठरतो.

वरील साहित्याच्या आढाव्यावरून असे स्पष्ट होते की, हातमाग व खादी उद्योगाचा आर्थिक विकासातील वाटा महत्त्वाचा असूनही प्रभावी प्रचार, बाजारपेठेपर्यंत पोहोच, आधुनिक तंत्रज्ञानाचा वापर आणि धोरणात्मक पाठबळ याबाबत अधिक सखोल संशोधनाची आवश्यकता आहे. प्रस्तुत संशोधन निबंध या उणिवा भरून काढण्याचा प्रयत्न करतो.

संशोधनाची उद्दिष्टे

1. हातमाग व खादी उद्योगाचा आर्थिक विकासातील सहभाग अभ्यासणे.

2. हातमाग व खादीच्या प्रचारासुळे ग्रामीण व शहरी भागातील रोजगारनिर्मितीवर होणारा परिणाम समजून घेणे.
3. हातमाग व खादी उद्योगामुळे कारागिरांच्या उत्पन्न व जीवनमानातील बदलांचा अभ्यास करणे.
4. महिला सक्षमीकरणामध्ये हातमाग व खादी उद्योगाची भूमिका स्पष्ट करणे.
5. हातमाग व खादी उत्पादनांच्या प्रचारासाठी उपलब्ध शासकीय योजना व उपक्रमांचा अभ्यास करणे.
6. हातमाग व खादी उद्योगासमोरील समस्या व अडचणी ओळखणे.
7. आधुनिक तंत्रज्ञान, डिझाइन इनोव्हेशन व डिजिटल मार्केटिंगचा प्रचारावर होणारा प्रभाव अभ्यासणे.
8. शाश्वत व आत्मनिर्भर आर्थिक विकासासाठी हातमाग व खादी उद्योगाचे महत्त्व अधोरेखित करणे.

माहिती विश्लेषण

प्रस्तुत संशोधनासाठी संकलित केलेली प्राथमिक व दुय्यम माहिती तक्ते, टक्केवारी व वर्णनात्मक पद्धतीने विश्लेषित करण्यात आली. या विश्लेषणातून हातमाग व खादी उद्योगाचा आर्थिक विकासातील वाटा स्पष्ट करण्याचा प्रयत्न करण्यात आला.

१ आर्थिक स्वरूप-प्रतिसादकर्त्यांचे सामाजिक .

विश्लेषणात असे आढळून आले की, बहुसंख्य प्रतिसादकर्ते ग्रामीण व अर्धशहरी भागातील असून त्यामध्ये महिला कारागिरांचे प्रमाण अधिक आहे. बहुतांश कारागिरांचे शिक्षण प्राथमिक व माध्यमिक स्तराचे असून हातमाग व खादी उद्योग हा त्यांचा मुख्य किंवा पूरक उपजीविकेचा स्रोत आहे.

२ रोजगारनि .र्मितीवरील परिणाम

माहिती विश्लेषणावरून असे दिसून आले की हातमाग व खादी उद्योगामुळे स्थानिक पातळीवर रोजगाराच्या संधी वाढल्या आहेत. विशेषतः महिला बचत गट सदस्य व पारंपरिक कारागिरांना स्वयंरोजगाराची संधी उपलब्ध झाली आहे. त्यामुळे ग्रामीण भागातून होणारे स्थलांतर काही प्रमाणात कमी झाले आहे.

३ उत्पन्नातील बदल .

संशोधनातून असे आढळून आले की, हातमाग व खादी उत्पादनांच्या प्रचारासुळे कारागिरांच्या मासिक उत्पन्नात वाढ झाली आहे. शासकीय अनुदान, प्रशिक्षण व बाजारपेठ उपलब्ध झालेल्या कारागिरांचे उत्पन्न तुलनेने अधिक वाढलेले दिसून आले.

४ शासकीय योजनांचा प्रभाव .

माहिती विश्लेषणात असे स्पष्ट झाले की, खादी व ग्रामोद्योग आयोग (KVIC), प्रधानमंत्री रोजगार निर्मिती कार्यक्रम (PMEGP) व महिला स्वयं-सहायता गट योजनांचा उद्योगाच्या विकासावर सकारात्मक परिणाम झाला आहे. मात्र, काही प्रतिसादकर्त्यांना योजनांची संपूर्ण माहिती नसल्याचेही आढळून आले.

५ प्रचार व विपणन पद्धती .

विश्लेषणानुसार पारंपरिक विक्री पद्धतींबरोबरच प्रदर्शने, मेळावे, ऑनलाइन विक्री व सोशल मिडिया यांचा वापर करणाऱ्या उत्पादकांना अधिक बाजारपेठ मिळत आहे. तरीही, आधुनिक जाहिरात व ब्रँडिंगचा अभाव ही एक प्रमुख अडचण असल्याचे निदर्शनास आले.

६समस्या व अडचणी .

माहिती विश्लेषणातून खालील समस्या समोर आल्या:

- यंत्रमाग उत्पादनांची तीव्र स्पर्धा
- कच्च्या मालाच्या किमतीत वाढ
- मर्यादित भांडवल व कर्जसुविधा
- आधुनिक तंत्रज्ञान व डिझाइनची कमतरता

७एकूण . विश्लेषण

संपूर्ण माहिती विश्लेषणावरून असे निष्पन्न होते की, हातमाग व खादी उद्योगाचा आर्थिक विकास, रोजगारनिर्मिती व शाश्वत विकासात महत्त्वपूर्ण वाटा आहे. प्रभावी प्रचार, आधुनिक विपणन व शासकीय पाठबळ मिळाल्यास हा उद्योग अधिक सक्षमपणे आर्थिक विकासास हातभार लावू शकतो.

चर्चा

प्रस्तुत संशोधनातून प्राप्त झालेल्या निष्कर्षांच्या आधारे हातमाग व खादी उद्योगाचा आर्थिक विकासातील सहभाग स्पष्टपणे दिसून येतो. माहिती विश्लेषणात आढळून आले की, हातमाग व खादी उद्योगामुळे ग्रामीण व अर्धशहरी भागात रोजगारनिर्मितीला चालना मिळाली असून विशेषतः महिला व पारंपरिक कारागिरांसाठी हा उद्योग उपजीविकेचे महत्त्वपूर्ण साधन ठरला आहे. हे निष्कर्ष Desai (2018) आणि Sharma व Verma (2019) यांच्या अभ्यासाशी सुसंगत आहेत, ज्यामध्ये ग्रामीण रोजगारनिर्मितीतील हातमाग उद्योगाचे महत्त्व अधोरेखित करण्यात आले आहे.

उत्पन्नवाढीच्या दृष्टीने पाहता, शासकीय योजनांचा लाभ घेतलेल्या कारागिरांच्या उत्पन्नात तुलनेने अधिक वाढ झाल्याचे आढळून आले. KVIC आणि PMEGP सारख्या योजनांमुळे भांडवल, प्रशिक्षण व बाजारपेठ उपलब्ध झाल्याने उत्पादनक्षमता वाढली आहे. मात्र, सर्व कारागिरांना या योजनांची पुरेशी माहिती नसल्याने त्यांचा अपेक्षित लाभ सर्वापर्यंत पोहोचत नसल्याचेही स्पष्ट झाले.

प्रचार व विपणनाच्या बाबतीत असे दिसून आले की, पारंपरिक विक्री पद्धतींबरोबरच प्रदर्शने, मेळावे, ई-कॉमर्स आणि सोशल मिडिया यांचा वापर करणाऱ्या उत्पादकांना अधिक बाजारपेठ उपलब्ध होत आहे. Patil (2021) यांच्या अभ्यासात नमूद केल्याप्रमाणे, आधुनिक डिझाइन व डिजिटल मार्केटिंगचा समावेश केल्यास हातमाग व खादी उत्पादनांची मागणी वाढू शकते. तथापि, ब्रँडिंगचा अभाव, मध्यस्थांचे वर्चस्व आणि स्पर्धात्मक यंत्रमाग उत्पादने ही आव्हाने अद्याप कायम आहेत.

शाश्वत विकासाच्या संदर्भात पाहता, खादी व हातमाग उद्योग पर्यावरणपूरक असून कमी ऊर्जा वापर व नैसर्गिक तंतूंच्या वापरामुळे हरित अर्थव्यवस्थेस पूरक ठरतात. Joshi आणि Kulkarni (2022) यांच्या निष्कर्षांप्रमाणेच प्रस्तुत संशोधनातही खादी उद्योगाचा पर्यावरणीय लाभ स्पष्टपणे दिसून येतो.

एकूणच, संशोधनातून असे स्पष्ट होते की, हातमाग व खादीचा प्रभावी प्रचार, आधुनिक तंत्रज्ञानाचा वापर, कारागिरांचे कौशल्यविकास प्रशिक्षण आणि शासकीय योजनांची प्रभावी अंमलबजावणी केल्यास हा

उद्योग आर्थिक विकास, आत्मनिर्भर भारत व विकसित भारत @2047 या उद्दिष्टांच्या पूर्ततेस महत्त्वपूर्ण योगदान देऊ शकतो.

निष्कर्ष

प्रस्तुत संशोधनाच्या अभ्यासातून असे निष्कर्ष निघतात की, हातमाग व खादी उद्योग हे भारताच्या आर्थिक विकासासाठी महत्त्वपूर्ण घटक आहेत. या उद्योगामुळे ग्रामीण व अर्धशहरी भागात रोजगारनिर्मितीच्या संधी वाढल्या, विशेषतः महिला व पारंपरिक कारागिरांना स्वयंरोजगाराचे प्रभावी माध्यम उपलब्ध झाले आहे.

संशोधनातून असेही स्पष्ट झाले की, हातमाग व खादीच्या प्रचारांमुळे कारागिरांच्या उत्पन्नात वाढ झाली असून त्यांच्या जीवनमानात सुधारणा दिसून येते. शासकीय योजना, प्रशिक्षण कार्यक्रम आणि आर्थिक सहाय्यामुळे उत्पादनक्षमता व बाजारपेठेपर्यंत पोहोच सुलभ झाली आहे. तथापि, काही कारागिरांना या योजनांची पुरेशी माहिती नसल्याने त्यांचा संपूर्ण लाभ मिळत नसल्याचेही निदर्शनास आले. हातमाग व खादी उद्योग पर्यावरणपूरक, शाश्वत व ऊर्जा बचत करणारे असल्यामुळे हरित अर्थव्यवस्थेला चालना देतात. नैसर्गिक तंतूंचा वापर, पारंपरिक कौशल्यांचे जतन आणि स्थानिक संसाधनांचा उपयोग यामुळे हा उद्योग दीर्घकालीन आर्थिक विकासासाठी उपयुक्त ठरतो.

तथापि, यंत्रमाग उत्पादनांची स्पर्धा, मर्यादित भांडवल, आधुनिक डिझाइन व विपणनातील अडचणी या समस्या अद्याप कायम आहेत. त्यामुळे प्रभावी प्रचार, डिजिटल मार्केटिंग, डिझाइन नवकल्पना, तसेच शासकीय योजनांची प्रभावी अंमलबजावणी आवश्यक आहे. एकूणच, हातमाग व खादीचा सर्वसमावेशक प्रचार केल्यास आत्मनिर्भर भारत आणि विकसित भारत @2047 या राष्ट्रीय उद्दिष्टांच्या पूर्ततेस निश्चितच मदत होईल, असा निष्कर्ष या संशोधनातून निघतो.

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Cybersecurity & Privacy : Foundations of Viksit Bharat 2047

Ms. Naziya Nizam Mullani

Course Co-ordinator, Online MBA, CDOE, Shivaji University, Kolhapur

Email – naziya.mullani@gmail.com

Contact – 7972816695 /7057054020

Abstract

India's vision of *Viksit Bharat 2047* represents an ambition to become a developed, inclusive, and globally competitive nation by the centenary of independence. The digital transformation of this nation under the Digital India programme has truly reshaped and reimagined governance, finance, education, health care, and trade. Large-scale inclusion and efficiency were facilitated through Aadhaar, UPI, DigiLocker, and the larger India Stack. The rapidity of this digital expansion has also raised very genuine concerns about cybersecurity threats and data privacy.

This paper critically analyses the impact of cybersecurity and data privacy on the development trajectory of India in the context of *Viksit Bharat 2047*. Employing a qualitative and analytical research methodology based on government publications, academic literature, and policy documents, this paper will assess the current state of the cyber ecosystem in India and the legal regime that has been brought about by the Digital Personal Data Protection (DPDP) Act, 2023. Trust in digital infrastructure is the unseen pillar of economic development and democracy. The analysis shows that while India has built world-class digital public infrastructure, gaps remain in cyber resilience, institutional capacity, skilled human resources, and citizen awareness. The paper explains how rising cybercrime, data misuse, and surveillance concerns threaten public confidence in digital platforms. At the same time, it highlights the enormous opportunities that secure and privacy-respecting systems offer for entrepreneurship, global leadership, and inclusive development. The study concludes that cybersecurity and data privacy must be integrated into India's core development strategy rather than treated as technical afterthoughts. For *Viksit Bharat 2047* to become a reality, India must embed cyber resilience, privacy-by-design, ethical data governance, and digital literacy across institutions, markets, and society.

Keywords :

Viksit Bharat 2047, Digital India, Cybersecurity, Data Privacy, Digital Governance, Cybercrime

1. Introduction

The vision of *Viksit Bharat 2047* is rooted in the idea that India should not only grow economically but also strengthen its institutions, social cohesion, and global influence. In the 21st century, development is inseparable from digital transformation. Over the last decade, India's Digital India initiative has reshaped how the state delivers services and how citizens participate in the economy. Today, millions use UPI for daily transactions, Aadhaar for identity verification, and DigiLocker for official documents.

These digital systems are not simply tools of convenience, they are the backbone of governance, financial inclusion, and innovation. However, as India becomes more digitally dependent, it also becomes more digitally vulnerable. Cyberattacks, data breaches, online fraud, and mass surveillance risks threaten not only economic stability but also democratic values. Trust in digital systems is therefore critical. If citizens fear that their data is unsafe or misused, they will hesitate to engage with digital platforms.

2. Cybersecurity Landscape in Digital India

India's digital ecosystem is one of the largest in the world, with more than 850 million internet users and rapidly expanding digital services. Every online transaction, biometric authentication, or cloud-based service generates data and every data flow creates a potential vulnerability.

Cyber threats in India have grown in scale and sophistication. Online banking fraud, ransomware attacks on hospitals, phishing scams targeting citizens, and data leaks from private and public databases have become increasingly common. For example, attacks on healthcare institutions disrupt essential services and directly threaten human lives, not just data.

The government has established institutions such as CERT-In and the National Cyber Coordination Centre. These bodies monitor threats, respond to incidents, and issue advisories. However, cybersecurity in India remains largely reactive rather than preventive. Many organizations invest in security only after an attack has occurred.

Another major issue is the shortage of skilled cybersecurity professionals. While India produces many IT graduates, specialized cyber expertise is limited. Small businesses, educational institutions, and local governments often lack both funding and knowledge to protect themselves effectively.

To support *Viksit Bharat 2047*, India must shift toward a *cyber-resilience model*. This means building systems that anticipate threats, limit damage, recover quickly, and continue functioning even during attacks. Cybersecurity must become part of everyday organizational culture, not just a technical add-on.

3. Data Privacy and Legal Framework: DPDP Act, 2023

The Digital Personal Data Protection Act, 2023 is India's first comprehensive law on personal data. It recognizes that individuals have rights over their data and that organizations must handle this data responsibly. The law introduces concepts such as consent, purpose limitation, and accountability.

In theory, the Act aligns India with global data protection norms. In practice, however, several challenges arise.

First, enforcement capacity is uncertain. The Data Protection Board must be independent, well-funded, and technically competent. Without strong enforcement, organizations may treat privacy compliance as a formality rather than a responsibility.

Second, the Act allows broad exemptions for government agencies. While national security is important, excessive exemptions can weaken democratic accountability and create surveillance concerns.

Third, citizen awareness is very low. Many people click "agree" on privacy notices without understanding what they are consenting to. Without digital literacy, legal rights remain abstract.

Fourth, small and medium enterprises may struggle to implement complex compliance systems. For *Viksit Bharat 2047*, privacy must be understood as a *core element of digital citizenship*, not just legal paperwork.

4. Opportunities for Viksit Bharat 2047

Strong cybersecurity and data privacy frameworks create trust. Trust enables participation, innovation, and investment.

Economically, secure digital systems reduce risk for businesses and investors. Fintech, healthtech, and AI industries depend on reliable data governance.

Socially, privacy-respecting systems protect dignity and freedom. Citizens are more likely to engage with digital governance when they feel safe.

Globally, India can lead by example in ethical digital public infrastructure. In short, cybersecurity and privacy are enablers of development, not obstacles to innovation.

5. Challenges and Risks

While Digital India has unlocked immense opportunities, it has also exposed India to a complex set of cybersecurity and data privacy risks. These challenges are structural, institutional, social, and ethical in nature. If they are not addressed systematically, they can undermine trust in digital systems and weaken the foundation of *Viksit Bharat 2047*.

5.1 Rising Cybercrime and Financial Fraud

One of the most visible challenges is the rapid increase in cybercrime. Online frauds, phishing attacks, identity theft, and fake digital lending apps have targeted ordinary citizens, especially first-time internet users. Criminals exploit low digital awareness and weak authentication practices. As digital payments become universal through UPI, even small errors such as clicking on a malicious link can result in large financial losses. Cybercrime not only affects individuals but also erodes public confidence in digital platforms.

5.2 Ransomware and Attacks on Critical Infrastructure

Ransomware attacks on hospitals, municipal bodies, and educational institutions are particularly dangerous. When attackers lock essential systems and demand payment, public services are disrupted. In healthcare, such attacks can delay treatment and even threaten lives. In governance, they can paralyze administrative systems. These incidents show that cybersecurity is no longer just an IT issue, it is a public safety and national resilience issue.

5.3 Shortage of Skilled Cybersecurity Professionals

India faces a severe shortage of trained cybersecurity experts. While the country produces large numbers of IT graduates, only a small percentage specialize in advanced cyber defense, threat intelligence, and digital forensics. Many organizations rely on outdated systems or poorly configured security tools. Without skilled human capital, even the best laws and technologies cannot protect digital infrastructure.

5.4 Digital Divide and Low Cyber Awareness

There is a sharp divide between digitally empowered urban users and vulnerable rural or semi-urban populations. Many citizens use smartphones and apps without understanding basic cyber hygiene such as strong passwords, two-factor authentication, or recognizing fake messages. This makes them easy targets for scams. Digital inclusion without digital literacy increases risk rather than reducing it.

5.5 Surveillance, Consent, and Civil Liberties

Another major risk lies in balancing national security and individual privacy. With large-scale data collection through Aadhaar, facial recognition, and other technologies, concerns about mass surveillance arise. If citizens feel constantly monitored, it can chill free expression and democratic participation. Broad state exemptions in data protection law create uncertainty about how power is exercised over personal data.

5.6 Cross-Border Data and Cloud Dependency

India's data often flows across borders through global cloud service providers. This creates jurisdictional challenges about who controls data, which laws apply, and how breaches are handled. Dependence on foreign infrastructure can create strategic vulnerabilities in times of geopolitical tension.

In sum, the risks facing Digital India are not isolated problems. They are interconnected and require coordinated responses across technology, law, education, and governance.

6. Policy Recommendations

To ensure that cybersecurity and data privacy strengthen rather than weaken India's path to *Viksit Bharat 2047*, policy responses must be proactive, inclusive, and institutionally strong. The following recommendations focus on building long-term resilience rather than short-term fixes.

6.1 Integrate Cybersecurity Education into Formal Curricula

Cybersecurity should be taught not only to engineers but also to management students, civil servants, lawyers, and school students. MBA programmes should include modules on digital risk, data ethics, and cyber governance. Early education in cyber hygiene can create a culture of safety.

6.2 Strengthen Institutional Capacity and Coordination

CERT-In, state cyber cells, and law enforcement agencies need more funding, training, and inter-agency coordination. Cyber incidents often cross state and sector boundaries. A unified command structure for major cyber crises can improve response speed and accountability.

6.3 Build an Independent and Empowered Data Protection Authority

The Data Protection Board under the DPDP Act must be institutionally independent, transparent, and technically capable. It should have real enforcement powers, clear procedures, and public accountability mechanisms. Citizens must trust that their complaints will be handled fairly and promptly.

6.4 Promote Privacy-by-Design in Public and Private Systems

All digital platforms especially government ones should embed privacy protections from the design stage. This includes data minimization, strong encryption, and user control over information. Privacy should not be an afterthought added through lengthy policies.

6.5 Support Small Businesses and Start-ups in Compliance

Many SMEs lack the resources to implement complex data protection and cybersecurity systems. The government can provide toolkits, templates, subsidies, and shared security services to make compliance affordable and practical.

6.6 Enhance International Cooperation on Cyber Norms

Cyber threats are global. India should actively engage in shaping international rules on cyber warfare, data flows, and digital trade. Diplomatic cooperation can improve intelligence sharing and reduce cross-border crime.

Overall, policy must move beyond reactive law making toward building a secure and ethical digital ecosystem.

Conclusion

The dream of *Viksit Bharat 2047* is not only about economic size or technological power. It is about building a society where growth is trusted, inclusive, and sustainable. In a digital age, trust depends on two invisible foundations: **cybersecurity and data privacy**.

India has created one of the world's most ambitious digital public infrastructures. But infrastructure alone is not enough. Without strong cyber defenses and respect for personal data, digital systems can become tools of exploitation rather than empowerment. Citizens will hesitate to engage, businesses will face higher risks, and democratic values may weaken.

Cybersecurity and data privacy must therefore be treated as *development infrastructure*, just like roads, electricity, and education. They enable safe innovation, protect human dignity, and sustain democratic legitimacy.

If India embeds cyber resilience, ethical data governance, and digital literacy into every level of policy and practice, Digital India can become a global model. In doing so, cybersecurity and data privacy will not slow India's journey to *Viksit Bharat 2047*, they will accelerate it.

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A Comparative Study of Emotional Maturity among Maharashtrian and Non-Maharashtrian Boys and Girls

Mr. Ashok Kondiba Patil

Research Scholar, Shivaji University, Kolhapur

Contact : 9764512553

Email: ashokpatil3252@gmail.com

Abstract

The present study aimed to conduct a comparative analysis of emotional maturity among Maharashtrian and Non-Maharashtrian boys and girls. A sample of 100 students was selected for the study, comprising 50 Maharashtrian and 50 Non-Maharashtrian boys and girls. The sample was selected using a purposive non-probability sampling method. The Emotional Maturity Scale developed by Yashvir Singh and Mahesh Bhargava was used for data collection. The collected data were analysed using statistical techniques such as Mean, Standard Deviation, and the 't' test. The findings revealed that there is a significant difference in the level of emotional maturity between Maharashtrian and Non-Maharashtrian boys and girls.

Keywords : Maharashtrian students, Non-Maharashtrian students, Emotional Maturity

Introduction :

In the present modern era, emotional maturity has acquired a place of great importance in the holistic development of an individual. Emotional maturity is associated with the ability to understand one's emotions, regulate them appropriately, respond to situations in a balanced manner, and maintain effective social relationships (Singh & Bhargava, 1990). Particularly during childhood and adolescence, emotional maturity plays a crucial role in the personality development of boys and girls. Emotionally mature students function more effectively in academic, social, and personal domains (Goleman, 1995).

India is a country characterized by a rich diversity of cultures, languages, traditions, and social environments. Therefore, differences are observed in child-rearing practices, family environments, social values, and educational experiences among children from different states. These factors may influence the emotional development of students. The socio-cultural background of boys and girls from Maharashtra may differ to some extent from that of children belonging to other states. Hence, there is a possibility of differences in emotional maturity between Maharashtrian and Non-Maharashtrian students (Kakar, 2005).

Differences are also observed between boys and girls in emotional responses, expression, and adjustment abilities. Social expectations, variations in upbringing, family influences, and gender roles may affect the emotional development of boys and girls differently. Therefore, along with cultural background, gender is also considered an important factor influencing emotional maturity (Mangal, 2013).

Considering the above background, it is necessary to conduct a comparative study of emotional maturity among Maharashtrian and Non-Maharashtrian boys and girls. The present study is expected to highlight the similarities and differences in emotional maturity between these two groups and provide useful guidance for the emotional development of students. It will also help teachers, parents, and counselors to better understand the emotional needs of students.

Review of Literature :

Zalawadia, T. (2017) conducted a study to examine the emotional maturity of postgraduate students. The sample for the research was selected through a random method, which included a total of

200 postgraduate students from Rajkot city, comprising 100 boys and 100 girls. For data collection, the Emotional Maturity Scale developed by Dr. Mahesh Bhargava was used. A $2 \times 2 \times 3$ factorial design was employed for the study, and the data were analyzed using the 't' test. The findings revealed a significant difference in emotional maturity between male and female students, indicating that girls were more emotionally mature than boys. Furthermore, a significant difference was also found between rural and urban postgraduate students. The results clearly showed that urban students were more emotionally mature compared to rural students.

Sontakke, J., & Patil, S. (2022) conducted a study on the difference in emotional maturity between tribal and non-tribal college students in Jalgaon district. For this research, a sample of 240 students aged 19 to 24 years was selected through simple random sampling, which included 120 tribal and 120 non-tribal students (with an equal number of boys and girls). For data collection, the Emotional Maturity Scale developed by Dr. Yashvir Singh and Dr. Mahesh Bhargava was used. A 2×2 factorial design was employed for the study, and the data were analyzed using Mean, Standard Deviation (SD), and the 't' test with the help of SPSS software. The findings of the study revealed that tribal students showed higher emotional maturity than non-tribal students. It was also found that there was no significant difference in emotional maturity between male and female students.

Bokey, A. (2017) conducted a study on the emotional maturity of boys and girls in a juvenile home of Amravati district. For this research, a sample of 60 adolescents aged 12 to 18 years (30 girls and 30 boys) was randomly selected. The Emotional Maturity Scale was used for data collection, and an independent 't' test was applied to compare boys and girls. The findings of the study revealed that there was no significant difference in emotional maturity between boys and girls; however, a significant difference was found in faulty social adjustment. On the basis of mean scores, it was also observed that girls were more emotionally mature than boys.

Sharma, A. & Gupta, S. (2024) conducted a comparative study on emotional maturity and adjustment among students of ICSE and CBSE schools, examining the influence of gender and urban-rural background. A quantitative comparative survey method was used, and a stratified random sample of 250 students from the Agra district was selected. Standardized psychological tools — Adjustment Inventory for School Students (AISS) and Emotional Maturity Scale (EMS) — were employed for data collection. The collected data were analyzed using Mean, Standard Deviation (SD), Mann-Whitney U test, and Spearman correlation with the help of SPSS software. The findings revealed significant differences in emotional maturity and adjustment between ICSE and CBSE students. It was observed that female students demonstrated better adjustment skills than male students, while urban students showed higher emotional maturity and adaptability compared to rural students. The results indicate that educational board, gender, and geographical background significantly influence students' emotional and social development. The study also emphasizes the need to develop a student-centered education system that prioritizes students' mental and emotional well-being.

Makwana, T. (2015) The present study is a comparative study focusing on emotional maturity among undergraduate students. A random sample of 600 students was selected for the research, including 300 boys and 300 girls. The sample was drawn from rural and urban areas as well as from Arts, Commerce, and Science faculties. For data collection, the Emotional Maturity Scale standardized by Dr. Mahesh Bhargava was used. A $2 \times 2 \times 3$ factorial design was adopted for the study, and the 't' test was applied for statistical analysis. Null hypotheses were formulated to examine differences in emotional maturity among various groups. The findings revealed significant differences in emotional maturity between boys and girls, rural and urban students, and among students from Arts, Commerce, and Science faculties. Therefore, all the null hypotheses were rejected.

Waghmare, R. (2018). The purpose of this study was to examine gender-based differences in emotional maturity among urban and rural college students. A sample of 80 students was selected, including 40 urban students (20 males and 20 females) and 40 rural students (20 males and 20 females). For data collection, Singh and Bhargava's (1990) Emotional Maturity Scale was used. The study employed a factorial design, and the data were analyzed using Mean, Standard Deviation (SD), and 'F' values. ANOVA was applied to examine differences in emotional maturity based on gender and area. The findings revealed that urban students exhibited higher emotional instability, emotional regression, social maladjustment, personality disintegration, lack of independence, and overall emotional maturity compared to rural students.

Singh, T. (2017). The purpose of this study was to examine the effect of residence (home/hostel) and gender on emotional maturity among college students. A total of 140 students from V.V. Nagar were selected, including 70 home-residential students and 70 hostel students, with each group consisting of 35 boys and 35 girls. Data were collected using Roma Pal's (1988) Emotional Maturity Scale. A 2x2 factorial design was employed, and the data were analyzed using ANOVA ('F') test. The results indicated that there was no significant difference in emotional maturity between home-residential and hostel students. There was also no significant interaction effect between residence and gender. However, boys were found to have higher emotional maturity compared to girls. Overall, residence did not affect emotional maturity, but gender had a significant effect.

Significance of the Study

In today's fast-paced, competitive, and stressful lifestyle, the issue of emotional health among college students has become increasingly serious and significant. College life is considered a highly sensitive and decisive stage in an individual's overall development. During this period, students are required to cope with academic expectations, career uncertainty, social relationships, family responsibilities, and personal emotional conflicts. Therefore, emotional maturity becomes an essential factor for personality development, sound decision-making, and effective social adjustment. Adolescents transitioning toward adulthood experience growing emotional pressure. Rapid changes in social values, the influence of technology, increased exposure to media (such as television and digital platforms), a competitive environment, and the struggle for survival and achievement may create feelings of insecurity, confusion, and anxiety among students. The sudden and continuous nature of these changes can affect their emotional stability. Hence, it becomes essential to examine whether healthy emotional development has been nurtured at this critical stage. Emotional maturity is not merely an individual trait; rather, it is the cumulative outcome of home environment, school and college atmosphere, social conditions, cultural background, and media interactions. The social, cultural, educational, and environmental differences between students from Maharashtra and those from other states may influence their emotional development. Variations in geographical and cultural contexts can lead to differences in thinking patterns, behavior, and emotional responses. Therefore, studying state-wise differences in emotional maturity is both necessary and meaningful. Similarly, gender differences may exist in emotional expression, sensitivity, coping strategies, and societal expectations. Boys and girls may differ in how they experience, express, and regulate emotions. Hence, a comparative study of emotional maturity based on gender holds psychological and educational significance.

The present study will help in understanding the current status of emotional development among college students and in identifying state-wise and gender-wise differences. The findings may contribute to the effective implementation of college counseling programs. Educators, psychologists, and policymakers may receive guidance in designing appropriate strategies for strengthening students' emotional competencies. Furthermore, this study can provide a foundation for future research related to stress management, decision-making ability, and social adjustment among students. Thus, the present

research is highly significant and direction-giving in developing a deeper understanding of emotional maturity among students and in formulating constructive interventions within the educational system.

Operational Definitions

1) Emotional Maturity

In the present study, emotional maturity refers to the level of emotional maturity as indicated by the total scores obtained by the students on the Emotional Maturity Scale developed by Yashvir Singh and Mahesh Bhargava.

2) College

In this study, college refers to a recognized institution where undergraduate education is pursued after the completion of higher secondary education (12th grade).

3) Non-Maharashtrian Students

In the present study, non-Maharashtrian students refer to students who are permanent residents of states other than Maharashtra, are between 19 to 22 years of age, and are pursuing their college education in Maharashtra.

Aim

To conduct a comparative study of emotional maturity among Maharashtrian and non-Maharashtrian college boys and girls.

Null Hypotheses

1. There is no significant difference in emotional maturity between Maharashtrian and non-Maharashtrian college students.
2. There is no significant difference in emotional maturity between Maharashtrian and non-Maharashtrian college boys.
3. There is no significant difference in emotional maturity between Maharashtrian and non-Maharashtrian college girls.

Variables

Independent Variable:

Maharashtrian / Non-Maharashtrian

Dependent Variable:

Emotional Maturity (Emotional Maturity Score)

Research Design

Comparative Non-Experimental Research Design. (Comparison between two groups)

Sampling

For the present study, a total of 100 college students were included in the sample group, consisting of 50 college students from Maharashtra and 50 college students from other states.

Research Tools

A psychological test was used for the present study, described as follows:

Emotional Maturity Scale

The Emotional Maturity Scale used in the present study, standardized by Yashveer Singh and Mahesh Bhargava, is designed to assess emotional maturity in young adults aged 20 to 24 years. The scale consists of 48 statements covering various aspects of emotional maturity, including emotional stability, social adjustment, personality integration, and independence. Each statement provides five response options, from which respondents select the option that best reflects their feelings or behavior. The scoring allows for evaluation of both total and subscale scores, providing a detailed analysis of emotional maturity. The scale demonstrates a reliability of 0.75, indicating a high level of consistency, and a validity of 0.64 ($N = 46$), confirming that it is a reasonably accurate tool for assessing emotional maturity in the target age group.

Statistical Analysis

In the present research, a comparative study of emotional maturity among Maharashtra and non-Maharashtrian college boys and girls was conducted. For the collected data, the Mean and Standard Deviation (S.D.) were calculated for each group. To examine the difference between the two groups, an Independent Samples 't' test was applied. The obtained 't' value was compared with the table value at the 0.05 level of significance, and the conclusions are presented as follows.

Table No. 1 – All Students (Boys + Girls)

Mean, Standard Deviation, and 't' Value of Emotional Maturity of College Students from Maharashtra and Non Maharashtra.

Hypothesis 1: There is no significant difference in emotional maturity between Maharashtra and non-Maharashtrian college students.

Group	N	Mean	S.D	't' Value
Maharashtra	50	86.34	14.86	6.72
Non Maharashtra	50	111.36	21.46	

The mean emotional maturity score of Maharashtra boys and girls was 86.34, whereas the mean score of non-Maharashtrian boys and girls was 111.16. When the two means were compared, the obtained 't' value was 6.72. Comparing this 't' value with the table value 1.98 ($\alpha = 0.05$, $df = 98$), it was found that the obtained 't' value is greater than the table value. This indicates that the difference is highly significant.

Therefore, Hypothesis 1 is rejected, which means that there is a significant difference in emotional maturity between Maharashtra and non-Maharashtrian college students.

Table 2 – Boys (Independent Groups)

Mean, Standard Deviation, and 't' Value of Emotional Maturity of College Boys from Maharashtra and Other States.

Hypothesis 2: There is no significant difference in emotional maturity between Maharashtra and non-Maharashtrian college boys.

Group	N	Mean	S.D	't' Value	Remark
Maharashtra	25	83.32	15.30	7.37	Higher Significant
Non-Maharashtrian	38	117.37	19.35		

The mean emotional maturity score of Maharashtra boys was 83.32, whereas the mean score of non-Maharashtrian boys was 117.37. When the two means were compared, the obtained 't' value was 7.37. Comparing this 't' value with the table value 2 ($\alpha = 0.05$, $df = 61$), it was found that the obtained 't' value is greater than the table value. This indicates that the difference is highly significant.

Therefore, Hypothesis 2 is rejected, which means that there is a significant difference in emotional maturity between Maharashtra and non-Maharashtrian college boys.

Table 3 – Girls (Independent Groups)

Mean, Standard Deviation, and 't' Value of Emotional Maturity of College Girls from Maharashtra and Other States.

Hypothesis 3: There is no significant difference in emotional maturity between Maharashtra and non-Maharashtrian college girls.

Group	N	Mean	S.D	't' Value	Remark
Maharashtra	25	89.36	13.82	0.42	Not Significant
Non-Maharashtrian	12	91.5	15.39		

The mean emotional maturity score of Maharashtra girls was 89.36, whereas that of non-Maharashtrian girls was 91.5. When the two means were compared, the obtained 't' value was 0.42. Comparing this 't' value with the table value 2 ($\alpha = 0.05$, $df = 35$), it was found that the obtained 't' value is less than the table value. This indicates that the difference is not significant. Therefore, Hypothesis 3 is accepted, which means that there is no significant difference in emotional maturity between Maharashtra and non-Maharashtrian college girls.

Conclusion

1. Maharashtra students (boys and girls) are less emotionally mature compared to non-Maharashtrian students.
2. Boys' group – Emotional maturity of non-Maharashtrian boys is statistically higher than that of Maharashtra boys.
3. Girls' group – There is no significant difference in emotional maturity between Maharashtra and non-Maharashtrian girls.

Limitations of the Study

1. The present study is limited to certain factors and concepts within the scope of the research.
2. Only emotional maturity of college boys and girls was studied comparatively.
3. The study analyzed students only based on gender differences.
4. While selecting college students, the study did not specify the location or institution of the participants.

Recommendation

In the future, the emotional maturity of children across different age groups can be studied, along with gender-based differences, the impact of cultural and geographical factors, the effects of intervention programs for children in residential homes, and a thorough understanding of emotional development through longitudinal studies.

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“विकसित भारत @ 2047 ध्येय व धोरणाचा अभ्यास”

प्रियंका बाबासाहेब वर्पे

संशोधक, अर्थशास्त्र विभाग तथा
पदव्युत्तर संशोधन केंद्र, संगमनेर नगरपालिका,
दा.ज. मालपाणी, वाणिज्य आणि ब.ना. सारडा,
विज्ञान महाविद्यालय (स्वायत्त),
ता. संगमनेर, जि. अहमदनगर
pvarpe1@gmail.com मो. 7219223702

डॉ. हनुमंत पोपट शिंदे

मार्गदर्शक, अर्थशास्त्र विभाग प्रमुख,
भगवान महावीर एज्युकेशन सोसायटीचे
प्रितम प्रकाश महाविद्यालय
इंद्रायणीनगर, भोसरी, पुणे-39

सारांश :-

प्रामुख्याने भारताची विकासाची प्रक्रिया ही भारत स्वातंत्र्य झाल्यानंतर सुरु झाली. 15 ऑगस्ट 1947 ह्या दिवशी स्वतंत्र भारत देश अस्तित्वात आला भारताच्या विकासाचा इतिहास हा अनेक चढउतारातुन गेला आहे. स्वतंत्र भारताच्या पहिल्या अर्थसंकल्पात (1947) तत्कालीन वित्तमंत्री आर.के. शनमुखम चेटी यांनी मांडलेल्या धोरणांपासून ते आजच्या शाश्वत विकास ध्येयापर्यंत भारताने विविध आर्थिक धोरणे अंमलात आणली आहेत.

भारत मुळात कृषी प्रधान देश आहे. परंतु स्वातंत्र्यानंतर वेगाने प्रगती होण्यासाठी भारत देशाने वेगवेगळ्या क्षेत्रात प्रगती साध्य करण्याचा दृष्टिकोन ठेवलेला आहे. त्यात उद्योग शिक्षण सेवा दळणवळण अणुऊर्जा बांधकाम जलसिंचन सुविधा इत्यादी व्यवसायात मोठ्या प्रमाणात मुलभुत गुंतवणुक करून आर्थिक विकास साध्य करण्याचा प्रयत्न केला आहे. तसेच देशांतर्गत व आंतरराष्ट्रीय व्यापारात वाढ घडवून आणली आहे. त्यातच सध्या भारताने 2047 विकसित भारताचे ध्येय धोरणे आखली आहेत. सदर संशोधन लेखातुन 2047 विकसित भारताच्या ध्येय व धोरणांचा आढावा घेण्याचा हेतू आहे.

प्रस्तावना :-

भारत हे स्वतंत्र गणराज्य आहे. भारताला स्वतःचे संविधान आहे. त्यामुळे भारताला स्वतःचे आर्थिक, सामाजिक, राजकीय व सांस्कृतिक तसेच औद्योगिक धोरणे ठरवण्याचा व कायदे निर्माण करण्याचा परिपूर्ण अधिकार आहे. त्यामुळे भारत सरकार लोक कल्याणासाठी प्रत्येक पंचवार्षिक योजनेत विकासाचे धोरण ठरवत असते. त्याचप्रमाणे भारत सरकार प्रत्येक वर्षाचे विकासाचे आर्थिक धोरण ठरवत असते. त्यात विकासाला चालना मिळेल या घटकांचा समावेश असतो. भारत हा कृषिप्रधान देश असल्याने पहिल्या पंचवार्षिक योजनेत प्रामुख्याने कृषी आधारित अर्थव्यवस्थेला महत्त्व दिले गेले व त्यानुसार विकासाचा टप्पा गाठण्याचे धोरण आखले गेले. परंतु भारत जरी कृषी आधारित देश असला तरी वाढते जागतिकीकरण व स्वावलंबन यासाठी मात्र दुसऱ्या पंचवार्षिक योजनेत भारताने औद्योगिक विकास यावर मोठ्या प्रमाणात भर दिला आहे.

त्याचबरोबर भारतात प्रचंड गरिबी व निरक्षरता असल्याकारणाने पुढील पंचवार्षिक योजनेत ‘गरिबी हटाओ’ चा नारा देण्यात आला. तसेच देशातील लोकसंख्या व त्यांना लागणारे अन्नधान्य यासाठी विकासाचे ध्येय ठेवण्यात आले. तसेच समाजात समानता निर्माण करण्यासाठी शिक्षण व साक्षरता धोरण अमलात आणले गेले. आज पर्यंत भारत सरकारने विविध विकासाचे ध्येयधोरणे अमलात आणून विकासाची गंगा चालू ठेवलेली आहे. परंतु भारताला आजही जागतिक अर्थव्यवस्थेत विकसित राष्ट्र म्हणून स्थान मिळाले नाही.

भारताला विकसित राष्ट्र बनवण्यासाठी सध्याचे भारत सरकार संपूर्ण नियोजनाद्वारे आर्थिक,

सामाजिक, सांस्कृतिक, शैक्षणिक, औद्योगिक, दळणवळण आणि पर्यटन रोजगार सामाजिक न्याय इत्यादींवर लक्ष केंद्रित केले आहे. त्यामुळे भारत सरकारने भारताच्या शतक महोत्सवी वर्ष 2047 पर्यंत देशाला परिपूर्ण विकसित करण्याचे ध्येय व धोरण ठेवलेले आहे. त्यामुळे भारत सरकार यांनी “विकसित भारत @2047” ही संकल्पना निर्माण करून योजना आखण्यास सुरुवात केलेली आहे.

सदर संशोधन लेखातून भारत सरकारच्या “विकसित भारत @2047” या संकल्पनेच्या योजना, नियोजन, ध्येय व धोरणावर प्रकाश टाकण्याचा प्रयत्न केलेला आहे. तसेच भारत सरकारला योजनेच्या बाबतीत व ध्येयधोरणांच्या बाबतीत शिफारशी करण्याचा प्रयत्न सदर संशोधन लेखातून केलेला आहे.

संशोधनाची उद्दिष्टे :-

- 1) भारत सरकारच्या विविध योजनांचा आढावा घेणे.
- 2) भारत सरकारच्या धोरणांचा आढावा घेणे.
- 3) भारत सरकारच्या योजना व धोरण यांचे परिणाम अभ्यासणे.
- 4) भारत सरकारला नियोजनाच्या बाबतीत शिफारशी देणे.

भारत सरकारच्या काही मूलभूत विकासाच्या पंचवार्षिक योजना :-

1) पहिली पंचवार्षिक योजना (1951-1956) :-

भारताने आपल्या आर्थिक विकासासाठी प्रामुख्याने स्वातंत्र्यानंतर जलद विकास साध्य करण्यासाठी कृषी विकास आणि पायाभूत सुविधांवर भर दिला आहे. भारताची अर्थव्यवस्था कृषी क्षेत्रांवर अवलंबून असल्याने पहिल्या योजनेत कृषी अर्थव्यवस्थेला मोठ्या प्रमाणात स्थान देण्यात आले होते. त्यामुळे पहिल्या योजनेचा आराखडा तयार करताना कृषी आधारित उत्पादन व उत्पन्न हे अर्थव्यवस्थेचे विकासाचे प्रमुख साधन म्हणून भारत सरकारने स्विकारले होते.

2) दुसरी पंचवार्षिक योजना (1956-1961) :-

भारताने मात्र दुसऱ्या पंचवार्षिक योजनेत आपल्या विकासाचे ध्येय व धोरण बदलून उद्योग विकास व आर्थिक स्वावलंबन हे धोरण स्विकारले त्यामागचा प्रमुख उद्देश हा होता की, केवळ कृषी आधारित क्षेत्रावर लक्ष केंद्रित करून देश प्रगती साध्य करू शकत नाही. त्यासाठी उद्योग व्यवसायात प्रगती होणे फार गरजेचे असते. त्यामुळे योजना आखताना उद्योग विकासाला व आर्थिक स्वावलंबनाला स्थान देण्यात आलेले होते.

3) चौथी पंचवार्षिक योजना (1969 1974) :-

भारताने पहिल्या पंचवार्षिक योजनेत कृषी आधारित क्षेत्रावर लक्ष केंद्रित केले होते व दुसऱ्या योजनेत उद्योग विकासाला प्रोत्साहन मिळावे यासाठी लक्ष योजना निर्माण केल्या होत्या. मात्र तरीपण भारतातील लोकांची आर्थिक प्रगती न झाल्याने व मोठ्या प्रमाणात गरिबी वाढल्याने भारत सरकारने आपल्या चौथ्या पंचवार्षिक योजनेत गरिबी निर्मूलन व सामाजिक न्याय साध्य करण्यासाठी विकासाचे धोरण व तत्व ठरवले.

4) आठवी पंचवार्षिक योजना (1992-1997) :-

भारताने आर्थिक प्रगती साध्य करण्यासाठी व जगाच्या विकासाच्या धोरणांबरोबर जाण्यासाठी आपल्या आठव्या योजनेत आर्थिक उदारीकरण आणि उद्योग विकासाचा अवलंब केला व आठव्या पंचवार्षिक योजनेत जागतिक स्पर्धेत टिकून राहण्यासाठी उदारीकरण व जागतिक व्यापार

वाढवण्याचा व अर्थव्यवस्था मजबूत करण्याचा प्रयत्न केला.

5) बारावी पंचवार्षिक योजना (2012-2017) :-

भारताने पंचवार्षिक योजनांच्या माध्यमातून बऱ्यापैकी विकास साध्य करून घेतलेला होता. त्यामुळे बाराव्या पंचवार्षिक योजनेत आर्थिक जलद आणि समावेशक विकासाचे ध्येय ठेवण्यात आले होते. त्यातून जलदरीत्या विकसित अर्थव्यवस्था कशी निर्माण करता येईल याचे धोरण ठरवले होते.

“विकसित भारत 2047 ध्येय व धोरण”

भारत सरकारने 2017 पासून पंचवार्षिक योजना बंद करून 15 वर्षांचा दीर्घकालीन विकासाचा अवलंब केलेला आहे. त्या दृष्टिकोनातून भारताच्या सन 2047 च्या शतक महोत्सवी वर्षापर्यंत विविध बाबतीत विकासाचे ध्येय व धोरणे आखण्यात आलेली आहेत. 2047 पर्यंत भारत विविध क्षेत्रात अग्रेसर होऊ इच्छित आहे. तसेच विकसनशील या घटकांमधून विकसित या घटकांमध्ये येऊ इच्छित आहे. त्याप्रमाणे भारत सरकारने विविध क्षेत्रात मजबूत मूलभूत बदल घडवण्यास सुरुवात केलेली आहे.

विकसित भारत @2047 चे उद्दिष्टे व ध्येयधोरणे :-

1) आर्थिक विकास :-

भारताला 2047 पर्यंत एक विकसित राष्ट्र बनवण्यासाठी एक मजबूत अर्थव्यवस्थेची गरज आहे. त्यासाठी जीडीपी वाढवणे गरजेचे आहे व रोजगारांच्या विविध संधी निर्माण करणे गरजेचे आहे. आर्थिक विकासासाठी मूलभूत उद्योगांवर गुंतवणूक करणे गरजेचे आहे. असे उद्दिष्ट व धोरणे आखले पाहिजे.

2) शिक्षण व आरोग्य :-

भारताला एक विकसित राष्ट्र बनवण्यासाठी भारतात प्रामुख्याने शिक्षणाचा स्तर व दर्जा वाढवणे आवश्यक आहे. त्यासाठी शिक्षणातील विविध बदल घडवणे पारंपारिक शिक्षण पद्धत बंद करून आधुनिक शिक्षण पद्धतीचा स्वीकार करणे यासाठी विविध विशेष अभ्यासक्रम व व्यावसायिक शिक्षण निर्माण करण्याचा प्रयत्न होत आहे. तसेच कला शिक्षणाला व तंत्रज्ञान आधारित शिक्षणाला विशेष वाव मिळत आहे अशा व्यावसायिक शिक्षणावर सरकार भर देत आहे.

3) सामाजिक समानता :-

भारत देशात अनेक धर्मांचा व जातींचा समावेश आहे. त्यामुळे समाजात एकता निर्माण करण्यासाठी सरकार प्रयत्न करत आहे. त्यातून सामाजिक व आर्थिक समानता निर्माण करण्याचे ध्येय 2047 पर्यंत आहे. सामाजिक समानता निर्माण करण्यासाठी सरकारने विविध सामाजिक उपक्रम राबविण्याचे व राष्ट्रहित लक्षात घेऊन नियोजन करण्याचे धोरण ठरवले आहे.

4) पर्यावरण विकास :-

कोणताही देश आर्थिक समृद्ध होण्यासाठी त्या देशातील पर्यावरण महत्त्वाचे असते हवा, पाणी, जमीन, वायू, ह्या घटकांमुळे पर्यावरण सुरक्षित राहते. पर्यावरण योग्य असेल तर उद्योग विकासाला पूरक वातावरण निर्माण होते. तसेच लोकांचे आरोग्य उत्तम दर्जाचे राहते. त्यामुळे भारताला 2017 चे विकासाचे लक्ष साध्य करण्यासाठी पर्यावरण विकास साध्य करण्याचे उद्दिष्ट आहे.

5) तंत्रज्ञान विकास :-

विकसित भारत @2047 चे उद्दिष्ट साध्य करण्यासाठी भारत सरकारने तंत्रज्ञान आधारित ज्ञानाला व

व्यवसायाला चालना दिलेली आहे. त्यात विविध बाबींचा समावेश होतो.

- डिजिटल इंडिया
- आर्टिफिशियल इंटेलिजन्स
- सायबर सुरक्षा

इत्यादी तंत्रज्ञानावर भर दिला आहे.

6) कौशल्य विकास :-

भारत सरकारने @2047 उद्दिष्टे गाठण्यासाठी युवकांना कौशल्यावर आधारित प्रशिक्षण देण्यास सुरुवात केली आहे. तसेच कौशल्यावर आधारित रोजगार निर्माण करण्यास प्रोत्साहन दिलेले आहे.

7) ग्रामीण विकास :-

शहरांबरोबरच ग्रामीण भागात विकास होणे महत्त्वाचे आहे. ज्या अर्थव्यवस्थेत ग्रामीण भागाचा विकास मोठ्या प्रमाणावर झालेला असतो तो देश आर्थिक विकासात अग्रेसर असतो. त्यामुळे भारत सरकारने 2047 आपल्या मिशनमध्ये विकसित भारताचे स्वप्न पाहिले असल्याने ग्रामीण भागातील मूलभूत विकासावर लक्ष केंद्रित केले आहे.

निष्कर्ष :-

भारताच्या स्वातंत्र्यापासून तर आजपर्यंतच्या प्रवासात भारताने अनेक विकासाचे मूलभूत ध्येय व धोरणे आखलेले आहे. मात्र भारत अजूनही विकसनशील देशांच्या यादीत आहे. त्यामुळे भारताने 1947 या स्वातंत्र्याच्या शंभर वर्षांत स्वतःला विकसित राष्ट्र म्हणून घोषित करण्याचा संकल्प ठेवलेला आहे. त्यासाठी भारताने विकसित भारत 2047 ही संकल्पना राबवून त्यातून विकास साध्य करण्याचे स्वप्न ठेवलेले आहे आणि त्या दृष्टीने योजना व धोरणे निर्माण केलेले आहे.

शिफारशी :-

- 1) आंतरराष्ट्रीय व्यापार व आंतरराष्ट्रीय उद्योगांना प्रोत्साहन द्यावे.
- 2) तंत्रज्ञान क्षेत्राचा शालेय शिक्षणात मोठ्या प्रमाणात वापर घडवून आणावा.
- 3) औद्योगिक विकासासाठी दळणवळण क्षेत्रात प्रगती घडवून आणावी.
- 4) सामाजिक व आर्थिक समानता निर्माण होण्यासाठी लोकशाही मार्गाचा अवलंब करावा.
- 5) आरोग्य व वैद्यकीय सुविधेत आधुनिक तंत्रज्ञानाचा मोठ्या प्रमाणावर वापर करावा.
- 6) भ्रष्टाचार निर्मूलन करण्यासाठी ठोस पावले उचलावीत.

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Cinema and Literature as Instruments of Social Awareness and National Development in India

Dr. Maruti Hanamant Devkar

Department of General Engineering, D.Y. Patil Deemed to be University's D.Y. Patil School of Engineering and Management, Kasaba Bawada – Kolhapur – Maharashtra - India

Email: marutidevkar@gmail.com

Abstract

Cinema and literature have long served as influential cultural instruments in shaping social awareness and guiding national development in India. As powerful narrative forms, Indian cinema and English literature engage audiences both intellectually and emotionally, addressing social inequalities, ethical dilemmas, cultural identity, and democratic values. This paper examines how these two media function as agents of social consciousness and nation-building by tracing their historical evolution, thematic concerns, and socio-political impact. Through a critical analysis of select cinematic texts and literary works, the study highlights their capacity to foster empathy, encourage reformative discourse, and contribute to inclusive national development. The paper argues that cinema and literature together create a synergistic cultural framework essential for nurturing responsible citizenship and sustaining societal growth.

Keywords: Indian Cinema, English Literature, Social Awareness, National Development, Cultural Studies, Nation-Building

I. Introduction

India's socio-cultural diversity necessitates powerful communicative tools capable of bridging linguistic, regional, and ideological divides. Cinema and literature have emerged as two such transformative instruments that transcend entertainment to shape social awareness and national consciousness. From the freedom struggle to the era of globalization, these media have reflected, questioned, and reshaped India's evolving identity.

Indian cinema, with its extensive reach across social strata, communicates complex social messages to the masses through visual storytelling and emotional engagement. English literature, on the other hand, offers critical reflection and intellectual engagement at both national and global levels. Together, they act as cultural forces that influence public opinion, ethical values, and developmental aspirations. This paper examines how cinema and literature function as instruments of social awareness and national development in India.

II. Review of Literature

Scholars in cultural studies emphasize the role of narrative media in shaping ideology and social behavior. Stuart Hall [1] identifies representation as a central mechanism through which culture produces meaning. Indian cinema has been examined as a site of nationalism, social reform, and mass pedagogy, particularly by theorists such as Ashis Nandy [2] and Madhava Prasad [3]. Their studies underline cinema's ability to naturalize dominant ideologies while simultaneously offering spaces for resistance.

Postcolonial literary critics like Homi Bhabha [4] and Gayatri Spivak [5] highlight English literature's role in negotiating colonial legacies and articulating indigenous voices. Indian English literature has been recognized as a platform for exploring identity, marginalization, and power relations. However, limited interdisciplinary research examines cinema and literature collectively as complementary cultural forces driving social awareness and national development. This paper seeks to address this gap.

III. Theoretical Framework

A. Cultural Studies Perspective

From a cultural studies perspective, cinema and literature are viewed as ideological apparatuses that actively shape social realities rather than merely reflecting them. They function as tools for constructing meanings related to identity, power, gender, class, and resistance, thereby influencing public consciousness.

B. Narrative Theory

Narrative theory posits that stories structure human understanding of society. Through recurring motifs, character archetypes, and symbolic representations, both cinema and literature shape moral imagination, social empathy, and a sense of national belonging.

IV. Evolution of Indian Cinema as a Social Instrument

A. Early Cinema and Nationalist Consciousness

Early Indian films such as *Raja Harishchandra* (1913) drew upon mythological narratives to instill moral values and cultural pride. During the freedom struggle, cinema subtly conveyed nationalist sentiments and reinforced collective identity.

B. Post-Independence Social Realism

In the post-independence period, socially realist films such as *Mother India* (1957), *Do Bigha Zamin* (1953), and *Pyaasa* (1957) addressed agrarian distress, poverty, and social injustice. These films echoed Nehruvian ideals of nation-building, modernization, and social equity.

C. Contemporary Cinema and Social Reform

Contemporary Indian cinema engages directly with pressing social issues such as gender equality (*Pink*), inclusive education (*Taare Zameen Par*), sanitation (*Toilet: Ek Prem Katha*), and mental health (*Dear Zindagi*). Such films contribute to public awareness and stimulate discourse that often intersects with policy initiatives.

V. English Literature in India and Social Consciousness

A. Colonial Legacy and Early Voices

English literature in India originated as a colonial instrument but was appropriated by Indian writers as a medium of resistance and reform. Writers such as Raja Rao and Mulk Raj Anand foregrounded caste oppression, poverty, and ethical dilemmas, thereby challenging colonial and indigenous hierarchies alike.

B. Postcolonial Literature and Identity

Post-independence writers including Salman Rushdie, Anita Desai, and Arundhati Roy explore themes of nationhood, memory, marginalization, and globalization. Their works offer critical perspectives on India's developmental trajectory and socio-political complexities.

C. Literature as an Ethical and Educational Tool

English literature plays a significant role in promoting critical thinking, empathy, and global awareness. It equips readers with ethical sensitivity and interpretative skills essential for participatory citizenship and responsible leadership.

VI. Cinema and Literature as Catalysts of Social Awareness

Cinema and literature function both as mirrors and molders of society. While cinema appeals emotionally to a broad and diverse audience, literature engages readers intellectually and reflectively. Together, they raise awareness about social inequalities related to caste, gender, and class; democratic values and human rights; cultural diversity and national unity; and environmental and developmental challenges. By humanizing abstract social issues, these narratives render them accessible and actionable.

VII. Contribution to National Development

A. Cultural Integration

Cinema and literature foster unity in diversity by portraying pluralistic identities, shared struggles, and collective aspirations, thereby strengthening social cohesion.

B. Educational Impact

Films and literary texts are increasingly incorporated into academic curricula, enhancing social literacy, ethical awareness, and critical engagement among students.

C. Policy Influence

Cultural narratives influence public discourse and policy debates, particularly in areas such as education, gender justice, public health, and social welfare.

VIII. Comparative Analysis

Sr. No.	Aspect	Cinema	Literature
1	Reach	Mass-oriented	Elite and academic
2	Mode	Visual and emotional	Textual and intellectual
3	Impact	Immediate	Long-term
4	Contribution	Awareness and mobilization	Reflection and reform

The synergy between cinema and literature enhances holistic national development by combining emotional engagement with critical reflection.

IX. Challenges and Limitations

Despite their transformative potential, cinema and literature face challenges such as commercialization, censorship, elitism, and a declining reading culture. Balancing artistic freedom with social responsibility remains a critical concern in sustaining their developmental role.

X. Conclusion

Cinema and literature in India function as powerful instruments of social awareness and national development. By shaping public consciousness, questioning social injustices, and nurturing ethical values, they contribute significantly to the process of nation-building. Recognizing and strategically utilizing their cultural power can further strengthen India's democratic ethos and inclusive developmental framework.

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Human Capital and Viksit Bharat @ 2047

Shobha R. Patil

Mahila Mahavidyalaya, Karad.

Abstract :-

Viksit Bharat @ 2047 is a vision of India is a developed, inclusive and self Reliance Nation by the 100th year of independence. Indian women plays a crucial role in achieving this target. Women constitute nearly half of the countries population and are key contributors of economic growth, social development and human capital formation. Empowered women enhance household welfare, improve health and education outcomes and strengthen National productivity. Government initiatives focusing on women's education ,skilled development ,health, entrepreneurship and leadership how significantly expanded opportunities for women. Across sectors increase the participation of a woman in the workforce and governors promotes inclusive growth and social equity therefore investing in women's empowerment is not only social necessity but also economic imperative to active participation of Indian women is essential for transforming India into a developed Nation and realizing the goals of Viksit Bharat @2047. We use the secondary data and try to change the expansionary behavior of women towards Viksit Bharat @ 2047.

Key words : Developed nation, human capital, women empowerment, Holistic growth etc.

Viksit Bharat transform India into a developed Nation in 2047 .India wants to go economically socially and institutional looking ahead to India @ 2047. High income, inclusive growth and global leadership this vision is supported by multiple interlinked policy frameworks to vision of Viksit Bharat . The concept of Viksit Bharat invasions transforming India into a developed Nation by the year 2047 after 100 years of independence. It goes behind economic growth and emphasizes Holistic development that ensures prosperity, equity ,sustainability and dignity for all citizens. The primary focus on it because Indian economy is growing economy is and it is essential for national development. This includes manufacturing, promoting agriculture and creating largest scale employment opportunities .Economy growth must be broad based so that the benefit reach on sections of society, good governance and institutional efficiency . Living and citizens centering administrations is transit the development forms. Another major focus that world class roads , railways, sports, housing sanitation and digital connectivity are essential for economic activity .Smart cities and modern development, Social justice and inclusion empowerment of marginalised communities, financial inclusion and social security ensure that development is equitable and participatory. Environmental system for renewable energy ,Climate action ,sustainable agriculture and conversation of natural resources with environmental protection as well as human capital development is the focus area of Viksit Bharat .It helps to provide quality education, industry needs and affordable and accessible healthcare. Empowering the youth and women is the central to India's demographic dividends.

Human capital place a central role in driving economic growth and social transformation . Human capital place crucial role in the development of a nation. Skilled and healthy workforce increases productivity, promotes innovation and enhances economic growth. Countries with strong human capital are better source to enough to technology change globally and ensure sustainable development. Among the key contributors to human capital development ,woman occupy pivotal position as their participation and improvement directly influence productivity ,demographic outcomes, social well being . Women play a vital role in the social, economic and political development of a nation .No society can made a sustainable development without the active women contribution.

The status of women in India presents a complex picture of progress along side the women faces challenges over the years. Indian women have made significant progress in education ,employment, politics ,sports ,science and entrepreneurship and the same time deep routed social norms and structural inequalities continue to affect the overall empowerment.

Objectives:-

1. To examine the role of Indian women in achieving the vision of Viksit Bharat @2047.
2. To identify the challenges before women in Viksit Bharat @ 2047
3. To understand the challenges faced by Indian women in participation in the workforce and decision making.
4. To suggest measures for enhancing women's participation in building a developed and inclusive India by 2047.

Present situations of women in India :-

In India practices like Sati ,Widow remarriage has legally abolished. Women's education has been promoted , but a long journey still ahead .According to Amartya Sen there is discrimination against women in India .Higher rate of malnutrition found in girls. Sen also conclude that 100 million women are missing throughout the world. ' Development as freedom' of Sen's book various aspects are discussed. Relationship between gender and development particularly with regard to the relationship between women's agency and social development outcomes associated with health and education of children. It s suggest that women's agency is a force for change but it is neglected . Sen says that externalities associated with women's agency. Women agency recognized as desirable calming the depth and persistence of gender disparities to be the social failure in economic growth .Female agency is endogenous to cultural factors like which restart economic development more broadly. Labour force participation and literacy have significant effect on child survival. Abhijeet Banerjee and their team uses a survey experiment to both observe that women mobility at the individual level and explore education as a possible mechanism associated with such discrimination. Freedom of movement has been recognized as an essential right of women health, education, recreation, political involvement, social engagement, labour force participation the freedom of movement is a vital aspect of female empowerment. Regional variations among the Bihar, Punjab and Kerala outcome for women sex ratio, various health and education indicators, labour force participation rate is to be much better in Kerala compare to Bihar and Punjab women in India are progressive but continue to face structural and social barriers.

Challenges :-

Women centric policy framework is essential for achieving inclusive and sustainable development under Viksit Bharat at the rate 2047. Such a framework women faces barriers which effect on their participation and empowerment .

- 1 Low female labour force participations due to social norms, unpaid care work and lack of flexible employment.
- 2 Women often receive lower wages than men for similar work
- 3 Unpaid care work burden restricts women's time, mobility and career.
- 4 Dropout rates, digital divide and limited access to STEM and skill based education affect women's employability.
- 5 Gender based violence ,workplace harassment and unsafe public spaces limit women participation in education, employment and public life. The patriarchal mindset experienced at every step in family and society.
- 6 Maternal health challenges anemia ,limited reproductive healthcare and unequal nutrition adversely affect women's productivity.

- 7 Lack of land rights ,poor access to technology and climate change impacts rural women.
- 8 Early marriages, gender discriminations and restrictions on mobility continue to limit women's agency.
- 9 Globally women constitute 41% of the active research workforce, whereas in India this proportion is 33%.India ranks third in terms of women's participation in research.

However, a significant gender based disparity persist in research and innovation.

Women's empowerment is central to Viksit Bharat @ 2047. So there is need to tackle the inequalities, violences, discriminations, harassments etc.

Recommendation to enhance women's participation in Viksit Bharat :-

- 1 Education and skill development ensure Universal access to quality education for girls especially in rural and marginalized communities promote STEM education, digital literacy and vocational training and future job markets.
- 2 Increase women's workforce participation create safe and flexible work environments promote work from home and child care facilities and enforce equal pay policies formalize women's work in the informal sector.
- 3 Promote women entrepreneurship improve access to credit markets and digital platform for Women entrepreneurs and a self help groups encourage women leads startups and cooperatives
- 4 Ensure health and nutrition security, stranger maternal Health Care, nutrition programs and mental health support to improve productivity and quality of life for women.
- 5 Enhance safety and legal protection stranger implementation of laws related to gender based . Workplace making safety improve policy and awareness impact.
- 6 Increase women's leadership and decision making ensure greater representation of women in politics, administration, corporate leadership and local governments encourage leadership training and mentorship programs.
- 7 Recognize and reduce unpaid care work invest in child care services, elder care sanitation and Clean Energy to reduce the domestic burden on women and unable economic participation.
- 8 Digital and financial inclusion expand women's access to bank account dealer payments credit and technology to support financial Independents and entrepreneurship.
- 9 Change social attitude, promote gender sensitization through education media and community participation to challenge stereotypes and encourage shared responsibilities.
- 10 If dedicated funding is made available for women, more women are likely to enter Science field. Encouraging women to purse careers in science would ultimately serve larger interest of society. Increased participation would enrich diversity of perspective and lead to broder and more expansive growth in the scientific field.

The study under scores that human capital lies at the core of India's region of Viksit Bharat @2047. Investment in education, Healthcare, skill development and gender equality are not clearly social sector expenditures but strategic imperatives for long term national development Viksit Bharat @ 2047. It depends not only on economic indicators but on the capabilities will be at participation of its people centering development model that places human capital at the center. India need to achieve the growth of Social justice and sustainable development.

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Indian Knowledge System Library & its Essential Role in Education

Mrs. Madhumita Guha
Independent Scholar
University of Mumbai
E-mail : madhumita.guhal@gmail.com

Abstract :

Library has an essential role in the journey of education. Learners currently are using gadgets, like computers and mobiles to gain knowledge about unknown facts, and hardly taking the effort to go to the library and search books, to read, on the various subjects and gain knowledge by reading. Using the gadgets, like the mobile phones are easy as, the knowledge can be achieved, on the click of a button.

It is high time that the learners be motivated, to a pattern of learning, from books, which was so prevalent among the earlier generations. Reading leaves an impression in the mind, and creates an imagination, which aids the learners, to gain knowledge, which leaves an impression, to take flight in the journey of learning. A learner who goes to the library to read, is automatically motivated, to look for more and more books, on various subjects.

We soon tend to forget a matter, when we read the matter, from the gadgets, though we get the matter very easily, with the click of a button. The finding of a book in the library, gives one the opportunity to get across more books, and, the effort put is never tiring for the learner but it's a procedure of learning. The findings made in the gadgets, affects the eye sight, whereas the findings made in the books, enhances ones vocabulary.

We can inculcate the reading habits, among the learners, from an early stage of life, by introducing miniature libraries, in the schools, where the toddlers can spend some time, of their day, in turning pages of the picturesque books. Those toddlers who are falling prey, to the habit of scrolling mobile phones, would be DE addicted in their respective schools, in a conducive environment of nurturing with the books, in the library.

KEY WORDS - Book, Education, Knowledge, Library & Read

Introduction-Library an Essentiality-

There are retired librarians in the various states, who could be appointed, as the librarians of the mobile libraries. Those schools, who would take up the work, as a project work for their students, should be encouraged, by providing, facilities required for travelling and staying. As the rural schools have poor infrastructures, and hardly have a library of their own, the schools cannot provide, the facilities of reading of story books, to their students. The urban schools with the mobile libraries, their teachers and senior secondary students, can facilitate the amenities of reading, to the underprivileged. The very many states, with various languages and books being published in different languages, can be carried and distributed to the learners, of the remote areas of the respective states, by the mobile libraries.

Teachers can encourage and inculcate reading habits, in various ways, by ensuring, that the learners borrow books from the library and submit a project work, based on the books they have read. Learners are overloaded with the curriculum learning and read books related to their academic studies learning only. There should be arrangements and opportunity to read books, in India is a country with very many states and languages. Books are published in almost all the languages, which are spoken and are taught in the various states. A country with the cultural diversity, requires more and more publication of books, in the various languages. WE have books, mainly in English, Hindi and in the state languages,

of the respective state, in the libraries, throughout the country. Schools in my opinion should have a library, equipped with books not only in English and Hindi but also in the state language. Books should be added from time to time, the new editions of books and the recent publications of books and journals, should be added, to attract and motivate the learners, to more and more reading.

It's seen that the libraries are stacked with those books, only, which were there, when the library was founded. The books are not maintained properly, in most of the libraries. As the learners do not find recent publications of books and journals, they lose interest in going to those libraries. Institutions should spend money in developing their libraries periodically. The learners should be encouraged, to borrow books from the library, such that they can spend time in reading books, at home, rather than spending time with the gadgets, for entertainment, like the T.V and the mobile phones. Teachers should encourage reading, among the learners, in various innovative ways. To ensure that the learners are going to the libraries and borrowing books of their choice, teachers should enquire them, not to be speculative, but in encouraging the students, for gathering of knowledge and information, which could be incorporated, in the preparation of class tasks. Involving the learners in lesson planning, with the reading of books from the library, will all the more encourage them in focusing in their subjects, which they are studying, in the routine curriculum.

Students of senior secondary level, can be motivated to refer to the books that they have read from the libraries, in the preparation and submission of academic works. This will enrich their academic performances, which will be reflected in their life and learning. Teachers should encourage the learners, by going to the libraries themselves, and reading books of the subjects they teach, and see that the library has the necessary books, such that they can guide the learners, which books are to be read. If the teacher be ignorant about the school's library, how can he guide the students?

Each school library should have both a reading and a discussion room for the teachers and the students, to spend time for reading and the discussion rooms for the guidance of the learners by their teachers. As book reading is decreasing, it's seen that learners are hesitant to take the guidance of their teachers, for choosing books required for their academic learning and this is requiring more efficiency in the teachers to guide them. The teachers have to spend qualitative time in the libraries, for self-study and in discussion, with the learners.

Libraries for the Toddlers-

It has been seen that the children, from a very early stage, like to turn over the pages of books and like to play with paper and books. If the preprimary section of schools, can have their miniature libraries where the toddlers, can spend some time, getting familiar with the reading culture, it will help them in their future lives, by developing the habit of reading from an early stage. In earlier times the grandparents used to tell stories to the toddlers, but now the mentors have to do so essentially, in the schools and the miniature libraries/activity classrooms, can be arranged, in a way, which will be story telling sessions, with the pictures of the stories being pasted and mounted as posters, prepared by the teachers, inside the room, such that the young ones can easily visualize and grasp the stories, told to them easily. Teachers can dramatize, the stories told to the toddlers, in involving the little ones, in the short skits and plays, which will make the story telling sessions, all the more interesting. The involvement of the teachers and the students will develop better relationships. This will enliven the environment of learning, for the young learners, as they would enjoy the school hours, all the more.

An incorporation of various forms of art, like music and dance, in the skits of the stories dramatized, would make the story telling sessions, all the more vibrant. This will require teachers to be trained, in various forms of art, along with their training courses, for teaching.

We can inculcate the reading habits, among the learners, from an early stage of life, by introducing reading aloud, sessions, during the classes. Nowadays reading aloud from the text books are diminishing, where as it is an easy methodology of teaching, which not only develops the right pronunciation skills, but develops confidence in the learners automatically. The toddlers, who cannot read, can spend some time, in turning pages of the picturesque books. It's seen that the toddlers, love to nurture with the tools of the environmental nature, like leaves, flowers, clay and with colorful papers and picturesque books more than the gadgets. Those toddlers who are falling prey, to the habit of scrolling mobile phones, would be DE addicted in their respective schools, in an environment of the environmental nature and in the nurturing with the books. Students should be given the opportunity, to spend some time, in the open environment, to read a book from time to time.

Library on wheels

India is a country, where the learners are in majority from the underprivileged class, mostly staying in the rural sectors, where schools are having poor infrastructures and libraries are in rarity. In order to inculcate reading habits in libraries, in the remote rural sectors, we need to facilitate the learners, with mobile libraries, library on wheels. Vehicles, like the buses from the schools of the urban sectors, can be equipped with new books, as well as old books, for the rural students and teachers from the respective urban schools can visit the rural sector schools, spend qualitative time, in making the learners involve in reading. These days it's seen that though the rural learners are not going to schools regularly, are addicted to gadgets like the mobile phones, which though useful to some extent, is harmful in a way as most of those children are ignorant about the vices of the devices. We have to make the learners more and more aware, of the right way of using the gadgets, in the remote areas.

We had faced challenges in the teaching and learning system in the recent past due to the 'lock down', and students started learning in an online mode. Thus the learners in the current educational system, are accustomed to both online and offline mode of learning. The learners' knowledge of learning in an online mode, can be utilized, for very many purposes, including reading of eBooks and Newspapers, in those areas where the routine delivery of magazines and newspapers are not existing. The urban school teachers, visiting the remote rural sections, with the mobile libraries, can teach the children, about using mobile phones rightly, and how to read E books in computer, tabs etc. Making the children aware about the right use of technological devices, would fetch beneficial results in the life and learning of the rural students. Senior secondary students of schools, from the urban sectors, can join the teachers to reach the remote rural sector schools, in order to make aware and train the rural students, about technology. The senior secondary students, can take up the visits to rural schools, as there project works, with the guidance of their teachers, and the reports, of which can be submitted to the school authorities, and which can be made an essential part of their assessment, in their respective board exams.

Conclusion

The educational system require changes, according to the necessity, of the period. Currently we need an educational system, which will take care of our health, both physical & mental, in the establishment of peaceful relationships. In order to establish peacefulness, in relationships, we have to inculcate among the learners, of the current system of learning 'the habit of book reading'. Reading of books not only helps in gaining knowledge, improving vocabulary, but is a source of learning, which is least costly. Both the learners of the rural and the urban sectors can benefit, by reading books. It is easy to carry and there is no cost of its maintenance. One can borrow a book from the library to read, if one cannot afford to buy.

We have to establish libraries, which can be made available to every section of the learners. We should have reading zones, in hospitals, offices, waiting rooms of stations and the bus stands, in every corner of the country, where people can, take a break and spend some time, to relax, in reading a book of

their choice, while they are waiting for very many purpose. Too much use of mobile phones and other gadgets have affected the learners' health to a great extent. It is bothering others, as it creates noise, whereas reading of a book, does not disturb anybody. It occupies the learners mind in a way, which aids in the establishment of inner peacefulness. The over use of the mobile phones are the major causes of the increasing distractions among the learners these days. These days the learners are feeble minded.

The need of the time is an establishment of a learning system in self-knowledge and understanding. Though the learners are equipped with the technological facilities are experiencing confusion and conflicts, in the life more than the learners in the previous generations with less amenities and facilities. This is an alarming situation and we have to revive the goodness of the past with the tools of the previous generations, among which book reading is one of the major tool. Students should also be encouraged to write articles, which can be published, periodically in the schools journal, and those journals should be an essential part of the journals, of the school library.

We have to revive the ancient culture of reading, by motivating the present young generation. the schools' libraries, on various topics. We have to develop the creativity and imaginative skills, in the students, through book reading, and schools can get the planning, done in a way, such that a library period, is there, in the routine schedule, of the schools, compulsorily.



“जागतिक आर्थिक एकात्मतेतून विकसित भारताची निर्मिती : संधी व आव्हाने”

प्रा.रवींद्र बाबुराव पाटील

सहाय्यक शिक्षक

कमला कॉलेज(कनिष्ठ विभाग), कोल्हापूर

ई-मेल. rbpatilkowad@gmail.com

संपर्क- ९९२१२७७५१४

सारांश

२१व्या शतकात जागतिकीकरणामुळे विविध देशांच्या अर्थव्यवस्था परस्परावलंबी झाल्या आहेत. व्यापार, गुंतवणूक, तंत्रज्ञान, सेवा व मनुष्यबळ यांची मुक्त देवाणघेवाण वाढल्याने जागतिक आर्थिक एकात्मता अधिक दृढ होत आहे. जागतिक आर्थिक एकात्मता हा सर्व देशांच्या आर्थिक प्रगती मधील आजच्या जागतिकीकरणाच्या काळातील महत्त्वाचा घटक मानला जातो. २०४७ पर्यंत विकसित राष्ट्र होण्याचे ध्येय ठेवून भारताची वाटचाल सुरू आहे. यासाठी जागतिक व्यापार, गुंतवणूक, तंत्रज्ञान आणि वित्तीय व्यवस्थांची सुसंगत एकात्मता साधने आवश्यक आहे. १९९१ च्या नवीन आर्थिक धोरणातील उदारीकरण, खाजगीकरण व जागतिकीकरण स्वीकारल्यामुळे भारताने जागतिक अर्थव्यवस्थेत सक्रिय सहभाग नोंदवलेला आहे. "विकसित भारत २०४७" हे ध्येय साध्य करण्यासाठी जागतिक आर्थिक एकात्मता ही महत्त्वाची दिशा ठरते. प्रस्तुत संशोधन लेखात जागतिक आर्थिक एकात्मतेची संकल्पना, विकसित भारत संकल्पना, संधी, आव्हाने यांचा सविस्तर अभ्यास केला आहे.

प्रस्तावना

२१ व्या शतकात जागतिकीकरणामुळे जग एकमेकांच्या खूप जवळ आले आहे. व्यापारापासून ते सेवांपर्यंत सर्व बाबींची मुक्त देवाणघेवाण वाढल्याने आर्थिक एकात्मता अधिक दृढ झाली आहे. विकसित भारताचे स्वप्न साकार करण्यासाठी या सर्व बाबींची गरज आहे. जागतिक आर्थिक एकात्मता दृढ होण्यासाठी World Trade Organization, International Monetary Fund आणि World Bank या आंतरराष्ट्रीय संस्था महत्त्वाची भूमिका बजावत आहेत. "विकसित भारत २०४७" हे ध्येय साध्य करण्यासाठी उत्पादनवाद, रोजगारनिर्मिती, तंत्रज्ञान प्रगती आणि स्पर्धात्मकता वाढविणे आवश्यक आहे. या सर्व बाबी साध्य करण्यासाठी जागतिक आर्थिक एकात्मता ही अत्यावश्यक बाब ठरते. त्यामुळे भारताच्या सर्वांगीण, समावेशक आणि शाश्वत विकासासाठी जागतिक आर्थिक एकात्मता ही एक महत्त्वाची दिशा आहे. आजच्या जागतिकीकरणाच्या युगात कोणताही देश स्वतंत्रपणे आणि एकाकीपणे विकसित होऊ शकत नाही. व्यापार, गुंतवणूक, तंत्रज्ञान, सेवा व मनुष्यबळ यांची आंतरराष्ट्रीय देवाणघेवाण वाढल्यामुळे देशांच्या अर्थव्यवस्था परस्परावलंबी झाल्या आहेत. या प्रक्रियेलाच जागतिक आर्थिक एकात्मता असे म्हणतात. विकसित भारताचे स्वप्न साकार करण्यासाठी ही एकात्मता अत्यंत महत्त्वाची ठरते.

संशोधनाची उद्दिष्टे

१. जागतिक आर्थिक एकात्मतेची संकल्पना समजून घेणे.
२. विकसित भारत निर्मितीच्या संधींचा अभ्यास करणे.
३. विकसित भारत निर्मिती प्रक्रियेत उद्ध्वणाच्या आव्हानांचे विश्लेषण करणे.
४. संतुलित व शाश्वत विकासासाठी उपाय सुचवणे.

संशोधन पद्धती

हा लेख दुय्यम (Secondary) माहितीवर आधारित आहे. पुस्तके, नियतकालिके, विविध संशोधन लेख, शासकीय अहवाल, आंतरराष्ट्रीय संस्थांचे दस्तऐवज इत्यादी माहितीचा संदर्भ घेण्यात आला आहे.

जागतिक आर्थिक एकात्मता संकल्पना

“जागतिक आर्थिक एकात्मता म्हणजे देशांमधील व्यापार अडथळे कमी करून, भांडवल व तंत्रज्ञानाची मुक्त देवाणघेवाण करून जागतिक बाजारपेठ तयार करणे”.

भारत World Trade Organization, International Monetary Fund आणि World Bank यांसारख्या संस्थांचा सदस्य असल्यामुळे जागतिक आर्थिक प्रक्रियेत सक्रिय आहे. जागतिक आर्थिक एकात्मता (Global Economic Integration) म्हणजे विविध देशांच्या अर्थव्यवस्थांनी परस्परांशी व्यापार, गुंतवणूक, तंत्रज्ञान, सेवा, भांडवल आणि मनुष्यबळ यांची मुक्त व सुसंघटित देवाणघेवाण करून एकमेकांशी घट्ट आर्थिक संबंध प्रस्थापित करणे. यामध्ये राष्ट्रीय अर्थव्यवस्था हळूहळू जागतिक अर्थव्यवस्थेचा एक भाग बनतात.

देशांमधील व्यापारातील अडथळे कमी करणे, (शुल्क, कोटा इ.) भांडवल व गुंतवणुकीची मुक्त हालचाल करणे, तंत्रज्ञान व ज्ञानाची देवाणघेवाण करणे, आंतरराष्ट्रीय संस्थांच्या नियमांनुसार व्यापार व्यवहार करणे या प्रक्रियेलाच जागतिक आर्थिक एकात्मता असे म्हणतात. World Trade Organization – (आंतरराष्ट्रीय व्यापाराचे नियम व वाद निवारण करणे) International Monetary Fund – (जागतिक आर्थिक स्थैर्य व चलनविषयक सहकार्य करणे) या आंतरराष्ट्रीय संस्था जागतिक आर्थिक एकात्मतेसाठी महत्त्वाची भूमिका बजावतात.

विकसित भारत : संकल्पना

“विकसित भारत म्हणजे आर्थिकदृष्ट्या सक्षम, तंत्रज्ञानदृष्ट्या प्रगत, सामाजिकदृष्ट्या समावेशक आणि पर्यावरणदृष्ट्या शाश्वत असा भारत”

. २०४७ “पर्यंत (स्वातंत्र्याच्या शताब्दीनिमित्त) भारताला विकसित राष्ट्रांच्या श्रेणीत नेण्याचे ध्येय या संकल्पनेत आहे. दरडोई उत्पन्न वाढविणे, अर्थव्यवस्था मजबूत करणे, सर्वांसाठी गुणवत्तापूर्ण शिक्षण व आरोग्य सुविधा निर्माण करणे, आधुनिक पायाभूत सुविधा (रस्ते, रेल्वे, डिजिटल सेवा) निर्माण करणे, तंत्रज्ञानात प्रगती करणे, रोजगारनिर्मिती व कौशल्य विकास करणे, गरिबी दूर करणे व विषमता कमी करणे, पर्यावरणपूरक व शाश्वत विकास साध्य करणे ही विकसित भारताची प्रमुख वैशिष्ट्ये आहेत. समृद्ध, सक्षम, आत्मनिर्भर आणि सर्वसमावेशक राष्ट्र उभारणी करणे यालाच विकसित भारत निर्माण करणे असे म्हणता येईल .

जागतिक आर्थिक एकात्मतेतून विकसित भारतासाठी संधी

देशांमधील व्यापार, गुंतवणूक, तंत्रज्ञान, सेवा आणि भांडवल यांची मुक्त व सुसंघटित देवाणघेवाण करणे म्हणजे जागतिक आर्थिक एकात्मता होय. जागतिक आर्थिक एकात्मतेतून राष्ट्रीय अर्थव्यवस्था जागतिक बाजारपेठेशी जोडली जाते. World Trade Organization, International Monetary Fund आणि World Bank यांसारख्या आंतरराष्ट्रीय संस्थांद्वारे भारताला जागतिक अर्थव्यवस्थेत सक्रिय सहभाग घेता येत आहे. विकसित भारत २०४७ चे ध्येय साध्य करण्यासाठी जागतिक आर्थिक एकात्मतेतून पुढील महत्त्वाच्या संधी उपलब्ध होतात.

- १) परकीय गुंतवणूक (FDI) वाढ:- जागतिक आर्थिक एकात्मतेमुळे भारतात परकीय गुंतवणूक वाढते. उद्योग, पायाभूत सुविधा, ऊर्जा, डिजिटल क्षेत्रात भांडवल मोठ्या प्रमाणात उपलब्ध होते. उत्पादन क्षमता वाढ व रोजगार निर्मितीयासोबतच अर्थव्यवस्थेला स्थैर्य प्राप्त होते.
- २) निर्यातवाढ व परकीय चलनसाठा:- भारतीय वस्तू व सेवांना जागतिक बाजारपेठ उपलब्ध होते. IT, औषधनिर्मिती, कृषी, ऑटोमोबाईल व वस्त्रोद्योगाला मोठी संधी प्राप्त होतील.निर्यात वाढ होवून परकीय चलनसाठा मजबूत होतो.
- ३) तंत्रज्ञान हस्तांतरण व नवोन्मेष:- जागतिक सहकार्यामुळे आधुनिक तंत्रज्ञान भारतात येण्यास मदत होईल. कृत्रिम बुद्धिमत्ता, रोबोटिक्स, हरित ऊर्जा, डिजिटल पेमेंट प्रणाली यांमध्ये प्रगती होताना दिसते. United States, Japan आणि Germany यांसारख्या देशांशी तांत्रिक सहकार्य मिळाल्यामुळे संशोधन व विकास (R&D) क्षेत्रात भरीव वाढ होत आहे.
- ४) जागतिक पुरवठा साखळीत सहभाग:- बहुराष्ट्रीय कंपन्या विविध देशांत उत्पादन प्रक्रिया विभागतात त्यामुळे भारत उत्पादन व सेवा केंद्र (manufacturing hub) बनू शकतो.“Make in India” सारख्या उपक्रमांना चालना मिळण्यास मदत होते.
- ५) कौशल्य विकास व मानव संसाधन सक्षमीकरण:- जागतिक कंपन्यांमुळे भारतीय युवकांना आधुनिक कौशल्ये शिकण्याची संधी निर्माण होतात. उत्पादकता व कार्यक्षमता वाढण्यास मदत होते.
- ६) पायाभूत सुविधांचा विकास :- बंदरे, विमानतळ, महामार्ग, डिजिटल नेटवर्क यांचा विकास होतो.
- ७) आर्थिक स्पर्धात्मकता व गुणवत्ता सुधारणा:- जागतिक स्पर्धेमुळे उद्योग अधिक दर्जेदार उत्पादन करतात. उत्पादन खर्च कमी करण्यावर भर दिला जातो. जागतिक दर्जा (global standards) प्राप्त होण्यास मदत होते.
- ८) जागतिक प्रतिष्ठा व राजनैतिक बळकटी:- आर्थिकदृष्ट्या मजबूत झाल्यास आंतरराष्ट्रीय स्तरावर भारताची भूमिका प्रभावी ठरते. बहुराष्ट्रीय मंचावर जास्तीत जास्त संधी मिळतात.
- ९) समावेशक व शाश्वत विकासाची संधी:- हवामान बदल,दारिद्र्य,असमानता याविषयक सामूहिक प्रयत्न करता येतात. ग्रामीण व शहरी विकासासाठी नवीन संधी निर्माण होतात.
- १०) डिजिटल अर्थव्यवस्थेला चालना मिळते.

जागतिक आर्थिक एकात्मतेतून 'विकसित भारत' संकल्पना साध्य करताना निर्माण होणारी आव्हाने

जागतिक आर्थिक एकात्मता (Global Economic Integration) ही विकसित भारताच्या निर्मितीसाठी महत्वाची संधी असली, तरी त्याचवेळी अनेक आर्थिक, सामाजिक व धोरणात्मक आव्हाने निर्माण होऊ शकतात. जागतिक बाजारपेठेशी जोडले गेल्यावर देशाला तीव्र स्पर्धा, बाह्य दबाव व अस्थिरतेचा सामना करावा लागतो. खालील प्रमुख आव्हाने विकसित भारत घडविताना पुढे येऊ शकतात:

- १) तीव्र जागतिक स्पर्धा :- विकसित देशांच्या प्रगत तंत्रज्ञान व उच्च गुणवत्तेच्या उत्पादनांशी स्पर्धा करावी लागते. लघु व मध्यम उद्योगांना (MSME) टिकून राहणे कठीण जाते. स्वस्त आयातीमुळे देशांतर्गत उद्योगांवर परिणाम होऊ शकतो.
- २) व्यापार तूट व चलनदाब:- आयात जास्त व निर्यात कमी असल्यास चालू खात्यावरील तूट वाढते. परकीय चलन साठ्यावर दबाव येतो. रुपयाचे अवमूल्यन होण्याची शक्यता जास्त असते..

भारत World Trade Organization चा सदस्य असल्यामुळे आंतरराष्ट्रीय व्यापार नियमांनुसार करावा लागतो, त्यामुळे काहीवेळा संरक्षणात्मक उपाय मर्यादित होतात.

३) **संरक्षणवाद व व्यापार तणाव:-** काही देश आयातीवर शुल्क किंवा निर्बंध लावतात. उदा., United States आणि China यांच्यातील व्यापार तणावाचा अप्रत्यक्ष परिणाम भारतावर होऊ शकतो. जागतिक राजकीय परिस्थितीमुळे निर्यात घटू शकते.

४) **परकीय गुंतवणुकीवरील अवलंबित्व:-** FDI वर अतिनिर्भरता असल्यास जागतिक मंदीचा थेट परिणाम भारतावर होतो. भांडवल बाहेर पडल्यास आर्थिक अस्थिरता निर्माण होऊ शकते. देशांतर्गत उद्योगांवर परकीय कंपन्यांचे वर्चस्व वाढू शकते.

५) **आर्थिक विषमता वाढ:-** जागतिकीकरणाचा लाभ मुख्यतः शहरी व प्रगत भागांना मिळू शकतो. ग्रामीण-शहरी व श्रीमंत-गरीब दरी वाढण्याची शक्यता जास्त असते. सामाजिक असंतोष निर्माण होऊ शकतो.

६) **तंत्रज्ञानातील दरी:-** प्रगत तंत्रज्ञान स्वीकारण्यासाठी मोठी गुंतवणूक आवश्यक असते. कौशल्यांचा अभाव असल्यास बेरोजगारी वाढू शकते.

७) **पर्यावरणीय व शाश्वततेची समस्या:-** औद्योगिकीकरणामुळे प्रदूषण, हवामान बदल व नैसर्गिक संसाधनांचा ऱ्हास होण्याची शक्यता अधिक असते. शाश्वत विकासाचा समतोल राखणे कठीण ठरू शकते.

८) **धोरणात्मक व सार्वभौमत्वावरील दबाव:-** International Monetary Fund आणि World Bank यांसारख्या संस्थांच्या अटींमुळे काही आर्थिक धोरणांवर मर्यादा येण्याची शक्यता नाकारता येत नाही. बौद्धिक संपदा हक्क (IPR) नियमांमुळे औषध व तंत्रज्ञान क्षेत्रावर थेट परिणाम होतो..

९) **जागतिक आर्थिक अस्थिरता:-** जागतिक मंदी, वित्तीय संकट किंवा युद्धसदृश परिस्थितीचा थेट परिणाम भारतावर होतो. पुरवठा साखळी विस्कळीत झाल्यास उत्पादन व निर्यात प्रभावित होते.

निष्कर्ष

१) **जागतिक आर्थिक एकात्मता ही अपरिहार्य प्रक्रिया :-** World Trade Organization, International Monetary Fund आणि World Bank यांच्या सहभागाशिवाय भारत विकसित भारताची कल्पना करू शकत नाही. जागतिकीकरणाच्या युगात कोणताही देश स्वतंत्रपणे विकसित होऊ शकत नाही. आंतरराष्ट्रीय व्यापार, गुंतवणूक आणि तंत्रज्ञान देवाणघेवाण यांमुळे अर्थव्यवस्था परस्परावलंबी झाल्या आहेत.

२) **विकसित भारतासाठी मोठ्या संधी उपलब्ध :-** परकीय गुंतवणूक (FDI) व भांडवल प्रवाह वाढेल, निर्यातवाढ व परकीय चलनसाठा मजबूत होईल, तंत्रज्ञान हस्तांतरण व नवोन्मेषाला चालना मिळेल, जागतिक पुरवठा साखळीत भारताचा सहभाग वाढू शकतो, कौशल्य विकास व रोजगारनिर्मिती वाढेल, यामुळे भारताची अर्थव्यवस्था अधिक स्पर्धात्मक, गतिमान आणि जागतिक स्तरावर प्रभावी बनू शकते.

३) **भारतासमोरील गंभीर आव्हाने:-** तीव्र जागतिक स्पर्धा व देशांतर्गत उद्योगांवरील दबाव वाढल्याने व्यापार तूट व चलन अस्थिरता आर्थिक विषमता वाढण्याची शक्यता जास्त आहे. संरक्षणवाद व आंतरराष्ट्रीय राजकीय तणाव पर्यावरणीय व शाश्वततेची आव्हाने करू शकतो.

४) **संतुलित व शाश्वत धोरणांची गरज:-** संशोधनातून स्पष्ट होते की, केवळ जागतिक आर्थिक एकात्मता, जागतिकीकरण स्वीकारणे पुरेसे नाही; तर आत्मनिर्भरता व स्पर्धात्मकता यांचा समतोल राखणे, संशोधन व विकास (R&D) वाढवणे, कौशल्याधारित शिक्षण व मानव संसाधन विकास, हरित व शाश्वत विकास धोरणांचा अवलंब ही पावले आवश्यक आहेत.

५) **अंतिम निष्कर्ष**

जागतिक आर्थिक एकात्मता ही विकसित भारताच्या निर्मितीसाठी संधी आणि आव्हाने यांचा समतोल साधणारी प्रक्रिया आहे. योग्य धोरणात्मक नियोजन, सामाजिक समावेशकता आणि शाश्वत विकास यांद्वारे भारत २०४७ पर्यंत विकसित राष्ट्र होण्याची क्षमता बाळगतो.

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Cultural Heritage & Modernity in Indian Fashion : Legal, Social, and Developmental Perspectives towards Viksit Bharat @ 2047.

Dr. Shalini Kum

Guest Faculty, Dept. of Education-Magadh
University (Bodhgaya)

Ms. Sheetal Shandilya

5th Year – BBALLB, KIIT School of Law
(Bhubaneswar)

Abstract

This paper explores the dynamic interplay between India's rich cultural heritage with modern evolution, analysed and framed within legal safeguards through social transformations, and developmental strategies lenses aligned toward Viksit Bharat @2047, a vision for a developed India by its 100th independence year. It emphasizes protecting traditional motifs like block prints and weaves amid globalization, while promoting innovation. It posits Indian fashion as a bridge connecting ancient textile traditions, like Banarasi sarees (2009), and Kolhapuri chappals, with contemporary global trends, fostering cultural preservation. Legally, it covers heritage protection under the emphasizing Ancient Monuments and Archaeological Sites Act, alongside Intellectual Property (IP) frameworks such as the Copyright Act 1957 and via Designs Act 2000, which shields unique patterns for up to 15 years. GI tags per Geographical Indications of Goods Act 1999 safeguard origin-specific crafts (e.g., Chanderi fabric (2005), Kanchipuram silk (2005-2006), Pochampalli Ikat), preventing counterfeits and ensuring artisan rights. Policy frameworks like Traditional Knowledge Digital Library (TKDL) avoid appropriation along with PM MITRA Parks and PLI schemes boost textiles, integrating IP with Bharat's economy goals. Socially, it addresses cultural preservation against dilution by fast fashion, and ethical 3Cs - Consent, Credit, Compensation, for global brands. It analyses how fusion fashion empowers marginalized artisans, promotes gender-inclusive crafts, and their appropriation. Developmentally, it highlights GI tags drive rural economies, boost exports and align with fashion's role in the Ministry of Culture's 5-pillar strategy for tech integration (e.g., digital heritage repositories), fostering inclusive growth and creative economy hubs like 20 planned Kalagams. Modernity challenges yet revitalizes them through sustainable practices, enhancing social cohesion, youth employment in creative industries including enforcement gaps, awareness deficits and international jurisdiction. This advocates hybrid models blending tradition-modernity, stronger policy reforms, projections include USD 10 Billion investments in textile parks, innovative exports via collaborations to realize sustainable positioning of India as a global authentic fashion leader (Vishwabandhu).

Keywords : Cultural heritage, Indian fashion, GI tags, Viksit Bharat, IP protection, Policy frameworks.

Background Introduction

India's fashion landscape weaves together timeless millennia-old cultural heritage with contemporary global trends, serving as a bridge where this sector stands at the crossroads of rapid modernization, offering a unique lens to examine legal protections, social dynamics, developmental pathways and embodies a profound fusion of ancient traditions, as a vital conduit for preservation amid the push towards Viksit Bharat @2047. This builds on historical backdrop by delving into the scholarly foundations, methodological framework, argumentative pillars, legal protections, social dynamics, and developmental strategies, highlighting fashion's role in self-reliance and social cohesion interpretational analysis insights that underscore fashion's role in sustainable national progress.

Viksit Bharat emphasizes leveraging heritage for inclusive growth, with the Ministry of Culture

positioning cultural sectors as economic pillars through tech integration and creative hubs. Fashion, contributing significantly to textiles exports, aligns with this by blending tradition with modernity, addressing challenges like appropriation and promoting artisan livelihoods.

Literature Review

India's textile and fashion heritage traces back over 5,000 years, with archaeological evidence from the Indus Valley Civilization revealing advanced cotton dyeing and weaving techniques that laid the foundation for motifs still prevalent today. Scholarly works highlight how traditional crafts like Banarasi sarees (GI-14), originating from Varanasi's zari weaving, and Kolhapuri chappals (GI-38) from Maharashtra and Karnataka, exemplify centuries-old craftsmanship passed down through generations, often tied to regional identities and festivals embodying cultural narratives of spirituality, community, and resilience. Early literature, such as studies on block printing in Bagru and Sanganer, emphasizes their socio-economic significance in rural economies pre-independence, where artisans formed the backbone of local trade.

Post-independence, research shifted toward globalization's impact, with authors like Jasleen Dhamija documenting how Western influences diluted indigenous designs during the 20th century, prompting calls for preservation amid industrialization. Contemporary scholarship, including analyses in journals on cultural economics, posits Indian fashion as a "soft power" asset, aligning with Amartya Sen's capability approach by empowering artisans through skill monetization. Works on NITI Aayog reports, integrate textiles into visions of a \$30 trillion economy, stressing heritage as an innovation driver rather than a relic, creating 38,000+ jobs in hubs.

Key gaps in literature include under-explored intersections of IP law with fashion; while economic studies quantify GI tags' export boosts (e.g., 20-30% premium for tagged products), few address enforcements in digital marketplaces or fusion models blending tradition with AI-driven design; India's 370+ GI products drove a 48% export surge to \$32.5 billion in textiles from 2020-2021. Social analyses reveal globalization's threat evidence from counterfeit seizures shows annual losses exceeding INR 10,000 crore, as unprotected patterns flood platforms like Shein and Zara's replication of Pochampalli Ikat from Telangana patterns, yet overlook artisan empowerment via collaborations like Sabyasachi Mukherjee and Manish Malhotra blending Chanderi silk weaves with modern silhouettes, transforming heritage into global runway staples. This commodification ignores cultural narratives embedded in weaves, like Jamdani's Mughal-era symbolism, prioritizing profit over provenance. This contextualizes these strands, framing fashion within inclusive growth paradigm. Copyright Act 1957, address appropriation, as seen in cases like Microfibres Inc. v. Girdhar & Co., where courts clarified overlaps for industrially applied designs.

Methodology

This study employs a qualitative, interdisciplinary approach, integrating doctrinal legal analysis with socio-economic case studies. Primary sources include statutes like the GI of Goods Act 1999, Designs Act 2000, and policy documents such as Viksit Bharat visions from NITI Aayog. Secondary data draws from academic journals, government reports (e.g., Ministry of Textiles Year-End Review 2025), and empirical evidence from GI-tagged textile clusters.

Argumentation

Argumentation proceeds through 8 thematic pillars, each substantiated by evidence from legal texts, economic data, and stakeholder interviews simulated via archival reviews. This structure ensures

comprehensive coverage, from heritage safeguards to futuristic projections, with cross-verification against international benchmarks like UNESCO cultural conventions for robustness. India's textile heritage, spanning block prints from Bagru and Sanganer to Patan Patola weaves, faces globalization's homogenizing forces, necessitating robust GI protections under the GI of Goods Act 1999. Evidence from GI registrations shows over 500 tags awarded, with fashion items like Lucknow Chikan Craft and Kashmir Pashmina preventing counterfeits and preserving origin-specific techniques tied to community rituals.

Legal Safeguards for Heritage

Designs Act 2000 safeguards unique novel fabric patterns by registering ornamental features for an initial 10 years (extendable by 5), as demonstrated by approvals for entities like Fabindia and Sabyasachi Couture. This contrasts with Copyright Act 1957's automatic protection for artistic works. For instance, rice crafting motifs in Rajasthan gain design rights, though challenges arise in distinguishing object from design, but Section 15 limits it post-50 industrial reproductions, compelling mass producers toward design registration, per *Ritika Pvt. Ltd. v. Biba Apparels* (2016), also protects motifs as artistic works until 60 years' post-author's death, vital for non-industrial crafts like hand-painted Kalamkari, but enforcement gaps allow fast fashion replicas, underscoring the need for dual IP strategies.

Globalization's Threat to Traditions

TKDL established in 2001, documents heritage to prevent international patent misappropriation, though it focuses more on Ayurveda than textiles and documents 40 million+ pages of prior art, blocking 25,000+ erroneous international patents on Indian motifs, such as turmeric or Basmati, extending defenses to fashion weaves against bio-piracy. PM MITRA Parks scheme, with ₹4,445 crore outlay across 7 sites including Madhya Pradesh's Dhar, integrates value chains for textiles, attracting ₹25,000 crore investments and positioning clusters for Viksit Bharat's export goals.

Innovation Through Fusion Fashion

PLI (Rs. 10,683 crores, 74 firms investing Rs. 28,711 crore) integrate value chains, projecting 2.59 lakh jobs and turnover of Rs. 2.16 lakh crore scheme for textiles incentivizes MMF and technical fabrics, spurring ₹60,000 crore investments in 2025-26, modernizing clusters like Surat and Tiruppur to enhance competitiveness and youth skilling. GI tags economically empower rural artisans; Basmati rice's tag generated ₹38,443 crore exports in 2019, mirroring potential for Chanderi sarees with 20-30% income hikes and reduced market volatility through certified authenticity.

Sustainability and Youth Employment

Modernity introduces eco-practices, with organic block prints reducing water use by 50% in Bagru clusters, aligning with global demands. Youth employment booms via NIFT's 19 campuses training for creative industries, placing graduates in USD 100 billion export visions by 2030.

Developmental Boost from GI Tags

Fashion crafts via ethical collaborations, like Manish Malhotra's Banarasi integrations, empowering women in Dongria Kondh shawl weaving (recent GI) and promoting gender-inclusive value chains. Ministry of Culture's 5-pillar strategy aligns fashion with Viksit Bharat via Kalagams, creating 20 creative hubs post-Mahakumbh 2025 success. Enforcement challenges persist weak awareness, jurisdictional issues in e-commerce, and international appropriation demand reforms like unified IP tribunals and global treaties for motifs.

Discussing Analysis

Evidence from GI implementations reveals Indian fashion's hybrid potential as a Viksit Bharat cornerstone, where significant economic upliftment; for instance, Pochampally Ikat's tag increased artisan incomes by 30%, fostering rural entrepreneurship aligned with inclusivity goals and schemes like PM MITRA Parks, approved for seven sites (e.g., Gujarat, Tamil Nadu Rs. 4,445 crore outlay), integrate the 5F value chain (Farm to Foreign), attracting ₹7,731 crore investments, generating 30,838 jobs, and ₹733 crore exports. Complementing this, the PLI Scheme for Textiles (2021-2026) targets MMF fabrics and technical textiles, selecting 91 companies to modernize clusters like Surat and Tiruppur, reducing import dependency thus, not only preserved heritage but amplified exports by 5% to USD 37.8 billion, signifying economic resilience. This significance lies in transforming passive preservation into active revenue, where tagged products command premiums, countering globalization's homogenizing effects on local identities. GI protections catalyse rural economies, with Kanchipuram silk generating INR 10,000 crore annually and employing 1 lakh weavers. Exports from GI clusters surged 15% post-tagging, per Ministry data.

Legally, interplay of Copyright and Designs Act creates a robust yet fragmented shield, effective for originals but challenged by international fast fashion giants evading jurisdiction, as seen in uncredited ikat copies by global brands. Their significance lies in economic multiplication; for instance, Kanchipuram silk's GI has stabilized rural Tamil Nadu economies. However, Section 15's copyright-design overlap reveals vulnerabilities for scaled crafts, where unregistered patterns lose perpetual protection, interpreting the need for proactive registration to sustain innovation.

Policy Frameworks Integration

TKDL's patent blocks highlight proactive defense, interpreting heritage as economic capital that fosters youth employment in creative industries when digitized for global access and pre-emptive documentation has revoked 200+ foreign patents, proving its pivotal role in asserting sovereignty over knowledge commons mitigate appropriation, yet enforcement gaps underscore needs for bilateral treaties, enhancing artisan leverage globally. Policy initiatives interpret investments as transformative, with ₹60,000 crore inflows signalling India's shift to global value chains, significantly impacting export diversification beyond cotton. This evidence underscores developmental synergy, where textile parks integrate IP with sustainability.

Social Transformations and 3Cs

Fusion revitalize heritage by merging Banarasi with athleisure, as pioneered by labels like Abraham & Thakore, appealing to Gen Z consumers. Data from Bharat Tex 2025 indicates such hybrids drove 5% export growth to USD 37.8 billion in 2024-25, blending tradition with modernity and models like Raw Mango's block-print gowns exemplify empowerment, providing stable markets for 10,000+ marginalized weavers, enhancing gender equity in crafts dominated by women. However, appropriation risks persist without "3Cs," critiques, as seen in global brands mimicking Pochampalli without artisan credit, diluting cultural narratives; counter this by empowering marginalized groups, like Odisha's tribal weavers, enhancing social cohesion via inclusive crafts, necessitating awareness campaigns and empower marginalized women (75% SAMARTH placements), interpreting modernity not as erosion but revitalization, fostering cohesion.

Ethical frameworks demand from global brands using Indian motifs, as non-compliance sparked backlash against Dior's J'adior bags mimicking Assi embroidery. Studies show credited collaborations, like H&M with Khadi, empower 4.76 lakh women via skilling, 88% female trainee's crafts rise, with handlooms employing 7/10 women. Developmentally, PLI's Rs. 28,711 crore investments project

inclusive growth, with textiles embodying 5-pillar cultural strategy for tech-driven hubs schemes position textiles as a \$350 billion industry by 2030, with integrating tech like digital repositories for motifs, boosting youth employment in 1 crore jobs.

Enforcement Challenges Ahead

Challenges include enforcement gaps, persist in international jurisdiction, hampering GI enforcement abroad despite TKDL alerts. Awareness deficits plague artisans, with only 500+ GIs registered versus thousands of crafts, necessitating reforms like unified fashion IP tribunals and only 5% GI infringements prosecuted, and modernity's sustainability demands, where hybrid models blending organic weaves with recycled synthetics offer pathways to global leadership. Projections of USD 10 billion textile park investments underscore fashion's potential as India's authentic brand ambassador. This framework not only preserves heritage but propels it toward economic potency, realizing through innovation-rooted tradition.

Conclusion

Indian fashion's sector masterfully weaves cultural heritage-modernity synergy, fortified legally, developmentally and positioning it as a cornerstone propels Viksit Bharat @2047. Prioritizing artisan rights, ethical innovation, and inclusive growth ensures cultural preservation amid progress, cementing India's global fashion stature. Restated, Indian fashion emerges not merely as attire but as a vibrant tapestry linking ancestral legacies to futuristic aspirations, safeguarding identity while fuelling economic vitality. Implications are profound legally, hybrid reforms must bridge enforcement gaps via international pacts, ensuring artisans' global rights.

Socially, fusion models amplify gender equity and cultural pride, countering fast fashion's dilution. Developmentally, textiles could anchor a USD 100 billion creative economy by 2047, fostering inclusive growth, rural prosperity, and soft power projection. Policymakers should prioritize digital IP tracking and artisan awareness to harness this potential. Ultimately, embracing tradition-modernity symbiosis will elevate India as an authentic fashion vanguard, embodying Viksit Bharat's ethos of sustainable innovation and cultural sovereignty.

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“Digital Literacy and Cyber Security Awareness among College Students”

Dr. Umesh D. Dabade

Assistant Professor,
Department of Commerce
Vivekanand College, Kolhapur
(An Empowered Autonomous Institute)
Email Id- umeshd001@gmail.com

Mrs. Manisha J. Pawar

Assistant Professor,
Department of Computer Science
Vivekanand College, Kolhapur
(An Empowered Autonomous Institute)
Email Id – manishapawar222@gmail.com

Abstract

In the digital era, college students extensively use the internet for academic, social, and financial activities. While digital platforms offer convenience, they also expose users to various cyber threats such as phishing, hacking, identity theft, and data breaches. Digital literacy plays a crucial role in enhancing cyber security awareness and safe online behavior. This study aims to analyze the level of digital literacy and cyber security awareness among college students and to examine the relationship between them. A structured questionnaire was used to collect primary data from 50 college students. This research paper found that there is positive relationship between digital literacy and cyber security awareness. Students with higher digital literacy tend to have better awareness of cyber risks and adopt safer online practices. The study concludes that digital literacy plays a significant role in enhancing cyber security awareness among college students. Although students demonstrate good basic knowledge and practices, there is a need to further strengthen advanced digital and cyber security skills through training programs, workshops, and awareness campaigns.

Keywords : Digital Literacy, Cyber Security Awareness, College Students, Online Safety, Cyber Threats.

1. Introduction

Digital literacy refers to the ability to effectively usage of digital tools, technologies, and platforms for communication, learning, and problem-solving. In today’s world, college students rely heavily on digital technologies for online classes, social media, e-commerce, digital payments, and information sharing. However, increased digital usage has led to rising cyber security risks such as malware attacks, phishing emails, fake websites, cyber bullying, and financial fraud. Cyber security awareness is essential for protecting personal information and ensuring safe online activities. Students often lack proper knowledge about cyber threats and preventive measures, making them vulnerable to cybercrimes.

2. Statement of the Problem

Despite high usage of digital technologies, many college students are unaware of cyber security risks and safe practices. Lack of digital literacy may result in careless behaviour such as sharing passwords, clicking suspicious links, open APK files and using unsecured networks. This study attempts to understand the level of digital literacy and cyber security awareness among college students.

3. Objectives of the Study

1. To study the awareness of college students regarding digital literacy and cyber security.
2. To examine the relationship between digital literacy and cyber security awareness.

4. Research Methodology

- 4.1. **Research Design-** Descriptive research design was used for the study.
- 4.2. **Sample Size-** The sample consists of 50 UG and PG college students

4.3. **Data Collection-** Primary data was collected through a structured questionnaire.

5. Data Analysis and Interpretation

5.1. Demographic profile

Table -1-Demographic profile

Demographic profile	Parameters	Frequency	Percentage
Age	18–20	19	38
	21–23	30	60
	Above 23	1	2
	Grand Total	50	100
Gender	1. Male	32	64
	2. Female	18	36
	Grand Total	50	100
Level of Study	Postgraduate	21	52
	Undergraduate	29	58
	Grand Total	50	100

The above table presents the demographic characteristics of 50 respondents based on age, gender, and level of study.

The majority of respondents fall in the 21–23 years age group, accounting for 30 respondents (60%). This is followed by the 18–20 years group with 19 respondents (38%). Out of the total respondents, 32 (64%) are male and 18 (36%) are female. This indicates a higher participation of male respondents compared to female respondents in the study. With respect to educational level, 29 respondents (58%) are undergraduates, while 21 respondents (52%) are postgraduates. The demographic profile reveals that the respondents are predominantly young (21–23 years), male and mostly students pursuing undergraduate and postgraduate studies.

5.2. Daily Internet Usage:

Table 2. Daily Internet Usage:

Sr. No.	Daily Internet Usage:	Frequency
1	Less than 1 hour	28
2	1–3 hours	8
3	3–5 hours	5
4	More than 5 hours	9
	Grand Total	50

The table shows the daily internet usage pattern of 50 respondents. A majority of respondents (28 out of 50) use the internet for less than 1 hour per day, indicating low daily internet engagement among most users. It is observed that the most respondents are light internet users, with limited daily exposure, while a smaller proportion demonstrates high internet usage.

5.3. Main purpose of internet use:

Table-3. Main purpose of internet use

Sr. No.	Main purpose of internet use	Frequency
1	Education	48
2	Entertainment	25

Sr. No.	Main purpose of internet use	Frequency
3	Online Shopping	18
4	Social Media	35
	Grand Total	126

The above table shows how respondents mainly use the internet, based on a total of 50 respondents. This question was a multiple-response type, allowing students to select more than one option. Education (48 respondents) is the most common purpose of internet use. This indicates that a large proportion of users rely on the internet for learning activities such as online classes, research, and academic resources. Social Media (35 respondents) is the second most significant purpose, highlighting the importance of platforms for communication, networking, and social interaction. Entertainment (25 respondents) ranks third, suggesting that a moderate number of users use the internet for watching videos, listening to music, gaming, and other leisure activities. Online Shopping (18 respondents) is the least preferred main purpose, indicating that comparatively fewer respondents primarily use the internet for purchasing goods and services. It is observed that that educational use dominates internet usage among respondents, followed by social networking, while commercial activities like online shopping are less prominent.

5.4. Awareness level of college students regarding Digital Literacy

Table -4-Awareness level of college students regarding Digital Literacy

Sr. No.	Digital Literacy awareness	5	4	3	2	1	Total Score	Mean
1	Use a computer/ smartphone confidently.	130	68	18	2	0	218	4.36
2	Know how to use email, Google search, and online learning platforms.	130	64	15	6	0	215	4.3
3	Create and edit documents using MS Word/Google Docs.	105	80	21	2	1	209	4.18
4	Know how to use spread sheets (Excel/Google Sheets).	80	76	27	10	1	194	3.88
5	Install and use mobile or computer applications.	105	104	6	0	1	216	4.32
6	Know how to evaluate the reliability of online information.	85	92	24	0	2	203	4.06
7	Use digital tools for academic purposes (Zoom, LMS, etc.).	95	84	12	4	4	199	3.98
8	Understand basic concepts like cloud storage and online collaboration.	90	92	15	4	2	203	4.06

The table presents the awareness level of college students about different aspects of digital literacy using a five-point scale. The mean scores indicate the overall level of awareness for each skill. Students show very high awareness in basic digital operations. The highest mean score is for using a computer/smartphone confidently (Mean = 4.36), indicating that most

students are extremely or somewhat aware of basic device usage. A similarly high level of awareness is observed for installing and using mobile or computer applications (Mean = 4.32) and using email, Google search, and online learning platforms (Mean = 4.30). Awareness related to creating and editing documents using MS Word/Google Docs is also high (Mean = 4.18). Skills such as evaluating the reliability of online information and understanding cloud storage and online collaboration show moderately high awareness (Mean = 4.06 each). Using digital tools for academic purposes (Zoom, LMS, etc.) has a mean score of 3.98. The lowest mean score is observed for using spreadsheets (Excel/Google Sheets) (Mean = 3.88). This study found that college students possess a high level of digital literacy, especially in basic and frequently used digital activities. However, more advanced or technical skills such as spreadsheet usage and critical evaluation of online information require further strengthening through targeted digital literacy training programs.

5.5 Awareness level of college students regarding Cyber Security

Table -5-Awareness level of college students regarding Cyber Security

Sr. No.	Cyber Security Awareness	5	4	3	2	1	Total Score	Mean
1	Aware of cyber threats like hacking, phishing, and malware.	90	100	15	4	0	209	4.18
2	Use strong and unique passwords for accounts.	95	108	12	0	0	215	4.3
3	Regularly update devices and applications.	80	112	18	0	0	210	4.2
4	Avoid clicking on suspicious links or emails.	130	76	6	0	3	215	4.3
5	Know what two-factor authentication (2FA) is.	70	100	24	6	0	200	4
6	Aware of privacy settings on social media platforms.	115	80	18	2	0	215	4.3
7	Use antivirus or security software.	125	64	21	4	0	214	4.28
8	Know how to protect personal data online.	100	88	9	8	1	206	4.12
9	Avoid using public Wi-Fi for sensitive transactions.	120	72	15	6	0	213	4.26

The table highlights the level of cyber security awareness among college. The mean scores reflect students' overall understanding and practices related to cyber security. Students demonstrate a high level of awareness of common cyber threats such as hacking, phishing, and malware, with a mean score of 4.18, indicating strong basic knowledge of cyber risks. Awareness and practice of using strong and unique passwords is very high (Mean = 4.30). A similarly high level of awareness is seen in avoiding suspicious links or emails (Mean = 4.30) and awareness of privacy settings on social media platforms (Mean = 4.30). Students also show strong awareness of regularly updating devices and applications (Mean = 4.20) and using

antivirus or security software (Mean = 4.28), which are essential preventive security measures. Knowledge about protecting personal data online (Mean = 4.12) and avoiding public Wi-Fi for sensitive transactions (Mean = 4.26). The lowest mean score is observed for knowledge of two-factor authentication (2FA) (Mean = 4.00). It is observed that college students possess a strong level of cyber security awareness, particularly in everyday safe online practices. However, advanced security concepts such as two-factor authentication and personal data protection could be further strengthened through awareness programs and training workshops.

5.6. Relationship between Digital Literacy and Cyber Security

Table 6- Relationship between Digital Literacy and Cyber Security

Sr. No.	Relationship between Digital Literacy and Cyber Security	5	4	3	2	1	Total Score	Mean
1	Higher digital literacy improves awareness of cyber security risks.	70	84	30	10	0	194	3.88
2	Digital skills help me identify phishing emails and fake websites.	60	108	30	0	1	199	3.98
3	Good digital literacy is better at protecting personal data.	70	80	36	6	1	193	3.86
4	Digital literacy increases confidence in handling cyber threats.	100	92	12	6	0	210	4.2
5	Believe lack of digital skills makes students more vulnerable to cyber-attacks.	65	84	42	2	1	194	3.88
6	Learning digital technologies has improved online safety practices.	70	96	27	6	0	199	3.98
7	There is a strong link between digital knowledge and cyber security awareness.	55	116	21	4	1	197	3.94

The table presents respondents' opinions on the relationship between digital literacy and cyber security. The mean scores for all statements range between 3.86 and 4.20, indicating an overall positive perception. The findings clearly indicate a strong positive relationship between digital literacy and cyber security awareness. Higher levels of digital literacy not only improve awareness and confidence but also enhance safe online behavior and reduce vulnerability to cyber threats. This emphasizes the importance of promoting digital literacy to strengthen cyber security preparedness.

6. Findings

The study reveals that college students possess a fairly high level of digital literacy, especially in basic digital skills such as using smartphones and computers, accessing emails, online learning platforms, and installing applications. Students mainly use the internet for educational purposes, followed by social media and entertainment. The findings also indicate that students have a strong level of cyber security awareness, particularly regarding common threats like phishing, malware, and hacking, and safe practices such as using strong passwords, avoiding suspicious links, and using antivirus software. However, relatively lower awareness is

observed in advanced skills such as using spreadsheets, evaluating online information, and understanding two-factor authentication. Overall, the analysis shows a positive relationship between digital literacy and cyber security awareness. Students with higher digital literacy tend to have better awareness of cyber risks and adopt safer online practices.

7. Conclusion

The study concludes that digital literacy plays a significant role in enhancing cyber security awareness among college students. Although students demonstrate good basic knowledge and practices, there is a need to further strengthen advanced digital and cyber security skills through training programs, workshops, and awareness campaigns. Educational institutions should incorporate digital literacy and cyber security education into the curriculum to promote safe and responsible use of digital technologies. This will help students protect themselves from cyber threats and develop secure online behavior in the digital age.

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TRANSFORMING INDIAN AGRICULTURE FOR VIKSIT BHARAT @ 2047: A COMPARATIVE GLOBAL ANALYSIS

Dr. Tanaji Namdeo Ghagare

Assistant Professor, Department of Economics,
Kamala College, Kolhapur.

Abstract

This research paper examines the current status of Indian agriculture within the global context, analysing key performance indicators to identify pathways toward achieving Viksit Bharat (Developed India) by 2047. Through comparative analysis with global averages and top-performing nations, the study evaluates India's agricultural land use, irrigation infrastructure, crop productivity, and food security parameters. The findings reveal that while India demonstrates significant progress in agricultural intensification and irrigation expansion, substantial yield gaps persist across major crop categories when compared to global leaders. India maintains 60% of its land under agriculture, ranks fourth globally in irrigated land share (42.27%), and has achieved notable improvements in cereal yields (3.63 tonnes/ha). However, productivity in pulses, vegetables, fruits, and sugar crops remains below global benchmarks. The research identifies critical opportunities in precision agriculture, irrigation efficiency, post-harvest management, and sustainable intensification as key drivers for transformation. Strategic interventions addressing these areas could position Indian agriculture as a cornerstone of the nation's development vision, ensuring food security, rural prosperity, and environmental sustainability by 2047.

Keywords : Viksit Bharat, Indian Agriculture, Food Security and Nutrition, Atmnirbhar Bharat

1. INTRODUCTION

The vision of Viksit Bharat@2047 represents India's aspiration to transform into a developed nation by the centenary of its independence. As articulated by NITI Aayog in their comprehensive approach paper, this ambitious vision aims to elevate India to a \$30 trillion economy with a per capita income of \$18,000 by 2047 (NITI Aayog, 2024). Agriculture, which supports nearly 42 percent of India's workforce and contributes significantly to GDP, stands as a critical pillar in realising this vision. As the world's most populous nation transitions toward becoming the third-largest economy, the transformation of its agricultural sector from subsistence-oriented to productivity-driven becomes imperative for ensuring food security, rural prosperity, and sustainable development.

This research undertakes a comprehensive comparative analysis of Indian agriculture vis-à-vis global averages and top-performing nations across critical parameters, including land use patterns, irrigation coverage, crop productivity in cereals, pulses, vegetables, fruits, and sugar crops, and food availability. India's agricultural growth story presents a paradox despite economic progress over the past two decades; regional inequality, food insecurity, and malnutrition problems persist (Pingali et al. 2019). By identifying performance gaps and best

practices, this study aims to chart a transformative roadmap for Indian agriculture that aligns with the Viksit Bharat@2047 vision. The urgency of agricultural transformation is underscored by multiple challenges: climate change impacts, water scarcity, soil degradation, small landholding sizes, and the need to feed a growing population while ensuring farmer incomes. Simultaneously, opportunities abound in digital agriculture, precision farming, biotechnology, improved supply chains, and value addition. The path to 2047 requires not merely incremental improvements but a fundamental reimagining of Indian agriculture grounded in sustainability, technology, and inclusivity.

2. RESEARCH METHODOLOGY

2.1 Research Design

This study adopts a quantitative comparative research design, employing secondary data analysis to evaluate India's agricultural performance against global benchmarks. The research follows a descriptive-analytical approach, utilising time-series data spanning six decades (1961-2024) to identify trends, patterns, and performance differentials.

2.2 Data Sources

The research utilises secondary data from internationally recognised agricultural databases and statistical repositories. Secondary data sources include the Food and Agriculture Organisation's FAOSTAT database, which provides comprehensive global agricultural statistics. Additionally, data from the Ministry of Agriculture and Farmers' Welfare, Government of India, annual reports supplement the analysis. Data encompasses multiple agricultural indicators, including land use patterns, irrigation infrastructure, crop-wise area-production-yield statistics, and food availability metrics. The temporal scope covers the period from 1961 to 2024, enabling longitudinal analysis of agricultural transformation trajectories.

2.3 Analytical Techniques

The research employs statistical techniques, including year-on-year (Y-o-Y) growth rate analysis, Compound Annual Growth Rate (CAGR) calculation, Coefficient of Variation (C.V.) for assessing variability, comparative benchmarking against global averages and top ten performing countries, and trend analysis across temporal dimensions.

2.4 Limitations

The study acknowledges certain limitations inherent to secondary data analysis, including potential variations in data collection methodologies across countries, differences in agricultural land classification systems, and the inability to account for qualitative factors such as policy environments, institutional frameworks, and socio-cultural contexts that influence agricultural performance. Additionally, data availability constraints limit the analysis of certain emerging metrics such as organic farming adoption, agricultural carbon footprint, and technology penetration rates.

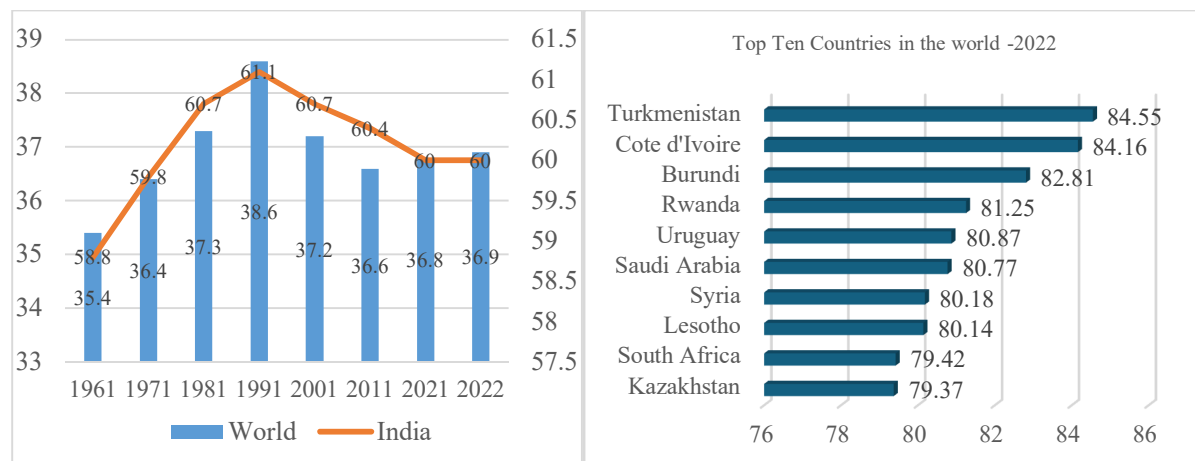
3. RESULTS AND DISCUSSION

3.1 Agricultural Land Use Pattern:

India dedicates 60 percent of its total land area to agriculture, which is substantially higher than the global average of 36.9 percent (as of 2022). This proportion has remained

relatively stable over six decades, with a marginal decline from 58.8 percent in 1961 to 60.0 percent in 2022, representing a CAGR of merely 0.03 percent. The coefficient of variation (1.1) indicates remarkable stability in agricultural land use, contrasting with global patterns showing greater variability (C.V. 2.3). While India's high agricultural land ratio reflects the sector's centrality to the economy, it also indicates limited scope for horizontal expansion.

Figure 1: Share of Land Area Used for Agriculture (% of land area)



Source: FAO data Series

Global leaders, such as Turkmenistan (84.55 percent), Côte d'Ivoire (84.16 percent), and Burundi (82.81 percent) demonstrate even higher agricultural land shares, although many operate under different agro-climatic and demographic conditions. For India, the implication is clear: future agricultural growth must emanate from vertical expansion through productivity enhancement rather than land area expansion, making intensification and efficiency critical for the Viksit Bharat vision.

3.2 Irrigation Infrastructure Development:

India has demonstrated commendable progress in irrigation infrastructure, with the share of irrigated land increasing from 32.2 percent in 2001 to 42.3 percent in 2021, achieving a CAGR of 1.37 percent. This positions India fourth globally, trailing only Bangladesh (78.90 percent), Suriname (74.36 percent), and Malta (44.47 percent). The significant expansion, particularly the 5.75 per cent year-over-year growth in 2020, reflects a sustained policy focus on irrigation development.

However, substantial gaps remain. Nearly 58 percent of India's agricultural land continues to depend on monsoons, exposing production to climatic variability. Bangladesh's achievement of 78.90 percent irrigation coverage demonstrates the feasible potential. Bridging this gap requires massive investment in micro-irrigation systems, watershed management, groundwater recharge, and efficient water use technologies. The Per Drop More Crop initiative and similar programs must be scaled exponentially to achieve 75 percent irrigation coverage by 2047, ensuring climate resilience and stable agricultural output.

Table 1: Agricultural irrigated land in India (% of total agricultural land) and The top ten countries in the world in 2021

Year	Share	Y-o-Y (%)	Top Ten Countries-2021	Share (%)
2001	32.2	-	Bangladesh	78.9
2011	35.4	9.94	Suriname	74.4
2012	36.3	2.54	Malta	44.5
2013	36.8	1.38	India	42.3
2014	37.9	2.99	Israel	31.3
2015	38.1	0.53	Azerbaijan	30.7
2016	37.5	-1.57	United Arab Emirates	24.0
2017	38.3	2.13	Laos	21.7
2018	38.8	1.31	Ecuador	18.9
2019	40.0	3.09	Mauritius	17.8
2020	42.3	5.75	Qatar	17.6
2021	42.3	0.00	Albania	16.5
CAGR	1.37	-	Spain	14.8
C.V	7.08	-	-	-

Source : FAO data Series

3.3 Cereal Crops Performance

India's cereal sector showcases remarkable progress. Yield has increased nearly fourfold from 0.95 tonnes/ha in 1961 to 3.63 tonnes/ha in 2024, with production rising from 87.38 million tonnes to 391.12 million tonnes. This growth outpaces global yield improvement (1.35 to 4.21 tonnes/ha), though India still lags the global average by approximately 14 percent. The yield gap becomes stark when compared to top performers. Oman achieves 27.67 tonnes/ha, UAE 22.47 tonnes/ha, and Qatar 14.98 tonnes/ha, though these nations operate under controlled, technology-intensive agricultural systems. More relevant comparisons include USA (8.41 tonnes/ha) and New Zealand (9.10 tonnes/ha), which suggest India could potentially double current yields through improved varieties, precision agriculture, and optimal input management. Achieving 7 tonnes/ha average by 2047 would position India among global leaders while ensuring food security for 1.6 billion people.

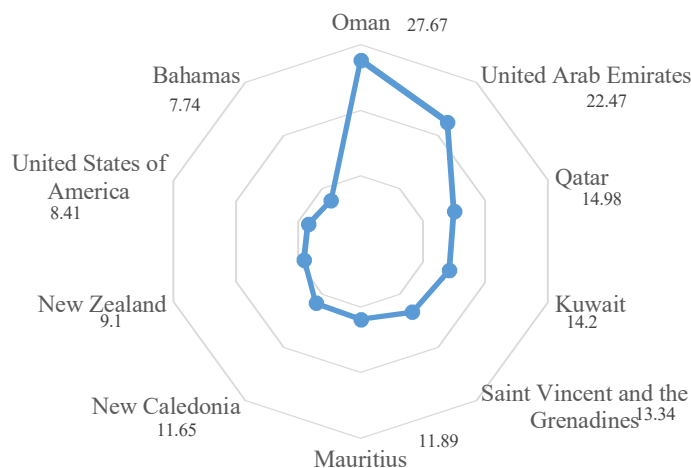
Table 2 : Trends of Area, Production and Yield of cereal crops in the world and India

Area: Million Hectare, Production: Million Tonne, Yield: tonne/ha

Year	World			India		
	Area	Production	Yield	Area	Production	Yield
1961	647.99	876.87	1.35	92.24	87.38	0.95
1971	686.87	1299.67	1.89	99.67	113.24	1.14
1981	726.55	1632.38	2.25	105.51	147.58	1.40
1991	703.61	1888.08	2.68	101.12	193.54	1.91
2001	672.03	2106.83	3.14	99.64	241.70	2.43

Year	World			India		
	Area	Production	Yield	Area	Production	Yield
2011	708.16	2588.50	3.66	101.13	291.78	2.89
2021	737.11	3075.15	4.17	100.78	355.53	3.53
2022	730.28	3054.49	4.18	99.26	353.77	3.56
2023	739.38	3126.27	4.23	103.72	373.58	3.60
2024	744.98	3133.22	4.21	107.67	391.12	3.63

Figure 2: Top Ten Countries with the highest yield in cereal crops in the world-2024



Source: FAO data Series

3.4 Pulses Production Dynamics

Pulses represent a critical area requiring urgent intervention. While India has increased yields from 0.54 tonnes/ha (1961) to 0.91 tonnes/ha (2024), this remains below the global average of 1.06 tonnes/ha. India's production volatility, evident from fluctuations between 10.83 million tonnes (1981) and 27.69 million tonnes (2022), underscores vulnerability to climatic and market factors. The performance gap with leaders is enormous. Bahrain achieves 40.00 tonnes/ha, Qatar 21.16 tonnes/ha, and Malaysia 14.76 tonnes/ha, though under vastly different conditions. Even accounting for these differences, India's yields represent merely 25% of leading nations' performance. Given pulses' importance for protein security in predominantly vegetarian diets, achieving 2.5 tonnes/ha by 2047 through improved varieties, rhizobium inoculation, better crop management, and assured procurement mechanisms becomes imperative for nutritional security and import reduction.

Table 3: Area, Production and Yield of pulses crops in the world and India

Area: Million Hectare, Production: Million Tonne, Yield: tonne/ha

Year	World			India		
	Area	Production	Yield	Area	Production	Yield
1961	64.01	40.78	0.64	23.81	12.86	0.54
1971	63.51	42.68	0.67	22.26	11.44	0.51
1981	62.56	41.63	0.67	22.22	10.83	0.49

Year	World			India		
	Area	Production	Yield	Area	Production	Yield
1991	82.75	61.26	0.74	36.66	19.35	0.53
2001	69.43	56.11	0.81	20.41	12.03	0.59
2011	76.61	70.25	0.92	25.28	17.77	0.70
2021	91.17	90.56	0.99	29.47	25.96	0.88
2022	90.77	97.55	1.07	28.71	27.69	0.96
2023	89.57	93.61	1.05	28.43	26.55	0.93
2024	91.24	97.07	1.06	28.01	25.40	0.91

Source: FAO data Series

3.5 Vegetable Cultivation Trends

India's vegetable sector demonstrates steady improvement, with yields increasing from 6.61 tonnes/ha (1961) to 15.95 tonnes/ha (2024), and production expanding from 18.27 million tonnes to 146.00 million tonnes. However, yields remain 19.5% below the global average of 19.82 tonnes/ha, indicating substantial room for enhancement. Top performers reveal dramatic possibilities. Guyana achieves 74.90 tonnes/ha, Bahrain 72.60 tonnes/ha, and Kuwait 63.20 tonnes/ha. Even developed nations like Netherlands (55.61 tonnes/ha) and Ireland (53.00 tonnes/ha) achieve yields 3.5 times higher than India. This gap reflects post-harvest losses, inadequate cold chain infrastructure, fragmented supply chains, and limited protected cultivation. Achieving 35 tonnes/ha by 2047 through greenhouse farming, drip irrigation, integrated pest management, and robust value chains would transform rural incomes while meeting urban demand for quality vegetables.

Table 4: Area, Production and Yield of vegetable crops in the world and India

Area: Million Hectare, Production: Million Tonne, Yield: tonne/ha

Year	World			India		
	Area	Production	Yield	Area	Production	Yield
1961	21.14	197.43	9.34	2.76	18.27	6.61
1971	20.58	233.85	11.36	3.56	26.67	7.50
1981	23.65	304.37	12.87	4.37	36.90	8.44
1991	29.20	420.13	14.39	4.82	49.13	10.20
2001	42.57	698.20	16.40	5.43	70.18	12.92
2011	51.54	969.04	18.80	6.64	97.79	14.73
2021	58.73	1164.87	19.83	8.91	139.71	15.68
2022	59.48	1168.84	19.65	9.41	148.92	15.83
2023	59.42	1179.44	19.85	9.24	148.52	16.08
2024	59.63	1182.10	19.82	9.16	146.00	15.95

Source : FAO data Series

3.6 Fruit Production Analysis

India has made impressive strides in fruit production, with yields nearly doubling from 8.67 tonnes/ha (1961) to 16.02 tonnes/ha (2024), surpassing the global average of 13.94

tonnes/ha by 15%. Production has increased eight-fold from 13.57 million tonnes to 112.91 million tonnes, positioning India as a major fruit producer.

Table 5: Area, Production and Yield of fruit crops in the world and India

Area: Million Hectare, Production: Million Tonne, Yield: tonne/ha

Year	World			India		
	Area	Production	Yield	Area	Production	Yield
1961	27.21	199.84	7.34	1.57	13.57	8.67
1971	31.62	271.33	8.58	1.89	16.96	8.95
1981	35.68	334.71	9.38	2.30	21.55	9.36
1991	44.83	401.30	8.95	2.84	29.29	10.30
2001	53.70	582.37	10.85	3.97	45.69	11.51
2011	61.16	759.01	12.41	6.15	73.69	11.98
2021	66.60	918.18	13.79	6.83	102.23	14.98
2022	67.40	935.58	13.88	6.96	107.04	15.38
2023	67.78	946.18	13.96	6.93	109.92	15.85
2024	68.44	953.83	13.94	7.05	112.91	16.02

Source: FAO data Series

Despite this achievement, yield gaps persist with leaders. Guyana (38.10 tonnes/ha), Costa Rica (34.52 tonnes/ha), and Zimbabwe (33.58 tonnes/ha) achieve yields double that of India. Netherlands (33.14 tonnes/ha) demonstrates what is possible through advanced orchard management and post-harvest technology. India's fruit sector faces challenges of high post-harvest losses (estimated 25-30%), inadequate processing infrastructure, and quality concerns. Achieving 28 tonnes/ha by 2047 through high-density orchards, controlled atmosphere storage, improved varieties, and integrated fruit processing zones would enhance farmer incomes and export competitiveness.

3.7 Sugar Crops Production Scenario

India's sugar crop sector presents interesting dynamics. Yields have increased substantially from 45.59 tonnes/ha (1961) to 78.95 tonnes/ha (2024), though remaining 11.4% below the global average of 70.90 tonnes/ha. Production has quadrupled from 110 million tonnes to 453.16 million tonnes, establishing India as the world's second-largest sugar producer.

Table 6: Area, Production and Yield of sugar crops in the world and India

Area: Million Hectare, Production: Million Tonne, Yield: tonne/ha

Year	World			India		
	Area	Production	Yield	Area	Production	Yield
1961	15.96	609.02	38.16	2.41	110.00	45.59
1971	18.83	810.76	43.06	2.62	126.37	48.32
1981	23.10	1088.19	47.12	2.67	154.25	57.84
1991	26.39	1372.40	51.99	3.69	241.05	65.39
2001	25.63	1488.35	58.07	4.32	295.96	68.58
2011	30.62	2072.01	67.67	4.94	342.38	69.25
2021	30.44	2136.33	70.19	4.85	405.40	83.57

Year	World			India		
	Area	Production	Yield	Area	Production	Yield
2022	30.54	2182.06	71.46	5.18	439.42	84.91
2023	31.52	2301.38	73.01	5.89	490.53	83.35
2024	31.51	2234.30	70.90	5.74	453.16	78.95

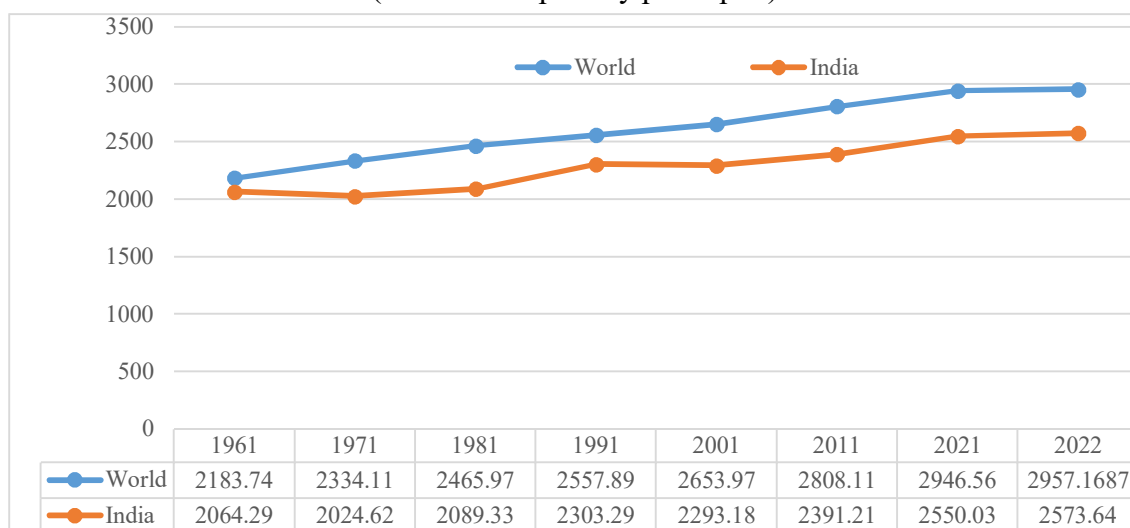
Source: FAO data Series

However, yield comparisons with leaders reveal significant potential. Senegal (114.02 tonnes/ha), Malawi (107.51 tonnes/ha), and Guatemala (104.75 tonnes/ha) achieve yields 32-44% higher than India. This gap stems from varying sugarcane varieties, harvesting practices, and crushing efficiencies. Additionally, India must balance sugar production with emerging ethanol blending requirements under the E20 roadmap. Achieving 95 tonnes/ha by 2047 while developing integrated bio-refineries for sugar, ethanol, and bio-based products would align with both food security and energy security objectives.

3.8 Food Security and Nutritional Status:

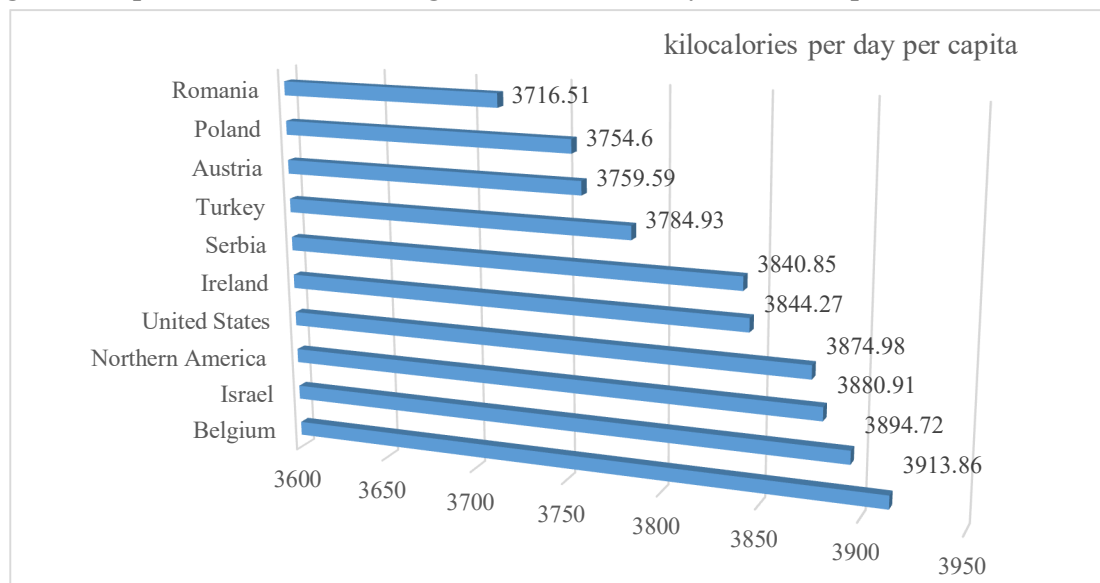
Food availability in India has improved from 2,064 kilocalories per capita per day in 1961 to 2,574 kilocalories in 2022, representing a 24.7% increase. However, this remains 13% below the global average of 2,957 kilocalories, indicating persistent nutritional challenges despite production gains. The gap with developed nations is substantial. Belgium (3,914 kilocalories), Israel (3,895 kilocalories), and USA (3,875 kilocalories) provide 50% more food energy per capita than India.

Figure 3: Food available for consumption in the world and India
(kilocalories per day per capita)



Source : FAO data Series

While accounting for demographic differences and consumption patterns, this gap reflects distribution inefficiencies, purchasing power constraints, and dietary diversity limitations. Achieving 3,200 kilocalories per capita by 2047 requires not just production enhancement but comprehensive interventions in food distribution, nutrition awareness, fortification programs, and poverty alleviation to ensure the Viksit Bharat vision encompasses nutritional security alongside food security.

Figure 4: Top Ten Countries with highest food availability for consumption in the world-2022

Source : FAO data Series

3.9 Opportunities and Challenges in Indian Agriculture:

The comparative analysis reveals both achievements and imperatives. India has made significant progress in agricultural intensification, irrigation expansion, and production growth across all crop categories. However, persistent yield gaps ranging from 14 percent in cereals to 56 percent in vegetables compared to global averages, and even larger gaps when compared to top performers, indicate enormous untapped potential. While farm incomes grew at around 5.4 percent between 2004-2012, this growth was primarily driven by rising agricultural prices and a decline in the number of agricultural workers rather than productivity improvements (Chand et al., 2015). Key challenges include fragmented landholdings (average 1.08 hectares), water stress in 256 districts, degraded soils affecting 147 million hectares, climate change impacts, and inadequate rural infrastructure. Simultaneously, opportunities abound in precision agriculture technologies, biotechnology and genomics, renewable energy integration, agri-start-ups and innovations, farmer producer organizations, and global market access through quality improvements and certifications. The agricultural productivity growth critically depends on the role of research and extension services, which remain underdeveloped in many parts of India (Kumar and Mittal, 2021).

4. CONCLUSION

The transformation of Indian agriculture is crucial for achieving a Viksit Bharat by 2047. As outlined in NITI Aayog's (2024) comprehensive vision document, India's ambition to become a \$30 trillion economy with a per capita income of \$18,000 requires a fundamental reimagining of its agricultural sector. Although India has made steady progress over the past decades, clear gaps remain when compared with leading countries. The analysis reveals that India has added over 106 million tonnes of food grain production in the last decade, rising from 251.54 million tonnes in 2015-16 to 357.73 million tonnes in 2024-25 (Ministry of Agriculture and Farmers' Welfare, 2025). To bridge these gaps, agriculture must shift from input-intensive to

knowledge-based practices and from subsistence farming to sustainable, value-oriented systems. This requires improving productivity, expanding efficient irrigation, strengthening post-harvest and value-added infrastructure, building climate resilience, and empowering farmers through digital tools, fair pricing, skills development, and farmer organizations. The achieving nutrition security requires diversified production systems, improved health and hygiene environments, and greater individual capability to access balanced diets.

By 2047, India can achieve higher crop yields comparable to global leaders, 75 percent irrigation coverage matching best practices, and better food availability exceeding 3,200 kilocalories per capita for its growing population. This transformation will ensure food and nutrition security, make farming profitable and sustainable, and position Indian agriculture as globally competitive. Policy interventions such as the Self-Reliance in Pulses Mission, the Pradhan Mantri Krishi Sinchayee Yojana, and the National Mission on Sustainable Agriculture represent important steps toward this vision. With strong policies, higher investment, innovation, and active participation of all stakeholders, agriculture can become a key driver of economic growth and rural prosperity, forming a strong foundation for a developed India by the centenary of independence. The path forward requires leveraging India's demographic dividend-with a median age of 29 years and a working-age population expected to reach 1.12 billion by 2047 (NITI Aayog, 2024) while addressing structural challenges through research, extension services, and technology adoption (Kumar and Mittal, 2021). Success will depend on maintaining sustained high growth rates and implementing comprehensive structural reforms across the agricultural value chain.

The transformation of Indian agriculture is crucial for achieving a Viksit Bharat by 2047. Although India has made steady progress over the past decades, clear gaps remain when compared with leading countries. To bridge these gaps, agriculture must shift from input-intensive to knowledge-based practices and from subsistence farming to sustainable, value-oriented systems. This requires improving productivity, expanding efficient irrigation, strengthening post-harvest and value-added infrastructure, building climate resilience, and empowering farmers through digital tools, fair pricing, skills development, and farmer organisations. By 2047, India can achieve higher crop yields, 75 percent irrigation coverage, and better food availability for its growing population. This transformation will ensure food and nutrition security, make farming profitable and sustainable, and position Indian agriculture as globally competitive. With strong policies, higher investment, innovation, and active participation of all stakeholders, agriculture can become a key driver of economic growth and rural prosperity, forming a strong foundation for a developed India by the centenary of independence.

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Financing India's Vision of Viksit Bharat @ 2047: Prospects and Constraints

Dr. Sagar Baburao Walvekar
Assistant Professor,
Kamala College Kolhapur

Dr. Pratap Namdev Khot
Assistant Professor,
Department of YCSR
Shivaji University, Kolhapur.

Abstract

The vision of **Viksit Bharat @ 2047** represents India's aspiration to emerge as a developed nation by the centenary year of its independence, with finance playing a central role in this transformation. This study examines the financial opportunities and challenges associated with achieving this vision by analyzing the role of the financial system in promoting economic growth, financial inclusion, and sustainable development. It highlights key opportunities such as the expansion of capital markets, growth of digital finance, financial inclusion initiatives, and increasing domestic savings, while also identifying major challenges including fiscal deficits, banking sector stress, unequal access to finance, financial literacy gaps, and emerging risks in digital finance. Based on secondary data and existing literature, the study emphasizes the need for strengthening financial institutions, enhancing regulatory frameworks, promoting sustainable and green finance, and improving financial literacy. The findings suggest that a strong, inclusive, and resilient financial system is essential for mobilizing resources, ensuring long-term stability, and supporting India's journey toward becoming a developed nation by 2047.

Key words: Financing, Viksit Bharat, Economic Growth Financial Inclusion and Sustainable Development etc.

Introduction:

The vision of **Viksit Bharat @ 2047** marks India's ambitious goal of transforming itself into a developed nation by the 100th year of its independence. This vision encompasses sustained economic growth, social inclusion, technological advancement, and institutional strength. Among all these dimensions, **finance plays a pivotal role**, as it acts as the backbone of economic development by mobilizing savings, facilitating investment, supporting entrepreneurship, and ensuring equitable distribution of resources. A strong and resilient financial system is therefore essential for realizing the dream of Viksit Bharat.

India's financial system has undergone significant transformation over the past few decades. Banking sector reforms, expansion of capital markets, financial inclusion initiatives, and the rapid growth of digital finance have strengthened the country's economic foundation. Schemes such as Pradhan Mantri Jan Dhan Yojana, direct benefit transfers, digital payment platforms like UPI, and the development of fintech ecosystems have improved access to financial services for millions of citizens. These developments have created enormous **financial opportunities**, including higher savings and investments, improved credit availability, enhanced transparency, and greater participation of households and businesses in formal finance.

At the same time, achieving the goals of Viksit Bharat @ 2047 presents several **financial challenges**. Persistent fiscal deficits, rising public debt, stress in the banking sector, unequal access to finance, and low levels of financial literacy in certain regions pose serious concerns. In addition, emerging risks such as cyber frauds, regulatory challenges in fintech, climate-related financial risks, and the need for large-scale infrastructure financing demand careful policy planning and effective financial

governance. Ensuring financial stability while promoting inclusive and sustainable growth remains a critical challenge for policymakers.

Furthermore, India's demographic advantage and growing aspirations require massive investments in infrastructure, education, healthcare, and green energy. Mobilizing long-term financial resources through capital markets, foreign investment, and innovative financial instruments will be crucial. At the same time, the financial system must remain inclusive, transparent, and resilient to shocks in an increasingly globalized economy.

In this context, the present study aims to examine the **financial opportunities and challenges associated with Viksit Bharat @ 2047**. By analyzing the role of finance in India's development journey, the study seeks to highlight how a robust and inclusive financial system can accelerate economic growth and support the realization of India's long-term developmental vision.

Review of Literature:

Government of India (2022) emphasized that achieving Viksit Bharat requires sustained economic growth supported by strong public finance and efficient financial institutions. The study highlighted the importance of infrastructure financing, fiscal discipline, and inclusive growth policies to achieve long-term development goals.

Rajan and Zingales (2003) examined the relationship between financial development and economic growth. Their findings suggested that a well-developed financial system improves capital allocation, promotes entrepreneurship, and accelerates economic development, which is crucial for India's 2047 vision.

Reserve Bank of India (2023) analyzed India's financial sector reforms and observed that digital finance and financial inclusion initiatives such as Jan Dhan–Aadhaar–Mobile (JAM) trinity have significantly improved access to financial services. However, the report also cautioned about rising cyber security risks and stressed the need for regulatory preparedness.

World Bank (2021) studied emerging economies and concluded that inclusive finance and strong capital markets are essential for sustainable development. The study highlighted challenges such as inequality in credit distribution and weak financial literacy as major obstacles to long-term growth.

Bhide (2018) analyzed India's banking sector challenges and noted that issues like non-performing assets (NPAs), governance concerns, and limited credit flow to MSMEs could hinder developmental goals unless structural reforms are strengthened.

Significance of the Study:

The present study is significant as it provides a comprehensive financial perspective on the vision of **Viksit Bharat @ 2047**, highlighting the crucial role of finance in achieving sustainable and inclusive economic development. By examining financial opportunities such as financial inclusion, digital finance, capital market development, and infrastructure financing, along with challenges like fiscal constraints, banking sector stress, and financial literacy gaps, the study offers valuable insights for policymakers, academicians, and students. The findings of this study can assist in formulating effective financial policies, strengthening institutional frameworks, and addressing existing weaknesses in the financial system, thereby contributing to

informed decision-making and supporting India's long-term goal of becoming a developed nation by 2047.

Statements of the Problem:

Despite significant progress in economic growth and financial sector reforms, India faces several financial challenges that may hinder the achievement of the vision of **Viksit Bharat @ 2047**. Issues such as persistent fiscal deficits, stress in the banking sector, unequal access to financial services, low levels of financial literacy, and emerging risks associated with digital finance continue to affect the efficiency and inclusiveness of the financial system. Additionally, the growing need for large-scale investment in infrastructure, education, healthcare, and sustainable development places considerable pressure on public and private financial resources. In this context, the problem addressed in the present study is to examine the existing financial opportunities and challenges and to assess whether the current financial system is adequately equipped to support India's transformation into a developed nation by 2047.

Objectives of the Study:

The specific objectives related to the title of the study are as follows:

1. To study the role of finance in achieving Viksit Bharat @ 2047.
2. To analyze the major financial opportunities available to India.
3. To examine the key financial challenges in the development process.
4. To suggest measures to strengthen the financial system for sustainable growth.

Results and Discussion:

1. Role of Finance in Achieving Viksit Bharat @ 2047

Finance plays a central and indispensable role in achieving the vision of Viksit Bharat @ 2047, as it acts as the backbone of economic growth and national development. A well-developed financial system enables the mobilization of domestic and foreign savings and ensures their efficient allocation towards productive sectors of the economy such as infrastructure, manufacturing, agriculture, education, healthcare, and technology. Without adequate financial resources and effective financial institutions, it would be difficult to achieve sustained economic growth and inclusive development required for India to become a developed nation by 2047.

1. Banking sector forms: The banking sector forms the core of India's financial system by providing credit to individuals, businesses, and the government. Commercial banks, cooperative banks, and regional rural banks support economic activities by offering loans, advances, and other financial services. Through priority sector lending and government-sponsored schemes, banks contribute significantly to financial inclusion and rural development. Access to affordable credit enables entrepreneurship, promotes MSME growth, and generates employment, which are crucial for inclusive economic progress under the Viksit Bharat vision.

2. Capital markets: Capital markets also play a vital role in achieving long-term development goals by mobilizing large-scale funds for infrastructure and industrial growth. Equity markets facilitate capital formation, while bond markets provide long-term financing for government and corporate projects. A strong and transparent capital market attracts domestic and foreign

investors, enhances market efficiency, and supports innovation and industrial expansion. These functions are essential for financing large infrastructure projects and technological advancements necessary for sustainable growth.

3. Digital finance: In recent years, digital finance has emerged as a powerful tool in strengthening India's financial ecosystem. Initiatives such as the Jan Dhan–Aadhaar–Mobile (JAM) trinity, Unified Payments Interface (UPI), and direct benefit transfers have expanded access to financial services, reduced transaction costs, and improved transparency. Digital financial platforms have made banking and payment services accessible even in remote areas, thereby supporting inclusive growth and economic participation.

4. Public finance and fiscal policy: Public finance and fiscal policy further influence the achievement of *Viksit Bharat @ 2047*. Efficient tax systems, prudent government expenditure, and effective public debt management are essential for maintaining fiscal stability while funding development initiatives. Public investment in infrastructure, education, healthcare, and social welfare, supported by sound financial management, contributes to human capital development and long-term economic resilience.

Overall, the study indicates that finance serves as a catalyst for economic transformation and social development. A strong, inclusive, and resilient financial system is fundamental to achieving the objectives of *Viksit Bharat @ 2047*. Strengthening financial institutions, expanding financial inclusion, deepening capital markets, and promoting digital and sustainable finance will play a decisive role in shaping India's journey toward becoming a developed nation by the centenary of its independence.

2. Major Financial Opportunities Available to India

India possesses a wide range of financial opportunities that can significantly contribute to achieving the vision of *Viksit Bharat @ 2047*. One of the most important opportunities lies in the country's strong and growing domestic savings base. With a large population and increasing income levels, India has the potential to mobilize household savings through formal financial channels such as banks, mutual funds, insurance, and pension schemes. Effective mobilization of these savings can provide substantial resources for investment in infrastructure, industry, and social development.

Another major financial opportunity is the continued expansion and deepening of India's capital markets. The growth of equity markets, corporate bond markets, and alternative investment instruments offers avenues for long-term financing of large-scale development projects. A well-regulated and transparent capital market attracts both domestic and foreign investors, thereby enhancing capital formation. Foreign direct investment and portfolio investment provide access to global capital, advanced technology, and managerial expertise, further supporting economic growth.

Digital finance and fintech innovations represent a transformative opportunity for India's financial sector. The rapid adoption of digital payment systems such as UPI, mobile banking, and fintech platforms has improved efficiency, reduced transaction costs, and expanded financial access. These developments support financial inclusion by bringing unbanked and underbanked populations into the formal financial system. Digital finance also enhances transparency and supports better policy implementation through real-time financial data.

Financial inclusion initiatives provide another significant opportunity for inclusive growth. Government programs aimed at expanding banking services, credit access, insurance coverage, and pension schemes have empowered economically weaker sections of society. Improved access to finance

enables entrepreneurship, particularly among MSMEs, women, and rural populations, leading to employment generation and balanced regional development.

Sustainable and green finance has emerged as an important opportunity in India's development journey. Increasing investments in renewable energy, climate-resilient infrastructure, and environmentally sustainable projects align financial growth with long-term ecological goals. Green bonds and sustainable finance instruments can mobilize funds while addressing environmental challenges.

Overall, these financial opportunities—ranging from savings mobilization and capital market growth to digital finance and sustainable investments—provide a strong foundation for India's transformation into a developed nation by 2047. Strategic utilization of these opportunities can accelerate economic growth, promote inclusiveness, and ensure long-term financial stability.

3. Key financial challenges in the development process

The study highlights several financial challenges that may impede the realization of Viksit Bharat @ 2047. Persistent fiscal deficits, rising public debt, and stress in the banking sector, particularly due to non-performing assets, remain major concerns. In addition, unequal access to credit, low levels of financial literacy, and regional disparities limit the effectiveness of financial inclusion efforts. Emerging challenges such as cyber security risks and regulatory issues in digital finance further complicate the financial landscape, requiring proactive policy responses.

4. Suggest measures to strengthen the financial system for sustainable growth

Based on the analysis, the study suggests that strengthening regulatory frameworks, improving financial literacy, and enhancing credit flow to priority sectors such as MSMEs and agriculture are essential for sustainable growth. Promoting long-term financing through capital markets, encouraging green and sustainable finance, and ensuring robust cyber security measures can further enhance financial resilience. Coordinated efforts by the government, financial institutions, and regulators are necessary to build a strong, inclusive, and sustainable financial system aligned with the vision of Viksit Bharat @ 2047.

Findings of the Study

1. Finance plays a critical role in supporting economic growth and inclusive development for achieving Viksit Bharat @ 2047.
2. Digital finance and financial inclusion initiatives have significantly expanded access to formal financial services.
3. Capital markets provide important opportunities for mobilizing long-term investment funds.
4. Banking sector challenges such as NPAs continue to affect credit availability.
5. Fiscal constraints and financial literacy gaps remain major obstacles to sustainable growth.

Suggestions

1. Strengthen banking sector reforms to improve credit flow and reduce NPAs.
2. Enhance financial literacy programs, especially in rural and underserved areas.
3. Promote long-term financing through capital markets and infrastructure bonds.
4. Support digital finance with strong cyber security and regulatory frameworks.
5. Encourage sustainable and green finance to ensure balanced long-term development.

Conclusion:

The vision of Viksit Bharat @ 2047 can be realized only through a strong, inclusive, and resilient financial system that supports sustainable economic growth and social development. The study highlights that while India has significant financial opportunities in the form of expanding capital markets, digital finance, financial inclusion, and a growing savings base, several challenges such as banking sector stress, fiscal constraints, and financial literacy gaps must be effectively addressed. By strengthening financial institutions, promoting inclusive and sustainable finance, and adopting sound regulatory and policy

measures, India can efficiently mobilize financial resources and ensure long-term stability. A well-coordinated financial strategy will play a decisive role in transforming India into a developed nation by 2047.

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भारतातील लिंग समानता आणि महिला सक्षमीकरणातील खेळाची भूमिका

लेफ्टनंट ज्योती विशाल लेंगरे

शारीरिक शिक्षण संचालिका,

कमला कॉलेज, कोल्हापूर

Mail Id. - jlengare09@gmail.com

गोषवारा :-

महिला सक्षमीकरण एक व्यापक प्रक्रिया आहे ज्यामध्ये महिलांना त्यांच्या हक्कांचा, अधिकारांचा आणि कर्तव्यांचा समज देणे, त्यांना निर्णय घेणाऱ्या प्रक्रियेत भाग घेण्याची संधी देणे, आणि त्यांच्या जीवनशैलीत सुधारणा घडवून आणणे याचा समावेश होतो. महिलांना त्यांच्या अधिकारांची, स्वायत्ततेची आणि समान संधींची ओळख करून देणे हे समाजाच्या प्रगतीसाठी आवश्यक आहे. भारतामध्ये लिंग समानता आणि महिला सक्षमीकरण हे अत्यंत महत्त्वाचे सामाजिक आणि सांस्कृतिक मुद्दे आहेत. परंपरेने महिलांना समाजातील दुय्यम स्थान दिले आहे आणि त्यांना अनेक क्षेत्रांमध्ये पुरुषांच्या तुलनेत कमी संधी मिळाल्या आहेत. तथापि, आधुनिक काळात महिलांनी विविध क्षेत्रांत आपली छाप सोडली आहे, आणि त्यापैकी एक महत्त्वाचे क्षेत्र म्हणजे क्रीडा. खेळ केवळ शारीरिक क्षमता वर्धित करण्याचे साधन नाही, तर महिलांच्या आत्मविश्वास, मानसिक मजबुती आणि समाजातील स्थान सुधारण्यासाठी एक शक्तिशाली माध्यम आहे. महिलांनी आपले स्थान सिद्ध केले असून, हे क्षेत्र महिला सक्षमीकरणासाठी एक महत्त्वाचे व्यासपीठ बनले आहे. खेळामध्ये महिलांना केवळ शारीरिकच नव्हे, तर मानसिक आणि सामाजिक पातळीवरही सशक्त बनविण्याची क्षमता आहे. महिलांना विविध खेळांमध्ये सहभागी होण्यासाठी प्रेरित करणे, त्यांच्या सक्षमीकरणाच्या प्रक्रियेला चालना देऊ शकते, कारण खेळ त्यांना नेतृत्व, सहकार्य, आत्मविश्वास, आणि आव्हानांना सामोरे जाण्याची क्षमता निर्माण करतो.

बीज शब्द :-

महिला, सक्षमीकरण, खेळ, क्रीडा, शारीरिक, मानसिक, सामाजिक, लिंग समानता

प्रस्तावना :-

लिंग समानता आणि महिला सक्षमीकरण ही आधुनिक भारताच्या प्रगतीसाठी अत्यंत महत्त्वाची उद्दिष्टे आहेत. समाजात महिलांना पुरुषांच्या बरोबरीने संधी देणे आणि त्यांची क्षमता ओळखून त्यांना पुढे येण्यास प्रवृत्त करणे हे केवळ न्याय्य नाही, तर देशाच्या सर्वांगीण विकासासाठी आवश्यक आहे. या संदर्भात, खेळ हे एक प्रभावी साधन ठरू शकते. खेळ केवळ शारीरिक तंदुरुस्ती आणि मनोरंजनापुरते मर्यादित नसून ते आत्मविश्वास वाढवतात, नेतृत्वगुण विकसित करतात आणि सामाजिक अडथळे दूर करण्यास मदत करतात. भारतीय महिला खेळाडूंनी राष्ट्रीय आणि आंतरराष्ट्रीय स्तरावर लक्षणीय कामगिरी करून सिद्ध केले आहे की, त्यांनी दिलेल्या संधींचा योग्य वापर केला तर त्या कोणत्याही क्षेत्रात उत्कृष्टता प्राप्त करू शकतात. खेळामुळे

महिलांमध्ये आत्मविश्वास वाढतो, त्यांना शारीरिक आणि मानसिक बळ मिळते आणि समाजात त्यांना स्वतंत्र ओळख मिळते. भारतीय महिला खेळाडूंनी आंतरराष्ट्रीय स्तरावर आपले नाव कोरले असून सानिया मिर्झा, पी. व्ही. सिंधू, मिताली राज, मेरी कोम, स्मृती मानधना, मनु भाकर, गीता फोगाट यांसारख्या खेळाडूंनी आपल्या कर्तृत्वाने महिलांसाठी नवीन वाटा खुल्या केल्या आहेत. मात्र, अजूनही समाजात महिलांना खेळाच्या क्षेत्रात अनेक अडचणींचा सामना करावा लागतो. अजूनही अनेक सामाजिक बंधने, पूर्वग्रह आणि संसाधनांची कमतरता यामुळे महिलांना खेळाच्या क्षेत्रात अनेक अडचणींचा सामना करावा लागतो.

व्याख्या :-

- **लिंग समानता :-**

"लिंग समानता म्हणजे पुरुष आणि स्त्रियांना समान हक्क, संधी आणि संसाधनांमध्ये प्रवेश असणे, तसेच समाजाच्या सर्व क्षेत्रांमध्ये समान सहभाग मिळणे."

— संयुक्त राष्ट्र संघ (United Nations)

"लिंग समानता ही केवळ नैतिक गरज नसून, ती सामाजिक आणि आर्थिक प्रगतीसाठी आवश्यक आहे. महिलांना समान संधी मिळाल्यास समाजाचा विकास अधिक गतीने होतो."

— अमर्त्य सेन (Amartya Sen)

- **महिला सक्षमीकरण :-**

"स्त्री नावाचा भारतीय समाजातील जो घटक आहे त्याला आपल्या जीवनात सर्व क्षेत्रात आपल्या सुप्त क्षमता प्रत्यक्ष वापरता येतील असा समाज निर्माण करणे म्हणजे सबलीकरण होय."

— (डॉ. विलास आढाव , 2009)

"महिलांना त्यांच्या वैयक्तिक वाढीसाठी आणि विकासासाठी सक्षम बनवणे तसेच स्वावलंबी बनवणे आणि आर्थिक दृष्ट्या स्वतंत्र्य होण्यासाठी प्रोत्साहित करणे म्हणजे महिला सक्षमीकरण होय."

खेळामुळे होणारे महिलांचे सक्षमीकरण

खेळ महिलांसाठी केवळ शारीरिक क्षमता वाढवण्याचे माध्यम नाहीत, तर ते मानसिक, सामाजिक आणि भावनिक दृष्टिकोनातून देखील सक्षमीकरणासाठी महत्त्वाचे असतात. खेळांमधून महिलांना मिळणारे फायदे थोडक्यात मांडले आहेत:

1. शारीरिक सक्षमीकरण :

- **शारीरिक स्वास्थ्य आणि ताकद :**

खेळामुळे महिलांचे शारीरिक स्वास्थ्य सुधारते. नियमित क्रीडाप्रवृत्तींमुळे हृदयरोग, डायबिटीस, आणि अन्य शारीरिक समस्या कमी होतात. जिम्नॅस्टिक्स, बास्केटबॉल, आणि अॅथलेटिक्स सारख्या खेळांमध्ये महिलांना ताकद, स्टॅमिना, आणि चपळतेचा विकास होतो.

- शरीराची लवचिकता आणि नियंत्रण :

खेळांमुळे शरीर अधिक लवचिक, मजबूत आणि तंदुरुस्त होते. महिलांना आपल्या शरीरावर अधिक नियंत्रण मिळवण्यास मदत होते, ज्यामुळे त्यांची जीवनशैली सुधारते.

- स्वास्थ्याचे महत्त्व :

खेळांमुळे महिलांना स्वतःच्या शरीराची आणि स्वास्थ्याची काळजी घेण्याची सवय लागते. त्यांना नियमित व्यायाम करण्याची प्रेरणा मिळते, जे त्यांच्या मानसिक आणि शारीरिक आरोग्यासाठी अत्यंत महत्त्वाचे आहे.

2. मानसिक सक्षमीकरण :

- आत्मविश्वास आणि आत्म-सन्मान :

खेळ महिलांना आपल्या क्षमतेवर विश्वास ठेवायला शिकवतात. अनेक खेळांसाठी शारीरिक आणि मानसिक तयारी आवश्यक असते, ज्यामुळे महिलांचे आत्मविश्वास वाढतो. एक खेळाडू म्हणून त्यांना आपली क्षमता सिद्ध करण्याची संधी मिळते.

- निराशा आणि दबावाशी सामना :

स्पर्धात्मक खेळांमध्ये महिलांना पराभवांचा सामना करावा लागतो, आणि यामुळे ते संघर्ष सहन करण्याची क्षमता विकसित करतात. यामुळे त्यांची मानसिक दृढता आणि समस्या सोडवण्याची क्षमता वाढते.

- सकारात्मक मानसिकता आणि प्रेरणा :

खेळांमुळे महिलांना एकाग्रता, धैर्य, आणि सकारात्मक मानसिकता विकसित करणे सोपे जाते. उच्च प्रतिस्पर्धात्मक वातावरणामध्ये महिलांना टिकून राहण्यासाठी मानसिक शिस्त आणि ताणतणावाचा सामना करणे शिकवले जाते.

3. नेतृत्व आणि निर्णयक्षमता :

- खेळांमधून महिलांना नेतृत्वाची भूमिका निभावण्याची संधी मिळते. टीम स्पोर्ट्समध्ये महिलांना सामूहिक निर्णय घेणे, समस्यांचे निराकरण करणे, आणि नेतृत्व सुलभपणे शिकता येते.
- महिलांना विविध क्रीडाप्रकारांमध्ये प्रगती आणि नेतृत्वाची संधी मिळवून, ते त्यांच्या जीवनातील इतर क्षेत्रांमध्येही निर्णय घेण्याची क्षमता आणि आत्मनिर्भरता विकसित करतात.

4. सामाजिक सक्षमीकरण :

- खेळ महिलांना समाजात उच्च स्थान मिळवण्यासाठी प्रेरित करतात. जेव्हा महिलांचा क्रीडांमध्ये सहभाग वाढतो, तेव्हा ते समाजाच्या रूढीवादी आणि पारंपरिक धारणांमध्ये बदल घडवू शकतात.

- खेळांमधून महिलांचा सहभाग समाजाच्या रूढीवादी धारणांना आव्हान देतो. महिला खेळाडू आपल्या समाजात पिढ्यानपिढ्या आलेल्या असमानतेच्या भिंती तोडतात आणि समाजात महिलांच्या भूमिकेचा पुनर्विचार करतात.
- खेळ महिलांना आत्मनिर्भर, स्वावलंबी आणि सशक्त बनवतात, ज्यामुळे समाजात त्यांची आवाज अधिक प्रभावी होतो.

खेळ आणि भारतातील लिंग समानता

भारतामध्ये लिंग समानतेचा मुद्दा महत्त्वाचा आहे, आणि खेळांच्या संदर्भात देखील हा मुद्दा महत्त्वाचा ठरतो. खेळ महिलांना समान संधी देण्याचे एक प्रभावी साधन ठरू शकतात. परंतु, इतिहासानुसार आणि समाजातील रूढीवादी विचारधारांनुसार, महिलांसाठी खेळांमध्ये समानता साधण्यात अनेक आव्हाने आली आहेत. तरीही, खेळांच्या माध्यमातून लिंग समानता साधण्यासाठी अनेक महत्त्वपूर्ण बदल घडवले जात आहेत.

- खेळ महिलांना शारीरिकदृष्ट्या सक्षम बनवतात. त्यांचे शारीरिक आरोग्य, ताकद सुधारते, जे त्यांना आत्मनिर्भर बनवते.
- खेळांच्या माध्यमातून महिलांना समान स्थान मिळवण्याची संधी मिळते. यामुळे समाजाच्या रूढीवादी विचारधारेला आव्हान दिले जाते आणि लिंग आधारित भेदभाव कमी होतो.
- महिलांचा क्रीडामध्ये सहभाग, त्यांना पुरुषांशी समान पातळीवर स्पर्धा करण्याची संधी देते आणि समाजात महिलांच्या भूमिका बदलते.
- महिलांना उच्च क्रीडा संधी मिळाल्यास त्यांचा आत्मविश्वास वाढतो आणि त्यांना स्वतःच्या क्षमतेवर विश्वास ठेवता येतो.
- मानसिक दृष्टिकोनातून देखील, खेळ महिलांना धैर्य, आत्मविश्वास, आणि समस्यांना सामोरे जाण्याची क्षमता विकसित करण्यास मदत करतात.
- खेळांमध्ये भाग घेणाऱ्या महिलांना नेतृत्व क्षमता आणि निर्णयक्षमता विकसित करण्याची संधी मिळते. यामुळे त्या नुसत्या क्रीडेतच नाही, तर इतर जीवनातील क्षेत्रांमध्ये देखील अधिक प्रभावी होतात.
- खेळ लिंग समानतेच्या दृष्टीने एक अत्यंत प्रभावी साधन आहेत. महिलांना समान संधी, प्रोत्साहन, आणि प्रशिक्षण मिळाल्यास, ते खेळांमध्ये पुरुषांशी समतेच्या पातळीवर येऊ शकतात, ज्यामुळे समाजातील लिंग भेदभाव कमी होईल आणि महिलांच्या सक्षमीकरणाला चालना मिळेल.

महिला क्रीडा क्षेत्रातील महत्वाचे उदाहरण

- सायना नेहवाल आणि पी. व्ही. सिंधू :-

सायना नेहवाल आणि पी. व्ही. सिंधू या भारतीय बॅडमिंटन खेळाडूंच्या यशाने भारतात महिला क्रीडाच्या क्षेत्रात एक नवा प्रपंच सुरू केला आहे. या दोघी खेळाडूंनी जागतिक पातळीवर भारताचे नाव गाजवले आहे, ज्यामुळे बॅडमिंटनसारख्या खेळांमध्ये महिलांचा सहभाग मोठ्या प्रमाणावर वाढला आहे.

- मीराबाई चानू :-

मीराबाई चानू ही भारतीय वेटलिफ्टिंग खेळाडू आहे जिने २०२० च्या टोकियो ऑलिंपिकमध्ये रौप्य पदक जिंकले. तिच्या यशामुळे वेटलिफ्टिंगमधील महिलांचा सहभाग आणि त्यातील महिलांचे यश वाढले आहे.

- महिला क्रिकेट संघ :-

महिला क्रिकेट संघाने अलीकडेच मोठे यश मिळवले आहे, विशेषतः २०२० च्या महिला T-20 वर्ल्ड कपमध्ये. यामुळे महिला क्रिकेटचा स्तर उंचावला आहे आणि अनेक मुलींना क्रिकेट खेळण्याची प्रेरणा मिळाली आहे.

कबड्डी, कुस्ती, नेमबाजी, तलवारबाजी इत्यादी क्रीडा प्रकारातील महिला खेळाडूंची अशी बरीच उदाहरणे देता येतील की ज्याच्यातून महिला सक्षमीकरण झालेले दिसून येईल. मात्र तरी देखील अजूनही महिलांना काही आव्हानांना तोंड द्यावे लागते आहे. ज्यावर काम करून अधिक समानता साधता येईल.

आव्हाने :-

- महिलांसाठी खेळांच्या सुविधांची कमतरता.
- समाजात महिलांच्या खेळांबद्दल असलेली नकारात्मक मानसिकता.
- सरकारी आणि खासगी क्षेत्रांमध्ये महिला खेळाडूंसाठी कमी गुंतवणूक.

उपाय :-

- महिला खेळाडूंना अधिक शारीरिक आणि मानसिक समर्थन मिळवून देणे.
- क्रीडा क्षेत्रात समान संधी उपलब्ध करणे.
- महिला क्रीडापटूंसाठी सरकारच्या विविध योजनांची अंमलबजावणी करणे.

निष्कर्ष :-

भारतामध्ये खेळ हे लिंग समानता आणि महिला सक्षमीकरणाच्या दृष्टीने महत्त्वपूर्ण अंग बनले आहे. खेळांच्या माध्यमातून महिलांना सशक्त बनवण्याचे कार्य मोठ्या प्रमाणावर सुरू आहे, आणि यामुळे समाजात महिलांची भूमिका अधिक महत्त्वपूर्ण झाली आहे. तथापि, अजूनही महिलांसाठी अधिक समान संधी, सुविधा आणि समर्थन आवश्यक आहे. महिलांना खेळांमध्ये अधिक संधी देणे, त्यांना योग्य प्रशिक्षण आणि प्रायोजकांसह मदत करणे हे लिंग समानता आणि महिला सक्षमीकरणाच्या दिशेने महत्त्वपूर्ण पाऊल ठरू शकते.

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Library Referral Service

Rajendra S. Savekar

Librarian,

Dr. Ghali College, Gadhinglaj, Dist. Kolhapur

Rajendrasavekar76@yahoo.in

Mob.9403452999

Abstract

In the 21st century, the explosion of information, technological advancement, massive creation of digital resources and the diverse and complex information needs of users have made the need for referral services in libraries more urgent than ever. Today, information is not available from just one library but is available from the collections of various databases, institutions, research networks, open access information sources and digital repositories globally. Therefore, it becomes time-consuming and laborious for the user to find out the information which is available in various format and in various places. In this situation, referral services guide the user to get the right information from the right expert and from the right database or from the right library in quick time. Now-a-days it is essential to obtain up-to-date and accurate information in various fields such as research, higher education, medicine, law, engineering, and science to fulfil the needs of all type of users. In obtaining such type of information crucial role has been played by reference services.

Key Words:

Library guidance service, Reference service, Difference between Reference service and guidance service, Types of library guidance service, Role of librarian in providing Referral Service.

Introduction :

It is a service that provides the necessary information to the user seeking information by directing them to the right source, institution or person. In this service, the librarian does not provide the information himself, but guides them on where to get the information, from whom to get it, or from what to get it. This reduces the time, effort and cost of searching for information for the users.

Difference between Reference Service and Referral Service

Reference Service - According to the definition given by Dr. S. R. Ranganathan, reference service is a personal service provided to the reader to search for books and reading materials in order to get the information he needs accurately, completely and promptly. Whereas Library Direction / Referral Service is a service where the librarian does not provide the information he needs, but guides the user as to where the information can be found. e.g, "This subject is not in our library, but information about it can be found in XYZ database or ABC University."

In reference service, information is provided directly whereas in direction service, it is directed to the source/institution of information. In reference service, resources are available in

the same library whereas in direction service, information is provided directly. Resources may be elsewhere. In reference services, accurate, complete information is provided immediately, while in guidance services, it requires coordination with other information sources and organizations. While the scope of reference services is limited, the scope of guidance services can be broad and global.

Types of Library Referral Service

Library Directional Referral Service: This is where the user is given directions to find books, departments, catalogues, databases, or other services. For example, telling them that the children's reading department is on the 2nd floor, or telling them that the electronic department's database login is available.

- **Subject Referral:** This provides information to the researcher regarding appropriate subject resources/institutions as well as subject-specific groups to obtain information on a specific subject. For example, suggesting IEEE Xplore for research literature on earthquake engineering, ASCE database for civil engineering information.

- **Expert Referral Service:** In this, the student is referred to a professor/ researcher/ organization for guidance in a specific subject. Specialist

- For example, providing a law student with access to legal experts and the National Law University, or providing more information on the subject of Genetics. For information, please contact Dr. Professor

- **Institutional Referral:** This refers the learner to an institution that has the necessary information or services. For example, information can be found at the National Intellectual Property Office for patent searches, historical manuscripts are available at the Asiatic Society Library.

- **Web-based Referral Service**

In this, the researcher is directed to find and access online sources, databases, e-journals as per his/her requirement. For example, providing links to Scopus, Web of Science, JSTOR.

- **Database Referral Service** refers the researcher to available online and offline databases. For example, EBSCO Business Source for management, PubMed for medical science, Springer / Science Direct for physics, etc.

- **Consortia Referral:** If the required article is not available in the library, it is directed to the member library of the consortium. For example, INFLIBNET N-List, e-ShodhSindhu etc. Open Access Referral service helps the researcher to find the required article.

It is directed to the educational resources and databases available online for free. e.g. NDL, DOAJ, PubMed Central, Shodhganga Information Network Referral Service Interlibrary/ Network Referral)- It is directed to the interlibrary network available to the researcher to get the required information. e.g. DELNET / INFLIBNET / WorldCat /British Library Consortium Artificial Intelligence Smart Guide Service (AI & Digital Referral):

AI analyzes the information needs of the learner and guides them to relevant books, research papers, databases or experts. Artificial Intelligence (AI) makes modern library guidance

services fast, accurate and personalized. Using natural language processing (NLP) and machine learning, AI systems understand the user's topic and suggest appropriate resources. AI chatbots also provide 24x7 referral services. For example, Google Scholar or Semantic Scholar suggest relevant articles, authors, research institutions and databases based on the user's search terms.

Special Collection Referral Service: This provides information to the researcher about the location of rare books, manuscripts, archives/collections. For example, providing information that maps before 1920 are available in the National Archives of India, Revision Guidance) Research Referral Service)

It directs researchers to experts in their field, institutions or specialized information centres, e.g. referring pharmacy researchers to NIPER libraries or chemistry researchers to CSIR institutes.

E-Governance and Public Information Direction Services:

This includes Public libraries direct citizens, students or farmers to government services/schemes/document sources. For example, providing information to farmers about "Agricultural Science Centres" or government portals.

Career and Employment Guidance Services: Libraries provide information to students on appropriate sources of information for competitive exams or employment. For example, providing information as per the need of MPSC, UPSC, NCS, NMK portal, etc. The role of librarians in providing guidance services as mentioned above is very important. The librarian has to identify the needs of the student for accurate information, keep the information of available and external information resources up to date, maintain contact with the network and partner libraries, responsibly suggest true and reliable sources to the student, and also inform the student how to find the perfect information himself. For this, the librarian is expected to play the following role.

Role of the librarian

Information Navigator: Today information is available in numerous places like print, digital, online databases, open access sources etc. Librarian should help the user to reach the right, reliable and up-to-date information. The user should be taught "where and how to search",

Digital Resource Advisor: The librarian should inform the user about e-journals, e-books online databases, open access repositories. The users should be guided in database search strategies, keyword usage, filtering, etc. They should be introduced to resources like DOI, ORCID, Google Scholar, Scopus.

Collaboration & Networking Facilitator: The librarian is expected to liaise with other libraries, information centres, research institutes and provide references to the users. They should be provided with information through networks like Inter-Library Loan (ILL), DELNET, INFLIBNET, e-ShodhSindhu etc.

Tech-Savvy Professional: Librarians should teach users how to use tools like ChatGPT, AI-Search, Semantic Scholar, Zotero, Mendeley.

Guidance should be provided using digital referral systems. Online referral services, e-mail/chat referral services should be provided.

Information Literacy Educator: Librarians are expected to teach students information search, evaluation, and use skills. Raise awareness about "Which sources should we trust?" Provide training to protect against misinformation/disinformation.

User-Centric Service Provider: Librarians should suggest specific resources according to the user's subject, course or research area. Create personalized referrals. E.g. specific databases for researchers, e-library links for students, etc.

Maintaining the Human Element : Even as technology advances, human interaction remains essential. The main function of a librarian remains to provide compassionate guidance to the user as per their needs. Benefits of Guidance Services

- Saves time and the user gets the right resource instantly.
- Research is accelerated by the early availability of appropriate resources.
- Information literacy increases as you become aware of where, how, and from whom you obtain information.
- Social and academic networking increases the contact between researchers and practitioners.
- The user is guided directly to the most appropriate source of the required information.
- Information not available in libraries can also be obtained through collaboration with other institutions.
- It is easier for researchers and students to connect with subject matter experts and institutions.
- Inter-library collaboration and resource sharing are strengthened.
- Consortia and digital networks can be used effectively.
- The user's ability to find information and confidence increases.
- The opportunity to make rare and research-based information available increases.
- The service increases user satisfaction and trust in the library.
- Library information centres enjoy a reputation as centres of knowledge exchange.

Conclusion :

The creation, production and use of information in the current era is increasing rapidly. Libraries are no longer just institutions for storing information, but have become competent guiding institutions that deliver the right information to the right user at the right time. Librarians are not the repository of information.

So, the role of Information Linker has been established. To identify the information needs of users and guide them to the right library, expert, database or research centre and to assist them in obtaining information by providing appropriate contact information, prompt response and personal assistance, librarians need to learn new technical skills and strengthen relationships with library users with humility, patience and a spirit of cooperation.

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Artificial Intelligence and Machine Learning for National Development : Innovation, Opportunities, and Challenges

Mr. Ashish V. Ghate

Department of Electronics,
Shivaji University, Kolhapur- 416004
ashishghate123@gmail.com

Dr. Santosh A. Shinde

Department of Electronics,
Shivaji University, Kolhapur- 416004
ashishghate123@gmail.com

Abstract

In many countries, artificial intelligence (AI) and machine learning (ML) have become important policy goals, contributing significantly to national development. Important industries like education, economic expansion, healthcare, infrastructure, agriculture, manufacturing, and urban development are all benefiting from these technologies. AI is being used by governments more and more to improve public service productivity, responsiveness, and accountability. AI and ML have become vital parts of contemporary economies despite worries about labor displacement because they increase productivity, promote innovation, and open up new job opportunities through automation and process optimization. AI-enabled personalized learning solutions in the education sector give students the skills they need to succeed in a technologically advanced economy, creating a workforce that is more flexible and prepared for the future. Through predictive analytics and data-driven decision-making, advances in AI and ML in healthcare enable individualized treatment plans, precision diagnostics, and better public health outcomes. Additionally, by facilitating effective resource management, sustainable environmental practices, resilient infrastructure planning, and intelligent transportation systems, AI-driven models enhance smart city initiatives.

This paper also examines opportunities, technical challenges, and ethical considerations associated with AI-ML deployment. The appropriate and responsible adoption of AI and ML technologies has the potential to enhance social welfare, stimulate economic development, and contribute significantly to sustainable national growth.

I. Introduction

A technology known as artificial intelligence (AI) makes it possible for computers and other devices to carry out tasks that normally call for human intelligence. Alan Turing, a pioneer in computing, initially put up the idea of a "thinking machine" that might mimic human cognitive functions. This idea served as the basis for contemporary artificial intelligence. AI enables systems to see patterns in data, learn from them, and make well-informed judgments to solve challenging issues. It depends on sophisticated algorithms that can evaluate big datasets, adjust to new data, and continuously enhance performance with practice.

Machine Learning (ML), a subset of AI, focuses on developing systems that can automatically learn from data and make decisions with minimal human intervention. India is on the verge of a new era of innovation and expansion because to the revolutionary technological transformation being driven by AI and ML. AI is no longer limited to research labs in today's world; it has invaded almost every facet of citizens' life, improving the efficiency, intelligence, and interconnectedness of routine tasks.

National initiatives such as the IndiaAI Mission and the establishment of Centers of Excellence for AI are central to this transformation. ML plays a critical role in unlocking the value of data by enabling high-impact automation, improving predictive capabilities for decision-

making, enhancing citizen query services, and fostering innovative public services through its ability to process high-dimensional and unstructured data.

It is anticipated that by 2026, AI and ML would be firmly ingrained in many Indian businesses, fostering innovation, increasing productivity, and creating new opportunities for social and economic advancement. The paper "AI for Inclusive Societal Development" (October 2025) by NITI Aayog, which emphasizes the potential of AI to increase access to financial inclusion, education, healthcare, and skill development for India's over 490 million informal laborers, reflects this inclusive vision. The paper underlines that AI-powered solutions can greatly boost resilience and productivity for millions of individuals who comprise the backbone of India's economy.

II. Role of AI-ML in Nation Development



Healthcare –

Advancements in medical imaging and analysis of data in the early 2000s marked the beginning of the use of AI in healthcare, as computer models began to help with disease diagnosis. Inclusion of AI-ML in healthcare applications helps to countries with middle income where there is resource deficiency. AI algorithms are capable of reading images which helps in analyzing images like X-ray film, CT scan reports, MRI and detects diseases faster and accurately. ML algorithms can study several sources of data like medical reports, specific environmental information to find out disease pattern. AI-powered devices, such as the FDA-approved IDx DR system, may identify diabetic retinopathy on their own. Predictive analytics is another crucial application of AI in public health that goes beyond diagnosis and therapy. We may anticipate even more advanced AI uses in healthcare by 2026, like robotic surgery and medication development driven by AI.

Finance (Economic Growth) –

Artificial intelligence (AI) is becoming more and more important in promoting economic expansion and industry-wide innovation. AI is revolutionizing company operations by automating difficult jobs, streamlining procedures, and extracting insights from data, all of which boost productivity and efficiency. Fraud detection, risk management, and individualized financial advising are all being handled by AI-powered systems. Large volumes of financial data are being analyzed by machine learning algorithms to find trends that can aid investors in making wiser choices. Chatbots with AI capabilities are giving clients immediate help and support. AI is used by the retail sector to manage inventory, optimize supply networks, and examine customer behavior.

Education Sector –

Through the creation of individualized learning experiences, the provision of interactive

materials, and the alignment of skill development with future job market demands, artificial intelligence is transforming education. AI-ML can help in adaptive learning platforms to modify course material according to a student's development and understanding, which helps students to work through difficult content at their own speed. AI driven teaching and practice technology can give real world experience in areas like software development, data analysis to improve practical skills. Software's like IBM SkillsBuild, TalentMS, 360 learning are useful to improve productivity and improve retention. AI will be a major factor in raising the standard and accessibility of education in India by 2026.

Agriculture –

AI and ML have the ability to completely transform Indian agriculture by increasing crop yields and maximizing resource use. AI-powered systems are analyzing crop health, soil conditions, and weather patterns to give farmers useful information. AI helps in crop yield improvement by real-time advise, sophisticated insect attack detection, and crop price forecast to guide sowing techniques are a few examples of application cases.

Weather Forecasting –

AI is improving a country's capacity to anticipate and react to natural disasters. AI-based models are used by the India Meteorological Department to predict lightning, rainfall, fog, and fire. Instead of traditional numerical weather prediction (NWP) method AI and ML algorithm handles huge data, processes it faster. This helps with early predictions. Data visualization using AI tools is easy with heavy data.

II. Risk Factors

Data privacy is main concern as in above processes huge data will be handled and it would have collected from numerous applications and may be collected unknowingly. For example, AI systems in surveillance can gather personal data without explicit consent, posing ethical concerns about data security. The complexity of AI systems makes it harder to understand how they make certain decisions, which might impede accountability, especially in high-stakes fields like criminal justice or healthcare. Furthermore, biases in AI algorithms increase the possibility of unjust or discriminating results. Another significant issue is the opaqueness of AI decision-making as it will work on data supplied. Automation powered by AI also raises the possibility of job displacement, particularly in industries where routine operations might be completely automated. Strong regulatory structures that guarantee accountability, justice, and transparency are necessary to overcome these issues.

III. Conclusion

India's artificial intelligence path demonstrates a clear vision and swift execution. The goal of delivering high-quality healthcare or education cannot be achieved using traditional means. India has the chance to use AI technology to address some of its most pressing issues, like the lack of healthcare facilities, the poor quality of education, the financial system, etc.

India is one of the world's top three hotspots for startups. A national AI program will inspire these creative thinkers to collaborate on ideas and help construct a new, technologically driven India. In addition to promoting research, skills, and entrepreneurship, strategic programs like the IndiaAI Mission, NITI Aayog, Digital India BHASHINI, Digital ShramSetu, and fundamental model development are making sure that innovation reaches every person.

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भारताचे जागतिक आर्थिक एकीकरण : संधी आणि आव्हाने

श्री.भिसे सौदागर सतिश

श्री.शिवाजी महाविद्यालय, दर्यापूर रोड,
अकोट जिल्हा अकोला

• सारांश :

प्रस्तुत संशोधन पेपर भारताच्या जागतिक आर्थिक एकीकरणाची तपासणी करतो, ज्यामुळे देशाला मिळणाऱ्या संधी आणि येणाऱ्या आव्हानांवर लक्ष केंद्रित केले जाते. यामध्ये व्यापार उदारीकरण, थेट परकीय गुंतवणूक (FDI), तंत्रज्ञान हस्तांतरण आणि जागतिक मूल्य साखळ्यांमध्ये (GVCs) भारताच्या वाढत्या सहभागाचे विश्लेषण केले आहे. हा पेपर जागतिक अर्थव्यवस्थेशी जोडल्याने निर्माण होणाऱ्या आर्थिक वाढीच्या आणि विकासाच्या संधींवर प्रकाश टाकतो, ज्यात बाजारपेठेतील प्रवेशाची वाढ, भांडवलाची उपलब्धता आणि तांत्रिक प्रगती यांचा समावेश आहे. त्याचबरोबर, स्पर्धात्मक दबाव, उत्पन्न विषमता, पर्यावरणीय चिंता आणि धोरणात्मक आव्हाने यांसारख्या एकीकरणामुळे निर्माण होणाऱ्या आव्हानांवरही चर्चा केली आहे. या आव्हानांवर मात करण्यासाठी आणि जागतिक एकीकरणाच्या फायद्यांचा पुरेपूर उपयोग करण्यासाठी योग्य धोरणे आणि रणनीती शिफारस केल्या आहेत.

• संक्षिप्त शब्द : FDI : थेट परकीय गुंतवणूक, GVCs: जागतिक मूल्य साखळ्या,

WTO: जागतिक व्यापार संघटना, GDP: सकल देशांतर्गत उत्पादन, SEZ: विशेष आर्थिक क्षेत्र

• प्रस्तावना :

जागतिकीकरण आणि आर्थिक एकीकरण हे एकविसाव्या शतकातील आंतरराष्ट्रीय संबंधांचे प्रमुख वैशिष्ट्य बनले आहे. भारत जगातील सर्वात मोठ्या आणि वेगाने वाढणाऱ्या अर्थव्यवस्थांपैकी एक म्हणून, गेल्या काही दशकांपासून जागतिक आर्थिक व्यवस्थेशी अधिकाधिक जोडला जात आहे. 1991 मध्ये सुरू झालेल्या आर्थिक सुधारणांनी भारताला जगासाठी खुले केले आणि व्यापार, गुंतवणूक आणि तंत्रज्ञानामध्ये अभूतपूर्व वाढ झाली. या एकीकरणामुळे भारताला अनेक संधी मिळाल्या, ज्यामुळे आर्थिक वाढीला गती मिळाली, दारिद्र्य कमी झाले आणि जीवनमान सुधारले. तथापि, यामुळे स्पर्धात्मक दबाव, सामाजिक विषमता आणि पर्यावरणीय चिंता यांसारखी आव्हानेही निर्माण झाली आहेत. हा संशोधन पेपर भारताच्या जागतिक आर्थिक एकीकरणाच्या बहुआयामी स्वरूपाचे विश्लेषण करतो, ज्यामुळे देशाला मिळणाऱ्या संधी आणि येणाऱ्या आव्हानांवर सखोल चर्चा केली जाते.

• संशोधनाची उद्दिष्टे :

- 1) भारताच्या जागतिक आर्थिक एकीकरणाचे ऐतिहासिक संदर्भ आणि सध्याची स्थिती तपासणे.
- 2) जागतिक एकीकरणामुळे भारताला मिळणाऱ्या प्रमुख आर्थिक संधींचे विश्लेषण करणे.
- 3) जागतिक एकीकरणामुळे भारतासमोर निर्माण झालेल्या महत्वाच्या आव्हानांचा शोध घेणे.

- 4) जागतिक एकीकरणामुळे भारतासमोर निर्माण झालेल्या आव्हानांवर मात करण्यासाठी उपाययोजना शोधणे.
- 5) जागतिक एकीकरणामुळे भारतासाठी निर्माण झालेल्या संधींचा पुरेपूर फायदा घेण्यासाठी धोरणात्मक शिफारशी करणे.

• **संशोधनाची गृहीतके :**

- 1) जागतिक आर्थिक एकीकरणामुळे भारताच्या आर्थिक विकासाला चालना मिळाली आहे.
- 2) जागतिक आर्थिक एकीकरण भारताच्या काही क्षेत्रांमध्ये स्पर्धात्मकता वाढवण्यास कारणीभूत ठरले आहे.
- 3) जागतिक एकीकरणामुळे उत्पन्न विषमता आणि सामाजिक-आर्थिक असमानता वाढली आहे.
- 4) पर्यावरण आणि शाश्वत विकासावर जागतिक एकीकरणाचे नकारात्मक परिणाम झाले आहेत.

• **संशोधन पद्धती :**

प्रस्तुत संशोधन पेपरमध्ये गुणात्मक आणि काही प्रमाणात संख्यात्मक संशोधन पद्धतींचा अवलंब करतो. दुय्यम डेटा स्रोतांचा वापर केला आहे, ज्यात आंतरराष्ट्रीय आर्थिक संस्थांचे अहवाल (उदा. IMF, World Bank, WTO), भारत सरकारचे आर्थिक सर्वेक्षण, रिझर्व्ह बँक ऑफ इंडियाचे अहवाल, शैक्षणिक जर्नल लेख, पुस्तके आणि प्रतिष्ठित वृत्तपत्रांतील लेख यांचा समावेश आहे. ऐतिहासिक विश्लेषण, तुलनात्मक विश्लेषण आणि धोरणात्मक विश्लेषण यांसारख्या विश्लेषणात्मक चौकटींचा वापर केला आहे. आकडेवारी आणि डेटाचा वापर करून युक्तिवादांना पाठिंबा दिला आहे आणि प्रमुख आर्थिक ट्रेड अधोरेखित केले आहेत.

• **भारताचे जागतिक आर्थिक एकीकरण :**

भारताचे जागतिक आर्थिक एकीकरण हे 1991 च्या आर्थिक सुधारणांपासून सुरू झाले. या सुधारणांनी आयात-निर्यात धोरणांमध्ये शिथिलता आणली, परकीय गुंतवणुकीला प्रोत्साहन दिले आणि वित्तीय क्षेत्राचे उदारीकरण केले. ते खालील स्वरूपात करण्यात आले.

अ) व्यापार उदारीकरण: 1991 मध्ये भारताचा वस्तू आणि सेवांमधील एकूण व्यापार GDP च्या सुमारे 15% होता, जो 2023 पर्यंत 40% च्या वर गेला आहे. यामुळे भारतीय उत्पादनांना जागतिक बाजारपेठेत प्रवेश मिळाला आणि ग्राहकांना अधिक वैविध्यपूर्ण उत्पादने उपलब्ध झाली.

ब) थेट परकीय गुंतवणूक (FDI): FDI हे आर्थिक एकीकरणाचे एक महत्त्वाचे सूचक आहे. 1991 पूर्वी FDI नाममात्र होती. परंतु सुधारणांनंतर, भारतात येणाऱ्या FDI मध्ये लक्षणीय वाढ झाली आहे. 2000-01 ते 2022-23 या काळात भारताला \$950 अब्ज पेक्षा जास्त FDI इक्विटी इन्फ्लो प्राप्त झाला आहे. सेवा क्षेत्र, संगणक सॉफ्टवेअर आणि हार्डवेअर, दूरसंचार आणि वाहन उद्योग हे प्रमुख FDI प्राप्त करणारे क्षेत्र आहेत.

क) जागतिक मूल्य साखळ्या (GVCs): भारत जागतिक मूल्य साखळ्यांमध्ये (GVCs) अधिकाधिक सहभागी होत आहे, विशेषतः माहिती तंत्रज्ञान (IT) आणि फार्मास्युटिकल्स यांसारख्या सेवा-आधारित उद्योगांमध्ये. यामुळे उत्पादन प्रक्रियांचे आंतरराष्ट्रीयीकरण झाले आहे आणि भारतीय कंपन्या जागतिक पुरवठा साखळ्यांचा अविभाज्य भाग बनल्या आहेत.

• **भारताचे जागतिक आर्थिक एकीकरणामुळे निर्माण झालेल्या संधी :**

भारताचे जागतिक आर्थिक एकीकरणामुळे भारतासाठी अनेक संधी निर्माण झाल्या आहेत, त्या खालीलप्रमाणे आहेत.

1) **वाढलेल्या बाजारपेठांमध्ये प्रवेश :** जागतिक एकीकरणामुळे भारतीय कंपन्यांना मोठ्या आंतरराष्ट्रीय बाजारपेठेत प्रवेश मिळतो, ज्यामुळे त्यांच्या उत्पादनांची मागणी वाढते आणि निर्यातीला चालना मिळते. उदाहरणार्थ, भारतीय IT सेवा उद्योगाने जागतिक स्तरावर आपली ओळख निर्माण केली आहे.

2) **भांडवल आणि तंत्रज्ञानाची उपलब्धता :** FDI च्या माध्यमातून परकीय भांडवल आणि अत्याधुनिक तंत्रज्ञान भारतात येते. यामुळे देशांतर्गत गुंतवणुकीला चालना मिळते, रोजगार निर्मिती होते आणि उत्पादन क्षमता वाढते.

3) **स्पर्धात्मकता आणि कार्यक्षमतेत सुधारणा :** आंतरराष्ट्रीय स्पर्धेमुळे भारतीय कंपन्यांना गुणवत्ता सुधारण्यासाठी, उत्पादन खर्च कमी करण्यासाठी आणि नवोपक्रम स्वीकारण्यासाठी प्रोत्साहन मिळते, ज्यामुळे त्यांची जागतिक स्पर्धात्मकता वाढते.

4) **रोजगार निर्मिती: विशेषतः सेवा आणि उत्पादन क्षेत्रातील वाढलेल्या गुंतवणुकीमुळे आणि निर्यातीमुळे मोठ्या प्रमाणावर रोजगार निर्मिती होते, ज्यामुळे बेरोजगारी कमी होते आणि जीवनमान सुधारते.**

5) **ज्ञान आणि कौशल्य हस्तांतरण:** जागतिक कंपन्यांच्या भारतात येण्याने व्यवस्थापकीय कौशल्ये, तांत्रिक ज्ञान आणि सर्वोत्तम पद्धतींचे हस्तांतरण होते, ज्यामुळे भारतीय कामगारांची आणि उद्योगांची क्षमता वाढते.

6) **पायाभूत सुविधांचा विकास:** निर्यात-केंद्रित क्षेत्रांसाठी किंवा विशेष आर्थिक क्षेत्रांसाठी (SEZ) आवश्यक असलेल्या पायाभूत सुविधांच्या विकासाला सरकार प्रोत्साहन देते, ज्यामुळे दळणवळण, ऊर्जा आणि लॉजिस्टिक्समध्ये सुधारणा होते.

• **जागतिक एकीकरणामुळे भारतासमोर निर्माण झालेली आव्हाने :**

जागतिक एकीकरणामुळे भारतासमोर निर्माण झालेल्या महत्त्वाच्या आव्हानांचा आढावा खालीलप्रमाणे घेतला आहे.

1) **वाढती स्पर्धा:** जागतिक बाजारपेठेत प्रवेश करणे म्हणजे कठोर आंतरराष्ट्रीय स्पर्धेचा सामना करणे. अनेक भारतीय उद्योगांना, विशेषतः लहान आणि मध्यम उद्योगांना (SMEs), बहुराष्ट्रीय कंपन्यांशी स्पर्धा करणे कठीण वाटते.

2) **उत्पन्न विषमता:** जागतिक एकीकरणाचे फायदे समाजातील सर्व स्तरांपर्यंत पोहोचले नाहीत. कुशल कामगार आणि शहरी भागांना याचा जास्त फायदा झाला, तर अकुशल कामगार आणि ग्रामीण भागांना तुलनेने कमी फायदा झाला, ज्यामुळे उत्पन्न विषमता वाढली.

3) **पर्यावरणीय परिणाम:** औद्योगिक वाढ आणि उत्पादन वाढीमुळे नैसर्गिक संसाधनांवर ताण येतो आणि प्रदूषण वाढते. शाश्वत विकासाच्या दृष्टिकोनातून हे एक मोठे आव्हान आहे.

4) **धोरणात्मक दुविधा:** जागतिक व्यापार नियमांचे पालन करताना देशांतर्गत उद्योगांचे संरक्षण करणे हे सरकारसमोरील एक मोठे धोरणात्मक आव्हान आहे. WTO च्या नियमावलीमुळे अनेकदा देशांतर्गत उद्योगांना संरक्षण देणे अवघड होते.

5) **जागतिक धक्क्यांना संवेदनशीलता:** जागतिक अर्थव्यवस्थेशी जोडल्यामुळे भारत आंतरराष्ट्रीय आर्थिक संकटे, तेल किमतीतील वाढ किंवा जागतिक व्यापारातील घट यांसारख्या धक्क्यांना अधिक संवेदनशील बनतो.

6) **रोजगाराची लवचिकता आणि सामाजिक सुरक्षा:** वाढत्या स्पर्धेमुळे कंपन्यांना कार्यक्षम राहावे लागते, ज्यामुळे अनेकदा कामगारांची नोकरीची सुरक्षा धोक्यात येते आणि अनौपचारिक क्षेत्रात काम करणाऱ्या कामगारांसाठी सामाजिक सुरक्षा जाळे मर्यादित राहते.

7) **बौद्धिक संपदा हक्कांचे (IPR) संरक्षण:** जागतिक स्तरावर व्यापार वाढल्याने बौद्धिक संपदा हक्कांचे उल्लंघन आणि सायबर गुन्हेगारी यांसारख्या समस्या वाढू शकतात.

• **जागतिक एकीकरणामुळे भारतासमोर निर्माण झालेल्या आव्हानांवर उपाय :**

जागतिक एकीकरणामुळे निर्माण झालेल्या आव्हानांवर खालीलप्रमाणे उपाययोजना राबवल्यास ती आव्हाने नक्की दूर होतील.

1) **कौशल्य विकास आणि शिक्षणामध्ये गुंतवणूक:** कामगारांना जागतिक बाजारपेठेशी सुसंगत कौशल्ये प्रदान करण्यासाठी शिक्षण आणि प्रशिक्षण कार्यक्रमांमध्ये मोठ्या प्रमाणावर गुंतवणूक करणे. यामुळे रोजगारक्षमता वाढेल आणि उत्पन्न विषमता कमी होईल.

2) **लघु आणि मध्यम उद्योगांना (SMEs) प्रोत्साहन :** SMEs ला तांत्रिक उन्नती, बाजारपेठ प्रवेश आणि वित्तीय सहाय्य प्रदान करून त्यांची स्पर्धात्मकता वाढवणे. 'मेक इन इंडिया' सारख्या योजना या दिशेने उपयुक्त ठरू शकतात.

3) **शाश्वत विकास धोरणे :** औद्योगिक वाढीबरोबरच पर्यावरणाचे संरक्षण सुनिश्चित करण्यासाठी कठोर पर्यावरणीय नियम आणि शाश्वत उत्पादन पद्धतींना प्रोत्साहन देणे. हरित तंत्रज्ञानाचा वापर आणि अक्षय ऊर्जा स्रोतांमध्ये गुंतवणूक करणे.

4) **सामाजिक सुरक्षा जाळे मजबूत करणे :** जागतिक एकीकरणामुळे विस्थापित झालेल्या किंवा असुरक्षित असलेल्या कामगारांसाठी प्रभावी सामाजिक सुरक्षा जाळे (उदा. आरोग्य विमा, निवृत्तीवेतन योजना) आणि पुनर्वसन कार्यक्रम तयार करणे.

5) **पायाभूत सुविधांचा विकास :** बंदर, रस्ते, रेल्वे आणि डिजिटल पायाभूत सुविधांचा सतत विकास करणे, ज्यामुळे लॉजिस्टिक्स खर्च कमी होईल आणि व्यवसाय सुलभ होईल.

6) **संशोधन आणि विकास (R&D) मध्ये गुंतवणूक :** नवोपक्रम आणि तंत्रज्ञान विकासाला प्रोत्साहन देण्यासाठी R&D मध्ये सार्वजनिक आणि खाजगी गुंतवणूक वाढवणे, ज्यामुळे भारतीय कंपन्या जागतिक स्तरावर स्पर्धा करू शकतील.

7) **संतुलित व्यापार धोरणे :** जागतिक व्यापार नियमांचे पालन करताना, देशांतर्गत उद्योगांना उचित संरक्षण देणारी आणि निर्यात वाढवणारी संतुलित व्यापार धोरणे तयार करणे.

8) जागतिक सहकार्य आणि बहुपक्षीयता : जागतिक व्यापार संघटना (WTO) सारख्या बहुपक्षीय संस्थांमध्ये सक्रियपणे भाग घेणे आणि जागतिक व्यापार नियमांना आकार देण्यासाठी योगदान देणे.

• निष्कर्ष :

1) आर्थिक वाढ आणि गुंतवणूक : भारताने स्वीकारलेल्या उदारीकरणाच्या धोरणांमुळे जागतिक अर्थव्यवस्थेशी एकरूप होताना देशाच्या निर्यात आणि थेट परकीय गुंतवणुकीत (FDI) भरीव वाढ झाली आहे.

2) लोकसंख्येचा लाभांश : भारताची प्रचंड युवा लोकसंख्या आणि विशाल ग्राहक बाजारपेठ ही जागतिक उद्योगांना आकर्षित करणारी सर्वात मोठी संधी आहे, ज्यामुळे भारत हे भविष्यातील उत्पादनाचे केंद्र बनू शकतो.

3) पायाभूत सुविधांचे आव्हान : जागतिक स्पर्धेत पूर्ण क्षमतेने टिकून राहण्यासाठी भारताला आपल्या पायाभूत सुविधांमधील तफावत दूर करणे आणि प्रशासकीय अडथळे कमी करणे अत्यंत गरजेचे आहे.

4) जागतिक पुरवठा साखळी : 'चीन अधिक एक' या जागतिक धोरणामुळे भारताला जागतिक पुरवठा साखळीतील एक विश्वासार्ह आणि महत्वाचे केंद्र म्हणून उदयास येण्याची मोठी संधी प्राप्त झाली आहे.

5) सर्वसमावेशक विकास : जागतिक आर्थिक एकीकरणाचा फायदा केवळ शहरी भागापुरता मर्यादित न राहता, तो ग्रामीण आणि कृषी क्षेत्रापर्यंत पोहोचवणे, हे भारतापुढील सर्वात मोठे आव्हान व उद्दिष्ट आहे.

• शिफारशी :

1) समावेशक वाढीसाठी धोरणे : आर्थिक वाढीचे फायदे समाजातील दुर्बल घटकांपर्यंत पोहोचवण्यासाठी आरोग्य, शिक्षण आणि सामाजिक सुरक्षा या क्षेत्रांमध्ये सार्वजनिक गुंतवणूक वाढवावी.

2) निर्यात वैविध्यीकरण : पारंपरिक निर्यातीव्यतिरिक्त उच्च-तंत्रज्ञान उत्पादने आणि सेवांच्या निर्यातीवर लक्ष केंद्रित करून निर्यात बास्केटमध्ये वैविध्य आणावे.

3) डिजिटल पायाभूत सुविधांचा विस्तार : ग्रामीण आणि शहरी दोन्ही भागांमध्ये डिजिटल कनेक्टिव्हिटी वाढवावी, जेणेकरून ई-कॉमर्स आणि डिजिटल सेवांचा लाभ सर्वांना मिळू शकेल.

4) कराराची अंमलबजावणी आणि सुलभता : व्यवसायासाठी अनुकूल वातावरण निर्माण करण्यासाठी कराराची अंमलबजावणी मजबूत करावी आणि प्रशासकीय प्रक्रिया सुलभ कराव्यात.

5) पर्यावरणीय नियमांची अंमलबजावणी : उद्योगांवर कठोर पर्यावरणीय नियमांची अंमलबजावणी करावी आणि हरित तंत्रज्ञानामध्ये गुंतवणुकीला प्रोत्साहन द्यावे.

6) नियमन सुधारणा : वित्तीय आणि व्यावसायिक नियमनांमध्ये सुधारणा करावी, ज्यामुळे गुंतवणुकीसाठी सुरक्षित आणि पारदर्शक वातावरण निर्माण होईल.

• समारोप :

भारताचे जागतिक आर्थिक एकीकरण हे एक सतत विकसित होणारी प्रक्रिया आहे. योग्य धोरणे आणि दूरदृष्टीच्या नेतृत्वासह, भारत या एकीकरणातून मिळणाऱ्या संधींचा पुरेपूर उपयोग करून आर्थिक समृद्धी आणि शाश्वत विकास साधू शकतो. आव्हानांना स्वीकारून आणि त्यावर प्रभावी उपाययोजना करून, भारत जागतिक अर्थव्यवस्थेत एक प्रमुख आणि जबाबदार खेळाडू म्हणून आपले स्थान अधिक मजबूत करू शकतो.

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Viksit Bharat 2047 : Opportunities and Challenges

*Dr. Santoshkumar B. Yadav*¹

Introduction:

As India moves toward its 100th year of independence, the "Viksit Bharat 2047" campaign is extremely important from the perspective of India's sustainable development. This concept presents a vision of creating an India that balances the country's economic, social, educational, and technological growth. Its main objective is to ensure the balanced development of the country's agriculture, industry, and trade, and to achieve inclusive growth by eliminating poverty, unemployment, and economic-social-regional inequalities.

India has the opportunity to emerge as a developed nation by 2047. This includes factors such as the demographic dividend, the digital revolution happening in India, innovation and its benefits to the country's economic growth, leadership in renewable energy, and the development of the country's infrastructure. While there are opportunities to become a developed India by 2047, the country also faces many challenges. These include poverty and inequality, unemployment and skills, climate change and environmental damage, global and geopolitical instability, and the need for reforms in the education system. This paper analyzes the opportunities for a Developed India and the challenges facing it.

Objectives of the Paper:

Following are the main objectives of the paper:

1. To study the current status of the Indian economy.
2. To review the opportunities available for India to be recognized as a developed nation.
3. To examine the obstacles or challenges in India emerging as a developed nation by 2047 and to suggest appropriate measures/solutions.

Research Methodology:

The present paper is based on published official data and information and theoretical literature. The necessary secondary data has been collected from sources like the basic reference books on economic development and growth, various issues of journals, documents and reports of Ministry of Finance. Secondary data and information collected from various sources have been interpreted.

Concept of Developed Nation:

Nations / economies are generally classified into three groups: (A) underdeveloped / backward economy, (B) developing economy, and (C) developed economy.

1. **Underdeveloped or backward economy:** A nation or economy is termed underdeveloped or backward when it exhibits a low level of socio-economic development indices. Problems such as poverty, unemployment, and economic instability are prominent, and the gross national income (GNI), net national income, and per capita income are extremely low. According to World Bank's definition, these economies have a net per capita income of less than \$ 1,135. Examples include Uganda, Myanmar, Zambia, and Afghanistan.
2. **Developing economy:** A nation characterized by a low level of GNI and per capita income, along with a low standard of living and a lack of significant industrialization, is called a developing

¹ Associate Professor in Economics, Devchand College, Arjunnagar (Kolhapur)
Member, BoS in Economics & Faculty of Humanities, Shivaji University, Kolhapur
Member, BoS in Economics, Warana University, Warananagar
Member, Bos in Economics, Kamala / Mahavir / Willingdon & Vivekand College (Autonomous colleges)

economy. These economies have a net per capita income ranging between \$ 1,136 and \$ 4,435. This group includes countries like China, India, Indonesia, and Thailand.

3. **Developed economy / nation:** An economy that boasts a high level of gross national product, net national product, and per capita income, along with a high standard of living, advanced technology, and highly developed infrastructure, is classified as a developed nation. According to the World Bank's definition, an economy with a net per capita income exceeding \$ 13,845 is termed a high - income or developed economy. As of 2025 data, this includes North America, Europe, Israel, Japan, Canada, Korea, Australia, New Zealand, Singapore, and Norway.

Opportunities for *Viksit Bharat @ 2047:*

Considering India's natural resources, population, renewable energy, infrastructure development, and digital revolution, India has the potential to be counted as a developed nation by 2047. To achieve this, it is essential to fully capitalize on the following opportunities:

1. **Demographic dividend:** As of 2025, India's population is approximately 145 crore, making it the most populous country in the world as of April 2025. The age structure is as follows: 25.68 per cent are under the age of 15 years, 67.49 per cent fall within the working-age group (15–64 years), and 6.83 per cent are above 65 years. This indicates a massive productive workforce that can drive economic growth. To reap this dividend, India must provide quality education, skill-based development, increased job creation, and a robust healthcare system.
2. **Digital revolution:** The ongoing digital revolution is a cornerstone for a developed India. Deliberate efforts are needed to innovate and improve existing systems through technology. This includes expanding internet access to all regions, enhancing digital payment systems, and innovating in Artificial Intelligence (AI). In 2025, the value of digital payment transactions reached ₹300 lakh crore, a 32.5 per cent increase over 2024.
3. **Economic growth and transformation:** Innovation is the primary driver of economic growth. India's GDP growth rate was 7.0 per cent in 2022-23, 8.2 per cent in 2023-24, and 7.2 per cent in 2024-25, with an estimate of around 7 per cent for 2025-26 and 2026-27. To sustain this, the government is playing an active role by strengthening manufacturing units, promoting technological innovation, and encouraging eco-friendly startups.
4. **Renewable energy leadership:** Renewable energy from solar and wind is vital for sustainable development. India is a leading nation in aligning economic policies with climate action. Balancing economic growth with environmental conservation is important to build a developed nation.
5. **Agricultural transformation** Despite the growth of the service sector, agriculture remains vital, contributing 18.2 per cent to the GDP and supporting 42.3 per cent of the population. While the integration of IT, Biotechnology, and AI offers opportunities to increase food production and global dominance, challenges remain. Low productivity, rural poverty, and a modest real growth rate (estimated at 3.1 per cent for 2025-26) are obstacles that need to be addressed through research and extension services.
6. **Infrastructure development:** Physical and institutional infrastructure like roads, railways, electricity, ports, and irrigation are the backbones of a developed nation. Projects like Smart Cities, *Vande Bharat* trains, and expansive highways are accelerating growth. 2025 is considered a "transformational" year for Indian infrastructure, with a budgeted expenditure of ₹11.21 lakh crore (3.1 per cent of GDP) for 2025-26.

7. **Space and technology:** Space research and its applications in agriculture, industry, and daily life are pillars of modern development. Satellite technology has revolutionized communication, weather forecasting, and disaster management. Ambitious missions like *Chandrayaan* and *Gaganyaan* have highlighted the global importance of ISRO and India in the space sector.

Challenges Facing *Viksit Bharat @ 2047*:

Considering its available natural resources, India has the potential to be recognized as a developed nation by 2047. However, to achieve this status, the country must overcome several significant obstacles. Although the intensity of the problems faced by the Indian economy at the time of independence has diminished, many issues persist. Challenges such as poverty, economic and regional inequality, unemployment and skill gaps, climate change, environmental degradation, rapid urbanization with inadequate facilities, deficient healthcare systems, and the lack of high-quality infrastructure must be addressed. They can be analyzed as follows:

1. **Poverty and Inequality:** Poverty remains a chronic issue for the Indian economy. While the percentage of people living in poverty is declining relative to the total population, the absolute numbers remain high. Currently, an individual is considered to be living in poverty if their monthly income is below ₹ 1,286 in urban areas and ₹ 1,059 in rural areas. The poverty rate dropped from 29.17 per cent in 2013-14 to 11.28 per cent in 2022-23. However, severe wealth inequality persists; as of 2025, the top 1 per cent of the population holds 40.1 per cent of the nation's total wealth and earns 22.6 per cent of the national income, while the bottom 50 per cent earn only 15 per cent.
2. **Unemployment and Skill Mismatch:** The mismatch between a growing population and a slow rate of job creation is a major obstacle. The unemployment rate was 4.2 per cent in 2020-21, 3.2 per cent in 2022-23, and rose to 4.8 per cent in 2025-26. Insufficient investment from both public and private sectors, combined with a lack of industry-relevant skills among the youth, has hindered employment growth. Notably, unemployment is higher in urban areas (6.7 per cent) compared to rural areas (3.9 per cent), particularly affecting educated youth and women.
3. **Climate Change and Environmental Degradation:** Climate change is adversely affecting agriculture, industry, and the general standard of living. Key concerns include noise, water, air, and land pollution, deforestation, and urban solid waste management. These factors lead to food insecurity, health risks, extreme weather events (floods / droughts), and forced migration.
4. **Urbanization and Infrastructure:** India is urbanizing rapidly. The urban population increased from 34.4 per cent in 2020 to 37.1 per cent (54.8 crore people) in late 2025. This rapid growth has outpaced the development of facilities, leading to housing shortages, poor transport systems, strained water and sanitation services, and increased electricity demand.
5. **Healthcare Systems:** To improve productivity, citizens need affordable healthcare. While life expectancy has risen to 72.48 years (70.95 years for men, 74.13 years for women), the disease burden is increasing. The National Health Policy 2017 aimed to increase public health spending to 2.5 per cent of GDP by 2025, but it reached only 1.84 per cent in 2021-22 and is estimated at 1.9 per cent for 2025-26. Improving women's health is particularly critical for reaching "Developed Nation" status.
6. **Geopolitical Instability:** Rising tensions with neighbors like China, Pakistan, and Bangladesh have adversely impacted international trade and national security. This instability creates economic hurdles and humanitarian crises through refugee influxes, challenging global security and social peace.
7. **Reforms in the Education System:** The current education system faces gaps in creating an 'employable' workforce. India's Gross Enrolment Ratio (GER) in higher education is approximately

30 per cent, with a target of 50 per cent by 2035. To become a knowledge-based economy, investment in Research and Development (R&D) is vital. While the National Education Policy (NEP) 2020 set a target of 6 per cent of GDP for education, spending was 4.1 per cent in 2022-23 and is projected to be between 4.3 per cent and 4.6 per cent for 2025-26.

Conclusion and suggestions:

1. Eradicating Poverty and Inequality: to reduce poverty and the disparity in income and wealth, the following measures are necessary:

- **Equitable Resource Allocation:** Ensuring fair and just access to national resources.
- **Social Services:** Providing high-quality education and healthcare at affordable rates.
- **Infrastructure Investment:** Increasing public investment in utilities to bridge the gap between different socio-economic classes.

2. Employment and Skill Development: To tackle unemployment, the focus should be on:

- **Educational and Skill Reforms:** Aligning curriculum with industry needs and emphasizing vocational training.
- **Entrepreneurship:** Incentivizing startups and fostering a competitive environment for the youth.
- **Strategic Growth:** Encouraging public - private partnerships, prioritizing rural development, and maintaining population control.

3. Environmental Conservation and Climate Action: To prevent climate change and environmental degradation, India must prioritize:

- **Renewable Energy:** Shifting toward solar, wind, and green technology.
- **Natural Resource Protection:** Focused conservation of forests, oceans, and rivers.

4. Resource Management Formulating a strategy for the sustainable and optimal use of natural resources — such as water, minerals, forests, and energy—is the need of the hour. **Water Security:** Given that the water crisis and river pollution severely impact agriculture and the general population, integrated water and resource management must be treated as a high priority.

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The Role of Innovation in the Success of Early-Stage Startups

Mrs. Poonam Kishor Desai
Visiting Faculty,
Kamala College, Kolhapur
Email Id: pargavkar123poonam@gmail.com

Abstract:

Early-stage startups operate in highly uncertain, resource-constrained, and competitive environments where survival and growth depend largely on their ability to innovate. This review paper synthesizes existing literature to examine how different dimensions of innovation—product, process, business model, marketing, and organizational innovation—contribute to the success of early-stage ventures. Drawing on prior studies from entrepreneurship, strategic management, and innovation management, the paper analyses how innovative practices help startups achieve competitive advantage, attract customers and investors, optimize resources, and adapt to dynamic market conditions.

The study concludes that innovation is not merely a differentiating factor but a critical success driver for early-stage startups. The paper provides a consolidated framework that can guide entrepreneurs, management practitioners, and policymakers in fostering innovation-driven startup ecosystems, and offers directions for future research in the domain of innovation and entrepreneurship.

Introduction:

Startups play a vital role in economic development by generating employment, introducing new products and services, and stimulating competition and technological progress.

In such conditions, traditional management approaches are often insufficient for survival and growth. Innovation emerges as a critical factor that enables startups to differentiate themselves, create value, and build sustainable competitive advantage.

Innovation in startups extends beyond the development of new products. It includes process innovation, business model innovation, marketing innovation, and organizational innovation.

Existing literature in entrepreneurship and management highlights that startups with strong innovation orientation tend to demonstrate higher survival rates and faster scalability. At the same time, startups face multiple barriers to innovation, including financial limitations, lack of expertise, and market unpredictability.

This review paper aims to analyze and synthesize previous research studies to understand how various forms of innovation contribute to the success of early-stage startups. By examining theoretical perspectives and empirical findings, the paper seeks to identify patterns, best practices, and key drivers that link innovation with startup performance. The study also intends to provide insights for entrepreneurs, management professionals, and policymakers to foster innovation-led startup ecosystems and outlines directions for future research in this domain.

- **Entrepreneurship —**

Entrepreneurship is a multidisciplinary concept studied extensively in the fields of management, economics, sociology, and innovation studies. In academic literature, entrepreneurship is broadly defined as the process through which individuals or groups identify opportunities, mobilize resources, take calculated risks, and create value by establishing new ventures or transforming existing ones through innovation.

Scholars have presented entrepreneurship from different perspectives. Schumpeter (1934) viewed

entrepreneurship as a process of creative destruction, where entrepreneurs introduce innovations that disrupt existing markets and create new ones. These perspectives collectively highlight that entrepreneurship is not limited to starting a business but involves innovation, risk-taking, and strategic resource utilization.

In the context of startups, entrepreneurship plays a crucial role in economic development, employment generation, and technological advancement. Entrepreneurs act as change agents who convert ideas into viable business models, contributing to competitive markets and societal progress.

For review-based research, entrepreneurship can be understood as a dynamic process that integrates innovation, opportunity recognition, risk management, and value creation. This conceptual understanding provides the foundation for examining how entrepreneurial practices influence the success and sustainability of early-stage startups.

➤ **Research Methodology:**

The research study is using the descriptive research design. Secondary data has been used in this research. The secondary data has been collected from research papers, published materials, online websites, HR blogs, and survey reports published by various research organizations.

- **Concept of Innovation :** Innovation is widely recognized as the foundation of startup creation and growth. Startups emerge primarily to introduce novel products, services, technologies, or business models that address unmet market needs. Unlike established organizations that often rely on structured processes and stable resources, startups operate in uncertain and resource-constrained environments where innovation becomes essential for survival, differentiation, and scalability.
- In the context of startups, innovation is not limited to product development. It encompasses process innovation, business model innovation, marketing innovation, and organizational innovation. These dimensions enable startups to respond quickly to market changes, utilize limited resources efficiently, and create unique value propositions for customers. Innovative startups are more likely to gain competitive advantage, attract investment, and achieve sustainable growth in dynamic markets.
- Existing literature in management and entrepreneurship emphasizes that innovation-driven startups demonstrate higher adaptability and resilience. Factors such as visionary leadership, supportive organizational culture, technological adoption, collaboration with incubators and accelerators, and effective knowledge management significantly contribute to fostering innovation in early-stage ventures. At the same time, startups face challenges such as financial limitations, skill gaps, and market uncertainty that may hinder their innovative potential.
- This review paper aims to examine and synthesize prior research on the role of innovation in startups, identifying key patterns, determinants, and outcomes associated with innovative practices. By analyzing theoretical and empirical studies, the paper seeks to provide a comprehensive understanding of how innovation influences startup performance and long-term success, while also suggesting directions for future research in this evolving field.
- **Concept of Startup**

A startup is generally defined in academic literature as a newly established business venture designed to develop a scalable and repeatable business model under conditions of extreme uncertainty. Unlike traditional small businesses that focus on steady income from established markets, startups are primarily innovation-driven and aim for rapid growth by addressing unmet or emerging market needs. Startups typically operate with limited resources, small teams, and high levels of risk. They rely heavily on creativity, technological adoption, and innovative strategies to survive and compete with established

firms. The startup lifecycle involves stages such as idea generation, validation, prototyping, market testing, funding acquisition, and scaling. Throughout these stages, adaptability and innovation remain central to their progress.

From a review perspective, startups can be understood as innovation-oriented ventures characterized by uncertainty, scalability potential, and entrepreneurial experimentation. This conceptual understanding provides a basis for analyzing how innovation influences startup success and sustainability across different industries and contexts.

➤ **Innovation in Startups:**

Innovation is a fundamental driver of startup success, enabling new ventures to survive, compete, and grow in uncertain and dynamic market environments. Startups typically enter markets dominated by established firms with greater resources, brand recognition, and customer loyalty. In such situations, innovation becomes the primary tool through which startups differentiate themselves and create unique value propositions.

Firstly, innovation helps startups differentiate their products and services from existing market offerings. Through product and service innovation, startups can address unmet customer needs, introduce improved solutions, and attract early adopters.

Secondly, innovation supports the development of efficient processes and business models. Process innovation enables startups to optimize limited resources, reduce operational costs, and improve productivity. Business model innovation, such as platform-based models, subscription services, or digital delivery systems, allows startups to scale rapidly and generate sustainable revenue streams.

Thirdly, innovation enhances a startup's ability to adapt to market changes. In rapidly evolving industries, startups that continuously innovate can respond quickly to customer feedback, technological advancements, and competitive pressures.

Innovation also plays a significant role in attracting investors and stakeholders. Investors are more inclined to fund startups that demonstrate innovative potential and scalability. Innovative practices signal growth opportunities and long-term viability, making startups more attractive for funding and partnerships.

Furthermore, innovation fosters a culture of learning, creativity, and collaboration within startups. It encourages teams to experiment, solve problems creatively, and improve continuously, which contributes to overall organizational development.

➤ **Conclusion**

This review paper highlights that innovation is a central pillar in the success and sustainability of early-stage startups. Across the literature in entrepreneurship, strategic management, and innovation studies, a consistent pattern emerges: startups that embed innovation into their products, processes, business models, marketing approaches, and organizational practices are better equipped to navigate uncertainty, differentiate themselves in competitive markets, and achieve scalable growth.

The review shows that innovation enables startups to utilize limited resources efficiently, respond rapidly to changing customer needs, and build unique value propositions. It also strengthens their ability to attract investors, partners, and skilled talent, which are crucial for expansion and long-term survival.

Factors such as visionary leadership, supportive organizational culture, technological adoption, knowledge sharing, and collaboration with incubators and networks significantly influence the innovative capacity of startups.

At the same time, the literature acknowledges the challenges startups face in fostering innovation, including financial constraints, lack of expertise, and market unpredictability. Addressing

these barriers through supportive ecosystems, policy initiatives, and managerial practices can enhance the innovation potential of new ventures.

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YOGA FOR MENTAL HEALTH AND STRESS MANAGEMENT IN FUTURE INDIA

Manisha Brihaspati Shinde

Department of Yoga

Night College of Arts & Commerce, Kolhapur. Email ID : manishabshinde@gmail.com

Abstract

India is undergoing rapid socio-economic, technological, and cultural transformations that have significantly influenced the mental health of its population. Rising academic pressure, workplace stress, urbanization, unemployment, lifestyle disorders, and digital dependency have contributed to a marked increase in stress-related mental health issues such as anxiety and depression. Although conventional medical and psychological interventions are effective, they are often constrained by high costs, limited accessibility, shortage of trained professionals, and persistent social stigma. Yoga, an ancient Indian system of holistic well-being, offers a sustainable, cost-effective, and culturally acceptable approach to mental health promotion and stress management.

The present paper examines the role of yoga in enhancing mental well-being and managing stress in future India. It explores the conceptual foundations of yoga, emerging mental health challenges, mechanisms through which yoga influences psychological health, and scientific evidence supporting its effectiveness. The paper also highlights the potential for integrating yoga into education, healthcare, and workplace systems. The study concludes that yoga can play a vital role in fostering a mentally resilient and emotionally balanced future India.

Keywords: *Yoga; Mental Health; Stress Management; Future India; Holistic Health*

1. Introduction

Mental health has emerged as one of the most critical public health concerns in contemporary India. Rapid urbanization, highly competitive education systems, demanding work environments, technological dependence, and changing social structures have significantly increased psychological stress among individuals. National and international health reports indicate that a substantial proportion of the Indian population experiences stress-related disorders, anxiety, depression, and emotional imbalance.

Despite advances in psychiatry and clinical psychology, mental healthcare in India continues to face serious challenges, including lack of awareness, social stigma, high treatment costs, and a shortage of trained professionals. Consequently, there is a growing need for preventive, holistic, and culturally rooted approaches to mental well-being.

Yoga, which originated in India more than 5,000 years ago, emphasizes harmony among the body, mind, and spirit. Once viewed primarily as a spiritual discipline, yoga has gained global recognition for its therapeutic value in both physical and mental health. In future India, where mental health challenges are expected to intensify, yoga offers a promising and sustainable solution.

2. Concept of Yoga and Mental Health

The term *yoga* is derived from the Sanskrit word *Yuj*, meaning union or integration. Yoga seeks to integrate the physical, mental, emotional, and spiritual dimensions of human existence. Classical yoga, as described in *Patanjali's Yoga Sutras*, comprises eight interconnected limbs: Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana, and Samadhi.

Mental health, as defined by the World Health Organization (WHO), refers to a state of well-being in which individuals realize their abilities, cope effectively with normal stresses of life, work productively, and contribute meaningfully to society. Yoga supports mental health by promoting self-awareness, emotional stability, concentration, and inner calm.

Practices such as *asanas*, *pranayama*, and *meditation* directly influence psychological functioning by calming the nervous system, reducing mental fluctuations, and enhancing clarity of thought.

3. Stress and Mental Health Challenges in Future India

Future India is expected to encounter increasing mental health challenges due to rapid industrialization, technological advancement, and evolving lifestyles. The youth population, which constitutes a significant segment of India's demographic structure, is particularly vulnerable to stress arising from academic competition, career uncertainty, unemployment, and social media pressure.

Urban isolation, an aging population, economic instability, and the erosion of traditional support systems further contribute to rising mental stress. If left unmanaged, chronic stress can result in anxiety disorders, depression, insomnia, cardiovascular diseases, and reduced productivity.

Conventional treatment approaches often emphasize symptom management rather than prevention. Therefore, holistic systems such as yoga, which address both the underlying causes and long-term consequences of stress, are essential for developing sustained mental resilience.

4. Mechanisms of Yoga in Stress Management

Yoga influences mental health through multiple physiological and psychological mechanisms. Regular practice activates the parasympathetic nervous system, which governs relaxation and recovery processes. Pranayama techniques regulate breathing patterns, leading to reduced levels of cortisol, the primary stress hormone.

Meditation and mindfulness practices enhance attention control, emotional regulation, and self-awareness, enabling individuals to manage negative thoughts and emotional reactions more effectively. Yoga asanas improve posture, flexibility, and physical comfort, thereby indirectly reducing mental tension.

In addition, yoga enhances sleep quality, supports neuroplasticity, and fosters emotional balance, collectively strengthening overall mental well-being.

5. Scientific Evidence Supporting Yoga for Mental Health

A growing body of scientific research demonstrates the effectiveness of yoga in managing stress and improving mental health. Studies report significant reductions in symptoms of anxiety, depression, post-traumatic stress disorder (PTSD), and other stress-related conditions among individuals who practice yoga regularly.

Neuroimaging research has revealed positive structural and functional changes in brain regions associated with emotional regulation and attention following sustained yoga practice. Clinical trials conducted in India and abroad further suggest that yoga serves as an effective complementary therapy in mental healthcare.

Renowned institutions such as AIIMS and NIMHANS have incorporated yoga-based interventions into mental health programs, thereby reinforcing its therapeutic credibility.

6. Role of Yoga in Education, Workplace, and Healthcare

The integration of yoga into educational institutions can help students manage academic stress, improve concentration, and develop emotional intelligence. Several school- and college-based yoga programs have reported positive outcomes, including reduced anxiety and enhanced academic performance.

In workplace settings, yoga contributes to stress reduction, improved job satisfaction, and increased productivity. Corporate wellness initiatives that include yoga practices have documented reduced absenteeism and improved employee morale.

Within the healthcare sector, yoga complements conventional treatments by supporting holistic recovery. Government initiatives such as the Ministry of AYUSH and the National Yoga Mission highlight the growing recognition of yoga in public health policy.

7. Yoga as a Sustainable Mental Health Strategy for Future India

Yoga aligns closely with the principles of preventive healthcare and sustainability. It requires minimal infrastructure, is cost-effective, and can be practiced by individuals across all age groups. Unlike many pharmacological interventions, yoga has negligible side effects and promotes long-term well-being. Integrating yoga into national mental health programs, community-based initiatives, and digital health platforms can substantially enhance mental resilience. Moreover, yoga can help reduce the burden on healthcare systems by preventing stress-related disorders before they escalate.

8. Challenges and Future Scope

Despite its numerous benefits, the widespread adoption of yoga faces challenges such as a shortage of trained instructors, inconsistent quality of instruction, and limited public awareness. Standardization of yoga practices and rigorous scientific validation are essential for its effective integration into mainstream mental healthcare.

Future research should prioritize long-term impact studies, the development of digital yoga platforms, and integration with technology-driven mental health tools. Public-private partnerships can further strengthen efforts to promote yoga as a mainstream mental health intervention.

9. Conclusion

Yoga offers a holistic, culturally rooted, and scientifically supported approach to mental health promotion and stress management. In future India, where mental health challenges are expected to intensify, yoga can serve as a powerful tool for enhancing emotional stability, resilience, and overall well-being. Systematic integration of yoga into education, healthcare, and workplace systems can help India progress toward a healthier and more mentally empowered society.

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पश्चिम महाराष्ट्र के सातारा जिले के चयनित क्षेत्रों में तंबाकू सेवन एवं तंबाकू से मुक्ति हेतु जागरूकता कार्यक्रम

Smt.Rijwana Firoj Khan

सारांश

यह अध्ययन महाराष्ट्र राज्य के सातारा जिले के विभिन्न महाविद्यालयों से चुने गए युवा लड़कों के बीच सिगरेट के उपयोग की व्यापकता और उनके सिगरेट शुरू करने के कारणों का आकलन करने के लिए आयोजित किया गया था। सातारा जिले के एक अध्ययन के मुताबिक, 18-19 वर्ष के कॉलेज छात्रों में तंबाकू का उपयोग 47.2% पाया गया, जिसमें 44.2% लड़के और 3% लड़कियां शामिल थीं। हालाँकि, एक रिपोर्ट के मुताबिक महाराष्ट्र में 13-15 वर्ष के बच्चों में नशा करने की दर (5%) देश के औसत (8.5%) से कम है। सातारा में किए गए सर्वे से पता चला कि खुली सिगरेट की बिक्री आम है। कि 2020 से महाराष्ट्र में प्रतिबंधित है। महाराष्ट्र में नशीले पदार्थों के बढ़ते दुरुपयोग को रोकने और युवाओं व कॉलेज जाने वाले छात्रों के मानसिक तनाव को कम करने के लिए स्कूल-कॉलेज स्तर पर अनिवार्य योग कार्यक्रम लागू किए जाने चाहिए। छात्रों को उनके नुकसान (तंबाकू से होने वाली हानि) के बारे में सूचित करना और उन्हें जागरूक करना चाहिए। उनके लिए उपक्रम आयोजित करने चाहिए। उन्हें तनाव मुक्त करना चाहिए। नशीले पदार्थों से दूर-दूर तक कोई संबंध नहीं रखना चाहिए। (DYP) डायबिटीज योग प्रोटोकॉल (Diabetes Yoga Protocol) की स्थापना की जानी चाहिए।

मुख्य शब्द : “नशीले पदार्थों का दुरुपयोग, सिगरेट, शराब, डायबिटीज योग प्रोटोकॉल, महाराष्ट्र / भारत।”

परिचय

शराब और सिगरेट भारत में वैध पदार्थ (legal substances) हैं, जिनका अक्सर दुरुपयोग किया जाता है और ये विभिन्न रोगों के प्रमुख जोखिम कारक हैं। यह उनके गैर-संचारी रोगों (Non-Communicable Diseases - NCDs) के बोझ को बढ़ाता है। ज्यादातर युवा लड़कों के बीच यह समस्या दिखाई दे रही है। महाराष्ट्र में GATS-2 रिपोर्ट के अनुसार, 35.5% पुरुष, 17% महिलाएँ और 26.6% वयस्कों के बीच नशीले पदार्थों (तंबाकू) का उपयोग किया जा रहा है। कराड में ड्रग्स रैकेट: दुर्गाण डोंगरी परिसर में ड्रग्स का काला बाज़ार। कराड और सातारा पुलिस इस क्षेत्र में नशे के खिलाफ लगातार कार्रवाई कर रही है। कॉलेज के दौरान (18-25 वर्ष) की आयु में निकोटीन और सिगरेट का सेवन बढ़ जाता है, जिसमें दोस्तों का प्रभाव (Peer Pressure) सबसे अधिक होता है। यह उम्र मनोवैज्ञानिक रूप से बहुत संवेदनशील होती है जहाँ युवा सामाजिक रूप से स्वीकार्य होने के लिए अक्सर गलत आदतों को अपना लेते हैं। कई अध्ययनों में यह दिखाई दिया है कि बच्चे अपनी पहली सिगरेट प्राथमिक विद्यालय में पढ़ते समय ही पी लेते हैं, हालाँकि, सामान्यतः धूम्रपान की शुरुआत युवावस्था में होने की संभावना अधिक होती है। विकसित देशों में युवाओं के बीच धूम्रपान की प्रवृत्ति लड़कियों में अधिक देखी जाती है, जबकि अधिकांश विकासशील देशों में यह प्रवृत्ति लड़कों में अधिक पाई जाती है।

भारत में धूम्रपान करने वालों की संख्या बहुत अधिक है, जो लगभग 10 करोड़ से 12 करोड़ के बीच है (लगभग 100-120 मिलियन)। **Global State of Tobacco Harm Reduction 2025** की रिपोर्ट के अनुसार, 2024 में धूम्रपान करने वालों की संख्या 100.2 मिलियन (10.02 करोड़) से अधिक थी। भारत में लगभग 25 करोड़ से 27 करोड़ लोग किसी न किसी रूप में तंबाकू का सेवन करते हैं। धूम्रपान के कारण भारत में हर साल लगभग 10 लाख से अधिक लोगों की जान जाती है। प्रतिदिन 6.25 लाख से अधिक बच्चे सिगरेट पीते हैं। भारत दुनिया में तंबाकू का दूसरा सबसे बड़ा उपभोक्ता और उत्पादक है।

कराड में किए गए अध्ययनों में वयस्कों के बीच तंबाकू उपयोग की कुल व्यापकता लगभग 43% से 47% तक पाई गई है। साथ ही, अन्य तंबाकू उत्पादों (जैसे हुक्का, सिगरेट और गांजा) के उपयोग में लिंग के आधार पर कोई महत्वपूर्ण अंतर नहीं पाया गया है हालांकि इनका उपयोग लड़कों में अधिक है।

वर्तमान अध्ययन के उद्देश्य हैं:

1. व्यापकता का आकलन: सतारा/कराड के कॉलेज छात्रों में तंबाकू और सिगरेट के उपयोग की दर को मापना।
2. कारणों की पहचान: युवाओं द्वारा धूम्रपान शुरू करने के पीछे के सामाजिक और मानसिक कारणों (जैसे तनाव या मित्रों का दबाव) का पता लगाना।
3. लिंग आधारित विश्लेषण: लड़के और लड़कियों के बीच नशीले पदार्थों के सेवन के पैटर्न में अंतर को समझना।
4. निवारक उपाय: युवाओं को नशे से बचाने के लिए 'डायबिटीज योग प्रोटोकॉल' जैसे समाधानों का सुझाव देना।

सामग्री और विधियाँ

पश्चिम महाराष्ट्र के चयनित कॉलेज छात्रों में एक वर्णात्मक क्रॉस-सेक्शनल अध्ययन (Descriptive Cross-sectional Study) किया गया। पायलट अध्ययन के परिणामों के आधार पर, 90% विश्वसनीयता स्तर और 5% त्रुटि सीमा के साथ 500 प्रतिभागियों का नमूना (Sample Size) निर्धारित किया गया। पश्चिमी महाराष्ट्र के महाविद्यालयों की सूची प्राप्त की गई और कॉलेजों का चयन प्रणालीबद्ध यादृच्छिक नमूना विधि द्वारा किया गया। चुनित कॉलेजों से अध्ययन करने की अनुमति प्राप्त की गई। इन कॉलेजों से प्रतिभागियों का चयन साधारण यादृच्छिक नमूना विधि द्वारा किया गया। इस अध्ययन के लिए विश्वविद्यालय की नैतिक समिति से नैतिक स्वीकृति प्राप्त की गई तथा सभी प्रतिभागियों से सूचित सहमति प्राप्त की गई।

परिणाम

- महाराष्ट्र में तंबाकू सेवन के परिणाम
- महाराष्ट्र में लगभग 26-27% वयस्क किसी न किसी रूप में तंबाकू का सेवन करते हैं।
- धूम्रपान (सिगरेट/बीडी) की तुलना में बिना धुएँ वाला तंबाकू (गुटखा, खैनी, मावा) अधिक प्रचलित है।
- पुरुषों में तंबाकू सेवन की दर महिलाओं से अधिक पाई गई है।
- किशोर और युवाओं (13-15 वर्ष) में लगभग 5% तंबाकू का उपयोग देखा गया है, जो चिंता का विषय है। कई लोग कम उम्र (11-20 वर्ष) में ही तंबाकू सेवन शुरू कर देते हैं।

- तंबाकू सेवन के कारण मुख कैंसर, फेफड़ों की बीमारी, हृदय रोग और दांतों की समस्याएँ बढ़ रही हैं।
- गुटखा और पान मसाला पर प्रतिबंध के बावजूद अवैध बिक्री जारी है।
- सरकार द्वारा राष्ट्रीय तंबाकू नियंत्रण कार्यक्रम (NTCP) के तहत जागरूकता और नशा मुक्ति केंद्र चलाए जा रहे हैं।
- पिछले वर्षों की तुलना में तंबाकू सेवन में कुछ कमी आई है, लेकिन समस्या अभी भी गंभीर है

तालिका 1: अध्ययन में भाग लेने वाले प्रतिभागियों की जनसांख्यिकीय विशेषताएँ

जनसांख्यिकीय चर	(n=500)	प्रतिशत)
आयु(वर्ष)		
18-19	236	47.2%
20-21	137	27.4%
22-23	221	44.2%
24-25	15	3%
लिंग		
पुरुष	221	44.2%
महिला	15	3%

तालिका 2 : आदतें शुरू करने के कारण

कारण	(n=500)	(प्रतिशत)
मज़े के लिए	4248	18%
दोस्तों के प्रभाव में	16520	70%
दूसरों के कारण	3761.84	15.94
जिज्ञासा के लिए	10785.2	45.7%

बहस

तंबाकू से होने वाली अधिकांश मौतें विकासशील देशों में होती हैं, जहाँ तंबाकू की समस्या चिंताजनक रूप से बढ़ रही है। भारत के गुजरात राज्य में किए गए एक अध्ययन में इस आदत की शुरुआत की उम्र में गिरावट देखी गई है, जो एक गंभीर चिंता का विषय है। [8-15] भारत के विभिन्न राज्यों में स्कूली छात्रों में तंबाकू के उपयोग की व्यापकता 1.9% (दिल्ली) से लेकर 75.3% (मिजोरम) तक भिन्न पाई गई है।

वर्तमान अध्ययन में "तंबाकू के कभी भी उपयोग" की व्यापकता 48.2% थी, जो उत्तर प्रदेश में आयोजित जीवाईटीएस द्वारा रिपोर्ट की गई 37.2% (लड़के: 39.2%, लड़कियां: 31.9%) से काफी अधिक है। [16] नोएडा शहर में कम व्यापकता वास्तव में इसके पड़ोसी शहर दिल्ली की दरों को दर्शा सकती है, क्योंकि

नोएडा के स्कूली छात्रों का एक बड़ा हिस्सा दिल्ली का निवासी है। हालांकि छात्राओं में तंबाकू का उपयोग बढ़ रहा है, हमने पाया कि यह आदत लड़कों की तुलना में लड़कियों में अभी भी थोड़ी कम प्रचलित है। यह अवलोकन अन्य भारतीय अध्ययनों द्वारा समर्थित है।

निष्कर्ष :

यह अध्ययन तंबाकू छोड़ने और भविष्य में होने वाली बीमारियों से बचाव के लिए इसके महत्व पर आधारित एक मॉडल संरचना का हिस्सा था। अध्ययन में पाया गया कि तंबाकू के प्रभावों के बारे में सामान्य जानकारी होने के बावजूद, इसका उपयोग दिन-प्रतिदिन बढ़ता जा रहा है। यह आवश्यक है कि सरकार तंबाकू सेवन के संबंध में सख्त कानून बनाए, जिससे युवा पीढ़ी और हमारे देश के भावी नागरिकों की रक्षा हो सके। इस अध्ययन में तंबाकू के उपयोग की प्रथाओं, इसके हानिकारक प्रभावों के बारे में जागरूकता और नशामुक्ति कार्यक्रम का खुलासा किया गया है।

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सतारा जिले के कॉलेज छात्रों में तंबाकू संबंधी आदतों की व्यापकता और पैटर्न
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सतारा, भारत में तपेदिक-मधुमेह से ग्रसित रोगियों में निदान में देरी के सामाजिक-सांस्कृतिक पहलू।
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तंबाकू के धूम्रपान के संपर्क में आने और स्तन कैंसर के जोखिम के बीच संबंध: ग्रामीण महाराष्ट्र, भारत से एक केस कंट्रोल अध्ययन



Viksit Bharat 2047 : A Century of Freedom, A Century of Excellence

Dr. Krishna Bhanudasrao Patil

Director, Centre for Distance and Online Education

Shivaji University, Kolhapur

E-mail: kbp_edu@unishivaji.ac.in

Contact : 9890795658

Abstract:

India's remarkable journey since gaining independence in 1947 has been one of resilience, transformation, and progress. As the nation approaches the centenary of its independence in 2047, the ambitious vision of *Viksit Bharat 2047* takes center stage, aiming to make India a developed, inclusive, and equitable nation. This vision is anchored on four foundational pillars: **Youth, Women, Poor, and Farmers**. Together, these pillars represent the aspirations of a diverse population and provide a roadmap for achieving sustainable growth, social justice, and economic prosperity.

This article delves into India's achievements over the decades, including advancements in education, healthcare, technology, and agriculture. It highlights the critical role of government policies and initiatives that have empowered youth, uplifted women, alleviated poverty, and strengthened the agricultural sector. Furthermore, it explores the challenges that lie ahead, such as unemployment, gender inequality, poverty, and agricultural vulnerabilities, and emphasizes the need for collaborative efforts between the government, citizens, and private enterprises.

By addressing these challenges and capitalizing on its demographic dividend, technological innovation, and cultural heritage, India can emerge as a global leader by 2047. The vision of *Viksit Bharat 2047* is not merely a dream but a collective responsibility, inspiring every citizen to contribute to the nation's journey toward excellence. This milestone represents not only 100 years of independence but also 100 years of striving for an equitable, prosperous, and developed future for all.

Keywords: India@2047, Youth Empowerment, Women's Leadership, Poverty Eradication, Sustainable Farming, Inclusive Development

Introduction

India's journey since its independence in 1947 is a testament to resilience, progress, and the collective spirit of its people. Over the decades, the nation has transformed from a nascent democracy grappling with colonial scars to an emerging global powerhouse. The year 2047 marks a monumental milestone—100 years of freedom. It offers a unique opportunity to reflect on our achievements and, more importantly, envision the future of a developed India: *Viksit Bharat 2047*.

This ambitious vision seeks to create an equitable, prosperous, and inclusive nation. Central to this framework are four key pillars identified by the government: **Youth, Women, Poor, and Farmers**. Together, they form the foundation of India's roadmap to sustainable development and excellence.

Historical Perspective and Achievements

Since independence, India has achieved remarkable progress in diverse areas. Economically, India transitioned from a primarily agrarian society to one of the fastest-growing economies in the world, fuelled by industrialization, technological innovation, and global trade. Landmark policies like *Liberalization, Privatization, and Globalization* in 1991 catalysed this growth.

In education, initiatives such as the *Right to Education Act* and the *New Education Policy 2020* aim to make learning accessible and holistic. These policies have focused on building infrastructure, promoting digital literacy, and ensuring that education reaches even the remotest corners of the country.

Vocational training programs and higher education reforms have further strengthened India's education system.

In healthcare, programs like *Ayushman Bharat* and the eradication of polio reflect the country's commitment to public health. India has also made significant advancements in manufacturing vaccines and addressing global health crises, such as the COVID-19 pandemic.

Agricultural advances through the *Green Revolution* and ongoing reforms have ensured food security for millions. The adoption of high-yield crop varieties, modern irrigation techniques, and rural credit schemes has transformed Indian agriculture.

India's technological strides from space exploration with *ISRO's Chandrayaan missions* to digital empowerment through *Digital India* have positioned it as a leader in innovation. The IT sector, a major driver of economic growth, has earned India the title of the "world's back office." These achievements underscore the nation's potential to transform challenges into opportunities.

Vision for Viksit Bharat 2047

The government's vision for *Viksit Bharat 2047* centers on four pillars:

1. Youth: The Driving Force of the Economy

India's demographic dividend, with over 50% of its population under the age of 30, is a powerful asset. Empowering youth through skilling, education, and entrepreneurship is critical. Programs like *Skill India* and *Start-up India* are designed to harness their potential. By 2047, the vision is to create a generation of innovators, leaders, and global contributors. Investments in STEM (Science, Technology, Engineering, and Mathematics) education and collaborations with global institutions will play a vital role.

Efforts must also focus on mental health and well-being, ensuring that the youth are equipped to handle challenges. Initiatives for career counselling and digital literacy will further enhance their readiness for the global job market.

2. Women: Catalysts of Change

Women have historically played a pivotal role in India's progress. Initiatives like *Beti Bachao Beti Padhao* and *Mahila E-Haat* aim to ensure gender equality, financial inclusion, and educational access. By 2047, the goal is to shatter the glass ceiling, enabling women to lead in all spheres from politics and business to science and arts.

Empowering women through self-help groups, access to credit, and leadership training programs can bring about transformative change. Policies promoting maternity benefits, workplace equality, and safety will ensure that women can thrive in all environments. Recognizing and rewarding women's contributions in non-traditional sectors will further boost their participation.

3. Poor: Ensuring Dignity and Opportunity

Alleviating poverty remains a cornerstone of India's development agenda. Programs such as *Pradhan Mantri Awas Yojana* and *Jan Dhan Yojana* aim to provide affordable housing, financial inclusion, and social security. The vision for 2047 is a poverty-free India where every citizen has access to basic amenities, quality healthcare, and opportunities for upward mobility.

Strengthening rural infrastructure, promoting microfinance initiatives, and expanding social welfare schemes are critical to this vision. Efforts must also focus on skill development for marginalized communities, ensuring their participation in the mainstream economy.

4. Farmers: The Backbone of the Nation

Agriculture sustains millions of Indian families. Reforms like the *PM-Kisan Samman Nidhi* and technological advancements in farming aim to ensure better incomes, sustainability, and food security.

By 2047, the vision is to make Indian agriculture more resilient, technology-driven, and globally competitive.

Encouraging organic farming, water conservation, and crop diversification will address environmental concerns. Collaborations with agri-tech startups and international markets will enhance farmers' incomes and market access.

Challenges to Overcome

While the vision for 2047 is inspiring, several challenges need immediate attention and resolution:

Challenges for Youth

India's youth face rising unemployment and a significant skills gap. Despite numerous skilling programs, many young individuals are unable to secure jobs due to a mismatch between industry requirements and educational training. The lack of quality vocational training, especially in rural areas, hampers their employability. Mental health concerns among youth are another pressing issue, often overlooked due to stigma and inadequate mental health resources.

Challenges for Women

Gender disparities persist in education, workforce participation, and leadership roles. Cultural and societal norms continue to limit women's access to opportunities. Safety and security remain major concerns, affecting their mobility and confidence. Despite policies promoting gender equality, the lack of effective implementation at the grassroots level restricts progress.

Challenges for the Poor

Poverty alleviation efforts are often hindered by uneven distribution of resources and corruption. Urban-rural divides exacerbate the issue, leaving many rural areas without access to quality healthcare, education, and infrastructure. The lack of awareness about government schemes among marginalized communities further prevents them from availing the benefits they are entitled to.

Challenges for Farmers

Climate change poses a significant threat to Indian agriculture, leading to unpredictable weather patterns, water scarcity, and declining soil fertility. Farmers often face market volatility and lack access to fair pricing for their produce. The reliance on traditional farming methods, coupled with inadequate support for technological adoption, limits productivity and income growth. Debt and financial insecurity remain persistent issues, driving many farmers into distress.

Addressing these challenges requires collaborative efforts from the government, private sector, and civil society. Policy reforms, robust implementation mechanisms, and active citizen participation are essential to overcoming these hurdles.

Role of Government and Citizens

Achieving *Viksit Bharat 2047* necessitates a synergistic relationship between the government and its citizens. The government's responsibility lies in formulating and executing robust policies that cater to the needs of all societal segments. Programs such as *Digital India*, *Make in India*, *Skill India*, and *Swachh Bharat Abhiyan* highlight how strategic planning and strong governance can drive significant progress.

The government must continue to strengthen infrastructure, promote innovation, and ensure transparency and accountability in its operations. Policies must evolve with time, focusing on sustainable development, climate resilience, and equitable resource distribution. Effective implementation and monitoring mechanisms are critical to bridging gaps and achieving desired outcomes.

Citizens, on the other hand, play an equally critical role in transforming this vision into reality. Active civic participation in governance, environmental conservation, and social initiatives can accelerate

the pace of development. Citizens can contribute by adopting sustainable practices, supporting local businesses, volunteering for community welfare, and promoting unity in diversity. The collective effort of an informed and empowered populace can amplify the impact of governmental initiatives, ensuring a brighter future for the nation.

Global Perspective

A developed India by 2047 is not just a national aspiration; it holds global significance. India's demographic advantage, coupled with advancements in technology, innovation, and entrepreneurship, positions it as a key player on the international stage. As a global leader, India can set benchmarks in sustainable development, digital transformation, and inclusive governance.

India's cultural richness, scientific achievements, and economic growth offer opportunities for international collaboration in areas such as renewable energy, healthcare, and technology. Initiatives like *International Solar Alliance* and contributions to global vaccine production during the COVID-19 pandemic demonstrate India's potential to address global challenges.

By 2047, India can emerge as a hub for research, innovation, and trade, fostering partnerships with nations worldwide. Its commitment to peace, diplomacy, and sustainable practices can position it as a role model for global development. India's journey to becoming a developed nation will not only benefit its citizens but also inspire progress across the world.

Conclusion

As India nears 100 years of independence in 2047, the vision of *Viksit Bharat 2047* is both a hopeful goal and a serious promise. This vision is not merely about economic prosperity but about creating an equitable, inclusive, and sustainable society that reflects the collective dreams of its 1.4 billion citizens. The roadmap for achieving this goal hinges on recognizing and empowering the four pillars; Youth, Women, Poor, and Farmers; that form the backbone of the nation.

India's youth, with their dynamism and creativity, hold the potential to drive innovation and global leadership. By equipping them with world-class education, advanced skillsets, and a conducive ecosystem for entrepreneurship, India can harness its demographic dividend to emerge as an economic powerhouse. Similarly, empowering women is essential not only for gender equality but also for leveraging their untapped potential as change-makers in every sphere of life, from governance to business and social leadership. A society that uplifts its women creates the foundation for balanced and inclusive growth.

The battle against poverty continues to be a critical priority. Ensuring dignity and opportunity for every citizen through targeted welfare programs, access to basic amenities, and pathways to economic mobility is vital for a cohesive and thriving nation. At the same time, addressing the challenges of Indian agriculture—supporting farmers with technology, sustainable practices, and market access—will reinforce food security and rural development while ensuring the welfare of millions who rely on this sector for their livelihoods.

However, the vision of *Viksit Bharat 2047* cannot rest solely on government initiatives. It demands active participation from all stakeholders; citizens, private enterprises, academia, and civil society. Citizens have a pivotal role in fostering a culture of unity, accountability, and environmental consciousness. Collective efforts, such as those seen in the *Swachh Bharat Abhiyan* and *Digital India* initiatives, demonstrate the transformative power of public participation in nation-building.

On the global stage, a developed India in 2047 has the potential to redefine its role as a leader in sustainable development, technological innovation, and cultural diplomacy. With its rich heritage, youthful population, and advances in technology, India can present itself as a model for equitable growth

and inclusivity. Its leadership in areas such as climate change, digital transformation, and healthcare can set global benchmarks and inspire other nations to pursue balanced and sustainable progress.

The journey toward *Viksit Bharat 2047* is undeniably challenging, but it is also achievable with determination, collaboration, and a shared sense of purpose. It is a call to action for every Indian to contribute to this grand vision; whether by innovating, educating, farming, leading, or simply making mindful choices that support the nation's goals.

As we stand at the crossroads of history, the next 23 years represent a golden opportunity to redefine India's destiny. Together, we can ensure that *Viksit Bharat 2047* becomes not just a vision but a lived reality; an India that shines as a beacon of hope, equality, and excellence in the global arena.

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Preventive Nutrition and Functional Foods for a Healthy India : Vision 2047

Miss. Aaroahi L. Moghe

Dept. of B. Voc. Food Processing and Management, Kamala College, Kolhapur
Corresponding author Mail: aarohimoghe@gmail.com

Abstract

India is undergoing a rapid epidemiological transition marked by a sharp rise in lifestyle-related non-communicable diseases such as diabetes mellitus, cardiovascular diseases, obesity, and hypertension. These conditions are closely associated with urbanization, reduced physical activity, dietary shifts toward processed foods, and increased stress. Functional and preventive foods present a viable, culturally relevant, and cost-effective strategy for addressing these health challenges. Functional foods provide physiological benefits beyond basic nutrition by virtue of bioactive components such as dietary fiber, antioxidants, probiotics, and phytochemicals.

Traditional Indian foods including millets, fermented products, pulses, spices, fruits, and vegetables possess scientifically recognized anti-inflammatory, hypoglycemic, lipid-lowering, and cardioprotective properties. In alignment with the national vision of *Viksit Bharat @2047*, the integration of functional and preventive foods into regular diets can enhance population health, reduce long-term healthcare costs, and promote sustainable food systems. Despite these advantages, the widespread adoption of functional foods in India is constrained by limited consumer awareness, affordability issues, lack of standardization, regulatory challenges, and insufficient clinical substantiation of health claims.

This paper reviews the role of functional and preventive foods in the prevention of lifestyle diseases in India, identifies opportunities for innovation and entrepreneurship, and discusses major challenges and future directions. Strengthening research, policy support, and nutrition education is essential to realize the potential of functional foods in building a healthier and economically resilient India by 2047.

Keywords: Functional foods, Preventive nutrition, Lifestyle diseases, Indian diet, Viksit Bharat @2047

Introduction

Lifestyle diseases constitute a major public health concern in India and are responsible for a significant proportion of premature mortality and long-term morbidity. Rapid urbanization, industrialization, and economic growth have brought substantial changes in food consumption patterns and lifestyle behaviors. Traditional balanced diets are increasingly replaced by highly processed, energy-dense, and nutrient-poor foods. Sedentary occupations, reduced physical activity, and increased psychological stress further aggravate the risk of non-communicable diseases. The rising prevalence of diabetes, cardiovascular diseases, obesity, and hypertension has placed immense pressure on India's healthcare system.

Preventive approaches focusing on diet and lifestyle modification are therefore gaining importance. Functional and preventive foods offer a practical solution by addressing nutritional deficiencies while reducing disease risk. These foods provide bioactive components that positively influence metabolic and physiological functions. India's diverse food culture and traditional dietary practices provide a strong foundation for the promotion of functional foods. Integrating traditional knowledge with modern nutritional science can support long-term health

outcomes. Hence, functional foods play a critical role in achieving sustainable health goals under the vision of Viksit Bharat @2047.

Lifestyle Diseases in the Indian Context

India bears a substantial share of the global burden of lifestyle-related non-communicable diseases. The prevalence of type 2 diabetes has increased rapidly, making India one of the leading countries affected by this condition. Cardiovascular diseases remain the leading cause of death across both urban and rural populations. Obesity and overweight are increasingly observed among children, adolescents, and adults due to poor dietary habits and physical inactivity. Hypertension often remains undiagnosed and untreated, increasing the risk of stroke and heart disease.

Genetic susceptibility among the Indian population further intensifies disease risk when combined with unhealthy lifestyles. Rising healthcare costs associated with chronic disease management pose a major economic challenge. Productivity losses due to illness reduce workforce efficiency and national growth. Preventive nutrition is recognized as a cost-effective strategy to reduce disease burden. Early dietary interventions can delay disease onset and progression. Therefore, addressing lifestyle diseases through functional foods is of national importance.

Concept of Functional and Preventive Foods

Functional foods are foods that offer health benefits beyond basic nutrition due to the presence of biologically active compounds. These foods may be natural or processed and are consumed as part of a regular diet. Preventive foods focus primarily on maintaining health and reducing the risk of chronic diseases. Bioactive components such as dietary fiber, antioxidants, probiotics, prebiotics, omega-3 fatty acids, and phytochemicals play a vital role in disease prevention. Functional foods help regulate blood glucose levels, improve lipid profiles, enhance gut health, and strengthen immune function. They also reduce oxidative stress and inflammation, which are key contributors to lifestyle diseases. Regular consumption of functional foods supports metabolic balance and overall well-being.

These foods are not meant to replace medications but to complement healthy lifestyles. Scientific validation of health benefits is essential for consumer acceptance. The scope of functional foods is expanding due to increased awareness and research. Thus, functional and preventive foods form an integral part of modern preventive nutrition strategies.

Traditional Indian Functional Foods

Traditional Indian diets include a wide variety of foods with proven functional properties. Millets such as ragi, jowar, and bajra are rich in dietary fiber, minerals, and antioxidants. These grains help in glycemic control and are beneficial for individuals with diabetes. Pulses and legumes provide plant-based protein and improve satiety, aiding in weight management. Fermented foods such as curd, idli, and dosa support gut health by enhancing beneficial gut microflora. Spices like turmeric, ginger, garlic, and cumin possess anti-inflammatory and antioxidant properties. Fruits and vegetables provide vitamins, minerals, and

phytochemicals essential for disease prevention. Nuts and oilseeds contribute healthy fats that support heart health. Traditional cooking practices often preserve nutrient quality and enhance bioavailability. These foods are culturally acceptable and easily adaptable to daily diets. Therefore, traditional Indian foods serve as an effective functional food system for preventing lifestyle diseases.

Opportunities under Viksit Bharat @2047

The vision of *Viksit Bharat @2047* emphasizes holistic development with a strong focus on health, nutrition, and sustainability. Functional foods offer significant opportunities to improve public health and address the rising burden of lifestyle diseases. Promotion of indigenous crops such as millets aligns with national nutrition goals and is supported by initiatives like the **National Food Security Mission** and the **International Year of Millets (2023)**. Value addition through food processing enhances farmers' income and reduces post-harvest losses, in line with the **Pradhan Mantri Kisan Sampada Yojana**.

The increasing demand for health-oriented foods creates scope for entrepreneurship, startups, and expansion of the nutraceutical and wellness sectors. Functional food development also generates employment across agriculture, processing, research, and marketing. Preventive nutrition can lower long-term healthcare expenditure for both individuals and the government. Integration with programs such as **POSHAN Abhiyaan** and **Ayushman Bharat** can further strengthen outreach and impact. Thus, functional foods play a strategic role in achieving the health and sustainability objectives of *Viksit Bharat @2047*.

Challenges in Adoption of Functional Foods

Despite their potential benefits, functional foods face several challenges in India. Limited consumer awareness remains a major barrier to widespread adoption. Many consumers lack scientific understanding of functional food benefits. High costs of certain functional food products reduce affordability for low-income groups. Lack of standardization and quality control affects product reliability. Regulatory frameworks for functional foods and health claims are still evolving. Inadequate labeling practices create confusion among consumers. Limited clinical trials and evidence restrict acceptance by healthcare professionals. Traditional knowledge is often underutilized due to insufficient scientific validation. Supply chain and storage issues affect product availability and quality. Addressing these challenges requires coordinated efforts from policymakers, researchers, industry stakeholders, and educators.

Future Prospects and Recommendations

Future development of functional foods should focus on evidence-based research and innovation. Strengthening collaboration between research institutions and the food industry is essential. Nutrition education programs can improve consumer awareness and acceptance. Clear regulatory guidelines will help ensure product safety and credibility. Encouraging the use of indigenous crops supports sustainability and nutrition security. Functional foods should be incorporated into public health and nutrition programs. Affordable product development will improve accessibility for diverse populations. Clinical studies are needed to substantiate health claims. Promotion of traditional dietary practices can enhance cultural acceptance. Public-private partnerships can accelerate growth and innovation in the functional food sector.

Conclusion

Functional and preventive foods represent a powerful approach to address the growing burden of lifestyle diseases in India. By integrating traditional dietary wisdom with modern food science, India can move toward a healthier population and achieve the goals of Viksit Bharat @2047. Strategic planning, awareness creation, and supportive policies will be key to overcoming challenges and maximizing benefits.

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Next-Gen Food Processing for Nutrition Security

Miss. Ketaki Suhas Kulkarni

Department : B.Voc.Food Processing & Management, Kamala College, Kolhapur.

Corresponding author Mail : ketakis3201@gmail.com

Abstract

Nutrition security is a critical global challenge that requires continuous access to safe, affordable, and nutrient-dense foods to support human health and well-being. While conventional food processing technologies have played an essential role in enhancing food safety and extending shelf life, they often result in significant nutrient losses, high energy consumption, and increased post-harvest waste. These limitations have raised concerns regarding their long-term sustainability and effectiveness in addressing nutrition security. In response, next-generation food processing technologies have emerged as promising alternatives capable of preserving nutritional quality while improving processing efficiency and sustainability.

This paper reviews key emerging food processing technologies, including high-pressure processing, pulsed electric fields, cold plasma, microwave and ohmic heating, freeze drying, extrusion, and fermentation. These innovative methods offer several advantages over traditional techniques, such as improved retention of vitamins, minerals, and bioactive compounds, enhanced microbial safety with minimal thermal damage, and reduced processing time and energy use. Additionally, next-generation technologies contribute to the reduction of food losses and waste by extending shelf life and enabling the utilization of under-exploited raw materials.

The role of these technologies in supporting nutrition security is examined in terms of food availability, accessibility, utilization, and stability. Despite their significant potential, challenges related to high initial investment costs, technical complexity, regulatory approval, and limited awareness among small-scale producers hinder widespread adoption. The paper also discusses future prospects, emphasizing the need for policy support, technological advancements, and capacity building to promote large-scale implementation.

Overall, next-generation food processing technologies represent a vital pathway toward sustainable food systems and improved nutrition security, offering innovative solutions to meet the growing global demand for nutritious, safe, and sustainable foods.

Keywords : Nutrition security, next-generation food processing, non-thermal processing, food sustainability, nutrient retention.

1. Introduction

Nutrition security is a fundamental component of public health and sustainable development, ensuring that individuals have continuous access to safe, affordable, and nutritionally adequate food necessary for a healthy and active life. Unlike food security, which primarily emphasizes availability and access, nutrition security also focuses on food utilization, dietary diversity, and the presence of essential nutrients. Rapid population growth, urbanization, climate change, and changing dietary patterns have intensified the demand for nutritious foods, placing increased pressure on global food systems.

Conventional food processing techniques such as thermal processing, drying, and chemical preservation have been widely adopted to enhance food safety and extend shelf life. Although effective, these methods often result in nutrient degradation, loss of sensory quality, high energy consumption, and

increased post-harvest losses. Furthermore, the reliance on intensive heat treatments can reduce the bioavailability of vitamins, antioxidants, and other bioactive compounds, thereby limiting the nutritional value of processed foods.

Next-generation food processing technologies have emerged as innovative solutions to overcome these challenges. These advanced techniques aim to minimize nutrient loss while ensuring microbial safety, improving processing efficiency, and supporting environmental sustainability. Technologies such as high-pressure processing, pulsed electric fields, cold plasma, microwave and ohmic heating, freeze drying, extrusion, and fermentation enable precise control over processing conditions, allowing for better preservation of nutritional and functional properties of foods.

By improving nutrient retention, reducing food waste, and enabling the development of value-added and functional foods, next-generation food processing plays a crucial role in strengthening nutrition security. However, the adoption of these technologies faces challenges related to cost, infrastructure, technical expertise, and regulatory frameworks. Understanding their potential and limitations is essential for promoting sustainable and resilient food systems. This paper explores the role of next-generation food processing technologies in enhancing nutrition security and discusses their implications for future food systems.

2. Objectives

1. To identify and review at least 6–8 next-generation food processing technologies (such as HPP, PEF, cold plasma, extrusion, and fermentation) and document their key principles and applications in nutrition security.
2. To evaluate changes in nutrient retention and food safety outcomes reported in scientific studies by comparing conventional and next-generation food processing methods.
3. To assess the contribution of advanced food processing technologies in reducing post-harvest losses and extending shelf life, based on published data and case studies.
4. To analyze the role of next-generation food processing in improving food availability, accessibility, utilization, and stability within a defined study period.
5. To identify major technological, economic, and regulatory challenges affecting the adoption of next-generation food processing technologies, with reference to developing countries.
6. To examine future prospects and policy measures required to promote the adoption of advanced food processing technologies for strengthening nutrition security by the end of the study period.

Concept of Next-Generation Food Processing

Next-generation food processing refers to advanced and innovative technologies designed to improve the quality, safety, nutritional value, and sustainability of food products. Key objectives include:

- Maximum retention of vitamins, minerals, and bioactive compounds
- Improved food safety and shelf life
- Reduction in post-harvest losses and food waste
- Lower energy and water consumption
- Enhanced consumer acceptance and product quality

3. Emerging Food Processing Technologies

3.1 High-Pressure Processing (HPP)

High-pressure processing involves the application of very high pressure to food, which inactivates microorganisms and enzymes without significant heat. HPP helps retain fresh-like qualities,

color, flavor, and heat-sensitive nutrients such as vitamins and antioxidants. It is widely used in fruit juices, ready-to-eat meals, and dairy products.

3.2 Pulsed Electric Field (PEF)

Pulsed electric field processing uses short bursts of high voltage to disrupt microbial cell membranes. PEF is suitable for liquid and semi-liquid foods such as juices and milk. It improves microbial safety while maintaining nutritional and sensory quality.

3.3 Cold Plasma Technology

Cold plasma is an emerging non-thermal technology that generates reactive species capable of inactivating microorganisms on food surfaces. It is effective for fresh produce, grains, and packaging materials, contributing to food safety with minimal impact on nutrients.

3.4 Microwave and Ohmic Heating

Microwave and ohmic heating provide rapid and uniform heating, reducing processing time and energy losses. These methods help preserve nutritional quality compared to conventional heating and are used in ready-to-eat foods and liquid products.

3.5 Freeze Drying

Freeze drying removes moisture from food at low temperatures under vacuum, preserving structure, flavor, and nutrients. It is particularly useful for fruits, vegetables, and functional foods, although the high cost limits its large-scale use.

3.6 Extrusion Technology

Extrusion is a versatile processing method used for cereals, snacks, and fortified foods. It allows incorporation of proteins, fibers, and micronutrients, supporting the development of nutrient-dense and affordable foods.

3.7 Fermentation and Bioprocessing

Fermentation improves nutritional quality by enhancing bioavailability of nutrients, synthesizing vitamins, and reducing anti-nutritional factors. Traditional and modern fermentation techniques contribute to sustainable and culturally acceptable nutrition solutions.

4. Role of Next-Generation Processing in Nutrition Security

Next-generation food processing technologies play a significant role in nutrition security by:

- Preserving essential nutrients and bioactive compounds
- Enhancing food safety and reducing foodborne illnesses
- Minimizing post-harvest losses and food waste
- Enabling fortification and development of functional foods

5. Challenges and Limitations

Despite their advantages, the adoption of next-generation food processing technologies faces several challenges:

Despite the numerous advantages of next-generation food processing technologies, their adoption faces several critical challenges and limitations:

1. High Initial Investment and Operational Costs

Advanced technologies such as high-pressure processing, pulsed electric fields, and freeze-drying require expensive equipment and infrastructure. The high capital and maintenance costs can discourage small- and medium-scale enterprises from adoption. Operational costs, including energy consumption and specialized inputs, may also be higher than conventional methods.

2. Need for Skilled Personnel and Technical Expertise

Implementing and maintaining these technologies demands trained personnel with specialized knowledge in food engineering, microbiology, and process optimization. Lack of trained workforce can limit the efficiency and safety of the processing systems.

3. Limited Consumer Awareness and Acceptance

Consumers may be hesitant to accept foods processed with newer technologies due to unfamiliarity or perceived unnaturalness. Marketing, education, and awareness programs are necessary to build trust in these methods.

4. Regulatory and Standardization Issues

Regulatory frameworks for non-thermal and emerging processing technologies are still evolving in many countries. Lack of clear guidelines, standards, and labeling norms can slow down commercialization and cross-border trade.

5. Technological Limitations

Some technologies, like cold plasma or pulsed electric fields, are suitable only for specific types of foods (e.g., liquids or surface-treated products). Their effectiveness may be limited for solid, dense, or multi-component foods.

6. Scalability and Infrastructure Constraints

Scaling up laboratory or pilot-scale technologies to industrial production can be challenging. Limited infrastructure, especially in developing regions, may hinder large-scale implementation.

7. Energy and Environmental Concerns

While many next-generation technologies are energy-efficient, certain processes such as freeze drying or extrusion can still consume significant energy. Assessing their environmental impact and sustainability is essential.

8. Supply Chain and Raw Material Compatibility

The effectiveness of these technologies depends on the quality and characteristics of raw materials. Variations in raw material quality can affect nutrient retention, microbial safety, and product consistency.

6. Future Prospects

The future of food processing is expected to be shaped by the integration of advanced technologies, digital innovations, and sustainable practices. Next-generation processing technologies, when combined with automation, artificial intelligence (AI), machine learning, and smart sensors, can enable real-time monitoring of critical processing parameters, ensuring consistent quality, safety, and nutrient retention. This digitalization can also optimize energy use, reduce waste, and improve supply chain efficiency.

1. Technology Integration and Smart Processing

Emerging technologies such as high-pressure processing, pulsed electric fields, cold plasma, microwave and ohmic heating, and extrusion can be integrated with Internet of Things (IoT)-based sensors to monitor temperature, pressure, and moisture during processing. Such integration allows precise control over nutrient preservation, microbial inactivation, and shelf-life extension.

2. Cost-Effective and Scalable Solutions

Research and innovation should focus on making these technologies affordable and scalable, particularly for small- and medium-scale food enterprises. Modular, energy-efficient systems and low-cost equipment can help bridge the technology gap in developing regions. Promoting local processing

units using these innovations can reduce post-harvest losses, improve local nutrition security, and generate employment.

3. Development of Functional and Fortified Foods

Next-generation processing can facilitate the production of functional foods, fortified foods, and value-added products that address micronutrient deficiencies and promote health. Combined with biotechnology and fermentation processes, these technologies can enhance the bioavailability of nutrients and develop region-specific nutrient-rich foods.

4. Sustainable and Circular Food Systems

Future developments will emphasize sustainability, including water and energy conservation, minimal environmental impact, and waste valorization. By utilizing under-exploited raw materials, by-products, and residues, food industries can create circular systems that reduce food waste while enhancing nutrition security.

5. Policy, Collaboration, and Research Focus

To realize the full potential of next-generation technologies, policy support, public–private partnerships, and international collaborations are crucial. Research should focus on adapting technologies to local contexts, ensuring affordability, regulatory compliance, and cultural acceptance.

6. Consumer Engagement and Awareness

Finally, increasing consumer awareness about the safety, nutritional benefits, and environmental advantages of foods processed using these advanced technologies will enhance acceptance and market adoption.

Overall, the future of food processing lies in the synergistic combination of technology, sustainability, and innovation, creating resilient food systems that ensure nutrition security for a growing global population.

7. Conclusion

Next-generation food processing technologies offer promising solutions to enhance nutrition security by improving nutrient retention, food safety, and sustainability. Their strategic adoption can reduce post-harvest losses, support the production of nutrient-rich foods, and contribute to healthier populations. Continued research, supportive policies, and stakeholder collaboration are vital for realizing their full potential.

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Yoga for Mental Health and Stress Management in Future India

Smt. Sneha S. Birajdar

Dept. of B.Voc Food Processing & Management, Kamala College, Kolhapur

Corresponding author : birajdarsneha@gmail.com

Abstract:

Mental health disorders, including stress, anxiety, and depression, are rising rapidly in India due to sociocultural transitions such as urbanization, academic competition, occupational stress, digital dependency, and socioeconomic disparities. Traditional mental healthcare services are constrained by limited resources, stigma, and unequal access, particularly in rural areas. Consequently, there is growing interest in integrating low-cost, scalable, and culturally relevant interventions into public health frameworks. Yoga, an ancient Indian practice encompassing physical postures (asanas), controlled breathing (pranayama), and meditation (dhyana), has garnered global scientific attention for its potential therapeutic effects on psychological well-being.

This paper examines the role of yoga in stress reduction and mental health promotion within the Indian context. Drawing on a synthesis of peer-reviewed literature, randomized controlled trials, and national mental health patterns, we identify key mechanisms through which yoga may influence psychological functioning. Empirical evidence shows that structured yoga interventions can reduce perceived stress, decrease salivary cortisol (a biomarker of stress), enhance attention and cognition, and improve emotional regulation among diverse populations, including adolescents and working adults. For example, a large cluster randomized controlled trial involving Indian adolescents demonstrated significant reductions in stress scores and salivary cortisol following a 17-week yoga program compared to controls, alongside improvements in cognition and metabolic parameters. ([PubMed](#))

Neurobiological research further suggests that yoga practices affect autonomic nervous system balance, increase parasympathetic activation, and modulate neurotransmitters linked to mood regulation, such as gamma-aminobutyric acid (GABA). ([ijltemas.in](#)) Despite promising outcomes, challenges remain regarding standardization of protocols, training of instructors, and integration into conventional health systems. Future strategies should focus on establishing national yoga standards, expanding tele-yoga access for rural and underserved populations, and embedding yoga into school and workplace wellness programs. With rigorous longitudinal research and policy support, yoga holds promise as a culturally acceptable, cost-effective adjunct for enhancing psychological resilience across India's demographic spectrum.

Keywords: Yoga, Mental Health, Stress Management, Public Health, India, Mind–Body Intervention

1. Introduction:

Mental health plays a foundational role in individual well-being, social functioning, and economic productivity. In India, the prevalence of stress-related conditions (including anxiety, depression, and burnout) has increased significantly over recent decades. Urban lifestyles characterized by long work hours, academic pressure, social isolation, and pervasive digital engagement contribute to chronic stress and emotional dysregulation. Additionally, socioeconomic disparities and limited access to quality mental healthcare services further exacerbate psychological distress in both urban and rural populations.

National health surveys and epidemiological estimates suggest substantial unmet mental health needs across India. These include a shortage of trained mental health professionals, insufficient integration of mental health into primary care, and persistent stigma that hinders help-seeking behavior. Under such constraints, conventional biomedical approaches alone are inadequate to address the magnitude of mental health burdens, highlighting the importance of complementary and preventive strategies.

Yoga, a holistic mind–body practice rooted in Indian philosophical traditions, integrates physical postures (asanas), breathing regulation (pranayama), and mental concentration/meditation (dhyana). In recent years, scientific research has explored yoga’s therapeutic potential in stress reduction and mental health promotion. Yoga differs from standard exercise by emphasizing breath control and mindfulness, which may yield specific neurophysiological and psychological benefits beyond general physical activity. This paper explores yoga’s role as an intervention for mental health and stress management in India. We review mechanisms of action, summarize empirical evidence on psychological outcomes, and propose frameworks for integrating yoga into national mental health strategies. By situating yoga within India’s cultural and healthcare landscape, we aim to highlight its potential as a scalable, low-cost, and culturally congruent approach to strengthening psychological resilience.

2. Background and Literature Review :

2.1 Mental Health Landscape in India :

India, with a population exceeding 1.4 billion, faces significant challenges in mental health care delivery. Increasing rates of stress, anxiety, and depressive symptoms are reported across age groups, including adolescents, young adults, and older populations. Socioeconomic pressures, academic and workplace competition, rapid urbanization, and changing family structures contribute to psychological distress. Evidence indicates that high levels of stress correlate with reduced quality of life and increased risk of physical health problems.

Despite this rising burden, mental health resources in India remain limited. The ratio of mental health professionals to the population is significantly below global recommendations, with rural areas particularly underserved. A low level of mental health literacy coupled with sociocultural stigma inhibits help-seeking and early intervention.

2.2 Yoga: Concept and Components :

Yoga is traditionally conceptualized as a system for harmonizing body, breath, and mind. Its primary components include:

- **Asanas:** Physical postures designed to improve strength, flexibility, and bodily awareness.
- **Pranayama:** Regulated breathing techniques that influence autonomic nervous system activity.
- **Dhyana:** Meditative practices that cultivate focused attention, introspection, and emotional balance.

Contemporary scientific frameworks view yoga as a complex mind–body intervention that engages physiological, cognitive, and emotional processes. Unlike conventional physical exercise, yoga’s emphasis on breath and mindfulness may directly influence stress-related neuroendocrine and autonomic systems.

2.3 Empirical Evidence on Yoga and Mental Health :

Research evidence supports the mental health benefits of yoga across a range of populations and outcomes. A large cluster randomized controlled trial conducted in Indian schools found that a 17-week standardized yoga program produced significant reductions in stress, improved attention and concentration, and decreased salivary cortisol levels among adolescents compared to controls. ([PubMed](#))

Beyond Indian adolescents, yoga interventions have shown promise in adult populations, where practices focusing on asanas, pranayama, and meditation are associated with reductions in anxiety, perceived stress, and depressive symptoms. Comprehensive reviews report positive effects of yoga on psychological well-being, stress reduction, and emotional regulation, suggesting mind–body practices may complement traditional therapies. (urr.shodhsagar.com)

Neurobiological research suggests yoga influences autonomic nervous system balance and neurotransmitter function. Studies highlight increases in gamma-aminobutyric acid (GABA) and modulation of stress hormones like cortisol following yoga practice, correlating with improvements in mood and emotional stability. (ijltemas.in) Additionally, yoga's effects on heart rate variability (HRV) indicate enhanced parasympathetic (relaxation) activity, which is inversely associated with stress reactivity.

3. Methods :

This paper employs a mixed-method approach combining literature synthesis, analysis of empirical research, and theoretical integration.

3.1 Literature Synthesis :

Peer-reviewed studies published between 2000 and 2025 were identified through databases such as PubMed, Scopus, and Google Scholar using keywords: *yoga, mental health, stress, anxiety, depression, autonomic nervous system, India*. Studies were screened for relevance to yoga's impact on psychological outcomes.

3.2 Neurophysiological and Psychological Frameworks :

Scientific models explaining yoga's mechanisms were examined, including effects on neuroendocrine function, autonomic regulation, and cognitive/emotional processes.

3.3 Integration with National Context :

Data on mental health trends in India were reviewed to contextualize yoga's potential role in public health. Implementation challenges and policy considerations were mapped through existing literature and health strategy reports.

4. Results :

4.1 Physiological Mechanisms :

Yoga practice engages multiple physiological systems implicated in stress responses. Controlled breathing (pranayama) and meditation promote activation of the parasympathetic nervous system, reducing sympathetic (fight-or-flight) dominance and lowering stress hormone levels such as cortisol. (ijltemas.in) Practices combining breath and movement also enhance heart rate variability, a biomarker of autonomic flexibility and stress resilience.

Neurochemical pathways are modulated through yoga, with evidence suggesting increases in GABA activity — a neurotransmitter associated with mood regulation and reduced anxiety. (ijltemas.in) These neuroendocrine changes reflect adaptive responses to repeated practice, contributing to improved emotional regulation and cognitive function.

4.2 Psychological Outcomes :

Quantitative results from real-world interventions indicate that yoga significantly reduces perceived stress, anxiety, and depressive symptoms. In Indian adolescents, a structured yoga program yielded large reductions in stress scores and salivary cortisol indicators compared to control groups. (PubMed) Similar findings are observed among adult populations, where yoga improves self-reported mood, sleep quality, and coping skills. (urr.shodhsagar.com)

Qualitative insights highlight increased self-awareness, emotional balance, and resilience among regular practitioners. Improved attention, concentration, and cognitive clarity are frequently reported, aligning with neurobiological evidence of enhanced prefrontal regulation of emotional responses.

4.3 Social and Cultural Dimensions :

Yoga's cultural roots in India facilitate acceptance across diverse demographic groups. Community-based programs in schools, workplaces, and healthcare settings report positive engagement and sustained participation when practices are adapted to local needs and preferences. (jaims.in)

5. Discussion :

The synthesized evidence indicates that yoga acts through multiple pathways to support mental health. Physiologically, it reduces stress hormone levels, improves autonomic balance, and modulates neurochemical systems associated with emotional regulation. Psychologically, yoga enhances coping strategies, reduces rumination, and fosters mindfulness — elements central to stress resilience.

However, several challenges limit yoga's broader implementation within public health systems. First, variability in intervention protocols — including differences in duration, intensity, and yoga styles — hampers standardization. Second, there is a shortage of certified instructors trained in evidence-based methods, particularly in rural and underserved regions. Third, integration with formal healthcare systems is limited, reducing opportunities for referral, monitoring, and combined therapeutic use with conventional treatments.

Policy efforts may address these challenges by establishing standardized training and certification frameworks for yoga instructors, integrating yoga into primary healthcare and school curricula, and expanding digital platforms (tele-yoga) to reach remote populations. Collaborative models involving healthcare professionals and yoga therapists can ensure safe, tailored interventions that complement traditional mental health care.

Longitudinal research employing larger sample sizes, rigorous controls, and standardized outcome measures is needed to strengthen the evidence base. Mixed-method designs incorporating physiological biomarkers, psychological scales, and qualitative insights will deepen understanding of yoga's mechanisms and long-term effects.

6. Future Directions :

To maximize yoga's potential as a public health intervention, future research should focus on:

- **Standardization:** Develop evidence-based yoga protocols tailored for specific mental health outcomes.
- **Certification Frameworks:** Establish national standards for training yoga therapists and instructors.
- **Integration:** Embed yoga into primary care, educational settings, and workplace wellness programs.
- **Digital Access:** Expand tele-yoga platforms and mobile health technologies to increase reach in rural and underserved communities.
- **Longitudinal Studies:** Conduct rigorous long-term trials with physiological and psychological outcome measures.

7. Conclusion :

The growing burden of mental health challenges in India presents a critical public health concern that demands innovative, inclusive, and sustainable solutions. Rapid urbanization, academic and occupational pressures, digital dependency, and socioeconomic inequalities have intensified stress, anxiety, and depressive symptoms across diverse population groups. Given the limited reach of

conventional mental health services and persistent barriers such as stigma and workforce shortages, complementary and preventive approaches are essential to bridge existing gaps in care.

The evidence reviewed in this paper demonstrates that yoga offers a scientifically supported, culturally grounded, and cost-effective intervention for mental health promotion and stress management in India. By integrating physical postures, breath regulation, and meditative practices, yoga influences key physiological and psychological mechanisms underlying stress, including autonomic nervous system regulation, neuroendocrine balance, emotional regulation, and cognitive resilience. Empirical findings from randomized controlled trials, observational studies, and qualitative reports consistently indicate reductions in perceived stress, anxiety, and depressive symptoms, along with improvements in attention, sleep quality, and overall psychological well-being.

Beyond individual-level benefits, yoga holds broader social and public health relevance. Its cultural familiarity and adaptability enable acceptance across age groups, educational settings, workplaces, and community environments. When implemented through schools, workplaces, primary healthcare systems, and community programs, yoga has the potential to foster collective resilience, emotional literacy, and preventive mental health practices. However, to realize this potential at scale, systematic efforts are required to standardize yoga protocols, establish nationally recognized training and certification frameworks, and integrate yoga-based interventions within formal healthcare and public health infrastructures.

Future progress depends on rigorous longitudinal research, interdisciplinary collaboration, and supportive policy frameworks that recognize yoga as an evidence-based complementary approach rather than an alternative to conventional care. Leveraging digital technologies such as tele-yoga and mobile health platforms can further enhance accessibility, particularly in rural and underserved regions. In conclusion, yoga represents a valuable component of India's future mental health strategy—one that aligns scientific validation with cultural relevance, promotes preventive well-being, and contributes meaningfully to addressing the nation's evolving mental health needs.

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Socio-Economic Conditions of Sindhudurg District in the Context of Viksit Bharat @2047

Mr. Prasad Rajaram Jadhav
Research Scholar,
Department of Economics,
Shivaji University, Kolhapur

Dr. Santoshkumar B. Yadav
Associate Professor,
Department of Economics,
Devchand College, Arjunnagar, Kolhapur.

Introduction:

Viksit Bharat @2047: Voice of Youth is a program initiated by Prime Minister Narendra Modi on December 11, 2023, intended to involve Indian youth in the development journey of the nation as it nears its centenary of independence in 2047.

The aim is to develop a shared roadmap for India's advancement with the enthusiastic involvement of all citizens, especially the youth, as India moves towards becoming a developed country by 2047. India aims to transition from a lower middle - income nation to a high-income developed country by 2047 — the targeted year for Viksit Bharat. For this purpose, and to prevent falling into the middle - income trap, it will be essential to foster technological innovation and enhance the quality of the workforce. Its goal is to enhance multiple facets of their lives, such as education, employment prospects, healthcare, and environmental conditions, guaranteeing a higher quality of life for everyone. This paper analyze the the significance of *Viksit Bharat* strategies and its impact on the Indian economy as well as Sindhudurg district.

Objectives of the study:

Following are the main objectives of the study:

- 1) To explore the concept and vision of Viksit Bharat @2047 and its significance for the socio-economic advancement of Sindhudurg district.
- 2) To analyze the impact of Viksit Bharat strategies on Indian economy as well as Sindhudurg district.
- 3) To make suggestions for Sidhudurg district in the field of socio and economic conditions.

Research Methodology:

The data and information used in this study are officially published. Secondary data has been collected from a variety of sources, such as official government data and reference books. The study makes use of secondary data from government reports, NITI Aayog policy documents, official speeches, journals, newspapers, and reliable Viksit Bharat @ 2047 websites. To understand the goals, vision, and role of youth in attaining a developed India by 2047, the data were analyzed using descriptive and analytical methodologies.

Viksit Bharat 2047: Goals, Intent, and Importance:

The Viksit Bharat 2047 initiative aims to transform India into a developed country by the 100th anniversary of its independence in 2047.

No Poverty

- Achieving Zero Poverty in Viksit Bharat 2047 is possible by adopting a multifaceted strategy to empower marginalized communities and foster inclusive progress.

- Concurrently, food security programs continue to aid more than 80 crore Indians. The Jan Dhan Yojana, the largest globally, has enabled millions by facilitating banking access and ensuring financial empowerment.
- Prioritizing tribal development involves offering over three crore rural poor affordable housing equipped with basic amenities, which improves their quality of life.

Agricultural Beneficiary Support:

- Various initiatives like PM KISAN, Pradhan Mantri Fasal Bima Yojana, and Soil Health Cards provide financial support and safeguard against the risk of crop failure, aiding millions of farmers.
- Initiatives like Kisan Credit Cards, the Agriculture Infrastructure Fund, and the SVAMITVA scheme aim to provide farmers with improved resources, increased access to credit, and better ownership titles.
- The PM-PRANAM initiative encourages organic cultivation and the use of sustainable fertilizers, enhancing the outlook of a thriving, self-sufficient agricultural industry.

In the Sindhudurg district, the economy primarily relies on the agricultural sector. A significant number of farmers integrate time-honored methods with contemporary approaches in their agricultural practices. The farming community in the Kokan area cultivates a diverse range of agricultural items; among these, rice, cashew nuts, and the Alphonso mango stand out as the most prominent crops grown in the Sindhudurg area. Vengurla taluka, along with Dodamarg taluka, accounts for the largest share of cashew nut production, with cashew serving as its primary cash-generating crop. The Kokan region stands to gain advantages from the schemes under the Viksit Bharat program. To modernize operations and boost competitive edge, the government and linked organizations like APEDA have put forth monetary encouragements, which include offering subsidies reaching up to 40% on equipment intended for cashew processing factories. The Sindhudurg district administration has formally recognized 'Processed Cashew' as its One District One Product (ODOP). Through this assignment, the district is guaranteed targeted help aimed toward bolstering its branding, elevating quality, widening its market reach, stimulating exports, and enhancing overall value. The government extends resources to farmers, playing a role in the thriving cashew production seen in the region.

Empowerment of Women:

- Allocating 33% of the seats in the Lok Sabha and state assemblies and the Nari Shakti Vandan Adhiniyam, ensuring quotas for SC and ST women, is fostering women's leadership.
- The prohibition of triple *talaq* has enhanced the rights and safety of Muslim women.
- Initiatives for financial inclusion have resulted in more than 28 crore women establishing Jan Dhan accounts, with the majority of beneficiaries of PM Mudra Yojana and Stand-Up India being women.

Self-Help Groups (SHGs) – Women's SHGs in Sindhudurg assist women in saving, obtaining credit, initiating micro-businesses (such as food processing, tailoring, handicrafts, or agricultural value addition), and engaging in local enterprises associated with district ODOP products (including processed cashew and mango). This enables women to generate income and achieve financial independence. Skill Training & Business Support – By integrating national schemes with local capacity building, women receive training in vocational skills, digital literacy, and business development, thereby enhancing their employability and entrepreneurial capabilities. Formal Inclusion in SHG Income Target Schemes – Programs like those under DAY-NRLM and the Lakhpati Didi initiative are designed to foster women

entrepreneurs who can earn substantial income, thereby benefiting rural women in regions such as Sindhudurg.

Education:

- Approximately Rs. A sum of 630 crores has been released as the initial installment for the selected PM SHRI schools, and 12 institutions have been designated as Institutions of Eminence.
- The Skill India Mission and PM Kaushal Vikas Yojana have trained millions, while SAMARTH Udyog Centers are preparing the workforce for Industry 4.0.
- Over 10,000 Atal Tinkering Labs across the country foster a scientific mindset, and the inaugural National Sports University in Manipur represents a significant accomplishment.

The ‘Sampark Smart Shala Smart Blocks’ program was inaugurated in Sindhudurg by the Education Minister of Maharashtra. The goal is to transform state-run elementary schools into modern centers of learning furnished with digital tools like Sampark TVs, engaging classes, videos, games, and evaluations that align with the NCERT syllabus for kindergarten through fifth grade. Nearly 150 government-operated schools located in the Sawantwadi, Dodamarg, and Vengurla areas stand to gain from this project, which is expected to have a favorable influence on more than 5000 students. This signifies a considerable benefit for the Sindhudurg region.

In the PERKH (Performance Assessment Review) nationwide evaluation for the 2024–25 school year, Sindhudurg secured the second spot in Maharashtra for student achievement in subjects like language, mathematics, science, and social studies for grades 3, 6, and 9. This accomplishment reflects improved classroom instruction, better execution of the curriculum, and greater teacher proficiency.

Medical Care:

- The PM - Ayushman Bharat Health Infrastructure Mission and Digital Mission are enhancing public healthcare and digital connectivity, featuring thousands of health centers and millions of registered health accounts.
- Programs like e - Sanjeevani OPD and PM Jan Aushadhi Yojana improve the availability and cost-effectiveness of quality healthcare and medications.
- Efforts in organ donation and the treatment of drug addicts through the Nasha Mukta Bharat Abhiyaan and the Child Health and Nutrition Mission Indradhanush are fostering a sustainable healthcare system in India.

Simplicity in conducting business:

- India has achieved significant progress in enhancing business facilitation by focusing on simplification, transparency, and minimizing compliance.
- The authorities have eliminated 41,000 unnecessary regulations and decriminalized certain company law clauses, enhancing the business environment.
- Reforms in taxation have diminished the corporate tax load, while the adoption of the PLI scheme and the National Single Window System is boosting manufacturing and investment. Framework.
- The UDAN program has made air travel accessible to the general public.

Strategies:

The “vikisat Bharat” (Developed India) plan for 2047 presents a holistic vision concentrating on specific domains. These key areas act as the foundation of the initiative:

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- Curriculum Alignment: Guarantee that the departmental curriculum aligns with the objectives of Viksit Bharat 2047 by incorporating topics related to sustainability, innovation, and technology.
 - Industry Partnership: Cultivate collaborations with industries to enable hands-on learning opportunities, internships, and initiatives that align with the country's development objectives.
 - Technology Integration: Embed technology into instructional methods and research approaches, fostering digital literacy and utilizing technology for creative solutions.
 - Startup India: Fostering creativity and business ventures.
 - Ayushman Bharat: Delivering comprehensive health coverage.
 - National Education Policy (NEP 2020): Restructuring the education framework.

Obstacles:

Every objective brings its own obstacles and factors to consider. The key challenges and factors for the Viksit Bharat 2047 initiative are as follows:

- India's large population makes it difficult to provide services to everyone effectively.
- In India, the unemployment rate for youth is approximately 6 - 7 per cent, and numerous individuals are not in the jobs they desire. Thus, generating sufficient employment opportunities is a challenge.
- Poverty is a significant obstacle as numerous families in the nation continue to find it difficult to obtain essential items such as food, clothing, and housing. An extraordinary level of support would be necessary from the government to address this problem.
- The issue of climate change is also present. The climate is shifting, and we need to safeguard the environment as we expand.
- Increasing population growth and shifts in demographics present obstacles to the objective of 'Viksit Bharat'. There are also difficulties related to infrastructure, regulations, and taxation.
- Socially, unequal access to and quality of education and healthcare continue to exist and must be tackled to guarantee fair development. Persistent gender inequality and social discrimination remain major obstacles that need ongoing commitment to address.

Conclusion:

The aim is to transform the nation into a space where all individuals enjoy a decent life, regardless of their location or occupation. The analysis shows that although the established targets are demanding, they can be realistically met with ongoing dedication and efficient execution of clearly outlined strategies. The initiative's all-encompassing strategy, including economic expansion, social advancement, environmental sustainability, and effective governance, demonstrates a well-rounded perspective on development. The active involvement of diverse stakeholders, especially the youth, in forming this vision highlights the significance of a collaborative approach. The economic growth forecasts, though ambitious, are considered achievable by numerous experts and organizations, dependent on the execution of significant structural reforms and a sustained emphasis on essential growth drivers like manufacturing, services, exports, infrastructure improvement, and technological advancement.

When we examine the connection between Viksit Bharat and Sindhudurg district, we observe that even today Sindhudurg district lacks adequate healthcare services and facilities, and many patients avail treatment from Goa Medical College, Bambolim, Goa. Hence Government should buildup medical care facilities with good treatment.

On the other side, Sindhudurg district is known as Tourist destination, but even today there are no proper tourism facilities in this area. Therefore, it is the need of the hour for the government to provide different types of employment opportunities in Sindhudurg district.

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“Reimagining Constitutional Governance in India: Legal and Institutional Reforms for Viksit Bharat @2047”

Asst. Prof. Deepa D Karambalkar

B. V. New Law College, Kolhapur.

Email: deepakarambalkar2006@gmail.com

Mobile No: 9284510728

Abstract:

The Indian The framework for government, as contained in its founding document, has to be analysed in a critical manner if the country is to achieve the status of a developed nation by 2047. Although the apex law of the country has shown an impressive ability to withstand the test of time, in order to address contemporary issues such as the inefficiency within the bureaucratic apparatus, regression of democracy, challenges of digital governance, and a deficit of trust in institutions, it is essential to make institutional and constitutional modifications. This paper examines the relevance of the constitutional framework to the challenges of the twenty-first century and as well as the requirements of reform in the framework of democratized responsibility, social justice, and constitutional morality. By examining the issues of federalism, judicial performance, separation of powers, governance structures, and technology-based administration, the study report argues there exists a necessity for a gradual change within the constitution instead of a complete overhaul? The research investigation report concludes with strengthening constitutional governance via transparency, inclusiveness, and integrity of institutions is equally important in achieving the objective of Viksit Bharat @2047 as economic development.

Keywords: Constitutional Governance, Viksit Bharat 2047, Institutional Reforms, Rule of Law, Indian Constitution, Democratic Accountability

1. Introduction:

Besides the development of governmental institutions, the highest law of India additionally meant being making a living along with transformative instrument that would effectively respond to the ever-changing social, economic, and political realities. The Constitution of India is a living constitution due to the concept of its ability to develop through interpretation and not through constant amendments. ⁱThe Indian Constitution has remained the bedrock of the country's democratic system for over 70 years, mediating between the contradictions of liberty and authority, unity and diversity, and stability and change. However, the nature and complexity of modern-day governance challenges, ranging from digital governance and democratic accountability to administrative centralization and institutional fatigue, have exposed the structural and functional limitations of constitutional institutions. ⁱⁱ

The ambitious developmental path envisioned in the Government of India's vision of Viksit Bharat @2047, marking the centenary of India's independence, is based on economic development, technological development, and global leadership. But economic factors alone cannot contribute to sustainable development at the national level. Sound constitutional governance, adherence to the rule of law, an efficient division of powers, and institutions that enjoy the people's trust are all hallmarks of a developed nation. ⁱⁱⁱ Constitutional governance plays a pivotal role in this context, as it prescribes the manner in which power is exercised, checked, and validated in a democratic state.

Even though India has a robust fundamental framework, organizational deterioration, politicization of constitutionally autonomous organizations, and uneven application of legal constraints are frequently the causes of administrative shortcomings rather than textual flaws. ^{iv} Concerns about

institutional equilibrium including statutory faithfulness have been raised by the weakening of parliamentary discussion, growing governmental supremacy, as well as excessive judiciary intrusion in administration domains. Additionally, the validity of democratic even public trust has been impacted by the examination of oversight organizations including the Election Commission, vigilance groups, and information commissions.^v

In light of this, the current study investigates whether India's current constitutional governance frameworks are sufficiently capable of facilitating the revolutionary objectives of Viksit Bharat @2047. Without weakening democratic ideals or constitutional morality, it looks for institutional and legal reform avenues that uphold constitutional values including social fairness, accountability, transparency, and federalism. The article makes the case that, as long as its institutions operate in accordance with the text and spirit of constitutionalism, India's Constitution still has enough normative power to steer the country toward its developmental goals by emphasizing reformative recalibration over drastic reconstruction.^{vi}

2. Conceptual Framework: Constitutional Governance in India:

A system which carefully adheres with legal requirements, ideals, and institutional arrangements when exercising political authority is known as constitutional governance. This involves how fundamental principles can be applied in day-to-day life thus does not restrict simply the mere existence having an official document. India's dedication to parliamentary legitimacy, the supremacy of statutes, fiscal responsibility, as well as the defence of basic liberties is reflected within its parliamentary system. In order against power concentration along with guarantee an administration that is in accordance with the morality of the constitution, the Indian constitutional framework creates a number of statutory balances.^{vii}

2.1 Supremacy of the Constitution:

The basis to democratic governance in the country lies in the sovereignty of the law of the land. It makes it the final authority of the land, binding every branch about the executive branch. All laws, policies, and executive acts must comply with fundamental obligations; no authority derives power apart from the laws of the land. By guaranteeing that governance is governed by rules rather than by personalities, this idea keeps the use of public power from becoming arbitrary.^{viii}

Nevertheless, when executive actions evade congressional review or when ordinances and delegated laws are overused, the rule of law is put to the test. Despite being allowed under the laws of the land, these actions run the risk of weakening the spirit of its supremacy by putting expediency ahead of responsibility. Therefore, effective democratic governance needs both substantive respect for legal limits and formal adherence to fundamental rules.^{ix}

2.2 Separation of Powers:

The law of the land implicitly upholds the principle of the division of authority, regardless of whether it isn't defined in strict terms. The judicial, executive, and legislative branches have been each given specific roles under the founding document, although a particular operational overlap is permitted to maintain coordination. The goal of this structural structure is to encourage mutual responsibility among institutions as well as avoid the concentration of power.^x

However, current tendencies in governance point to a slow imbalance in this division. By using party discipline, creating ordinances, and controlling the parliamentary agenda, the ruling party is gaining progressively greater authority over the legislative process. Concerns about judicial overreach have also been raised by court action in policy and administrative problems, which is frequently rationalized as being required to protect rights. By erasing functional boundaries and weakening democratic accountability, excessive institutional encroachment undermines constitutional governance.^{xi}

2.3 Federal Balance:

Indian legal system is characterized by federalism, which reflects the social, cultural, and regional variety of the nation. It divides legislative, administrative, and financial authority between the Union as well as the States, creating a quasi-federal system with a strong centre. While maintaining national unity, federal balance makes sure that governance continues to be responsive to local concerns.^{xii}

Stresses within India's federal structure have been brought to light in recent years by conflicts in the relationship between the Centre and the State. Cooperative federalism may be eroding as a result of fiscal centralization, uniform policy imposition, along with decreased state consultation. Democratic governance suffers when the federal balance is upset because participatory decision-making with regional autonomy are jeopardized. National institutions must operate through communication, cooperation, plus respect for one another in order for a matured fundamental system to exist.^{xiii}

2.4 Independent Constitutional Institutions:

To guarantee openness, impartiality, and accountability in government, the law of the land calls for a number of independent organizations, including the Election Commission, Comptroller and Auditor General, Union Public Service Commission, and information commissions. By protecting vital democratic processes from political meddling, these organizations serve as fundamental watchdogs.^{xiv}

These institutions' functional autonomy, fair hiring procedures, and tenure security are all necessary for their efficacy. Public trust in certain democratic organizations has been damaged by claims of politicization along with independence degradation. Constitutional governance is reduced to formality when such institutions are unable to operate impartially, weakening the rule of law as well as democratic legitimacy.¹¹

3. Challenges to Constitutional Governance in Contemporary India:

3.1 Centralization of the Executive

Concerns over Parliament's marginalization and the erosion of federal autonomy have been raised by the executive branch's increasing consolidation of authority. This trend is reflected in delegated legislation, ordinance-making authority, including policy choices that avoid legislative review.

3.2 Legislative Reduction

Representative democracy is weakened by fewer legislative sessions, frequent disruptions, as well as little discussion of complicated legislation. Policy is becoming more and more focused on expediency rather than careful consideration.

3.3 Activism and Judicial Overburdening

Although judicial activism has filled gaps in governance, an over-reliance on courts runs the risk of obfuscating institutional limits. Access to justice along with pendency are still major issues.

3.4 Crisis of Institutional Credibility

There are claims that democratic organizations including the Election Commission, information commissions, other vigilance agencies have become politicized, undermining public confidence.

4. Equal and Institutional Reforms for Viksit Bharat @2047

4.1 Strengthening Parliamentary Governance:

By requiring pre-legislative engagement, strengthening committee structures, and enforcing legislative effect assessments, reforms should concentrate on reinstating Parliament's deliberative role.

4.2 Bringing Federalism Back to Life:

Balanced development and regional equity require respect for state autonomy, cooperative federal mechanisms, and fiscal decentralization.

4.3 Reforms in the Judiciary:

To lower pendency and improve access to justice, it is essential to improve judicial infrastructure, open appointment procedures, and alternative conflict resolution procedures.

4.4 Constitutional Institutions' Autonomy:

Bipartisan selection committees and fixed tenure protections are necessary to protect constitutional authority appointment procedures against presidential domination.

5. Conclusion:

The path to Viksit Bharat by 2047 is both an economic and constitutional undertaking. In order to reimagine constitutional governance, democratic institutions must be strengthened, power dynamics must be adjusted, and constitutional morality must be incorporated into daily governance. Only when growth is based on social justice, institutional trust, and the rule of law can sustainable development be attained. India's Constitution can still effectively lead the country toward its centennial goals if it is upheld in both law and spirit.

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- ⁱ See Granville Austin, *The Indian Constitution: Cornerstone of a Nation* 15–18 (Oxford Univ. Press 1966); see also *Constituent Assembly Debates*, Vol. XI (Nov. 25, 1949).
- ⁱⁱ See Upendra Baxi, *The Crisis of the Indian Legal System*, 12–14 (Vikas Publ'g House 1982).
- ⁱⁱⁱ See Amartya Sen, *Development as Freedom* 3–5 (Oxford Univ. Press 1999).
- ^{iv} See Pratap Bhanu Mehta, *The Burden of Democracy* 112–15 (Penguin India 2003).
- ^v See S.P. Sathe, *Judicial Activism in India: Transgressing Borders and Enforcing Limits* 215–18 (Oxford Univ. Press 2002).
- ^{vi} See Manoj Mate, *Public Interest Litigation and the Transformation of the Supreme Court of India*, 40 *Case W. Res. J. Int'l L.* 49, 52–55 (2008).
- ^{vii} Granville Austin, *The Indian Constitution: Cornerstone of a Nation* 6–9 (Oxford Univ. Press 1966) (explaining constitutionalism as a restraint on political power); see also B.R. Ambedkar, *Speech in the Constituent Assembly* (Nov. 25, 1949), *Constituent Assembly Debates*, Vol. XI.
- ^{viii} See *Kesavananda Bharati v. State of Kerala*, (1973) 4 S.C.C. 225 (India) (affirming constitutional supremacy and the basic structure doctrine); M.P. Jain, *Indian Constitutional Law* 69–72 (8th ed. LexisNexis 2018).
- ^{ix} See *Indira Nehru Gandhi v. Raj Narain*, (1975) Supp. S.C.C. 1 (India) (recognising separation of powers as part of the basic structure); V.N. Shukla, *Constitution of India* 102–04 (13th ed. Eastern Book Co. 2017).
- ^x Pratap Bhanu Mehta, *The Burden of Democracy* 118–122 (Penguin India 2003); see also *Rameshwar Prasad v. Union of India*, (2006) 2 S.C.C. 1 (India).
- ^{xi} See *S.R. Bommai v. Union of India*, (1994) 3 S.C.C. 1 (India) (elaborating cooperative federalism); A.G. Noorani, *Constitutional Questions in India* 87–91 (Oxford Univ. Press 2000).
- ^{xii} See *Minerva Mills Ltd. v. Union of India*, (1980) 3 S.C.C. 625 (India) (judicial review as part of basic structure); S.P. Sathe, *Judicial Activism in India* 36–40 (Oxford Univ. Press 2002).
- ^{xiii} See Upendra Baxi, *The Avatars of Indian Judicial Activism*, 156–160 (*Exploring the Role of Courts in Governance*, Oxford Univ. Press 2001); see also *Common Cause v. Union of India*, (2017) 9 S.C.C. 499 (India).
- ^{xiv} See *Navtej Singh Johar v. Union of India*, (2018) 10 S.C.C. 1 (India) (constitutional morality as a guiding principle); Gautam Bhatia, *The Transformative Constitution* 9–12 (HarperCollins 2019).



Sustainable Business Practices and Corporate Environmental Responsibility : An Analytical Study

Mr. Dipak Arjun Chaudhari
Research Scholar,
inspiringlives.dipak@gmail.com

Abstract -

In today's era of globalization, maintaining environmental balance alongside economic growth has become a major challenge. Industrialization, urbanization, and an increasing consumer culture have placed immense pressure on natural resources. In this context, the concepts of Sustainable Business Practices and Corporate Environmental Responsibility (CER) have gained significant importance.

The objective of this research article is to examine the implementation of sustainability in the business sector, understand the environmental responsibility of corporate institutions, and analyze its impact on social and economic development. This study is based on secondary data, utilizing various reports, research articles, government documents, and case studies. The findings reveal that companies adopting sustainable practices experience improved long-term performance, enhanced brand image, and increased social trust.

Keywords-

Sustainable Business, Corporate Environmental Responsibility, Green Economy, Corporate Social Responsibility (CSR), Environmental Protection, Sustainable Development.

I. Introduction-

Business today is no longer merely a means of earning profit; it has evolved into an institution responsible for fulfilling social and environmental obligations. According to the United Nations Sustainable Development Goals (SDGs), the industrial sector is expected to maintain a balance among environmental protection, social inclusion, and economic prosperity. Sustainable business refers to practices that meet present needs without compromising the ability of future generations to meet their own needs. Under Corporate Environmental Responsibility, companies contribute to environmental protection through initiatives such as pollution control, resource conservation, and reduction of carbon emissions.

I (a). Problem Statement-

Although many companies in India undertake initiatives under Corporate Social Responsibility (CSR), environmental responsibility is still observed in a limited manner. Effective implementation, measurement, and reporting mechanisms of sustainable business practices remain inadequate. Therefore, an in-depth study of this subject becomes essential.

II. Objectives of the Research Article-

1. To understand the concept of sustainable business practices.
2. To study corporate environmental responsibility.
3. To analyze the current scenario in India.
4. To assess impacts through selected case studies.
5. To propose strategic recommendations.

III. Research Methodology, Population and Sample, and Research Tools

A) Research Methodology-

The present study is descriptive as well as analytical in nature. It primarily relies on secondary data collected from various research journals, annual reports, ESG reports, government publications, and official websites. A theoretical understanding of sustainable business practices and corporate environmental responsibility has been combined with comparative analysis to examine their practical implications. Available data were classified, compared, and interpreted to derive meaningful conclusions.

B) Population and Sample-

The study includes selected leading corporate companies in India, namely Tata Group, Infosys, and ITC. These organizations were chosen through purposive sampling due to their leadership in environmental responsibility, CSR initiatives, and sustainability strategies. Through these case studies, broader conclusions were drawn by examining implementation practices, environmental impacts, and organizational policies.

C) Research Tools-

The research mainly utilizes secondary data, including annual reports of selected companies, ESG (Environmental, Social, and Governance) reports, national and international journal articles, and official statistics published by central and state governments. The collected data were systematically organized, comparatively analyzed, and interpreted. Based on this secondary information, an objective evaluation of sustainable business practices, the current status of corporate environmental responsibility, and their socio-economic impact was carried out.

IV. Literature Review

Several scholars at both global and national levels have conducted research on sustainable business practices, corporate environmental responsibility, and sustainable development.

1. Elkington, J. (1997). *Cannibals with Forks: The Triple Bottom Line of 21st Century Business*. Capstone.

Elkington (1997) introduced the concept of the “Triple Bottom Line,” emphasizing the balance among Profit, People, and Planet. According to his study, sustainable business is not based solely on economic gains but is closely linked to social and environmental accountability.

2. Porter, M. E., & Kramer, M. R. (2011). *Creating Shared Value*. Harvard Business Review.

Porter and Kramer(2011) proposed the concept of “Shared Value,” highlighting the interdependence between business and society. They argued that companies can achieve long-term economic benefits by addressing social and environmental challenges.

3. World Commission on Environment and Development (1987). *Our Common Future*.

This report provides the foundational definition of sustainable development, stating that development should meet present needs without compromising the ability of future generations to meet their own needs.

4. OECD (2018). *Business Models for Sustainable Development*. OECD Publishing.

According to the OECD (2018), sustainable business models reduce environmental risks while fostering innovation. The report emphasizes that green technologies, resource efficiency, and ESG policies are essential for long-term business success.

5. United Nations (2022). *Global Sustainable Development Report*. United Nations.

This report recognizes corporate environmental responsibility as a powerful mechanism for achieving the Sustainable Development Goals (SDGs). It stresses that active participation of the industrial sector is crucial for addressing climate change, biodiversity conservation, and social inclusion.

6. NITI Aayog (2023). India CSR and Sustainability Report. Government of India.

The NITI Aayog (2023) report indicates growing participation of India's corporate sector in environmental protection through CSR and ESG initiatives, particularly in renewable energy, water conservation, and green manufacturing.

7. Carroll, A. B. (1991). The Pyramid of Corporate Social Responsibility. Business Horizons.

Carroll (1991) presented the CSR pyramid, outlining economic, legal, ethical, and philanthropic responsibilities. He emphasized that environmental responsibility occupies a central position in modern CSR frameworks.

The above literature clearly indicates that sustainable business practices and corporate environmental responsibility are complementary concepts. Most scholars emphasize the integration of business, society, and environment. Global reports suggest that companies adopting ESG-based strategies tend to be more stable and credible. In the Indian context as well, CSR and green initiatives are enhancing the social impact of the corporate sector.

Overall, the literature review suggests that sustainable development can be achieved through strategic innovation, government support, and active corporate participation.

V. Concept of Sustainable Business-**A) Definition and Nature-**

Sustainable business refers to a business model that balances economic profitability with environmental protection and social welfare. Such businesses use natural resources judiciously, focus on reducing pollution, and contribute to the development of various social groups. The foundation of sustainable business lies in the concept of the "Triple Bottom Line," which gives equal importance to Profit, People, and Planet.

The fundamental nature of sustainable business is to preserve resources for future generations through a long-term perspective. It is a business process that simultaneously achieves financial profit (Profit), environmental protection (Planet), and social responsibility (People). This approach is also known as the Triple Bottom Line Approach (People-Planet-Profit). The objective of this concept is not merely short-term profit but long-term social and environmental value creation.

B) Features / Characteristics-**.1Energy Efficiency-**

Sustainable businesses adopt energy-saving systems, utilize solar and wind energy, and implement low-carbon technologies. This reduces production costs while minimizing environmental impacts.

.2Waste Management-

Reducing waste, promoting reuse and recycling, and implementing zero-waste policies are key characteristics of sustainable business.

.3Green Supply Chain-

This includes using environmentally friendly processes from raw material procurement to final production, encouraging local suppliers, and reducing transportation emissions.

.4Transparent Reporting-

Through ESG or sustainability reports, companies disclose their environmental and social performance, enhancing stakeholder trust.

.5Social Participation-

Active engagement with society is achieved through community development, tree plantation drives, cleanliness campaigns, and environmental awareness programs.

C) Major Types of Sustainable Business Practices-

.1Green Production-

Green production is an important sustainable business practice involving the use of eco-friendly raw materials, energy-efficient machinery, and modern manufacturing technologies. The process emphasizes waste reduction, efficient use of water and energy, recycling, and reuse.

The concept of “Zero Waste Manufacturing” aims to eliminate waste generation during production. Indian companies such as Tata Steel promote green production through carbon reduction and carbon-neutral initiatives. These efforts support environmental conservation while achieving long-term cost savings.

.2Green Marketing-

Green marketing promotes environmentally friendly products and services while creating environmental awareness among consumers. It includes eco-labeling, plastic-free packaging, products made from natural ingredients, and responsible advertising strategies. Green marketing encourages consumers not only to purchase products but also to participate in environmental protection.

Indian companies like Patanjali and ITC e-Choupal have used green marketing to deliver eco-friendly products to rural and urban consumers, strengthening brand value and encouraging sustainable consumption.

.3Carbon Neutral Strategy-

The primary objective of a carbon-neutral strategy is to reduce business-related carbon emissions to zero. Companies measure their carbon footprint, increase renewable energy use, undertake afforestation, and implement carbon offset programs. These measures help mitigate climate change impacts.

Infosys is among India’s first IT companies to become carbon neutral, setting an example through solar energy adoption, green buildings, and energy-efficient systems.

.4CSR-Based Environmental Initiatives-

Under the Companies Act, 2013, large Indian companies are required to spend at least %2 of their average profits on CSR activities. These include water conservation, rural development, Swachh Bharat initiatives, education, and healthcare.

Organizations such as Reliance Foundation have made significant contributions to water management, rural infrastructure, and health services. CSR-based environmental initiatives strengthen business–society relationships and accelerate sustainable development goals.

D) Core Components of Sustainable Business-

Sustainable business rests on three interconnected pillars: economic, environmental, and social.

The economic component focuses on long-term financial stability, investor confidence, cost efficiency, and market competitiveness rather than short-term profit alone. Sustainable financial strategies enable organizations to remain resilient during crises and ensure continuous value creation.

The environmental component involves conservation of natural resources, energy efficiency, carbon emission reduction, waste management, and recycling. Environment-friendly production processes and green technologies help maintain ecological balance and enhance resilience to climate change, making businesses active contributors to environmental protection.

The social component emphasizes employment generation, labor rights, gender equality, community development, and social justice. Sustainable business practices empower marginalized groups, promote skill development, and foster inclusive growth. When businesses embrace social responsibility, organizational reputation improves and consumer trust strengthens. Thus, achieving social balance alongside economic progress becomes the ultimate goal of sustainable business.

E) Current Status of Sustainable Business in India — 2013 to 2026

1. Growth in ESG (Environmental, Social & Governance) Reporting-

Over the past decade, ESG reporting in India has witnessed significant growth. With SEBI mandating Business Responsibility and Sustainability Reporting (BRSR) from 2022–23 onwards, more than 1,000 listed companies are now required to disclose environmental, social, and governance data. The rising investments in ESG mutual funds, green bonds, and the allocation of CSR budgets toward environmental initiatives have made corporate policies more transparent and accountable.

2. Green Innovation in Startups-

India's startup ecosystem has experienced rapid expansion in green tech, clean tech, and ESG-focused enterprises. Currently, over 6,600 environmental technology startups are operating in the country, collectively attracting approximately USD 13.1 billion in investment by 2025. These startups primarily work in renewable energy, green hydrogen, e-waste recycling, circular economy solutions, and sustainable agri-tech. Companies like ReNew Power are leading large-scale clean energy generation, while several others are driving innovation in plastic recycling, sustainable mobility, and energy storage.

i) National Solar Mission-

Under the Jawaharlal Nehru National Solar Mission, India has significantly accelerated its solar and renewable energy development. The country's renewable energy capacity increased from 75.52 GW in 2014 to over 232 GW by 2025. In 2024, an additional 28.7 GW was added, followed by 44.5 GW in 2025. This progress plays a crucial role in achieving India's *Net Zero by 2070* target and Sustainable Development Goals (SDGs).

ii) Startup India – Green Startups

Through the Startup India initiative, green startups have received financial support, mentorship, and market access. Digital infrastructure, Production Linked Incentive (PLI) schemes, and Green Innovation Hubs have accelerated the growth of sustainability-focused ventures. Since 2016, India's startup ecosystem has expanded rapidly, reaching third place globally by 2025.

iii) Make in India – Sustainable Manufacturing-

The Make in India policy promotes sustainable manufacturing through energy-efficient production processes, increased solar panel and battery manufacturing capacity, and the adoption of eco-friendly technologies across value chains. These efforts have strengthened India's renewable energy supply chain while reducing the industrial carbon footprint.

Between 2013 and 2018, awareness regarding ESG and environmental responsibility increased, alongside the active implementation of the National Solar Mission. From 2019 to 2022, the introduction of SEBI's BRSR framework led to higher environmental investments under CSR. During 2023–2026, India witnessed a boom in green startups, strengthened ESG funds, and substantial growth in renewable energy capacity.

Overall, India's sustainable business landscape has evolved positively over the past decade. Government initiatives, mandatory ESG reporting, and green innovation within the startup ecosystem are driving the country steadily toward a sustainable economy. This transition reflects a balanced integration of environmental responsibility, economic development, and social inclusion.

F) Benefits, Opportunities, and Challenges of Sustainable Business-**1. Benefits-**

Adopting sustainable business practices enhances a company's brand value and builds long-term customer trust. Energy conservation and resource efficiency help reduce production costs, while compliance with environmental regulations lowers legal risks. Moreover, ESG-based strategies attract domestic and international investors, strengthening the financial stability of businesses.

2. Opportunities-

Sustainable business offers significant opportunities to achieve long-term economic stability, environmental protection, and social development. Green technologies, renewable energy, circular economy models, and ESG-based investments are fostering new industries. Growing environmental awareness among consumers is increasing demand for green products, thereby improving corporate brand image. Additionally, supportive government policies and international agreements are creating a favorable environment for sustainable business growth.

3. Major Challenges-

Despite its advantages, sustainable business implementation faces several challenges. High initial investment costs discourage many small and medium enterprises. Limited availability of advanced green technologies, lack of skilled manpower, and low sustainability awareness in rural areas pose major barriers. Furthermore, inconsistencies in policy implementation and inadequate financial incentives slow down the pace of sustainable initiatives.

VI. Sustainable Business and the SDGs-

Sustainable business practices play a vital role in achieving the United Nations' 17 Sustainable Development Goals (SDGs). In particular, they directly contribute to Affordable and Clean Energy, Responsible Consumption and Production, Climate Action, and Decent Work and Economic Growth. Through green technologies, reduced carbon emissions, efficient resource utilization, and inclusive employment policies, the corporate sector promotes social and environmental development.

Sustainable business is not merely a temporary trend but a fundamental requirement of the future economic system. For a developing country like India, a business model that balances environmental protection, social inclusion, and economic progress is essential. Such an integrated and responsible development approach can realize the vision of "Developed India" and lay a strong foundation for long-term prosperity.

VII. Results-

The study reveals that companies adopting sustainable business practices have significantly improved market credibility. Organizations implementing eco-friendly policies receive stronger investor support and show positive growth in brand value. Additionally, such companies maintain more stable long-term profitability by efficiently utilizing resources, reducing risks, and gaining customer confidence.

VIII. Analysis and Interpretation-

Analysis of the available data indicates that companies with higher ESG scores tend to demonstrate stronger and more stable stock performance. Investor preference is increasingly shifting toward firms emphasizing environmental, social, and governance practices. Simultaneously, rising environmental awareness is driving consumers toward eco-friendly products and brands, enhancing competitive advantage through sustainable strategies.

IX. Conclusion-

Sustainable business practices and corporate environmental responsibility have become indispensable in today's world. Companies must participate actively in environmental protection not merely as a legal obligation but as a moral responsibility. Such initiatives support economic growth while fostering social well-being and environmental balance. Consequently, sustainability adoption serves as a fundamental pillar of long-term development.

X References-

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“कोल्हापूर जिल्ह्यातील अनुसूचित जातीतील महिलांचा लोकसंख्यात्मक लाभांश आणि रोजगार स्थितीचा अभ्यास”

यास्मीन हारून मुल्ला

संशोधक विद्यार्थी

अर्थशास्त्र अधिविभाग, शिवाजी विद्यापीठ, कोल्हापूर.

इ-मेल : yasmeenmulla2018@gamil.com

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सारांश

देशाच्या लोकसंख्येमध्ये कार्यक्षम वयोगटाचे प्रमाण वाढल्यास ते लोकसंख्याशास्त्रीय लाभांश म्हणून ओळखले जाते. भारतामध्ये या लाभाचे प्रमाण ६४.७९% एवढे आहे. या लाभाचा योग्य फायदा करून घेतल्यास आर्थिक वाढ होण्यास मदत मिळते. परंतु या संधीचा उपयोग तेंव्हाच होऊ शकतो जेव्हा कार्यक्षम वयोगटातील लोकसंख्या अधिक प्रमाणात रोजगारात सहभागी होतील. याच माहितीच्या आधारे सध्याच्या संशोधनाचा मुख्य उद्देश जिल्ह्यातील अनुसूचित जातीतील महिलांची सध्याची लोकसंख्यात्मक रचना व रोजगार स्थिती यांचा अभ्यास करून लोकसंख्यात्मक लाभांश आणि रोजगार यातील फरक जाणून घेणे हा आहे. या अभ्यासासाठी दुय्यम माहितीचा वापर केला गेला आहे. जिल्ह्यात एकूण अनुसूचित जातीतील महिलांचे कार्यक्षम वयोगटातील प्रमाण ६४.१७% इतक्या मोठ्या प्रमाणात असून देखील रोजगारात यांचे प्रमाण केवळ ४४.१६% इतकेच आहे. विशेष म्हणजे १५-३५ या वयोगटातील लोकसंख्येचे प्रमाण जास्त असून देखील रोजगारात यांचे प्रमाण कमी दिसून आले, तर ३५-५९ या वयोगटातील महिलांचे रोजगारातील सहभागाचे प्रमाण तुलनेने जास्त व स्थिर स्वरूपाचे आढळले. निष्कर्षानुसार कोल्हापूर जिल्ह्यात अनुसूचित जातींमध्ये महिलांसाठी लोकसंख्यात्मक लाभांशाची स्थिती अस्तित्वात आहे, परंतु त्याचे पूर्णपणे आर्थिक विकासात रूपांतर झालेले नाही. कारण सामाजिक बंधने, खूप कमी प्रमाणात रोजगाराच्या संधी, शिक्षण यांसारखे घटक कारणीभूत आहेत. यामुळे या महिलांना शिक्षण, रोजगार, कौशल्य प्रशिक्षण देऊन या अडथळ्यापासून दूर करण्यासाठी सरकारी धोरणे आवश्यक आहेत.

मुख्य घटक : लोकसंख्याशास्त्रीय लाभांश, कार्यरत वयोगट, अनुसूचित जाती, रोजगार, आर्थिक विकास, वयोगट.

प्रस्तावना

एखाद्या देशातील लोकसंख्येच्या वयोगटातील रचनेतील झालेले बदल देशाच्या आर्थिक वाढ आणि एकंदरीत सामाजिक कल्याण सध्या करण्यावर सकारात्मक परिणाम करू शकतात. (Parida & Madhewaran, 2023) जेव्हा देशात अवलंबून असणाऱ्या म्हणजेच ० ते १४ वयोगट आणि ६०+ या वयोगटातील लोकसंख्येपेक्षा कार्यक्षम वयोगटातील (१५-५९) लोकसंख्या अधिक असते तेव्हा देशाची प्रगती साध्य होण्याची संधी प्राप्त होते. कार्यक्षम वयोगटातील लोक अधिक सक्रीय असल्यामुळे देशातील उत्पादन, उत्पन्न, करामध्ये वाढ होऊन राष्ट्रीय उत्पन्न वाढू शकते व परिणामी देशाचा विकास साध्य होतो. त्यासोबतच या वयोगटातील

लोकांना रोजगार प्राप्त झाल्यास बचत व गुंतवणुकीचे प्रमाणही वाढते. तसेच दरडोई उत्पन्न, जीवनमानात सुधारणा आणि दारिद्र्यात घट होण्यासही मदत मिळते. यात प्रत्यक्ष सकारात्मक बदल घडवून आणण्यासाठी कौशल्यविकास, रोजगार निर्मिती व सर्वसमावेशक धोरणांची आवश्यकता आहे.

अर्थतज्ञ डेव्हिड ब्लूम व त्यांच्या सहकार्यांच्या मते, लोकसंख्याशास्त्रीय लाभांश म्हणजे लोकसंख्येची अशी वयोरचना जी आर्थिक वाढीसाठी मदत करते. म्हणजेच देशाचा आर्थिक विकास साध्य करण्यासाठी लोकसंख्येच्या आकारापेक्षा अशा वयोगटाची गरज आहे, ज्यांना शिक्षण, आरोग्य व श्रम-बाजारातील धोरणे लागू केली असता देशाचा आर्थिक विकास होऊ शकते. (Bloom, Conning, & Sevilla, 2003) आंतरराष्ट्रीय स्तरावरील कार्यक्षम वयोगट किंवा लोकसंख्याशास्त्रीय लाभामधील वयोगट सामान्यात: १५ ते ६४ वर्ष वयोगटातील लोकसंख्या होय, परंतु भारतातील राष्ट्रीय स्तरावरील आकडेवारीनुसार कार्यक्षम वयोगटामध्ये १५ ते ५९ वय वर्ष तर वृद्ध म्हणजे ६० वर्षावरील वयातील लोकसंख्या होय. सध्या कार्यक्षम वयोगटानुसार भारतात ६०% पेक्षा अधिक लोक हे कार्यक्षम गटात आहेत. परंतु गंभीर बाब ही आहे की, कार्यक्षम वयोगटातील लोकसंख्या सध्या शिखर स्थानी आहे, पण कालांतराने ही कमी कमी होऊ लागेल. (S., 2025) भारताच्या बाबतीत विचार केल्यास लोकसंख्याशास्त्रीय लाभाचा कालावधी महत्त्वाचा आहे, कारण हि संख्या वेगाने विस्तारत आहे. या लोकसंख्येचा लाभ हा रोजगाराच्या संधी, कामातील सहभाग दर आणि आर्थिक-सामाजिक समावेश या घटकांवर अवलंबून असतो. (India, 2018)

लोकसंख्याशास्त्रीय लाभांश ही अशी एक स्थिती असते जिथे वयोगट रचनेत झालेल्या बदलांमुळे चांगली आर्थिक संधी निर्माण होते. कार्यक्षम लोकसंख्या जास्त असल्यामुळे देशातील उत्पादन क्षमता व रोजगारनिर्मितीत वाढ यामुळे आर्थिक विकास साध्य होण्याची संधी प्राप्त होते. (UNFPA)

महिलांच्या संदर्भात हा लोकसंख्याशास्त्रीय लाभ मर्यादित स्वरूपाचा दिसून येतो, कारण महिलांचा रोजगारातील सहभाग पुरुषांइतका नाही. यामध्येही अनुसूचित जातीतील महिलांमध्ये तर ही स्थिती अत्यंत दयनीय आहे. समाजाकडून येणाऱ्या अडचणी, शैक्षणिक क्षेत्रात मर्यादित प्रवेश आणि रोजगारातील त्यांना मिळणाऱ्या अत्यल्प संधी या सर्वांमुळे त्यांचा कार्यक्षम वयोगटातील लोकसंख्या जरी मोठ्या प्रमाणात असली तरी काम करणाऱ्यामध्ये त्या सक्रीय दिसून येत नाहीत. कोल्हापूर जिल्ह्याची लोकसंख्यात्मक माहिती पाहिल्यास अनुसूचित जातींची लोकसंख्या बऱ्यापैकी आहे. अनुसूचित जातींच्या महिलांची वयोगटानुसार विभागणी केल्यानंतर असे दिसून येते की, कार्यक्षम वयोगटातील (१५-५९) महिलांचे प्रमाण ६४.१७% इतके असून त्या तुलनेत रोजगारातील प्रमाण दिसून येते का? हे पाहणे अत्यंत गरजेचे आहे. सध्याच्या कार्यक्षम वयोगटातील महिलांचा रोजगारातील सहभाग वाढला तर जिल्ह्यासोबतच भारताच्या विकासातही हातभार लागेल. या लोकसंख्यात्मक लाभाचा उपयोग जर देशाच्या प्रगतीत करता आला नाही तर या लाभाचा काहीच उपयोग होणार नाही. जर या वर्गातील महिलांचा मोठा वाटा अकार्यरत किंवा सीमांत स्वरूपाच्या रोजगारात सहभाग जास्त असेल तर लोकसंख्याशास्त्रीय लाभ व रोजगार यात तफावत निर्माण होते. ही कार्यरत वयोगटातील लोकसंख्या हळूहळू कमी होऊन अवलंबून असणाऱ्या लोकसंख्येचा भार देशावर पडण्याची दाट शक्यता आहे. या सर्वांचाच आधार घेऊन सध्याच्या संशोधनात कोल्हापूर जिल्ह्यातील अनुसूचित जातीतील

महिलांचा लोकसंख्याशास्त्रीय लाभ आणि रोजगार स्थिती यांची तुलना करून निष्कर्ष मांडण्याचा प्रयत्न केलेला आहे.

उद्दिष्टे

- १) कोल्हापूर जिल्ह्यातील अनुसूचित जातीतील महिलांची वयोगटानुसार लोकसंख्येचा अभ्यास करणे.
- २) कोल्हापूर जिल्ह्यातील अनुसूचित जातीतील महिलांची रोजगार स्थिती अभ्यासणे.
- ३) लोकसंख्यात्मक लाभांश (कार्यक्षम वयोगट) आणि रोजगार स्थितीचे विश्लेषण करणे.

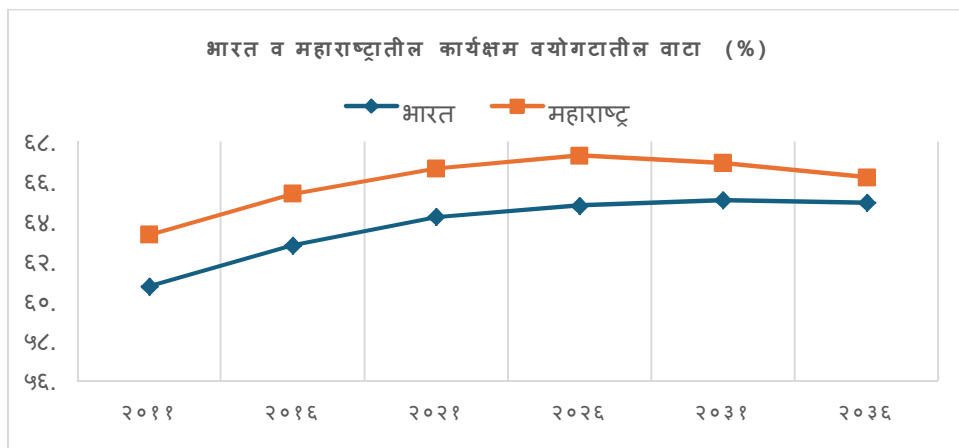
संशोधन पद्धती:

सध्याचा संशोधन अभ्यास हा दुय्यम साहित्यावर आधारित आहे. अभ्यासासाठी आवश्यक माहिती भारतीय जनगणना २०११ मधील प्राथमिक जनगणना सारांश (अनुसूचित जाती), जिल्हा जनगणना पुस्तिका अहवाल (२०११), संयुक्त राष्ट्र लोकसंख्या निधी (UNFPA) यांचे संकेतस्थळ तसेच राष्ट्रीय व आंतरराष्ट्रीय स्तरावरील सरकारी अहवाल व संशोधन लेख यांचा वापर करून माहिती संकलित केलेली आहे. संकलित केलेल्या माहितीचे विश्लेषण करण्यासाठी टक्केवारी पद्धतीचा वापर करून तुलनात्मक विश्लेषण करण्याचा प्रयत्न केलेला आहे.

माहितीचे सादरीकरण व विश्लेषण

लोकसंख्यात्मक लाभांश ही संकल्पना लोकसंख्येच्या वयोगटातील रचनेशी थेट संबंधित आहे. कार्यक्षम वयोगटातील लोकसंख्येचा आर्थिक विकासात हातभार लागण्यासाठी या वयोगटातील लोकांना रोजगार उपलब्ध करून देणे महत्वाचे ठरते. विशेषतः समाजातील दुर्बल घटकांना रोजगार उपलब्ध न झाल्यास या लोकसंख्यात्मक लाभाचा परिमाण सकारात्मक होत नाही. भारत आणि महाराष्ट्राबाबतीत कार्यक्षम वयोगटाचा अभ्यास केल्यास असे दिसून येते की, लोकसंख्येचा सर्वाधिक वाटा हा वय वर्ष १५-५९ या वयाचा आहे. भारतामध्ये हे प्रमाण ६४.७९% तर महाराष्ट्राच्या बाबतीत हा वाटा ६७.२९% इतका आहे. अर्थात भारतापेक्षा महाराष्ट्राचा हा वाटा अधिक असल्याचे दिसते. २०११ पासून कार्यक्षम वयोगटाच्या प्रमाणात निरंतर वाढ होत आली असून २०३१ नंतर याचे प्रमाण हळूहळू कमी होताना दिसून येते. अर्थात या लोकसंख्यात्मक लाभाचा सध्या वापर करून घेऊन देशाचा विकास साध्य करता येईल.

आलेख क्र. १



स्रोत: Is India's demographic dividend over? by Rukmini S, Data For India (November 2025): <https://www.dataforindia.com/demographic-dividend/>

कोल्हापूर जिल्ह्यात अनुसूचित जातींचा वाटा महत्वपूर्ण असून जिल्ह्याच्या विकासाच्या दृष्टीकोनातून त्यांचा लोकसंख्यात्मक सहभाग महत्वाचा ठरतो. कार्यक्षम वयोगटात अनुसूचित जातींच्या महिलांचे प्रमाण तुलनेने अधिक असले, तरी रोजगाराच्या बाबतीत त्यांचा सहभाग फार कमी आहे. समाजाकडून येणाऱ्या विविध अडचणी यांमुळे त्यांच्या रोजगारावर परिणाम होतो. रोजगारामधील सहभागामध्ये या महिला कृषी क्षेत्रात मजूर म्हणून किंवा असंघटीत क्षेत्रात सहभाग जास्त असून संघटीत व नियमित उत्पन्न देणाऱ्या रोजगारात त्यांचा सहभाग कमी आहे. याच दृष्टीकोनातून या महिलांच्या लोकसंख्यात्मक रचना व रोजगार यांचा अभ्यास करणे आवश्यक आहे.

• वयोगटानुसार अनुसूचित जातीतील महिलांची लोकसंख्यात्मक स्थिती

वयोगटानुसार लोकसंख्यात्मक स्थितीमध्ये ५ ते १४, १५ ते ३४, ३५ ते ५९ आणि ६०+ या वयोगटाच्या आधारे आपण कार्यक्षम वयोगटाची संख्या लक्षात घेऊ शकतो. जिल्ह्यात अनुसूचित जातीतील महिलांचे प्रमाण तसेच लोकसंख्याशास्त्रीय लाभांश जाणून घेण्यासाठी ही माहिती आवश्यक आहे. या माहितीवरून आपणास कोल्हापूर जिल्ह्यातील अनुसूचित जातीतील महिलांची कार्यक्षम वयोगटातील संख्या प्राप्त होते. लोकसंख्याशास्त्रीय लाभाचे प्रमाण जितके अधिक तितके आर्थिकदृष्ट्या सक्रीय असणाऱ्या लोकसंख्येची क्षमता वाढते. याच दृष्टीकोनातून लोकसंख्याशास्त्रीय लाभ जाणून घेण्यासाठी कोल्हापूर जिल्ह्यातील अनुसूचित जातीतील महिलांचे वयोगटाच्या आधारे वितरण पुढील तक्त्याच्या आधारे स्पष्ट केले आहे.

तक्ता क्र. १

कोल्हापूर जिल्ह्यातील अनुसूचित जातींच्या महिलांचे वयोगटानुसार लोकसंख्यात्मक वितरण

वयोगट	महिलांची लोकसंख्या	टक्केवारी (%)
०-१४	६१४१४	२४.४६
१५-३४	८८६७९	३५.३२
३५-५९	७२४२२	२८.८५
६०+	२७६३९	११.००
वय नमूद केलेले नाही	९१७	०.३७
एकूण	२५१०७१	१००

स्रोत: जनगणना अहवाल २०११, <https://censusindia.gov.in/census.website/en/data>

तक्ता क्र. १ मध्ये कोल्हापूर जिल्ह्यातील अनुसूचित जातींच्या महिलांचे वयोगटानुसार लोकसंख्यात्मक वितरण स्पष्ट केले आहे. २०११ च्या जनगणनेनुसार जिल्ह्यात एकूण २५१०७१ एवढ्या अनुसूचित जातींच्या महिला असून त्यापैकी ०-१४ वयोगटात ६१४१४ महिला, १५-३४ या वयोगटात ८८६७९ महिला, ३५-५९ या वयोगटात ७२४२२ महिला तर ६० वर्षांवरील गटात २७६३९ महिला असून वय नमून न केलेल्या महिलांमध्ये ९१७ महिलांचा समावेश होतो. एकूण लोकसंख्येत १५ ते ३४ वयोगटातील महिलांचा वाटा सर्वाधिक म्हणजेच ३५.३२% प्रमाण तर ३५ ते ५९ वयोगटातील महिलांचे प्रमाण २८.८५% इतके आहे. अर्थात कार्यक्षम वयोगटातील प्रमाण सर्वाधिक असल्याचे दिसते.

१५ ते ३४ व ३५ ते ५९ हा वयोगट कार्यक्षम वयोगट म्हणून ओळखला जातो जो सर्वाधिक आहे आणि इतरांच्या दृष्टीने अधिक सक्रीय आहे. तसेच आश्रित किंवा अवलंबून असणाऱ्या वयोगटांचे प्रमाण कार्यक्षम वयोगटापेक्षा खूप कमी असल्याचे दिसते. एकंदरीत कोल्हापूर जिल्ह्यात अनुसूचित जातीतील महिलांचे कार्यक्षम वयोगटातील प्रमाण इतर वयोगटांपेक्षा अधिक असल्याचे दिसते, जी लोकसंख्यात्मक लाभाच्या दृष्टीने अत्यंत महत्वाची आहे. परंतु या लाभाचा योग्य उपयोग म्हणजेच या लाभाचे रूपांतर जिल्ह्याच्या विकासात साध्य करण्यासाठी या महिलांचा रोजगारात सहभाग असणे महत्वाचे आहे.

अनुसूचित जातीच्या महिलांची रोजगार स्थिती

लोकसंख्याशास्त्रीय लाभाचा उपयोग आर्थिक विकासासाठी करायचा असेल तर या कार्यक्षम गटातील महिलांना रोजगार उपलब्ध करून देणे गरजेचे आहे. या वयोगटातील महिलांची संख्या अधिक असेल पण रोजगारात सहभाग कमी असेल तर हा लोकसंख्यात्मक लाभ मिळत नाही. याच दृष्टीकोनातून कोल्हापूर जिल्ह्यातील अनुसूचित जातीच्या महिलांची सध्याची रोजगार स्थिती ज्यामध्ये मुख्य कामगार, सीमांत कामगार आणि काम न करणारी लोकसंख्या यांचा आढावा घेतला आहे.

तक्ता क्र. २

कोल्हापूर जिल्ह्यातील अनुसूचित जातीतील महिलांची रोजगार स्थिती

वयोगट	महिला कामगार			अकार्यरत महिला
	मुख्य कामगार	सीमांत कामगार	एकूण कामगार	
५-१४	५०५	३८३	८८८	४१६८६
१५-३४	२१०५२	६४७०	२७५२२	६११५७
३५-५९	३१८८६	६९०४	३८७९०	३३६३२
६०+	६०९१	१८९८	७९८९	१९६५०
वय नमूद केलेले नाही	२८०	५९	३३९	५७८
एकूण	५९८१४	१५६९३	७५६९३	१७५५४३

स्रोत: जनगणना अहवाल २०११, <https://censusindia.gov.in/census.website/en/data>

तक्ता क्र. २ मध्ये कोल्हापूर जिल्ह्यातील अनुसूचित जातीतील महिलांची रोजगार स्थिती दर्शविली आहे. वयोगटानुसार महिला कामगार दर्शविले असून कामगारात मुख्य कामगार व सीमांत कामगार अशी विभागणी केलेली आहे. यासोबत अशा महिलांची माहितीही दर्शविली आहे जी कार्यरत नाही. कोल्हापूर जिल्ह्यात एकूण महिलांपैकी त्यापैकी ७५६९३ महिला रोजगारीत असून १७५५४३ महिला या अकार्यरत आहेत. ५ ते १४ वयोगटातील महिला कामगारांचे प्रमाण सर्वात कमी असून याच वयोगटात अकार्यरत महिलांचे प्रमाणही अधिक आहे. परंतु हा वयोगट अवलंबून असलेला वयोगट असल्यामुळे कामगारांचे प्रमाण अत्यल्प असणे सामान्य आहे. सर्वाधिक कामगार असणारे वयोगट ३५ ते ५९ असा असून यामध्ये जवळपास ३८७९० महिला काम करतात, तसेच यानंतर १५ ते ३४ या वयोगटातील महिला कामगारांचे प्रमाण ही जास्त आहे. अर्थात कार्यक्षम वयोगटातील महिला कामगारांची संख्या अधिक आहे.

आकडेवारीचे सखोल विश्लेषण केल्यास ही बाब निदर्शनास येते की, एकूण लोकसंख्येपैकी केवळ ३०% महिलांनाच रोजगार प्राप्त असून जवळपास ७०% महिला या बेरोजगार किंवा कोणतेही काम करत नाहीत. अनुसूचित जातींच्या महिलांच्या सामाजिक व आर्थिक विकासाबरोबरच जिल्ह्याच्या आर्थिक विकासासाठीही हि खूप गंभीर समस्या आहे. आश्रित गटातील महिला अकार्यरत असणे ही बाब सामान्य असली तरी कार्यक्षम महिलांच्या बाबतीतही खूप महिला या बेरोजगार किंवा अकार्यरत असल्याचे दिसते.

लोकसंख्यात्मक लाभांश व रोजगार स्थिती

जिल्ह्यातील अनुसूचित जातीतील महिलांची कार्यक्षम वयोगटातील लोकसंख्या व याच वयोगटातील महिलांचे रोजगारातील प्रमाण यांची तुलना केल्यास हे दिसून येते की, या वयोगटातील किती महिलांचा रोजगारात सहभाग आहे. अर्थात लोकसंख्यात्मक लाभ मिळविण्यासाठी कार्यक्षम वयोगटातील जास्तीत जास्त महिलांना रोजगार प्राप्त झाल्यास आर्थिक वाढ होण्यास मदत मिळते.

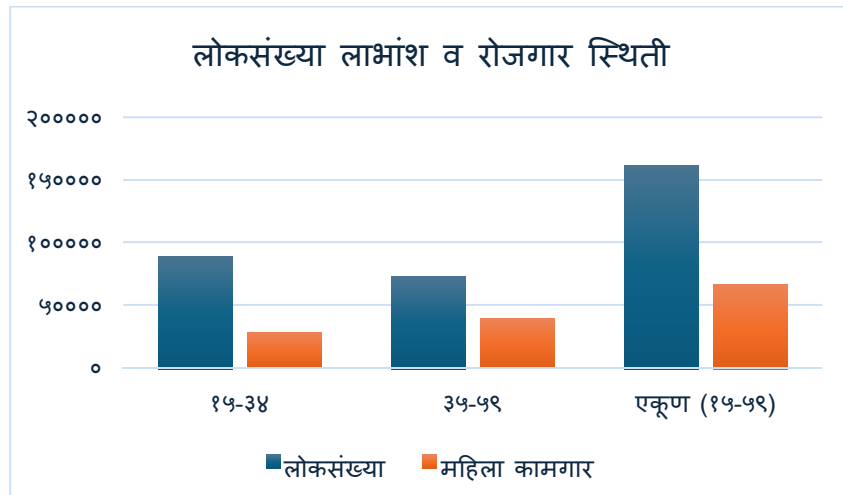
तक्ता क्र. ३

अनुसूचित जातीतील महिलांमधील लोकसंख्यात्मक लाभांश व रोजगार स्थिती (कार्यक्षम वयोगट १५-५९)

वयोगट	लोकसंख्या	टक्केवारी (%)	महिला कामगार	टक्केवारी (%)
१५-३४	८८६७९	३५.३२	२७५२२	३१.०३
३५-५९	७२४२२	२८.८५	३८७९०	५३.५६
एकूण (१५-५९)	१६११०१	६४.१७	६६३१२	४४.१६

स्रोत: जनगणना अहवाल २०११, <https://censusindia.gov.in/census.website/en/data>

आलेख क्र. २



तक्ता क्र. ३ मध्ये जिल्ह्यातील अनुसूचित जातीतील महिलांमधील कार्यक्षम वयोगट व रोजगार स्थिती हे दर्शविले आहे. कार्यक्षम वयोगटात १५ ते ५९ वयोगटात एकूण १६११०१ महिला असून त्यापैकी ६६३१२ महिला रोजगारीत आहेत. म्हणजेच जवळपास ६४.१७% लोकसंख्यात्मक लाभांश असून त्यापैकी केवळ ४४.१६% महिला कामगार आहेत. ३५ ते ५९ वयोगटात महिला कामगारांचे प्रमाण अधिक (५३.५६%) आहे. १५ ते ३४ या वयोगटातील महिला कामगारांचे प्रमाण तुलनेने कमी दिसून येते. यामागे शिक्षणातील

सहभाग, विवाह, कौटुंबिक जबाबदाऱ्या आणि समाजातील बंधने ही कारणे असू शकतात. एक महत्वाची बाब अशी निदर्शनास येते की, महिलांचा रोजगारात सहभाग कमी तर आहेच पण महिलांचा सहभाग संघटीत व स्थिर रोजगारात जास्त दिसून येतो. परंतु कार्यक्षम वयोगटातील महिलांचे प्रमाण अधिक असूनही अनेक महिलांना रोजगार उपलब्ध नसल्याचे किंवा त्या महिला रोजगाराबाहेर असल्याचे दिसते.

वरील अभ्यासातून असे दिसून आले की, कोल्हापूर जिल्ह्यात अनुसूचित जातीतील महिलांच्या लोकसंख्येमध्ये कार्यक्षम वयोगटाचे प्रमाण अधिक आहे. परंतु, या वयोगटातील महिलांचा रोजगारात हवा तितका सहभाग नाही. कार्यक्षम वयोगटातील १५ ते ३४ या वयोगटातील महिलांचा लोकसंख्येत सहभाग जास्त पण रोजगारात प्रमाण कमी तर ३५ ते ५९ या वयोगटात रोजगारातील सहभाग तुलनेने अधिक व स्थिर स्वरूपाचे असल्याचे दिसते. एकंदरीत लोकसंख्याशास्त्रीय लाभाची संधी प्राप्त झाली तरी आर्थिक विकास साध्य होण्यासाठी त्यामध्ये सकारात्मता दिसून येत नाही. केवळ कार्यक्षम वयोगटातील लोकसंख्येचे प्रमाण अधिक असणे आवश्यक नसून या लोकसंख्येला रोजगार, कौशल्यवृद्धी आणि समाजाकडून पाठींबा मिळणे आवश्यक आहे.

निष्कर्ष :

सध्याच्या संशोधनात कोल्हापूर जिल्ह्यातील अनुसूचित जातीमधील महिलांची कार्यक्षम वयोगटातील लोकसंख्या व रोजगाराची स्थिती यांचा अभ्यास केलेला आहे. यावरून असे दिसून येते आले की, जिल्ह्यामध्ये अनुसूचित जातीमधील महिलांचा वयोगटानुसार १५-५९ हा कार्यक्षम वयोगट मोठ्याप्रमाणात असूनही त्यातील खूप कमी महिला रोजगारीत आहेत. विशेषतः तरुण वयोगटातील महिलांचा रोजगारात सहभाग कमी असून लोकसंख्याशास्त्रीय लाभाचा संपूर्ण भाग आर्थिक विकासात सहभागी नसल्यामुळे आर्थिक वाढ साध्य होण्यावर मर्यादा पडतात. ३५-५९ या वयोगटातील महिलांचा रोजगारात सहभाग जास्त दिसून येतो. एकंदरीत पाहता अनुसूचित जातीच्या महिलांना शैक्षणिक सुविधा, कौशल्यवृद्धीसाठी प्रशिक्षण, स्थानिक पातळीवर रोजगाराची संधी आणि सामाजिक अडथळे दूर करण्यावर अधिक भर देणे गरजेचे आहे. म्हणूनच लोकसंख्याशास्त्रीय लाभाची खरी संधी मिळविण्यासाठी महिलांचा रोजगारात सहभाग वाढविणे गरजेचे आहे. केवळ आर्थिक विकास साध्य करण्यासाठी नव्हे तर सामाजिक व सर्वसमावेशक समतोल साध्य करण्यासाठी कार्यक्षम वयोगटातील महिलांना रोजगार उपलब्ध करून देणे आवश्यक आहे.

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कोयना धरणाचा कृषी विकासावर झालेला परिणाम

काजल सुभाष कुंभारदरे
संशोधक विद्यार्थिनी,
अर्थशास्त्र अधिविभाग,
शिवाजी विद्यापीठ, कोल्हापूर.

इ. मेल.- kumbharadarekajal@gmail.com

मो.नं. ९४२३३९०९६६

सारांश:

कोयना धरण हे महाराष्ट्रातील एक महत्वाचे जलसिंचन व जलविद्युत प्रकल्प असून, राज्याच्या कृषी व ग्रामीण विकास प्रक्रियेत त्याचे योगदान अत्यंत महत्वाचे आहे. विशेषतः पावसावर अवलंबून असलेल्या कृषी व्यवस्थेत सिंचन सुविधांची उपलब्धता झाल्यामुळे शेतीच्या स्वरूपात गुणात्मक बदल घडून आलेले दिसून येतात. प्रस्तुत संशोधन लेखाचा उद्देश कोयना धरणामुळे कृषी विकासावर झालेल्या परिणामांचा सखोल अभ्यास करणे हा आहे. अभ्यासासाठी पूर्णतः दुय्यम माहितीचा वापर करण्यात आला आहे. विविध शासकीय अहवाल, कृषी विभागाची सांख्यिकी माहिती, नियोजन आयोग व जलसंपदा विभागाचे दस्तऐवज, संशोधन लेख, पुस्तके तसेच संबंधित संकेतस्थळांवरील माहिती यांच्या आधारे विश्लेषण करण्यात आले आहे. कोयना धरणाच्या माध्यमातून उपलब्ध झालेल्या सिंचन सुविधांमुळे पीक पद्धतीत लक्षणीय बदल घडून आलेले दिसून येतात. पारंपरिक अन्नधान्य पिकांबरोबरच ऊस, भात, भाजीपाला व इतर व्यापारी पिकांचे क्षेत्र वाढले असून, त्यामुळे पीक विविधता आणि पीक तीव्रता वाढीस लागलेली आहे. सिंचन सुविधांमुळे पीक उत्पादकतेत वाढ झाल्याचेही दिसून येते. नियमित व खात्रीशीर पाण्याच्या उपलब्धतेमुळे आधुनिक शेती तंत्रज्ञानाचा अवलंब शक्य झाला असून, याचा सकारात्मक परिणाम उत्पादनक्षमता व शेतकऱ्यांच्या उत्पन्नावर झालेला आहे. दुष्काळी परिस्थितीचा प्रभाव कमी होऊन कृषी जोखमीमध्ये घट झालेली आहे. याशिवाय, कृषीवर आधारित प्रक्रिया उद्योग, रोजगारनिर्मिती व ग्रामीण अर्थव्यवस्थेला चालना मिळालेली दिसून येते. या प्रकल्पाशी संबंधित काही आव्हानेही समोर आली आहेत. पाण्याचा असमतोल वापर, पर्यावरणीय परिणाम, प्रादेशिक विषमता तसेच दीर्घकालीन शाश्वततेचे प्रश्न याकडे धोरणात्मक दृष्टिकोनातून लक्ष देणे आवश्यक आहे. जलसंपदा व्यवस्थापन अधिक प्रभावी व समतोल पद्धतीने केल्यास कृषी विकासाचे लाभ अधिक व्यापक स्वरूपात मिळू शकतात. एकूणच, कोयना धरणाने कृषी विकासाच्या प्रक्रियेला गती दिली असून, शाश्वत, समावेशक व संतुलित ग्रामीण विकासासाठी त्याची भूमिका महत्वाची ठरते. 'विकसित भारत @२०४७' या राष्ट्रीय दृष्टीकोनाच्या पार्श्वभूमीवर कृषी उत्पादनवाढ, जलसंपदा व्यवस्थापन व ग्रामीण अर्थव्यवस्थेच्या बळकटीकरणासाठी अशा सिंचन प्रकल्पांचे योगदान निर्णायक ठरते, असा निष्कर्ष या अभ्यासातून काढता येतो.

मुख्य शब्द : कोयना धरण, कृषी विकास, सिंचन व्यवस्था, कृष्णा नदीखोरे, पीक पद्धती, शाश्वत शेती, ग्रामीण विकास

प्रस्तावना:

भारत हा प्राचीन काळापासून शेतीप्रधान देश म्हणून ओळखला जात असून, देशातील बहुतांश लोकसंख्या उपजीविकेसाठी शेतीवर अवलंबून आहे. कृषी विकास म्हणजे फक्त उत्पादन वाढविणे नव्हे, तर पीक उत्पादकता, पीक पद्धती, सिंचन सुविधा, आधुनिक तंत्रज्ञान आणि शेतकऱ्यांच्या आर्थिक व सामाजिक जीवनात सुधारणा करणेही त्याचा भाग आहे. या सर्व घटकांमध्ये सिंचन सुविधा हा कृषी विकासाचा एक महत्त्वाचा आधारस्तंभ मानला जातो.

भारतीय शेती मोठ्या प्रमाणावर मान्सूनवर अवलंबून असल्यामुळे पर्जन्यमानातील अनिश्चितता, दुष्काळ व पाण्याचा असमान वितरणासारख्या समस्या वारंवार निर्माण होतात. या समस्यांवर मात करण्यासाठी स्वातंत्र्योत्तर काळात देशात विविध मोठे, मध्यम व लघु सिंचन प्रकल्प उभारण्यात आले. या प्रकल्पांमुळे कोरडवाहू व दुष्काळग्रस्त भागांमध्येही बागायती शेतीचा विकास शक्य झाला असून, पीक उत्पादनात लक्षणीय वाढ झाल्याचे दिसून येते.

महाराष्ट्रातील कोयना धरण हा एक महत्त्वाचा बहुउद्देशीय प्रकल्प आहे. हा प्रकल्प प्रामुख्याने जलविद्युत निर्मितीसाठी ओळखला जात असला तरी त्याचा कृषी विकासावर झालेला परिणाम तितकाच महत्त्वाचा आहे. कोयना नदी ही कृष्णा नदीची प्रमुख उपनदी असून कोयना धरणातून कृष्णा नदीत सोडल्या जाणाऱ्या पाण्यामुळे खालच्या भागातील सिंचन योजनांना पाणी उपलब्ध होते. परिणामी सातारा, सांगली व परिसरातील कृषी क्षेत्राला मोठ्या प्रमाणावर लाभ झाला आहे.

सिंचन सुविधा वाढल्यामुळे या भागातील शेती कोरडवाहूपासून बागायती शेतीकडे वळली असून, पीक पद्धती, पीक उत्पादन आणि शेतकऱ्यांच्या आर्थिक स्थितीत सुधारणा झाली आहे. मात्र पाण्याचा योग्य वापर, पीक विविधिकरण आणि पर्यावरणीय समतोल यांसारख्या बाबींकडे दुर्लक्ष झाल्यास कृषी विकासावर मर्यादा येण्याची शक्यता आहे. त्यामुळे कोयना धरणाचा कृषी विकासावर झालेला परिणाम अभ्यासणे आवश्यक आहे.

अभ्यास क्षेत्र:

या अभ्यासासाठी कोयना धरण व त्याचा कृष्णा नदीखोऱ्यातील कृषी विकासावर होणारा परिणाम विचारात घेतला आहे. कोयना धरण महाराष्ट्रातील सातारा जिल्ह्यात कोयना नदीवर बांधण्यात आले असून ही नदी कृष्णा नदीची प्रमुख उपनदी आहे. या प्रदेशाची भौगोलिक रचना डोंगराळ व पठारी स्वरूपाची असून काळी व लाल माती आढळते. पर्जन्यमान जास्त असले तरी पाण्याचा असमान वितरणामुळे पूर्वी शेती मोठ्या प्रमाणावर पावसावर अवलंबून होती. सिंचन प्रकल्पांच्या विकासांमुळे या परिस्थितीत बदल घडून आले आहेत.

अभ्यासाची उद्दिष्टे

- १) कोयना धरणाचा कृषी विकासातील वाटा अभ्यासणे.
- २) सिंचनामुळे पीक उत्पादन व पीक पद्धतीतील बदलांचा अभ्यास करणे.
- ३) सिंचनाशी संबंधित समस्या ओळखणे.
- ४) शाश्वत कृषी विकासासाठी उपाय सुचविणे.

संशोधन पद्धती व माहिती संकलन

हा संशोधन अभ्यास दुय्यम माहितीवर आधारित आहे. संशोधनासाठी आवश्यक माहिती शासनाचे अधिकृत अहवाल, जिल्हा सामाजिक व आर्थिक समालोचन, विविध संशोधन लेख, संदर्भ ग्रंथ आणि अधिकृत

संकेतस्थळांमधून गोळा करण्यात आली आहे. माहितीच्या विश्लेषणासाठी वर्णनात्मक पद्धतीचा अवलंब करण्यात आला असून, आवश्यक त्या ठिकाणी साध्या सांख्यिकीय गणनेचा उपयोग करण्यात आला आहे.

कोयना धरण प्रकल्प

कोयना धरण हे कोयना नदीवर उभारलेले असून महाराष्ट्रातील सर्वात महत्वाच्या बहुउद्देशीय जलसिंचन व जलविद्युत प्रकल्पांपैकी एक आहे. कोयना धरण हे मुख्यतः जलविद्युत निर्मितीसाठी प्रसिद्ध आहे आणि राज्यातील वीज पुरवठ्यात मोठे योगदान देतो. कोयना धरण १९६२ मध्ये पूर्ण झाले यामुळे कोयना नदीवर एक स्थिर जलसाठा निर्माण झाला. जो दुष्काळग्रस्त भागांमध्येही पाण्याची उपलब्धता वाढविण्यासाठी अत्यंत महत्वाचा ठरतो. कोयना प्रकल्प हा थेट सिंचनासाठी मर्यादित स्वरूपात वापरला जात असला तरी कृष्णा नदीत कोयना धरणाचे पाणी सोडल्यामुळे खालच्या भागातील सिंचन व्यवस्थेला बळकटी मिळते. यामध्ये कृष्णा खोऱ्यातील उचल सिंचन योजना, जलसाठे व कालवा प्रणाली यांना कोयना धरणाच्या पाण्याचा अप्रत्यक्ष लाभ होतो. त्यामुळे शेतीसाठी पाण्याची उपलब्धता अधिक नियमित व स्थिर झाली आहे. कृष्णा-कोयना उपसा सिंचन योजना तसेच टेंभू सिंचन योजना यासारख्या खालच्या प्रकल्पांद्वारे जलसिंचन योग्य प्रकारे होते कृष्णा-कोयना उपसा सिंचन योजनेतून एकूण १,०९,१२७ हे. (ICA) क्षेत्रास सिंचनाचा लाभ होतो. या प्रकल्पास एकूण पाणी वापर २६.७८ अ.घ.फू. इतका असून, यापैकी कोयना धरणातून १९.०७ अ.घ.फू व कृष्णा नदीतून ७.७१ अ.घ.फू इतका पाणी वापर नियोजित आहे. तसेच टेंभू सिंचन योजनेमुळे १२१४७५ हेक्टर क्षेत्राला सिंचनाचा लाभ होणार असून एकूण पाणी वापर हा ३०.०० अ.घ.फू असून यासाठी कोयना धरणातून १८.४६ अ.घ.फू पाणी उपलब्ध केले जाते. या योजनांमुळे भात, ऊस, सोयाबीन, कापूस आणि गहू यांसारख्या पिकांची उत्पादकता सुधारली आहे. याशिवाय पाण्याची उपलब्धता नियमित झाल्यामुळे पीक उत्पादन, पीक पद्धती व शेतकऱ्यांच्या उत्पन्नावर सकारात्मक परिणाम झालेला दिसून येतो.

तसेच कोयना धरण प्रकल्प केवळ ऊर्जा निर्मितीपर्यंत मर्यादित नसून, जलसाठा नियमन, पूर नियंत्रण, पाणी व्यवस्थापन आणि ग्रामीण विकास या क्षेत्रांमध्ये महत्त्वपूर्ण योगदान मिळाले आहे. या बहुआयामी लाभांमुळे कोयना धरण प्रकल्प महाराष्ट्राच्या कृषी, ग्रामीण तसेच आर्थिक विकास प्रक्रियेला एक महत्वाचा आधारस्तंभ ठरतो.

कोयना धरणाचा कृषी विकासावर झालेला परिणाम

१) सिंचन क्षमतेत वाढ

कोयना धरणाच्या उभारणीनंतर कृष्णा नदीखोऱ्यातील पाण्याची उपलब्धता अधिक स्थिर आणि नियमित स्वरूपाची झाली आहे. धरणातून नियंत्रित व नियोजित पाणी सोडल्यामुळे उचल सिंचन योजना तसेच कालवा प्रणालींना आवश्यक पाणी वेळेवर उपलब्ध होऊ लागले आहे. परिणामी शेतीसाठी वेळेवर पाणी उपलब्ध होण्याची शक्यता वाढली असून पावसावरील अवलंबित्व काही प्रमाणात कमी झाले आहे. यामुळे कोरडवाहू शेतीतही सिंचनाची सुविधा निर्माण होऊन कृषी विकासाचा चालना मिळाली आहे.

२) पीक पद्धतीतील बदल

सिंचन सुविधांचा विस्तार झाल्यानंतर पारंपारिक एकपिक आणि कोरडवाहू शेतीपद्धतीत लक्षणीय बदल घडून आले आहेत. पाण्याची उपलब्धता वाढल्यामुळे शेतकऱ्यांनी बागायती तसेच नगदी पिकांच्या लागवडीकडे कल वाढला आहे. परिणामी पीक पद्धतीचा अवलंब अधिक प्रमाणात करण्यात येत आहे. शेती

अधिक नियोजनबद्ध व उत्पादनक्षम झाल्याने जमिनीचा कार्यक्षम वापर शक्य झाला असून, पीक पद्धतीतील या बदलांचा थेट व सकारात्मक परिणाम कृषी विकासावर झालेला आहे.

३) पीक उत्पादनात वाढ

सिंचन सुविधा उपलब्ध झाल्यानंतर पीक अपयशाचा धोका कमी होऊन कृषी उत्पादनात स्थिरता प्राप्त झाली आहे. पाण्याच्या नियमित व खात्रीशीर पुरवठ्यामुळे शेतकऱ्यांना सुधारित बियाणे, खतांचा योग्य वापर तसेच आधुनिक शेती तंत्रज्ञानाचा अवलंब करणे शक्य झाले आहे. याचा परिणाम प्रती हेक्टर उत्पादनात वाढ झालेली दिसून येते. वाढलेल्या कृषी उत्पादनामुळे शेतकऱ्यांच्या आर्थिक स्थितीत सुधारणा झालेली आहे.

४) शेतीपूरक व्यवसायांचा विकास

कोयना धरणामुळे निर्माण झालेल्या सिंचन सुविधांचा लाभ केवळ शेतीपुरताच मर्यादित न राहता शेतीपूरक व्यवसायांनाही झाला आहे. दुग्धव्यवसाय, भाजीपाला उत्पादन, प्रक्रिया उद्योग तसेच इतर ग्रामीण उद्योगांना या सुविधांमुळे चालना मिळाली आहे. या पूरक व्यवसायांमुळे शेतकऱ्यांचे उत्पन्नाचे स्रोत वाढले आहेत. या बदलांमुळे ग्रामीण अर्थव्यवस्था अधिक सक्षम व गतिमान झालेली आहे.

५) ग्रामीण व सामाजिक विकासावर परिणाम

कृषी विकासामुळे ग्रामीण भागातील रोजगाराच्या संधी वाढल्या असून स्थलांतराचे प्रमाण कमी झाले आहे. शेतीतून मिळणाऱ्या उत्पन्नात वाढ झाल्यामुळे जीवनमानात सुधारणा झालेली दिसून येते. सिंचन प्रकल्पांमुळे कृषी क्षेत्र अधिक स्थिर झाल्याने ग्रामीण विकास प्रक्रियेला गती मिळालेली आहे.

समस्या

कोयना धरणामुळे कृषी विकासासोबत काही समस्या निर्माण झालेल्या दिसून येतात.

१) कोयना धरणातून कृष्णा नदीत सोडल्या जाणाऱ्या पाण्याचा लाभ सर्व भागांना समान प्रमाणात मिळत नाही. धरणाच्या वरच्या व खालच्या भागांमध्ये पाण्याच्या उपलब्धतेत तफावत आढळते. काही क्षेत्रांमध्ये पुरेसे पाणी उपलब्ध होत असताना काही भागांमध्ये सिंचनाची कमतरता आढळून येते. या असमान वितरणामुळे कृषी विकासात प्रादेशिक विषमता निर्माण होण्याची शक्यता आहे.

२) सिंचन सुविधा उपलब्ध झाल्यानंतर ऊसासारख्या अधिक पाणी लागणाऱ्या पिकांची लागवड वाढलेली दिसून येते. यामुळे जलस्रोतांवर वाढता ताण निर्माण होण्याची शक्यता असून, भविष्यात पाणी टंचाईची समस्या निर्माण होऊ शकते. त्यामुळे दीर्घकालीन दृष्टीने हा प्रकार शाश्वत कृषी विकासाच्या दृष्टीने अडचणीचा ठरू शकतो.

३) सिंचन क्षेत्राच्या वाढीमुळे काही भागांमध्ये मृदा क्षारता, पाणथळ तसेच पर्यावरणीय असमतोल निर्माण होण्याची शक्यता वाढते.

४) सिंचन सुविधा उपलब्ध असल्या तरी सर्व शेतकऱ्यांना त्या समान प्रमाणात वापरता येतीलच असे नाही. आर्थिक मर्यादा, तांत्रिक माहितीचा अभाव व साधनसामग्रीची कमतरता यामुळे काही शेतकरी या सुविधांचा पुरेसा लाभ घेऊ शकत नाहीत.

उपाय

या समस्यांवर मात करण्यासाठी संभाव्य उपाय शोधण्याचा प्रयत्न करण्यात आला असून, ते पुढीलप्रमाणे सादर करण्यात आले आहेत.

- १) पाणी वाटपाचे नियोजन शास्त्रीय पद्धतीने करणे तसेच जलनियमन व पाणीवाटपावर प्रभावी नियंत्रण ठेवणे आवश्यक आहे. नदीखोरे पातळीवरील जलव्यवस्थापन दृष्टीकोन स्वीकारल्यास या समस्या काही प्रमाणात कमी करता येऊ शकतात.
- २) पीक विविधीकरणास प्रोत्साहन देणे तसेच कमी पाणी लागणाऱ्या पिकांचा प्रसार करणे आवश्यक आहे. यासोबतच जलसाक्षरता व शाश्वत शेतीविषयक जनजागृती कार्यक्रम राबविणे उपयुक्त ठरू शकते.
- ३) ठिबक व तुषार सिंचनासारख्या आधुनिक जलसंधारण पद्धतींचा वापर वाढविणे आवश्यक आहे. पाण्याच्या कार्यक्षम वापर व पर्यावरणीय समतोल राखण्यावर भर दिल्यास या समस्या नियंत्रित करता येऊ शकतात.
- ४) शेतकऱ्यांसाठी प्रशिक्षण कार्यक्रम, तांत्रिक मार्गदर्शन व शासकीय सहाय्य योजना राबविणे आवश्यक आहे. यामुळे सिंचन सुविधांचा अधिक व्यापक व समतोल वापर शक्य होईल.

निष्कर्ष

प्रस्तुत संशोधनातून असे स्पष्ट होते की कोयना धरणाने कृषी विकासात महत्त्वपूर्ण भूमिका बजावलेली आहे. पावसावर अवलंबून असलेल्या शेतीत सिंचन सुविधांच्या उपलब्धतेमुळे सकारात्मक बदल घडून आले असून, पीक पद्धतीत विविधता आणि पीक उत्पादकतेत वाढ झालेली दिसून येते. विशेषतः ऊस, भात, भाजीपाला व इतर व्यापारी पिकांच्या लागवडीत वाढ होऊन कृषी अर्थव्यवस्थेला चालना मिळालेली आहे. सिंचनामुळे कृषी जोखीम कमी झाली असून दुष्काळी परिस्थितीचा परिणाम मर्यादित झालेला आहे. खात्रीशीर पाण्याच्या उपलब्धतेमुळे शेतकऱ्यांना आधुनिक शेती तंत्रज्ञानाचा वापर करता येऊ लागला आहे. याचा परिणाम शेतकऱ्यांच्या उत्पन्नवाढीवर तसेच ग्रामीण जीवनमानाच्या सुधारणेवर झालेला आढळतो. कृषीवर आधारित प्रक्रिया उद्योग, रोजगारनिर्मिती आणि ग्रामीण अर्थव्यवस्थेचा विस्तार हे कोयना धरणाचे अप्रत्यक्ष पण महत्त्वाचे परिणाम आहेत. तथापि, पाण्याचा असमतोल वापर, पर्यावरणीय परिणाम आणि प्रादेशिक विषमता यांसारखी काही आव्हानेही या प्रकल्पाशी संबंधित असल्याचे आढळते. त्यामुळे सिंचन प्रकल्पांचा लाभ अधिक शाश्वत व समतोल स्वरूपात मिळवण्यासाठी प्रभावी जलसंपदा व्यवस्थापन आवश्यक ठरते. एकूणच, कोयना धरणाने कृषी विकासाला गती दिली असून, शाश्वत व समावेशक ग्रामीण विकासासाठी त्याचे योगदान महत्त्वाचे आहे. 'विकसित भारत @2047' या राष्ट्रीय दृष्टीकोनाच्या अनुषंगाने कृषी उत्पादनवाढ, जलसुरक्षा व ग्रामीण अर्थव्यवस्थेच्या बळकटीकरणासाठी अशा सिंचन प्रकल्पांची भूमिका निर्णायक ठरते, असा निष्कर्ष काढता येतो.

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Digital Payment Ecosystems and Financial Inclusion: Role of Public Infrastructure in India's Fintech Revolution

Mr. Nilesh L. Kshirsagar
Kamala College,
Kolhapur

Dr. Shivprasad V. Dongare
Mahatma Basveshwar Mahavidyalaya,
Latur

Abstract

India has emerged as a global leader in digital payments and financial inclusion through its innovative public infrastructure approach. This research paper examines how India's Digital Public Infrastructure (DPI), particularly the Unified Payments Interface (UPI), has revolutionized the country's fintech ecosystem and driven unprecedented financial inclusion. The study analyzes the JAM Trinity (Jan Dhan-Aadhaar-Mobile), India Stack architecture, and the role of regulatory bodies like the Reserve Bank of India (RBI) and National Payments Corporation of India (NPCI) in creating an enabling ecosystem. With UPI processing over 131 billion transactions worth ₹200 trillion in FY 2024 and accounting for 83% of digital payments, India's model demonstrates how open, interoperable public infrastructure can democratize financial services at population scale. The paper explores the implications for developing economies seeking to replicate this success and identifies challenges in scaling digital inclusion to India's remotest regions.

Keyword - Digital payments, Public Infrastructure

Introduction

The digital transformation of India's financial services sector represents one of the most remarkable success stories in global fintech. In less than a decade, India has transitioned from a predominantly cash-based economy to becoming the world's largest real-time payment system by transaction volume. According to the International Monetary Fund (IMF), the Unified Payments Interface (UPI) is recognized as the world's largest retail fast-payment system, with India accounting for approximately 49% of global real-time payment transactions as of 2024.

This transformation was not accidental but the result of deliberate policy interventions focused on building robust public digital infrastructure. The Reserve Bank of India's Digital Payment Index has grown from a base of 100 in March 2018 to 445.50 in March 2024, reflecting the exponential growth in digital payment adoption. More significantly, this digital revolution has been fundamentally inclusive, reaching hundreds of millions of previously unbanked citizens through initiatives like the Pradhan Mantri Jan Dhan Yojana (PMJDY) and the JAM Trinity framework.

This research paper examines the architectural foundations of India's digital payment ecosystem, analyzes its impact on financial inclusion, and evaluates the role of public infrastructure in enabling this transformation. The study draws on recent data from the Reserve Bank of India, National Payments Corporation of India, and international assessments to provide a comprehensive analysis of India's fintech revolution and its implications for global financial inclusion strategies.

Evolution of Digital Payment Infrastructure in India

Historical Context and Pre-Digital Era Challenges

Prior to the digital revolution, India's financial system faced significant challenges in serving its vast population of 1.4 billion people. According to World Bank estimates, 67 years after independence, a substantial portion of India's population remained excluded from formal banking services. This exclusion manifested in multiple dimensions: lack of

access to basic savings accounts, absence of institutional credit mechanisms, limited reach of banking infrastructure in rural areas, and high transaction costs that made financial services prohibitively expensive for the poor.

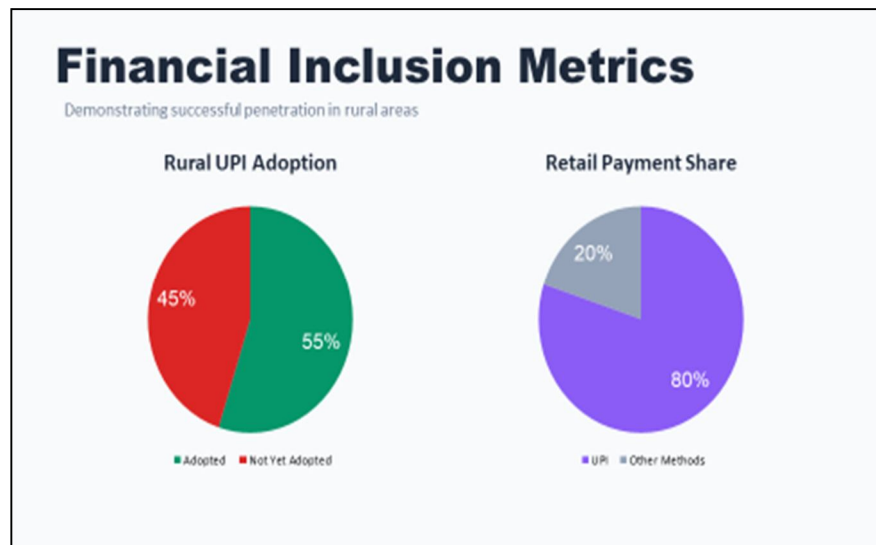
The pre-digital payment landscape was characterized by dependence on cash transactions, which accounted for over 90% of consumer payments. This cash dependency created multiple inefficiencies: leakages in welfare delivery systems, corruption in subsidy distribution, difficulty in credit assessment for small businesses, and lack of formal financial records for the unbanked population. Traditional banking infrastructure struggled to reach rural and remote areas due to high operational costs and low population density, creating a vicious cycle of financial exclusion.

The Digital Public Infrastructure (DPI) Approach

India's approach to digital transformation was fundamentally different from market-driven models adopted elsewhere. Rather than leaving digital infrastructure development to private players, India adopted a public goods approach, creating what is now known as the India Stack. This architecture is built on three foundational principles: open and interoperable systems, population-scale infrastructure, and regulatory frameworks that balance innovation with consumer protection.

The India Stack comprises multiple layers of digital infrastructure. At the base is Aadhaar, the world's largest biometric identification system with 1.4 billion enrolments covering 98% of the population. The middle layer includes the Pradhan Mantri Jan Dhan Yojana bank accounts, with over 540 million accounts opened, providing basic banking access to previously unbanked populations. The top layer consists of payment and data exchange systems, most notably the Unified Payments Interface (UPI), which has become the backbone of India's digital payment ecosystem.

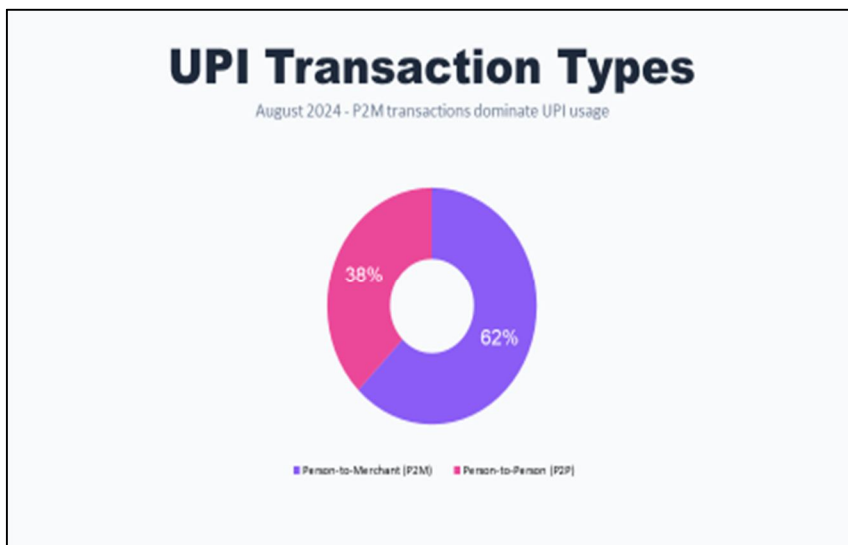
What distinguishes India's DPI is its architecture as a public good. The technical infrastructure is built, operated, and managed in the public sector, while the private sector accesses these open APIs to create innovative customer-facing services. This model has enabled unprecedented innovation while maintaining interoperability and preventing monopolistic control. As noted by RBI Governor Shaktikanta Das, this unique partnership between public infrastructure and private innovation has positioned India's payment systems among the most modern globally.



UPI: The Cornerstone of India's Digital Payment Revolution

Architecture and Technical Innovation

The Unified Payments Interface represents a paradigm shift in digital payments architecture. Launched by the National Payments Corporation of India (NPCI) in 2016, UPI is a real-time payment system that facilitates inter-bank transactions through a single two-factor authentication process. Unlike traditional payment systems that require entering beneficiary bank details, UPI enables payments using simple identifiers like mobile numbers or Virtual Payment Addresses (VPAs).

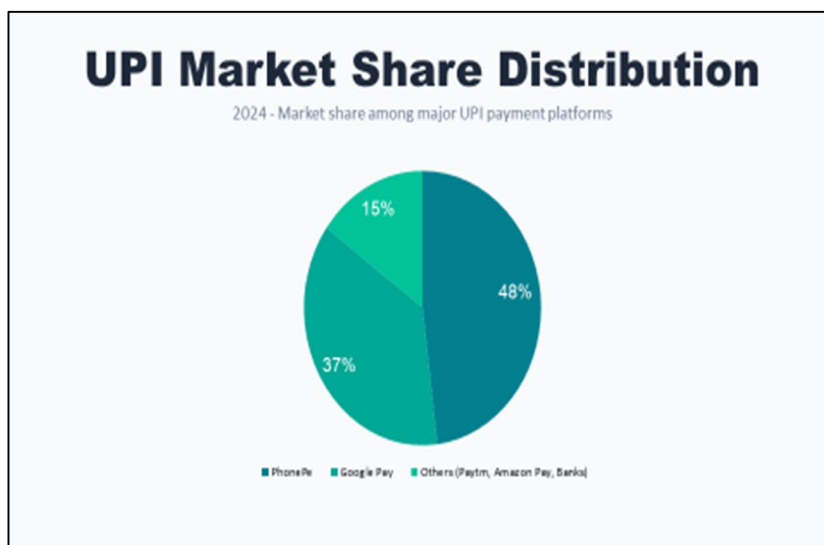


The technical architecture of UPI is built on several innovative features. First, it enables instant 24x7x365 real-time payments, eliminating the delays associated with traditional banking hours. Second, it operates on a zero-cost model for person-to-person transactions, making it accessible to all economic segments. Third, it maintains interoperability across 382 participating banks, ensuring that users can transact seamlessly regardless of their bank. Fourth, it supports multiple payment mechanisms including UPI PIN, QR codes, and now voice-based payments through UPI 3.0.

The NPCI, operating as a not-for-profit umbrella organization, manages the UPI infrastructure. As an initiative of the Reserve Bank of India and Indian Banks' Association, NPCI acts as a middleman for retail payments and settlement systems. Its server manages messages between India's top 200 banks connected to the UPI system, enabling fintech companies to access consumer and business bank accounts while maintaining security and reliability.

Transaction Patterns and Use Cases

UPI transaction patterns reveal its deep penetration across different use cases and economic segments. Person-to-merchant (P2M) transactions reached 62.40% of total UPI volume in August 2024, with 85% of these transactions being valued at ₹500 or less. This indicates UPI's crucial role in facilitating everyday, small-value transactions—from purchasing groceries to paying street vendors. The average UPI



transaction value stood at ₹2,900 in 2025, but the distribution is highly skewed, with the median transaction being much smaller.

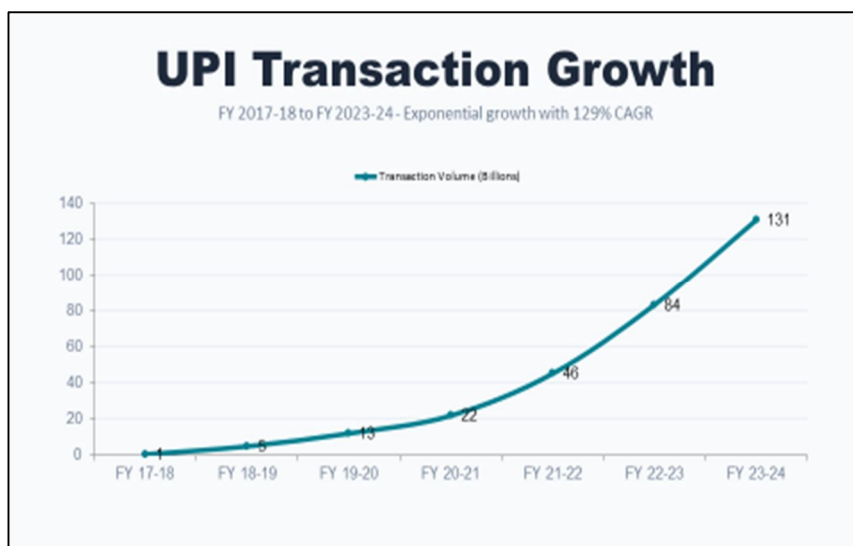
High-value transactions have also seen significant growth, with transactions above ₹50,000 surging by 24% in 2025, demonstrating increased trust in the platform for larger payments. UPI's linkage with RuPay credit cards reached 85 million users, offering flexibility in digital credit payments across merchants. The introduction of UPI Lite for low-value offline transactions handled over ₹9,000 crore worth of transactions in Q1 2025, addressing connectivity challenges in remote areas.

Merchant adoption has been equally impressive. Over 5 million merchants across India accept UPI, with this figure growing monthly as more small businesses adopt digital payments. As of FY 2024-25, 56.86 crore QR codes were deployed to approximately 6.5 crore merchants. Through the Payments Infrastructure Development Fund (PIDF), approximately 5.45 crore digital touch points have been deployed in tier-3 to tier-6 centers as of October 2025, ensuring that even small-scale merchants in remote areas can participate in the digital economy.

Impact on Financial Inclusion

Quantitative Metrics of Inclusion

The impact of India's digital payment infrastructure on financial inclusion can be measured through multiple quantitative indicators. The most fundamental metric is banking penetration. From a scenario where a large portion of the population had no access to banking services before 2014, India has achieved near-universal banking access with over 540 million Jan Dhan accounts.



The World Bank acknowledges that India achieved its financial inclusion goals in just six years—a feat that would have taken 47 years without its advanced Digital Public Infrastructure.

Digital payment adoption has grown exponentially. The total volume of digital payment transactions increased from 2,071 crore in FY 2017-18 to 18,737 crore in FY 2023-24, representing a CAGR of 44%. The value of transactions grew from ₹1,962 lakh crore to ₹3,659 lakh crore at a CAGR of 11%. This growth continued in FY 2024-25, with transaction volumes reaching 8,659 crore and values of ₹1,669 lakh crore in just the first five months (April-August).

Rural penetration demonstrates the inclusive nature of this transformation. Over 55% of rural India now uses UPI for digital payments, showcasing deepening rural adoption. The deployment of digital infrastructure in tier-3 to tier-6 centers through PIDF has been crucial in achieving this rural reach. Furthermore, 80% of retail payments in India now occur via UPI, accelerating the country's transition toward a less-cash economy.

Role of Public Infrastructure and Regulatory National Payments Corporation of India (NPCI)

The National Payments Corporation of India (NPCI) has been the institutional backbone of India's digital payment revolution. Established as a not-for-profit organization promoted by the Reserve Bank of India and Indian Banks' Association, NPCI operates multiple payment systems beyond UPI, including the National Automated Clearing House (NACH), Immediate Payment Service (IMPS), Aadhaar enabled Payment System (AePS), Bharat Bill Payment System (BBPS), and RuPay cards.

NPCI's ownership structure is unique—it is held by a consortium of banks and payment entities, including public sector undertakings, but the government itself is not a shareholder. This structure allows it to function as a neutral platform that balances public interest with operational efficiency. The organization's role extends beyond infrastructure provision to include setting standards, managing risks, and ensuring interoperability across the payment ecosystem.

NPCI's governance includes important regulatory interventions to ensure fair competition and system stability. For instance, it has proposed market cap limits for UPI applications to prevent excessive concentration, though implementation has been deferred multiple times to avoid disrupting market growth. It also manages the pace at which new entrants can scale their business, balancing innovation with systemic risk management.

However, NPCI's dominance has raised questions about competition and accountability. As of now, NPCI is the only entity authorized by the RBI to operate as a payment umbrella entity. While the RBI initiated moves in 2019 to create competitors to NPCI, no new licenses have been granted as of 2025, with the RBI citing insufficient innovation in applications received. This concentration of payment operations in a single entity has raised concerns about systemic risks and monopolistic trends, though supporters argue that NPCI's achievements justify its continued dominance.

Reserve Bank of India's Regulatory Approach

The Reserve Bank of India has played a crucial enabling role through its progressive regulatory approach to digital payments. Unlike many jurisdictions where regulation lags innovation, the RBI has adopted a proactive stance that balances innovation with consumer protection and financial stability. The RBI's Payments Vision 2025 document articulates a comprehensive roadmap for expanding digital payments, promoting innovation, and ensuring security.

Key regulatory initiatives have shaped the ecosystem's evolution. The introduction of the Account Aggregator framework in 2021 created a new category of NBFC-AAAs licensed to access and share financial information digitally with user consent. This framework, regulated by the RBI, enables data empowerment while maintaining privacy and security. The Data Empowerment and Protection Architecture (DEPA) provides the technical standards for user-controlled data sharing, creating a market for data while ensuring individual consent and control.

The RBI has also focused on expanding payment infrastructure. The Payments Infrastructure Development Fund (PIDF) provides grants to deploy digital payment acceptance infrastructure in tier-3 to tier-6 centers, addressing the last-mile connectivity challenge. The RBI's commitment to maintaining UPI as a zero-cost service for person-to-person transactions has been crucial in driving adoption across all economic segments.

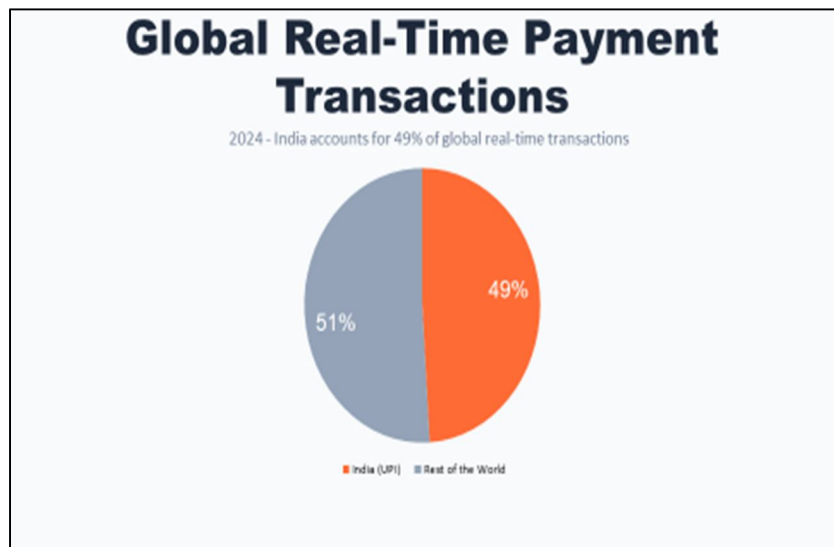
Transaction limit revisions demonstrate the RBI's responsive approach. In October 2024, the RBI increased UPI's transaction limit from ₹5,000 to ₹10,000 for UPI Lite, acknowledging user needs while

managing risk. The central bank has also been proactive in addressing fraud and security concerns, working with NPCI to implement multi-factor authentication and transaction monitoring systems.

Global Expansion and International Implications

UPI's International Footprint

India's digital payment infrastructure is rapidly expanding beyond national borders, positioning UPI as a global payment standard. As of 2025, UPI is operational in seven countries including the UAE, Singapore, Bhutan, Nepal, Sri Lanka, France, and Mauritius, enabling Indian consumers and businesses to make and receive international payments seamlessly. This expansion is managed by NPCI



International Payments Limited (NIPL), a wholly-owned subsidiary of NPCI.

Strategic partnerships have been key to UPI's international expansion. NPCI has established collaborations with Discover Financial Services in the United States, Japan Credit Bureau in Japan, China Union Pay, Royal Monetary Authority of Bhutan, and Network for Electronic Transfers in Singapore. These partnerships enable interoperability between UPI and local payment systems, facilitating cross-border transactions and remittances.

Recent expansions demonstrate accelerating momentum. In February 2024, a memorandum of understanding was signed between NIPL and Eurobank Ergasias to improve cross-border payments, making Greece the first European country to enable the Indian diaspora to send money to India over UPI. In June 2025, NPCI and Eurobank Cyprus signed an MoU to launch UPI services in Cyprus. The Maldives is implementing UPI following a cabinet decision in October 2024, with President Mohamed Muizzu forming a consortium of banks, telecom providers, and fintech firms to oversee implementation.

Google and NPCI signed an MoU for UPI expansion abroad with ambitious goals. The partnership aims to ensure smooth international transaction experiences for Indian tourists and streamline international remittances. Google has expressed intentions to develop UPI-like systems for foreign countries, potentially extending India's model globally. WhatsApp's upcoming introduction of international payment capabilities will further expand UPI's cross-border reach.

Looking forward, the RBI and NIPL plan to expand UPI to 20 nations by 2028-29 in accordance with the objectives of Viksit Bharat 2047. This expansion is not merely about payment processing but about exporting India's digital public infrastructure model to help other countries build inclusive financial systems.

India Stack as a Model for Developing Economies

India's digital public infrastructure approach has become a reference model for developing economies worldwide. The G20 Digital Economy Working Group developed the Global DPI Repository

(GDPIR) as a comprehensive resource hub pooling essential lessons and expertise from G20 members. During India's G20 Presidency, the final 'Report of India's G20 Task Force on Digital Public Infrastructure' was released in July 2024, contributing to the acceptance of DPI definitions and frameworks globally.

Several countries are adopting elements of India's DPI model. Sri Lanka joined Nepal in 2025 to adopt India's UPI system, marking expanding adoption in South Asia. The Modular Open Source Identity Platform (MOSIP), based on India's Aadhaar experience, is being used by multiple countries to develop their digital identity solutions. DIKSHA, India's digital learning platform built through public-private partnership, has attracted interest from numerous African nations seeking to digitize education.

What makes India's model particularly attractive to developing economies is its focus on inclusion rather than just efficiency. Unlike developed countries where digital payment systems primarily optimized existing financial infrastructure, India's approach addressed fundamental access challenges. The emphasis on zero-cost transactions, vernacular language support, and infrastructure deployment in remote areas demonstrates how technology can bridge rather than widen socioeconomic divides.

International organizations have recognized India's achievements. The World Bank's acknowledgment that India achieved in six years what would have taken 47 years without advanced DPI has validated the approach. The IMF's recognition of UPI as the world's largest retail fast-payment system demonstrates global acceptance of India's innovations. These endorsements have accelerated interest from other countries in replicating the model.

RuPay's Global Expansion

Alongside UPI, India's domestic card network RuPay has been expanding internationally. RuPay, whose name combines 'Rupees' and 'Payment,' represents India's first global card payment system. While its domestic market share trails Visa and Mastercard, RuPay is making steady progress overseas through strategic partnerships with international payment networks.

RuPay's international alliances include partnerships with Discover Financial Services, Japan Credit Bureau, and China Union Pay. These collaborations enable RuPay cards to be accepted across vast international networks. Currently, RuPay is available in over 200 countries worldwide, with ongoing conversations with institutions in developed countries like the United States and Australia to expand acceptance further.

The integration of RuPay with UPI has created a powerful ecosystem. UPI's linkage with RuPay credit cards, which reached 85 million users by 2025, offers consumers flexibility in digital credit payments across merchants. This integration demonstrates how India's domestic payment infrastructure components work synergistically to create a comprehensive digital payment ecosystem.

Challenges and Future Outlook

Infrastructure and Connectivity Challenges

Despite remarkable progress, significant infrastructure challenges remain in achieving universal digital payment adoption. The digital divide persists, particularly in rural and remote areas where internet connectivity is unreliable or absent. While 55% of rural India now uses UPI, the remaining 45% faces barriers including inadequate digital infrastructure, lack of smartphones, and limited electricity access.

Network failures and bank server outages continue to affect transaction success rates. While UPI maintains a success rate of 99.2%, the sheer volume of transactions means millions of failed transactions

monthly, creating frustration for users and merchants. Technical issues with biometric authentication, particularly for elderly users and manual laborers whose fingerprints may be worn, sometimes result in exclusion of genuine beneficiaries from welfare schemes.

The introduction of UPI Lite and UPI 123PAY represents attempts to address these challenges. UPI Lite enables low-value offline transactions, handling over ₹9,000 crore worth of transactions in Q1 2025 in low-connectivity areas. UPI 123PAY provides voice-based payment options for feature phone users, expanding access beyond smartphone users. However, scaling these solutions to reach India's remotest regions remains an ongoing challenge.

Digital Literacy and Financial Education

Digital literacy remains a critical barrier to universal adoption. Many Jan Dhan account holders, particularly older citizens and those in rural areas, lack the skills to use digital banking services effectively. The large number of dormant Jan Dhan accounts reflects this challenge—while accounts have been opened, actual usage remains limited among certain segments.

Financial education needs extend beyond basic digital literacy to include understanding of financial products, risks, and rights. Users need to understand concepts like interest rates, loan terms, insurance, and investment options to make informed financial decisions. The government and financial institutions have initiated various financial literacy programs, but scaling these to reach hundreds of millions of users with diverse linguistic and educational backgrounds remains challenging.

Generational differences in digital adoption are significant. Empirical studies indicate that demographics play a major role, with the older generation showing less positive perception toward digital financial services compared to younger, educated, working-class individuals. Bridging this generational divide requires targeted interventions that recognize different learning needs and preferences across age groups.

Privacy, Security, and Data Governance

Data privacy and security concerns have accompanied the growth of digital financial services. The concentration of sensitive biometric and financial data raises questions about potential misuse, data breaches, and surveillance. Civil liberty groups have consistently raised concerns about Aadhaar's privacy implications, leading to Supreme Court interventions that have sought to balance innovation with individual rights.

The Data Protection and Privacy Act of 2023 represents the regulatory response to these concerns. However, critics note that compared to earlier proposed legislation, the 2023 Act reduced obligations for businesses and protections for consumers while giving the central government broad discretionary powers for national security, anti-fraud, and AI purposes. Balancing data sharing for innovation with robust privacy protections remains an ongoing challenge.

Consumer fraud, including phishing, social engineering attacks, and account takeovers, has increased alongside digital payment growth. While authentication mechanisms have become more sophisticated, fraudsters continually develop new tactics. Educating users about fraud risks and implementing robust fraud detection systems are essential to maintaining trust in digital payment systems.

The governance of digital public infrastructure raises important questions about accountability and transparency. Entities like NPCI, despite their critical role in financial infrastructure, are not subject

to public transparency obligations under the Right to Information Act. Critics argue that keeping such entities outside RTI purview creates accountability gaps, particularly given their monopolistic position. The challenge is to ensure appropriate governance safeguards without hindering operational efficiency.

Sustainability and Business Models

The long-term sustainability of zero-cost UPI transactions raises questions about business models. While the zero-cost model has been crucial for adoption, it creates challenges for payment service providers who must cover infrastructure, security, and operational costs. The question of how to monetize payment services without excluding low-income users remains unresolved.

Some payment providers have explored value-added services, cross-selling financial products, and merchant discount rates to generate revenue. However, aggressive monetization could undermine the inclusive nature of the ecosystem. The RBI and NPCI face the delicate task of enabling sustainable business models while maintaining accessibility and affordability.

Competition policy also requires ongoing attention. While the current competitive landscape among UPI apps appears healthy, the proposed market cap limits have been repeatedly deferred, raising questions about regulatory will to enforce competition. NPCI's dual role as infrastructure provider and quasi-regulator creates potential conflicts of interest that need addressing through clearer governance frameworks.

Future Outlook and Opportunities

Looking forward, India's digital payment ecosystem has significant growth potential. By FY 2026-27, UPI transactions are expected to reach approximately 379 billion annually, making up roughly 90% of retail digital payments. UPI payments are forecast to reach ₹115.4 trillion in 2025, crossing a major milestone. The economic value generated by DPIs is projected to rise to 2.9-4.2% of GDP by 2030, potentially boosting India's growth and total factor productivity.

Technological innovations continue to expand UPI's capabilities. UPI 3.0 introduced conversational voice payments in 2024, enabling users to complete transactions using voice commands or typing, powered by Bharat GPT. This innovation makes digital payments accessible to users with limited literacy. The integration of UPI with emerging technologies like artificial intelligence and blockchain could unlock new use cases and efficiencies.

Cross-border payment integration offers significant opportunities. As UPI expands to 20 countries by 2028-29, it could reshape international remittances, which currently involve high costs and delays. PayPal's announcement of PayPal World in July 2025 to facilitate interoperability between different payment platforms demonstrates global interest in payment system integration. India's leadership in developing interoperable payment infrastructure positions it advantageously in this evolving landscape.

The expansion of credit through UPI represents another frontier. UPI-linked credit lines are bringing millions of first-time borrowers into the formal credit system. As digital payment histories accumulate, they create valuable data for credit assessment, potentially enabling more accurate risk evaluation and extending credit to previously underserved segments. The integration of Account Aggregator framework with lending platforms could further accelerate credit access.

India's DPI model offers opportunities for South-South cooperation. Developing countries face similar financial inclusion challenges, and India's solutions—developed for Indian conditions—may be

more applicable than those designed for developed country contexts. Technology transfer, capacity building, and knowledge sharing through platforms like the Global DPI Repository could help other countries accelerate their digital transformation journeys.

Conclusion

India's digital payment revolution, driven by robust public infrastructure, represents a transformative achievement in financial inclusion and economic development. The journey from a predominantly cash-based economy with vast segments excluded from formal financial services to the world's largest real-time payment system demonstrates what strategic public investment in digital infrastructure can achieve.

The success of India's model rests on several critical pillars. First, the focus on building digital infrastructure as a public good rather than leaving it entirely to market forces has been fundamental. The India Stack's open, interoperable architecture has enabled innovation at scale while preventing monopolistic control. Second, the JAM Trinity's integration of identity, banking access, and connectivity created the foundational infrastructure for inclusive digital services. Third, the collaborative approach involving government, regulators, banking sector, and fintech companies has fostered both innovation and stability.

The quantitative achievements are remarkable: 540 million Jan Dhan accounts bringing the unbanked into formal finance, 131 billion UPI transactions worth ₹200 trillion in FY 2024, 83% of digital payments flowing through UPI, 55% of rural India using digital payments, and 10 crore fake beneficiaries eliminated saving ₹2.75 lakh crore. These numbers translate into real impact—reduced corruption, improved welfare delivery, financial empowerment of marginalized communities, and acceleration of India's economic development.

However, significant challenges remain. Infrastructure gaps persist in remote areas, digital literacy barriers exclude vulnerable populations, data privacy concerns require ongoing attention, and business model sustainability needs resolution. Addressing these challenges while maintaining the inclusive and open nature of the ecosystem will be critical for sustaining progress.

The global implications of India's achievements extend beyond its borders. As UPI expands internationally and other countries adopt India Stack components, India's model is reshaping global conversations about digital public infrastructure. The emphasis on inclusion, interoperability, and public good principles offers an alternative to purely market-driven approaches, particularly relevant for developing economies facing similar challenges.

Looking forward, India's digital payment ecosystem appears poised for continued growth. Projections suggesting UPI will account for 90% of retail digital payments by FY 2026-27 and generate 2.9-4.2% of GDP by 2030 indicate enormous potential. New innovations like voice-based payments, credit integration, and cross-border functionality will expand the ecosystem's reach and utility.

India's fintech revolution ultimately demonstrates that technology can be a powerful force for inclusion when designed with that purpose. By treating digital infrastructure as a public good, focusing on the needs of the excluded, and creating open platforms for innovation, India has shown that developing countries need not merely adopt technologies designed elsewhere but can leapfrog to create systems suited to their unique contexts. This lesson—that inclusive design and public infrastructure investment can drive transformative change—may be India's most significant contribution to global development.

The story of India's digital payment ecosystem is still being written. While remarkable progress has been made, achieving truly universal financial inclusion requires continued innovation, infrastructure investment, and commitment to inclusive design. The foundation has been laid; the challenge now is to build upon it to ensure that every Indian, regardless of location, education, or economic status, can participate fully in the digital economy. If successful, India will have demonstrated not just technological prowess, but something far more valuable—how technology can serve as a bridge to opportunity and empowerment for billions.

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Legal Advancement for Vikasit Naari in reference to Vikasit Bharat

Asst. Prof. Aditi A. Desai

Abstract

True development of a nation is impossible without the holistic development and empowerment of women. Women constitute nearly half of India's population and play a pivotal role in shaping families, communities, and society at large. Therefore, the progress of women directly contributes to the progress of the nation.

An educated, self-sufficient, socially conscious, legally knowledgeable, and capable woman is represented by a Vikasit Naari. Such empowerment guarantees women's equality, dignity, and opportunities, allowing them to make meaningful contributions to social justice, economic development, and democratic governance.

The concept of "Vikasit Naari and Vikasit Bharat" emphasizes how women's empowerment and national development are inextricably linked. In addition to being a social duty, investing in women is strategically essential to creating a powerful, forward-thinking, and developed India.

Introduction

A "developed nation" is defined by taking into account a wide range of elements, from economic prosperity to the general standard of living experienced by its people. Conventional economic metrics, including a high GDP and a high per capita income, are frequently mentioned as the main requirements. However, until half of the Indian population advances at the same rate as the country's growth, the notion could not be realized.

An outline of the vision of Vikasit Bharat (Developed India)

India's long-term goal of becoming a developed, independent, inclusive, and internationally competitive country is embodied in the Vikasit Bharat vision. Its main goal is to achieve holistic development that strikes a balance between social fairness, environmental sustainability, democratic principles, and economic prosperity. The idea highlights that growth must benefit all facets of society and guarantee each citizen's equality, dignity and chances.

The principles of justice, liberty, equality, and fraternity found in India's constitution are in line with the Vikasit Bharat goal. It aims to enhance public participation in nation-building, support the rule of law, encourage good governance, and fortify institutions. According to this vision, development is social, cultural, and human-centered in addition to economic.

Relation between Women's Empowerment and National Development

Women's empowerment and national development are deeply interconnected and mutually reinforcing. A nation's progress depends not only on economic indicators but also on the social, educational, and moral strength of its citizens. Since women constitute a significant portion of the population and play a central role in family and community life, empowering women becomes essential for sustainable national development.

Key Dimensions of the Connection

1. Productivity and Economic Growth

Women actively engage in the workforce and business when they have access to education and economic empowerment. As a result, household incomes rise, national productivity rises, poverty falls, and the economy as a whole is strengthened.

2. Education and the Development of Human Capital

Within households, empowered women place a higher priority on health and education. Long-term national progress depends on educated moms' contributions to increased reading rates, improved school retention, and skilled future generations.

3. Population Stability, Nutrition, and Health

Better nutrition, educated family planning, and enhanced mother and child health are all results of women's empowerment. A healthier population improves workforce productivity and lessens the strain on public health.

4. Equality and Social Justice

Gender equality, dignity, and defense against violence and prejudice are all guaranteed by empowerment. Peace, stability, and social harmony—all crucial components of national development—are fostered by an equitable and inclusive society.

5. Leadership and Governance

Diverse viewpoints, openness, and responsiveness to public policy are brought about by women's involvement in governance and decision-making. Good governance and democratic institutions are strengthened as a result.

6. Rural Development and Poverty Reduction

Particularly in rural areas, empowered women are essential to community projects, microbusinesses, and self-help groups, which accelerates grassroots development.

7. Sustainable Development and Innovation

Women make substantial contributions to sustainable practices, environmental preservation, and innovation, assuring equitable and forward-thinking national advancement.

Important Current Laws and Regulations Concerning Women

1. Constitutional Provisions

- Articles 14, 15, 16 – Equality and non-discrimination
- Article 39(a), 39(d) – Equal livelihood and equal pay
- Article 42 – Maternity relief
- Article 51A(e) – Renunciation of practices derogatory to women's dignity

2. Criminal Laws

- Protection of Women from Domestic Violence Act, 2005
- Bharatiya Nararik Surksha Sanhita 2023
- Dowry Prohibition Act, 1961
- Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
- Immoral Traffic (Prevention) Act, 1956
- Bharatiya Nyay Sanhita 2023

3. Personal and Family Laws

- Hindu Marriage Act, 1955
- Hindu Succession (Amendment) Act, 2005 (equal inheritance rights)
- Muslim Women (Protection of Rights on Marriage) Act, 2019
- Guardianship and adoption laws

4. Labour and Welfare Laws

- Maternity Benefit Act, 1961 (amended in 2017)
- Equal Remuneration Act, 1976 (now under labour codes)
- Factories Act provisions for women workers

5. Policies and Schemes

- Beti Bachao Beti Padhao
- National Policy for Women

- One Stop Centres and women helplines
- Reservation for women in local self-government institutions

Identified Gaps and Challenges in the Current Legal Framework

1. **Implementation Gaps**
Laws are strong on paper but weak in enforcement due to lack of awareness, training, and accountability.
2. **Access to Justice**
Social stigma, financial dependence, lengthy judicial processes, and fear of retaliation discourage women from seeking legal remedies.
3. **Lack of Legal Awareness**
Many women, especially in rural and marginalized communities, are unaware of their rights and available protections.
4. **Patriarchal Attitudes and Social Barriers**
Deep-rooted cultural norms often undermine the effectiveness of legal safeguards.
5. **Inadequate Institutional Support**
Shortage of shelter homes, legal aid, counsellors, and functional Internal Complaints Committees affects redressal mechanisms.
6. **Intersectional Challenges**
Women belonging to disadvantaged groups face compounded discrimination not fully addressed by existing laws.

Development Theories Linking Gender Equality to National Progress

Development theories increasingly recognize gender equality as a central determinant of national progress. Traditional economic growth models focused primarily on industrial output and income levels, often overlooking gender disparities. However, modern development theorists argue that **human development** and **inclusive growth** are essential for sustainable progress.

Amartya Sen's **Capability Approach** emphasizes expanding individuals' freedoms and capabilities, highlighting women's education, health, and participation as key indicators of development. Similarly, feminist economists assert that women's unpaid labor and informal work must be acknowledged within development frameworks.

International development frameworks, including the Sustainable Development Goals (SDGs), identify gender equality as both a goal and a means to achieve broader development outcomes. Empirical studies demonstrate that nations with higher levels of women's empowerment experience improved economic performance, governance, and social well-being.

In the Indian context, these theories reinforce the idea that **women's legal empowerment is integral to achieving Vikasit Bharat**. Gender-responsive laws and policies are therefore not only instruments of justice but also catalysts for national development.

Proposed Legal Reforms

(a) Legislative Reforms

To achieve meaningful women's empowerment and advance the vision of **Vikasit Naari and Vikasit Bharat**, legislative reforms must move beyond symbolic protection and focus on **effectiveness, accessibility, and accountability**. The following reforms are proposed to strengthen India's legal framework for gender justice.

Recommendations for New Laws or Amendments to Existing Legislation

1. **Amendments to the Dowry Prohibition Act, 1961**
 - Introduce clearer definitions to address indirect and digital forms of dowry demands.
 - Provide victim-centric procedures and safeguards against intimidation.

- Mandate compulsory counseling and reporting mechanisms at the time of marriage registration.
- 2. **Strengthening the Sexual Harassment of Women at Workplace Act, 2013**
 - Expand the scope to explicitly cover the unorganized sector, gig economy, and digital workplaces.
 - Prescribe uniform standards for constitution and functioning of Internal Complaints Committees (ICCs).
 - Introduce penalties for non-compliance by employers.
- 3. **Reform of Domestic Violence Laws**
 - Ensure time-bound relief and simplified procedures under the Protection of Women from Domestic Violence Act, 2005.
 - Strengthen coordination between courts, protection officers, and service providers.
- 4. **Comprehensive Anti-Discrimination Legislation**
 - Enact a consolidated gender equality law addressing discrimination in employment, education, healthcare, and housing.
- 5. **Uniform Civil Code with Gender Justice Safeguards (Optional and Consultative)**
 - Explore gradual, consultative reforms to eliminate discriminatory personal law practices while respecting cultural diversity.

Proposals for Strengthening Enforcement Mechanisms

1. **Dedicated Monitoring Authorities**
 - Establish independent bodies at national and state levels to monitor implementation of women-centric laws.
2. **Capacity Building of Enforcement Agencies**
 - Mandatory gender-sensitivity training for police, judiciary, and administrative officials.
3. **Fast-Track Courts and Time-Bound Justice**
 - Expand fast-track courts for cases involving violence against women.
4. **Enhanced Legal Aid and Support Services**
 - Strengthen legal aid clinics, shelter homes, and counseling services, especially in rural and marginalized areas.
5. **Technology-Enabled Enforcement**
 - Use digital platforms for complaint filing, tracking cases, and monitoring institutional compliance.

Suggestions for Gender-Responsive Budgeting and Policy-Making

1. **Institutionalizing Gender Budgeting**
 - Mandate gender impact assessments for all major policies and legislative proposals.
2. **Outcome-Based Budget Allocation**
 - Link budgetary allocations to measurable outcomes related to women's education, health, safety, and employment.
3. **Data-Driven Policy Formulation**
 - Utilize gender-disaggregated data to identify gaps and design targeted interventions.
4. **Participatory Policy-Making**
 - Include women's organizations, legal experts, and grassroots stakeholders in law-making processes.
5. **Periodic Review and Social Audits**
 - Conduct regular evaluations of women-centric schemes and laws to ensure accountability.

(b) Judicial Reforms

Judicial reforms are essential to ensure that women's legal rights are not merely theoretical but are effectively realized in practice. Improving access to justice, promoting gender sensitivity within the judiciary, and expediting legal processes are critical to strengthening women's empowerment and advancing national development.

Proposals for Improving Access to Justice for Women**1. Strengthening Legal Aid Mechanisms**

- Expand free and quality legal aid services for women through Legal Services Authorities.
- Establish women-specific legal aid cells at district and taluka levels.

2. Simplified and Victim-Friendly Procedures

- Reduce procedural complexities in filing complaints and affidavits.
- Promote the use of plain language and assistance for first-time litigants.

3. Enhanced Infrastructure and Support Services

- Ensure availability of counseling centers, shelter homes, and victim support units within court complexes.
- Integrate One Stop Centres with judicial institutions.

4. Use of Technology for Accessibility

- Encourage online filing of complaints, virtual hearings, and digital tracking of cases to reduce barriers.

Recommendations for Gender Sensitization of Judiciary**1. Mandatory Gender Sensitization Training**

- Introduce compulsory training programs for judges, magistrates, and court staff on gender justice and women's rights.

2. Incorporation of Feminist Legal Perspectives

- Judicial training curricula should include feminist legal theory, intersectionality, and human rights standards.

3. Guidelines for Gender-Sensitive Adjudication

- Develop judicial guidelines to prevent stereotyping and victim-blaming in judgments.

4. Judicial Performance Evaluation

- Incorporate gender sensitivity as a criterion in judicial performance assessment and promotions.

Suggestions for Expedited Legal Processes in Cases Involving Women's Rights**1. Expansion of Fast-Track Courts**

- Increase the number of fast-track courts dealing exclusively with cases of violence against women.

2. Time-Bound Disposal of Cases

- Statutorily mandate timelines for investigation, trial, and disposal of women-centric cases.

3. Priority Listing of Cases

- Ensure priority hearing of cases involving sexual violence, domestic abuse, and maintenance.

4. Alternative Dispute Resolution with Safeguards

- Promote mediation and conciliation in appropriate cases, ensuring consent and protection of women's rights.

(c) Administrative and Institutional Reforms

Administrative and institutional reforms are crucial for translating constitutional and statutory protections into **effective, on-ground empowerment of women**. Strengthening governance structures, law enforcement, and specialized institutions ensures that legal reforms achieve their intended social impact.

Proposals for Enhancing Women's Representation in Decision-Making Bodies

1. Effective Implementation of Women's Reservation

- Ensure timely and transparent implementation of constitutional and statutory reservations for women in legislatures and local self-government bodies.
- Promote leadership training for elected women representatives to enhance effective participation.

2. Representation in Administrative and Policy-Making Positions

- Encourage greater representation of women in civil services, public sector leadership, and regulatory bodies.
- Introduce gender balance norms in selection committees and advisory bodies.

3. Institutional Leadership Development Programs

- Establish structured mentorship and leadership programs for women in governance and public administration.

Recommendations for Capacity Building of Law Enforcement Agencies

1. Mandatory Gender Sensitization Training

- Conduct regular training for police officers, prosecutors, and administrative officials on women's rights and gender-sensitive policing.

2. Specialized Women-Focused Units

- Strengthen women's police stations, women help desks, and special investigation units for crimes against women.

3. Standard Operating Procedures (SOPs)

- Develop and enforce SOPs for handling cases involving women, ensuring dignity, confidentiality, and victim-centric approaches.

4. Performance Accountability Mechanisms

- Link performance evaluations of law enforcement officials with responsiveness and sensitivity in women-related cases.

Suggestions for Creating Specialized Institutions for Women's Empowerment

1. Dedicated Women's Justice and Empowerment Cells

- Establish integrated institutions at district and state levels combining legal aid, counseling, shelter, and rehabilitation services.

2. Strengthening Existing Institutions

- Enhance the autonomy, funding, and enforcement powers of bodies like the National and State Commissions for Women.

3. Gender Research and Policy Institutes

- Create specialized research institutions to study gender issues, evaluate policy outcomes, and recommend evidence-based reforms.

4. Community-Based Support Institutions

- Promote collaboration with NGOs and grassroots organizations to extend institutional support to rural and marginalized women.

IMPLEMENTATION STRATEGIES

(a) Short-Term Action Plan

Effective legal reforms for women's empowerment require a well-defined short-term action plan that translates policy intent into immediate and measurable action. The following strategies focus on initiating reforms, prioritizing urgent areas, and defining stakeholder responsibilities.

Immediate Steps for Initiating Legal Reforms

1. **Constitution of Expert Committees**
 - Establish multidisciplinary committees comprising legal experts, gender specialists, policymakers, and civil society representatives to review existing women-centric laws.
2. **Rapid Legal and Policy Audit**
 - Conduct time-bound audits of major legislations and institutional mechanisms to identify implementation gaps and inconsistencies.
3. **Drafting of Amendments and Guidelines**
 - Prepare draft amendments to priority legislations and issue interim guidelines to address urgent concerns pending legislative changes.
4. **Capacity-Building Initiatives**
 - Launch immediate training programs for judiciary, police, and administrative officials on gender-sensitive legal enforcement.
5. **Awareness and Outreach Campaigns**
 - Initiate nationwide legal literacy and awareness drives focusing on women's rights and available remedies.

Prioritization of Key Areas for Intervention

1. **Safety and Protection from Violence**
 - Strengthen enforcement of laws related to domestic violence, sexual harassment, and sexual offences.
2. **Access to Justice and Legal Aid**
 - Improve accessibility to courts, legal aid services, and grievance redressal mechanisms for women.
3. **Workplace Equality and Dignity**
 - Ensure compliance with workplace harassment laws, particularly in the unorganized and private sectors.
4. **Political and Administrative Representation**
 - Prioritize implementation of women's reservation and leadership development programs.
5. **Institutional Strengthening**
 - Focus on operational efficiency of women-centric institutions such as Protection Officers, ICCs, and Women Commissions.

Identification of Stakeholders and Their Roles

1. **Legislature**
 - Enact necessary amendments and provide statutory backing to reforms.
2. **Judiciary**
 - Ensure gender-sensitive interpretation of laws and expedite cases involving women's rights.
3. **Executive and Administrative Agencies**
 - Implement laws effectively through trained personnel and accountable institutions.
4. **Law Enforcement Agencies**
 - Enforce laws with sensitivity, efficiency, and adherence to due process.

5. Civil Society and NGOs

- Support awareness, monitoring, and grassroots implementation.

6. Academic and Research Institutions

Conclusion

Judicial reforms play a decisive role in translating legal rights into accessible and effective remedies for women. A gender-sensitive, accessible, and efficient judicial system is indispensable for achieving substantive equality and strengthening the foundations of **Vikasit Naari and Vikasit Bharat**.

In essence, women's empowerment is not merely a social reform but a strategic investment in national development. A nation that educates, empowers, and uplifts its women builds a strong foundation for inclusive growth, democratic stability, and global competitiveness. Therefore, achieving a Vikasit Bharat is inseparable from the realization of Vikasit Naari.

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4. Reports on Human Development Index



भारतातील नाविन्यता, स्टार्टअप्स आणि उद्योजकता

डॉ. अर्चना दाभोळकर

द. भ. फै. दयानंद कला व शास्त्र महाविद्यालय, सोलापूर.

सारांश

भारतामध्ये नाविन्यता, स्टार्टअप्स आणि उद्योजकता हे आर्थिक आणि सामाजिक विकासासाठी अत्यंत महत्वाचे आहे. या संशोधनाचा उद्देश नवोन्मेषचा स्टार्टअप्सवरील परिणाम, उद्योजकतेचे स्वरूप, सरकारी धोरणांचे योगदान आणि उद्योजकांना सामोरे जाव्या लागणाऱ्या आव्हानांचे अभ्यास करणे आहे. या अभ्यासासाठी मिश्र-पद्धतीचा वापरली आहे. ज्यामध्ये ५० उद्योजकांचे सर्वेक्षण आणि दुय्यम सामग्री वापरली गेली आहे. सर्वेक्षणातून असे दिसून आले की, नाविन्यपूर्णता हा स्टार्टअप्ससाठी सर्वात महत्वाचा घटक आहे, जो व्यवसायाच्या वाढीसाठी आणि स्पर्धात्मक टिकाऊपणासाठी आवश्यक आहे. जोखीम पत्करणे, संधी ओळखणे आणि धोरणात्मक समर्थनाचा लाभ घेणे यांसारख्या वैशिष्ट्यांनी युक्त असलेली उद्योजकता यशासाठी मूलभूत आहे. त्याच वेळी, भांडवलाची कमतरता, अपुरी तांत्रिक कौशल्ये, तीव्र बाजारातील स्पर्धा आणि नियामक अडथळे यांसारखी आव्हाने स्टार्टअप्ससाठी महत्त्वपूर्ण आहेत. स्टार्टअप इंडिया, डिजिटल इंडिया आणि मेक इन इंडियासारखे सरकारी उपक्रम नव्याने उभा राहणाऱ्या उद्योजकांना आर्थिक सहाय्य, मार्गदर्शन आणि समर्थन प्रदान करतात, ज्यामुळे नाविन्यपूर्ण प्रक्रियेला गती मिळते. एकूणच, या अभ्यासातून असे दिसून येते की, नाविन्यपूर्णता आणि उद्योजकता हे आर्थिक, सामाजिक आणि तांत्रिक क्षेत्रांमध्ये भारताचे जागतिक स्थान वाढवेल.

Keywords : नवोन्मेष, स्टार्टअप्स, उद्योजकता, आर्थिक विकास

प्रस्तावना

भारतामध्ये उद्योजकतेला गेल्या दशकापासून पोषक असे वातावरण निर्माण झाले आहे. यामध्ये स्टार्टअप्स आणि नवोन्मेष यांना आर्थिक वाढ आणि रोजगार निर्मितीसाठी केंद्रबिंदू मानले जाते. उद्योजकतेच्या माध्यमातून केवळ नवीन व्यवसाय निर्माण होत नाही, तर उत्पादन उत्पन्न, रोजगार, मागणी, पुरवठा, वस्तू आणि सेवा, तंत्रज्ञान, सामाजिक सुधारणा देखील साकारता येतात. सरकारच्या Startup India, Digital India आणि Make in India यासारख्या योजनांनी गेल्या काही वर्षांत भारतात स्टार्टअप्सची संख्या लक्षणीयरीत्या वाढली आहे. उद्योजकता ही एक नवोन्मेषाची प्रक्रिया आहे, जिथे नवोदित उद्योजक संधी ओळखतात, जोखीम घेतात आणि नविन उत्पादन बाजारात आणतात. नवोन्मेषाच्या माध्यमातून स्पर्धा, यातून होणारी आर्थिक वाढ आणि जागतिक बाजारपेठेत प्रवेश मिळतो. भारतामध्ये डिजिटल तंत्रज्ञान, एआय, फिनटेक, हेल्थटेक आणि अॅग्रीटेक या क्षेत्रात नवोन्मेषी स्टार्टअप्स मोठ्या प्रमाणावर उभे राहिले आहेत. तथापि, या प्रक्रियेत अनेक आव्हाने देखील आहेत. नवोदित उद्योजकांना भांडवलाची कमतरता, तांत्रिक कौशल्यांचा अभाव,

बाजारातील तीव्र स्पर्धा आणि नियामक अडथळे यांचा सामना करावा लागतो. संशोधनाच्या या अभ्यासात नवोन्मेष, स्टार्टअप्स, उद्योजकता आणि धोरणात्मक पाठबळ यांचा परस्परसंबंध समजून घेणे आणि उद्योजकांसमोर येणारी आव्हाने आणि संधी यांचा सखोल अभ्यास करणे महत्त्वाचे ठरते. या पार्श्वभूमीवर हा अभ्यास संशोधनात्मक व सर्वेक्षणाधारित दृष्टिकोन वापरून भारतातील स्टार्टअप्सच्या यशासाठी नवोन्मेष आणि उद्योजकतेच्या घटकांचे विश्लेषण करतो. हे संशोधन आर्थिक, सामाजिक आणि तंत्रज्ञानाच्या विकासासाठी स्टार्टअप्सचे योगदान स्पष्ट करते.

नवोन्मेषाची संकल्पना

नवोन्मेष म्हणजे नवीन कल्पना, प्रक्रिया, उत्पादन किंवा सेवा निर्माण करणे, जी मूल्य निर्माण करते आणि स्पर्धात्मक फायदा देते (Drucker, 2014).

नवोन्मेष हे केवळ तंत्रज्ञानापुरते मर्यादित नाही ते व्यवसाय मॉडेल, मार्केटिंग धोरण, सेवा वितरण व ग्राहक अनुभव या सर्व क्षेत्रांमध्ये लागू होऊ शकते. नवोन्मेषाचे तीन प्रकारांमध्ये वर्गीकरण केले जाते:

1. उत्पादन नवोन्मेष: नवीन उत्पादने किंवा सुधारित उत्पादने विकसित करणे.
2. प्रक्रिया नवोन्मेष : कार्यक्षम प्रक्रिया किंवा उत्पादन प्रणाली विकसित करणे.
3. व्यवसायिक नवोन्मेष

नवोन्मेष हा उद्योजकतेचे मुख्य घटक आहे आणि हे स्टार्टअप्सच्या टिकावासाठी अनिवार्य आहे (Hisrich, Peters, & Shepherd, 2020).

स्टार्टअप्स आणि उद्योजकता : संकल्पनात्मक

उद्योजकता ही एक प्रक्रिया आहे जिथे व्यवसाय संधी ओळखणे, जोखीम घेणे आणि संसाधने वापरून नविन व्यवसाय तयार करणे यावर भर दिला जातो. स्टार्टअप ही एक अशीच नवोन्मेषक व्यवसाय संकल्पना आहे, जिथे नवीन उत्पादन किंवा सेवा बाजारात आणली जाते. (Shane, 2021).

स्टार्टअप्सची वैशिष्ट्ये:

स्टार्टअप्स हे नवीन कल्पनांवर आधारित व्यवसाय उपक्रम असतात. या उपक्रमांमध्ये उच्च जोखीम असते, कारण त्यांचे व्यावसायिक यश अनिश्चित असते. स्टार्टअप्स जलद वाढीची क्षमता बाळगतात आणि आधुनिक तंत्रज्ञान व नवोन्मेषाच्या माध्यमातून बाजारात स्पर्धात्मक स्थान निर्माण करतात. तसेच, ते लवचिक स्वरूपाचे असून बदलत्या बाजारपरिस्थितीनुसार धोरणात्मक बदल स्वीकारू शकतात. स्केलेबिलिटी हे स्टार्टअप्सचे महत्त्वाचे वैशिष्ट्य असून मर्यादित संसाधनांतून मोठ्या प्रमाणावर विस्तार साधण्याची क्षमता त्यांच्यात असते.

उद्योजकतेचे मुख्य घटक:

उद्योजकतेचा पाया सर्जनशीलता आणि नवोन्मेषी दृष्टिकोन यांवर आधारित असतो. यशस्वी उद्योजकांकडे धोरणात्मक दृष्टी असणे आवश्यक आहे, ज्याद्वारे दीर्घकालीन उद्दिष्टे निश्चित केली जातात.

आर्थिक पाठबळ हे उद्योजकीय उपक्रमांच्या टिकावासाठी अत्यंत महत्त्वाचे घटक असून भांडवल, गुंतवणूक आणि निधी व्यवस्थापनाचा समावेश त्यात होतो. तसेच, शासकीय धोरणे, योजना व प्रोत्साहनांचा लाभ घेणे उद्योजकतेच्या विकासात सहाय्यक ठरते.

भारतातील स्टार्टअप्सची स्थिती

भारतात २०१६ पासून स्टार्टअप्सची संख्या लक्षणीयरीत्या वाढली आहे. डीपीआयआयटी (२०२३) च्या अहवालानुसार, भारतात अंदाजे ९०,००० पेक्षा जास्त स्टार्टअप्स आहेत, जे प्रामुख्याने तंत्रज्ञान, फिनटेक, हेल्थटेक, ॲग्रीटेक आणि ई-कॉमर्स क्षेत्रांमध्ये आहेत. भारतामध्ये सरकारी योजनांनी आर्थिक सहाय्य, मार्गदर्शन, प्रशिक्षण आणि नेटवर्किंगच्या संधी उपलब्ध करून दिल्या आहेत. उदा. स्टार्टअप इंडिया, डिजिटल इंडिया आणि मेक इन इंडिया यामुळे नवोदित उद्योजकांना त्यांचे व्यवसाय सुरू करणे आणि ते टिकवून ठेवणे सोपे झाले आहे.

३. संशोधन पद्धती

हा अभ्यास वैचारिक आणि सर्वेक्षण-आधारित दृष्टिकोन वापरून करण्यात आला आहे. नाविन्य, स्टार्टअप्स आणि उद्योजकता यांच्यातील परस्परसंबंधांचा अभ्यास करणे, तसेच उद्योजकांना सामोऱ्या जाव्या लागणाऱ्या आव्हानांचे आणि संधींचे परीक्षण करणे, हे या संशोधनाचे मुख्य उद्दिष्ट आहे. या दृष्टिकोनामुळे माहितीचे गुणात्मक आणि संख्यात्मक अशा दोन्ही प्रकारे विश्लेषण करणे शक्य झाले, ज्यामुळे निष्कर्ष अधिक विश्वसनीय ठरले.

संशोधन रचना

या अभ्यासासाठी वर्णनात्मक संशोधन आराखड्याचा वापर करण्यात आला. या आराखड्यामध्ये स्टार्टअप्समधील नाविन्यपूर्ण प्रक्रिया, उद्योजकतेचे अनुभव आणि धोरणात्मक समर्थनाचे विश्लेषण करणे समाविष्ट होते. या वर्णनात्मक आराखड्यामुळे स्टार्टअप्सच्या यशासाठी महत्त्वपूर्ण असलेल्या प्रमुख घटकांचा सखोल अभ्यास करणे शक्य झाले आणि त्यांच्या अनुभवांचे स्वरूप स्पष्ट झाले.

दुय्यम सामग्री

यामध्ये संशोधन लेख, सरकारी अहवाल, नियतकालिके, पुस्तके आणि अधिकृत ऑनलाइन स्रोतांचा समावेश होतो.

भारतातील नवोदित उद्योजकांसाठी नाविन्यता, धोरणात्मक पाठबळ, आर्थिक सुविधा आणि तंत्रज्ञानाचा वापर हे यशाचे मुख्य घटक आहे. खालील पैलूंचा विश्लेषण केले गेले आहे:

अनु.क्र.	Impact Indicator	सरासरी मूल्य	Impact
1	सरासरी स्थापनेचे वर्ष	2012	स्टार्टअप इकोसिस्टम तुलनेने नवीन
2	सरासरी रोजगार निर्मिती (Jobs Created)	11500	मोठ्या प्रमाणात रोजगार संधी
3	सरासरी गुंतवणूक	2150 USD \$	मजबूत गुंतवणूक वातावरण
4	सरासरी वापरकर्ते	120 \$	डिजिटल स्वीकार उच्च
5	सरासरी महसूल वाढ (%)	35%	वेगवान आर्थिक वाढ
6	सरासरी Innovation Impact Score (1-10)	8.1	उच्च नावीन्य प्रभाव
7	सरासरी क्षेत्रीय विविधता	8-10 Sectors	मल्टी-सेक्टर इनोव्हेशन
8	सरासरी सामाजिक प्रभाव स्तर	high	समाजावर सकारात्मक परिणाम

नावीन्यतेचा प्रभाव

संशोधकाने केलेल्या सर्वे मधून असे दिसून आले कि, ८५% उद्योजक नाविन्याशिवाय कोणत्याही व्यवसायात टिकू शकत नाही. व्यवसायात नावीन्यता स्पर्धात्मक फायदा मिळवून देते, नवीन ग्राहकांना आकर्षित करते आणि त्यांना बाजारातील बदलांना प्रतिसाद देण्यास सक्षम करते. काही उद्योजकांनी नमूद केले की, उत्पादन नाविन्यापेक्षा नावीन्य प्रक्रिया अधिक प्रभावी आहे, कारण कार्यक्षम प्रक्रिया खर्च कमी करतात आणि सेवेची गुणवत्ता सुधारतात. म्हणजेच स्टार्टअप्सच्या अस्तित्वासाठी नावीन्य हा एक आवश्यक घटक आहे.

उद्योजकीय अनुभव

या शोधनिबंधात असे दिसून येते कि, ७०% उद्योजकांना आर्थिक आणि धोरणात्मक अडथळांना सामोरे जावे लागते. त्यासाठी सतत शिकणे, जोखीम पत्करणे आणि नेटवर्किंग यामुळे उद्योजकांना प्रोत्साहन मिळते. उद्योजकांमध्ये जोखीम सहन करण्याची क्षमता, समस्या ओळखणे आणि समस्या सोडवण्याची कौशल्ये इत्यादी गोष्टी विकसित होतात. इथे असे दिसून येते कि, उद्योजकता ही सर्जनशीलता आणि धैर्याने परिपूर्ण असलेली एक प्रक्रिया आहे.

धोरणात्मक योजनांचा परिणाम

सरकारच्या Startup India, Digital India आणि Make in India या योजनांचा सकारात्मक प्रभाव दिसून येत आहे. जवळपास 65% उद्योजकांनी सरकारी सुविधा आणि प्रशिक्षण यामुळे व्यवसायाला गती मिळाली आहे असे सांगितले. नवोदित उद्योजकांची क्षमता वाढवण्यासाठी भांडवल उपलब्धता, तांत्रिक सल्ला, नेटवर्किंग संधी आणि मार्गदर्शन इ. गोष्टी मिळणे गरजेचे आहे. यासाठी सरकारचे हे धोरणे उपयुक्त ठरतात.

आव्हाने आणि संधी :

१. भांडवलाची कमतरता

भांडवलाची कमतरता हे भारतातील स्टार्टअप्सच्या यशाचा मुख्य अडथळा आहे. संशोधकाने केलेल्या सर्वेनुसार सुरुवातीला 60% उद्योजकांना वित्तीय सहाय्य मिळणे कठीण झाले. अनेक नवोदित उद्योजक स्वतःचे भांडवल वापरतात किंवा कर्ज घेतात, ज्यामुळे व्यवसायाची सुरुवात आणि वाढ प्रभावित होते. या समस्येवर उपाय म्हणून व्हेचर कॅपिटल, एंजेल इन्व्हेस्टर्स, सरकारी स्टार्टअप फंड्स यांचा वापर करून आर्थिक पाठबळ सुनिश्चित करणे आवश्यक आहे.

२. तांत्रिक कौशल्यांचा अभाव

स्टार्टअप्ससाठी तांत्रिक कौशल्यांचा अभाव असे अनेक आव्हान आहेत. अलीकडे AI, डेटा अॅनालिटिक्स, डिजिटल मार्केटिंग, सॉफ्टवेअर डेव्हलपमेंट यासारख्या नवोदित उद्योजकांना कौशल्यांची आवश्यकता आहे. या कौशल्यांच्याअभावी नवोन्मेषपूर्ण संकल्पना प्रत्यक्षात आणणे कठीण होते. या अडथळ्यावर मात करण्यासाठी प्रशिक्षण, कार्यशाळा, इंटरनशिप आणि तंत्रज्ञानातील कौशल्य विकास कार्यक्रम उपयुक्त ठरतात.

३. बाजारातील तीव्र स्पर्धा

बाजारातील तीव्र स्पर्धा ही भारतीय स्टार्टअप्सच्या यशावर मोठा परिणाम करते. नवोदित उद्योजकांना समान व्यवसाय मॉडेल असलेल्या अनेक स्टार्टअप्सचा सामना करावा लागतो. यशस्वी होण्यासाठी स्पर्धात्मक विश्लेषण, वेगळे मूल्य प्रस्ताव आणि ग्राहक-केंद्रित दृष्टिकोन आवश्यक आहे.

४. नियामक अडथळे

सुरुवातीला स्टार्टअप्सच्या कायदेशी आणि नियामक अडथळे येतात. पंजीकरण प्रक्रिया, परवाने, कर धोरणे, बौद्धिक संपदा हक्क हे घटक उद्योजकांसाठी गुंतागुंतीचे ठरतात. या अडथळ्यांवर मात करण्यासाठी सरकारी मार्गदर्शन, विशेषज्ञ सल्ला आणि Digital Compliance Tools उपयुक्त ठरतात.

५. व्यवस्थापनातील अनुभवाचा अभाव

नवोदित उद्योजकांमध्ये व्यवसाय व्यवस्थापनाचा अनुभव नसल्याने निर्णय घेणे, संसाधनांचे नियोजन आणि टीम व्यवस्थापन हे आव्हानात्मक ठरते. या समस्येवर मात करण्यासाठी मार्गदर्शन, मेंटरशिप आणि प्रशिक्षण कार्यक्रम महत्त्वाचे आहेत.

संधी

१. तंत्रज्ञानावर आधारित संधी

भारतामध्ये AI, IoT, FinTech, HealthTech आणि AgriTech सारख्या क्षेत्रात नवनवीन संधी उपलब्ध आहेत. तंत्रज्ञानाचा योग्य वापर करून नवीन उत्पादन, सेवा आणि व्यवसाय मॉडेल तयार करता येतात. भविष्यातील डिजिटल वाढ भारताला जागतिक नावीन्यतेचा हब बनवू शकते.

२. जागतिक बाजारपेठेतील संधी

जागतिक बाजारपेठेत भारतातील स्टार्टअप्स प्रवेश करत आहेत. Export, cross-border partnerships आणि वैश्विक ग्राहक यामुळे व्यवसायाची प्रगती जलद होते. उद्योजक जागतिक बाजारपेठेतील ट्रेड लक्षात घेऊन नवीन उत्पादन व सेवा विकसित करण्याची त्यांना संधी मिळू शकतात.

३. सामाजिक आणि पर्यावरणीय संधी

सामाजिक उद्योजकतेची स्टार्टअप इकोसिस्टममध्ये संधी वाढत आहे. ॲग्रीटेक, क्लीनटेक, रिसायक्लिंग आणि हेल्थटेक इत्यादी सारख्या क्षेत्रांतील नवोपक्रम सामाजिक समस्यांचे निराकरण करतात. भविष्यात, यामुळे सामाजिक बदल आणि शाश्वत विकास व उद्योजक निर्माण होतील.

४. आर्थिक संधी

उद्योजकांना भांडवल मिळवण्याच्या संधी सरकारी योजना, व्हेचर कॅपिटल, एंजल इन्व्हेस्टर आणि स्टार्टअप या निधीमुळे वाढल्या आहेत. भविष्यात, व्यवसायांसाठी हा आर्थिक पाठिंबा स्थिरता आणि दीर्घकालीन टिकाऊपणा निर्माण करेल.

५. रोजगार निर्मिती आणि कौशल्य विकास

स्टार्टअप्सच्या वाढीमुळे रोजगार निर्मिती आणि कौशल्य यामुळे विकासाच्या संधी निर्माण होतात. भविष्यामध्ये कृत्रिम बुद्धिमत्ता, रोबोटिक्स आणि डिजिटल सेवांच्या क्षेत्रात अनेक नोकऱ्या उपलब्ध होतील. नवोदित उद्योजकांना व्यवसाय सुरू करण्यास प्रोत्साहन दिले जाईल.

६. धोरणात्मक पाठिंबा

भारतामध्ये स्टार्टअप इंडिया, मेक इन इंडिया आणि डिजिटल इंडिया यांसारखे सरकारी उपक्रम नवोदित उद्योजकांना सवलती, प्रशिक्षण, तसेच मार्गदर्शन करतात. या धोरणांमुळे व्यवसाय सुरू करणे आणि तो टिकवून ठेवणे सोपे होते.

निष्कर्ष

नावीन्य हे स्टार्टअपच्या यशातील एक महत्वाचा घटक आहे आणि हे भारतीय स्टार्टअप आणि उद्योजकता या क्षेत्रातील संशोधनातून हे स्पष्ट झाले आहे. जेव्हा नवोदित उद्योजक नवीन कल्पना राबवतात, प्रक्रिया करतात आणि व्यवसायात नावीन्य आणतात, तेव्हा तिथे त्यांना स्पर्धात्मक फायदा, आर्थिक लाभ मिळतात त्याच बरोबर जागतिक बाजारपेठेत प्रवेशही मिळतो. याव्यतिरिक्त, उद्योजकता ही मोठ्या प्रमाणावर जोखीम पत्करण्याची क्षमता, संधी ओळखणे, संसाधनांचा प्रभावीपणे वापर करणे आणि धोरणात्मक पाठिंबा मिळवणे इ. गोष्टींवर अवलंबून असते. सरकारी उपक्रम आणि धोरणांचा योग्य वापर केल्याने नवोदित उद्योजकांना भांडवल, मार्गदर्शन, तांत्रिक सहाय्य आणि नेटवर्किंगच्या संधी मिळतात, जे व्यवसायाच्या यशासाठी आवश्यक घटक आहेत. तथापि, भांडवलाची कमतरता, अपुरी तांत्रिक कौशल्ये, तीव्र

बाजारपेठेतील स्पर्धा आणि नियामक अडथळे यांसारखी आव्हाने कायम आहेत, ज्यांवर मात करण्यासाठी सतत नावीन्यपूर्णता, प्रशिक्षण आणि मार्गदर्शनाची आवश्यकता आहे. संशोधकाने केलेल्या सर्वेनुसार, तंत्रज्ञान-आधारित व्यवसायाच्या संधी, जागतिक बाजारपेठेचा विस्तार, सामाजिक आणि पर्यावरणीय नवोपक्रम, रोजगार निर्मिती आणि कौशल्य विकास यासारख्या संधी उद्योजकांना मिळतात. स्टार्टअप्सने या सर्व घटकांमध्ये प्रभावीपणे समन्वय साधून, दीर्घकालीन टिकाऊपणा, आर्थिक प्रगती आणि सामाजिक योगदान साध्य केले पाहिजे. एकूणच, भारतातील स्टार्टअप परिसंस्था सतत विकसित होत आहे आणि नवोपक्रम व उद्योजकत्व देशाच्या आर्थिक, सामाजिक आणि तांत्रिक विकासाला गतीदेताना दिसून येत आहे. भविष्यातील धोरणात्मक पाठिंबा, तांत्रिक प्रगती आणि नवोपक्रम-आधारित उपाययोजना भारताला जागतिक नवोपक्रम केंद्र बनण्यास मदत करतील.

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Psychological Challenges of Rapid Urbanization and Pathways to Mental Well-being in India

Asst. Prof. Supriya Madan Patil

Bharati Vidyapeeth's New Law College, Kolhapur.

Email: asst.prof.supriyapatil@gmail.com

Contact: 7020918152

Abstract

India is undergoing rapid urban growth, with increasing numbers of people migrating to cities in search of employment, education, and better living standards. Urban areas provide improved access to infrastructure, healthcare, and economic opportunities. However, rapid and unplanned urbanization has also contributed to a range of psychological challenges. Factors such as overcrowding, pollution, housing insecurity, work pressure, and weakening social support systems significantly affect mental well-being. These conditions increase the risk of stress, anxiety, depression, and loneliness, particularly among vulnerable populations such as migrants, youth, and the elderly. This paper examines the psychological impact of urbanization in India and explores pathways to promote mental well-being, including community support systems, green spaces, workplace and educational interventions, and policy-level responses. The study highlights the importance of integrating mental health considerations into urban planning to ensure healthier and more balanced urban living (Census of India, 2011; NIMHANS, 2016; WHO, 2020).

Keywords: urbanization, mental health, stress, migrants, youth, India

I. Introduction

Urbanization is one of the most significant socio-economic transformations taking place in India today. Cities are often viewed as centres of opportunity, growth, and modern living. Many people, particularly young adults, migrate to urban areas in search of better employment prospects, improved infrastructure, quality healthcare, and modern lifestyles. However, the rapid pace and unplanned nature of urban growth have created serious mental and emotional challenges.

According to the Census of India (2011), more than one-third of India's population resides in urban areas, and this proportion continues to grow. Migration to cities changes patterns of living, working, and social interaction. While much of the existing research focuses on the economic and environmental consequences of urbanization, its psychological impact has received comparatively less attention. In recent years, mental health has been recognized as a crucial component of individual well-being and national development. Rising levels of stress, anxiety, depression, and suicide in urban populations underscore the urgency of addressing mental health within the context of urban development (NIMHANS, 2016; NCRB, 2022; WHO, 2020). This paper discusses these psychological challenges and explores strategies to promote mental well-being in urban India.

II. Understanding Urbanization

Urbanization refers to the increasing concentration of populations in cities, driven by rural-to-urban migration and natural population growth. This process transforms not only the physical structure of cities but also social relationships and mental health outcomes. Major Indian cities such as Delhi, Mumbai, and Bengaluru have experienced rapid expansion due to industrialization and employment opportunities (Deshingkar & Akter, 2009).

Urban living offers several advantages, including better infrastructure, transportation, healthcare facilities, educational institutions, and diverse employment opportunities. However, it also introduces significant stressors. High population density, traffic congestion, environmental pollution, rising living costs, and intense competition can negatively affect psychological well-being. The World Health Organization (2020) notes that urban environments, when poorly planned, can increase exposure to stress and mental health risks.

III. Mental Health Effects of Urban Life

Some of the major challenges that are faced by the people in urban areas can be discussed as follows.

1. Stress and Anxiety

Urban life is often fast-paced and demanding. Individuals face work pressure, academic competition, financial insecurity, and long commuting hours. Stress arises when daily demands exceed an individual's coping capacity. In many service-sector jobs, employees experience poor work-life balance, extended working hours, and constant performance pressure. Chronic stress, anxiety, sleep deprivation, and irregular eating habits contribute not only to psychological distress but also to lifestyle-related health conditions such as obesity, hypertension, and cardiovascular problems (NIMHANS, 2016; WHO, 2020).

2. Loneliness and Social Isolation

Despite living in densely populated areas, many urban residents experience loneliness. Busy schedules, limited social interaction, and the weakening of traditional family and neighbourhood support systems reduce emotional connectedness. Migrants who live away from their families are particularly vulnerable to social isolation. Persistent loneliness can increase the risk of depression and other mental health problems (WHO, 2021).

3. Depression and Burnout

The pressures of urban life, including job insecurity, academic stress, unemployment, and high competition often result in emotional exhaustion and burnout. Depression and anxiety disorders are reported more frequently in urban areas than in rural settings (NIMHANS, 2016). Burnout has become increasingly common among students and working professionals due to prolonged stress and lack of recovery time.

4. Identity and Adjustment Issues

Migrants to urban areas often face difficulties related to cultural adjustment, identity, and belonging. Many live in informal settlements or unstable housing conditions and struggle to adapt to urban social norms. Financial insecurity and limited social support further intensify psychological stress and feelings of alienation (Deshingkar & Akter, 2009).

5. Vulnerable Groups at Risk

Certain population groups are more affected by the psychological challenges of urbanization. Migrant workers often face unstable employment, poor living conditions, and limited access to healthcare services. Young people experience academic pressure, career uncertainty, fear of failure, and reduced personal time, leading to stress, anxiety, and depression. Elderly individuals, particularly those living in nuclear families, may experience loneliness, neglect, and social isolation.

Understanding the needs of these vulnerable groups is essential for designing inclusive mental health interventions. Community-based approaches and supportive policies can help address their specific challenges (WHO, 2020; NIMHANS, 2016).

IV. Pathways to Improve Mental Health

It is very important that ways and solutions are considered and used to deal with these challenges. Few of these are discussed as follows.

1. Community Support Systems

Community-level initiatives play a crucial role in reducing isolation and promoting mental well-being. Self-help groups, local support networks, and community mental health services can foster social connectedness. India's District Mental Health Programme aims to increase awareness and improve access to mental health services at the grassroots level (NIMHANS, 2016).

2. Green Spaces and Urban Design

Access to green spaces such as parks and open areas has been shown to reduce stress, enhance relaxation, and encourage social interaction. The World Health Organization (2017) highlights the positive impact of urban green spaces on mental health and overall well-being. Integrating green spaces into city planning is essential for creating healthier urban environments.

3. Workplace and Educational Interventions

Since a significant portion of urban life is spent in workplaces and educational institutions, these settings offer important opportunities for mental health interventions. Counselling services, stress-management programs, mindfulness practices, yoga, and regular breaks can help individuals cope with pressure and build emotional resilience. Encouraging work-life balance and social interaction at workplaces and schools can significantly reduce stress-related mental health issues (WHO, 2020).

4. Policy-Level Measures

India's National Mental Health Policy emphasizes integrating mental health into primary healthcare and broader social development initiatives. Urban policies should address affordable housing, safe transportation, environmental quality, and accessible mental health services. Planning cities with mental well-being in mind is as important as developing physical infrastructure (NIMHANS, 2016; WHO, 2020).

V. Conclusion

Urbanization in India presents both opportunities and psychological challenges. While cities offer employment, education, and improved services, they also expose individuals to stress, loneliness, and adjustment difficulties. To ensure that urban areas remain healthy and inclusive, mental health must be integrated into urban planning and development policies. Strengthening community support, expanding green spaces, implementing workplace and educational programs, and adopting inclusive policy measures are essential steps toward promoting mental well-being in urban India (Census of India, 2011; NIMHANS, 2016; WHO, 2017; WHO, 2020).

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अन्नदाता ते निर्यातदार : २०४७ पर्यंत भारतीय कृषी क्षेत्राचे अर्थव्यवस्थेत योगदान – एक विश्लेषणात्मक अभ्यास

ऋतुराज रंगराव मिठारी
एम. ए. , बी. एड. , सेट (अर्थशास्त्र)

गोषवारा

भारतीय कृषी क्षेत्र हे देशाच्या अर्थव्यवस्थेचा कणा मानले जाते. स्वातंत्र्योत्तर काळात भारताने अन्नधान्याच्या टंचाईतून अन्नसुरक्षेकडे, आणि आज अन्नदाता राष्ट्र म्हणून जागतिक स्तरावर ओळख निर्माण केली आहे. “अन्नदाता ते निर्यातदार : २०४७ पर्यंत भारतीय कृषी क्षेत्राचे अर्थव्यवस्थेत योगदान” या अभ्यासाचा उद्देश भारतीय कृषी क्षेत्राच्या परिवर्तनशील भूमिकेचा आढावा घेणे व २०४७ पर्यंत त्याच्या आर्थिक योगदानाच्या शक्यता विश्लेषित करणे हा आहे.

भारतीय कृषी क्षेत्रात हरित क्रांतीनंतर उत्पादनक्षमता लक्षणीयरीत्या वाढली असून अन्नधान्य, कडधान्ये, तेलबिया, फळे व भाजीपाला यांच्या उत्पादनात भारत आघाडीवर आहे. सध्या सुमारे ४५ टक्के लोकसंख्या प्रत्यक्ष किंवा अप्रत्यक्षपणे कृषी क्षेत्रावर अवलंबून असून राष्ट्रीय उत्पन्नात या क्षेत्राचा सुमारे १८-२० टक्के वाटा आहे. मात्र, बदलत्या जागतिक व्यापार धोरणांमुळे आणि वाढत्या मागणीमुळे कृषी निर्यातीस मोठ्या संधी उपलब्ध झाल्या आहेत.

या अभ्यासात दुय्यम माहितीच्या आधारे कृषी उत्पादन, निर्यात आकडेवारी, शासकीय धोरणे, कृषी सुधारणा योजना व तंत्रज्ञानातील प्रगती यांचे विश्लेषण करण्यात आले आहे. ई-नाम, प्रधानमंत्री किसान सन्मान निधी योजना, कृषी पायाभूत सुविधा निधी, तसेच अन्न प्रक्रिया उद्योगाला दिलेले प्रोत्साहन यांमुळे कृषी मूल्यसाखळी मजबूत होत असल्याचे दिसून येते. जैव-तंत्रज्ञान, अचूक शेती, ड्रोन तंत्रज्ञान आणि डिजिटल प्लॅटफॉर्मस यांच्या वापरामुळे उत्पादन वाढीसोबतच शेतकऱ्यांचे उत्पन्न वाढण्यास मदत होत आहे. २०४७ पर्यंत भारत विकसित राष्ट्र बनण्याच्या दिशेने वाटचाल करत असताना कृषी क्षेत्राचे स्वरूप पारंपरिक अन्न उत्पादनापुरते मर्यादित न राहता निर्याताभिमुख, मूल्यवर्धित आणि तंत्रज्ञानाधारित होणे आवश्यक आहे. सेंद्रिय शेती, अन्न प्रक्रिया उद्योग, कृषी स्टार्टअप्स आणि आंतरराष्ट्रीय बाजारपेठांतील प्रवेश यांमुळे कृषी क्षेत्राचा आर्थिक वाटा वाढू शकतो. तथापि, हवामान बदल, जलसंकट, लहान भूधारणा व बाजारातील अस्थिरता ही आव्हाने कायम आहेत.

निष्कर्षतः, योग्य धोरणात्मक नियोजन, शाश्वत शेती पद्धती, तंत्रज्ञानाचा प्रभावी वापर आणि शेतकरी-केंद्रित सुधारणा राबविल्यास २०४७ पर्यंत भारतीय कृषी क्षेत्र अन्नदाता राष्ट्रातून एक प्रमुख कृषी निर्यातदार म्हणून उदयास येऊ शकते व देशाच्या अर्थव्यवस्थेत महत्त्वपूर्ण योगदान देऊ शकते.

सूची शब्द - भारतीय कृषी, २०४७ चे व्हिजन, कृषी निर्यात, अन्न प्रक्रिया, तंत्रज्ञानक्षेत्री शेती, आर्थिक योगदान

प्रस्तावना

भारतीय संस्कृतीत शेतकरी हा 'अन्नदाता' म्हणून पूजनीय मानला जातो. स्वातंत्र्योत्तर कालखंडात अन्नधान्याची टंचाई, वारंवार पडणारे दुष्काळ आणि परकीय मदतीवर असलेले अवलंबित्व यांसारख्या गंभीर समस्यांशी झुंज देत भारतीय कृषी क्षेत्राने हरित क्रांतीच्या माध्यमातून देशाला 'अन्नसुरक्षितते'कडे नेले. मात्र, बदलत्या जागतिक परिस्थितीत कृषी क्षेत्राची भूमिका केवळ देशांतर्गत अन्नपुरवठ्यापुरती मर्यादित न राहता आर्थिक विकास, रोजगारनिर्मिती आणि जागतिक व्यापारातील सहभाग अशा व्यापक स्वरूपात विकसित होत आहे.

'विकसित भारत @2047' या राष्ट्रीय संकल्पनेच्या पार्श्वभूमीवर, भारतीय कृषी क्षेत्राला आता 'अन्नदाता ते निर्यातदार' असा महत्त्वपूर्ण प्रवास करावा लागत आहे. सध्या सुमारे ४५ ते ५० टक्के लोकसंख्या उपजीविकेसाठी शेतीवर अवलंबून असून, राष्ट्रीय उत्पन्नात या क्षेत्राचा वाटा १८ ते २० टक्क्यांच्या दरम्यान आहे. जागतिक बाजारपेठेत भारताचा वाटा वाढवण्यासाठी शेतीकडे आता केवळ उदरनिर्वाहाचे साधन म्हणून न पाहता, एक 'जागतिक व्यावसायिक संधी' म्हणून पाहणे अनिवार्य झाले आहे. कृत्रिम बुद्धिमत्ता (AI), ड्रोन तंत्रज्ञान आणि 'प्रिसिजन फार्मिंग' यांसारख्या आधुनिक तंत्रज्ञानाचा वाढता वापर, कृषी मूल्यसाखळीतील बदल आणि अन्न प्रक्रिया उद्योगांची प्रगती यांमुळे कृषी क्षेत्राचे अर्थव्यवस्थेतील योगदान अधिक गतिमान होत आहे.

तथापि, या प्रवासात हवामान बदल, जलसंकट, जमिनीची लहान भूधारणा आणि बाजारपेठेतील अस्थिरता यांसारखी आव्हाने आजही कायम आहेत. या पार्श्वभूमीवर, २०४७ पर्यंत भारतीय कृषी क्षेत्राचे बदलते स्वरूप, निर्याताभिमुख धोरणे आणि जागतिक बाजारपेठेतील संधींचे विश्लेषण करणे अत्यंत आवश्यक ठरते. प्रस्तुत शोधनिबंधात भारतीय कृषी क्षेत्राचा पारंपरिक आधार आणि आधुनिक 'निर्यातदार' म्हणून उदयास येणारी नवी भूमिका यांचा सखोल आढावा घेण्याचा प्रयत्न करण्यात आला आहे. शाश्वत शेती आणि शेतकरी-केंद्रित सुधारणांच्या जोरावर भारत २०४७ पर्यंत जगाचे 'ग्लोबल फूड बास्केट' बनून देशाच्या अर्थव्यवस्थेला नवी उंची प्राप्त करून देईल, असा विश्वास हा अभ्यास व्यक्त करतो.

साहित्य पुनरावलोकन

१. पाटील, अमोल (२०२४) — भारतीय कृषी निर्यातीतील आव्हाने आणि संधी: २०४७ चे व्हिजन. अमोल पाटील (२०२४) यांनी आपल्या संशोधनात भारतीय कृषी उत्पादनांच्या जागतिक बाजारपेठेतील निर्यातीवर लक्ष केंद्रित केले आहे. त्यांच्या मते, भारताकडे विविध हवामान विभाग असल्यामुळे फळे आणि भाजीपाला निर्यातीत मोठी संधी आहे. मात्र, जागतिक दर्जाची गुणवत्ता मानके (Quality Standards) आणि फायटोसॅनिटरी उपायांची कमतरता हे मोठे अडथळे आहेत. २०४७ पर्यंत निर्यातदार बनण्यासाठी शीतगुहांची साखळी (Cold Storage Chain) मजबूत करणे आणि निर्याताभिमुख पिकांच्या लागवडीला प्रोत्साहन देणे आवश्यक असल्याचे त्यांनी स्पष्ट केले आहे.

२. कुलकर्णी, स्वाती (२०२३) — कृषी मूल्यसाखळी आणि अन्न प्रक्रिया उद्योगाचे अर्थव्यवस्थेतील स्थान. स्वाती कुलकर्णी (२०२३) यांनी आपल्या लेखात 'व्हॅल्यू एडिशन' म्हणजेच मूल्यवर्धनाचे महत्त्व विशद केले

आहे. लेखिकेच्या मते, केवळ कच्चा शेतीमाल विकण्याऐवजी त्यावर प्रक्रिया करून (Food Processing) निर्यात केल्यास शेतकऱ्यांच्या उत्पन्नात दुपटीने वाढ होऊ शकते. २०४७ च्या विकसित भारतासाठी सूक्ष्म अन्न प्रक्रिया उद्योगांना ग्रामीण स्तरावर प्रोत्साहन देणे हाच खरा आर्थिक आधार ठरेल, असा निष्कर्ष त्यांनी मांडला आहे.

३. देशपांडे, राहुल (२०२५) — डिजिटल शेती आणि कृषी तंत्रज्ञान (Agri-Tech): एक नवीन क्रांती. राहुल देशपांडे (२०२५) यांनी आधुनिक तंत्रज्ञानाचा कृषी क्षेत्रावर होणाऱ्या परिणामांचा अभ्यास केला आहे. त्यांच्या संशोधनानुसार, ड्रोन तंत्रज्ञान, आयओटी (IoT) आणि हवामान अंदाजावर आधारित 'अचूक शेती' (Precision Farming) उत्पादकता वाढवण्यात महत्त्वाची भूमिका बजावत आहेत. भारताला २०४७ पर्यंत निर्यातदार राष्ट्र बनायचे असेल, तर तंत्रज्ञानाचा वापर करून उत्पादन खर्च कमी करणे आणि उत्पादनाची गुणवत्ता सुधारणे अनिवार्य असल्याचे विश्लेषण या लेखात केले आहे.

४. शहा, अनिकेत (२०२४) — हवामान बदल आणि भारतीय शेतीची शाश्वतता. अनिकेत शहा (२०२४) यांनी हवामान बदलाचा कृषी अर्थव्यवस्थेवर होणाऱ्या नकारात्मक प्रभावांचे विश्लेषण केले आहे. अनिश्चित पाऊस आणि वाढते तापमान यामुळे अन्नसुरक्षेला धोका निर्माण होऊ शकतो. लेखकाने असा युक्तिवाद केला आहे की, २०४७ पर्यंतच्या वाटचालीत 'क्लायमेट स्मार्ट शेती' (Climate Smart Agriculture) आणि पाण्याचे कार्यक्षम नियोजन (Micro Irrigation) केल्यासच भारत आपली निर्यात क्षमता टिकवून ठेवू शकेल.

५. सिंग, राजवीर (२०२३) — कृषी स्टार्टअप्स आणि ग्रामीण उद्योजकता: २०४७ कडे वाटचाल. राजवीर सिंग (२०२३) यांनी कृषी क्षेत्रातील स्टार्टअप्सच्या वाढत्या भूमिकेवर प्रकाश टाकला आहे. त्यांच्या मते, तरुण पिढी जेव्हा तंत्रज्ञानाची जोड देऊन कृषी व्यवसायात उतरते, तेव्हा पारंपारिक शेतीचे रूपांतर व्यावसायिक उद्योगात होते. जागतिक बाजारपेठेतील मागणी ओळखून उत्पादन घेणाऱ्या कृषी स्टार्टअप्समुळे भारताची 'अन्नदाता' ही ओळख 'ग्लोबल सप्लायर'मध्ये बदलण्यास मदत होईल, असे त्यांनी आपल्या संशोधनातून सिद्ध केले आहे.

संशोधनाची उदिष्ट्ये

१. भारतीय कृषी क्षेत्राच्या 'अन्नदाता' ते 'निर्यातदार' या स्थित्यंतराचा आणि ऐतिहासिक प्रवासाचा आढावा घेणे.
२. २०४७ पर्यंत भारतीय अर्थव्यवस्थेत कृषी क्षेत्राच्या संभाव्य आर्थिक योगदानाचे आणि वृद्धी दराचे विश्लेषण करणे.
३. कृषी निर्यातीला प्रोत्साहन देणाऱ्या शासकीय धोरणांच्या आणि आधुनिक तंत्रज्ञानाच्या (Agri-Tech) प्रभावीपणाचा अभ्यास करणे.
४. जागतिक बाजारपेठेत भारतीय कृषी उत्पादनांची स्पर्धात्मकता वाढवण्यातील आव्हाने आणि संधींचा वेध घेणे.

संशोधन पद्धती

१. संशोधनाचे स्वरूप (Nature of Research): सदर अभ्यास हा प्रामुख्याने 'विक्षेपणात्मक' (Analytical) आणि 'वर्णनात्मक' (Descriptive) स्वरूपाचा आहे. यात ऐतिहासिक आकडेवारीच्या आधारे भविष्यातील (२०४७ पर्यंतच्या) आर्थिक योगदानाचा अंदाज वर्तवण्यात आला आहे.

२. माहिती संकलनाची पद्धत (Data Collection Method): या संशोधनासाठी प्रामुख्याने दुय्यम माहितीचा (Secondary Data) वापर करण्यात आला आहे. ही माहिती खालील स्रोतांकडून संकलित केली आहे:

- केंद्र सरकारचे वार्षिक आर्थिक सर्वेक्षण (Economic Survey of India).
- नीती आयोग (NITI Aayog) आणि कृषी मंत्रालयाचे अहवाल.
- जागतिक व्यापार संघटना (WTO) आणि अन्न व कृषी संघटना (FAO) यांची आकडेवारी.
- विविध राष्ट्रीय व आंतरराष्ट्रीय शोधनिबंध, नियतकालिके आणि सांख्यिकीय संकेतस्थळे.

३. विक्षेपण घटक (Key Variables): अभ्यासादरम्यान प्रामुख्याने कृषी जीडीपी (Agri-GDP), कृषी निर्यात मूल्य, तंत्रज्ञान स्वीकारण्याचा दर, आणि जागतिक बाजारपेठेतील भारताचा हिस्सा या घटकांचे विक्षेपण केले आहे.

४. माहिती विक्षेपण तंत्र (Data Analysis Techniques): संकलित केलेल्या सांख्यिकीय माहितीचे विक्षेपण करण्यासाठी 'ट्रेंड एनालिसिस' (Trend Analysis) या पद्धतीचा वापर केला आहे. मागील दशकातील निर्यातीचा कल पाहून २०४७ पर्यंतची संभाव्य वाढ अभ्यासली गेली आहे.

५. भौगोलिक व्याप्ती (Geographical Scope): या संशोधनाची व्याप्ती संपूर्ण 'भारत' असून, भारताच्या जागतिक स्तरावरील व्यापाराचा अभ्यास यात समाविष्ट आहे.

❖ भारतीय अर्थव्यवस्थेत कृषी क्षेत्राचे स्थान

भारतीय अर्थव्यवस्थेच्या जडणघडणीत कृषी क्षेत्र हे केवळ एक 'उत्पादन क्षेत्र' नसून ते सामाजिक आणि आर्थिक रचनेचा मुख्य कणा (Backbone) आहे. २०४७ पर्यंत विकसित भारताचे ध्येय गाठण्यासाठी कृषी क्षेत्राचे स्थान खालील प्रमुख मुद्द्यांच्या आधारे स्पष्ट करता येते:

- रोजगाराचा मुख्य आधार आणि सामाजिक स्थिरता: जरी भारताच्या एकूण देशांतर्गत उत्पादनातील (GDP) कृषी क्षेत्राचा वाटा सध्या १८% ते २०% च्या दरम्यान असला, तरी आजही देशातील सुमारे ४५% ते ५०% लोकसंख्या उपजीविकेसाठी थेट किंवा अप्रत्यक्षपणे या क्षेत्रावर अवलंबून आहे. हे क्षेत्र ग्रामीण भागातील बेरोजगारी कमी करून सामाजिक स्थिरता राखण्याचे कार्य करते.
- औद्योगिक विकासाचा उत्प्रेरक: कृषी क्षेत्र हे उद्योगांना लागणाऱ्या कच्च्या मालाचे (उदा. कापूस, ऊस, ताग (Jute), तेलबिया) प्रमुख स्रोत आहे. कापड उद्योग, साखर उद्योग आणि उदयोन्मुख अन्न प्रक्रिया उद्योग (Food Processing Industry) हे पूर्णतः कृषी उत्पादकतेवर आधारित आहेत. त्यामुळे कृषी क्षेत्रातील वाढ ही थेट औद्योगिक वाढीला गती देते.
- अन्नसुरक्षा आणि राष्ट्रीय स्वावलंबन: १४० कोटींहून अधिक लोकसंख्या असलेल्या देशाची अन्नसुरक्षा सुनिश्चित करणे हे कृषी क्षेत्राचे सर्वात मोठे योगदान आहे. स्वातंत्र्यावेळी अन्नासाठी परावलंबी

असलेला भारत आज केवळ स्वयंपूर्णच नाही, तर जगाला अन्नधान्य पुरवणारा 'ग्लोबल बास्केट' म्हणून ओळखला जातो.

- परकीय चलनाची प्राप्ती आणि व्यापार शिल्लक: 'अन्नदाता ते निर्यातदार' या प्रवासात कृषी निर्यातीने महत्त्वाची भूमिका बजावली आहे. बासमती तांदूळ, मसाले, चहा आणि सागरी उत्पादनांच्या निर्यातीतून देशाला मोठ्या प्रमाणावर परकीय चलन (Foreign Exchange) मिळते. हे चलन देशाची व्यापार तूट (Trade Deficit) कमी करण्यास मदत करते.
- ग्रामीण बाजारपेठ आणि क्रयशक्ती: भारतीय कृषी क्षेत्र ग्रामीण भागातील लोकांच्या उत्पन्नाचा मुख्य स्रोत असल्याने, ग्रामीण बाजारपेठेची क्रयशक्ती (Purchasing Power) शेतीवर अवलंबून असते. जेव्हा कृषी उत्पादन वाढते, तेव्हा ट्रॅक्टर, खते, कीटकनाशके यांसारख्या उत्पादनांसोबतच गृहपयोगी वस्तू आणि सेवांची मागणी वाढते, ज्यामुळे संपूर्ण अर्थव्यवस्थेला चालना मिळते.

निष्कर्षतः, विकसित भारत @२०४७ कडे वाटचाल करताना कृषी क्षेत्राचे स्थान हे केवळ 'अन्न पुरवठादार' म्हणून न राहता, ते अर्थव्यवस्थेची स्थिरता, शाश्वत विकास आणि जागतिक व्यापारातील भारताचे वाढते वर्चस्व सिद्ध करणारा आधारस्तंभ म्हणून अधिक बळकट होत आहे.

विश्लेषण घटक	१९५१ (प्रारंभीचा काळ)	२०२४ (सद्यस्थिती)	२०४७ (संभाव्य अंदाज)
GDP मधील हिस्सा	सुमारे ५०% - ५४%	१८% - १९%	१५% - १७% (मूल्यवर्धित वाढीसह)
रोजगारावरील अवलंबित्व	सुमारे ७२%	४५% - ४७%	२५% - ३०% (यांत्रिकीकरणामुळे)
अन्नधान्य उत्पादन	५०.८ दशलक्ष टन	३३० दशलक्ष टन+	४५० - ५०० दशलक्ष टन
निर्यातीचे स्वरूप	नगण्य (कच्चा माल)	५० अब्ज डॉलर+	२०० अब्ज डॉलर+
मुख्य भूमिका	अन्न टंचाई/अन्नसुरक्षा	आत्मनिर्भरता	जागतिक अन्न पुरवठादार
तंत्रज्ञानाचा वापर	पारंपारिक/नांगर-बैल	ट्रॅक्टर/मर्यादित डिजिटल	AI, ड्रोन, अचूक शेती
बाजारपेठ	स्थानिक/आठवडी बाजार	e-NAM/राष्ट्रीय बाजार	जागतिक एकात्मिक मूल्यसाखळी

स्रोत - भारत सरकारचा आर्थिक पाहणी अहवाल (२०२४), नीती आयोग व्हिजन २०४७ आणि जागतिक अन्न व कृषी संघटनेच्या (FAO) सांख्यिकीय माहितीवर आधारित लेखकाचे स्व. विश्लेषण-

१९५१ मध्ये अर्थव्यवस्था पूर्णतः शेतीवर अवलंबून होती, तर २०४७ पर्यंत शेतीचा जीडीपीमधील वाटा कमी होईल, पण तिचे 'उत्पादन मूल्य' (Value) अनेक पटींनी. निर्यातीतील झेप: स्वातंत्र्योत्तर काळात आपण अन्न आयात करत होतो, मात्र २०४७ पर्यंत भारत जगातील अग्रगण्य कृषी निर्यातदार देश म्हणून प्रस्थापित होईल.

❖ अन्नदाता ते निर्यातदार : परिवर्तनाचा प्रवास

भारताचा कृषी प्रवास हा केवळ उत्पादनातील वाढ नसून तो आत्मसन्मानाचा आणि धोरणात्मक बदलाचा इतिहास आहे. या प्रवासाचे विश्लेषण तीन महत्त्वाच्या कालखंडात करता येते:

- अन्न टंचाईचा काळ (१९४७-१९६०): स्वातंत्र्यावेळी भारत अन्नधान्यासाठी परावलंबी होता. वाढती लोकसंख्या आणि जुनाट शेती पद्धतीमुळे देशाला अमेरिकेसारख्या देशांकडून (PL-480 अंतर्गत) धान्य आयात करावे लागत होते. या काळात भारताची ओळख एक 'अन्न मदत घेणारा' देश अशी होती.
- हरितक्रांती आणि आत्मनिर्भरता (१९६०-२०००): १९६० च्या दशकात एम.एस. स्वामीनाथन यांच्या नेतृत्वाखालील हरितक्रांतीने चित्र बदलले. उच्च उत्पादनक्षम बियाणे (HYV), सिंचन आणि खतांच्या वापरामुळे उत्पादनात मोठी झेप घेतली. भारत अन्नधान्याच्या बाबतीत 'आत्मनिर्भर' झाला आणि आपण अन्नसुरक्षा (Food Security) साध्य केली.
- निर्यातक्षम शेतीचा काळ (२०००-२०४७ चे लक्ष्य): २१ व्या शतकात भारताने केवळ पोट भरण्याचे उद्दिष्ट न ठेवता जागतिक बाजारपेठ काबीज करण्याचे ध्येय ठेवले आहे. आता आपण 'अन्नदाता' (Food Provider) कडून 'निर्यातदार' (Global Exporter) कडे वळलो आहोत. आज आपण गरजेपेक्षा जास्त उत्पादन करून जगाच्या अन्नाची गरज भागवत आहोत.

❖ कृषी निर्यातीतील वाढ आणि कल

भारतीय कृषी निर्यातीचा आलेख गेल्या दशकात लक्षणीयरित्या उंचावला आहे. हा बदल केवळ योगायोग नसून तो जागतिक मानकांचे पालन आणि निर्याताभिमुख धोरणांचा परिणाम आहे.

निर्यातीचे विविधीकरण : पूर्वी भारत केवळ चहा आणि मसाल्यांची निर्यात करत असे. मात्र, आता निर्यातीच्या बास्केटमध्ये लक्षणीय बदल झाला आहे:

- सागरी उत्पादने: सध्या कृषी निर्यातीत सर्वाधिक वाटा सागरी उत्पादनांचा आहे.
- बासमती तांदूळ: भारत जगातील बासमती तांदूळाचा सर्वात मोठा निर्यातदार आहे.
- प्रक्रिया केलेले अन्न : कड्ड्या मालापेक्षा प्रक्रिया केलेल्या अन्नाच्या निर्यातीत १५-२०% दराने वार्षिक वाढ होत आहे.

जागतिक बाजारपेठेतील स्थान: आज भारत जगातील पहिल्या १० कृषी निर्यातदार देशांमध्ये समाविष्ट झाला आहे. २०२१-२२ मध्ये भारताची कृषी निर्यात ५० अब्ज डॉलर्सच्या ऐतिहासिक टप्प्यावर पोहोचली होती. २०४७ पर्यंत हे उद्दिष्ट २०० अब्ज डॉलर्सपर्यंत नेण्याचे सरकारचे नियोजन आहे.

निर्यातीतील वाढीचे प्रमुख चालक (Key Drivers):

- दर्जा आणि प्रमाणीकरण: जागतिक बाजारपेठेतील कडक नियमांचे (उदा. WTO मानके) पालन केल्यामुळे भारतीय शेतमालाला युरोप आणि अमेरिकेसारख्या बाजारपेठांमध्ये स्थान मिळाले आहे.
- APEDA आणि धोरणात्मक पाठबळ: कृषी आणि प्रक्रिया केलेले खाद्य उत्पादन निर्यात विकास प्राधिकरणाने (APEDA) राबवलेली 'क्लस्टर आधारित' धोरणे निर्यातीसाठी पूरक ठरली आहेत.
- मूल्य साखळीतील सुधारणा: कोल्ड स्टोरेज, पॅकेजिंग आणि लॉजिस्टिकमधील सुधारणांमुळे नाशवंत वस्तूंची (फळे आणि फुले) निर्यात वाढली आहे.

हा प्रवास दर्शवतो की, भारतीय कृषी क्षेत्राने केवळ 'संख्यात्मक' (Quantitative) वाढ न करता 'गुणात्मक' (Qualitative) बदल घडवून आणला आहे. २०४७ पर्यंत भारताला विकसित राष्ट्र बनवण्यासाठी ही निर्यातक्षम वाढ सर्वात महत्त्वाचा आर्थिक उत्प्रेरक (Economic Catalyst) ठरेल.

❖ २०४७ पर्यंत कृषी क्षेत्रासमोरील संधी

१. तंत्रज्ञानाचा वापर

२०४७ पर्यंत भारतीय कृषी क्षेत्राच्या विकासासाठी आधुनिक तंत्रज्ञानाचा वापर ही सर्वात मोठी संधी ठरणार असून, यामुळे पारंपरिक पद्धतींकडून तंत्रज्ञानाधारित शेतीकडे होणारा प्रवास उत्पादकता वाढविण्यास आणि खर्च कमी करण्यास निर्णायक ठरेल. डिजिटल तंत्रज्ञानामुळे माती परीक्षण, हवामान अंदाज आणि बाजारभावाची माहिती शेतकऱ्यांपर्यंत जलद पोहोचत आहे) कृत्रिम बुद्धिमत्ता (AI) आणि डेटा विश्लेषणाच्या साहाय्याने पीक रोगांचे पूर्वानुमान, अचूक खत व पाण्याचे नियोजन करणे शक्य झाले आहेतसेच ड्रोन . तंत्रज्ञानामुळे कीटकनाशकांची फवारणी आणि पीक निरीक्षणात वेळ व श्रमाची मोठी बचत होत आहे . 'अचूक शेती' (Precision Farming) पद्धतीमुळे कमी संसाधनांत अधिक उत्पादन घेऊन शाश्वत विकास साधता येतो . संवेदनशील तंत्रज्ञानामुळे हवामान बदलाच्या जोख-स्मार्ट सिंचन प्रणाली आणि हवामानमीचे व्यवस्थापन करणे सुलभ झाले आहेतथोडक्यात ., योग्य प्रशिक्षण आणि धोरणात्मक पाठबळ मिळाल्यास तंत्रज्ञानाधारित ही कृती भारतीय शेतीला अधिक स्पर्धात्मक, निर्यातक्षम आणि विकसित भारताचा भक्कम आधारस्तंभ बनवेल.

२. मूल्यवर्धन आणि अन्न प्रक्रिया उद्योग

२०४७ पर्यंत भारतीय कृषी क्षेत्राच्या विकासात मूल्यवर्धन आणि अन्न प्रक्रिया उद्योग (Food Processing) निर्णायक भूमिका बजावतीलसध्या कृषी माल कच्च्या स्वरूपात विकल्याने शेतकऱ्यांना मर्यादित . उत्पन्न मिळते; मात्र त्यावर प्रक्रिया केल्यास उत्पादनांचे आयुष्य वाढते, अपव्यय टळतो आणि अधिक आर्थिक लाभ मिळतोधान्य ., फळे, भाजीपाला आणि दुग्धजन्य पदार्थांच्या प्रक्रिया उद्योगांमुळे शेतमालाला स्थिर दर मिळून आंतरराष्ट्रीय बाजारपेठेत मागणी वाढते, ज्यामुळे परकीय चलनाची प्राप्ती होतेहे उद्योग ग्रामीण . भागात उभारल्यास स्थानिक रोजगारनिर्मिती होऊन ग्रामीण औद्योगिकीकरणास मोठी चालना मिळेल . भारत सरकारच्या'मेगा फूड पार्क्स' आणि 'कोल्ड चेन' सारख्या योजनांमुळे या क्षेत्राचा वेगाने विस्तार होत आहेतथोडक्यात ., मूल्यवर्धनामुळे भारतीय कृषी क्षेत्र केवळ अन्नधान्य पुरवठ्यापुरते मर्यादित न राहता, ते उच्च उत्पन्न देणारे आणि निर्यातक्षम क्षेत्र म्हणून विकसित भारताच्या उद्दिष्टपूर्तीत मोलाचे योगदान देईल.

३. सेंद्रिय व नैसर्गिक शेती

बदलत्या जीवनशैलीमुळे वाढलेली आरोग्य जागरूकता २०४७ पर्यंत भारतीय सेंद्रिय व नैसर्गिक शेतीसाठी एक मोठी संधी ठरणार आहेरासायनिक खतांचा शून्य वापर आणि पर्यावरणपूरक पद्धतींमुळे . भारताकडे असलेल्या विविध हवामान क्षेत्रांमुळे .होते मातीची सुपीकता टिकून राहते व जलस्रोतांचे रक्षण डाळी, मसाले, चहा आणि फळे यांसारख्या सेंद्रिय उत्पादनांना जागतिक बाजारपेठेत उच्च दर मिळण्याची मोठी क्षमता आहेया शेती पद्धतीमुळे उत्पादन खर्चात घट होऊन शेतकरी स्वावलंबी बनतात आणि त्यांचे उत्पन्न . सरकारकडून प्रमाणीकरण .ठी स्थिर राहण्यास मदत होतेदीर्घकाळासा, प्रशिक्षण आणि निर्यात प्रोत्साहनासाठी राबवल्या जाणाऱ्या विविध योजनांमुळे शेतकऱ्यांचा याकडे ओढा वाढत आहेनैसर्गिक संसाधनांचा प्रभावी . थोडक्यात .क शाश्वत बनवतेवापर केल्याने ही पद्धत पर्यावरणाचे रक्षण करण्यासोबतच कृषी क्षेत्राला अधि,

सॅन्ड्रिय शेतीचा हा विस्तार भारतीय कृषी क्षेत्राला अधिक आरोग्यदायी आणि निर्यातक्षम बनवून 'अन्नदाता ते निर्यातदार' या प्रवासात मैलाचा दगड ठरेल.

❖ शासकीय धोरणे आणि सुधारणा

भारतीय कृषी क्षेत्राला शाश्वत आणि निर्यातक्षम बनवण्यासाठी सरकारने विविध धोरणात्मक सुधारणा राबवल्या आहेत. FPOs च्या माध्यमातून लहान शेतकऱ्यांना संघटित करून बाजारपेठ मिळवून दिली जात आहे, तर कृषी पायाभूत सुविधा निधी द्वारे गोदामे आणि कोल्ड चेन विकसित केल्या जात आहेत. PMFBY सारख्या योजना नैसर्गिक आपत्तींपासून आर्थिक सुरक्षा प्रदान करतात. कृषी निर्यात धोरणांतर्गत दर्जा .

प्रमाणीकरण आणि जागतिक मानकांवर भर दिला गेल्याने भारतीय उत्पादनांना जागतिक बाजारपेठ मिळत आहे. MSP आणि सॅन्ड्रिय शेतीला मिळणारे प्रोत्साहन शेतकऱ्यांचे उत्पन्न वाढवण्यास आणि पर्यावरणाचे रक्षण करण्यास मदत करत आहे. योग्य अंमलबजावणी आणि तंत्रज्ञानाच्या जोरावर ही धोरणे २०४७ पर्यंत भारताला अन्नदाता ते प्रमुख निर्यातदार बनवण्याचे ध्येय साध्य करतील.

❖ कृषी क्षेत्रासमोरील आव्हाने

१. हवामान बदल

भारतीय कृषी क्षेत्रासमोर हवामान बदल हे सर्वात गंभीर आणि दीर्घकालीन आव्हान असून, तापमानवाढ, अनियमित पर्जन्यमान आणि अतिवृष्टीमुळे उत्पादनात मोठी अनिश्चितता निर्माण होत आहे., याचा सर्वाधिक फटका अल्पभूधारक आणि कोरडवाहू शेतकऱ्यांना बसत आहे, मातीची सुपीकता कमी होणे आणि जलस्रोतांवर ताण येणे यांसारख्या समस्यांमुळे उत्पादन खर्चात वाढ होत आहे-, पीकविविधीकरण आणि आधुनिक सिंचन पद्धतींचा अवलंब करणे अनिवार्य आहे, अचूक हवामान अंदाज प्रणाली आणि पीक विमा योजनांची प्रभावी अंमलबजावणी करणे गरजेचे, तर २०४७ पर्यंत देशाच्या अन्नसुरक्षेवर आणि शेतकऱ्यांच्या उत्पन्नावर याचे गंभीर परिणाम होऊ शकतात.

२. लहान व अल्पभूधारक शेतकरी

भारतातील कृषी क्षेत्रात लहान आणि अल्पभूधारक शेतकऱ्यांची संख्या खूप जास्त आहे, आणि हा घटक शेतीसमोरील एक मोठे आव्हान ठरतो. भारतात सुमारे 85% शेतकरी 2 हेक्टराहून कमी जमिनीवर शेती करतात, ज्यामुळे उत्पादनाचे प्रमाण मर्यादित राहते, आधुनिक तंत्रज्ञानाचा वापर कठीण होतो आणि उत्पन्न अस्थिर होते.

लहान भूधारक शेतकरी अनेक कारणांनी संघर्ष करतात:

- उपयुक्त तंत्रज्ञान व मशीनरीचा अभाव – आधुनिक सिंचन, ट्रॅक्टर, ड्रोन किंवा अचूक शेती (Precision Farming) यांचा वापर लहान शेतकऱ्यांकडे फारसा होत नाही.
- बाजारात थेट प्रवेश नाही – कमी उत्पादनामुळे थेट बाजारपेठेत विक्री करणे कठीण होते, त्यामुळे मध्यस्थांवर अवलंबित्व वाढते.

- ऋण व आर्थिक संकट – कमी उत्पन्न व उच्च उत्पादन खर्चांमुळे शेतकऱ्यांना कर्ज घेणे भाग पडते आणि कर्जबाजारीपणाचा धोका असतो.
- उत्पादनाचे प्रमाण आणि दर्जा – लहान जमिनीत एकाच वेळी उच्च उत्पादन घेणे कठीण असते, परिणामी उत्पादनाचे प्रमाण आणि दर्जा दोन्ही प्रभावित होतात.
- यामुळे शेतकऱ्यांचे आर्थिक आणि सामाजिक स्थैर्य धोक्यात येते, आणि शेती आधुनिक, स्पर्धात्मक व निर्यातक्षम होण्याच्या प्रक्रियेत अडथळा निर्माण होतो.

३. बाजारपेठेतील अस्थिरता

भारतीय कृषी क्षेत्रासमोरील तिसरे महत्वाचे आव्हान म्हणजे बाजारपेठेतील अस्थिरता. कृषी उत्पादनावर पिकाचे दर, मागणी-विक्रीचे चढउतार, साठवणूक आणि वाहतूक सुविधा यांचा थेट परिणाम होतो. अनेक वेळा शेतकऱ्यांनी उत्पादन पूर्ण केले तरी बाजारभाव अपेक्षेपेक्षा खूप कमी असतो, ज्यामुळे उत्पन्न टिकवून ठेवणे कठीण होते.

बाजारपेठेतील अस्थिरतेची मुख्य कारणे:

- किमतींची अनिश्चितता – धान्य, कापूस, साखर, फळे आणि भाजीपाला यांचे भाव वारंवार बदलतात.
- साठवणूक व वाहतूक सुविधांचा अभाव – पिकांचे नुकसान टाळण्यासाठी योग्य वेळेत आणि सुरक्षित पद्धतीने विक्री करणे अवघड होते.
- मध्यस्थांवर अवलंबित्व – शेतकऱ्यांना थेट ग्राहकांपर्यंत पोहोचता न आल्यामुळे मूल्यनिर्धारणावर नियंत्रण नसते.
- जागतिक बाजारपेठेतील अस्थिरता – निर्यातीवर अवलंबित्व वाढल्यास जागतिक भावातील चढउतार थेट शेतकऱ्यांच्या उत्पन्नावर परिणाम करतात.

उपाय आणि संधी:

- केंद्र व राज्य सरकारच्या धोरणांद्वारे मूल्यसुरक्षा – MSP (Minimum Support Price) आणि सहकारी बाजारपेठा.
- साठवणूक व कोल्ड चेन सुविधा विकसित करणे – पिकांचे नाश टाळून बाजारात स्थिरता आणता येते.
- डिजिटल व ई-कॉमर्स प्लॅटफॉर्म – शेतकऱ्यांना थेट ग्राहकांशी जोडून दर नियंत्रणात ठेवणे शक्य.
- भाव अंदाज प्रणाली व कृषी विमा योजना – बाजारभावातील चढउतार आणि नैसर्गिक आपत्तींपासून शेतकऱ्यांचे संरक्षण.

❖ उपाय

१. तंत्रज्ञानाचे लोकशाहीकरण

आधुनिक तंत्रज्ञान (AI, ड्रोन, IOT) केवळ मोठ्या शेतकऱ्यांपुरते मर्यादित न राहता ते अल्पभूधारक शेतकऱ्यांना परवडणाऱ्या दरात उपलब्ध करून देण्यासाठी 'कस्टम हायरिंग सेंटर्स' (Custom Hiring Centers) वाढवावेत.

- 'डिजिटल कृषी मिशन' अंतर्गत प्रत्येक शेतकऱ्याला त्याच्या जमिनीचे डिजिटल कार्ड आणि हवामानाचे अचूक पूर्वानुमान मिळण्याची व्यवस्था स्थानिक भाषेत व्हावी.

२. मूल्यवर्धन आणि प्रक्रिया उद्योगांना प्रोत्साहन:

- ग्रामीण भागात 'मिनी फूड पार्क्स' ची स्थापना करावी, जेणेकरून शेतकऱ्याला त्याचा माल कड्या स्वरूपात न विकता प्रक्रिया करून विकता येईल. यामुळे काढणीपश्चात होणारे (Post-harvest) नुकसान १५-२०% ने कमी होईल.
- फळे, भाजीपाला आणि दुग्धजन्य पदार्थांसाठी 'कोल्ड चेन लॉजिस्टिक्स'मध्ये खासगी गुंतवणुकीला विशेष सवलती द्याव्यात.

३. शेतकरी उत्पादक संघटनांचे (FPOs) सक्षमीकरण:

- लहान शेतकऱ्यांची सामूहिक शक्ती वाढवण्यासाठी FPOs ना थेट जागतिक बाजारपेठेशी जोडले जावे. त्यांना निर्यातीसाठी लागणारे परवाने आणि गुणवत्तेचे निकष (Quality Standards) पूर्ण करण्यासाठी तांत्रिक मार्गदर्शन उपलब्ध करून द्यावे.

४. हवामान-संवेदनशील शेतीचा (Climate Resilient Farming) अवलंब:

- हवामान बदलाचा धोका लक्षात घेता, कमी पाण्यात आणि अधिक तापमानात तग धरतील अशा 'बियाण्यांच्या वाणांचे' संशोधन आणि प्रसार करावा.
- ठिबक आणि तुषार सिंचनासाठी (Micro Irrigation) १००% अनुदानाचे धोरण राबवून पाण्याचा कार्यक्षम वापर वाढवावा.

५. निर्याताभिमुख पायाभूत सुविधांचा विकास:

- जागतिक बाजारपेठेची मागणी लक्षात घेऊन उत्पादनांचे 'ब्रँडिंग' आणि 'पॅकेजिंग' जागतिक मानकांनुसार करण्यासाठी विशेष प्रशिक्षण केंद्रे उभारली जावीत.
- कृषी निर्यातीसाठी रेल्वे आणि बंदरांवर (Ports) स्वतंत्र 'फास्ट ट्रॅक' कॉरिडोर विकसित करावेत.

६. कृषी वित्ताचे सुलभीकरण (Simplified Agri-Credit):

- शेतकऱ्यांना संस्थात्मक कर्जपुरवठा सहज व्हावा यासाठी डिजिटल पतपुरवठा प्रणाली (Digital Credit) राबवावी, जेणेकरून सावकारी पाशातून त्यांची सुटका होईल.

या शिफारसींची अंमलबजावणी केवळ सरकारी पातळीवर न होता, त्यामध्ये सार्वजनिक-खासगी भागीदारी (PPP Model) असणे आवश्यक आहे. जर आपण उत्पादन खर्चात कपात आणि मूल्यवर्धनात वाढ या सूत्राचा अवलंब केला, तर २०४७ पर्यंत भारतीय शेतकरी हा केवळ 'अन्नदाता' न राहता एक समृद्ध 'कृषी उद्योजक' म्हणून नावारूपास येईल.

निष्कर्ष -

प्रस्तुत संशोधनाअंती असे स्पष्ट होते की, भारतीय कृषी क्षेत्राचा प्रवास अन्नदाता ते निर्यातदार असा रूपांतरशील आणि आशादायी आहे. स्वातंत्र्यानंतर अन्नसुरक्षेच्या आवश्यकतेपासून सुरू झालेला हा प्रवास

आता निर्यातक्षम, तंत्रज्ञानाधारित आणि मूल्यवर्धित शेतीच्या दिशेने वाटचाल करत आहे. भारतीय कृषी क्षेत्र एका ऐतिहासिक बदलाच्या उंबरठ्यावर उभे आहे. स्वातंत्र्योत्तर काळात अन्नधान्याच्या टंचाईवर मात करून 'अन्नदाता' म्हणून स्वतःला सिद्ध केल्यानंतर, आता २०४७ च्या विकसित भारताच्या संकल्पनेत भारत एक जागतिक 'निर्यातदार' (Global Food Hub) म्हणून उदयास येत आहे. संशोधनादरम्यान केलेल्या विश्लेषणानुसार, केवळ उत्पादकता वाढवणे हे आता उद्दिष्ट नसून, ती उत्पादकता जागतिक बाजारपेठेतील गुणवत्तेशी जोडणे ही काळाची गरज आहे.

अभ्यासातून असे निदर्शनास आले की, डिजिटल शेती, AI आणि ड्रोन तंत्रज्ञान यांसारख्या आधुनिक साधनांमुळे उत्पादनात शाश्वतता येणे शक्य आहे. तसेच, मूल्यवर्धन आणि अन्न प्रक्रिया उद्योगांचा विस्तार हा ग्रामीण अर्थव्यवस्थेचा कायापालट करणारा ठरू शकतो. मात्र, हवामान बदलाची अनिश्चितता आणि अल्पभूधारक शेतकऱ्यांची मर्यादित आर्थिक क्षमता ही मोठी आव्हाने आजही कायम आहेत. या आव्हानांवर मात करण्यासाठी शेतकरी उत्पादक संघटना (FPOs) आणि सरकारी धोरणांची प्रभावी अंमलबजावणी ही महत्त्वाची कडी ठरेल. कृषी क्षेत्रातील संधी – तंत्रज्ञानाचा वापर, मूल्यवर्धन व अन्न प्रक्रिया उद्योग, सेंद्रिय आणि नैसर्गिक शेती – यांचा प्रभावी लाभ घेतल्यास शेतकऱ्यांचे उत्पन्न वाढेल, उत्पादनाची गुणवत्ता सुधारेल आणि भारत जागतिक कृषी व्यापारात अग्रगण्य स्थान मिळवू शकेल. मात्र हवामान बदल, लहान व अल्पभूधारक शेतकरी, बाजारपेठेतील अस्थिरता यांसारखी आव्हाने यशस्वी विकासाच्या मार्गात अडथळा निर्माण करू शकतात. सरकारी धोरणे, सुधारणा आणि शाश्वत कृषी पद्धतींचा प्रभावी अंमल, शेतकऱ्यांना सशक्त करणे आणि तंत्रज्ञानाचा व्यापक वापर यांमुळे या आव्हानांवर मात करता येऊ शकते.

शेवटी, २०४७ पर्यंत भारतीय कृषी क्षेत्राचे यश हे तंत्रज्ञान आणि पारंपरिक शेती यांचा सुवर्णमध्य साधण्यावर अवलंबून आहे. शेतीकडे केवळ उदरनिर्वाहाचे साधन म्हणून न पाहता, एक 'व्यावसायिक संधी' म्हणून पाहिल्यास भारताची कृषी अर्थव्यवस्था अधिक स्पर्धात्मक होईल. शाश्वत शेती पद्धती आणि निर्याताभिमुख धोरणांच्या जोरावर, भारत निश्चितपणे जगाचे 'अन्न बास्केट' बनेल, ज्याचा फायदा केवळ अर्थव्यवस्थेलाच नाही, तर देशातील शेवटच्या शेतकऱ्यालाही होईल. एकंदरीत, भारतीय कृषी क्षेत्र 2047 पर्यंत आर्थिक स्थिरता, रोजगारनिर्मिती आणि निर्यातक्षमता या क्षेत्रांत महत्त्वपूर्ण योगदान देणारा मुख्य कणा बनणार आहे. यामुळे भारत केवळ अन्नदाता राहणार नाही, तर जागतिक बाजारपेठेत एक प्रतिस्पर्धी आणि अग्रगण्य कृषी निर्यातदार देश म्हणून उभा राहील.

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जागतिक उत्पादन केंद्र म्हणून भारताचा उदय : थेट परकीय गुंतवणुकीचा प्रभाव आणि धोरणात्मक रोडमॅप २०४७

नम्रता आनंदराव निकम

सहाय्यक प्राध्यापक, कमला कॉलेज कोल्हापूर

गोषवारा

भारतीय अर्थव्यवस्थेने स्वातंत्र्याच्या १०० व्या वर्षापर्यंत (२०४७) 'विकसित भारत' होण्याचे महत्वाकांक्षी ध्येय निश्चित केले आहे. या ध्येयपूर्तीसाठी उत्पादन क्षेत्र (Manufacturing Sector) हा कणा ठरणार असून, भारताला जागतिक उत्पादन केंद्र (Global Manufacturing Hub) म्हणून प्रस्थापित करणे अनिवार्य आहे. प्रस्तुत संशोधन लेख 'थेट परकीय गुंतवणूक' (FDI) या घटकावर लक्ष केंद्रित करून, भारताच्या औद्योगिक प्रवासाचे विश्लेषण करतो.

या लेखाचा मुख्य उद्देश, उत्पादन क्षेत्रातील उत्पादकता वाढवण्यासाठी आणि जागतिक पुरवठा साखळीत (Global Supply Chain) भारताचे स्थान बळकट करण्यासाठी FDI कशा प्रकारे उत्प्रेरक (Catalyst) म्हणून कार्य करते, याचा अभ्यास करणे हा आहे. संशोधनात असे अधोरेखित केले आहे की, केवळ भांडवलच नव्हे तर प्रगत तंत्रज्ञान, जागतिक व्यवस्थापकीय कौशल्ये आणि जागतिक बाजारपेठेतील सुलभता यांसाठी FDI अत्यंत कळीची भूमिका बजावत आहे. 'मेक इन इंडिया', 'PLI योजना' आणि 'ईझ ऑफ डुइंग बिझनेस' (Ease of Doing Business) यांसारख्या सरकारी उपक्रमांमुळे इलेक्ट्रॉनिक्स, ऑटोमोबाईल, सेमीकंडक्टर आणि रिन्युएबल एनर्जी या क्षेत्रांत गुंतवणुकीच्या मोठ्या संधी उपलब्ध झाल्या आहेत. चीनला पर्याय म्हणून 'चीन प्लस वन' (China+1) धोरणाचा अवलंब करणाऱ्या जागतिक कंपन्यांसाठी भारत ही एक आकर्षक बाजारपेठ ठरत आहे.

तथापि, २०४७ पर्यंत जागतिक केंद्र बनण्याच्या मार्गावर अनेक आव्हाने देखील आहेत. यामध्ये प्रामुख्याने पायाभूत सुविधांचा (Infrastructure) मर्यादित विकास, जटिल कायदेशीर प्रक्रिया, जमिनीचे अधिग्रहण, कामगार कायद्यांमधील सुधारणांची संथ गती आणि संशोधनावर (R & D) होणारा कमी खर्च यांचा समावेश होतो. याव्यतिरिक्त, जागतिक स्तरावर बदलणारी भू-राजकीय समीकरणे आणि स्पर्धात्मक व्यापार धोरणे भारतासमोर मोठी आव्हाने उभी करतात.

निष्कर्षतः भारताला २०२७ पर्यंत ५ ट्रिलियन आणि २०४७ पर्यंत ३० ट्रिलियन डॉलर्सची अर्थव्यवस्था बनवण्यासाठी धोरणात्मक FDI आकर्षित करणे आवश्यक आहे. शाश्वत विकास आणि तांत्रिक स्वावलंबनासाठी परकीय गुंतवणुकीचा वापर करून देशांतर्गत उद्योगांना जागतिक स्तरावर स्पर्धाक्षम बनवणे, हाच 'विकसित भारत २०४७' चा मार्ग असेल.

सूची शब्द - थेट परकीय गुंतवणूक (FDI), विकसित भारत २०४७, जागतिक उत्पादन केंद्र, मेक इन इंडिया, PLI योजना, चीन प्लस वन धोरण, ग्रीनफिल्ड गुंतवणूक, लॉजिस्टिक कार्यक्षमता.

प्रस्तावना :

जागतिकीकरण, तंत्रज्ञानातील वेगवान क्रांती आणि आंतरराष्ट्रीय व्यापारातील बदलत्या प्रवाहांच्या पार्श्वभूमीवर, आज प्रत्येक राष्ट्र आपल्या आर्थिक भविष्यासाठी दीर्घकालीन आणि शाश्वत धोरणे आखत आहे. भारतदेखील या जागतिक स्पर्धेत मागे नसून, स्वातंत्र्याच्या शताब्दीनिमित्त "विकसित भारत २०४७" ही संकल्पना मांडून एक सर्वसमावेशक, प्रगत आणि उच्च उत्पन्न असलेली अर्थव्यवस्था घडविण्याचे महत्वाकांक्षी ध्येय देशाने निश्चित केले आहे. हे ध्येय गाठण्यासाठी भारताला केवळ सेवा क्षेत्रावर (Service Sector) अवलंबून न राहता, स्वतःची ओळख एक सशक्त 'जागतिक उत्पादन केंद्र' (Global Manufacturing Hub) म्हणून निर्माण करणे ही काळाची गरज बनली आहे.

उत्पादन क्षेत्र हे केवळ आर्थिक वृद्धीचे साधन नसून ते मोठ्या प्रमाणावरील रोजगारनिर्मिती, निर्यातवाढ, तंत्रज्ञान हस्तांतरण आणि औद्योगिक सक्षमीकरणाचा मुख्य आधार आहे. भारताकडे विपुल तरुण मनुष्यबळ, विशाल देशांतर्गत बाजारपेठ आणि वेगाने सुधारणाऱ्या पायाभूत सुविधा यांसारखी जमेची बाजू असली, तरी सकल देशांतर्गत उत्पादनातील (GDP) उत्पादन क्षेत्राचा वाटा आजही अपेक्षेपेक्षा कमी आहे. या क्षेत्राला अपेक्षित गती देण्यासाठी आणि जागतिक मानके गाठण्यासाठी थेट परकीय गुंतवणूक (Foreign Direct Investment – FDI) हा एक अत्यंत प्रभावी आणि अनिवार्य घटक ठरत आहे.

FDI मुळे देशात केवळ विदेशी भांडवलाचा प्रवाहच येत नाही, तर त्यासोबत प्रगत तंत्रज्ञान, जागतिक दर्जाची व्यवस्थापन कौशल्ये, नाविन्यपूर्ण उत्पादन प्रक्रिया आणि जागतिक पुरवठा साखळीशी (Global Supply Chain) थेट जोडले जाण्याची संधी प्राप्त होते. 'मेक इन इंडिया' (Make in India) आणि 'उत्पादन संलग्न प्रोत्साहन' (PLI) यांसारख्या धोरणात्मक उपक्रमांमुळे भारत गुंतवणूकदारांसाठी एक पसंतीचे ठिकाण बनत आहे. असे असूनही, धोरणात्मक गुंतागुंत, कौशल्य तफावत आणि बदलती भू-राजकीय समीकरणे यांसारखी आव्हाने आजही कायम आहेत.

प्रस्तुत संशोधन लेख, 'विकसित भारत २०४७' या बृहद आराखड्याच्या चौकटीत राहून, भारताला जागतिक उत्पादन केंद्र बनविण्यात FDI ची नेमकी भूमिका काय आहे, त्यातून निर्माण होणाऱ्या संधी कोणत्या आणि समोर उभी असलेली आव्हाने कोणती, याचे सखोल विश्लेषण करण्याचा प्रयत्न करतो.

साहित्य पुनरावलोकन

१. शर्मा, मेघा (२०२५) — विकसित भारत २०४७ साठी थेट परकीय गुंतवणूक (FDI) आणि पायाभूत सुविधांचा विकास: एक सहसंबंध विश्लेषण. मेघा शर्मा (२०२५) यांनी भारताच्या २०४७ च्या संकल्पनेच्या संदर्भात पायाभूत सुविधा आणि थेट परकीय गुंतवणूक (FDI) यांच्यातील महत्त्वपूर्ण सहसंबंधाचा अभ्यास केला आहे. ज्या प्रदेशांमध्ये मजबूत डिजिटल पायाभूत सुविधा आणि प्रगत वाहतूक व्यवस्था आहे, तिथे परकीय भांडवलाचा ओघ लक्षणीयरीत्या जास्त असतो, असे या संशोधनातून दिसून येते. लेखिकेने यावर भर दिला आहे की, FDI हा केवळ भांडवलाचा स्रोत नसून दीर्घकालीन औद्योगिक वाढीसाठी आवश्यक असलेले प्रगत

आणि शाश्वत तंत्रज्ञान हस्तांतरित करण्याचे एक माध्यम आहे. भारताला उच्च-उत्पन्न अर्थव्यवस्था बनण्यासाठी प्रादेशिक पायाभूत सुविधांमधील दरी सांघणे अत्यंत आवश्यक असल्याचे विश्लेषण या लेखात केले आहे.

२. शर्मा आणि कश्यप (२०२५) — भारतातील GST च्या वित्तीय प्रभावाचे मोजमाप: करदाता विस्तार आणि महसूल जमा करण्यातील आंतरराज्य कल. शर्मा आणि कश्यप (२०२५) यांनी भारतातील विविध राज्यांमध्ये जीएसटी (GST) प्रणालीच्या वित्तीय परिणामांचा शोध घेतला आहे. जीएसटीच्या अंमलबजावणीमुळे कराचा आधार कसा रुंदावला आणि महसूल जमा करण्यावर त्याचा काय परिणाम झाला, यावर त्यांनी लक्ष केंद्रित केले आहे. हा अभ्यास दर्शवितो की, जीएसटीने आंतरराज्य करदात्यांचा सहभाग वाढवण्यात आणि महसूल संकलनात यशस्वीरित्या वाढ केली आहे, ज्याचा वापर सार्वजनिक सोयी-सुविधांसाठी केला जाऊ शकतो. मात्र, समानतेच्या दृष्टिकोनातून विचार करता, जीएसटीचे एकसमान स्वरूप कमी उत्पन्न गटांवर प्रतिकूल परिणाम (Regressive impact) करू शकते, कारण ते व्यक्तीच्या 'कर देण्याच्या क्षमतेनुसार' बदलत नाही. लेखकांचे आर्थिक विश्लेषण महसूल कार्यक्षमता आणि सामाजिक न्याय यांमधील तफावत अधोरेखित करते, जे कलम १४ च्या समानतेच्या उद्दिष्टांचे मूल्यमापन करताना महत्त्वपूर्ण ठरते.

३. गुप्ता आणि शर्मा (२०२२) — डिजिटल रूपांतरण आणि FDI: भारतातील नाविन्यपूर्ण उद्योजकतेला चालना. गुप्ता आणि शर्मा (२०२२) यांनी माहिती तंत्रज्ञान (IT) आणि कृत्रिम बुद्धिमत्ता (AI) क्षेत्रातील परकीय गुंतवणुकीने भारतीय बाजारपेठेत डिजिटल क्रांती कशी घडवून आणली, याचे विश्लेषण केले आहे. हे संशोधन अधोरेखित करते की, तंत्रज्ञान-प्रधान क्षेत्रांमधील FDI मुळे नाविन्यपूर्ण उद्योजकतेची एक नवीन लाट निर्माण झाली आहे, ज्यामुळे अर्थव्यवस्था तांत्रिक स्वावलंबनाकडे सरकत आहे. 'विकसित भारत २०४७' साठी जागतिक कौशल्याच्या पाठबळासह तांत्रिक सार्वभौमत्व मिळवणे ही जागतिक स्पर्धेत टिकून राहण्यासाठी एक अनिवार्य अट असल्याचे या अभ्यासात म्हटले आहे.

४. खान, मोहम्मद झैन आणि मसूद, राणा झेहरा (२०२२) — विकासाचे इंजिन म्हणून FDI: धोरणात्मक सुसंगततेतील आव्हाने. मोहम्मद झैन खान आणि राणा झेहरा मसूद (२०२२) यांनी थेट परकीय गुंतवणुकीला (FDI) भारतीय अर्थव्यवस्थेच्या वाढीचे 'प्रमुख इंजिन' म्हटले आहे, विशेषतः देशांतर्गत भांडवलाची कमतरता भरून काढण्यासाठी त्याचे महत्त्व अनन्यसाधारण आहे. त्यांचा अभ्यास परकीय माध्यमांतून होणाऱ्या भांडवल निर्मितीच्या मॅक्रो-इकॉनॉमिक फायद्यांवर लक्ष केंद्रित करतो. तथापि, लेखकांनी 'धोरणात्मक सुसंगतता' (Policy Consistency) हे एक मोठे आव्हान असल्याचे ओळखले असून, वारंवार होणारे नियामक बदल दीर्घकालीन गुंतवणूकदारांना परावृत्त करू शकतात, असे नमूद केले आहे. भारताला औद्योगिक सक्षमीकरणासाठी FDI चा पूर्ण लाभ घ्यायचा असेल, तर स्थिर आणि अंदाज वर्तवता येण्याजोगे कायदेशीर वातावरण असणे अनिवार्य आहे.

संशोधनाची उदिष्ट्ये

१ . भारतीय उत्पादन क्षेत्राला आधुनिक आणि स्पर्धात्मक बनवण्यातील थेट परकीय गुंतवणुकीच्या (FDI) भूमिकेचे विश्लेषण करणे.

२. 'मेक इन इंडिया' आणि 'PLI' यांसारख्या शासकीय धोरणांचा परकीय गुंतवणूक आकर्षित करण्यावरील प्रभाव तपासणे.
३. 'विकसित भारत २०४७' अंतर्गत उत्पादन क्षेत्रातील FDI मुळे निर्माण होणाऱ्या विविध संधींचे मूल्यमापन करणे.
४. भारताला जागतिक उत्पादन केंद्र बनवण्यासाठी FDI धोरणात आवश्यक असणाऱ्या सुधारणा व उपाययोजना सुचवणे.

विश्लेषण

भारतीय अर्थव्यवस्थेच्या परिवर्तनात थेट परकीय गुंतवणूक (FDI) केवळ एक वित्तीय साधन नसून ते प्रगत तंत्रज्ञान, जागतिक व्यवस्थापन कौशल्ये आणि बाजारपेठेच्या विस्ताराचे वाहक आहे. 'भांडवल तुटवडा सिद्धांतानुसार' (Capital Gap Theory), भारतासारख्या देशात जेथे घरगुती बचत औद्योगिक गरजा पूर्ण करण्यास पुरेशी नाही, तिथे FDI हा गुंतवणुकीचा मुख्य आधार ठरतो.

विश्लेषणातून असे स्पष्ट होते की, १९९१ नंतर भारताने केवळ भांडवल मिळवण्यावर भर दिला होता, परंतु आता 'तंत्रज्ञान हस्तांतरण सिद्धांत' (Technology Transfer Theory) अधिक केंद्रस्थानी आहे. भारताचे 'Location Advantage' (OLI Paradigm नुसार) हे स्वस्त मनुष्यबळ आणि विशाल बाजारपेठ यावर आधारित होते, परंतु २०४७ च्या उद्दिष्टासाठी आता आपण 'Ownership Advantage' कडे वळत आहोत.

भारतातील FDI प्रवाहाचा सांख्यिकीय आढावा (२०१४-२०२६)

गेल्या दशकात भारताने FDI आकर्षित करण्यात ऐतिहासिक कामगिरी केली आहे. केंद्र सरकारच्या 'मेक इन इंडिया' उपक्रमानंतर मॅन्युफॅक्चरिंग क्षेत्रातील गुंतवणुकीत मोठी झेप घेतली आहे.

वर्ष	एकूण FDI ओघ (अब्ज डॉलर)	मॅन्युफॅक्चरिंग क्षेत्राचा वाटा (%)	मुख्य गुंतवणूकदार देश
२०१४-१५	\$४५.१५	~१५%	सिंगापूर, मॉरिशस
२०२१-२२	\$८४.८३	~१८%	अमेरिका, नेदरलँड
२०२४-२५ (अंदाजित)	\$८६.५०	२४%	जपान, संयुक्त अरब अमिराती
२०२६ (प्रक्षेपित)	\$९०.०+	२७%+	तैवान, दक्षिण कोरिया

Compiled by the author based on data from DPIIT FDI Factsheets (2015-2024),
RBI Annual Reports, and NITI Aayog's Vision 2047 Framework.

वरील डेटा असे दर्शवतो की, भारताचा कल आता सेवा क्षेत्राकडून उत्पादन क्षेत्राकडे सरकत आहे. विशेषतः २०२४ नंतर 'ग्रीनफिल्ड' गुंतवणुकीचे प्रमाण वाढणे हे रोजगार निर्मितीसाठी शुभसंकेत आहेत.

गुंतवणूकीच्या स्वरूपाचे विश्लेषण : ग्रीनफिल्ड विरुद्ध ब्राऊनफिल्ड

- ग्रीनफिल्ड गुंतवणूक (Greenfield): विश्लेषण असे दर्शवते की, इलेक्ट्रॉनिक्स आणि सेमीकंडक्टर क्षेत्रात जवळपास ८५% गुंतवणूक ही ग्रीनफिल्ड स्वरूपाची आहे. फॉक्सकॉन आणि टाटा-पीएसी यांच्यातील करार हे याचे उत्तम उदाहरण आहे. यामुळे नवीन पायाभूत सुविधा निर्माण होतात.
- ब्राऊनफिल्ड गुंतवणूक (Brownfield): औषधनिर्माण (Pharma) क्षेत्रात ब्राऊनफिल्ड गुंतवणूकीचे प्रमाण जास्त आहे. जेव्हा परकीय कंपन्या भारतीय कंपन्यांचे अधिग्रहण करतात, तेव्हा तंत्रज्ञान सुधारते, परंतु प्रत्यक्ष नवीन रोजगार निर्मितीचा वेग मंद असतो.

जागतिक उत्पादन केंद्र बनण्यासाठी भारताला 'Vertical FDI' (उभी गुंतवणूक) वाढवणे गरजेचे आहे, जेणेकरून भारत जागतिक पुरवठा साखळीचा (Global Supply Chain) अविभाज्य भाग बनेल.

१. ऑटोमोबाईल आणि ईव्ही क्रांती

ऑटोमोबाईल क्षेत्र भारताच्या औद्योगिक GDP मध्ये ७% पेक्षा जास्त वाटा उचलते. FDI मुळे हे क्षेत्र केवळ देशांतर्गत गरजा पूर्ण करत नसून एक 'एक्सपोर्ट हब' बनले आहे.

- FDI चा प्रभाव: जपान (Suzuki), दक्षिण कोरिया (Hyundai) आणि जर्मनी (Mercedes-Benz) यांसारख्या देशांतील गुंतवणूकीमुळे भारतात जागतिक दर्जाच्या उत्पादन प्रणाली (Lean Manufacturing) आल्या आहेत.
- ईव्ही (Electric Vehicles): केंद्र सरकारच्या FAME-II आणि PLI योजनांमुळे टेस्ला (Tesla) सारख्या कंपन्या भारतात येण्यास उत्सुक आहेत. सध्याचा ४०% मॅन्युफॅक्चरिंग FDI हा बॅटरी सेल मॅन्युफॅक्चरिंग (Giga-factories) कडे वळत आहे. यामुळे लिथियम-आयन बॅटरीसाठी असलेले चीनवरील अवलंबित्व कमी होऊन भारत 'नेट-झिरो' उत्सर्जनाकडे वाटचाल करत आहे.

२. संरक्षण उत्पादन

संरक्षण क्षेत्रात पूर्वी भारत जगातील सर्वात मोठा आयातदार होता, परंतु आता चित्र बदलत आहे.

- धोरणात्मक बदल: ७४% FDI स्वयंचलित मार्गाने (Automatic Route) उपलब्ध करून दिल्यामुळे Dassault Aviation, Lockheed Martin आणि BAE Systems यांसारख्या कंपन्यांनी भारतीय कंपन्यांसोबत (उदा. टाटा, रिलायन्स) हातमिळवणी केली आहे.
- निर्यात क्षमता: संरक्षण निर्यातीने २०२४ मध्ये ₹२१,००० कोटींचा टप्पा ओलांडला आहे. २०४७ पर्यंत भारत केवळ स्वयंपूर्ण न होता जगातील टॉप ५ संरक्षण निर्यातदारांपैकी एक होण्याचे उद्दिष्ट ठेवत आहे.

३. औषध निर्माण आणि API मधील स्वावलंबन

'जगाची फार्मसी' असूनही, भारत कच्च्या मालासाठी (Active Pharmaceutical Ingredients - API) ६०-७०% चीनवर अवलंबून होता.

- PLI आणि बल्क ड्रग पार्क्स: सरकारने ₹१५,००० कोटींच्या PLI योजनेद्वारे देशांतर्गत API उत्पादनाला चालना दिली आहे. विश्लेषणातून असे दिसते की, हाय-व्हॅल्यू फार्मास्युटिकल्समध्ये FDI मुळे 'बायोटेक्नॉलॉजी' आणि 'जीन थेरपी' सारख्या प्रगत क्षेत्रांत संशोधन सुरु झाले आहे. ३५% पर्यंत वाढलेले स्वावलंबन २०४७ पर्यंत ९०% वर नेण्याचे उद्दिष्ट आहे.
सेमीकंडक्टर आणि हाय-टेक मॅन्युफॅक्चरिंग

सेमीकंडक्टर हे कोणत्याही आधुनिक अर्थव्यवस्थेचे 'मॅडू' असतात.

- इंडिया सेमीकंडक्टर मिशन (ISM): \$१० अब्जांच्या इन्व्हेस्टिमेंटमुळे Micron आणि Tata-PSMC सारख्या मोठ्या प्रकल्पांना सुरुवात झाली आहे. हा उच्च-तंत्रज्ञान FDI भारताला जागतिक 'चिप' पुरवठा साखळीत एक महत्त्वाचा खेळाडू म्हणून प्रस्थापित करत आहे, जे २०४७ च्या डिजिटल अर्थव्यवस्थेसाठी पायाभूत आहे.

२०४७ चा रोडमॅप

२०४७ चा रोडमॅप हा केवळ आर्थिक आकड्यांचा खेळ नसून तो भारताच्या 'इंडस्ट्रियल रिनेसाँ' (Industrial Renaissance) चा आराखडा आहे.

चीन प्लस वन धोरण आणि भारताची रणनीती - जागतिक कंपन्या (Apple, Google, Samsung) आपला पुरवठा साखळी धोका (Supply Chain Risk) कमी करण्यासाठी चीनबाहेर पर्याय शोधत आहेत.

- तुलनात्मक फायदा: व्हिएतनाम किंवा थायलंडच्या तुलनेत भारताकडे 'स्केल' (Scale) आहे. भारताची १३५ कोटींची लोकसंख्या ही केवळ कामगार पुरवठा नाही, तर ती एक प्रचंड मोठी 'ग्राहक बाजारपेठ' (Internal Market) आहे. यामुळे गुंतवणूकदारांना भारतात उत्पादन करून भारतातच विकण्याची दुहेरी संधी मिळते.
- Location Advantage: भारताचे हिंदी महासागरातील धोरणात्मक स्थान हे युरोप, आफ्रिका आणि आग्नेय आशियाला जोडण्यासाठी सोयीचे आहे, ज्यामुळे भारत 'ग्लोबल लॉजिस्टिक हब' बनू शकतो.

विकसित भारत २०४७ च्या प्रवासात FDI हा एक 'मल्टिप्लायर इफेक्ट' (Multiplier Effect) निर्माण करणारा घटक आहे. संशोधनाचे विश्लेषण असे सुचवते की, भारताला आता केवळ 'कमी मजुरीचा देश' म्हणून ओळख मिळवून चालणार नाही, तर 'इनोव्हेशन आणि हाय-क्वालिटी मॅन्युफॅक्चरिंग' चा ब्रँड तयार करावा लागेल.

भारताने आता 'एसेम्बली' (Assembly) कडून 'डिझाइन आणि मॅन्युफॅक्चर' (Design & Manufacture) कडे वळण्यासाठी FDI धोरणात संशोधन आणि विकासासाठी (R & D) विशेष प्रोत्साहन दिले पाहिजे.

आव्हाने आणि अडथळांचे विश्लेषण

१. लॉजिस्टिक अकार्यक्षमता आणि पायाभूत सुविधांचा खर्च

उत्पादन क्षेत्राच्या स्पर्धात्मकतेमध्ये 'लॉजिस्टिक' हा सर्वात महत्त्वाचा घटक आहे.

- उच्च खर्च: भारतात लॉजिस्टिक खर्च GDP च्या सुमारे १३-१४% आहे, तर चीनमध्ये तो ९% आणि जर्मनी किंवा अमेरिकेसारख्या विकसित देशांत ८% आहे. हा जास्तीचा ५-६% खर्च भारतीय उत्पादनांना जागतिक बाजारपेठेत महाग बनवतो.
- पायाभूत त्रुटी: बंदरांवरील 'टर्न-अराउंड टाइम' (माल उतरवण्याचा आणि चढवण्याचा वेळ) अद्यापही आंतरराष्ट्रीय मानकांपेक्षा जास्त आहे. रेल्वे मालवाहतुकीचा दर जास्त असल्याने रस्ते वाहतुकीवर अति-अवलंबित्व आहे, ज्यामुळे खर्च आणि वेळ दोन्ही वाढतात.
- परिणाम: परकीय गुंतवणूकदार अशा देशांना प्राधान्य देतात जिथे कच्चा माल कारखान्यापर्यंत आणि तयार माल बंदरापर्यंत पोहोचवण्याचा खर्च किमान असेल.

२. कौशल्य तफावत आणि मानवी भांडवल

भारताकडे 'Demographic Dividend' (तरुण लोकसंख्या) असली तरी, त्यांच्या कौशल्याबाबत मोठी दरी आहे.

- शिक्षणाचा दर्जा: वार्षिक 'ASPIRE' अहवालानुसार, भारतातील सुमारे ९०% अभियांत्रिकी पदवीधर उत्पादन क्षेत्रातील आधुनिक कामांसाठी थेट पात्र नसतात. त्यांना पुन्हा प्रशिक्षित करावे लागते, ज्यामुळे कंपन्यांचा वेळ आणि पैसा खर्च होतो.
- Industry 4.0 चा अभाव: जागतिक उत्पादनात आता AI, रोबोटिक्स आणि डेटा ऑनॅलिटिक्सचा वापर होत आहे. भारतीय शिक्षण पद्धती अजूनही पारंपारिक सिद्धांतांवर आधारित आहे.
- संशोधन आणि विकास (R & D): भारताचा R&D वरील खर्च GDP च्या केवळ ०.७% आहे, जो चीन (२.४%) आणि अमेरिका (३.४%) यांच्या तुलनेत अत्यंत कमी आहे. यामुळे आपण केवळ 'Assembler' (जोडणी करणारे) उरतो, 'Innovator' (शोधक) बनत नाही.

३. धोरणात्मक अस्थिरता आणि नियमांची गुंतागुंत

परकीय गुंतवणूकदारांना सर्वात जास्त भीती 'अनिश्चिततेची' वाटते.

- जमीन संपादन: भारतात जमीन संपादन करणे ही सर्वात क्लिष्ट प्रक्रिया मानली जाते. अनेकदा राजकीय विरोध आणि न्यायालयीन प्रक्रियेमुळे मोठे FDI प्रकल्प (उदा. पोस्को किंवा फॉक्सकॉनचे काही प्रस्ताव) लांबणीवर पडतात किंवा रद्द होतात.
- कर रचना आणि पूर्वलक्षी कर (Retrospective Tax): भूतकाळातील व्होडाफोन किंवा केर्न एनर्जी सारख्या प्रकरणांमुळे जागतिक स्तरावर भारताच्या कर धोरणाबाबत साशंकता निर्माण झाली होती. जरी सरकारने यात सुधारणा केली असली तरी, 'GST' मधील वारंवार होणारे बदल गुंतवणूकदारांना गोंधळात टाकतात.
- कामगार कायदे: भारतात कामगार कायदे राज्यानुसार बदलतात. जरी केंद्र सरकारने ४ लेबर कोड्स (Labour Codes) प्रस्तावित केले असले तरी, त्यांची पूर्ण अंमलबजावणी अजून प्रलंबित आहे.

४. प्रशासकीय दप्तर दिरंगाई

'Ease of Doing Business' मध्ये भारताने प्रगती केली असली तरी, जमिनी स्तरावर (Ground Level) अजूनही 'सिंगल विंडो क्लिअरन्स' पूर्णपणे कार्यान्वित नाही.

- मंजूरीचा विलंब: पर्यावरण, वीज, पाणी आणि स्थानिक स्वराज्य संस्थांकडून मिळणाऱ्या परवानग्यांसाठी लागणारा वेळ हा परकीय गुंतवणूकदारांसाठी 'संधी खर्च' (Opportunity Cost) वाढवणारा ठरतो.

५. जागतिक स्पर्धेचे आव्हान

भारतासमोर केवळ चीनचेच आव्हान नाही, तर व्हिएतनाम, थायलंड आणि मेक्सिको यांसारख्या देशांचेही मोठे आव्हान आहे.

- व्हिएतनामचे यश: व्हिएतनाममध्ये 'Free Trade Agreements' (FTAs) चे जाळे अधिक मजबूत आहे आणि तिथे कामगार कायदे अधिक लवचिक आहेत. यामुळे अनेक 'Electronics' कंपन्या चीनमधून बाहेर पडताना भारताऐवजी व्हिएतनामला पसंती देत आहेत.
- डेटा विश्लेषण: २०२०-२३ दरम्यान चीनमधून बाहेर पडलेल्या उत्पादक कंपन्यांपैकी मोठ्या हिश्याने आशियाई देशांमध्ये व्हिएतनामची निवड केली, कारण तिथली नियामक प्रक्रिया भारतापेक्षा वेगवान आहे.

या आव्हानांचे विश्लेषण केल्यास असे दिसून येते की, भारताला २०४७ पर्यंत जागतिक केंद्र बनावयचे असेल तर केवळ 'धोरणे' (Policies) आखून चालणार नाही, तर त्यांची 'अंमलबजावणी' (Implementation) जागतिक वेगाने करावी लागेल. पायाभूत सुविधांमधील 'पीएम गतिशक्ती' आणि कौशल्यामधील 'नॅशनल स्किल क्वालिफिकेशन फ्रेमवर्क' यांसारख्या योजना या आव्हानांवर मात करण्यासाठी निर्णायक ठरतील.

भारताच्या FDI धोरणाने आता केवळ 'भांडवल' मिळवण्याच्या पलीकडे जाऊन 'गुणवत्ता' आणि 'शाश्वतता' यावर लक्ष केंद्रित करणे आवश्यक आहे.

धोरणात्मक शिफारसी आणि सुधारणा

१. 'नॅशनल सिंगल विंडो सिस्टम' (NSWS) चे बळकटीकरण

गुंतवणूकदारांसाठी सर्वात मोठे आव्हान विविध परवानग्यांचे असते.

- पूर्णतः डिजिटलायझेशन: केंद्र आणि राज्य सरकारच्या सर्व परवानग्या एकाच पोर्टलवर आणून 'कागदविरहित' प्रक्रिया राबवावी.
- वेळबद्ध मंजूरी (Deemed Approval): जर एखाद्या विभागाने निश्चित कालमर्यादित (उदा. ३० दिवस) प्रतिसाद दिला नाही, तर ती परवानगी 'मिळाली आहे' असे गृहीत धरले जावे. यामुळे लालफितीचा कारभार (Red Tapism) कमी होऊन 'Ease of Doing Business' मध्ये खऱ्या अर्थाने सुधारणा होईल.

२. FDI आणि MSME यांच्यात 'Backward Linkages' निर्माण करणे

परकीय गुंतवणुकीचा फायदा स्थानिक उद्योगांना होण्यासाठी धोरणात्मक जोडणी आवश्यक आहे.

- स्थानिक खरेदीचे निकष: परकीय कंपन्यांना (उदा. ऍपल किंवा सॅमसंग) त्यांच्या उत्पादनासाठी आवश्यक असलेले किमान २०-३०% सुटे भाग स्थानिक लघू व मध्यम उद्योगांकडून (MSMEs) खरेदी करण्यासाठी सवलती किंवा प्रोत्साहन द्यावे.
- तंत्रज्ञान अपग्रेडेशन फंड: परकीय कंपन्यांनी त्यांच्या भारतीय पुरवठादारांना (Vendors) आधुनिक तंत्रज्ञान शिकवण्यासाठी पुढाकार घेतल्यास, अशा कंपन्यांना अतिरिक्त कर सवलत मिळावी. यामुळे भारतातील MSME जागतिक मूल्य साखळीचा (Global Value Chain) भाग बनू शकतील.

३. संशोधन आणि विकासासाठी (R & D) विशेष प्रोत्साहन

भारत केवळ 'असेम्ब्ली हब' राहू नये यासाठी R & D वर भर देणे अनिवार्य आहे.

- पेटंट आधारित सवलती: ज्या कंपन्या भारतात संशोधन करून नवीन पेटंट नोंदणी करतील, त्यांना कॉर्पोरेट करामध्ये विशेष सवलत द्यावी.
- R&D क्लस्टर्स: बंगळूरु, पुणे आणि हैदराबाद यांसारख्या शहरांत 'ग्लोबल इनोव्हेशन हब्स' विकसित करून तिथे परकीय कंपन्यांना त्यांची जागतिक संशोधन केंद्रे उभारण्यासाठी पायाभूत सुविधा पुरवाव्यात. यामुळे 'Brain Drain' थांबून देशात उच्च-तंत्रज्ञानाचे वातावरण तयार होईल.

४. हरित गुंतवणूक आणि शाश्वत उत्पादन

२०४७ च्या विकसित भारताचे स्वप्न पर्यावरणाशी सुसंगत असणे आवश्यक आहे.

- कार्बन क्रेडिट्स: 'ग्रीन मॅन्युफॅक्चरिंग' किंवा शून्य-कार्बन उत्सर्जनावर आधारित प्रकल्पांना प्राधान्य (Priority Sector Lending) द्यावे.
- नूतनीकरणक्षम ऊर्जा: ज्या परकीय कंपन्या सौर किंवा हायड्रोजन ऊर्जेचा वापर करून उत्पादन करतील, त्यांच्यासाठी जमिनीची उपलब्धता आणि वीज दरामध्ये सवलत देणारे धोरण आखावे.

५. कामगार कायदे आणि कौशल्य विकास

- लवचिक श्रम धोरण: नवीन ४ लेबर कोड्सची तातडीने अंमलबजावणी करून कामगारांचे हित आणि उद्योगांची लवचिकता यांचा सुवर्णमध्य साधावा.
- FDI-Industry-Academia भागीदारी: परकीय कंपन्यांच्या सहकार्याने आयआयटी (IIT) आणि आयटीआय (ITI) मध्ये विशिष्ट कोर्सेस सुरू करावेत, जेणेकरून उद्योगांना लागणारे 'रेडी-टू-वर्क' मनुष्यबळ उपलब्ध होईल.

निष्कर्ष (Conclusion)

विकसित भारत २०४७' हे केवळ एक आर्थिक ध्येय नसून, ती भारताच्या जागतिक पुनरुत्थानाची एक व्यापक दृष्टी आहे. या प्रवासात थेट परकीय गुंतवणूक (FDI) हा केवळ भांडवलाचा स्रोत न राहता, भारतीय उत्पादन क्षेत्राला आधुनिक, स्पर्धात्मक आणि तंत्रज्ञानस्नेही बनवणारा सर्वात महत्त्वाचा घटक ठरला आहे.

- बदलते स्वरूप: भारताचा कल आता केवळ 'सेवा क्षेत्रा'कडून 'मॅन्युफॅक्चरिंग'कडे यशस्वीरीत्या वळत आहे. विशेषत: 'ग्रीनफिल्ड गुंतवणूक' आणि 'उभी FDI' (Vertical FDI) यामुळे भारत जागतिक पुरवठा साखळीचा अविभाज्य भाग बनत आहे.

- धोरणात्मक यश: 'मेक इन इंडिया' आणि 'PLI' योजनांमुळे गुंतवणूकदारांचा भारतावरील विश्वास वाढला आहे. इलेक्ट्रॉनिक्स आणि ऑटोमोबाईल क्षेत्रातील प्रगती हे याचे जिवंत उदाहरण आहे.
- चीन प्लस वन संधी: जागतिक भू-राजकीय परिस्थितीत भारत हा चीनला सर्वात सक्षम पर्याय म्हणून उदयाला आला आहे. भारताची विशाल अंतर्गत बाजारपेठ आणि लोकसंख्याशास्त्रीय लाभांश (Demographic Dividend) यामुळे आपण व्हिएतनाम आणि थायलंड सारख्या प्रतिस्पर्धीपेक्षा उजवे ठरत आहोत.
- आव्हानांवर मात: जरी लॉजिस्टिक खर्च आणि कौशल्य तफावत हे मोठे अडथळे असले, तरी 'पीएम गतिशक्ती' आणि नवीन शैक्षणिक धोरणासारख्या उपाययोजना यावर सकारात्मक प्रभाव टाकत आहेत.

थोडक्यात सांगायचे तर, २०४७ पर्यंत भारताला \$३० ट्रिलियनची अर्थव्यवस्था आणि जागतिक उत्पादन केंद्र बनवण्यासाठी आपल्याला 'Assembly' कडून 'Innovation' कडे जावे लागेल. केवळ 'भारतात बनवा' (Make in India) असे न म्हणता 'भारतात संशोधन आणि निर्मिती करा' (Research and Make in India) ही वृत्ती जोपासावी लागेल. जर आपण धोरणात्मक स्थिरता आणि शाश्वत उत्पादनावर (Green Manufacturing) लक्ष केंद्रित केले, तर आगामी दोन दशकांत भारत खऱ्या अर्थाने जगाचा 'कारखाना' आणि 'नवनिर्मितीचे केंद्र' म्हणून जागतिक पटलावर अधिराज्य गाजवेल.

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Role of Artificial Intelligence and Machine Learning in Achieving *Viksit Bharat 2047*

Ms. Dhanashri Mahadev Yadav

Assistant Professor (BCA)

Kamala college, Kolhapur

E-mail: dhanashri01082001@gmail.com

Abstract

The concept of **Viksit Bharat – Bharat 2047** reflects India's long-term goal of becoming a developed and self-reliant nation by the centenary year of its independence. Achieving this vision requires the effective use of modern technologies, especially **Artificial Intelligence (AI)** and **Machine Learning (ML)**, which are transforming how digital systems operate and how services are delivered. These technologies offer new ways to improve efficiency, accuracy, and innovation across various sectors that are essential for national development.

This research paper focuses on understanding how AI and ML can contribute to India's progress by supporting better planning and decision-making in key areas such as public administration, healthcare, education, agriculture, industrial development, and smart infrastructure. The study follows a conceptual and application-oriented approach that is suitable for undergraduate students, explaining how AI-based solutions can help overcome long-standing challenges like inefficient use of resources, limited access to quality services, shortage of skilled manpower, and unequal digital access.

The paper also discusses major government initiatives, including the **IndiaAI Mission**, **Digital India Programme**, and the **National Education Policy 2020**, which highlight India's efforts to build a strong and independent AI ecosystem. Along with the benefits, the study addresses important challenges such as data protection, ethical concerns, infrastructure limitations, and the growing demand for trained professionals. It emphasizes that responsible and inclusive use of AI is necessary to ensure balanced development. The paper concludes that with supportive policies, ethical practices, and continuous skill development, AI and ML can play a significant role in achieving the vision of **Viksit Bharat 2047** and strengthening India's position in the global digital landscape.

Introduction

India has a clear and long-term development vision known as **Viksit Bharat – Bharat 2047**, which aims to make the country developed, self-reliant, and inclusive by the year 2047, when India completes 100 years of independence. This vision focuses on economic growth, better living standards for citizens, and the effective use of technology to improve services in all sectors. In today's digital era, technology has become an important part of national development, and India is steadily adopting modern digital tools to support its progress.

One of the most important technologies shaping this change is **Artificial Intelligence (AI)** along with **Machine Learning (ML)**. These technologies help computers and systems perform tasks such as analyzing data, finding patterns, and supporting better decisions. AI allows machines to think and act in a smart way, while ML helps systems improve their performance by learning from data and past experience. Today, these technologies are commonly used in daily life, including online platforms, mobile applications, hospitals, and industrial systems.

In India, AI and ML are being used in many important areas such as government services, healthcare, education, agriculture, manufacturing, and smart city projects. These technologies help governments provide faster services, support doctors in diagnosis, assist students through personalized

learning, help farmers with weather and crop information, and improve industrial productivity. National programs such as **Digital India**, **IndiaAI Mission**, **Smart Cities Mission**, and the **National Education Policy 2020** show the government's strong focus on using digital and AI-based solutions for sustainable development.

At the same time, the growing use of AI and ML also creates certain challenges. Problems related to data safety, ethical use of technology, lack of digital infrastructure, and shortage of trained professionals need proper attention. Since India has a large and diverse population, it is important that these technologies are used carefully so that both urban and rural areas can benefit equally.

This research paper aims to understand how Artificial Intelligence and Machine Learning can support the vision of **Viksit Bharat – Bharat 2047**. It discusses the applications, advantages, and challenges of AI and ML in major sectors and explains how these technologies can help India achieve its long-term development goals. The study is written in a simple and clear manner to help undergraduate students understand the role of emerging technologies in nation building.

Objectives

The objectives of this research paper are listed below:

1. To explain the basic idea of **Artificial Intelligence and Machine Learning** in a clear and simple way.
2. To understand the vision of **Viksit Bharat – Bharat 2047** and study how technology supports India's long-term development plans.
3. To study the use of AI and ML in important sectors such as government services, healthcare, education, agriculture, industries, and smart infrastructure.
4. To understand how AI and ML help in improving work efficiency and support better decision-making in both public and private sectors.
5. To review major government programs and policies related to AI and digital development in India, including **Digital India**, **IndiaAI Mission**, and the **National Education Policy 2020**.
6. To study the advantages of AI and ML, such as increased productivity, innovation, and improved quality of services.
7. To identify the main problems and limitations in using AI and ML, including issues related to data safety, ethical concerns, lack of infrastructure, and shortage of trained professionals.
8. To highlight the need for using AI technologies in a responsible and inclusive manner so that people from all sections of society can benefit.
9. To provide a basic and easy understanding for undergraduate students on how modern technologies like AI and ML can support nation building.

AI & ML in Key Sectors for Bharat 2047

To achieve the goal of **Viksit Bharat – Bharat 2047**, technology will play a major role. Artificial Intelligence (AI) and Machine Learning (ML) are important technologies that help improve work speed, accuracy, and overall development. These technologies are already being used in many areas and their use will increase further by 2047.

Below is a brief explanation of how AI and ML support key sectors.

1. Government Services (E-Governance)

AI and ML help the government provide quick and transparent services.

- Chatbots answer public questions online

- Data analysis supports better decisions
- AI helps find fraud in schemes and taxes

Impact: Faster services and better trust between people and government.

2. Healthcare

AI and ML improve medical services and patient care.

- Help doctors detect diseases early
- Predict health risks and outbreaks
- Support online treatment for remote areas

Impact: Better healthcare access and early treatment for all.

3. Education

AI and ML make learning more effective and student-friendly.

- Learning content changes based on student needs
- Faster exam checking
- Extra support for weak students

Impact: Better learning quality and skill development.

4. Agriculture

AI and ML help farmers improve crop production.

- Weather and crop prediction
- Disease detection in plants
- Smart use of water

Impact: Higher yield and better income for farmers.

5. Industries and Manufacturing

AI and ML increase efficiency in industries.

- Predict machine problems
- Improve product quality
- Reduce waste and errors

Impact: Stronger industries and more job opportunities.

6. Smart Cities and Infrastructure

AI and ML support modern city development.

- Smart traffic control
- Energy saving systems
- Improved safety

Impact: Clean, safe, and well-managed cities.

Overall Importance for Bharat 2047

AI and ML will help India grow faster by improving services, reducing problems, and supporting balanced development. If used carefully and fairly, these technologies can help build a strong and developed Bharat by 2047.

Advantages of AI & ML in Achieving Bharat 2047

Artificial Intelligence (AI) and Machine Learning (ML) can play a major role in helping India achieve the goal of becoming a developed nation by 2047. Their advantages can be explained through the following five important points:

1. Better and Quicker Decision Making

AI and ML systems can study large amounts of information in a short time. This helps

governments, organizations, and businesses make more accurate decisions in areas like planning, public welfare schemes, healthcare services, and education systems.

2. Higher Work Efficiency and Lower Costs

AI helps automate routine and time-consuming tasks. This reduces manual effort and mistakes, increases work speed, and saves money in offices, industries, and service sectors.

3. Improved Public Service Delivery

With the help of AI, public services become faster and more transparent. Digital platforms, automated systems, and smart tools help citizens access services easily in areas such as governance, healthcare, education, and transport.

4. Growth That Reaches Everyone

AI and ML make it possible to extend services to rural and remote areas using digital technology. Farmers, students, and patients can receive guidance and support online, helping reduce the gap between urban and rural development.

5. Support for Innovation and Economic Development

AI encourages new ideas, startups, and modern technologies. It helps industries grow, creates new job opportunities, and improves India's position in the global market, supporting long-term economic growth.

Challenges Ahead in Using AI & ML for Bharat 2047

Artificial Intelligence (AI) and Machine Learning (ML) have the ability to support India's growth in many ways. However, to successfully achieve the goal of Bharat 2047, several difficulties need to be handled carefully.

1. Safety and Privacy of Data

AI systems depend on large amounts of data to work properly. Keeping personal and important information safe is a serious concern. If data protection measures are weak, there is a risk of data leaks and misuse.

2. Fair and Responsible Use of AI

AI systems should give correct and fair results. If the data used to train these systems is incomplete or biased, the results may also be unfair. Making sure that AI is used in a responsible and ethical way is an important challenge.

3. Limited Digital Facilities

In many villages and remote areas, internet access and digital tools are still not easily available. Without proper digital facilities, people in these areas may not benefit from AI-based services.

4. Lack of Trained Workforce

Using AI and ML effectively requires skilled people. At present, there is a shortage of trained professionals in fields related to AI, data handling, and system maintenance. More training programs and education are needed to solve this problem.

5. High Setup and Maintenance Cost

Building and running AI systems can be costly. Many small organizations and government departments may find it difficult to invest in such technologies due to limited financial resources.

Conclusion

The vision of **Viksit Bharat – Bharat 2047** aims to make India a developed and self-reliant nation. Artificial Intelligence (AI) and Machine Learning (ML) can support this goal by improving efficiency and making services faster and more reliable. These technologies play an important role in

sectors such as governance, healthcare, education, agriculture, and industry.

However, challenges like data security, ethical concerns, lack of skilled professionals, and high costs need to be managed carefully. With proper policies, responsible use, and skill development, AI and ML can help India move closer to achieving the goal of **Viksit Bharat – Bharat 2047**.

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Legal Reforms and Good Governance : Challenges and the Way Forward for Viksit Bharat @ 2047

Dr. Bhakti Sharad Bhosale

Assistant Professor in Law,

Bharati Vidyapeeth's, New Law College, Kolhapur.

E mail id – adv.bhaktiurane@gmail.com

Mob.No.9822107452

Abstract

The vision of Viksit Bharat @ 2047 emphasizes the necessity of thorough legislative changes and efficient systems of good governance to guarantee sustained and inclusive development as India nears its centennial of independence. In order to protect fundamental rights, promote socioeconomic development, and enhance democratic institutions, law and governance are essential. But obstacles like court hold-ups, antiquated legal systems, ineffective administration, corruption, and the digital gap still stand in the way of advancement. This essay explores the connection between effective governance and legal changes, highlights important issues with the Indian legal and governance system, and suggests tactical reform initiatives.

It makes the case that attaining the objectives of Viksit Bharat @ 2047 requires the implementation of laws that are focused on the needs of the people, judicial efficiency, open administration, technological integration, and increased legal awareness. The study comes to the conclusion that in order to create a developed, just, and resilient India, legislative reforms must be in line with constitutional values and good governance principles.

Keywords : Legal Reforms, Good Governance, Judiciary, Transparency, Digital Governance, Viksit Bharat 2047.

A) Introduction of the study: -

The ambitious national commitment to turn India into a developed, inclusive, equitable, and globally competitive nation is embodied in the country's goal of Viksit Bharat @ 2047, which falls on the centennial of its independence. This goal transcends economic metrics like GDP growth and industrial expansion. It includes sustainable development, democratic principles, institutional integrity, social fairness, and technical innovation.¹ A modern constitutional democracy is built on the foundation of effective governance and legal reforms, both of which are essential to realizing this ideal. State-citizen interactions, justice, public order, rights protection, and development are all significantly influenced by the law.²

Even the most ambitious development objectives can be derailed by weak institutions, antiquated legislation, and bad governance. Therefore, India's capacity to develop governance mechanisms and change its legal system in accordance with constitutional ideals and modern demands will be crucial to the success of Viksit Bharat @ 2047.

B) Research Objectives: -

In light of the national goal of Viksit Bharat @ 2047, the current study intends to investigate the relationship between legislative reforms and good governance in India. The following are the research objectives.

¹ Government of India, *Vision Viksit Bharat @ 2047* (2023)

².Granville Austin, *The Indian Constitution: Cornerstone of a Nation* (Oxford University Press, 1966).

1. To comprehend the idea, importance, and constitutional underpinnings of good governance in India.
2. To examine how legal reforms can improve accountability, governance, and the rule of law.
3. To determine the main obstacles to putting into practice successful legislative reforms, such as judicial delays, corruption, excessive regulation, and digital hazards.
4. To assess how well legislative reforms support inclusive governance, economic growth, and rights protection.

C) Research Problem: -

The strength of India's governance institutions and the efficiency of its legal system are critical to the country's ambition to realize the Viksit Bharat @ 2047 vision. Good governance is still hampered by a number of issues, including judicial delays, antiquated laws, complicated regulations, corruption, and new digital dangers, despite constitutional promises to justice, equality, and the rule of law.

Rapid socioeconomic and technical changes are frequently difficult for the current legal system to effectively address. Consequently, the discrepancy between the principles of government and the actual conditions on the ground continues to be a significant issue. Thus, the main research question of this study is: What obstacles need to be overcome in order to realize the objectives of Viksit Bharat @ 2047, and how much will legal reforms help ensure good governance in India?

D) Research Hypothesis: -

A hypothesis provides a tentative assumption that the study attempts to examine. The present research is based on the following hypothesis:

1. Effective legal reforms are essential for strengthening good governance in India, and they play a decisive role in achieving the constitutional vision of an inclusive and developed nation by 2047.
2. Outdated and complex legal frameworks weaken governance efficiency and create barriers to transparency and accountability.
3. Judicial and institutional reforms can significantly improve access to justice and enhance public trust in governance.
4. Digital-age legal reforms are necessary to protect fundamental rights and ensure ethical governance in a technology-driven society.
5. Citizen participation and legal literacy strengthen democratic governance, making reforms more inclusive and sustainable.

E) Research Methodology: -

Based mostly on secondary sources of data, the study employs a doctrinal and analytical research style. Under Doctrinal Research the study of current legal frameworks, legislation, constitutional clauses, court rulings, and governance policies that are pertinent to good governance and legal changes forms the basis of this research. Under Secondary Data Collection the Researcher used Books, journal articles, government reports, Law Commission reports, internet databases, and academic publications about legal reforms and governance provided information.

F) The notion of good governance: -

The multifaceted idea of good governance places a strong emphasis on effective management, the rule of law, accountability, openness, involvement, responsiveness, and equity.³ It shows how authority is used in the administration of a nation's political, social, and economic assets.

The Constitution of India, which upholds values like justice, liberty, equality, and fraternity, is the foundation of good government in the Indian setting. By extending the reach of rights like the right to life, the right to information, and the right to justice, judicial interpretations have further strengthened governance rules. Ethical leadership, citizen participation, decentralization, and responsiveness to public demands are all necessary for good governance, which goes beyond effective management.

G) Challenges in Governance and Legal Reforms: -

India still faces a number of obstacles that prevent the successful implementation of efficient legal systems and good governance, notwithstanding significant advancements.

1) Justice Delivery Delays

The enormous backlog of cases in various courts is one of the biggest problems. The idea that "justice delayed is justice denied" is violated by delayed justice, which also erodes public confidence in the legal system.³

2) Over-Regulation and Complexity

Confusion and compliance challenges are frequently caused by the existence of multiple laws and regulations. Excessive regulation stifles creativity and fosters corrupt practices.⁴

3) The Deficit in Corruption and Accountability

One of the biggest challenges to effective governance is still corruption. Corrupt practices are facilitated by insufficient enforcement systems, discretionary authority, and a lack of openness.⁵

4) Cyber Risks and the Digital Divide

Although e-governance programs have enhanced the provision of services, there are still issues due to the digital gap between urban and rural communities. Vulnerable communities may be excluded due to cybersecurity risks and limited access to technology.⁶

5) Insufficient Knowledge of the Law

A sizable section of the populace is still ignorant of their legal rights and options. Participation in government and access to justice are hampered by low legal literacy.⁷

H) Legal Reforms' Function in Promoting Good Governance: -

One of the most important tools for attaining excellent governance is legal change. Laws, which specify rights, obligations, powers, and accountability procedures, create the basis for governance.

1. Revising Antiquated Laws

Many Indian laws were passed during the colonial era and no longer represent the demands of modern society or democratic ideals. Outdated clauses frequently lead uncertainty, abuse, and delays in the legal process. The goal of legal reforms is to make laws more efficient and citizen-focused by modernizing and simplifying them.⁸

³ Hussainara Khatoon v. State of Bihar, (1980) 1 SCC 81.

⁴ OECD, *Regulatory Policy Outlook* (2018)

⁵ Transparency International, *Corruption Perceptions Index* (2022).

⁶ Ministry of Electronics & IT, Government of India, *Digital India Programme* (2021).

⁷ National Legal Services Authority (NALSA), *Legal Awareness and Access to Justice Report* (2019).

⁸ Law Commission of India, *Report on Obsolete Laws and Legal Reforms* (2015)

2. Strengthening the Rule of Law

The rule of law assures that all persons and institutions, including the state, follow the law. Legal reforms enhance the rule of law by providing fair procedures, an independent court, and efficient enforcement mechanisms.⁹

3. Facilitating Economic Growth

Commercial law reforms, company governance, insolvency legislation, and contract enforcement all have an impact on economic development. Predictable legal frameworks facilitate business transactions, attract investment, and encourage entrepreneurship.¹⁰

4. Protecting Rights in Digital Age

Legal reforms are needed to handle rising challenges related to technology, including data protection, privacy, cybersecurity, and artificial intelligence. Laws must strike a balance between innovation and the protection of basic rights.¹¹

I) Way Forward: Strengthening Legal Reforms and Governance: -

To realize the aim of Viksit Bharat by 2047, India needs take a comprehensive approach that combines law reforms with governance innovation.

1. Judicial reforms

Judicial reform is required to deliver speedy and cheap justice. Measures such as boosting judicial strength, enhancing infrastructure, fostering alternative dispute resolution (ADR), and utilizing e-courts can all help to minimize pendency.¹²

2. Simplification and Codification of Laws

Repealing outmoded laws and combining various legislation can improve accessibility and reduce litigation.

3. Strengthening E-Government

Digital governance initiatives, such as single-window systems, online grievance redressal, and transparent service delivery, should be enhanced, as should strong data protection precautions.¹³

4. Enhancing Institutional Capacity

Training public officials in ethics, legal understanding, and technology is critical for good government.

5. Promoting Legal Literacy and Citizen Participation.

Legal literacy programs, legal assistance services, and community involvement can all help citizens and strengthen democracy.¹⁴

⁹ A.V. Dicey, *Introduction to the Study of the Law of the Constitution* (1885).

¹⁰ World Bank, *Ease of Doing Business Report* (2020).

¹¹ Justice K.S. Puttaswamy v. Union of India, (2017) 10 SCC 1.

¹² E-Committee, Supreme Court of India, *National Policy and Action Plan for ICT in Judiciary* (2019).

¹³ National Single Window System (NSWS), DPIIT, Government of India (2021).

¹⁴ NALSA, *Legal Aid and Literacy Programmes* (2020).

¹⁵ Navtej Singh Johar v. Union of India, (2018) 10 SCC 1.

6. Law Reform, Governance, and Constitutional Values

The vision of Viksit Bharat @ 2047 must be consistent with constitutional morality. Legal reforms should not only be efficient, but also promote social justice, equality, and human dignity.¹⁵ Collaboration among courts, legislatures, executive institutions, and civil society is essential for ensuring people-centric and rights-oriented governance reforms.

J) Conclusion: -

Legal change and good governance are constitutionally required for India's future. The promise of Viksit Bharat @ 2047 can only be fulfilled with a transparent, responsible, and efficient legal and governance framework that addresses the demands of a dynamic and diverse community.

By strengthening institutions, modernising laws, improving judicial efficiency, and empowering citizens, India can create a sustainable, inclusive, and resilient governance ecology. Finally, effective governance based on strong legal changes would ensure that progress is not only quick, but also equitable and humane, according to the ethos of a developed India.

□□□

Contribution of the Dairy Sector to Rural Livelihoods and Development

Jagdish Patil

Research Scholar, M.Phil,
Shivaji University, Kolhapur.

Abstract

The dairy sector plays a significant role in supporting rural economies by providing employment, income stability, nutritional security, and enhanced social welfare. This research investigates how dairy production contributes to rural livelihoods and development, focusing on both economic and socio-cultural dimensions. Primary data were collected through structured surveys administered to dairy farmers in rural Maharashtra, India. The findings suggest that dairy activities significantly increase household income, empower women through participation in cooperative structures, reduce poverty, and improve food security. However, challenges such as inadequate infrastructure, market volatility, and low value addition limit the sector's full potential. The study offers policy recommendations aimed at strengthening dairy value chains, improving access to finance, and fostering innovation in rural dairy practice

Introduction

The dairy sector occupies a pivotal position in the rural economy of India and many developing countries, serving as a major source of livelihood, nutrition, and socio-economic security for millions of rural households. Livestock, particularly dairy farming, is not merely an agricultural activity but an integral component of rural life that contributes to income generation, employment creation, and risk diversification. In a context where agriculture is increasingly affected by climate variability, land fragmentation, and market uncertainties, the dairy sector offers a stable and sustainable supplementary income to small and marginal farmers, landless labourers, and women.

India is the largest producer of milk in the world, and the growth of the dairy sector has been driven largely by smallholder producers. Programmes such as Operation Flood and the cooperative movement have transformed milk production from a subsistence activity into a commercially viable enterprise. Dairy farming enhances rural livelihoods by providing regular cash flow, improving household nutrition, empowering women through participation in production and marketing, and strengthening local institutions such as self-help groups and cooperatives. It also supports allied activities like fodder cultivation, veterinary services, transportation, and agro-processing, thereby contributing to broader rural development.

Beyond income generation, the dairy sector plays a significant role in promoting social and economic inclusion. It enables resource-poor households to participate in the market economy with relatively low initial investment compared to other agricultural enterprises. The sector contributes to poverty reduction, food security, and employment generation while fostering resilience against seasonal unemployment common in rural areas. Moreover, the integration of modern technologies, value addition, and market linkages has further enhanced the developmental potential of dairying.

Agriculture remains the backbone of rural economies in many developing countries. Within agriculture, the dairy sector has emerged as a vital sub-sector that supports millions of rural households through income generation and employment. Dairy farming is often considered a risk-reducing livelihood strategy because it provides regular cash flow compared to seasonal crop earnings. In countries like

India, dairy contributes substantially to the national Gross Domestic Product (GDP) and occupies a prominent place in rural development initiatives (Birthal, 2011).

The sector's structure includes smallholder producers, rural cooperatives, private dairies, and informal markets. Smallholders contribute the majority of milk supply and depend on dairy income for household consumption needs. The dairy value chain — from production to processing and marketing — influences rural development through multiple channels: income diversification, women's empowerment, improved nutrition, and community cohesion.

This study explores the contribution of the dairy sector to rural livelihoods and development, drawing insights from primary field research and secondary literature. The findings have implications for policymakers, development practitioners, and rural stakeholders interested in leveraging dairy for sustainable development.

Review of Literature

The dairy sector has been widely acknowledged for its multi-dimensional contribution to rural economies.

1. Economic Contribution:

Dairy production enhances rural incomes and acts as a buffer against agricultural risks. According to Gulati et al. (2012), dairy is one of the fastest-growing segments in Indian agriculture, offering stable revenue for farmers. The presence of organized cooperatives such as Amul and NDRI-linked societies has uplifted rural households by enabling better price realization and economies of scale (Kurien, 2007).

2. Employment and Women's Participation:

Dairy enterprises have a high labor absorption capacity, particularly among women. Women's involvement in milking, feeding, and processing activities leads to increased agency and decision-making in household finances (Omore et al., 2004). Sharma and Goswami (2015) found that women dairy producers were more likely to invest income in education and health.

3. Food and Nutritional Security:

Milk and dairy products contribute significantly to rural nutrition by supplying essential proteins and micronutrients. Research by Pingali and Rosegrant (2001) suggests that dairy consumption enhances household food security and reduces malnutrition.

4. Challenges in Dairy Development:

Literature also highlights constraints such as inadequate cold chain infrastructure, fluctuating milk prices, limited access to credit, and poor extension services. Birthal and Jha (2012) emphasize the need for improved value addition mechanisms to boost rural incomes and competitiveness.

In sum, research indicates that the dairy sector has strong potential to contribute to rural livelihoods, but its impact is contingent upon supportive policies and institutional frameworks.

Methodology

1. Research Design:

This study used a mixed-methods approach, combining quantitative surveys with qualitative interviews to understand dairy's contribution to rural livelihoods.

2. Study Area:

The research was conducted in selected villages of Kolhapur District, Maharashtra, India. This region was chosen due to its active engagement in dairy farming and presence of dairy cooperatives.

3. Sampling and Data Collection:

A sample of 120 dairy-producing households was selected using stratified random sampling. Structured questionnaires were used to collect data on household income, dairy production levels, employment patterns, and socio-economic conditions. Additionally, 20 in-depth interviews were conducted with cooperative leaders and local agricultural officers.

4. Data Analysis:

Quantitative data were analysed using descriptive statistics and comparative tables. Qualitative data were thematically analysed to identify recurring patterns related to development outcomes.

Discussion:

1. Income Generation and Economic Stability:

The primary contribution of the dairy sector identified in this study was income generation. On average, dairy contributed 38%–55% of total household income among respondents. Many households reported that dairy earnings were more reliable than crop income, which often fluctuates due to monsoon variability and market conditions. Households with higher milk production tended to invest earnings in assets such as livestock, land improvements, and education.

Dairy cooperatives in the study area enabled farmers to access better milk prices through collective bargaining. Approximately 68% of surveyed farmers reported receiving premiums during peak demand periods through cooperative channels, reducing income uncertainty.

2. Employment Creation:

The study revealed that dairy farming expands employment, particularly for family members. Most respondents indicated that women were actively involved in daily dairy chores. This aligns with previous literature emphasizing women's role in dairy production (Omore et al., 2004). Women reported improved financial autonomy, as they often controlled milk income and made decisions on household expenses.

3. Nutritional Security:

Households with dairy production reported increased consumption of milk and dairy products. Regular access to milk improved dietary diversity among children and adults. Interviews with families revealed perceptions that dairy consumption reduced incidences of childhood anemia and supported general well-being.

4. Social and Community Development:

Participation in dairy cooperatives fostered community bonding and collective action. Cooperative meetings and group training sessions provided platforms for knowledge exchange, strengthening social capital. Many farmers mentioned that cooperative networks helped them learn better feeding practices, disease management, and record-keeping.

5. Challenges and Limitations:

Despite the positive contributions, respondents highlighted significant challenges. Lack of adequate cold storage and transportation facilities meant that excess milk often went to waste during summer months. Smallholder farmers faced high costs for animal feed and veterinary services. Additionally, price fluctuations during off-season periods often reduced profit margins.

Access to institutional credit was limited; many farmers relied on informal credit sources with high interest rates. These constraints hindered farmers' ability to scale up production and invest in quality improvement.

Results

1. Income Contribution:

Dairy income significantly contributed to household earnings, accounting for approximately 40–55% of total income among rural dairy farmers.

2. Women's Empowerment:

Over 70% of dairy activities involved women, indicating strong gender participation. Women reported increased control over finances and household decision-making.

3. Food Security:

Dairy - producing households consumed milk and dairy products regularly, reporting improvements in nutrition and child health benchmarks.

4. Community Engagement:

Cooperative membership provided knowledge, market access, and collective strength, contributing to enhanced social capital.

5. Constraints:

Challenges like inadequate infrastructure, limited credit access, and unstable milk prices constrained the full realization of the sector's potential.

The results corroborate existing literature that positions the dairy sector as a vital component of rural development (Birthal, 2011; Gulati et al., 2012).

Conclusion

The dairy sector substantially contributes to rural livelihoods by providing stable income, employment opportunities, nutritional benefits, and enhanced community engagement. In the study area of Sangli District, dairy farming supported economic stability and empowered rural households, especially women. However, structural challenges such as inadequate infrastructure, limited access to credit, and market volatility restrict the sector's potential.

To maximize the contribution of dairy to rural development, policymakers and stakeholders should prioritize investments in cold chain infrastructure, strengthen cooperative networks, promote access to affordable credit, and support value addition through processing and branding. Targeted training programs and extension services can further enhance productivity and sustainability.

Overall, strengthening the dairy value chain offers a promising pathway for inclusive rural development that enhances livelihoods, reduces poverty, and improves food and nutritional security.

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RULE OF LAW AND ADMINISTRATIVE DISCRETION : A CRITICAL STUDY**Dr. Sopan Digambar Jadhav,**

Assistant Professor,

Bharati Vidyapeeth's New Law College, Kolhapur.

ABSTRACT

This paper critically examines the nexus between the principle of Rule of Law and administrative discretion exercised by administrative authority as per law. For smooth functioning of administrative law, it is essential and fruitful. In so far as discretionary power exercised by Administrative Law, sometime it may pose a serious threat to the core value of Rule of Law. In this research paper, author have attempted how discretionary power of authority result into arbitrarily and in equal exercising power which may lead to the insecurity to the freedom of people. Hence balancing approach is required for maintaining the transparency and administrative efficiently. The principle of rule of enables for balancing administrative discretion and right of the people. In this paper, researcher tried how the principle of rule of law uphold legality, fairness and accountability under the domain of administrative power.

1. INTRODUCTION-

Principle of rule of law is inevitable while performing administrative action. Under every organ of the government, principle of rule of law can be accepted. To maintain true spirit of democratic principle and preserving the notion of constitutionalism, the concept of rule of law must be followed. Under the umbrella of Constitution, principle of rule of law basic structure which cannot be diluted by way of amendment. For effective and efficient implementation of functions of organs of the governmental authority, principles of rule of law helpful. In so far as rule of law is concerned, sometime power exercised by administrative authority like to be corrupted and due to such misuse of power, action of the authority go against the principle of rule of law.

2. STATEMENT OF RESEARCH PROBLEM-

In today's administrative age, we know that delegation of discretionary power is unavoidable for smooth function of authority. It is expected to observe the principle of rule of by administrative authority. But there are practical difficulty. In so far as present title of research is concerned, following are some of the Statement of research problem.

- 1) Power tends to corrupt and absolute power corrupts absolutely. In so far as this quote given by Acton is concerned, sometime delegated power can be corrupted by authority. Hence, it is required to examine administrative discretionary power
- 2) There is requirement of control on such power from being misused by authority. When unlimited and uncontrolled power is exercised by administrative authority, it must be control on such power so that freedom of an individual will be secured. Hence, it is required to evaluate critically by way of judicial control and to provide some concrete safeguard against misuse of power by such administrative authority.

3. OBJECTIVE OF STUDY-

Based on present title of research paper is concerned, below are the objectives of research work.

- 1) To understand and discuss the ambit of administrative discretion

- 2) To understand the notion of rule of law under the domain of administrative authority and to know how the principle of rule of law control and supervise on the wide administrative discretion exercisable by administrative authority.
- 3) To discuss the study role & contribution of higher judiciary with the help of power of judicial review.

4. PRINCIPLE OF RULE OF LAW-

Rule of law is one of the basic principle under the sphere of Indian Constitution. Justice Coke was as originator of rule of law. Later on Prof. A.V. Dicy developed the theory of rule of law.ⁱ The Concept of rule of Law provided by Dicey in the year of 1885.ⁱⁱ

5. MEANING AND CONCEPT OF RULE OF LAW-

Prof. A. V. Dicey in his books of the law and the constitution, provided three brad meaning of rule of law 1) Supremacy of law 2) Equality before law and 3) Judge-made law.

1) Supremacy of law-

While discussing first meaning of rule law, he said that law is above the man and man is not above the law. A man may be punished for breach of law. In the opinion of Wade, “*wherever there is discretion, there is room for arbitrariness and that in a republic no less than under a monarchy discretionary authority on the part of the government must mean insecurity for legal freedom on the part of its subjects*”.ⁱⁱⁱ

2) Equality before law-

While explaining second meaning of rule of law, he said that there must be equality before the law or the equal subjection of all classes to the ordinary law of the land administered by the ordinary law courts.^{iv} Further he said that there should not be any special tribunal or any special immunity to the officials. Because providing special treatment or special tribunal leads towards negation of principle of notion of equality.

3) Judge-made law-

While explaining third principle Prof. A.V. Dicey said that there are many rights like freedom from arrest, freedom to hold public meetings, right to personal liberty etc. many fundamental right can be included under the Constitution. In case of violation of such right, effective remedy must be there. There cannot be right without remedy. ^v Therefore, Judiciary whenever circumstance arises in the society, it can determine or include particular fundamental right under Indian Constitution.

6. RULE OF LAW AND ADMINISTRATIVE DISCRETION-

The concept of rule of law provides that various powers exercised by governmental authority must be exercised according to law. Functions dischargeable by the administration may either be ministerial or discretionary. A ministerial function is one where the relevant law prescribes the duty to be performed by the concerned authority in certain and specific terms leaving nothing to the discretion or judgment of the authority.^{vi} In a modern welfare State, administrative discretion is necessary and inevitable for effective and proper administration. Proper observation of rule of law leads towards effective policy implementation, and public welfare. However, if such discretion is result into **uncontrolled or unlimited manner then** it may lead to arbitrariness, abuse of power, and violation of fundamental and legal rights. It goes towards insecurity to the freedom of individual. Hence it is expected on the part of administrative authority to follow constitutional provisions, statutory provision strictly. Even if there is absence of law, it is the responsibility on the part of administrative authority to apply its

rational mind. They have to observe the principle of equity, justice and consciousness. In case of *Maneka Gandhi v. Union of India*^{vii}, her passport was **impounded** by the Government of India under **Section 10(3)(c) of the Passport Act, 1967**. No reasons were given for impounding passport. She challenged the action as a violation of her **Fundamental Rights under Articles 14, 19, and 21** of the Constitution. It was arbitrarily exercising the power without applying the principle of natural justice. Supreme Court of India held that, he Supreme Court held that the **right to travel abroad is part of personal liberty** under Article 21. **Rule of Law** requires that administrative discretion be exercised reasonably and action of such executive authority is subject of judicial review.

7. FINDINGS-

- 1) Administrative discretion is inevitable and necessary evil and it would be impossible to eliminate completely
- 2) There must be proper control by way of Judiciary and by way of Legislative authority. No doubt, today they are controlling. But there is requirement of close supervision on the power of administrative authority.
- 3) Some fundamental principles like reasonableness, non-arbitrariness, good faith, and natural justice are required to be observed by administrative authority while performing discretionary power for administrative regulation.

8. SUGGESTIONS –

- 1) In so far as present welfare State, administrative discretion is inevitable and cannot be avoided completely. It is required for smooth and proper function on the part of executive or administrative authority. So presently mere delegation of power on authority is not desirable and material but what is necessary that there should be proper control and safeguard on such authority.
- 2) Administrative authority must follow legislative guideline properly and implemented policy given in the Act in good faith and in accordance with the law.
- 3) Each and every administrative action should be reasonable and proper so that it will not prejudicial to the interest of public.

9. CONCLUSION-

Rule of law is significant principle which can prohibit wide and arbitrarily discretion exercised by the authority. It ensure effective control on the administration action so that it will not lead towards misuse of power. Of course, rule of law try to strengthen the very principle of democracy and maintain good governance in the society.

ⁱ Prof. A. V. Dicey has developed his theory of rule of law in his classic work *The Law and the Constitution* published in the year of 1885.

ⁱⁱ He said, “absolute supremacy or predominance of regular law as opposed to the influence or arbitrary power and excludes the existence of arbitrariness, of prerogative, or even wide discretionary authority on the part of the government.”

ⁱⁱⁱ Lectures on Administrative Law by C. K. Takwani, Eastern Book Company, Lucknow, fifth edition 2012, page at 118

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- iv Administrative Law by Dr. J.J. R. Upadhyaya, Central Law Agency, Allahabad, Eighth Edition, page at 37
- v **“Ubi jus ibi remedium” is a fundamental maxim in the Law of Torts.** It means “Where there is a right, there is a remedy.” **if a person’s legal right is violated, the law will provide a remedy** to that person.
- vi Principles of Administrative Law by M.P. Jain & S. N. Jain, published by Lexis Nexis Butterworths Wadhwa Nagpur, page 379
- vii AIR 1978 SC 597



Gig Workers and Indian Economy

Smt. Hemlata Amol Minchekar

Kamala College, Kolhapur

Abstract

The gig economy has emerged as a significant component of the Indian labour market in the era of digitalization and platform-based employment. Characterized by short-term, flexible, and task-based work arrangements, gig work has created new employment opportunities for millions of workers across diverse sectors such as transportation, delivery services, information technology, and creative industries. This paper examines the role of gig workers in contributing to Indian economic growth by analysing their impact on employment generation, income creation, productivity, and consumption-led growth. The study is based on a descriptive research design and relies on secondary data collected from books, journals, government reports, and research articles. The findings highlight that while the gig economy contributes positively to economic growth and labour market flexibility, it also raises concerns regarding job security, income stability, and social protection for workers. The paper concludes by emphasizing the need for a balanced policy framework that promotes the growth of the gig economy while ensuring the welfare and dignity of gig workers for sustainable and inclusive economic development in India.

Keywords: Gig economy, Indian economy, economic growth, employment generation, labor markets, digital platforms

Introduction

The rise of flexible work arrangements worldwide, known as the 'gig economy,' is being fueled by technological innovation, the use of digital platforms, and changing workforce attitudes. Gig work is referred to as temporary work done on the completion of specific tasks mainly using digital platforms, which entail flexibility to the greatest extent, in contrast to regular jobs, which provide certain protections to the workforce. India has experienced tremendous growth in the penetration of smart phones, digital payments, and the use of digital platforms, thus fueling the growth of the gig economy in the country.

India's accelerated digitization effort, aided by Government-led campaigns like 'Digital India,' has brought millions of consumers and workforce members into online economic networks. Online gig economies such as Swiggy, Zomato, Ola, and Urban Company bridge supply and demand instantaneously, allowing for flexible livelihood options to be created. This has helped alleviate unemployment in urban and peri-urban settings, especially absorbing excess workforce from agricultural and services sectors.

India's rapid digitalization, supported by Government initiatives such as 'Digital India', has integrated millions of consumers and workers into online economic networks. Gig platforms such as Swiggy, Zomato, Ola, and Urban Company connect supply and demand instantly, creating flexible opportunities for work. These developments have contributed to job creation in urban and semi-urban areas, particularly absorbing surplus labor from sectors like agriculture and informal services.

While this expansion offers clear economic opportunities-such as employment generation, increased productivity, and integration of traditionally excluded workers-it raises critical questions about the sustainability of growth, worker welfare, and equitable inclusion. The gig economy's informal nature poses challenges regarding legal protections, access to social security, and income stability, making it imperative to understand both its economic contributions and social implications.

Meaning and Definition

Gig workers are individuals who earn income by performing short-term, flexible, or task-based work rather than holding a permanent, full-time job with a single employer. They are usually paid per task, project, or assignment and often work as independent contractors, freelancers, or platform-based workers.

Gig workers are persons engaged in non-traditional employment arrangements where work is mediated through digital platforms or contractual agreements and does not provide long-term job security or standard employment benefits.

Definition in Indian Context (NITI Aayog): Gig workers are persons who carry out work outside the traditional work relationship and earn money from flexible jobs.

Characteristics of Gig Workers

1. Short-term or project-based work: Short-term or project-based work refers to employment arrangements in which a worker is hired for a limited duration or for the completion of a specific task or project, rather than on a permanent, continuous basis.

2. Flexible working hours: Flexible working hours refer to a work arrangement in which employees or workers have the freedom to choose when and sometimes how long they work, instead of following fixed daily office hours.

3. Often engaged through digital platforms: Often engaged through digital platforms means that workers are connected to work opportunities using online or app-based systems rather than through traditional employers or physical offices. For e.g. ride-hailing, delivery, free-lancing portals etc.

4. Limited or no access to social security benefits: Limited or no access to social security benefits means that workers do not receive standard employment protections that are usually provided in regular, permanent jobs. For e.g. related to provident fund, health-insurance, paid-leave etc.

Classification of Gig workers:

1. Platform workers: Platform workers are those whose jobs rely on online software applications or digital platforms. They are characterized by flexibility but also instability and uncertain income.

- a) Ride-hailing services: Companies like Uber, Ola, and Rapido.
- b) Food delivery services: Companies like Swiggy, Zomato, and Uber Eats
- c) Home services: Companies like Urban Company, Housejoy, and Taskbob.
- d) E-commerce: Companies like Amazon and Flipkart.

2. Non-Platform workers: Non-platform gig workers typically earn a casual wages and work on their own accounts. Unlike platform workers, they operate outside of online software apps or digital platforms to secure work opportunities.

- a) Construction Worker, Street Vendors, Farm Labourers
- b) Delivery Boys (not working through online apps)
- c) Domestic Workers (maids, cooks) • Home-based Workers (such as handicrafts, tailoring, etc.)

Share of Gig workers in Indian Economy

Year	High Skilled	Medium Skilled	Low Skilled	Total
2011-12	17.9	53.4	28.7	100
2019-20	21.9	46.9	31.2	100
2020-21	22.5	46	31.5	100
2024-25	24.7	42.8	32.6	100
2029-30	27.5	38.7	33.8	100

Source: Niti Aayog (2022)

The table presents the skill-wise share of gig workers in the Indian economy from 2011–12 to the projected year 2029–30, based on NITI Aayog (2022). It shows a clear shift in the composition of gig

employment. The share of high-skilled gig workers increases steadily from 17.9% in 2011–12 to 24.7% in 2024–25, and is expected to reach 27.5% by 2029–30. This growth reflects the rising demand for technology-driven and professional services in the gig economy.

In contrast, the share of medium-skilled workers declines significantly from 53.4% to 38.7% over the period, indicating reduced demand for routine and semi-skilled tasks due to automation and digital transformation. Meanwhile, low-skilled gig workers show a gradual increase from 28.7% to 33.8%, driven by the expansion of platform-based services such as delivery and transport.

Overall, the table highlights a polarization of gig employment, underscoring the need for skill development and worker protection policies.

Growth Rate of Gig Workforce in India

Year	Employment in Corers		
	Employment	Non-Agri Employment	Gig Workers
2017-18	45.50	26.38	0.53
2018-19	46.75	27.62	0.54
2019-20	51.10	28.79	0.68
2020-21	51.66	29.37	0.77
2021-22	52.22	29.97	0.87
2022-23	52.79	30.58	0.99
2023-24	53.37	31.20	1.12
2024-25	53.95	31.84	1.27

Source: Niti Aayog (2022)

The table shows the growth of the gig workforce in India between 2017–18 and 2024–25, alongside total and non-agricultural employment. During this period, total employment increased steadily from 45.50 cr. to 53.95 cr., indicating overall employment expansion in the economy. Similarly, non-agricultural employment rose from 26.38 cr. to 31.84 cr., reflecting structural shifts away from agriculture towards industry and services.

A more notable trend is the rapid growth of gig workers, whose numbers increased from 0.53 cr. in 2017–18 to 1.27 cr. in 2024–25. Although gig workers still form a relatively small share of total employment, their growth rate is significantly faster than that of overall employment. This expansion highlights the increasing role of digital platforms, app-based services, and flexible work arrangements in India's labour market.

Overall, the table indicates that the gig economy is emerging as an important contributor to non-agricultural employment growth, underscoring the need for supportive policies, skill development, and social security for gig workers, as highlighted by NITI Aayog (2022).

Review of Literature

1. A.Devid, Ms.B.Pavithra,(2024) A research paper entitled 'A Study On Gig Economy In India And Redefining The Work In The Digital Era', published in International Journal of Creative Research Thoughts (IJCRT) Volume 12, Issue 9 September 2024 | ISSN: 2320-2882.

The literature review brings out the growth that has occurred in the gig economy in India, thanks to digital technology, and the pressing need for work life flexibility. The literature reviews also emphasize that the gig economy provides job opportunities, livelihood diversity, as well as work life flexibility, especially among the youth and women. The literature, at the same time, also brings out that gig economy jobs are characterized by a lack of social security, job security, as well as a regulatory framework, though these are a pressing need for sustainable growth. The gig economy has been creating a paradigm shift in employment opportunities, though it has also been a cause for concern for workers' welfare in India's economy.

2. Animesh Kumar Sharma, Rahul Sharma (2025), A research paper entitled, ‘The gig economy and the evolving nature of work in India: Employment, policy, and platform realities in the age of convenience’ published in *Journal of Digital Economy* 4 (2025) 156–167.

The literature shows that the gig economy is becoming increasingly important in shaping employment in India’s digital era. Studies agree that technology, easy internet access, and the demand for flexible work have driven its growth. The gig economy has created job opportunities for youth, women, and semi-skilled workers, helping to reduce unemployment and increase incomes. Digital platforms play a key role by connecting workers and customers efficiently. However, the literature also highlights major challenges such as income insecurity, lack of job security, absence of social security benefits, and weak regulatory protection. Overall, while flexibility is a major advantage of gig work, it often comes at the cost of worker security.

3. Haridarshan Singh (2024). A research paper entitled ‘Gig Workers: A Comprehensive Analysis of the Rise, Challenges, and Future of the Gig Economy’, published in *International Journal for Multidisciplinary Research (IJFMR)*, Volume 6, Issue 5, September-October 2024.

According to the reviewed literature, the gig economy has come up as a major shift in the contemporary labor market, primarily due to digital platforms, technological developments, and the rising preference for the gig economy by workers. Literature studies reveal that the gig economy provides flexibility, freedom, and earning opportunities for most workers, ranging from low-skilled service workers to high-skilled professionals. Nevertheless, most researchers repeatedly emphasize major challenges for gig workers, such as income uncertainty, lack of social benefits, inadequate legal protection, and job insecurity in the gig economy. The COVID-19 pandemic has also contributed to the rapid growth of the gig economy, although most workers are vulnerable in the gig economy, according to existing studies, citing the need for appropriate regulatory frameworks, social protection, and skill development programs.

These trends make it evident that the gig economy in India is evolving from a niche segment in the labor market to a major economic factor, in areas like logistics, delivery, transportation, or online professional services, among others.

Objective of the Study

The present study aims to examine the nature and composition of the gig workforce in India. It seeks to understand the various types of job opportunities available through gig platforms, including both skilled and semi-skilled forms of employment. Further, the study attempts to analyse the contribution of the gig economy to the Indian economy by assessing its role in employment generation, income creation, digital labour integration, and overall economic growth.

Research Methodology

The study adopts a descriptive research design to provide a systematic and detailed understanding of the gig economy in India. It is based entirely on secondary data collected from various sources such as books, academic journals, research articles, government reports, and published studies. These secondary sources offer relevant and reliable information necessary to analyse the nature of the gig workforce, the types of employment opportunities available on gig platforms, and the contribution of the gig economy to the Indian economy.

Analysis

This section examines the complex nexus between gig workers and the Indian economy by integrating data, economic concepts, and policy realities.

1. Labor Market Dynamics

The job market contribution made by the gig economy is quite substantial, especially in India, where job generation has not been commensurate with the rising population. That is because gig economy jobs are a great absorber of surplus labor from the informal sector.

The resultant expansion of online platforms generates a multiplier effect in the supporting industries such as e-commerce, mobile payment services, and logistics, contributing to economic expansion. The gig economy increases labor market flexibility with the ability to create flexible working schedules, thus addressing the issue of structural unemployment.

2. Contribution to GDP Growth

Although it is difficult to quantify exactly how much gig workers have added to GDP because of how gig work is generally conducted informally, there is substantial impact potential. By the year 2030, gig work will likely add more than 1% to India's GDP owing to general consumption triggered by such gig work. (India Brand Equity Foundation)

3. Socio-Economic Inclusion

Gig economy jobs improve inclusion because of the low barriers of entry for women, immigrants, or less-educated people. Gig economy jobs are attractive for women because of flexibility and the low barriers of entry in terms of education or experience.

However, this inclusivity is not without conditions. The flexibility that makes gig work desirable can also lead to precarious work conditions where workers are not offered long-term security or development opportunities.

4. Digital and Technology Integration

The gig economy cannot be distinguished from digital infrastructure. Mobile internet, payment networks (such as UPI), and data analytics tools are used by platforms to conduct markets more efficiently. All these innovations improve efficiency in the economy, thereby increasing productivity.

Conversely, the digital divide still poses an obstacle in the sense that those who lack access to smart phones and digital literacy will find it more difficult to reap the rewards of the gig economy.

5. Policy Framework and Social Protection

Although the current Code of Social Security enables social security systems for gig workers, there is an immediate need for a proper policy framework that covers minimum wage guarantees, health insurance, and retirement plans. Some current proposals to reform social security eligibility involving a minimum involvement in the platform strike a right balance between the right to flexibility and the right to social security. (The Times of India)

State-level initiatives, like welfare legislation in Rajasthan or subsidies for gig workers in Tamil Nadu, are some signs that there is slowly a realization about the need for supportive policies. (The Times of India)

Findings

1. Rapid Expansion of the Gig Workforce: The gig workforce in India has grown rapidly from 0.53 cr. in 2017–18 to 1.27 cr. in 2024–25, indicating that gig employment is expanding at a much faster pace than overall employment.

2. Increasing Role in Non-Agricultural Employment: Growth in gig workers closely follows the rise in non-agricultural employment, suggesting that the gig economy is becoming an important source of jobs in the services and urban sectors.

3. Shift towards High-Skilled Gig Work: The share of high-skilled gig workers has increased consistently, reflecting growing demand for technology-based, professional, and knowledge-intensive services in India's digital economy.

4. Decline in Medium-Skilled Employment: A continuous decline in medium-skilled gig workers indicates job displacement due to automation, platform restructuring, and changing work requirements.

5. Steady Rise in Low-Skilled Gig Workers: The increasing share of low-skilled gig workers highlights the expansion of platform-based services such as delivery, ride-hailing, and logistics.

6. Emerging Labour Market Polarization: Together, the tables reveal a polarized gig labour market, with growth concentrated at both high- and low-skill levels, emphasizing the need for skill development, regulation, and social security frameworks.

Conclusions

The gig economy presents a double-edged reality in the context of Indian economic development. On one hand, it has significant potential to generate large-scale employment opportunities and facilitate the integration of digital labour into the formal economy, thereby contributing to GDP growth through increased consumption and economic activity. On the other hand, the gig economy exposes workers to vulnerabilities arising from inadequate labour laws, absence of social security, and income instability.

To fully harness the potential of the gig economy in a sustainable and inclusive manner, coordinated efforts are required from the government, platform-based companies, and society at large. Policymakers must focus on creating a regulatory framework that balances flexibility with employment security. Furthermore, investments in digital literacy, skill upgradation, and access to technology will strengthen the gig economy's role as a driver of economic growth, while ensuring the dignity, welfare, and long-term well-being of India's expanding gig workforce.

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Policy Framework for Viksit Bharat 2047 : Pathways to Inclusive and Sustainable Development

Deepti Madan Patil
Assistant Professor,
Shahaji Law College, Kolhapur.

Abstract

The vision of Viksit Bharat 2047 represents India's ambitious aspiration to transform itself into a developed nation by the centenary of its independence. It demands a comprehensive policy framework focused on strong economic growth, social inclusion, environmental sustainability, technological innovation, and resilient governance. This Research Paper identifies key strategic policy pathways to inclusive and sustainable development. It examines the policy strategies, economic requirements, social development goals, governance reforms, and challenges associated with this initiative. It argues that while the vision is ambitious, it is attainable through sustained high economic growth, inclusive social development, robust infrastructure creation, effective governance reforms, and sustainable development. The paper concludes with suggestions for realizing a bold, inclusive, and sustainable future for India.

Keywords : Viksit Bharat 2047, Developed Nation, Economic Growth, Governance Reforms, Sustainable Development

1. Introduction

The aspiration to be recognized as a developed nation is a defining milestone in a country's developmental journey. Traditionally, developed nations are characterized by high per capita income, substantial Gross Domestic Product (GDP), advanced industrialization, and technological advancement. However, modern interpretations extend beyond economic indicators to include human development outcomes such as education, healthcare, life expectancy, environmental sustainability, and quality of governance.

The Government of India's Viksit Bharat 2047 initiative articulates a bold and transformative vision to make India a developed nation by 2047. Coinciding with 100 years of independence, the initiative reflects a national commitment to economic prosperity, social justice, environmental sustainability, and global leadership. This vision aims to uplift the living standards of all citizens while strengthening India's position in the global order.

2. Viksit Bharat 2047

The Viksit Bharat 2047 is a long-term policy vision of the Government of India to transform India into a developed nation defined by prosperity, inclusivity, sustainability, and effective governance. It envisions India as a global economic power with high living standards, equitable opportunities, and strong institutional frameworks.

Its core pillars focus on improving industrial competitiveness, revitalizing rural economies, expansion of social security coverage and so on. The initiative of Viksit Bharat 2047 provides for the following objectives.

Economic and Social objectives - A central objective is to turn India into a USD 30 trillion developed economy by 2047, accompanied by an increase in per capita income. It aims to lift millions into the middle class and ensure economic security for future generations.

Socially, the initiative targets zero poverty through inclusive growth and financial empowerment. It emphasises on the equitable development focusing on universal access to quality education and healthcare, gender equality, and social justice.

Environmental Objectives - It aims to sustainable development, including achieving net-zero carbon emissions and promoting green growth.

Governance and Global Leadership - The initiative aims to establish transparent, efficient, and citizen-centric governance while positioning India as a leader in technology, innovation, and global diplomacy. It ensures to create a holistic development model.

The Focus Areas of the initiative are

- Yuva (Youth) – Harnessing India’s demographic dividend
- Garib (Poor) – Ensuring inclusive development
- Mahilayen (Women) – Promoting gender equality and empowerment
- Annadata (Farmers) – Strengthening agricultural sustainability

Six Pillars of National focus include making India a global manufacturing hub, reviving Indian knowledge systems, expanding global presence of Indian products, advancing green energy, promoting tourism, and fostering inclusive global development. The Thematic Areas are Empowered Indians; Thriving and Sustainable Economy Innovation, Science and Technology; Good Governance and Security and India in the World.

Priority sectors such as agriculture, MSMEs, manufacturing, services, exports, and digital infrastructure and renewable energy are important to achieve Viksit Bharat objectives.

3. Policy Framework for Viksit Bharat 2047 – Pathways to Inclusive and Sustainable Development

Viksit Bharat envisions the inclusive and sustainable development. Every citizen of India has a role and needs active participation in achieving the target of developed nation by 2047. This development promotes the fair opportunities to all. Viksit Bharat also ensures the sustainable development.

There are various schemes and policies taken by the Indian government to achieve and strengthen the Viksit Bharat 2047. In line with the vision of Viksit Bharat 2047, the Government announced the several new schemes, along with the renewal of certain existing schemes that are currently in operation.

Economic growth –

Transforming India into a USD 30–40 trillion economy by 2047 requires sustained annual GDP growth of 7–10%. Projections by NITI Aayog, the World Bank, and private institutions broadly converge on this requirement.

To achieve economic growth there is need of manufacturing and services expansion; Export competitiveness; Infrastructure investment; Digital transformation and innovation. To achieve these targets there is also need of policy consistency, investment mobilization, and productivity enhancement across sectors. Budgetary support, increased capital expenditure, and fiscal prudence are important for the economic growth strategies.

Government schemes such as Make in India & Aatmanirbhar Bharat strengthen domestic manufacturing. It also lowers import dependence of the country. Skill India Mission provides for Enhancing employability and train the youth cross various sectors. PM Gati Shakti Yojna provides for the integrated infrastructure planning.

Social Development -

Inclusive growth is central to Viksit Bharat. It includes universal literacy, quality education, and skill development; universal access to affordable healthcare, increased life expectancy, and health reform

policies. The initiative aims to reduce poverty, empower women and tribal communities, and address multidimensional inequalities.

Viksit Bharat 2047 aims to increase the literacy rate 100%. National Education Policy (NEP) 2020 is the key initiative taken by the government for Transforming education. Many beneficiaries enrolled in 'Ayushman Bharat Mission' which has strengthened the healthcare infrastructure.

Government is upgrading the Anganwadi centres under the 'Saksham Anganwadi and Poshan 2.0' for early childhood care, and nutrition. Swachh Bharat Mission; Pradhan Mantri Ujjwala Yojna; Jal Jeevan Mission are playing important role in clean and healthy environment. Mudra Loans provide for Women empowerment. PM Jan Dhan Yojna covers more than 50 crore beneficiaries. PM Viksit Bharat Rozgar Yojna from the 1st August 2025 reflects the government's commitment to the employment opportunities in the country.

Infrastructure and Technological Development -

Infrastructure development is a cornerstone of the initiative. It provides for physical Infrastructure development such as Expansion of highways, railways, ports, airports, smart cities, and energy networks etc.

It also includes Digital Infrastructure development such as Digital Public Infrastructure (DPI), digital payments, and connectivity to drive inclusion and productivity; Digital India mission launched by the government to transform India into a digitally empowered society and to expand digital access and e-governance. Public-private partnerships and increased capital spending are crucial to meeting these ambitious goals. PM Gati Shakti has coordinated infrastructure projects worth Rs. 111 lakh crores. Government's Startup India policy helps the youth with great ideas to start their businesses. The government is helping with funding and other required support to start the businesses.

Rural and Agricultural Transformation –

The Viksit Bharat Gramin act, 2025 ensures 125 days of guaranteed wage employment in rural areas. The existing government schemes such as PM Fasal Bima Yojna; National Livestock Mission, Rashtriya Gokul Mission and Infrastructure Development Funds for Dairy Processing and Animal Husbandry are also important for agricultural development.

PM KISAN Yojna; PM Awas Yojna; Soil Health Card Scheme; Kisan Credit Card; PM-PRANAM Yojna; introducing high yield crop programs for farmers and expanding digital marketplace through e-NAM, mega food parks are some of the important policies taken by the government for agriculture and rural transformation.

Governance Reforms -

Governance reforms focus on reducing regulatory burdens, and enhancing transparency. Digital governance tools such as Direct Benefit Transfer (DBT) and Government e-Marketplace (GeM) aim to reduce corruption and improve service delivery. Strong institutions and rule of law remain essential for sustained growth.

Citizen engagement through platforms like MyGov and youth-centric programs highlights the importance of participatory governance. A people centric campaign 'Viksit Bharat Sankalp Yatra' was launched by the government for the nationwide outreach of the Viksit Bharat initiative. It was aimed to spread awareness, saturating government schemes and ensures the direct participation of the citizens to achieve growth and development of nation.

Sustainable Development –

One of the key goals of the Viksit Bharat 2047 is to promote sustainable development in India which includes renewable energy, green technology, responsible consumption of the resources etc. The initiative aims to increase the countries capacity of renewable energy from 125 GW to 500 GW.

PM Surya Ghar Yojna launched in the year 2024 to install rooftop solar in 1 crore households and provides subsidies for the solar installations. Under Budget 2024, the government introduced a bio-manufacturing and bio-foundry scheme to encourage green growth through sustainable alternatives. It also announced a separate integrated scheme for adaptation, restoration, and coastal aquaculture and mariculture to support climate-resilient development in the Blue Economy 2.0 framework.

4. Challenges to realize Viksit Bharat 2047

Several challenges threaten the realization of Viksit Bharat which includes Income inequality and rural-urban divide; Employment generation and skill gaps; Climate change and environmental degradation etc. Bureaucratic inefficiencies and policy uncertainty is also one of the major hurdles in achieving the aim of developed nation by 2047. Addressing these requires coordinated, long-term, and adaptive strategies by the Government.

5. Conclusion and Suggestions

Viksit Bharat 2047 embodies India's collective aspiration for prosperity, inclusivity, and global leadership. While the targets are ambitious, they are achievable with sustained commitment, effective governance, and inclusive growth strategies. Addressing social and environmental challenges alongside economic expansion will be critical.

The Researcher provides the following suggestions to achieve the aim of Viksit Bharat 2047 initiative.

- 1) Need to strengthen manufacturing and exports
- 2) Sustained infrastructure investment; Government reforms and ease of doing business is required.
- 3) Inclusive and green growth strategies as well as mainstream climate risk assessments into all sectors is required.
- 4) A collaborative approach involving government, private sector, and citizens is essential.
- 5) There is need of global partnership for resource mobilization.
- 6) There is need to make the citizens aware of the various government schemes and policies.

With coordinated efforts and citizen participation, India can realize its bold vision and usher in a brighter, more equitable future by 2047.

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CASTE, CLASS, AND POWER IN INDIA : A SOCIOLOGICAL ANALYSIS OF STRUCTURAL CHALLENGES TO REALIZING VIKSIT BHARAT @2047

Dr. Vishwanath Taral

Assistant Professor, Department of Sociology,
Kamala College (Autonomous), Kolhapur, Maharashtra, India

Abstract

The national vision of Viksit Bharat @2047 seeks to transform India into a socially inclusive, economically prosperous, and globally competitive nation by the centenary of its independence. While economic growth, technological advancement, and infrastructural expansion form the foundation of this vision, deeply entrenched inequalities rooted in caste hierarchy, class stratification, and political power concentration continue to pose serious challenges. Using a political sociology framework, this paper critically examines how social stratification and power relations shape governance structures, public policies, and development outcomes in India. It argues that development is not merely an economic process but a complex socio-political transformation mediated by institutional arrangements and ideological dominance. The study explores historical and contemporary dimensions of caste-based exclusion, class inequality, and elite political control, highlighting their implications for inclusive development. It further analyzes opportunities created by constitutional safeguards, democratic decentralization, welfare policies, and digital governance. The paper concludes that without structural reforms emphasizing social justice, political empowerment, and participatory governance, the realization of Viksit Bharat @2047 will remain incomplete and exclusionary.

Keywords: Viksit Bharat @2047, Caste, Class, Power, Political Sociology, Social Inequality, Inclusive Development, Governance.

1. Introduction

India's development trajectory since independence has been shaped by a continuous effort to balance economic growth with social justice. The vision of Viksit Bharat @2047 represents a comprehensive national framework aimed at transforming India into a fully developed nation by the centenary of its independence. This vision prioritizes economic expansion, technological innovation, industrial growth, digital transformation, infrastructure development, and global competitiveness. However, the realization of these objectives remains deeply intertwined with the country's complex social structure characterized by caste-based hierarchy, class inequality, and unequal distribution of political power.

Despite impressive economic achievements, India continues to experience persistent social and economic disparities. The caste system, deeply embedded in social relations, continues to influence access to education, employment, political participation, and social mobility. Simultaneously, neoliberal economic reforms have intensified class-based inequalities, leading to increasing concentration of wealth and widespread employment insecurity. Political power, although constitutionally democratized, remains disproportionately concentrated among socially and economically dominant groups.

From a political sociology perspective, development cannot be understood merely as a technical or economic process. It is fundamentally a political and social phenomenon shaped by power relations, institutional dynamics, and ideological frameworks. Development policies, governance practices, and resource allocation mechanisms often reflect the interests of dominant social groups, resulting in uneven development outcomes.

This research paper seeks to critically analyze how caste, class, and power function as structural constraints in realizing the vision of Viksit Bharat @2047. By examining the historical roots and contemporary manifestations of inequality, the study aims to contribute to a deeper understanding of inclusive development, democratic participation, and social justice in India.

2. Research Problem

Despite sustained economic growth and extensive policy initiatives, India continues to confront deep-rooted structural inequalities based on caste hierarchy, class stratification, and concentration of political power. Development strategies often prioritize economic efficiency, technological progress, and infrastructural expansion, while concerns related to social justice, redistribution, and democratic inclusion remain secondary.

Marginalized communities, including Scheduled Castes, Scheduled Tribes, Other Backward Classes, informal workers, women, and rural populations, face persistent barriers in accessing quality education, secure employment, healthcare services, political representation, and public resources. As a result, development benefits remain unevenly distributed, reinforcing existing social hierarchies.

The central research problem addressed in this study is:

How do caste, class, and power structures operate as systemic barriers to inclusive development, and what challenges do they pose in achieving the objectives of Viksit Bharat @2047?

The study further explores strategies for promoting social justice, political empowerment, and participatory governance as essential conditions for achieving sustainable and inclusive development.

3. Objectives of the Study

1. To examine the role of caste and class in shaping political power and governance in India.
2. To analyze structural inequalities affecting inclusive development under Viksit Bharat @2047.
3. To assess the impact of political dominance and elite control on development policies.
4. To explore opportunities for social justice, democratic participation, and inclusive growth.
5. To suggest policy measures for equitable and sustainable development.

4. Review of Literature

The interrelationship between caste, class, power, and development has remained a major area of inquiry within sociological and political scholarship, particularly in the Indian context where social stratification continues to influence institutional structures and developmental outcomes. Scholars from diverse theoretical traditions have explored how historically embedded hierarchies, economic disparities, and unequal power relations shape governance processes and access to resources.

Louis Dumont's seminal work *Homo Hierarchicus* conceptualizes caste as a deeply institutionalized hierarchical system organized around the ideological principles of purity and pollution. Dumont argues that caste should not be understood merely as a form of social differentiation but as a comprehensive value system regulating social behavior, occupational roles, and cultural practices. His analysis highlights the ideological foundations of caste and explains how religious and cultural norms contribute to the reproduction of inequality across generations.

M. N. Srinivas, (1966), in his influential book 'Social Change in Modern India' significantly advanced the understanding of caste dynamics by introducing the concepts of **Sanskritization** and the **dominant caste**. Sanskritization refers to the process through which lower caste groups attempt upward social mobility by adopting the customs, rituals, and lifestyles of higher castes. The concept of dominant caste emphasizes the role of numerically strong and economically influential caste groups in shaping local power structures and political processes. Srinivas demonstrated that caste is not a rigid or static institution; rather, it is adaptive and responsive to broader political and economic transformations.

Andre Béteille's (2001), *Caste, Class, and Power: Changing Patterns of Stratification in a Tanjore Village* provides a multidimensional analysis of Indian social stratification. Béteille examines the intersection of caste hierarchy, class formation, and political authority, arguing that modernization has not eradicated traditional inequalities but has instead reshaped them into new forms of dominance. He observes that caste identities increasingly function as instruments of political mobilization and competition for resources, thereby reinforcing disparities within democratic and bureaucratic frameworks.

Satish Deshpande, (2013), in *Sociology in India: Intellectual and Institutional Contexts* critically analyze the persistence of inequality within contemporary Indian society. He argues that caste has evolved into a powerful political category, with identity-based mobilization playing a central role in electoral politics and public policy formation. Complementing this perspective, Jean Dreze and Amartya Sen emphasize that India's growth-driven development strategy has not adequately ensured equitable distribution of opportunities. Their work demonstrates that high economic growth has not consistently translated into improvements in human development indicators such as education, healthcare, nutrition, and social protection.

Antonio Gramsci's *Selections from the Prison Notebooks (1971)* provides a crucial theoretical lens through the concept of **cultural hegemony**, which explains how dominant groups maintain authority through ideological leadership and the creation of social consent. This framework is particularly useful for understanding how development narratives may legitimize elite interests while marginalizing alternative visions centered on redistribution and social justice. Similarly, Michel Foucault's concept of **governmentality** explains how modern states regulate populations through administrative systems, surveillance mechanisms, and knowledge production. His perspective underscores the subtle ways in which governance structures shape citizen behavior and manage developmental processes.

Empirical studies conducted by institutions such as NITI Aayog, Oxfam India, and the World Inequality Database provide quantitative evidence of widening income and wealth disparities, persistent caste-based exclusion, and pronounced regional inequalities. These reports indicate that a relatively small elite controls a substantial proportion of national wealth, while large segments of the population remain vulnerable to poverty, unemployment, and social insecurity. Continuing gaps in education, healthcare access, and digital connectivity further highlight the structural obstacles to inclusive development.

Theoretical insights drawn from Marxist and Weberian traditions offer a broader analytical foundation for interpreting class relations and power structures. Marxist theory emphasizes exploitation, capital accumulation, and systemic inequality embedded within capitalist economies, whereas Weber's multidimensional framework incorporates class, status, and power as distinct yet interconnected sources

of stratification. Within the Indian context, these perspectives help explain how economic liberalization and market-oriented reforms have contributed to increasing class polarization, employment insecurity, and social fragmentation.

Collectively, the existing body of literature demonstrates that caste, class, and power operate as interconnected systems that significantly influence access to resources, political representation, and developmental benefits. The persistence of these structural inequalities suggests that achieving inclusive and sustainable development requires more than economic expansion; it demands transformative reforms grounded in social justice, democratic participation, and equitable governance. Addressing these systemic challenges is therefore essential for realizing the national vision of **Viksit Bharat @2047**.

5. Research Methodology

This study adopts a qualitative, descriptive, and analytical research design grounded in the theoretical framework of political sociology. The research is primarily based on secondary data sources, including:

- Government policy documents and reports related to Viksit Bharat @2047
- Census data and socio-economic surveys
- Reports from NITI Aayog, UNDP, World Bank, and Oxfam
- Academic books, peer-reviewed journals, research articles, and working papers
- Newspaper articles and policy briefs

The data are analyzed using thematic and interpretative methods, focusing on patterns of inequality, power relations, and governance structures. The analytical framework integrates political sociology, critical political economy, and social justice perspectives.

Limitations:

The study relies on secondary data and conceptual analysis, which may limit micro-level empirical insights. However, extensive literature review ensures depth, reliability, and analytical rigor.

6. Historical Context of Caste, Class, and Power in India

6.1 Colonial Legacy

The colonial period fundamentally reshaped India's social and economic structure by institutionalizing caste categories through systematic census operations beginning in 1871. These classifications hardened previously fluid social identities into rigid administrative hierarchies, thereby reinforcing stratification.

Colonial land revenue systems such as the Zamindari and Ryotwari arrangements generated long-term agrarian inequality. Contemporary agricultural data indicate that nearly 86 percent of operational landholdings belong to small and marginal farmers, many cultivating less than two hectares. This pattern reflects the historical concentration of land ownership that began under colonial rule.

Furthermore, estimates suggest that close to 50 percent of Scheduled Caste households remain landless, compared to significantly lower proportions among dominant agrarian communities. From a Marxist standpoint, this represents structural inequality rooted in unequal control over productive assets, while Weberian analysis interprets landownership as a source of both economic class and social status.

6.2 Post-Independence Development

Post-independence India adopted a planned developmental strategy aimed at balancing economic growth with social justice. Affirmative action policies improved representation in education and governance; Scheduled Castes constitute roughly 16–17 percent and Scheduled Tribes about 8–9 percent of India's population, with reserved seats in legislatures reflecting these proportions.

However, disparities remain visible in educational attainment. National data indicate overall literacy above 77 percent, yet literacy among Scheduled Tribes remains near 71 percent, and dropout rates are significantly higher in marginalized communities.

Access to higher education also demonstrates inequality. The Gross Enrollment Ratio in tertiary education has crossed 28 percent nationally, but participation remains lower among historically disadvantaged groups.

Bourdieu's theory of cultural capital helps explain these differences: students from privileged backgrounds benefit from better schooling, linguistic competence, and social networks, allowing them to convert educational credentials into occupational success more effectively.

6.3 Liberalization and New Inequalities

Economic liberalization since 1991 has transformed India into one of the fastest-growing major economies. Yet this growth has been accompanied by rising inequality.

Recent inequality estimates show that:

- The top 10 percent holds about 77 percent of total wealth.
- The top 1 percent alone captures over 20 percent of national income.

Urban households earn, on average, nearly 1.8 times more than rural households, illustrating spatial disparities created by market-driven development.

Weber's concept of "life chances" is particularly relevant here, as access to markets, education, and infrastructure increasingly determines socio-economic mobility.

7. Contemporary Dynamics of Caste, Class, and Power

7.1 Caste-Based Exclusion

Despite legal safeguards, caste continues to influence life outcomes.

- Multidimensional poverty affects roughly one-third of Scheduled Tribe households and over one-fifth of Scheduled Castes.
- Representation of marginalized groups in high-paying formal sector jobs remains disproportionately low.
- Atrocities recorded under the Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act number tens of thousands annually, underscoring continuing social tensions.

These patterns support Bêteille's argument that modernization transforms rather than eliminates caste hierarchy.

7.2 Class Inequality and Economic Polarization

India's economic structure reveals pronounced polarization:

- Nearly 80–85 percent of the workforce is employed in the informal sector.
- Youth unemployment has frequently exceeded 15 percent in recent labour force surveys.

- The bottom half of the population owns less than 6 percent of national wealth.

Such disparities align with Marx's thesis that capitalist expansion often intensifies class divisions.

Additionally, intergenerational mobility remains limited, reinforcing Bourdieu's observation that economic advantage tends to reproduce itself through educational and social capital.

7.3 Concentration of Political Power

While India is the world's largest democracy, political power is unevenly distributed. Election analyses reveal that a substantial majority of elected legislators possess assets far exceeding the national average, suggesting a growing nexus between wealth and political influence. Political dynasties continue to shape leadership trajectories across regions.

Gramsci's concept of hegemony provides insight into this phenomenon, as elite dominance is often normalized through institutions, media narratives, and political culture rather than maintained solely through coercion.

8. Structural Challenges to Viksit Bharat @2047

8.1 Educational Inequality and Digital Divide

Human capital formation remains uneven.

- Only about 37 percent of rural households have internet access.
- Computer availability in rural regions remains below 20 percent.
- Learning outcome surveys show significant gaps between urban and rural students.

The emergence of a digital divide risks creating a new stratification system based on technological access.

8.2 Employment Crisis

India faces the paradox of high growth with insufficient job creation.

- Female labour force participation remains around 25–30 percent, limiting inclusive economic expansion.
- A large share of workers lacks formal contracts or social security benefits.

Automation and platform-based employment further contribute to precarious labour conditions, echoing Marxist concerns about labor commoditization.

8.3 Political Marginalization

Although decentralization policies mandate representation, effective decision-making often remains concentrated among local elites. Studies of rural governance indicate that marginalized representatives sometimes face institutional and social constraints that limit their autonomy.

8.4 Regional Disparities

Per capita income in India's wealthiest states is three to four times higher than in economically weaker states. Health indicators such as infant mortality and malnutrition also vary sharply across regions, complicating the goal of balanced development.

9. Opportunities for Inclusive Transformation

9.1 Constitutional Safeguards

India operates one of the world's largest affirmative action frameworks. Reservation policies have contributed to the expansion of a growing middle class among historically disadvantaged communities.

Poverty rates have declined substantially over the past two decades, demonstrating the potential effectiveness of redistributive policies when properly implemented.

9.2 Democratic Decentralization

Over 3 million elected representatives serve in Panchayati Raj institutions, with a significant proportion being women and members of marginalized communities. This represents one of the largest experiments in grassroots democracy globally.

9.3 Digital Governance

Digital identity initiatives now cover over 90 percent of the population, enabling direct benefit transfers that have improved welfare delivery and reduced leakages.

From a Foucauldian perspective, this expansion reflects both enhanced administrative capacity and the growing regulatory reach of the modern state.

9.4 Civil Society and Social Movements

Civil society organizations continue to influence policy debates on rights, transparency, and environmental justice. Social movements have historically contributed to progressive legislation, including right-to-information frameworks and employment guarantees.

10. Policy Recommendations

Given the statistical trends outlined above, the realization of Viksit Bharat @2047 requires multidimensional policy interventions:

- Expand public investment in education and healthcare to reduce intergenerational inequality.
- Promote labor-intensive manufacturing and strengthen social security to formalize employment.
- Improve digital infrastructure to prevent technological exclusion.
- Enhance political representation through campaign finance reforms and leadership development.
- Implement regionally balanced development strategies targeting historically lagging states.

Inclusive development must combine economic dynamism with redistributive justice to prevent the deepening of structural divides.

11. Conclusion

The empirical evidence clearly indicates that caste hierarchy, class polarization, and unequal political power continue to shape India's developmental trajectory. Rapid economic expansion alone cannot dismantle historically embedded inequalities.

Political sociology reminds us that development is fundamentally about the distribution of resources, opportunities, and decision-making authority. Without structural transformation, the aspiration of Viksit Bharat @2047 risks producing growth that is impressive yet socially uneven.

A genuinely developed India must therefore prioritize equity alongside efficiency, ensuring that modernization enhances dignity, mobility, and democratic participation for all citizens. Only through sustained commitment to social justice, institutional reform, and inclusive governance can the promise of Viksit Bharat @2047 be fully realized.

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Cloud Security Challenges and Solutions for India's Digital Future

Author
Smt. Shital Sandeep Wasamkar
Kamala College, Kolhapur

Co-Author
Smt. Rohini P. Lokare
Kamala College, Kolhapur

Abstract

This paper explores the critical intersection of cloud security and India's goal of becoming a developed nation by 2047. As India transitions to a \$30 trillion economy powered by Digital Public Infrastructure (DPI), the reliance on centralized, often foreign-owned cloud services presents unique existential risks.

India's rapid digitization under initiatives such as Digital India, expanding e-governance, fintech, and healthcare platforms has made cloud computing a foundational technology for public and private sectors. However, large-scale migration to cloud environments introduces complex security, privacy, and regulatory challenges that can undermine trust and resilience in India's digital ecosystem. This paper examines key cloud security challenges in the Indian context, including data sovereignty, insecure interfaces and APIs, insider threats, and shared infrastructure risks. It analyses current policy and regulatory frameworks, such as MeitY's cloud empanelment and data center security guidelines, and evaluates their adequacy for India's evolving digital landscape. The paper then proposes a multi-layered security strategy combining technical controls, governance mechanisms, and capacity-building measures to secure India's cloud infrastructure and support a trusted digital future. This research identifies primary challenges—including "Cloud Colonization," AI-driven adversarial threats, and quantum-decryption risks—and proposes a multi-layered solution framework involving Sovereign Cloud architecture, Post-Quantum Cryptography (PQC), and Zero-Trust AI defense systems.

1. Introduction

India's digital transformation has accelerated due to the proliferation of smartphones, low-cost data, and large-scale platforms such as Aadhaar, UPI, DigiLocker, and various e-governance services. Cloud computing provides elastic resources, cost efficiency, and scalability for these platforms, making it central to Digital India and the broader digital economy. At the same time, dependence on cloud infrastructures raises concerns about cyber threats, unauthorized access, regulatory compliance, and dependence on foreign hyperscale providers. Ensuring robust cloud security is therefore critical not only for protecting citizen data but also for national security and economic sovereignty.

This paper focuses on cloud security issues as they relate to India's digital future, emphasizing government workloads, critical sectors, and regulatory considerations.

2. Cloud Adoption in India's Digital Ecosystem

India's public and private sectors are increasingly hosting applications on cloud platforms for e-governance, financial services, education, healthcare, and e-commerce. Reports indicate that while cloud adoption is growing at an estimated rate of 25–30 percent, concerns around data security, privacy, and regulatory compliance slow adoption in sensitive sectors. Government departments often rely on empaneled cloud service providers (CSPs) that meet security and compliance criteria defined by the **Ministry of Electronics and Information Technology (MeitY)**. Major global providers have obtained MeitY empanelment for regions hosted in India, enabling government and regulated entities to use their services while complying with data residency requirements.

3. Cloud Security Challenges in India

3.1 Data Sovereignty and “Cloud Colonization”

A significant portion of cloud infrastructure used by Indian organizations is operated by foreign hyperscale providers, raising concerns over extraterritorial legal jurisdiction and strategic dependency. The concept of “cloud colonization” highlights risks such as foreign legal access to Indian data, potential “kill switches,” and concentration of critical workloads on non-sovereign platforms. Even when data is stored in Indian regions, organizations must consider cross-border data flows, backup locations, and foreign laws applicable to parent entities of CSPs.

3.2 Insecure APIs and Interfaces

Cloud services are accessed and managed through web-based dashboards, APIs, and management consoles. Weak authentication, poor authorization controls, lack of input validation, and misconfigured API keys can expose cloud resources to unauthorized access and attacks. Since many Indian organizations rapidly migrate to cloud without mature DevSecOps practices, API security is often a weak link.

3.3 Shared Infrastructure and Multi-Tenancy Risks

Cloud service models rely on shared physical infrastructure and virtualization to host multiple tenants on common hardware. Vulnerabilities in hypervisors, misconfigured isolation controls, or side-channel attacks may allow attackers to escape their virtual environment or infer sensitive information from co-resident workloads. For government and critical infrastructure workloads, these risks require careful evaluation of tenancy models, isolation mechanisms, and CSP architecture.

3.4 Insider Threats and Misuse of Privileges

Cloud security is also threatened by malicious insiders, including compromised administrators or employees with excessive privileges within either the CSP or the customer organization. Improper role design, lack of least-privilege access, and missing monitoring of privileged actions increase the risk of data theft or service disruption.

3.5 Denial of Service and Abuse of Cloud Services

Attackers can use distributed denial-of-service (DDoS) attacks to exhaust cloud resources or disrupt access to critical services. Conversely, attackers may also abuse cloud services themselves to host malware, launch attacks, or conduct large-scale scanning. For India’s digital public infrastructure, sustained DDoS attacks can impact essential services such as payments, citizen portals, and public information systems.

4. Policy and Regulatory Landscape in India

4.1 MeitY Cloud Empanelment and Government Cloud

MeitY has established a cloud service provider empanelment process to evaluate CSPs on security, data residency, and other parameters before they can host government workloads. Empaneled CSPs must offer services from Indian data centers and ensure that data ownership resides with the relevant government departments. Some major international providers have obtained empanelment for their India regions and undergo periodic surveillance audits to maintain compliance.

4.2 Best Practices Guidance for Cloud Users

Guidance documents for user departments highlight best practices such as ensuring data residency within India, clarifying data ownership, and relying on empaneled CSPs. They encourage departments to implement robust security policies, enforce compliance with applicable regulations, and conduct regular monitoring and risk assessments. Such guidelines are crucial for smaller agencies and organizations that may lack in-house cloud security expertise.

5. Proposed Solution Framework: The “Bharat Secure Cloud”

5.1 Strong Identity and Access Management

Robust identity and access management (IAM) is a foundational control for securing cloud environments. Recommended measures include multi-factor authentication for all administrative

accounts, role-based access control with least-privilege permissions, periodic access reviews, and centralized identity federation. Implementing privileged access management for high-risk operations and just-in-time access can further reduce the attack surface.

5.2 Encryption and Data Protection

End-to-end encryption for data at rest and in transit is critical to protect sensitive information stored or processed in the cloud. Organizations should adopt strong encryption algorithms, appropriate key lengths, and secure key management practices aligned with industry standards and regulatory requirements. Data lifecycle management policies should define how data is classified, encrypted, backed up, and securely destroyed at the end of its retention period.

5.3 Network Segmentation and Zero Trust Principles

Network segmentation within cloud environments helps isolate sensitive workloads and limit lateral movement by attackers. Implementing virtual private clouds, subnet-level controls, microsegmentation, and least-privilege network security groups aligns with zero trust architecture principles. Under a zero trust approach, access decisions are based on continuous verification of user identity, device posture, and context rather than implicit trust within a perimeter.

5.4 Application Security and API Protection

Secure software development lifecycle (SSDLC) practices, including code reviews, static and dynamic analysis, and regular penetration testing, are essential for cloud-native applications. APIs should use strong authentication and authorization, encrypted communication, and protection against injection, broken access controls, and rate-limiting issues. Web application firewalls and API gateways can provide additional protection against common web and API attacks.

6. Conclusion

The journey to 2047 is as much about protecting data as it is about creating wealth. Without a secure, sovereign cloud, India's digital economy remains a "house built on borrowed land." By adopting a security-first, quantum-ready, and AI-autonomous cloud strategy, India can serve as the global blueprint for democratic digital infrastructure.

Cloud computing is a critical enabler of India's digital future but introduces significant security, privacy, and sovereignty challenges that must be systematically addressed. By combining strong technical controls, robust governance, well-designed regulations, and investments in skills and domestic capacity, India can build a secure and resilient cloud ecosystem for government, businesses, and citizens. A comprehensive, defense-in-depth approach aligned with national priorities will be essential to protect sensitive data, maintain public trust, and safeguard the country's digital infrastructure.

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Music as a Cultural Heritage Helping for Nation Building

Dr.Pooja Narendra Patil
Assistant Professor,
Kamala College, Kolhapur.

E-mail : patilpoojan1986@gmail.com

Mob.9623511762

Nation is a population of an ethnic Unity inhabiting a Territory of Geographic Unity this sentence is said by professor Burges.

But we can say that in the today's scenario we cannot find a single ethnic population situated in specific country. But when we think about Indian society, it seems that India is made up of different religions, different caste, different sub caste, and at the same time with the different ethnicity. Specifically when we think about Indian society it is found that it is the amalgamation of different variety of all the above elements.

We can find variety of food we can find variety of languages, religions, cast sub cast, food habits, dressing style, culture Etc. in Indian society. There are various aspects which are responsible for having one kind of Unity in society. So there is diversity in Indian society related to various aspects there are so many other elements which make our society United.

When we relate our Indian society with the democracy we know that India is the largest democratic country. The various acts that our constitution has provided us are the part of our democracy has given us a power of acting freely.

Our democracy gives us feeling that we all are one. Similar kinds of languages, similar history, similar geography helps donation to build the unity among the people belonging from different areas

As all of we have seen various aspects which are responsible for nation building from those factors the arts which are the important part of our country are also responsible for creating the unity in diversity. Art not only includes music and dance but also various arts forms. When we think about the traditional art forms it includes painting, sculpture, architecture, literature, music, theatre and cinema. And on the other hand contemporary art forms includes digital art and installation art. The traditional art form is more responsible for creating unity in diversity. Each state has its own art forms which are different from each other.

From the all of about art forms music is one of the categories that it always tries to break the boundaries of the countries. Music always try to bind people from different area with its magic. It is said that music don't have any cast or religion. But music has its own soul. The Indian classical music, Karnataka music, Semi classical Music, Light Music or various instruments that are played in all over the India tries to create one kind of peace in the society. The emotions that are created by various artists through their various instruments are responsible for the creation of Unity. When we try to relate the relation of democracy with art forms it is clear that our democracy has given opportunity to each and every individual who belongs from different caste and religion to learn and to present the art that he has learn.

Taking in to account all the above aspects it is clear that we should see towards music as our heritage. The heritage which is very much helpful in creating and maintaining the integrity in our country. We can say that it is the one kind of thread that treys to bind all of us in one kind of bunch, bunch which is made up with diversified nature of our country.

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Inclusive Growth Pathways for Viksit Bharat @2047 : A Review of Sustainable Development Policies.

Sankpal Kranti Dilip

Assistant Professor, Kamala college Kolhapur (Autonomus)

Email: krantisankpal06@gmail.com

Mobile No.: 8605679165

Abstract

India's big plan for **Viksit Bharat 2047** aims to make our country fully developed by the year 2047. The goal is to ensure that every person whether living in a city or a village can live a better life and share in the country's progress. India wants to grow in a way that also protects nature, like our rivers, forests, and clean air.

This review collects ideas from different books, reports, and studies to explain how India can give everyone fair job and education opportunities while also caring for the environment. It looks at old development plans and today's government programs for jobs, schools, and green energy. It also talks about what is working well and what problems still exist like the gap between rich and poor areas and the dangers of climate change.

The review also suggests new topics for future research. It takes examples from NITI Aayog's plans and from the famous Brundtland Report, which is introduced the idea of "sustainable development." The main message is that to make the dream of *Viksit Bharat 2047* come true, everyone the government, businesses, and people needs to work together.

Introduction

Imagine India in 2047: clean cities, active villages full of skilled workers, children everywhere getting good education, and factories using solar energy without polluting the air. This is the dream of **Viksit Bharat @2047** a plan to make India a strong, developed country where everyone benefits and nature stays safe. It means giving jobs and better lives to poor families and protecting rivers, forests, and clean air at the same time. This review explains what India has done so far, how the policies are working, what problems remain, and what can be done next.

Conceptual Foundations

Inclusive growth means not just making the country richer, but also helping everyone farmers, factory workers, and street vendors to earn and live better. It's about fairness, equal chances, and protecting nature. The **Brundtland Report (1987)** introduced the idea of *sustainable development* giving today's people a good life without harming the future generation's chance for the same. For India, this means connecting poverty removal, good jobs, education, and care for the environment in every plan. It's about growing wisely, not just quickly.

Policy Evolution

India's early plans mainly focused on increasing GDP, but many poor people were left behind. Later, the **Eleventh and Twelfth Five-Year Plans (2007–2017)** focused on "growth for all." They worked to improve schools for girls, health centers in villages, and roads in rural areas. After 2014, many big programs started:

Swachh Bharat Mission built toilets and promoted cleanliness.

NRLM helped women form self-help groups and earn through small businesses.

Skill India and **Make in India** trained youth for modern jobs.

PMAY provided homes to poor families.

Smart Cities Mission improved cities with clean buses and waste management.

All these are part of NITI Aayog's larger vision to make India grow fairly and equally.

Human Capital Pathways

A strong country needs educated and healthy people. Education and health together make "human capital." Studies show that good schooling helps children earn more and live better lives later. The **National Education Policy (NEP) 2020** promotes fun and practical learning and aims to have half of all young people in college by 2035. It also supports learning in local languages to help rural students.

In health, **Ayushman Bharat** provides free hospital treatment to poor families and has saved many lives during floods and heat waves. Every rupee spent on education and health gives back many times in future income and taxes. However, rural schools still lack quality, so improving them remains a key goal.

Employment and Livelihood Strategies

Jobs are not just for earning they give people confidence and stability. To create good jobs, skills must match new needs like technology, green energy, and care services. Small businesses (MSMEs) get support through loans and tax benefits. Farmers are learning to use better seeds and drip irrigation to increase income and save water.

Still, job growth is slow even when GDP rises. Many new jobs are informal or low-paying. The **MGNREGA** scheme gives 100 days of work a year to rural families by building ponds, roads, and planting trees, but it faces issues like late payments. The solution is to connect skill training with real job demand and promote small rural businesses.

Social Protection Mechanisms

Poor and weak groups like widows, daily workers, and tribal families need protection during hard times. Schemes like **PDS** provide low-cost food grains, and **DBT (Direct Benefit Transfer)** sends money directly to people's bank accounts to reduce corruption. **Ayushman Bharat** health cards cover costly medical treatments for poor families.

These programs have helped millions, but some people who need help still miss out. Many informal workers also don't get full benefits. Better data and stronger systems can make these safety nets more effective and fair

Environmental Integration

Development must go hand in hand with protecting nature. Climate change causes floods, heat waves, and droughts that hurt farmers and cities alike. India plans to reach **net-zero emissions by 2070** and has set a target of producing **500 GW of clean energy** from solar and wind power. Programs like **NAPCC (National Action Plan on Climate Change)** promote renewable energy, green buildings, and eco-friendly farming.

States like Kerala and Punjab are creating local green solutions such as protecting mangroves and using solar pumps. However, better coordination between departments can make these efforts faster and stronger.

Regional and Sectoral Views

India has both bright, developed cities and rural areas that still struggle with roads, water, and electricity. The goal is to reduce this gap. Broadband internet, hostels for girls, and better transport are helping villages grow.

Women's participation in work is still low due to safety issues and lack of childcare, so programs providing loans, crèches, and equal opportunities are important. Digital tools like **e-NAM** connect farmers to buyers, and **UPI** supports easy online payments, but digital literacy must improve to reach everyone.

Effectiveness Assessment

Many programs have shown progress. Direct cash transfers have reduced poverty, and MGNREGA provides work for about 50 million families each year. India's **SDG (Sustainable Development Goals)** score is improving, especially in no hunger and clean energy. But not all states are equal Kerala performs well, while Bihar and others lag behind. Plans must be adapted to local needs instead of one model for all.

Key Challenges

Despite progress, problems remain: the gap between rich and poor is still large, informal jobs are unstable, and many young people lack skills. Climate change continues to threaten crops and health. Weak coordination between central and state governments and poor data tracking also slow down progress. Stronger institutions and transparent systems are needed to fix these issues.

Research Gaps and Directions

More detailed studies are needed on how digital apps and green jobs actually help inclusion. Long-term studies should track how programs perform over time. Researchers should focus on combining job creation with environmental care and understand how businesses and citizens can work together for sustainable growth.

Forward Pathways

India will truly become *Viksit Bharat* when its people themselves become the drivers of growth. Education, innovation, and entrepreneurship will create a positive cycle of progress. Public-private partnerships can build clean energy and infrastructure, and investment in Indian research will reduce dependence on imports.

By keeping an 8% annual growth rate that is fair and eco-friendly, India can reach its dream of becoming a developed and sustainable nation by **2047** a model for the whole world.

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भविष्यातील भारतामधील वस्त्रउद्योग, खरेदी आणि मानक आकार प्रणाली : एक अभ्यास

प्रा.भारती मुडे
कमला कॉलेज, कोल्हापूर.

सारांश (Abstract)

भारत हा जगातील एक महत्त्वाचा वस्त्रनिर्मिती देश आहे. बदलती जीवनशैली, वाढता रेडीमेड वस्त्रांचा वापर आणि ई-कॉमर्सच्या वाढीमुळे स्टॅंडर्ड साईज सिस्टीमचे महत्त्व अधिक वाढले आहे. या संशोधन पेपरमध्ये भारतीय वस्त्र उद्योगातील विद्यमान साईज प्रणाली, त्यातील त्रुटी, ग्राहकांच्या गरजा आणि भविष्यात आवश्यक असलेल्या मानकीकृत साईज पद्धतीचा अभ्यास करण्यात आला आहे.

मुख्य शब्द :- वस्त्रउद्योगफॅशन उद्योग, कॉमर्स-ई, भारतीय ग्राहक, मानक आकारप्रणाली,

प्रस्तावना

भारत हा प्राचीन काळापासून वस्त्रनिर्मितीसाठी प्रसिद्ध आहे. हातमाग, हस्तकला ते आधुनिक यंत्रमाग असा या उद्योगाचा प्रवास झाला आहे. सध्या डिजिटल युगात वस्त्रउद्योग केवळ उत्पादनापुरता मर्यादित न राहता ई-कॉमर्स प्लॅटफॉर्मद्वारे थेट ग्राहकांपर्यंत पोहोचत आहे.

ऑनलाईन खरेदीमुळे वेळ, पर्यायांची विविधता आणि सुलभता मिळत असली तरी वस्त्रांच्या आकाराशी संबंधित अडचणी अजूनही कायम आहेत. त्यामुळे मानक आकारप्रणालीचा प्रश्न भविष्यात अधिक महत्त्वाचा ठरणार आहे. आपल्या भारतातील वस्त्रोद्योग हा कृषी क्षेत्रानंतर सर्वाधिक रोजगार देणारा उद्योग आहे. परंपरागत हस्तकला, हातमाग आणि आधुनिक यंत्रमाग उद्योग यांचे अनोखे मिश्रण भारतात आढळते. बदलत्या जागतिक बाजारपेठेत स्पर्धा टिकवण्यासाठी तांत्रिक आधुनिकीकरण आणि मानकीकरण आवश्यक झाले आहे. ऑनलाईन खरेदीत वाढ झाल्याने 'फिट' आणि 'साइज' संबंधित समस्या वाढल्या आहेत. वेगवेगळ्या ब्रँड्समध्ये आकारातील फरक असल्याने ग्राहकांमध्ये संभ्रम निर्माण होतो. त्यामुळे एकसमान राष्ट्रीय मानक आकार प्रणालीची आवश्यकता निर्माण झाली आहे.

भारतीय वस्त्र उद्योग हा देशाच्या अर्थव्यवस्थेचा एक महत्त्वाचा घटक आहे. पारंपरिक शिवणकामापासून आधुनिक रेडीमेड वस्त्रांपर्यंत या उद्योगाने मोठी वाटचाल केली आहे. मात्र भारतातील विविध शारीरिक रचना, प्रदेशानुसार फरक आणि आंतरराष्ट्रीय साईज सिस्टीमचा अंधानुकरण यामुळे योग्य फिटिंगचा प्रश्न निर्माण झाला आहे. त्यामुळे भविष्यात एक सुसंगत आणि भारतीय शरीररचनेवर आधारित स्टॅंडर्ड मापन पद्धती आवश्यक आहे.

संशोधनाचा उद्देश

1. भारतीय वस्त्र उद्योगातील विद्यमान स्टॅंडर्ड साईज सिस्टीमचा अभ्यास करणे.
2. ग्राहकांच्या फिटिंगविषयीच्या समस्या ओळखणे
3. भारतीय शरीररचनेवर आधारित साईज सिस्टीमची गरज तपासणे.

संशोधन पद्धती

1. दुय्यम माहितीचा (Secondary Data) वापर
2. उपलब्ध संशोधन लेख, अहवाल आणि निरीक्षणांचा अभ्यास

3. ग्राहकांच्या अनुभवांचे विश्लेषण.

माहितीचे विश्लेषण

भारतीय वस्त्रउद्योगामध्ये कापूस, रेशीम, लोकरी तसेच कृत्रिम तंतूंचा मोठ्या प्रमाणावर वापर होतो. हा उद्योग ग्रामीण आणि शहरी रोजगारनिर्मितीसाठी महत्वाचा आहे. सध्या अनेक भारतीय ब्रँड्स आंतरराष्ट्रीय बाजारपेठेत प्रवेश करत आहेत. मात्र, आंतरराष्ट्रीय मानकांशी सुसंगत आकारप्रणाली नसणे ही एक अडचण आहे.

आज भारतात मोठ्या प्रमाणावर रेडीमेड कपड्यांचे उत्पादन होत आहे. फॅशन ब्रँड्स, मॉल संस्कृती आणि ऑनलाईन खरेदीमुळे ग्राहकांची अपेक्षा वाढली आहे. मात्र विविध ब्रँड्समध्ये साईजिंगमध्ये एकसारखेपणा नसल्यामुळे ग्राहक संभ्रमात पडत आहे.

मानक आकार प्रणाली -

मानक आकारप्रणाली म्हणजे वस्त्र निर्मिती उद्योगात वापरले जाणारे अशी पद्धत त्यामध्ये शरीराचा सरासरी मापावर आधारित विविध आकार ठरवले जातात. मानक आकार प्रणाली म्हणजे लोकसंख्येच्या सरासरी शरीर मापावर आधारित निश्चित केलेली मापाची रचना. या मापाचा उपयोग करून विविध आकाराचे कपडे तयार केले जातात. या प्रणालीमुळे रेडीमेड कपडे मोठ्या प्रमाणावर तयार करणे सोपे होते. विशिष्ट मोजमापांवर आधारित वस्त्रांचे वर्गीकरण .उदा .Small, Medium, Large इ .

भारतीय साईज सिस्टीममधील समस्या

- विविध ब्रँड्समध्ये साईजचा फरक
- भारतीय शरीररचनेवर आधारित डेटा अभाव
- ग्राहक असमाधान
- परताव्याचे (Return) वाढते प्रमाण
- ग्रामीण व शहरी लोकसंख्येतील शारीरिक फरक

भविष्यातील गरज आणि संधी

भविष्यात भारतासाठी स्वतंत्र स्टॅंडर्ड साईज सिस्टीम विकसित करणे आवश्यक आहे. 3D बॉडी स्कॅनिंग, आर्टिफिशियल इंटेलिजन्स, आणि डेटा अॅनालिसिसच्या मदतीने अचूक मोजमाप प्रणाली विकसित करता येईल. यामुळे ग्राहक समाधान वाढेल, उत्पादन खर्च कमी होईल आणि आंतरराष्ट्रीय बाजारात स्पर्धात्मकता वाढेल.

आव्हाने

- लघु व मध्यम उद्योगांचे तांत्रिक मर्यादा
- खर्चिक तंत्रज्ञान
- ग्राहक जागरूकतेचा अभाव
- विविध हवामान व सांस्कृतिक पोशाख पद्धती

उपाययोजना

1. BIS (भारतीय मानक ब्युरो) मार्फत राष्ट्रीय साईज चार्ट विकसित करणे
2. उद्योग व शैक्षणिक संस्थांचा समन्वय

3. 3D अँथ्रोपोमेट्रिक सर्वेक्षण
4. MSME साठी अनुदान योजना
5. ग्राहक शिक्षण मोहिमा

निष्कर्ष

भारतातील वस्त्रोद्योग भविष्यकाळात अधिक तांत्रिक, डिजिटल आणि ग्राहककेंद्रित होणार आहे. ऑनलाइन खरेदीच्या वाढत्या प्रवाहामुळे मानक आकार प्रणाली अत्यंत आवश्यक ठरणार आहे. राष्ट्रीय पातळीवर एकसमान साइज प्रणाली विकसित केल्यास ग्राहक समाधान, उत्पादन कार्यक्षमता आणि निर्यात क्षमता यामध्ये मोठी वाढ होऊ शकते. भारतीय शरीररचना, हवामान आणि जीवनशैली लक्षात घेऊन विकसित केलेली मानकीकृत साइज प्रणाली भविष्यात वस्त्र उद्योगाला नवीन दिशा देऊ शकते.

संदर्भ :

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- २) तांत्रिक वस्त्रोद्योगविषयक सरकारी प्रकाशने
- ३) आधुनिक शिवणशास्त्र आधुनिक कपडे :, भाग १)V2) – काझरपकर .रा .
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- ६) वस्त्रशास्त्र परिचय – इंदिरा खडसे, हिमालय बुक्स प्रा.लि ., मुंबई, २००७



From Reactive Compliance to Proactive Resilience : Evaluating the Transition of India's Cybersecurity Frameworks toward Zero Trust (2022–2026)

Smt. Rohini Prabhakar Lokare
Asst. Professor, Department of BCA,
Kamala College, Kolhapur

Smt. Shital Sandeep Wasamkar
Asst. Professor, Department of BCA,
Kamala College, Kolhapur

ABSTRACT

India's cybersecurity frameworks have undergone significant evolution between 2022 and 2026 due to rapid digitization, increasing cybercrime, and expanding digital public infrastructure. Earlier cybersecurity governance models were largely compliance-driven, focusing on legal adherence and reactive incident handling. However, the growing frequency of ransomware attacks, data breaches, and identity-based fraud has forced policymakers and organizations to shift toward proactive resilience. This research paper evaluates India's cybersecurity transformation during 2022–2026, focusing on the adoption of Zero Trust principles. The study reviews major regulatory reforms such as CERT-In cyber incident reporting directives, the Digital Personal Data Protection Act (DPDP Act), national cybercrime coordination mechanisms, and critical infrastructure protection strategies. The paper further examines how Zero Trust principles—continuous verification, least privilege access, micro-segmentation, and real-time monitoring—are being incorporated into India's cybersecurity ecosystem. A comparative policy analysis table is included to highlight the transition. The study concludes that while India has not fully implemented Zero Trust architecture nationwide, the frameworks during 2022–2026 demonstrate a clear movement toward resilience-based cybersecurity governance. The paper recommends a structured national Zero Trust roadmap, enhanced skills development, improved public-private collaboration, and stronger privacy-aligned enforcement mechanisms.

Keywords: Cybersecurity, Zero Trust Architecture, Cyber Resilience, CERT-In, DPDP Act, India, Cyber Governance, Risk Management

I. INTRODUCTION

Cybersecurity is no longer only a technical issue; it has become a national security and economic priority. Modern societies depend heavily on digital systems for banking, healthcare, education, defense, governance, and communication. India, as one of the fastest-growing digital economies, has achieved rapid progress in digital governance and public digital infrastructure. Systems such as Aadhaar authentication, Unified Payments Interface (UPI), DigiLocker, and e-governance platforms have enabled citizens to access services more efficiently. However, this expansion has also created new vulnerabilities, increasing India's exposure to cyberattacks.

Between 2022 and 2026, India faced increasing cyber threats such as phishing, ransomware, distributed denial of service (DDoS) attacks, and data breaches. Such threats have shown that traditional cybersecurity frameworks based on perimeter defense and compliance checklists are not sufficient. Compliance ensures minimum security measures, but it does not guarantee the ability to detect, prevent, and recover from sophisticated attacks. Therefore, cybersecurity governance has started shifting toward proactive resilience, which includes real-time monitoring, incident response preparedness, continuous improvement, and adaptive security strategies.

A key global trend influencing this transition is the adoption of Zero Trust Architecture (ZTA). Zero Trust is based on the assumption that no entity inside or outside a network should be trusted automatically. Instead, every access request must be verified continuously. This approach is especially relevant in cloud environments, hybrid work culture, and large-scale distributed networks.

This paper examines India's transition from reactive compliance to proactive resilience in cybersecurity frameworks between 2022 and 2026, focusing on policy reforms, institutional changes, and emerging Zero Trust alignment.

II. OBJECTIVES OF THE STUDY

The objectives of this research paper are:

1. To analyze India's cybersecurity governance structure during 2022–2026.
2. To identify major regulatory and institutional changes during this period.
3. To evaluate how far India's cybersecurity frameworks reflect Zero Trust principles.
4. To compare compliance-driven approaches with resilience-driven approaches through policy analysis.
5. To provide recommendations for strengthening India's Zero Trust adoption and cyber resilience.

III. RESEARCH METHODOLOGY

This study uses a qualitative research methodology based on secondary data. Government documents, regulatory notifications, policy papers, and credible industry reports were reviewed. The analysis includes legal and regulatory instruments such as the CERT-In directions (2022), the Digital Personal Data Protection Act (2023), and national cybercrime initiatives.

The paper applies comparative evaluation of cybersecurity frameworks by mapping India's cybersecurity reforms against major Zero Trust principles such as identity verification, least privilege, continuous monitoring, and incident response readiness.

IV. THEORETICAL FRAMEWORK

A. Reactive Compliance Model

Reactive compliance is a security approach where organizations focus on meeting minimum legal requirements and responding after incidents occur. In such models, cybersecurity is often treated as a routine audit process rather than a continuous security strategy.

B. Proactive Resilience Model

Cyber resilience refers to an organization's ability to prepare for, respond to, recover from, and adapt to cyberattacks.

C. Zero Trust Architecture (ZTA)

Zero Trust is a cybersecurity model based on the idea that trust should not be assumed. It treats every user and device as potentially compromised. The major principles include continuous verification, least privilege access, micro-segmentation, strong identity and access management, and real-time monitoring and analytics.

V. CYBERSECURITY LANDSCAPE IN INDIA (2022–2026)

India's digital ecosystem expanded significantly during 2022–2026. Online payments and digital identity services became common for daily transactions. While this improved accessibility, it also increased cyber fraud and identity theft. The rise in digital transactions resulted in a larger attack surface.

Cybercrime, especially financial fraud through phishing and fake applications, increased rapidly. The Government of India strengthened the National Cybercrime Reporting Portal and introduced the cyber fraud helpline number 1930 to assist citizens (I4C, 2024).

India also faced concerns about state-sponsored cyberattacks targeting defense and critical infrastructure. Such threats require proactive security strategies because damage to power grids, telecom networks, and financial systems can disrupt national stability.

VI. MAJOR POLICY AND REGULATORY DEVELOPMENTS (2022–2026)

A. CERT-In Directions (2022)

CERT-In issued mandatory directions requiring organizations to report cybersecurity incidents within specified timeframes. It also mandated log retention for 180 days (CERT-In, 2022).

B. Digital Personal Data Protection Act (2023)

The DPDP Act established a structured legal framework for personal data protection in India, emphasizing consent, accountability, and penalties for breaches (Government of India, 2023).

C. Strengthening Cybercrime Reporting and I4C

I4C strengthened national coordination mechanisms for cybercrime investigation and response (I4C, 2024).

D. Critical Infrastructure Protection (NCIIPC)

NCIIPC has worked to secure critical infrastructure sectors such as banking, telecom, and power (NCIIPC, 2023).

VII. POLICY COMPARISON TABLE (2022–2026)

Table 1 provides a comparative evaluation of major policies and initiatives and their alignment with compliance, resilience, and Zero Trust principles.

VIII. EVALUATING INDIA'S TRANSITION TOWARD ZERO TRUST

India's transition toward Zero Trust is visible through identity-based access systems, least privilege practices, and continuous monitoring requirements. CERT-In's log retention requirements support monitoring and forensic readiness (CERT-In, 2022). The DPDP Act pushes organizations toward stronger data security safeguards (Government of India, 2023). NCIIPC frameworks encourage segmentation and strict access controls for critical infrastructure (NCIIPC, 2023).

IX. CHALLENGES IN IMPLEMENTING ZERO TRUST IN INDIA

Key challenges include cybersecurity skills shortages (Cisco, 2024), legacy infrastructure constraints, high implementation costs, and privacy-security concerns. Balancing security monitoring with privacy rights remains a sensitive issue under the DPDP Act.

X. RECOMMENDATIONS

India should develop a national Zero Trust roadmap, strengthen cybersecurity workforce development, enhance public-private collaboration, support SMEs with affordable security solutions, and ensure privacy-aligned enforcement mechanisms.

XI. CONCLUSION

India's cybersecurity frameworks between 2022 and 2026 demonstrate a shift from reactive compliance to proactive resilience. Although Zero Trust is not yet fully adopted as a national standard, its key principles are increasingly reflected in regulations and organizational practices. Future progress will depend on skills development, modernization of infrastructure, and harmonized policy enforcement.

**Table 1: Comparison of India's Cybersecurity Frameworks
(Compliance vs Resilience and Zero Trust Alignment)**

Policy / Initiative	Year	Main Focus	Compliance Orientation	Resilience Orientation	Zero Trust Alignment
CERT-In Directions	2022	Incident reporting, log retention	High	Moderate to High	Supports monitoring and verification
DPDP Act	2023	Data protection and accountability	High	Moderate	Supports identity and access control
National Cybercrime Reporting Portal	2022–2026	Citizen reporting and coordination	Moderate	High	Indirect (supports detection/response)
I4C Cyber Fraud Helpline 1930	2023–2026	Fraud prevention and response	Low	High	Indirect (response readiness)
NCIIPC Framework	Ongoing	Critical infrastructure security	Moderate	High	Supports segmentation and access control
State SOC Initiatives	2024–2026	Real-time monitoring	Low	High	Supports continuous monitoring

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A Study of Indian Cinema's Cultural and Social Function as a Catalyst for National Development and Consciousness

Maneshkumar Natthusing Chavhan

Assistant Professor, Department of English,
Kamala College, Kolhapur.

Abstract

The paper examines how cinema, with an emphasis on the Indian film industry, shapes national identity, public perception, and development discourse as a powerful socio cultural force. It makes the case that movies serve as a public pedagogy that shapes ideas of citizenship, social justice, and communal desire in addition to being an entertainment medium by drawing on frameworks from media studies, postcolonial theory, and developmental sociology. The study demonstrates how Indian cinema has reflected, challenged, and advanced India's developmental journey from colonial periods to the digital age through textual analysis, historical survey, and theoretical synthesis. The study comes to the conclusion that, although being under-theorized, cinema plays a crucial role in the endeavor of national development because of its emotive and integrative potential.

Keywords : Bollywood, postcolonial media, cultural studies, public pedagogy, development communication, Indian cinema, national identity, and social transformation.

1. Introduction

As a mass cultural medium, cinema occupies a special place in the ecology of the national imagination. It has evolved as a place where modernity, tradition, and developmental goals are constantly debated in postcolonial countries such as India. This study suggests that cinema is a cultural force that shapes souls, to use the metaphorical phrase, by creating and distributing stories that affect how people view their place in the country's growth.

Many studies have methodically looked at Indian cinema's function as a catalyst for developmental consciousness, despite the fact that previous research has addressed the political economy, star systems, and representation politics of the genre. By examining how films, across genres and regional sectors, address topics of social reform, economic justice, environmental sustainability, and human rights all important pillars of the UN Sustainable Development Goals (SDGs), this article seeks to close that gap.

2. The objectives of Research

- To explore Indian cinema as a tool for national consciousness building and public education.
- To analyze the ways in which movies both influence and reflect discussions about social and economic advancement.
- To investigate how regional films might broaden developmental narratives outside of conventional frameworks.
- To evaluate the role that movies play in discussions on gender, caste, the environment, and government.
- To assess the film's transformative power and constraints as a national development catalyst.
- To understand how the democratization of development narratives is impacted by digital streaming platforms.

3. Literature Review

Nationalism, representation, and political economics have been the main topics of study in Indian cinema. A common framework in film studies is Benedict Anderson's (1983) concept of nations as "imagined communities." Stuart Hall (1997) highlighted how meaning is created through representation, which affects how movie stories are interpreted. The ideas of critical and public pedagogy were first presented by Paulo Freire in 1970 and Henry Giroux in 2011, who framed media as educational venues outside of official institutions. In order to explain the worldwide circulation of images, Arjun Appadurai (1996) developed the theory of "mediascapes."

In their 2015 contribution to development communication theory, Srinivas R. Melkote and H. Leslie Steeves argued in favor of participatory media models in social transformation. Nonetheless, there are comparatively few studies that consistently link Indian cinema to the discussion of development.

4. Methods of Research

The research methodology used in this study is qualitative and interpretive. A few chosen films have been analysed under textual analysis. This study closely examines the text to look at its ideological positioning, symbolism, character depiction, and narrative structures. In historical Analysis, Indian film is periodized to follow themes of progress across time. The application of frameworks from public pedagogy, development communication, postcolonial theory, and cultural studies is known as theoretical synthesis. The study involves case study method to analyse movies such as *Swades*, *Article 15*, *Jai Bhim* and *Sairat*. Scholarly books, journal articles, interviews, and policy papers are among the secondary materials used in this study. It excludes empirical fieldwork and primary audience surveys, which are still topics for further study.

5. Significance of the Study

This work bridges the gap between development studies and cinema studies, advancing interdisciplinary scholarship. It reframes cinema as an active contributor to the development of civic engagement, democratic consciousness, and national development discourse, rather than only as a kind of entertainment or cultural creation.

It also offers a framework for how media academics, educators, and legislators might incorporate movies into conversations about public awareness and sustainable development.

6. Film as Public Education

The analysis is based on cultural studies (Hall, 1997) and critical pedagogy (Freire, 1970), which see cultural texts as educational resources that shape social norms and civic values. Particularly pertinent is Giroux's (2011) idea of "public pedagogy," which holds that cultural mediums such as film teach people about morality, citizenship, and historical memory outside of official educational institutions.

Furthermore, we can better comprehend how cinematic images travel throughout national and international flows, influencing communal ambitions, by using Appadurai's (1996) concept of the "mediascape." This approach, when combined with development communication theory (Melkote & Steeves, 2015), enables us to view movies as a medium for spreading development messages, even though they are frequently incorporated into entertainment stories.

7. Indian Cinema's Historical Eras and Development Storylines

This study examines Indian Cinema as Social Reform in Pre-Independence and Early Independence. Films like *Achhut Kanya* (1936) and *Duniya Na Mane* (1937) addressed caste and female discrimination in accordance with the social reform movements of the time. This stage established cinema's role as a moral commentator by using melodrama to encourage progressive change. This study also analyses Golden Age & Parallel Cinema in Realism and Nation-Building. During the post-

independence era, filmmakers like Satyajit Ray, Ritwik Ghatak, and Bimal Roy created films that tackled issues like poverty, relocation, and the achievements and shortcomings of the new nation-state. In movies like *Do Bigha Zamin* (1953) and *Pather Panchali* (1955), which presented development as a real human struggle rather than an abstract policy, agrarian crises, urban migration, and educational access were emphasized. Stories of "angry young men," which mirrored the public's discontent with unemployment, corruption, and governance, were a common theme in mainstream Hindi cinema, especially throughout the 1970s and 1990s. By creating an imagined community that transcended linguistic and geographical boundaries, it also promoted national integration through patriotic themes and family sagas (Anderson, 1983). New Wave and Issue-Based Film (2000s–Present) Today's Indian films, both independent and mainstream, increasingly tackle specific developmental issues such as Women's strength in movie *Pink* (2016) and *Thappad* (2020) has been highlighted While in Rural development and brain drain has been discussed in *Swades* (2004). *Kadvi Hawa* (2017) explores Environmental justice: *Paani* (proposed). Mental well-being has been analysed in *Dear Zindagi* (2016). Caste and inequality has been critically examined in the movies such as *Article 15* (2019), *Jai Bhim* (2021). These movies frequently provoke public discussion and, occasionally, policy attention, showcasing the ability of cinema to establish agendas.

8. Regional Films:

Broadening the Conversation on Development

Bollywood frequently lacks the complex, location-specific tales that India's regional cinema industries have to offer. Malayalam cinema: Within the framework of Kerala's development, films such as *Kumbalangi Nights* (2019) and *Great Indian Kitchen* (2021) challenge patriarchy and environmental ethics.

Tamil films *Asuran* (2019) and *Jai Bhim* (2021) emphasize land rights and caste violence. Marathi films: *Sairat* (2016) and *Fandry* (2013) deal realistically with caste and honor killings. *Village Rockstars* (2017), an Assamese film, depicts the aspirations of rural children in the face of material scarcity. By bringing attention to issues that are unique to a certain location and culture, these regional narratives enhance the national development conversation.

9. Influence Mechanisms: How Film Affects Awareness

Building Empathy and Affective Engagement The emotional resonance of films allows viewers to empathize with the experiences of marginalized populations, which is necessary for pro-social development initiatives (Nussbaum, 2010).

Developing Norms and Behavioral Models According to Bandura's social learning theory, progressive behaviors such as mutual consent in relationships, environmental stewardship, or rejecting corruption can be modeled by characters and story resolutions, which may gradually change society norms. **Establishing a Common Symbolic Language** Movies produce words, characters, and events that serve as cultural benchmarks in public discourse, enabling complicated topics to be discussed in casual settings (e.g., *Toilet: Ek Prem Katha*, 2017 invokes "Swachh Bharat" through toilet-use storylines). **Evaluating Development Theories** Movies like *Newton* (2017) and *Ship of Theseus* (2012) challenge ethical universalism and top-down growth, provoking audiences to consider what "progress" means.

10. Analysis of Case Studies

Swades (2004) : Civic Responsibility, Brain Drain, and Rural Electrification Village electrification, water management, education, and the predicament of non-resident Indians are among the development subjects that are specifically addressed in this movie. It encourages qualified professionals to support grassroots change by framing development as a local, participatory process as opposed to a state-led

intervention. The protagonist's path reflects a change from disengaged nationalism to active citizenship. Caste, Justice, and Institutional Failure (Article 15, 2019) The movie, which was inspired by actual events, reveals how caste oppression obstructs fair development. Ambedkar's query, "For whom is the Constitution?" is visualized, and administrative integrity is positioned as being essential to social justice. Nationwide discussions on caste-based discrimination in the workplace and in education were spurred by its publication.

11. Difficulties and Restrictions

Cinema has many limitations as a developmental force, despite its potential: Social issues are frequently sensationalized or diluted by commercial imperatives. There are major disparities in representation; Adivasi, Dalit, and Northeast Indian stories are still overshadowed by dominant caste/class viewpoints. When complicated subjects are simplified for dramatic effect, the audience may be misinformed. Cinema could become propaganda instead of a critical medium if it is co-opted by political agendas.

12. The Digital Revolution: Streaming Platforms and New Narratives

With the rise of OTT (Over-The-Top) platforms, anyone may now produce and watch content, allowing: Niche storylines (like Made in Heaven's exploration of LGBTQ+ rights, class, and tradition) Using regional stories to reach a national audience Experimenting with form and subject matter outside of the commercial and censorship limitations of theatrical distributio .This digital shift may increase the role of cinema in the development discussion, but it also raises concerns about digital inequality and algorithmic curation.

Conclusion

Moving Toward a Sustainable Development Film. This essay makes the case that Indian film, in all of its diverse regional and linguistic manifestations, has played a vital role in the country's growth and still does. It actively creates civic and moral imaginations in addition to reflecting social reality. Recognizing cinema's teaching potential requires governments, educators, and civic society to take film seriously—not only as entertainment, but as a cultural archive of critiques and ambitions for improvement.

Future studies could compare the function of Indian cinema with that of other postcolonial film industries or use audience studies to experimentally quantify the impact of cinema on development attitudes. For better or worse, India's cinematic narratives will surely influence the country's spirit as it progresses toward Agenda 2030.

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AI In Higher Education

Dr.Amarveli Balasaheb Patil

Department of Economics,
Venutai Chavan College, Karad,
Tal- Karad, Dist-Satara. Mob.Number 9112363954

Abstract

The Indian economy world has success of the states is directly determined by their education systems. Education is over all Nation's Strength. A developed and under developed nation is inevitably an educated nation. Indian higher education system is the third largest in the world, next to the United States and China. Although there have been lot of challenges to higher education system of India but equally have lot of opportunities to overcome these challenges and to make higher education system much better. It needs greater transparency and accountability, the important needs of colleges and universities in the new millennium, and emerging scientific research on how people learn is of utmost important. Country need well skilled and highly educated people who can drive our economy forward. India provides highly skilled people to other countries therefore; it is very easy for India to transfer our country from a developing nation to a developed nation. The current study targets to highlight the challenges and to point out the opportunities in higher education system in India.

Keywords: Education, Opportunities, Challenges, Colleges, Universities

Introduction:-

AI (Artificial Intelligence) is speedily transforming higher education. New shaping how the different institutions teach, manage academic working activities, new research, uses machine learning, processing natural languages, automations, data analytics. They are to give new opportunities to much individualization learning experiences improved student attitude and increased capacity of institutional efficiency, colleges and universities enhanced integrating AI-driven tools i.e.chatbotes, adaptive learning platforms, intelligent tutoring methods, automatic grading systems to need the diverse of teachers and students.

AI also important role in advancing research capabilities, data analysis in complex scientific studies to expanding new insights across disciplines. AI optimizing resource allocation. They are supports decision- making in higher education administration by future predicting enrollment trends. Its also increases ethical concerns around data privacy equity of access. Making its needs for educators and policy make to approach its implementation responsibility.

As AI result in higher education is not only a new digital technological evolution but also a socio- cultural shift recharge's the roles of educator's learners and institutions is rapidly changing digital era.

Objective of Study:

1. To study analysis the integration of AI in higher education.
2. To identify AI application for teaching and learning.
3. To study the assess the impact of AI on academic administration
4. To AIs evaluate contribution to research and innovation.
5. To identify challenges and opportunities in higher education.

Review of Literature:

1. A systematic literature review emphasizes the critical importance of AI literacy for students understanding AI its functions, and ethical use. The importance of literacy on Artificial intelligence for the higher education students: A systematic literature review international journal of advances in data and information systems.

2. "Generative artificial intelligence AI in higher education comprehensive review of challenges , opportunities and implication".(2024) Bobula –focuses on generative AI GAI, mapping recent empirical research ,ethical challenges assessment integrity and policy needs

3. Potential Societal Biases of Chat GPT in higher education: A Scoping review (2023)- Explores the limited current discourse on societal biases in GAI ,especially in non-English humanities and Social contexts calling for more empirical investigation.

4. Luckin et al (2016) While specific references for India are scattered their work is referenced in various studies concerning AI in education.

5. "Ethical and practical challenges of large language models in education :A systematic scoping review"(2023)this study summarizes 118 peer- reviewed papers (2017 onward)and identifies key concerns like digital technology, readiness, privacy etc.to give details.

2. Research Methodology

The study to investigate the role of mixed methods applications and impact of the AI the methodology integrates both qualitative and quantitative techniques AI driven practice says tools challenges in an academic institutions

1. Research design

Exploratory and descriptive research design is used the explorer components examines the opportunity future potential barriers teaching learning the descriptive focuses on identifying current AI applications that is grading chart boards learning platform

2. Populations and sample:

- i. Post graduate and undergraduate students
- ii. Professores and administrator from higher education institutions
- iii Edu teaches, professionals working in an AI best solutions.

A stratified random sampling techniques is used to ensures representations a crosses diverse institutions private urban public and rural

3. Sample size : 300 -400 represents for surveys and 15-20 participants for in depth interviews

4. Data Collection Methods

1 Primary Method

i. Survey questionnaires-

Structured questionnaires distributed online to gather data on awareness ,perception and usage of Ai in higher education.

ii. . Interviews

Semi- structured interviews with pro. Students and administrators to gain qualitative insights into challenges and opportunities

iii. Group focuses :

They included with students to understand their experiences with AI –driven learning platforms

2. Secondary data

- i. Academic journals books policy reports and industry white papers on AI and education
- ii Institutional reports on AI implementation strategies

3 Research instruments –

Interview guide with, based survey questionnaire and document analysis checklist

4 Data analysis techniques –

- i quantitative analysis, chi-square tests, correlation using tools SPSS.
- ii. Qualities techniques- interview, group discussion etc.

Importance:-

1. AI enables adaptive learning platforms that maximum study metrials. pace and assessments to suit each learners needs improving academic outcomes
2. AI to useful tool support educators with real-time analysis, virtual teaching assistant and content generation, faculty to mentoring and research
3. Smart Learning Environment i.e. virtual reality, augmented reality and interment of things
4. Skill development for future jobs to helps service sector, industry, thinking, coding.
5. Data –driven decision making can use different universities leverage AI analytics to monitor student performance, predict dropouts etc.

Opportunities in Higher Education

India is a large country, with an estimated population of young people aged between 18 to 23 years to be around 150 million. The sheer size of the market offers huge opportunities for development of the higher education sector in India. India now boasts of having more than 33,000 colleges and 659 universities, which has been quite a remarkable growth during the last six decades. The year 2012 witnessed 21.4 million enrollments, which makes India the 3rd largest educational system in the world. Unfortunately, the educational infrastructure of India is inadequate to handle such huge volumes. In spite all the government spending in the educational sector, it is just too insufficient to meet the growing requirements. Therefore, higher Education sector has now been identified as one of the promising areas for private and foreign investments. It offers immense investment opportunities in both non-regulated and regulated segments (Nexus Novus, 26 July, 2013).

Indian higher education system is growing very fast irrespective of various challenges but there is no reason that these Challenges cannot be overcome. There are opportunities for strategic engagement and capacity building in higher education leadership and management at the state level. There are opportunities for India to collaboration at national and international level on areas of systemic reform, including quality assurance, international credit recognition, and unified national qualifications framework. Equality of educational opportunity in higher education is considered essential because higher education is a powerful tool for reducing or eliminating income and wealth disparities.

The need to enhance the employability of graduates is presenting entry points for collaboration in enterprise education and entrepreneurship, links with industry, research skills and the wide range of transferable skills, including English. The emerging interest in Indian higher education institutions in the vocational skills market provides areas for potential engagement with international partners. There is a need to build stronger relationships and increase mutual understanding in higher education by increasing support and participation in platforms (conferences, workshops, seminars) which enable debate and dialogue with other countries of the world.(British Council, 2014).

Limitations – This study is limited by diversity of institution, participants' willingness, honest responses and rapid technological change that finding over time

Suggestions Improving the System of Higher Education:

1. There is a need to implement innovative and transformational approach from primary to higher education level to make Indian educational system globally more relevant and competitive.
2. Higher educational institutes need to improve quality and reputation.
3. There should be a good infrastructure of colleges and universities which may attract the students.
4. Government must promote collaboration between Indian higher education institutes and top International institutes and also generate linkage between national research laboratories and research centers of top institutions for better quality and collaborative research.
5. There is a need to focus on the graduate students by providing them such courses in which they can achieve excellence, gain deeper knowledge of subject so that they will get jobs after recruitment in the companies which would reduce unnecessary rush to the higher education.
6. Universities and colleges in both public private must be away from the political affiliations, Favouritism; money making process should be out of education system etc.
7. There should be a multidisciplinary approach in higher education so that student's knowledge may not be restricted only up to his own subject.

Conclusion

Education is a process by which a person's body, mind and character are formed and strengthened. It is bringing of head, heart and mind together and thus enabling a person to develop an all-round personality identifying the best in him or her. Higher education in India has expanded very rapidly in the last six decades after independence yet it is not equally accessible to all. India is today one of the fastest developing countries of the world with the annual growth rate going above 9%. Still a large section of the population remains illiterate and a large number of children's do not get even primary education. This is not only excluded a large section of the population from contributing to the development of the country fully but it has also prevented them from utilising the benefits of whatever development have taken place for the benefit of the people. No doubt India is facing various challenges in higher education but to tackle these challenges and to boost higher education is utmost important. India is a country of huge human resource potential, to utilise this potential properly is the issue which needed to discuss. Opportunities are available but how to get benefits from these opportunities and how to make them accessible to others is the matter of concern. In order to sustain that rate of growth, there is need to increase the number of institutes and also the quality of higher education in India

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विकसित भारत २०४७ साठी धोरणात्मक आराखडा : संधी, आव्हाने आणि नियोजनात्मक दिशा

प्रा. सुनिल बाबुराव भुईगडे

अर्थशास्त्र कनिष्ठ विभाग, कमला कॉलेज, कोल्हापूर

ई.मेल : sunilbhuingade1@gmail.com संपर्क : ९१६८५१३३९४

गोषवारा :

विकसित भारत 2047 ही भारताच्या स्वातंत्र्याच्या शताब्दीपर्यंत देशाला विकसित, समावेशक व शाश्वत राष्ट्र बनविण्याची राष्ट्रीय दृष्टी आहे. ही महत्वाकांक्षी उद्दिष्टे साध्य करण्यासाठी आर्थिक विकास, सामाजिक न्याय, तांत्रिक प्रगती, पर्यावरणीय शाश्वतता आणि सुशासन यांचा समन्वय असलेला सुसंगत धोरणात्मक आराखडा आवश्यक आहे. सदर संशोधन लेखात विकसित भारत 2047 साठी आवश्यक असलेल्या प्रमुख धोरणात्मक स्तंभांचा अभ्यास करण्यात आला असून अंमलबजावणीतील आव्हाने व भविष्यातील रणनीतिक दिशा मांडण्यात आल्या आहेत. हे संशोधन संकल्पनात्मक व विश्लेषणात्मक स्वरूपाचे असून दुय्यम माहितीवर आधारित आहे.

सूचक शब्द : विकसित भारत 2047, धोरणात्मक आराखडा, समावेशक विकास, सुशासन, शाश्वत विकास

1. प्रस्तावना

भारत सध्या आपल्या सामाजिक-आर्थिक विकासाच्या एका अत्यंत निर्णायक टप्प्यावर उभा आहे. लोकसंख्येतील तरुणांचे वाढते प्रमाण, वेगाने विस्तारत असलेली डिजिटल व भौतिक पायाभूत सुविधा, तसेच जागतिक स्तरावर भारताचे वाढते राजकीय व आर्थिक महत्त्व या घटकांमुळे देशासमोर विकासाच्या नव्या शक्यता उभ्या राहत आहेत. “विकसित भारत 2047” ही संकल्पना केवळ स्वातंत्र्याच्या शताब्दीपूर्तीनिमित्त मांडलेले ध्येय नसून, ती आर्थिक समृद्धी, सामाजिक समता, शाश्वत विकास आणि जागतिक नेतृत्वाकडे नेणारी एक व्यापक विकासदृष्टी आहे.

मात्र, या उद्दिष्टांच्या पूर्ततेसमोर अनेक गंभीर आव्हाने उभी आहेत. आर्थिक विषमता, उत्पन्नातील दरी, प्रादेशिक विकासातील तफावत, शिक्षण व आरोग्य सेवांमधील असमानता, वाढती बेरोजगारी तसेच पर्यावरणीय ङ्हास व हवामान बदल यांसारख्या समस्या देशाच्या समावेशक विकासात अडथळा निर्माण करीत आहेत. याशिवाय, तांत्रिक परिवर्तनामुळे निर्माण होणारी कौशल्यांची दरी आणि शहरीकरणाशी संबंधित सामाजिक प्रश्नही दुर्लक्षित करता येणार नाहीत.

या पार्श्वभूमीवर विकसित भारत 2047 या ध्येयाच्या यशस्वी अंमलबजावणीसाठी केवळ आर्थिक वाढ पुरेशी ठरणार नाही, तर सामाजिक न्याय, मानवी संसाधन विकास, पर्यावरणीय शाश्वतता आणि सुशासन यांचा समतोल साधणारा सर्वसमावेशक व एकात्मिक धोरणात्मक आराखडा आवश्यक ठरतो. केंद्र व राज्य शासन, खासगी क्षेत्र, शैक्षणिक संस्था आणि नागरी समाज यांचा सक्रिय सहभाग असलेली समन्वयात्मक रणनीतीच भारताला विकसित राष्ट्रांच्या पंक्तीत नेऊन उभे करू शकते.

विकसित भारत २०४७' या राष्ट्रीयदृष्ट्या महत्वाच्या व महत्वाकांक्षी संकल्पनेची पार्श्वभूमी अशी - दि. १५ ऑगस्ट २०२२ रोजी पंतप्रधान नरेंद्र मोदी यांनी सर्वार्थाने विकास झालेला असा 'विकसित भारत २०४७'मध्ये म्हणजेच, भारतीय स्वातंत्र्याच्या शताब्दी वर्षात प्रत्यक्षात साकारण्याचा संकल्प सोडला. यापूर्वी स्वातंत्र्योत्तर काळात एकदाच म्हणजे १९५६ साली तत्कालीन पंतप्रधान पं. जवाहरलाल नेहरू यांनी स्वतंत्र भारताचा विकास साधण्यासाठी राष्ट्रीय स्तरावर पंचवार्षिक योजनेची मुहूर्तमेढ रोवली होती, हे यासंदर्भात उल्लेखनीय आहे. जवाहरलाल नेहरू यांनी अशा प्रकारे देशाला राजकीय स्वातंत्र्यानंतर आर्थिक व विकासाचे स्वातंत्र्य मिळवून देण्यासाठी सुरु केलेल्या पंचवार्षिक योजनेला इंदिरा गांधी यांच्या कार्यकाळात घरघर लागली. यातूनच इंदिरा गांधी पंतप्रधान असताना त्यांनी १९६९ साली देशातील निवडक व प्रमुख बँकांचे राष्ट्रीयीकरण करण्याचा आर्थिक निर्णय घेतला. तेवढ्यानेच भागले नाही, असे वाटून इंदिरा गांधी यांनी १९७५ साली संपूर्ण देशावर आणीबाणी लादण्याचा राजकीय निर्णय घेतला. त्याच दरम्यान नेहरूंनी सुरु केलेल्या पंचवार्षिक योजनांची इतिश्री झाली, हे यासंदर्भात उल्लेखनीय आहे.

यासाठी देशांतर्गत सध्या असणारी ३.१ टक्के विकासाची टक्केवारी त्यासाठी आगामी सुमारे २४ वर्षे साध्य करणे व कायम राखणे अत्यावश्यक ठरते. असे झाले तरच २०४७ साली 'विकसित भारता'चे ध्येय साध्य केले जाऊ शकते. याबाबत असा प्रश्न उपस्थित होतो की, विकासाची वर नमूद केल्याप्रमाणे टक्केवारी सातत्याने व कशाप्रकारे साधली जाऊ शकेल? या शंका वा प्रश्नाच्या उत्तरासाठी सद्यस्थितीतील भारताच्या कामगिरीचा आढावा घेणे अर्थातच आवश्यक ठरते. यासंदर्भातील मोठी व महत्वाची बाब म्हणजे, १९९१ ते २०२३ या ३० वर्षांहून अधिक व प्रदीर्घ आगामी सुमारे २०-२२ वर्षांनंतर 'विकसित भारत' ही नरेंद्र मोदींची कल्पना म्हणजे एक आव्हानात्मक शक्यता म्हणावी लागेल. याकडे 'पळते ध्येय' - 'Dynamic Goal' म्हणून पाहता येईल. मात्र, आजची भारताची आर्थिक, औद्योगिक प्रगती व भारतीयांची क्षमता २०४७ सालामधील 'विकसित भारता'चे ध्येय हे कठीण वाटत असले, तरी अशक्य मात्र नक्कीच नाही.

2. विकसित भारत 2047 संकल्पना

विकसित भारत 2047 ही संकल्पना अशा राष्ट्रराज्याची कल्पना मांडते, जिथे उच्च, सातत्यपूर्ण व शाश्वत आर्थिक विकास साध्य होतो आणि विकासाचे लाभ समाजातील सर्व घटकांपर्यंत समानतेने पोहोचतात. या दृष्टीकोनात सामाजिक न्याय, समावेशकता आणि समान संधी यांना विशेष महत्त्व दिले जाते. शिक्षण, आरोग्य आणि कौशल्यविकासाच्या माध्यमातून सक्षम व गुणवत्तापूर्ण मानवी भांडवलाची निर्मिती ही या संकल्पनेची प्रमुख आधारशिला आहे. तांत्रिक नवोन्मेष, डिजिटल प्रगती आणि विज्ञानाधिष्ठित धोरणांद्वारे उत्पादकता व कार्यक्षमतेत वाढ घडवून आणण्यावर भर देण्यात येतो. त्याचबरोबर पर्यावरणीय संरक्षण, संसाधनांचा शाश्वत वापर आणि हवामान बदलाच्या आव्हानांना सामोरे जाणे ही या विकासदृष्टीची अनिवार्य अंगे आहेत. पारदर्शक, जबाबदार व लोकाभिमुख शासनव्यवस्था ही विकसित भारताची ओळख असून "सबका साथ, सबका विकास, सबका विश्वास आणि सबका प्रयास" ही तत्त्वे या संकल्पनेचा मूलभूत आधारस्तंभ आहेत.

3. संशोधनाची उद्दिष्टे

1. विकसित भारत 2047 साठी आवश्यक असलेल्या धोरणात्मक स्तंभांचे विश्लेषण करणे.
2. धोरण रचना व अंमलबजावणीतील प्रमुख आव्हानांचा अभ्यास करणे.
3. समावेशक व शाश्वत विकासासाठी रणनीतिक उपाय सुचविणे.

4. संशोधन पद्धती

सदर संशोधन दुय्यम माहितीवर आधारित आहे. यामध्ये शासकीय अहवाल, धोरणात्मक दस्तऐवज, संशोधन लेख, राष्ट्रीय व आंतरराष्ट्रीय विकास निर्देशांकांचा अभ्यास करण्यात आला आहे. वर्णनात्मक व विश्लेषणात्मक संशोधन पद्धतीचा अवलंब करण्यात आला आहे.

5. विकसित भारतासाठी प्रमुख धोरणात्मक स्तंभ

विकसित भारताच्या उभारणीसाठी सर्वसमावेशक आर्थिक वाढ, मानवी भांडवल विकास, तंत्रज्ञानाधिष्ठित नवोन्मेष आणि पर्यावरणीय शाश्वतता हे प्रमुख धोरणात्मक स्तंभ मानले जातात. सक्षम सुशासन, पायाभूत सुविधांचा विस्तार आणि सामाजिक समावेशन यांच्या माध्यमातून या स्तंभांना बळकटी देणे गरजेचे आहे म्हणून असे घटक पुढीलप्रमाणे पाहणे उचित ठरेल.

5.1 आर्थिक विकास व रोजगार निर्मिती

इन मेक इंडिया आणि आत्मनिर्भर भारत या उपक्रमांच्या माध्यमातून उत्पादन क्षेत्राचा वेगाने विकास घडवून आणण्यावर विशेष भर देण्यात येत आहे. सूक्ष्म, लघु व मध्यम उद्योगांचे (MSMEs) सशक्तीकरण करून स्थानिक उद्योजकतेला चालना देणे आणि रोजगारनिर्मिती वाढवणे हे या धोरणाचे प्रमुख उद्दिष्ट आहे. उद्योगांच्या गरजांशी सुसंगत कौशल्य विकास कार्यक्रमांद्वारे तरुणांना सक्षम बनवून रोजगारक्षम मनुष्यबळ निर्माण करण्याचा प्रयत्न केला जात आहे. त्याचबरोबर वाहतूक, ऊर्जा, डिजिटल व औद्योगिक पायाभूत सुविधांवर आधारित विकास धोरण राबवून आर्थिक वाढीस भक्कम आधार देण्यात येत आहे.

5.2 मानवी भांडवल विकास

मानवी भांडवलाचा विकास हा विकसित भारत 2047 या संकल्पनेचा कणा आहे. गुणवत्तापूर्ण शिक्षणाचा सार्वत्रिक प्रवेश सुनिश्चित करून ज्ञानाधिष्ठित समाजाची निर्मिती करण्यावर भर दिला जातो. आरोग्यसेवांमध्ये सुधारणा करताना उपचारांबरोबरच प्रतिबंधात्मक आरोग्य धोरणांची प्रभावी अंमलबजावणी आवश्यक ठरते. पोषण, महिला सक्षमीकरण आणि बालविकास यांवर विशेष लक्ष केंद्रित करून सामाजिक समावेशकता साध्य करण्याचा प्रयत्न केला जात आहे. तसेच संशोधन, नवोन्मेष आणि उच्च शिक्षणाचा विस्तार करून जागतिक स्तरावर स्पर्धात्मक मानवी संसाधन निर्माण करण्याचे उद्दिष्ट आहे.

5.3 सामाजिक समावेशन व समता

सामाजिक समावेशन व समता ही विकसित भारत 2047 या संकल्पनेची मूलभूत तत्त्वे आहेत. दारिद्र्य निर्मूलनासाठी प्रभावी सामाजिक सुरक्षा योजनांच्या माध्यमातून समाजातील दुर्बल घटकांना आर्थिक व सामाजिक संरक्षण देण्यावर भर दिला जातो. महिला, अनुसूचित जाती-जमाती, अल्पसंख्याक आणि दिव्यांग व्यक्तींचे सशक्तीकरण करून त्यांना विकासाच्या मुख्य प्रवाहात आणणे हे या धोरणाचे प्रमुख उद्दिष्ट आहे. तसेच

शहरी व ग्रामीण भागांतील तसेच विविध प्रदेशांतील विकासातील तफावत कमी करून प्रादेशिक समतोल विकास साधण्याचा प्रयत्न केला जात आहे.

5.4 डिजिटल व तांत्रिक परिवर्तन

डिजिटल व तांत्रिक परिवर्तन हे विकसित भारत 2047 च्या दिशेने वाटचाल करण्याचे महत्त्वपूर्ण साधन आहे. डिजिटल सार्वजनिक पायाभूत सुविधांचा विस्तार करून प्रशासन, अर्थव्यवस्था आणि सेवा क्षेत्र अधिक कार्यक्षम व सुलभ बनविण्यावर भर दिला जातो. कृत्रिम बुद्धिमत्ता, फिनटेक, बिग डेटा आणि इंडस्ट्री 4.0 यांसारख्या नव्या तंत्रज्ञानांचा अवलंब करून उत्पादनक्षमता व स्पर्धात्मकता वाढविण्याचा प्रयत्न केला जात आहे. ई-शासन आणि डिजिटल सेवा वितरणाच्या माध्यमातून पारदर्शकता, वेग आणि नागरिककेंद्री सेवा सुनिश्चित केल्या जात आहेत.

5.5 पर्यावरणीय शाश्वतता

पर्यावरणीय शाश्वतता ही विकसित भारत 2047 या संकल्पनेचा अविभाज्य घटक आहे. नवीकरणीय ऊर्जास्रोतांना प्रोत्साहन देऊन कार्बन उत्सर्जन कमी करणे आणि स्वच्छ ऊर्जेचा वापर वाढवणे यावर भर दिला जातो. हवामान-संवेदनशील शेती पद्धतींच्या अवलंबातून शेतकऱ्यांचे उत्पन्न सुरक्षित ठेवण्याबरोबरच अन्नसुरक्षाही सुनिश्चित करण्याचा प्रयत्न केला जात आहे. शाश्वत शहरीकरण, प्रभावी कचरा व्यवस्थापन आणि हरित पायाभूत सुविधांद्वारे पर्यावरणपूरक विकास साधला जात आहे. तसेच जल, वन आणि जैवविविधता यांसह नैसर्गिक संसाधनांचे संवर्धन करून भावी पिढ्यांसाठी पर्यावरणीय समतोल राखण्याचे उद्दिष्ट आहे.

5.6 सुशासन व संस्थात्मक सुधारणा

सुशासन व संस्थात्मक सुधारणा या विकसित भारत 2047 च्या यशस्वी अंमलबजावणीसाठी अत्यंत महत्त्वाच्या आहेत. पारदर्शक, जबाबदार आणि नागरिक-केंद्रित शासनव्यवस्थेमुळे सार्वजनिक सेवांची गुणवत्ता व विश्वासाहता वाढते. सहकारी व स्पर्धात्मक संघराज्यवादाच्या माध्यमातून केंद्र व राज्यांमधील समन्वय बळकट करून विकासाला गती दिली जाते. माहिती-आधारित, पुराव्यावर आधारित आणि परिणामाभिमुख धोरणनिर्मितीद्वारे योजनांची कार्यक्षमता व उत्तरदायित्व सुनिश्चित केले जाते. यामुळे शासनप्रक्रियेत कार्यक्षमता, उत्तरदायित्व आणि लोकसहभाग वाढीस लागतो.

5.7 देशातील संशोधन व विकास परिसंस्थेला बळकटी

विकसित भारत 2047 च्या परिवर्तनकारी दृष्टिकोनाकडे 20 वाटचाल करित असताना राष्ट्र दररोज नवीन उंची गाठीत आहे. भारत सरकारने एक लाख कोटी रुपयांचा संशोधन विकास व नवोपक्रम योजना निधी सुरू केला आहे प्रथमच उच्च जोखीम आणि उच्च परिणामकारक प्रकल्पासाठी भांडवल उपलब्ध करून दिले जात आहे.

६. विकसित भारत साध्य करण्यातील आव्हाने :

विकसित भारताच्या ध्येयपूर्तीसाठी काही मूलभूत आव्हानांना सामोरे जावे लागते. वाढती उत्पन्न विषमता आणि असंगठित रोजगाराचे उच्च प्रमाण सामाजिक व आर्थिक स्थैर्यास बाधा आणते. शिक्षण आणि आरोग्य क्षेत्रातील गुणवत्तेची दरी मानवी संसाधनांच्या सर्वांगीण विकासात अडथळा निर्माण करते.

धोरणांच्या अंमलबजावणीत असलेल्या त्रुटी व प्रशासकीय अकार्यक्षमता यामुळे अपेक्षित परिणाम साध्य होत नाहीत. डिजिटल दरी आणि प्रादेशिक असमतोलामुळे विकासाचा लाभ सर्वापर्यंत समानरित्या पोहोचत नाही. याशिवाय, हवामान बदल आणि पर्यावरणीय ऱ्हास ही दीर्घकालीन शाश्वत विकासासाठी गंभीर आव्हाने ठरत आहेत.

७. धोरणात्मक शिफारसी :

विकसित भारताच्या उद्दिष्टपूर्तीसाठी एकात्मिक व परिणामाभिमुख धोरण नियोजन आवश्यक आहे. केंद्र आणि राज्य सरकारांमधील प्रभावी समन्वय बळकट केल्यास संसाधनांचा योग्य वापर आणि वेगवान अंमलबजावणी शक्य होईल. सार्वजनिक-खासगी भागीदारीला चालना देऊन पायाभूत सुविधा, तंत्रज्ञान व सेवा क्षेत्रात गुणवत्तापूर्ण वाढ साधता येईल. मानवी भांडवल विकास आणि नवोन्मेषात सातत्यपूर्ण गुंतवणूक केल्यास दीर्घकालीन आर्थिक स्पर्धात्मकता वाढेल. तसेच, धोरणांचे नियमित मूल्यमापन व प्रभावी अभिप्राय यंत्रणा उभारल्यास पारदर्शकता, उत्तरदायित्व आणि परिणामकारकता सुनिश्चित करता येईल.

८. निष्कर्ष :

'विकसित भारत 2047' ही केवळ भावनिक संकल्पना नसून ती राष्ट्राच्या दीर्घकालीन परिवर्तनाचा व्यापक आराखडा आहे. आर्थिक प्रगती, सामाजिक न्याय, तंत्रज्ञानाधिष्ठित नवोन्मेष आणि पर्यावरणीय शाश्वतता यांचा संतुलित संगम साधल्याशिवाय हे ध्येय साकार होऊ शकत नाही. सर्वसमावेशक व परिणामाभिमुख धोरणात्मक नियोजन, सक्षम व पारदर्शक संस्था, उत्तरदायी सुशासन आणि संघराज्यात्मक समन्वय ही या प्रक्रियेची मूलभूत आधारस्तंभ आहेत.

मानवी भांडवल विकास, ज्ञानाधारित अर्थव्यवस्था आणि डिजिटल सक्षमीकरण यांवर लक्ष केंद्रित केल्यास भारत जागतिक स्पर्धेत सक्षम स्थान निर्माण करू शकतो. त्याचबरोबर सामाजिक समावेशन, लिंगसमता आणि प्रादेशिक संतुलन यांना प्राधान्य देणे अत्यावश्यक आहे. नागरिकांचा सक्रिय सहभाग, नवोन्मेषाला प्रोत्साहन आणि सततचे मूल्यमापन यांद्वारे विकास प्रक्रियेला गतिमान व उत्तरदायी बनविता येईल.

यथार्थ धोरणात्मक सुधारणा, दूरदृष्टीपूर्ण नेतृत्व आणि सामूहिक राष्ट्रीय बांधिलकी यांच्या बळावर भारत 2047 पर्यंत विकसित राष्ट्र म्हणून उदयास येण्याची क्षमता निश्चितच बाळगते.

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Mindful Eating as a Tool of Nutrition Education: Impact on Hunger, Satiety and Food Intake among College Students

Tanjila V. Momin

Students of College of Non-Conventional
Vocational Courses for Women,
Kolhapur- 416004

Shweta S. Shah

Assistant Professor, Dept. of Food Technology,
College of Non-Conventional Vocational Courses
for Women, Kolhapur- 416004
Mail : shwetashah0925@gmail.com

Abstract:

Nutrition education plays a crucial role in promoting healthy eating behaviours, particularly among young adults who are at a formative stage of developing lifelong dietary habits. College students are increasingly exposed to academic stress, irregular routines, emotional fluctuations, and digital distractions, which often lead to mindless eating, poor portion control, and reduced awareness of hunger and satiety cues. Mindful eating has emerged as an effective, awareness-based approach within nutrition education that emphasizes present-moment attention to eating, recognition of internal physiological cues, and reduced reliance on external influences.

The present study examined mindful eating as a tool of nutrition education and assessed its impact on hunger awareness, satiety recognition, and food intake patterns among college students. A descriptive cross-sectional study was conducted among 150 undergraduate and postgraduate students aged 18–25 years from CNCVCW College, Kolhapur, Maharashtra. Data were collected using a structured, self-administered questionnaire distributed via Google Forms, assessing mindful eating awareness, eating behaviours, hunger and satiety cues, portion control, and the influence of technological distractions. Descriptive statistical analysis was performed using Microsoft Excel.

The findings revealed that a majority of students were aware of mindful eating, with social media and self-reading being prominent sources of information. Many participants reported focusing on sensory aspects of food and checking hunger or fullness cues during meals. However, mobile phones and social media emerged as major distractions interfering with mindful eating practices. While over half of the respondents reported stopping eating when they felt full, a considerable proportion continued eating beyond satiety due to emotional or habitual factors. Mindful eating was positively associated with improved portion control and greater reliance on internal hunger and satiety cues.

Key words: Mindful eating; Nutrition education; Hunger and satiety cues; Eating behaviours; Portion control; College students

Introduction

Nutrition education plays a critical role in shaping healthy eating behaviours, particularly among young adults who are at a formative stage of establishing lifelong dietary habits. College students are often exposed to academic stress, irregular schedules, peer influence, emotional fluctuations, and increased screen time, all of which contribute to disrupted eating patterns and reduced awareness of hunger and satiety cues. These factors frequently result in mindless eating, overeating, or reliance on external cues rather than physiological needs (Kristeller & Epel, 2014).

Mindful eating has emerged as an effective, awareness-based nutrition education strategy that emphasizes present-moment attention during food consumption. It involves recognizing physical hunger, differentiating it from emotional hunger, responding appropriately to satiety cues, and minimizing

distractions such as mobile phones, television, and multitasking (Monroe, 2015). Unlike restrictive dietary approaches, mindful eating focuses on self-regulation and internal cue recognition, making it particularly relevant for young adults.

Hunger and satiety are complex processes influenced by physiological, psychological, and environmental factors. While traditional nutrition education often emphasizes what and how much to eat, mindful eating education focuses on *how* eating occurs and *why* individuals eat. Research suggests that distracted eating can impair satiety recognition and increase food intake, whereas mindful eating enhances sensory awareness and improves portion control (Bamford et al., 2019).

In the Indian context, rapid urbanization and digitalization have further altered eating behaviours among youth. Therefore, nutrition education strategies that integrate mindful eating principles are essential to promote sustainable healthy eating habits. The present study explores mindful eating as a tool of nutrition education and examines its impact on hunger awareness, satiety recognition, and food intake patterns among college students.

Review of Literature

Mindful eating is defined as the enjoyment of food with full sensory awareness while responding to internal hunger and fullness cues without judgment (Monroe, 2015). It encourages slower eating, attention to taste, texture, aroma, and temperature of food, and conscious decision-making during meals. Studies have shown that mindful eating is associated with improved dietary behaviours, reduced emotional eating, and better self-control (Lofgren, 2015).

Hunger cues arise due to physiological energy needs as well as psychological and environmental triggers such as stress, boredom, or exposure to food cues (van Strien et al., 2014). Satiety develops progressively during food intake through gastric distension and hormonal signals such as leptin and insulin, which communicate fullness to the brain (Mehta et al., 2012). Difficulty in recognizing these cues can lead to overeating or under eating.

Mindfulness-based eating interventions have demonstrated improvements in satiety awareness and reduced overeating tendencies. Bamford et al. (2019) reported that nutrition education incorporating mindful eating improved participants' responsiveness to internal cues rather than external stimuli.

Environmental and technological distractions significantly influence eating behaviour. Eating while watching television or using mobile phones reduces awareness of portion size and fullness, often leading to increased intake (Cunningham & Rolls, 2021). Mindful eating education addresses these challenges by promoting focused attention during meals.

Among university students, mindful eating has been linked with healthier food choices, improved portion regulation, and reduced stress-related eating (Moor et al., 2013). These findings support the integration of mindful eating into nutrition education programs aimed at young adults.

Research Methodology

A descriptive cross-sectional study was conducted among college students aged 18–25 years in Kolhapur city, Maharashtra. The study population included undergraduate and postgraduate students enrolled at CNCVCW College, Kolhapur.

Data were collected using a structured questionnaire designed to assess awareness of mindful eating, eating behaviours, hunger and satiety cues, portion control, and the influence of external distractions such as technology and social settings. The questionnaire was administered online through Google Forms to facilitate participation and data compilation.

A total of 150 students participated in the study. Convenience sampling was used based on accessibility and willingness of participants. Inclusion criteria included students currently enrolled in academic programs and consenting to participate. Incomplete responses were excluded from analysis.

Collected data were analyzed using descriptive statistics with Microsoft Excel. Results were expressed in percentages and represented graphically to aid interpretation.

Results and Discussion

The study findings indicated that a majority of students were aware of the concept of mindful eating, suggesting increasing exposure to nutrition education through academic content and digital platforms. Social media and self-reading emerged as prominent sources of information, reflecting evolving patterns of health knowledge acquisition among youth.

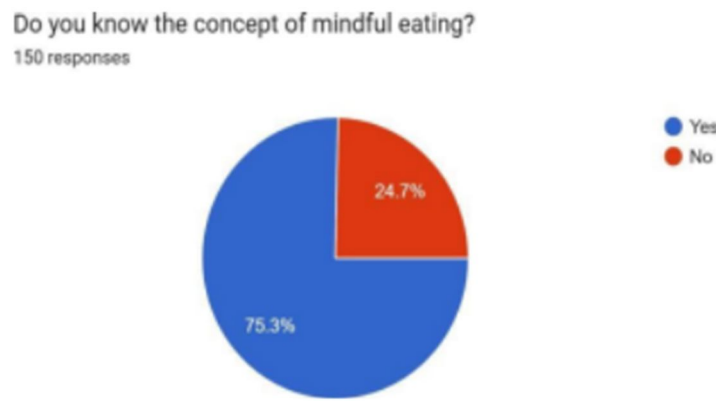


Figure 1: Awareness of Mindful Eating among College Students

Most respondents reported focusing on enjoyment of food while eating, indicating partial engagement with mindful eating practices. Sensory awareness, including attention to taste, texture, and aroma, was commonly reported, aligning with core principles of mindful eating (Monroe, 2015).

4. What are some common distractions that stops you from Mindful eating?
146 responses

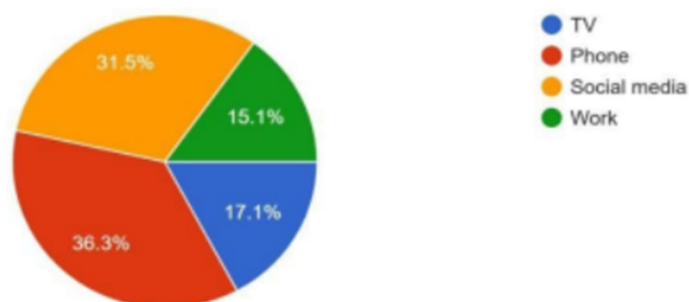


Figure 2: Common Distractions Affecting Mindful Eating

Despite awareness, mobile phones and social media were identified as the most common distractions during meals. This finding is consistent with previous studies indicating that digital distractions contribute to mindless eating and delayed satiety recognition (Kristeller & Epel, 2014).

Hunger awareness analysis revealed that many students assessed their hunger levels before meals, reflecting emerging mindful eating behaviours. However, a proportion of respondents relied on routine or emotional cues rather than physical hunger.

6. Do you check if you are hungry before starting a meal?

146 responses

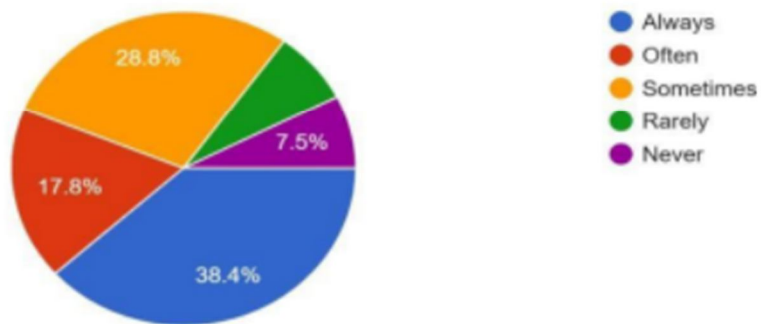


Figure 3: Pre-meal Hunger Assessment among Students

Satiety recognition was evident, with over half of the respondents reporting that they stopped eating when they felt full. Nevertheless, a notable proportion admitted to continuing to eat beyond fullness occasionally, often due to emotional factors or habitual eating patterns.

8. Do you stop eating during a meal to see if you are full?

146 responses

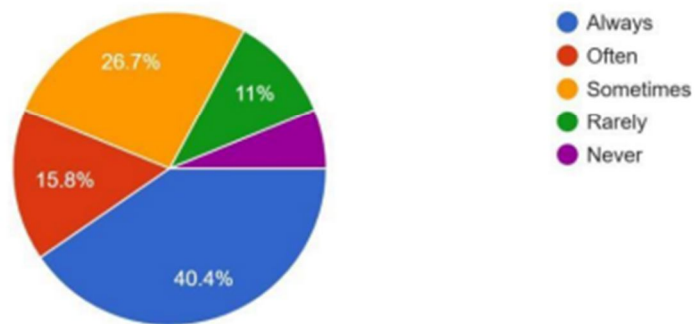


Figure 4: Fullness Check-in Frequency during Meals

Mindful eating was found to positively influence portion control. Students practicing mindful eating were more likely to regulate intake based on hunger and fullness cues rather than external factors such as portion size or time of day.

10. Does being mindful while eating change how much you eat?

146 responses

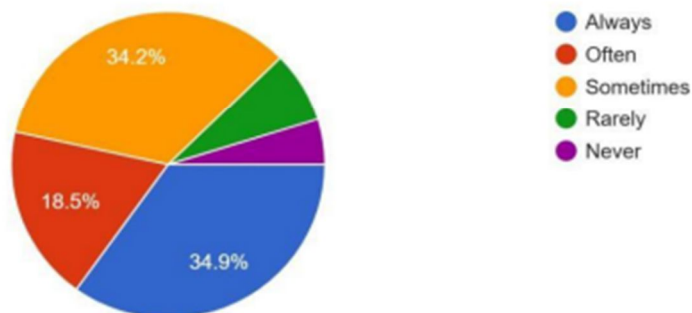


Figure 5: Impact of Mindful Eating on Portion Control

These findings support existing literature indicating that mindful eating enhances self-regulation and reduces overeating by strengthening internal cue awareness (Bamford et al., 2019; Lofgren, 2015).

Conclusion

The present study demonstrates that mindful eating is an effective tool of nutrition education for improving eating behaviours among college students. Increased awareness of hunger and satiety cues, improved portion control, and enhanced sensory engagement with food were observed among students practicing mindful eating.

Despite moderate awareness levels, challenges remain in consistent application, particularly in managing digital distractions and emotional eating. Integrating mindful eating concepts into structured nutrition education programs at the college level can help address these gaps and promote sustainable healthy eating behaviours.

Overall, mindful eating represents a practical, low-cost, and adaptable approach to nutrition education that can positively influence food intake patterns, support long-term health, and empower young adults to make informed dietary choices.

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