



A Double Blind Peer Reviewed Research Journal

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Nav Manthan

A Double Blind Peer Reviewed Annual Research Journal

Volume - 12, Issue – I, August 2025

Editorial

Nav Manthan is an annual, peer-reviewed interdisciplinary journal that embarks on its inaugural global journey as a distinctive academic publication. Renowned for its experimental and inclusive approach, the journal embraces a wide spectrum of leading schools of thought across diverse disciplines.

Independent in its vision and scope, Nav Manthan seeks to inspire contemporary research endeavours, fostering dialogue and exploration in the realms of Commerce, Economics, Psychology, Law, Finance, and other academic fields. It serves as a dynamic platform for the latest scholarly deliberations and emerging nuances in these domains.

We warmly invite contributions from learners and scholars across cultures and disciplines, encouraging a rich exchange of ideas and innovative perspectives that transcend traditional boundaries.

We express our sincere gratitude to all the renowned contributors for this special issue who all had participated and presented papers in the national symposium on ‘Rethinking the Connection Between Innovation, Education, and Economic Growth for "Viksit Bharat"’, organised by IQAC and Conference Committee in association with Department of Economics and Analytics of SVKM’s Narsee Monjee College of Commerce & Economics (Autonomous) held on 6th August, 2025. The selected papers are published in this issue, which were in terms of the policy of Nav Manthan journal publication. We appreciate all the paper presenters for their worthy inputs during the conference and taking Nav Manthan to greater heights. The primary objective of the symposium was to facilitate a practical and analytical exploration of sustainability and growth challenges, drawing upon the insights and experiences of the academic community, industry experts, and professionals.

Best Wishes!

Guidelines for Authors

‘Nav Manthan’ is a national level interdisciplinary double blind peer review journal focusing on research articles in the field of commerce, accountancy, management, economics, law, social sciences and humanities.

The research article in only of the original research work will be published. The authors are required to give an undertaking that the work is original and not published or sent for publication elsewhere. The authors are advised to submit their details on a separate page along with the article. The article once sent for Peer Review will not be returned back. The reviewer’s instructions will be sent to the main author to make the necessary amendments in their article. The revised article should be sent back within 15 days to the editor for publication. The Editor reserves the rights of editorial amendments required to be made in the article in order to meet the standard of the journal. The papers with more than 10% plagiarism and AI contents will not be accepted for publication.

The research article should be sent through a soft copy in MS-WORD at Vaishali.Dawar@nmcce.ac.in and follow APA style of references. The authors are requested to follow the format for research articles as-

1) For general research-

Title
Details of Author
Abstract
Introduction
Scope of research
Aims and objectives of the research
Methodology used
Data and interpretation
Conclusion
References

2) For historical research

Title
Details of Author
Abstract
Introduction
Scope
Aims and objectives
Methodology
Review of literature
Conclusion
References

Once the article is accepted by Peer Reviewer the main author will be informed about its publication along with the necessary instructions, if any.

Nav Manthan

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A Comparative Study on Financial Performance of Franchise Tea Outlets in Greater Mumbai with Respect to Yewale Amruttulya and Saiba Amruttulya

Vishal. R. Kapasi*

Abstract:

The fiscal performance of two popular franchise tea brands, Yewale Amruttulya and Saiba Amruttulya, in Mumbai is compared in this research by studying significant performance metrics like ROI, revenue generation, initial investment, and profitability percentages. The fiscal performance of two brands is compared in this research based on the number of franchise outlets and ANOVA, that is, differences in gross margin percentage, net profit percentage, and operating expenses. The research compares the high return on investment and profit margins of Yewale Amruttulya with the lean franchise model of Saiba Amruttulya, comparing operational concerns, cost profiles, and market characteristics determining franchise profitability of tea. With its limited scope and Mumbai orientation, the study presents valuable insights into Indian tea franchisees' growth and endurance. The research had concentrated on the financial performance of two tea franchise shops in Mumbai, Yewale Amruttulya and Saiba Amruttulya. Data were collected through a structured questionnaire, an interview, a conversation, and an observation technique. Data have been obtained from Mumbai for 2022-23, 2023-24, and 2024-25.

Keyword: Financial Performance, Franchise Tea Outlets, Yewale Amruttulya, Saiba, Amruttulya, Greater Mumbai.

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1. Introduction:

1.1: Introduction to Franchise Outlets:

The Mumbai food and beverage sector, which is India's business capital, is booming, and tea stalls are one of the defining elements of the city's tea culture. While tapris, the proprietors of roadside tea stalls, have been the favorite for centuries, the formal franchise tea shop has revolutionized the consumption of tea altogether.

Considering quality, hygiene, and ambience, the franchise tea business organizations like Yewale Amruttulya, Saiba Amruttulya, Chai Sutta Bar, Chai Point, and Chaayos have volumously grown. These cafes are visited by a large customer base of working professionals, students, and tea enthusiasts in pursuit of consistency and convenience in their beverages.

The purpose of this research report is to examine business models and financial practices concerning franchise tea shops in Mumbai. The study will shed light on the drivers affecting such firms' performance and how they affect the tea business in the local market by examining key industry players and their market positioning.

1.2. Introduction on Yewale Amruttulya and Saiba Amruttulya:

1.2.1. Yewale Amruttulya:

Yewale Tea is a Pune startup and has its franchise brand as Yewale Amruttulya. Business of tea began in 1983. They are expanding their tea business to Mumbai after they have already won the hearts of tea lovers in Pune. Franchisees in 35 cities offer around 500,000 cups of tea per day with 16 Lakhs Loyal Customers. They possess about 550 franchise tea stores in India and 56 are in Mumbai.

Yewale Amruttulya is a popular franchise tea brand name in India, most famous for their bold and consistent tea products. Yewale Amruttulya of Pune, Maharashtra, spread so rapidly to other metropolitan cities, such as Mumbai, providing tea lovers their proprietary blend of strong, full-bodied chai.

The company has been established with the mission of standardizing the tea industry so that traditional roadside tea stalls become a well-established franchise chain. Yewale Amruttulya is committed to serving good tea at affordable prices while placing the clients in a hygienic and comfortable environment.

The key to success of Yewale Amruttulya is its simple but fruitful business strategy of selling one single, traditional formula of tea in all its chains. This has enabled them to create a loyal clientele consisting primarily of working professionals, students, and common commuters.

The expansion of Yewale Amruttulya in Mumbai has positioned it as a player in the organized tea segment, in addition to established brands like Chai Sutta Bar and Chai Point. The focus of the brand on quality, price, and service speed has contributed towards its swift expansion, and now the company is a major player in India's tea franchise market.

1.2.2 Saiba Amruttylya:

Saiba Amruttulya is an Indian tea shop chain, popular for the quality of tea and the nationwide presence. It has more than 550 points of presence across the nation, 15 of which are Franchise Outlets in Mumbai city, and with 10 years of Legacy with 15 Lakhs Loyal Customers the company has been a haunt of preference for tea lovers seeking a trustworthy and comforting cup of tea.

Saiba Amruttulya has several outlets, one of which is situated in the area of Kandivali West, Mumbai. The place is known for its variety of teas, beverages, and street food, being a choice that meets the individual needs of the multicultural urban populace.

The commitment of the brand towards the quality and satisfaction of customers has been well received. The customers have liked the atmosphere and taste of the tea, highlighting the sweet experience delivered at their stores.

2. Review of Literature:

Literature review of tea industry, business franchise models, measures of financial performance, and consumer trends must be conducted in order to conduct comparative analysis of financial performance of franchise tea shops in Mumbai, i.e., Yewale Amruttulya and Saiba Amruttulya. Here follows the literature review with key research and findings:

(Sharma and Gupta, 2020), with the emphasis on the fact that as there is increased urbanization, changing consumer trends, and formalization of local tea shops, tea franchises have experienced meteoric rise in India.

(Patil, 2021), Writes that As per study, businesses like Yewale and Saiba Amruttulya have succeeded in breaking through to systematically developed franchise models from small-scale tea stalls. India's tea industry has a huge consumer base and hence is a lucrative business for franchise businesses.

(Kumar and Rao, 2019), The Objective of the present research is to identify the financial sustainability of a franchise through efficient pricing strategies, value chain effectiveness, and customer loyalty. researched various tea franchises operating in India and determined that product quality remaining consistent is the reason they are profitable.

Mehta and Joshi (2022): According to their perspective, It is evident that a franchise's profitability depends on good pricing strategy, effective supply chain, and customer retention. Analyzing some of India's tea franchises revealed that quality consistency of products is the success factor.

(Reddy, 2021), Yewale Amruttulya is well known for its strong, flavorful tea, while Saiba Amruttulya maintains a variety of menus in order to attract a variety of consumers. Consumer loyalty and price sensitivity are critical to identify in order to ascertain the financial feasibility.

(Verma and Singh, 2020), mentions that Consumer research indicates that brand reputation, consistency of taste, and price all have significant roles in the success of tea chain

stores.

Bhatia (2019), In this study, Different corporate models impact on financial performance. We studied franchise models and found that effectiveness of operations, pricing models, and supply chain management are all crucial.

(Mishra, 2023), This study evaluated Yewale Amruttulya has a focused strategy with a signature tea blend, while Saiba Amruttulya has variety, influencing their financial performance.

Rajput (2020), Based on a study, the financial viability of the tea franchise business is based on better operational efficiency, pricing strategy, and market positioning.

Based on the literature, it could be deduced that financial performance of the franchise tea business is affected by several factors such as branding, pricing strategies, operational cost, and customer wants. The financial comparison between Yewale Amruttulya and Saiba Amruttulya would highlight their profitability, viability, and competitiveness in the tea industry in Mumbai.

3. Relevance of the Study:

Indian tea industry is a valuable segment of the food and beverage market, and franchise tea stores have been gaining ground due to their consistent flavor, affordable prices, and brand name. Yewale Amruttulya and Saiba Amruttulya are some of the brands that have successfully penetrated the market in Mumbai. examination of their finances is therefore of utmost significance in unlocking the incentives behind the success and sustainability of franchise tea firms. This research will assist in the analysis of profitability and revenue generation ability of franchise tea shops by providing information on cost accounts, operating expenses, and return on investment (ROI). Comparative business models will be analyzed to identify the most effective business model in a competitive city like Mumbai. Information regarding client preferences, buying habits, and brand loyalty will assist franchisees in personalizing their products. Higher rent, raw materials prices, and local vendors will be the issue and opportunity of expansion that will be uncovered. The outcome will assist policy makers and business

people, who intend to venture into the tea franchise venture as well as in future studies about franchise models as well as their profitability in the Indian beverage market.

This comparative analysis will consider the findings of past studies so that it can compare the financial performance of Yewale Amruttulya and Saiba Amruttulya. It will consider aspects like profitability, market share, and operating efficiency while considering external factors like competition, customer behavior, and Mumbai's economic conditions.

The aim of this study is to suggest a comprehensive comprehension of the dynamics of the financial performance of franchise tea shops in the competitive urban market of Mumbai through literature insights synthesis.

4. Scope of the Study:

4.1 Conceptual framework: This study focuses on the financial results of tea franchise outlets in Mumbai.

4.2 location: The location chosen for study in Mumbai.

4.3 Product: Only ordinary tea is covered in the study.

4.4 Time: Years 2022-23, 2023-24 and 2024-25.

4.5 Size of the cup: Base on 60 mL cup of Tea consider for Financial Comparison.

4.6 Financial performance: cost of investment, Gross Profit, Net profitability, pricing, and ROI.

5. Methodology

5.1 Respondent class: The study's sample size consists of four tea franchise locations in Mumbai, two of which will be selected from the franchise tea shops' official data records: Yewale Amruttulya and Saiba Amruttulya.

5.2 Sampling Method: Primary data will be collected using non-probability convenience sampling.

5.3 Data gathering technique: The researcher applied both primary and secondary data for this investigation.

5.3.1 Primary data: A stratified random sample survey of franchise stores in Mumbai will serve as the foundation for primary data collection, which will also include a questionnaire, an interview, a conversation, and an observation technique.

5.3.2 Secondary data: The study will be supplemented by secondary data gathered from periodicals such as books, essays, the internet, newspapers, and publications.

5.4 Analysis of Data Statistical approaches: Ratio analysis, descriptive statistics, and the F test hypothesis.

6. Objectives of the Study

1. To determine and contrast the initial investment costs of the two tea franchise locations.
2. To analyse the impact of pricing on tea profitability at Yewale and Saiba Amruttulya.
3. To measure the gross profit ratio based on the cost of a cup of tea for both tea franchise stores.
4. To compare the tea Net profits for Yewale and Saiba Amruttulya.
5. To figure out the return on investment of each franchise tea outlet.

7. Hypothesis of the Study:

Hypothesis 1

Ho: The Net Profitability Ratio is not higher for Yewale Amruttulya than Saiba Amruttulya.

H1: The Net Profitability Ratio is higher for Yewale Amruttulya than Saiba Amruttulya.

Hypothesis 2

Ho: There is no considerable variation in return on investment between Yewale Amruttulya and Saiba Amruttulya.

H1: There is a considerable variation in the return on investment between Yewale Amruttulya and Saiba Amruttulya.

8. Result:

8.1 Comparing Yewale Amruttulya and Saiba Amruttulya:

8.1.1. What is the start-up cost of an investment?

Particulars	Yewale Amruttulya	Saiba Amruttulya
Total Start-Up Cost of Investment	Rs 18,00,000	Rs 10,00,000

(Sources- Authors own calculation by using Primary data collection.)

* Franchise Fees including GST, licences, GST Registration, Interior and exterior decorators, Kitchen Equipment, and marketing outlet launch expenses.

8.1.2. What is the price of regular tea (60 ml)?

Particulars	Yewale Amruttulya			Saiba Amruttulya		
Year	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
Tea Price	Rs 10	Rs 12	Rs 12	Rs 10	Rs 12	Rs 12

(Sources-Author's own calculation by using Primary data collection)

8.1.3. What is the Gross Profit ratio of tea?

Particulars	Yewale Amruttulya			Saiba Amruttulya		
Year	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
Gross Profit Ratio	57%	60%	61%	47%	50%	51%

(Sources-Author's own calculation by using Primary data collection)

8.1.4. What is the Net Profit ratio of tea?

Particulars	Yewale Amruttulya			Saiba Amruttulya		
Year	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
Net Profit Ratio	25%	28%	29%	16%	18%	19%

(Sources-Author's own calculation by using Primary data collection)

8.1.5. What is the return on investment of the tea franchise?

Particulars	Yewale Amruttulya			Saiba Amruttulya		
Year	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
Return on Investment	40%	43%	45%	30%	32%	33%

(Sources-Author's own calculation by using Primary data collection)

8.2. Hypothesis Testing:

Hypothesis 1

Ho : The Net Profitability Ratio is not higher for Yewale Amruttulya than Saiba Amruttulya.

H1 : The Net Profitability Ratio is higher for Yewale Amruttulya than Saiba Amruttulya.

Hypothesis was tested by calculating Percentage and Tabulation.

According to the above 8.1.4 Tabulation analysis, the Net Profitability Ratio for 2022-23 is 25%, and it is 28% in 2023-24 and 29% in 2024-25 of Yewale Amruttulya, while comparing the Saiba Amruttulya in the same year, it is 16%, 18% and 19%, respectively, in Three years. Hence, the null hypothesis is rejected, and the alternative hypothesis is shown to be true.

Hypothesis 2

Ho- There is no considerable variation in the return on investment between Yewale Amruttulya and Saiba Amruttulya.

H1: There is a considerable variation in the return on investment between Yewale Amruttulya and Saiba Amruttulya.

Hypothesis was tested by calculating Percentage and Tabulation.

From the above 8.1.5 Tabulation Analysis, based on the table, it is observed that the return-on-investment ratio of the year 2022–23 is 40%, 43% in the year 2023–24 and 45% in the year 2024–25, respectively, for Yewale Amruttulya, while comparing the Saiba Amruttulya in the same year, it is 30%, 32% and 33% in the three years.

Thus, it can be seen that the null hypothesis is disproved and the alternative hypothesis is accepted.

The ANOVA method was used to demonstrate the hypothesis.

Table-1: -Net Profitability Ratio ANOVA: Single factor test for paired two samples

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Column 1	3	82	27.33333	4.333333		
Column 2	3	53	17.66667	2.333333		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	140.1667	1	140.1667	42.05	0.002916	7.708647
Within Groups	13.33333	4	3.333333			
Total	153.5	5				

Analysis

F-value = 42.05 indicates the ratio of variability across groups to variability within them. A higher F-value suggests a substantial difference between groups.

The difference between the groups is statistically significant, as F (42.05) is greater than F crucial (7.708647).

P-value = 0.002916 → Since P-value < 0.05, we reject the null hypothesis (H_0), meaning there is a significant difference between the two groups. The Net Profitability Ratio is higher for Yewale Amruttulya than Saiba Amruttulya.

Table-2: Return-on-Investment Ratio ANOVA: Single factor test pairwise sample

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Column 1	3	128	42.66667	6.333333		
Column 2	3	95	31.66667	2.333333		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	181.5	1	181.5	41.88462	0.002937	7.708647
Within Groups	17.33333	4	4.333333			
Total	198.8333	5				

Analysis

F-value equals 41.88462. This value shows the ratio of variance between and within groups. A higher F-value indicates a substantial difference.

The test indicates a statistically significant difference because F (41.88462) exceeds F critical (7.708647).

With a P-value of 0.002937, we reject the null hypothesis (H_0) and conclude that there is a significant difference between the two groups. There is a considerable variation in the return on investment between Yewale Amruttulya and Saiba Amruttulya.

9. Finding of the Study:

1) Yewale Amruttulya requires a much bigger initial investment than Saiba Amruttulya. This additional cost includes franchise fees (including GST), licences, GST registration, interior and exterior decorators, kitchen equipment, and marketing outlet launch charges. The bigger investment may be associated with a more extensive service offering or brand positioning, which could improve its performance in other financial indicators.

2) Over the course of the study, both brands charged the same price for a normal 60 ml tea. This pricing parity implies that market competition or customer expectations may be driving a uniform tea price point, emphasizing operational efficiencies and cost management to account for profitability disparities.

3) Yewale Amruttulya consistently maintains a superior gross profit ratio compared to Saiba Amruttulya. A superior gross profit ratio implies superior cost control in operation and production, leading to greater overall profitability even when the two brands both sell tea at the same prices.

4) Yewale Amruttulya also has a stronger net profit ratio, reflecting bottom-line profitability after operating and other expenses have been subtracted. This indicates that while Yewale Amruttulya is more expensive upfront, Yewale Amruttulya turns more of sales into net profit than Saiba Amruttulya.

5) For all finance years, Yewale Amruttulya has a much better return on investment. It indicates that even though the initial start-up expense is higher, Yewale Amruttulya investors can expect a better return in terms of their initial investment. The brand's higher gross and net profit margins, which reflect better cost control and operational efficacy, are the reasons for the better ROI.

10. Limitation of the Study:

- 1) Only franchise-making establishments in Mumbai are included in this analysis.
- 2) Only tea franchisees are included in the study's scope.
- 3) There are just two franchised tea-making store brands included in the study.
- 4) The study's sample consists of just four franchise tea shops that are currently open for business.
- 5) Only three years' worth of franchise tea shops' financial performance is compared in this study.

11. Conclusion of the Study:

After the comparison of financial performance of franchise tea outlets in Greater Mumbai, the following observation made as below.

- 1) **Investment Requirement:** Compared to Saiba Amruttulya, Yewale Amruttulya demands a larger start-up investment of ₹18,000,000.
- 2) **Pricing Strategy:** For normal tea, both brands maintain a competitive and consistent price, indicating that pricing methods do not account for performance variations.
- 3) **Profitability:** With greater gross profit and net profit ratios, Yewale Amruttulya performs better than Saiba Amruttulya, demonstrating superior operational management.
- 4) **Return on Investment:** Compared to Saiba Amruttulya (30% to 33%), Yewale Amruttulya offers a greater ROI (between 40% and 45%), making it a more alluring investment choice.

- 5) **Implication for Investors:** Yewale Amruttulya is a more attractive franchise opportunity for investors looking for long-term financial advantages because of its greater ROI and superior profitability, even though it demands a larger initial investment. On the other hand, despite having a lower entry cost, Saiba Amruttulya may see slower capital recovery and lower total returns due to its lower profit margins and ROI.

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Ethical Considerations in the Marketing Conduct of Fair and Lovely: An Investigation of Gender Bias, Colourism and Deceptive Advertising in India

Ms. Susan M. Abraham*

Abstract:

This article provides a perspective on the ethicality of the advertising campaigns for Fair and Lovely, a skin-lightening product line marketed in India by Hindustan Unilever. By analysing the messages of the campaigns, the groups they were marketed to, and the implications these campaigns had on society, the research indicates that Fair and Lovely perpetuated discriminatory beauty ideals and colourism. It also reflects on the public outcry and reaction to the rebranding of Fair and Lovely to Glow and Lovely. The article concludes with a consideration of the role of advertisers in influencing social norms and values, and adequacy of their inclusivity.

Key words: Ethics, Fair and Lovely, Advertising, Gender Bias, Colourism, Misleading claims

Introduction:

Marketing ethics are essential for establishing trust from consumers, promoting transparency of action and accountability, and nurturing the credibility of brands over time. Consumerism can be changed for better or for worse due to marketing, therefore ethical marketing practices provide some degree of protection against manipulation, deception, and exploitation- especially in sensitive areas like health, beauty and criminality. This is even more important as consumers prefer to purchase from brands that align with their own values, and using an applied ethical perspective can reinforce just, and responsible, business, loyalty to their brand, and reputational value.

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Advertisers are among the most powerful people in the world since they can create norms, and influence public perceptions. While ideal advertising can promote transformations, diversity and inclusion, there is also the risk of exploitation of societal biases for gain, distorting product information to neglect honest science, and promoting things other than consumers by exploiting and feeding insecurities.

Fair and Lovely is a well-known and well-accepted brand in Indian consumer markets since it came to market in 1975. The advertising communication strategies of fairness cream associations (fair skin = achievement, beauty, social acceptance and approval) have received heavy criticism for perpetuating sexism and colourism, even though these advertisements have proven successful in terms of positioning and sales.

Scope of Study:

This study will be looking into the ethics of advertising and rebranding, and adopting Fair and Lovely - a skin-lightening product owned by Hindustan Unilever - as a case study. It will take a critical look at the messaging and targeting in Fair and Lovely's advertising campaigns as they relate to the reinforcement of colourist beauty standards and discrimination based on skin colour. The study will also explore consumer response to the brand's rebranding to Glow and Lovely, and whether the rebranding successfully addressed the ethical implications previously raised or simply replaced one marketing tactic with another. It will further provide recommendations to Company's like Unilever in ensuring ethical marketing practices are followed by them.

Historical Context and Popularity:

Beauty standards in India have long been associated with fairer skin, higher social class, and better marital prospects. These problematic beliefs date back from colonialism and India's caste system. Fair and Lovely capitalized on these ingrained beliefs, through clever and unethical marketing, which promoted living a better life through fairer skins.

Literature Review:

Advertisements- Ethical considerations and regulatory framework:

Indian advertisement ethics have long faced accusations from scholars and regulators, where disturbing trends in marketing practices are often identified. While advertising has proven to benefit the economy, lend itself to knowledge, and stimulate consumption, its unwarranted messaging practices often involve misleading representations, stereotypic representation, and advertising of social biases which raise significant ethical dilemmas. (Malhotra, 2021)

(Awasthi, Kakkar, & Uppal, 2020) Recognized that while ASCI and its Consumer Complaints Council (CCC) provided a regulatory platform for advertising, considerable limitations to ethical advertising remain, mainly, weak enforcement and consumer knowledge. There were many brands that superficially followed ASCI's codes, whilst claiming benefits to health, misusing celebrity endorsements, and disclaimers that one could hardly see or read.

According to (Galhotra & Kaur, 2019), advertisements in India remain under scrutiny for distortions, indecent ties, stereotypic representations, and exploitation of social sensitivities. The ethical dilemma lies in the motivations of profit versus social accountability. The authors output that advertisement ethics should be upheld by values such as honesty, fairness, and social accountability and these values tend to get overridden through mechanisms of aggressive persuasion usage.

In the modern marketing environment, unethical behaviour is more visible, especially in emerging economies like India where regulatory oversight is weak. As noted by (Neelakantaswamy, 2018), there are multiple unethical marketing behaviours including, but not limited to, misleading or deceptive advertisements, greenwashing, cultural insensitivity, price fixing, and exploitation of vulnerable groups.

Rebranding and its implications:

Rebranding can be an effective way to reshape public perceptions and respond to

societal criticism. Ms. Komal Dhillon-Jamerson explores Unilever's rebranding of its skin-lightening products in response to consumer backlash. This research considers how Unilever's marketing story changed when it engaged in the rebranding of Fair and Lovely to Glow and Lovely, specifically. While the brand did change the language and advertising imagery, this research suggests that colourist beauty ideals remained strong despite the potentially progressive branding. The brand provided a new marketing narrative and advertising programme while continuing to draw on recognised narratives of fairness, allowing us to question the branding values and deeper substantive changes. (Dhillon-Jamerson, 2025)

In an ever-changing world, many companies face challenges adapting to their environment. Therefore, rebranding has taken on a bigger role in the toolbox of organisations that want to stay relevant and competitive in their markets. Mr. Ardhitha Karthik B.'s study enhances knowledge in this area by investigating the effect, on consumers, of rebranding on consumer perceptions and brand loyalty. His work furthers understanding of how changes in branding induce changes in some key consumer behaviours such as trust, emotional attachments and purchasing. The study found that rebranding causes brand loyalty to increase and increases engagement with the brand. However, poorly executed rebranding processes could disengage consumers, resulting in a loss of brand loyalty and brand equity. Wider literature has discussion regarding the necessity for authenticity, consistency and clear strategy in the rebranding process as well (Karthik, 2025)

As society evolves, companies are responding to change, and so it is no surprise that the purpose-driven brand is a major development in today's marketplace. In this case, we have Dr. Jagandeep Singh and Dr. Rachita Sambyal, who researched the rebranding of Fair and Lovely to Glow and Lovely with the intention of embodying gender inclusivity and disrupting gender norms in beauty. Their research examined whether consumers believed this repositioning with Glow and Lovely was a legitimate expression of a socially driven purpose or just case of rebranding. Despite the progressive intentions of the initiative, the reactions from consumers were divided between those that viewed the rebranding as a push towards the inclusivity and disruption of gender norms, and those who questioned the legitimacy of the rebrand altogether. (Singh & Sambyal, 2024)

Brand transformation has become a more intentional branding strategy in the pursuit of

positioning one's brand with highly volatile social values. Mr. Shantanu's research study here addresses the case of Fair and Lovely's rebranding to Glow and Lovely and discussed brand transformation created through societal pressure and the larger societal dimensions of transformation within Indian society. The main point of research was to show that the brand transformation charged forth unapologetically and quietly—meaning they were making movement from a beauty of fairness-focused halo to being centered on empowerment and inclusion. Similarly, they were looking at the responses from consumers to whether the intended transformation could be seen as relevant to them as social responsibility, if at all. The mixed responses from the researched audience suggests, while some consumers embraced a more inclusive beauty, others were even more cynical and approached the change with skepticism seeing it merely as symbolic gestures—almost as if Fair and Lovely was a greenwashing type of brand, rather than a transformation. (Mishra, 2024)

Research Methodology:

The research methodology employed in this case study is a descriptive research methodology that emphasizes qualitative analysis. The research focuses on the ethical implications in the marketing conduct of Fair and Lovely in India. The research will consider issues relating to gender bias, colourism in advertising, and false advertising, and will consider the historical precedents, and the modern developments of past and present marketing practices.

The topic necessitated that the research relied exclusively on secondary data. At the time of the research and the writing of the report, the secondary data sources came from: academic journals, books, industry reports, company publications, media articles, and previous reports on branding, advertising ethics, and social impact. Content analysis was applied to decode advertising messages and branding and marketing strategies and how consumers responded to the rebranding of Fair and Lovely to Glow and Lovely.

This approach provided a way to investigate the societal ramifications of the marketing practices of Fair and Lovely, whether Fair and Lovely was able to engage with the normative social constructs of beauty, and if Fair and Lovely was able to improve to a new ethical

marketing practice through its rebranding of changing its brand image, or if it was just repositioning itself as an alternative business offering in the beauty marketplace.

Objectives of the Study:

1. To investigate the ethical implications of Fair and Lovely's marketing practices with regards to gender representation, colourism, and fairness based beauty ideals in India.
2. To evaluate the extent which Fair and Lovely's advertising campaigns have continued to promote discriminatory beauty standards and social biases.
3. To assess if changing Fair and Lovely's branding to Glow and Lovely has remedied some of the ethical challenges regard inclusivity and responsible advertising.

Data Analysis and Interpretation:

An overview of the Ethical Controversies:

1. Promotion of Colourism/ Colourism as Stereotyping

Fair and Lovely commercials typically portrayed dark-skinned individuals as losers, unhappy, or unattractive. In stark contrast, the lighter-skinned individuals were portrayed as achieving jobs, getting married, and becoming socially accepted reference points.

Advertising in India has also been criticized for advancing cultural and racial stereotyping. Stereotyping is a systemic affront to agency and works to undermine the negative beliefs already held about groups of people. Fair and Lovely has also built advertising around India's preference towards fair skin as a site for race, colonialism, and caste privilege towards a restoring social good through product place. This was exploiting colourism and is a clear example of how stereotypes can be exploited for gain.

Cultural insensitivity occurs when ads do not respect or represent the everyday norms and values of diverse social realities. Fair and Lovely ads tended to reinforce colour stereotypes that aligned fairness with moral and social excellence. (Neelakantaswamy, 2018) argues that

the stereotyping excluded segments of consumers, and perpetuated toxic social constructs that dismissed equality and respect for diversity.

2. Gender Bias and Commodification

The majority of Fair and Lovely commercials were directed toward women, on the implied assumption that a woman's beauty was determined by the way a woman looks. They suggested that in order for women to be successful in work or to find a partner a woman needed to lighten her skin.

The Fair and Lovely example demonstrates that a woman's value and potential both were assessed by how a woman looked, in turn, reinforcing gender discrimination and the myth that fair skin would attract social and marital benefits (Awasthi, Kakkar, & Uppal, 2020).

Women are effectively presented and sustained as traditional if not outdated stereotypes, predominantly as sexual or decorative beings. Fair and Lovely, advertisements continue to uphold the concept that a woman's potential and worth is tied to her appearance, especially the fairness of her skin. Not only does this exclude darker-skinned women, but it also reinforces the patriarchal ideas of beauty (Malhotra, 2021)

For Fair and Lovely specifically, women are able to obtain approval or visibility only on the condition that they become fair-skinned women, which suggests that their worth is attuned to their appearance. By continuing to portray these representations of women, Fair and Lovely is counteracting some great strides made towards gender equity and this type of negative representation only serves to strengthen existing stereotypes, especially in a society facing gender inequities (Galhotra & Kaur, 2019)

3. Unsubstantiated Claims

The advertisements for the product tended to make completely unsubstantiated claims about its ability to lighten skin drastically in a certain time period. Not only were these unsupported by science but the advertisements also failed to present the totality of health risks associated with skin bleaching.

One of the overarching themes for the advertisements is the exaggeration and misleadingness of health claims of such products. The advertisements for the product present benefits that are grossly exaggerated and are either scientifically untested or contextually misleading. Fair and Lovely advertises itself as a product for lightening skin, with results claimed in six weeks. Not only are such statements scientifically dubious, but they are also socially regressive, because they explicitly link lighter skin with success, beauty, and happiness. These narratives exploit consumer emotion and promote illegitimate measures of self-worth, particularly for women (Galhotra & Kaur, 2019).

Implications:

Exploitation of Marginalized Populations and Related Psychological and Social Harm:

Unethical advertising tends to target marginalized consumers, like women, children, and low-income groups. The Fair and Lovely example illustrates that with a marketing message that implicitly suggests dark-skinned women will be less successful, and more disadvantaged in finding love. This kind of exploitation of social anxieties, particularly in a country like India that is steeped in cultural significance around skin tone and complexion, carries ethical implications regarding the psychological exploitation for profit (Neelakantaswamy, 2018). The low self-worth experienced by dark-skinned individuals, particularly women, is the end result of these marketing messages. Where the brand reinforces fairness as a desired attribute and consequently rejects the merit of a natural appearance.

Public Outcry and subsequent Rebranding:

Increasing public outcry for Fair and Lovely and other similar products and practices, particularly in the wake of worldwide anti-racism movements in 2020 prompted Hindustan Unilever to change the name. The critics say that the changes made are mainly cosmetic changes since the intents of the product and its implications on society are unchanged.

Recommendations for Unilever and Other Companies:

Given the ethical issues regarding Fair and Lovely and the rebranding to Glow and Lovely, the following recommendations can be made for Unilever and other companies, with the goal of establishing advertising claims that are ethical, inclusive, and socially responsible as a contribution to scholarship:

1. Create Inclusive and Representative Advertising

Change the beauty narratives from being colour-based in a society of skin colour standards, to skin tone diversity, body diversity, gender diversity, and ethnicity diversity. Make advertisements that show all sides of lived social realities, and messages of self-acceptance and confidence as opposed to the message of physical transformation towards success.

2. Use message integrity and transparency in all advertising

Do not make unfounded or exaggerated efficacy claims with regard to products. Every health or cosmetic claim should be backed by legitimate scientific research and testing. Clearly articulate any health consequences for product use, and specifically skincare, as it can be sensitive.

3. Change the Definition of Beauty Beyond the Physical

Change how we define beauty by focusing on individual accomplishments, self-confidence, intellect, or overall character, rather than on physical features that we cannot control.

Place products into a context that promotes wellness and self-care, and champions personal confidence, rather than focusing on adhering to social norms that are self-constructed.

4. Stop Gendering Branding and Marketing

Stop forty years of so-called gendered marketing (narrowly defining women's worth based on physicality or their marital/dating prospects).

Change the narrative so that the marketing is clearly focused on women's empowerment in a professional, social, and emotional capacity—without implying that physical change is a prerequisite to professional development and success.

5. Avoid Content or Communications that Ignore Cultural Responsibility

Do not use imagery, visuals, content, and narratives that so clearly reinforce cultural stereotypes, caste-based privilege, or colonial ideals regarding beauty.

Engage local communities, culture collaborators, and cultural experts in your process, so that you are not taking liberties with messaging that is not aligned with your ethical practice and particular cultural realities.

6. Practice Active Listening and Public Engagement

Develop open and transparent channels for communication with critics, consumers and activists, who are your strongest advocates.

Consider creating an advisory body with ethicists, sociologists and consumer activists to examine your advertising and branding strategies.

7. Make Ethics Part of the Marketing Strategy

Make ethics part of the training of your marketing team and decision-makers, so they are accountable to ethical standards when creating campaigns.

Make use of internal review boards or third-party audits that could consider your campaigns, before being released to the public, for ethical issues.

8. Go Beyond Cosmetic Changes

Ensure that the new branding contains material changes internally (reformulations, employee awareness, long-term changes to brand purpose).

Articulate that this isn't just a change of name or package, but a definite, measurable shift in your commitment to ethical business and support of social responsibility.

9. Be Part of Social Change Campaigns

Partner with NGOs, educators and advocacy groups to solicit support for awareness campaigns focusing on body positivity, anti-colourism, and gender equality.

Leverage brand influence toward stimulating possibly constructive social change instead of simply reacting to pressure.

This advice endorses a shift from reactionary or superficial change to proactive, value-based alternatives that offer the potential for building authentic consumer trust and long-lasting brand credibility.

Conclusion:

The research paper is consistent in regarding Fair and Lovely's advertising campaign as part of a broader issue of unethical marketing in India. The brand's use of colourism, gender stereotyping, and deceit is not an anomaly but rather a part of a trend where companies have chosen profit over ethical obligation. In turn, the campaigns suggest the pressing need for more regulatory action, institutional changes to ethical obligations, and cultural change toward inclusivity and body positivity.

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Mental Well-being for Viksit Bharat: An Empirical Study of Job Crafting with Insights from the Bhagavad Gita

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Abstract:

The glory of Bharat is multi-dimensional. The greatness lies in the civilization itself, focusing on the holistic growth of an individual. The mental well-being of an individual is equally important as physical and emotional well-being. Even in contemporary corporate culture, human capital is the significant investment of an organisation, prompting employees to put forth their heart and soul to achieve their targets, contributing to the larger growth and success of the organisation. With the employees spending most of the time of their day at work, it is imperative for the employees to prioritise their mental well-being. Banking industry though evolving in nature, the job descriptions of front-office workers is quite rudimentary. This inspires the workforce to adopt a creative approach to their work profiles, thus maintaining the enthusiasm in their service. The empirical research aims to examine the banking employees in Ghatkopar suburb of Mumbai and assess the relationship of job crafting on employee's mental well-being. Sixty-three employees were surveyed using purposive sampling technique. Statistical tools used are percentage, weighted mean, Pearson's Correlation and Regression. The slokas of Bhagavad Gita were used to theoretically support and interpret the results for Viksit Bharat.

Key words: Job Crafting, Mental Well-being, Bhagavad Gita, Bank Employees, Viksit Bharat, Indian scriptures.

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1. Introduction:

Maddison (2001) estimated that Bharat accounted for approximately 28% of the global GDP in the year 1000 CE. Some of the reasons stated by the author was the thriving rural and trade economies. A sophisticated and methodical strategy was employed in education, banking, governance and taxation. With repeated invasions of foreigners, the contribution dwindled, particularly during the British era, when the nation transitioned from being an exporter of finished goods to an importer of British products. Despite independence later, it was post-liberalisation that the graph improved. As of 2025, the country ranks as the fourth largest economy, with a substantial contribution stemming from the service sector, succeeded by industry and agriculture.

Within the service sector, banking occupies the core of the financial sector. Banks are currently experiencing a severe competition, long working hours, challenging customers, and constant regulatory needs challenges. With tight schedules, big transactions, and online monitoring, the banking employees are likely to face long-term stress (Boora and Singh, 2019). The hybrid work culture has eroded personal-professional boundaries, disturbing the mental well-being of employees. Therefore, there is an acute need to improve employees' mental health and establish a sustainable working environment. Therefore, there is a dire need to enhance employees' mental well-being and create a sustainable work environment. To anchor in composure, the man needs the manual of life – Shrimad Bhagavad Gita.

Viksit Bharat and Banking Industry:

‘Viksit Bharat’ is a Hindi term that translates to ‘Developed India’ in English. It denotes the aspiration and objective of transforming India into a fully developed nation – economically powerful, advanced in technology, socially inclusive, ecologically sustainable, and globally impactful. This vision imagines India as a nation where all citizens have access to good education, health care, infrastructure, employment and a decent standard of life by 2047., the 100th year of India's independence. Banking industry is the backbone of a country's economic status. In a Times of India article from September 2024, Finance Minister Nirmala Sitharaman highlight the vital role of banks in Viksit Bharat on the Bank of Maharashtra's 90th Foundation Day. She emphasised the need for infrastructure development and MSMEs, improvement of

digital security, and highlighted UPI's important function in international digital payments. Banks ought to develop robust systems to combat cyber attacks.

Job Crafting (JC):

In recent decades, it has been acknowledged that the proactive contributions of individuals and their responsibilities must be included in job design (Berg et al., 2010). The “bottom-up” approach has emerged notably in worldwide professional environment. Job crafting is defined by Tims and Bakker (2010) as the alteration of the boundaries and conditions of job tasks, job relationships, and the meaning associated with the job.

Wrzesniewski and Dutton (2001) classified "Job Crafting" into three distinct forms: Task, Relational, and Cognitive job crafting. Cognitive job crafting entails modifying one's perception of the job; Task job crafting involves altering the content of work, while Relational job crafting pertains to changes in the quality and quantity of interactions with others. In the journey towards Viksit Bharat, employees are actively shaping their own jobs to enhance job fit.

Mental Well-being (MW):

A person's mind is a seat of emotions and thoughts. It transacts with the world outside from what goes on inside the mind. It is surely an on-going process, not a port of call. It is the ability to cope with the wax and wane that life offers. According to PERMA model (Seligman, 2002), well-being builds on positive emotions, thoughts and action.

The Bhagavad Gita: A Brief Overview

Robust individuals form the foundation of the nation. The process of nation-building starts with the identification of mental equilibrium and physical strength in the youthful and intellectual population. The Gita, the dialogue between Sri Krishna and Arjuna on the battlefield, is the discipline of human development with universal applicability. It is a scripture that seeks to harmonise the individuality of each learner, equipping them to confront the dynamic demands of life. Man, though experiencing the highest form of luxury improves only

his standard of living, not life. The rishis, the rational philosophers of the yore, assert that the happiness and glory of the world are contingent upon the standard of life chosen by individuals. H. H. Swami Chinmayananda (Chinmayananda, S.) says, *“Gita is meant for young men and women who are on the threshold of life bubbling with enthusiasm to plunge into the field of action, to struggle, to sweat, to strive, to succeed.”* The process of happiness and well-being elucidated in the Gita serves as a lighthouse for mankind. Gita provides a thorough explanation of how to train the mind and intellect to confront daunting and burdensome challenges in confusing situations. This contribution is now recognised at the global level too. According to the Economic Times report (April 2025), on the 17th April, 2025 UNESCO included the manuscripts of the Bhagavad Gita and Natyashastra on its esteemed Memory of the World Register, acknowledging its profound cultural and historical importance. This inclusion recognises the lasting influence of these ancient Bharatiya scriptures on world civilisation.

2. Review of Literature:

Moulik and Giri (2023) assessed 310 millennial employees working in IT/ITES, Telecom and Banking sector in India. The results indicated that proactive job crafting improves workplace happiness, including job satisfaction, work engagement and organisational commitment. Job crafting proved to be an important HR approach for workplace well-being, especially post-pandemic.

Harju et al. (2021) conducted a two-wave longitudinal study in Finland amongst 2,453 workers across different fields. The result demonstrated that job crafting has dual impact. It can be both empowering and burdensome. It was suggested that HR professionals should assist employees in crafting their work in ways that maximise their well-being without adding any psychological strain.

Ganguly, S., and Gope, M. (2020) theoretically examined the relevance of the Bhagavad Gita's concepts in mitigating employee stress in the contemporary business set-up. The researchers advocated that employee well-being and organisational performance could be improved by incorporating Gita's teachings into modern business practices.

Robledo et al. (2019) investigated the mediating role of job crafting in relation to work engagement and well-being. 443 Spanish employees across various sectors formed the sample size. It was found that engaged employees are more inclined to modify their roles, hence boosting well-being and productivity.

Slemp et al. (2015) carried out research studying the impact of job crafting and perceived autonomy support on workplace well-being. The data of 250 service sector employees in Australia revealed that both job crafting and autonomy substantially enhance employee well-being.

Tims et al. (2013) conducted a longitudinal study of 288 workers of a chemical plant in Netherlands. The significant findings depicted that employees who actively crafted structural and social job resources saw an increase in such resources over time, leading to greater engagement and job satisfaction, while simultaneously decreasing burnout.

3. Research Gap:

Today's workplace, especially in banking industry, is marked by higher stress levels, stringent deadlines and performance expectations. These issues greatly impact employees' mental health, causing burnout, emotional exhaustion, and job dissatisfaction. Thus, spiritual frameworks are increasingly being included into employee health initiatives and promote the ability to think out-of-the box. Bhagavad Gita offers timeless wisdom on emotional intelligence, resilience, ethics and mental discipline. Nonetheless, in light of the text's ideological richness and psychological benefits, a significant gap remains in the empirical investigation of its relevance and implementation in organisational instances. Naval Garg (2017) and Gunmala Suri (2017) indirectly incorporate Gita into other Indian philosophical concepts in their work. Insufficient empirical research exists in this area. The absence of targeted, evidence-based research presents a significant opportunity for progress. Addressing this gap not only draws scholarly attention to indigenous knowledge systems but also facilitates the creation of culturally pertinent mental health strategies in the workplace. The integration of qualitative and quantitative research designs provides a unique methodology in the sector. Additionally, this study seeks to bridge the theoretical and empirical gap by examining the particular impact of job crafting on mental well-being through the lens of the Gita.

4. Objectives of the Study:

Using the relevant teachings from the Bhagavad Gita, the objectives framed are:

- To examine the perceptions of Job Crafting and Mental Well-being of the respondents.
- To analyse the relationship between Job Crafting and Mental Well-being.
- To study the impact of Job Crafting on Mental Well-being.

5. Research Hypotheses:

Based on the above objectives, the hypotheses thus framed for the inferential statistics are:

H₁: There exists a positive and significant relationship between JC and MW.

H₂: There exists a positive and significant impact of JC on MW.

Based on the objectives and hypotheses framed, the proposed model is as below*:

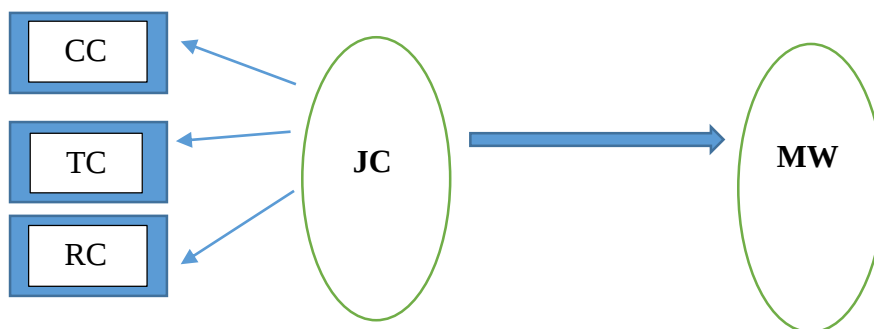


Fig 1. Job Crafting – Well-being Model

*Note: CC – Cognitive Crafting, TC – Task Crafting, RC- Relational Crafting, JC – Job Crafting and MW – Mental Well-being.

6. Research Methodology:

The statistical methods employed include percentage, weighted mean, Pearson's correlation, and regression analysis. The Bhagavad Gita was utilised to conceptually analyse and substantiate the findings.

Table 1: Details of the Research Methodology

Sr	Particulars	Description
1.	Data Collection	Primary data – standardized and structured questionnaire. Secondary data – Books, journals, websites and articles.
2.	Sample Unit	Private, public, co-operative and small-finance banking employees of Ghatkopar (East).
3.	Sample Size	63 respondents
4.	Sampling area	Ghatkopar (east), Mumbai.
5.	Sampling method	Purposive
6.	Instruments used	Job Crafting Questionnaire (JCQ) by Slemp and Vella-Brodrick (2013); Warwick Edinburgh Mental Well-being Scale (WEMWBS) by Warwick Edinburgh.
7.	Questionnaire	Part A – consisted 5 questions on Mental Well-being, Part B – 9 statements on Job Crafting, with 3 statements under each of the sub-variables viz., Task Crafting, Cognitive Crafting and Relational Crafting. Both the variables were measured on 5 point-Likert Scale (5-Always to 1-Never), and Part C – consisted questions on Demographics.
8.	Statistical tools used	Percentage, Weighted mean analysis, Pearson's Correlation and Regression using SPSS.

Source: Primary data

7. Data Analysis and Interpretation:

A. Demographics:

From the responses received, 56% are female and 44% are male. 30% of the respondents belong to the age group of 30 – 35 years, followed by 24% who belong to 25 – 30 years of age. 37% of the respondents have a work experience of 6 – 10 years. While only 6% have a work experience of less than a year, about 29% of the respondents have 1–5 years of working experience. This confirms that the majority of employees are young and matured

individuals having a decent number of work experience to give their opinions on their mental well-being and ability to craft their jobs. The Bhagavad Gita too, was addressed to young, skilled and dynamic Pandava prince, Arjuna who was baffled when he saw his kith and kin in the opposition.

B. Descriptive Analysis:

Table No.2: Perceptions of JC and MW

S.No.	Constructs	Overall Weighted Mean
1.	Job Crafting a. CC – 4.73 b. TC – 4.44 c. RC – 4.46	4.55
2.	Mental Well-being	4.38

Source: Primary data

This part of the study examines the perceptions of Job Crafting with their sub-variables and Mental Well-being among the respondents. Weighted mean scores of the two constructs were calculated. From the above table no.2, the score of Job Crafting was **4.55**. This indicates that the banking employees can craft their tasks (4.44) by introducing novel way to improve their work and choose to take on additional tasks at work. They were able to enforce cognitive crafting (4.73) by reminding themselves about how their job impact their personal and professional life, thereby contributing to the society at large. The respondents craft their relations (4.46) by attempting to know their co-workers and mentoring the new employees formally and at times, even informally.

The score for Mental Well-being was **4.38** and this means that the respondents have agreed to their Mental Well-being. Their job is so demanding that their mental composure is kept on check. They are able to think clearly, feel confident, interested in learning new things and they are highly optimistic about future.

Gita Interpretation: Arjuna's plight was similar to banking employees who are under constant work pressure. Sri Krishna advocates that the experiences of joy and sorrow, success and failure are impermanent and endurance is key to progress (**Ch 2, v. 14**). Banking

employees' routine work may bring fluctuating experiences such as pressure from targets on one hand and appreciation from customer on the other. These highs and lows are inevitable elements of professional existence. By cultivating mental fortitude, employees can maintain their emotional balance.

C. Inferential Analysis:

This part of the study determines the relationship between Job Crafting and Mental Well-being through Pearson's Correlation analysis. The Pearson correlation coefficient between JC and MW is $r = 0.351$, indicating the relationship is moderately strong and positive. Job Crafting is indeed highly correlated to Mental well-being which means that as the ability to proactively shape their jobs increase, their mental well-being also increases. The relationship is statistically significant and positive at 1% level (2-tailed). Therefore, Hypothesis (H₁) is accepted.

Gita Interpretation: Sri Krishna expounds the one who is engaged in work with intelligence and dedication relinquishes both positive and negative results. Therefore, strive for Yoga, which is skill in action (**Ch 2 v. 50**). The employees often face repetitive tasks and emotionally demanding customer interactions. By applying this wisdom, they engage in reshaping aspects of their job to align with their strength and interests. Thereby this reduces their burnout and fosters mental well-being.

Further to test the impact of predictor on the dependent variable, Regression analysis was conducted.

Table No.3: Impact of Relationship - JC on MW

Variables	Unstandardized Coefficients		Standardized Coefficients	t value	p value
	B	Std.Error	Beta		
Constant	1.836	0.874	-	2.102	0.040
JC	0.558	0.191	0.351	2.928	0.005
R value	0.351				
R Square value	0.123				

Source: Primary data

From the above table no.3, the coefficient of determination ($R^2 = 0.123$) shows that only 12.3% of the variation in the MW is explained by the predictor (JC) in the regression model. This shows that while the relationship is significant, it is not very strong. Other factors may also be influencing the mental well-being of banking employees. However, the relationship is statistically positive and significant. Therefore, Hypothesis (H_2) is accepted. This aligns with Self-Determination Theory (SDT) which is about what drives people and their well-being. The satisfaction of psychological needs – i.e., relatedness, competence and autonomy- on the job leads to higher motivation and better mental health results.

Gita Interpretation: Sri Krishna guarantees that for those who maintain unwavering dedication and concentration in their work, lord Himself takes care of material and spiritual needs (**Ch 9, v. 22**). Since the banking employees constantly keep juggling with high workloads and rigid targets, applying this verse in their life would be helpful. By what they do in job crafting, such experts are naturally creating a sense of purpose in their careers. Therefore, their mental welfare is sustained. Sri Krishna assures that whenever people are involved with commitment, their welfare and sense of security are satisfied – not by systems but by a vast inner confidence and divine assistance.

8. Scope for Further Study:

- a. More independent variables such as emotional intelligence, religiosity, employee engagement, and so on may be tested in the proposed model.
- b. A wider geographical area could be covered.
- c. Respondents from other service industry could be included.
- d. A longitudinal study could be conducted.

10. Practical Implications:

The study indicates that job crafting markedly improves the mental well-being of employees within the banking sector. Based on factual evidence and the timeless wisdom of the Gita, the subsequent practical implications are proposed for primary stakeholders:

- a) **For employees:** Gita emphasises on the importance of Swadharma (one's own duty) and employees guided by this wisdom should be motivated to contemplate their inherent abilities and synchronise with their everyday responsibilities.
- b) **For HR managers:** Managers should emphasis on establishing value-driven workplaces wherein policies enable employees to customise their workspaces, reflecting the Gita's focus on Karma Yoga (selfless action), keeping company above self. HR professionals can also develop wellness programs based on the teachings of the Gita.
- c) **For government:** Policymakers should integrate Gita-inspired leadership training and job crafting frameworks throughout public administration.

11. Limitations, Conclusions and Suggestions:

The Bhagavad Gita, an ancient scripture of Bharat, offers profound insights into human psychology and behaviour, providing a framework for understanding and managing the complexities of modern life, including the challenges faced by individuals in demanding professions such as banking (Bhadeshiya et al., 2023). This article examined how specific lessons from the Gita might provide insights into and perhaps mitigate the issues impacting the mental well-being of banking staff, as evidenced by the primary data. Sri Krishna emphasises the significance of mental mastery, asserting that the mind can either be a person's best friend or worst enemy, contingent upon its training (**Ch 6, v. 6**). Numerous studies indicate that the principles of the Gita correspond with modern psychological methodologies, such as Cognitive Behavioural Therapy (Sharma, 2014) and Goleman's (1995) Emotional Intelligence aligns with equanimity mentioned in the various verses of the Gita. The banking sector finds this message to be of high relevance. Employees experience control over their work processes through job crafting, thereby decreasing stress and burnout. Sri Krishna perspectives highlight that mental well-being is an internal triumph – when individuals actively craft their work and minds, the workplace transforms into a hub of development and fulfilment instead of a site of struggle.

Through research, findings indicated that managers in India design autonomous and adaptive work cultures through a bottom-up process. The study found that JC can improve MW when well managed. The regression analysis performed in this study offers substantial validation for the proposed model. The model is well-fitted and valid within the context of data analysed. The insights of the Gita in this paper is aligned with the results reported by Joshi and Sahu (2023) wherein they argued that Gita's teachings improve emotional resilience. In addition, Pandey and Mishra (2021) explored the relevance of Gita in enhancing personal strength during challenging times. However, a few limitations of the study include that the sample of the banking employees were only sixty-three. The study was confined to Ghatkopar suburb of Mumbai city, focussing specifically on this geographical area. It employed only a single predictor to test the proposed model, which may limit the scope of the findings. Additionally, the study relied on the questionnaire method for data collection, and therefore, the inherent limitations of this method- such as response bias also apply to this research.

The incorporation of Gita-based principles into wellness practices may cultivate a resilient, mindful, and morally anchored workforce. By connecting traditional spiritual knowledge with contemporary psychological techniques, companies may support employees' emotional and professional growth, thus striving for Viksit Bharat. It urges organisations to recognise and endorse such activities instead of depending exclusively on administrative actions. It establishes a core comprehension of job crafting and paving the way for subsequent empirical research and practical applications.

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Sustainability and Trade in Ancient India: A Historical and Philosophical Analysis

***Dr. Parag Ajagaonkar and Ms. Geeta Desai**

Abstract:

In the present study one of the focus areas is on old trading system of India i.e. what were stress on sustainability in ancient trade system and How principles embedded can help to sustain our economic models. The secondary objectives are to identify existing environmental awareness in agricultural and artisan production systems as well as comparing past cultures with modern sustainability models. Objective of the Paper: The paper interprets classical Indian civilizations across various epochs, from Indus Valley to Vijayanagar Empires through inter-disciplinary methods- analysing trade networks, guild operations and environmental philosophies culled from three types of primary sources –Historical textual references (literature) and related myths; Archaeological records and Epigraphs. In that era of ancient Indian trade systems, the consideration was taken in view with the sustainability of the community which involved human resources and nature resources. Taking evidence from a set of ethical practices in agriculture, religious thought and self-regulated guilds the paper elaborates upon a morally sound and ecologically respectful economic system Based on past records, scriptures and archaeological evidences it connects ancient Indian practice of commerce and ecology with the concept of sustainability — economic as well as environmental. In a series of case studies and philosophical reflections, the paper contends that ancient India provides a lesson for how to operate sustainable economic systems in the present day.

This research paper is an attempt to discover about the sustainability aspect in ancient Indian trade systems. Work also analyses how a compendium of agriculture, religious and tradition practices over time enforced strictures for maintaining an economic system that was moderate in morality and kinship with the rest of Creation. Based on the empirical evidence like historical accounts, scriptures and archaeological findings this paper connects ancient

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Indian trade and ecological practices with sustainability as conceptualized today. This paper in the form of a series of case studies and philosophy analysis, presents a model as to how an ancient Indian system can prove instructive for creating systems that are economically sustainable today.

Keywords: Ancient India, Sustainable Development, Trade, Guilds, Dharma, Arthashastra, Ethics, Ecological Sustainability, Agriculture,

Introduction:

Although sustainability is thought to be a modern idea, it has its roots back in the ancient civilizations. Sustainable trade in ancient India where economy was agrarian, whose philosophies were spiritual, and whose systems focused on the community was a reality long before sustainable trade became a household term across the world. The trade in ancient India was not just economic but also a cultural and ecological act as Dharma (duty), Ahimsa (non-violence) and Loka-Samgraha (universal welfare) defined the ancient India trade.

The paper discusses the way through which ancient India consciously embraced sustainability within its trading systems, including the studies of practices, ethical model and long-range trade, presenting the overview of how the knowledge system of the past can come into play in the modern achievement of sustainability.

Study objectives:

1. To trace the norms of sustainability, present in the Indian system of trade of antiquity.
2. To identify the environmental awareness present in agricultural and artisan production systems.
3. To make comparisons between past cultures and modern sustainability models.

Scope of the Study:

This study concerns classical Indian civilizations and polities spanning from the Indus Valley to the Mauryan empire and from the Chola dynasty to the time of the Satavahanas. It

concentrates on principles of trade, ecopsychology, ethical guild operations and philosophies of environmental stewardship, with the intent of drawing out immortal tenets in the current discussion of sustainability.

Research Methodology:

The study is conducted in a multi-disciplinary way by using qualitative methodological tools, fronting history, philosophy and text analysis. Analysing early resources like the Kautilya's Arthashastra, Vedic texts, Buddhist and Jain scriptures, copper plate inscriptions, and travel logs of ancient times, the study also looks at ideas of ecological consciousness and ethical trade. These texts are analyzed through hermeneutical and expository readings, and allow for a deeper understanding of ancient Indian ideas of "sustainability."

The paper also features extra resources in the form of peer-reviewed literature, historical commentaries, and archaeological reports to aid and frame the interpretations. Specific dynasties and regions for e.g., Indus Valley Civilization, Maurya Empire, Chola and Vijayanagara dynasties are employed as case studies of such infrastructure (docks, warehouses, highway systems), commerce, and regulation of guilds. (Possehl, 2002)

Thematic analysis reveals the following recurrent themes: resource conservation, ethical commerce, and community trade architecture. The approach seeks to reveal a value-based economic rational that underpinned ancient commerce while likewise corresponding to modern sustainable development models such as the United Nations' Sustainable Development Goals (SDGs).

Economic Foundations of Sustainability in Ancient India:

In Ancient India, economical foundations of sustainability may be formed during the course of ancient Indian civilization. The ancient Indian economy was founded on agriculture, handicrafts and trade. There were farming methods like crop rotation; use of organic manure; water conservation. Writings such as the *Arthashastra*, mentions sustainable forest management as well as control of animal products. Cotton, wool, and clay are biodegradable and available locally, these were the materials used by artisans. These environmental-friendly

activities were necessitated as well as motivated by environmental rules written in *Vedic* scripts and Buddhist-Jain principles.

Resource Ethics and Trade Networks India was in the extensive trade flows, such as the Silk Route and marine connections with Southeast Asia, Rome, and the Middle East. As trade was growing, sustainability of management of resources was being managed consciously. Such ports as Lothal and Bharuch had granaries and warehouses well documented.

Arthashastra set more emphasis on the exploitation of limited resources and conservation of natural assets. Ecological balance was not interfered with in as far as trade of such commodities as spices, textiles, and precious stones were concerned. Sustainable Practices and Guilds (*Shrenis*) Self-regulated organizations of merchants/ others of artisans were called guilds or *Shrenis*. They maintained quality of the product, good remuneration and environmental sustainability. To control the quality of the trades, these guilds usually embraced rules that discouraged production more than what was needed, wastage of resources and unscrupulous business. Their codes of conduct reflected doctrine of sustainable development. They also gave money to local infrastructure, temples, and education, which favoured community growth and inclusive growth.

The religions of Indians played an important role in sustainable trade. Hinduism also promoted morality to the society and nature. Non-violence, parsimony and frugality were encouraged by Buddhism and Jain. This was reflected in reasonable prices, non-exploitation and appreciation of biodiversity. Religiously based economies such as that of Cholas integrated environmental management, culture and economic activity.

Examples:

1. The Mauryan Empire (321-185 BCE) under emperor Ashoka practiced afforestation and animal protection, and promoted inland and coastal trade. (Thapar, 2002; Gupta, 2021)
2. Indo-Roman trade was concentrated at one of the ports of the city of Muziris (modern-day Kerala). In accordance with the local ecological conditions, it also had sustainable spice farms, particularly black pepper.

3. Chola Dynasty assisted navigation trade as it was investing in irrigation, afforestation, and temple grain store structures systems. A part of a unified ecology and economy can be seen in their copper-plate inscriptions.

4. Standardisation of trade systems Earliest evidence of standardised trade systems can be found in the Indus Valley Civilization (2600-1900 BCE). (Possehl, 2002)

Animals that were used as a trademark in seals were marked with animal motifs and script possibly to indicate origin or quality. There is evidence of maritime trade in Lothal, an Indus valley site in Gujarat which had a dock yard attached to the sea. Long distance trade relations are testified by the artifacts of Mesopotamia that were found in Lothal. ¹

5. The Satavahana Dynasty (1st century BCE 3rd century CE) had encouraged sustainable trade inland by patronizing the Buddhists. Karla and Bhaja had rock-cut caves and these were not only guild-supported trade rest stops but also monasteries. (Singh, 2008)

6. Agricultural tanks and plantations of trees along trade roads were financed by the Vijayanagara Empire (c. 1336-1646 CE). Portuguese voyagers including Domingo Paes have informed of the moral scrupulousness of Vijayanagara merchants particularly in Hampi markets which were abustle.

Current sustainability models such as the United Nations Sustainable Development Goals (SDGs) that focus on the inclusivity of economic development, nature protection, and responsible governance could be traced back as far as ancient India trade systems, where these ideas held true.

Ethical commerce has its basis in the ancient systems like concept of trusteeship by Gandhi. Although ethics and economics tend to be separated in modern capitalism, in ancient India they were integrated, and it indicates that another paradigm of development which would be both values-conscious and sustainable can be applied.

The ancient Indian trade was not accompanied by perfection. The barrier to accessibility was social hierarchies. Resource depletion had also taken place in certain areas because of war or excessive urbanization. But the prevailing philosophical systems stressed on corrective processes through Dharma, repentance and state action.

Conclusion:

The trade systems of ancient India provide a great store of sustainable traditions which is based on spiritual whereabouts and ecological awareness. The moral combination of trade, concern of nature and community-based economies offer a useful model of the contemporary sustainable growth. The rediscovery of these past views can be useful in motivating modern policy-makers, corporations, and teachers to sojourn into a more even-handed and responsible attitude towards trade and economy.

From the marine inlets in Lothal, the Chola inscriptions, the Mauryan policy of retrogressive afforestation and Satavahana network of monastery-trade, there are historical evidences which symbolises the doctrine of the practice of practical aspects of the sustainability. Eco-vision of the future is echoed in trade infrastructure including granaries, dockyards, and tree farms. Ethical business was mandated by guilds, waste was minimized, and production tied production to environmental and social justice from within its inception. These examples highlight the importance of environmental balance in trading policies and everyday economic life.

Limitations of the Study:

Satellite imagery and text mining give it a depth of insight, but like all research of this kind it is limited by its reliance on interpretation of historical and archaeological evidence. However, challenges exist in relation to missing data and absence of objective parameter to measure. Contemporary social inequalities could have rendered more inclusion of trade systems invisible. However, trends do offer a broad indication of substantial initial progress toward sustainability.

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An Insight into Trade and Artisan Symbols Used in Ancient India: Branding Practices from the Indus Valley to the 21st Century: A Journey of Symbols, Identity, and Cultural Resonance

***Dr. Parag Ajagaonkar and Ms. Geeta Desai**

Abstract:

Branding is usually considered a recent marketing concept but its origins are found in the ancient history of humanity in which symbols were not only artistic representations but branding tools aimed at facilitating trade, identification, and cultural sharing. The present paper discusses brand symbolism from the time of achievements, early in the Indus valley right up to present India and tries to focus on the continuity and discontinuity of iconographic language through millennia. Studying the trade seals, artisan marks and religious motifs of ancient India, the study reveals how these ancient symbols served as a mark of lineage, quality and religious ethos, traits now reflected in contemporary brand communication. Additionally, the paper showcases how, in the modern Indian context, brands such as Patanjali, Khadi and FabIndia use traditional cultural and philosophical symbols to create consumer confidence, authenticity and emotional connection. Comparing branding efforts, this study highlights the persistence of visual narrative embedded in history and its role in today's politicized economy of brand.

Objectives of the Study:

1. To understand the importance of trade and artisan signs in the Indus civilization.
2. To view semiotic symbols used by early traders and craftsmen.
3. To contrast old Indian branding and current brand techniques.
4. To demonstrate the onset of ethical branding and symbolic heritage in the 21st century.

Scope of the Study:

This paper covers the Indus Valley Civilization (approx 2600 BC) to contemporary branding practices in India. It emphasises on the visual and symbolic aspects of branding and delves into ancient seals, artisan stamps, trade, religion and symbols and their effect on contemporary Indian brands. The coverage spans history, as well as the present day.

Introduction:

Brand now-a-days have been accepted as a modern corporate fashion. Yet the temptation to claim these symbols as statements of identity, quality and trust is age-old. Long before trademarks and advertising, there were symbols, inscribed on seals and products, with stories, about making, owning, believing. In terms of Indus Valley civilization, the symbol was not an ornament; it was as a means of communication and trade. When we jump to India in 2025, there are brands in India which are constantly tapping into the same resource of symbolic inheritance whether it is the omnipresent, OM sign – a picture of lotus flower etc. reflect Indian cultural and spiritual heritage. It's in this realm that the researchers embark on the journey, the dawn of which is a few thousand years in the past and the twilight of which is nearer to our own symbolic age the age of the brand and the symbol through branding.

This study attempts to account for the effects exhibited by the ancient Indian symbolism branding techniques in developing and incorporating 21st century communication strategies.

The paper examines the communication strategies of the modern Indian brands with reference to the symbols of religion and philosophy to highlight their identity and consistency. The sign process of the traditional trader as opposed to that of a modern brand.

Trade in Ancient India: A Way of LIFE:

The world of the Ancient India was business creative, interdependent. Its routes of commerce had covered the rich planes of the Ganges to the distant regions of Mesopotamia and Central Asia. The archaeological remains of places such as Mohenjo-daro, Harappa etc. are the telling narrations of the past, and indicative of an economy which was as systematic as it

was intelligent. Not only did the cities have to show off newly built streets' drainage system but also warehouses, dockyards and markets. Goods like ivory, cotton texts and metal tools were exchanged via networks that were glued together with trust, reputation and shared symbolic meanings.

The presence of like weights and like seals suggesting repetitive themes, reflects a subconscious seal of approval and brand identity as a concept even at this nascent stage in the day.



Figure 1. Unicorn seal from Mohenjo-daro, Indus Valley Civilization

What They Mean to the Artisans of the Indus Valley:

One of the most powerful archaeological findings in the Indus Valley are its seals, made of, quite literally, steatite and carved in small shapes with animals and texture representations. It wasn't just images of any kind; these were powerful symbols of trade and society. Hence you see a monster like the unicorn, bull or elephant, which in all likelihood represented guilds, arts unions or to some extent named cities. The well-known so-called Unicorn Seal, in large numbers, may have indicated the residence of a distinct guild of merchants. Symbols of this type are repeated in several of the excavation squares and testifies to a complex network of symbolic system more or less workers as trademarks in modern society. Also, the seal of the yogin with animals – Pashupati -depicts the that the religious theme was mingled with business identity. These were not mere stamps, however, but bearers of faith, kinship and identity.

Ancient Indian Branding as Probed by Semiotics and Sacred Geometry:

Whereas approach to semiotics with how signs make meaning, ancient Indian symbols were applied with an intentional, if not a predominantly deciphered signifying potential, using sacred geometry, *yantras* for instance, and *mandalas*, *swastikas*. By aligning seals with sacra corpora, the analysis demonstrates an advanced knowledge of the visual coding of commodities that represent not only objects of devotion but agencies that guarantee transcendental access, wellbeing, and worth. We see the same embedded metaphysical logic we just describe reflected in the way brands are using geometry in more a more hidden way to generate trust and recall value.

Guild Branding and Proto-Certification:

Artisan guilds of ancient India (*shrenis*) work under the royal order which also mentions the ethical codes for artisans. Seal or mark from such a guild served as proto-authentications of quality and provenance, akin to today's ISO certifications or Geographical Indications (GI tags). This paper compares such seals with contemporary certified logos like 'Make in India', 'Organic India' or 'Handloom Mark' and illustrates continuity in ethical branding based on institutional recognition.

Trade Routes as Branding Channels:



Figure 2. Ancient maritime trade routes connecting India with West Asia, Africa, and Southeast Asia.

Trade between India and Egypt, Rome, Mesopotamia and Southeast Asia was not just about commerce: it was also symbolic and cultural. Ceramics, beads, and textiles carried graphic directions regarding source, maker, or community. The more established branding highways, the Silk Route from China and the Spice Route from the Western Ghats connected to the Silk Route, carried the goods and the “Indian-ness” long before brand export became global. So when this ancient Indian tradition became China’s first transnational brand identity, Ancient India had thus created one of the first transnational brand identities.

Religious Brand Endorsement through Symbolism in Places of Worship:

Temples, being both economic and cultural centres, invested in various art forms and symbols. The temple stamp, like that of the Chola bronzes or Hoysala carvings, was a form of elite endorsement. This article argues that modern-day influencer endorsements or celebrity ambassadors are cultural avatars of these ties.

Modern Connections and Cultural Rebranding:

Modern Transformation of Old School Values into Branding

Contemporary names such as Tanishq, Forest Essentials [Luxury Ayurvedic store], Amul and Borosil are barely selling products, they are trading on trust, the trust of lineage. For example, Forest Essentials leverages Ayurvedic recipes to conjure up emotional nostalgia and cultural rootedness while employing traditional Sanskrit chants and heritage in its packaging.

Re-spiritualization of Branding

Indian philosophy stressed the concept of action without selfish desires, ‘*nishkāma karma*’. Khadi, FabIndia, Tata Tea are some of the specialist brands which practice *dhārmic* branding that focuses on practice of social good and collective wellbeing. This is a transformation from capitalist marketing to conscious commerce, a movement in which companies strive to benefit society rather than capitalize on it.

Comparative Insight with Other Civilizations

By comparing, even if briefly, Egyptian symbols, Roman amphora stamp, and Chinese calligraphic symbols to Indian seals, the paper is able to draw attention to the global antiquity of symbolic branding whilst establishing how India made distinctive use of branding to combine spirituality, morals, and obligations vis-à-vis the society within the realm of commercial symbols.

Towards Future: Branding in an era of AI and Vedic Memory

With AI changing branding landscapes with algorithms and behavioural targeting, the opportunity for Indian brands lies in going back to the modern-century ancient semiotics for branding. And in the era of post-truth, symbols of heritage are becoming institutions of credibility. This new branding style is nothing but an ancient Indian wisdom of '*yathā dṛṣṭi tathā sṛṣṭi*', as is the vision, so is the creation.

The 21st Century Marketing Exploitation of Religious and Philosophical Trademarks

The cultural symbols is the revival and is updating the in Indian branding of today. Indian companies are finding that symbols that take us back to ancient times are not just décor in the cutthroat marketplace, but also floors of emotion and philosophy. The sacred sound of OM and lotus serenity: The blessings of the divine such as Krishna, Ganesha and others including food and nutrition come emblazoned on the facilities of well-being.

Patanjali with Ayurvedic cleanliness and spoken names in glossed-over Sanskrit and motifs in Vedic designs; and FabIndia with artisanal culture in clock prints and ethnic patterning reflecting ancient models. Marques reference religious and philosophical stories in order to not to sell products rather, to sell values, history, belonging however.

Branding Today and Its Sense and Cultural Inheritance:

The brands that resonate with us today are the brands that tug at our heart. Most often, the emotional cord is a common ancestry and a shared past in India. Religious, philosophical

or aesthetical symbols of ancient Indian thought systems give authenticity, nostalgia and loyalty. For example: Gandhian *nishkāmatā* (sacrifice) and rural traditions such as *hikatha* (story of) *Jeersa-Pallega*, reminiscent of the stories of village artisans and of India's self-sufficient spirit. The commercial crop, Tata tea “*Jaago Re*”, is week's craft, but added with social awareness -- Keep Your City Clean, support of equal rights is *dharmic* obligation. Not advertisements these, but, instead, today's articulation of India's old wisdom about how business has to be in the interest of society, and not merely in its wealth-seeking interest.

In the old India, trader's seal spoke of trust and belongingness. A logo for a brand has ethos and existential pledge in India today. But for all the digital divide, the idea of symbolic branding, authenticity, connection, provenance and cultural mooring is essentially age-old.

Research Methodology:

Taking a qualitative and semiotic-historical approach, this article has sought to explore the dynamics of transformation and persistence of branding through symbolic representation in India. The data of the archaeological artifacts, for example, the Indus seals, inscriptions on ancient trade routes, temple engravings and the guild marks are the sources of study and these are inter-related. These visual remains are analyzed using a semiotic approach that studies the ways in which symbols transmitted and infused meaning, ownership, religious legitimacy and quality control.

Apart from archival evidence, the study also draws on secondary evidences, which include ancient texts such as Arthashastra, Vedic literature etc. and an analysis of present-day brands like Patanjali, Khadi, FabIndia among others. The method consists of a comparison with older visual identities and contemporary use of tools of branding in order to stress the continuity in the figurative language of consumer trust and brand differentiation.

Drawing on symbolic anthropology and marketing semiotics, the study makes an interpretative/semiotic inquiry into the ways in which visual themes, of the like as the lotus/'OM'/deities, were historically recontextualized from seals to contemporary logos, to operate as a visual currency, across time. With the aid of this interdisciplinary lens, the paper

attempts to reveal how ancient India's visual culture has impacted the perceptions and design concerns present in current Indian brand identity.

Conclusion:

The seals of the Indus Valley when viewed all have symbols that represent ownership or ownership with truthfulness in the forms of unicorns, bulls and writing, which all turned out to mean the same thing, authenticity. A map of ancient trade routes demonstrates Indian early engagement in symbolic communication and transnational branding. Contemporary brand research says that business firms like Patanjali; FabIndia use historical and religious signs for trust and branding reminder. This symbolic heritage creates emotional connection for customers and enhances brand loyalty.

With its roots in steatite seals, which bore indents to verify goods in Harappa, the branding journey in India is more than 4000 years old and today's digital screens bear logos. At its core, the trip is bigger than business. Its storytelling, doing a worldview, making relations on trust. As we navigate the hyper-digital universe of the 21st century, decoding India's ancient and time-tested symbolic systems will provide visual and strategic insights. In a world that is desperately seeking some authenticity and values, India's traditional pictorial branding holds within it lessons for eternity.

Finally, while the present study is a good advance in understanding how symbolic branding has been historically continuous from ancient India to contemporary marketing practices, many avenues lie open for future research.

More comprehensive surveys/experiments: Large-scale surveys or experimental studies may be envisaged in future research to understand how consumers (both Indian and non-Indian) respond to brands that have ancient Indian symbols like the OM sign, lotus, traditional Guild Marks etc., so brand purchase decisions; trust and brand loyalty could continue to rely upon these physical forms of evidence representation (Panjwani, 2018).

Comparative Civilizational Branding Analysis: It is possible that broadening the comparative framework to consider archaic branding traditions in other ancient civilizations

(e.g., from Mesopotamia, China and Mesoamerica) might show how much of ritualistic branding in India was specifically Indian, or possibly subject to common cross-cultural influences (Marshall 1931; Witzel 2006).

Digital and AI-driven marketing: An extension of the present study could be to investigate how ancient Indian semiotics, that finds applications in digital media, can be used for algorithm based consumer targeting which is more relevant due to the era we are living (Chakraborty, 1995).

Consumer Research: A third possibility, prompted initially by an exploratory examination of emerging practice in cultural and heritage-based branding (Elst 2010), is that one could attempt to provide face-validity by consulting protected trade marks on industrial categorises to see if those based firmly on cultural or heritage sources perform better than others.

Ethical and Cultural Appropriation Concerns: Evaluating the perspectives of cultural custodians, communities as well as other interest groups regarding use of religious and philosophical symbols for commercial reasons could help brands in determining boundaries when it comes to ethical branding (Possehl, 2002).

Regional Symbolic Variations: with India being so rich in visual heritage, symbolic representations differ drastically from region to region — tribal motifs, folk art patterns and systems could be the fodder for niche branding.

Shifting the favour toward a more numerically based consumer analysis that rests solidly upon post-qualitative semiotic theory would certainly be a boon to the empirical study of such an archaic and ritualistic tradition, by helping to restrain its use from either diverging into purely cultural semiotics, or limping on sentiment alone.

Limitations of the Study:

Although the research provides a wide historical and cultural perspective, the interpretative nature of archaeology, paired with a paucity of first-hand historical

documentation, results in necessary, albeit tentative, conclusions. This research is qualitative and doesn't study consuming information. Also, the semiotic definitions are based on semiotic theory so they are difficult to reconcile with any opinion or subjective impression.

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Figure 1. Unicorn seal from Mohenjo-daro, Indus Valley Civilization.
Source: Marshall, J. (1931). *Mohenjo-daro and the Indus Civilization* (Vol. 1, Plate CX, p. 357). London: Arthur Probsthain.

Figure 2. Ancient maritime trade routes connecting India with West Asia, Africa, and Southeast Asia.
Source: UNESCO. (n.d.). *Silk Roads: Ancient maritime routes* [Map]. UNESCO Silk Roads Programme. <https://en.unesco.org/silkroad>

Indian Model for Ethical Artificial Intelligence and Related Change Management

*Dr. Vaishali Ashok Dawar

Abstract:

AI is a sophisticated technology that impacts different industries, and therefore strategic planning and ethical guidelines are required in its development and implementation. To provide equal opportunities to everyone, ethical artificial intelligence models and guidelines—such as the maturity model and ECCOLA method—have been suggested, highlighting principles such as Transparency, Fairness, Accountability, Security, and Privacy. Change management, which is a systematic process for bringing about change, highlights visualization, planning, and leadership in order to realize organizational objectives. The new European Parliament's Artificial Intelligence Act indicates the necessity for regulation because AI poses potential dangers, such as extreme outcomes mentioned in research on sophisticated AI. Ethical considerations at every phase of product development are necessary to counteract these dangers prior to public release.

To audit ethical AI products, change management models can be utilized, providing systematic strategies at different stages such as implementation and planning. Organizations can choose appropriate contemporary models depending on their requirements. In Hinduism, change management is aligned with six systems in Darshan Shastra (Shad-Darshan) that are schools of philosophy based on the Vedas. Each Darshan interprets the scriptures differently and aims for intellectual involvement. This framework comprises six systems: Nyaya, Vaisesika, Sankhya, Yoga, Purva Mimansa, and Uttar Mimansa (Vedant). The Preliminary Shad-Darshan Model given in this paper is a guiding framework to create ethical AI products, guaranteeing responsible practice as the future of AI is unknown. Historically, it has directed rulers, offering tried guidelines for fresh initiatives in artificial intelligence.

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Introduction:

The fast-growing applications of artificial intelligence in this present era and their wider usage is making people curious upon the future of mankind. The same thing is also making people uncertain about their own future and this is rising the fear of biased AI applications, it's consequences of negative use of AI applications, its effect on human morality, possibility of the rising power of machine's self-learning abilities ignoring the human warnings, loosing sensibility by human while moving faster along with machines and so on. This fear is escalating the need to discuss about the ethical issues in using machine learning and artificial intelligence on global scale. How to decide whether the AI project you are undertaking is ethical? The process you are following is ethical? How to determine that the outcome of the AI project will be ethical? Is the training data ethical and unbiased? These and similar questions are required to be answered before the AI application is sent for wider use, or even before making the AI applications and before that making AI algorithms itself.

With the application of AI in institutions requires handling human issues such as employing, training, placements, making the process more complicated. The challenges that AI practitioners faced within the institutions in the development and use of AI-based systems included (i) general challenges, (ii) technology-related challenges and (iii) human-related challenges (Pant and others, 2024).

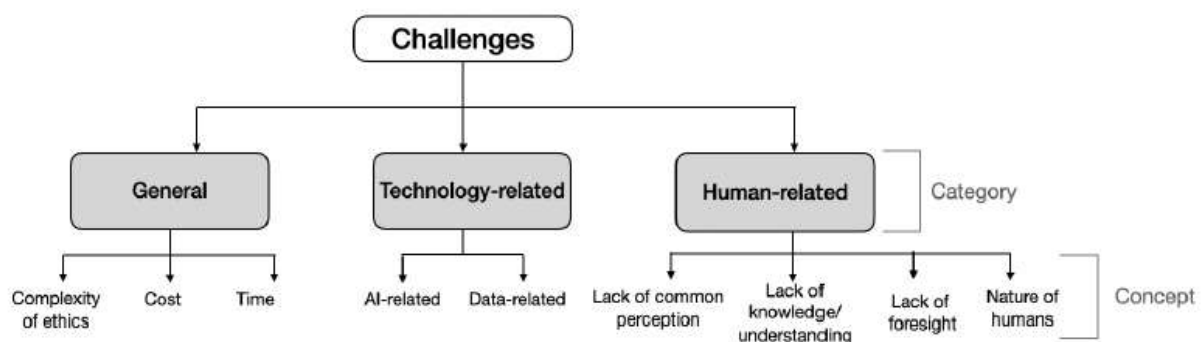


Fig. 1: Overview of the challenges/barriers in incorporating ethics in AI.

Source: Pant and others, 2024

As AI is a complex and multifaceted technology with continuously enlarging AI universe, in order to handle the changes due to AI systems inclusion within the institutions and within the overall society requires to deal with many factors at front and back end. This requires proper planning, which ultimately requires guiding principles from the stage of AI systems planning itself as well as during the further development in each stage. We need ethical AI in order to provide equal opportunities to all segments life on earth and universe including human. Various studies had proposed several frameworks, models, and methods to assist AI practitioners to incorporate ethics into AI-based systems such as maturity model, ECCOLA method, AI ethics framework. Likewise, several AI ethical guidelines and principles have been developed and formulated (Ville and others, 2021).

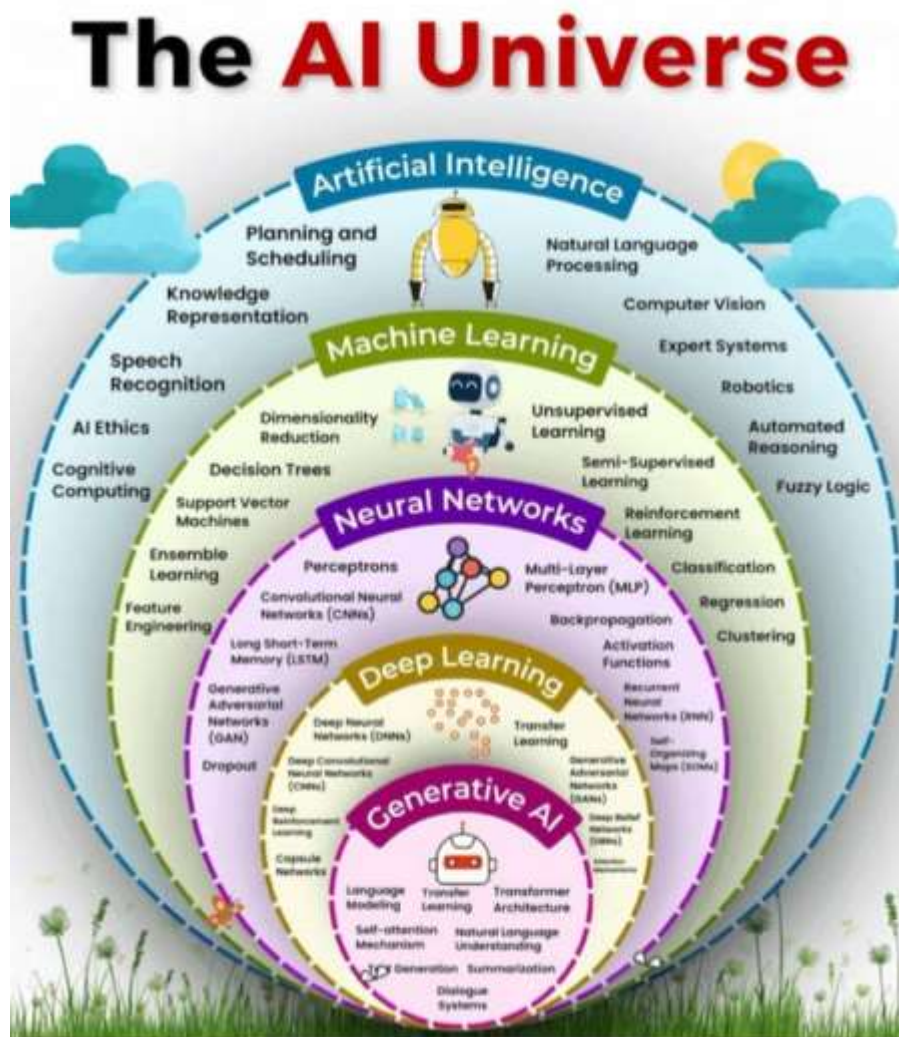


Fig. 2: The AI Universe

Source: Lucid Analytics, 2022

Ashok and others (2022) had collected many definitions in their research on ethical framework for artificial intelligence and digital technologies, which are categories under theoretical framework and Ontological framework. Through systematic literature review and qualitative synthesis, the key digital ethics implications were defined under four domains. Physical domain referred to Dignity and well-being, Safety, Sustainability. Cognitive domain referred to Intelligibility, Accountability, Fairness, Promoting prosperity, Solidarity, Autonomy. Information domain referred to Privacy revolving around access, consent, and rights to personal data. Governance domain referred to regulatory impact, the financial and economic impact, individual and societal impact (Ashok and others, 2022).

For Human, societal and environmental wellbeing the four key principles for ethical AI that guide the development and use of AI systems are Transparency, Fairness, Accountability/Responsibility, Security and Privacy (Relia Software, 2024)

AI Ethics Maturity Model by Baxter was created in order to guide the companies to earn customers trust while implementing ethical AI practice. This roadmap model is based on operationalizable principles like Responsibility, Accountability, Transparency, empowering, and inclusivity.

Ad Hoc	Organized & Repeatable	Managed & Sustainable	Optimized & Innovative
Someone raises their hand and starts asking not just "Can we do this?" but "Should we do this?"	Executive buy-in established	Ethical considerations are baked into the beginning of product development and reviews happen throughout the lifecycle	End-to-end inclusive design practices that combine ethical AI product and engineering dev with privacy, accessibility, and legal partners
Informal advocacy builds a groundswell of awareness	Build a team of diverse experts	Build or buy bias assessment and mitigation tooling	Ethical features and resolving ethical debt are a formal part of roadmap and resourcing
Ad hoc reviews and risk assessments take place among "woke" teams	Company-wide education	Metrics are identified to track progress and impact post-market for regular audits	Poor ethics metrics block launch

Fig 3: Ethical AI Practice Maturity Model

Source: Baxter ()

Managing The Change While Including AI in Practice:

Prosci defined change management is the application of a structured process and set of tools for leading the “people side of change” to achieve a desired outcome (Creasey, 2022). It is a strategic approach to initiate and drive required adoption and usage of activities to deliver expected results and outcomes for the organization. It is a cumulative impact of successful individual change that brings about successful organizational change. We demonstrate that we value people when we proactively engage and support them in the time of change.

The three major aspects of change management are visualization, planning and leadership, when the change is purposeful. Change management enables people to adopt a change so that the purpose is realized. Change management provides an organizational framework that enables individuals to adopt new values, skills and behaviours so that desired business results are achieved. It is about engaging the passion and energy of employees around a common and shared vision, so that the change becomes an integral part of their work and behaviour. (Hiatt and Creasey, 2012)

AI is a disruptive technology on larger scale with a transformative power to impact every industry. To mitigate this disruption, the European Parliament (Proposal for a regulation COM (2021) 206 final) recently adopted the Artificial Intelligence Act to control the usage of AI. Some control might indeed be needed, as a recent study found out that out of 2 778 researchers, between 37.8% and 51.4% of respondents gave at least a 10% chance of advanced AI leading to outcomes as bad as human extinction (Grace et al., 2024). With such a huge capability AI must be handled cautiously and thoughtfully. One of the ways is to take review of AI end product from the ethical reviewers’ organisations before giving it to public use. It will be better to conduct review at every stage of the product development process from the start.

To conduct the reviews about ethical AI products one can use the change management models. These models provide a structured approach, guidelines, frameworks, or methodologies for reviewing AI product at the planning, initiating, navigating, and implementing stages. Some of the contemporary change management models are as mentioned below. It is up to the organization to select the model that meets its requirements.

1. **Kotter's 8-Step Change Model:** This model, created by John Kotter, focuses on establishing a sense of urgency, forming a guiding coalition, and achieving short-term wins to facilitate effective change. The eight steps are creating a sense of urgency, forming a guiding coalition, developing a vision and strategy, communicating the vision, empowering others for action on the vision, generating short-term wins, consolidating gains, and anchoring the change.

2. **Lewin's Change Management Model:** This model was developed by Kurt Lewin and is commonly referred to as "unfreeze-change-refreeze." It consists of three phases: unfreezing the current state, applying the change, and refreezing the new state to ensure the change becomes permanent.

3. **ADKAR Model:** The ADKAR model, developed by Prosci, is individual change-oriented. It represents Awareness, Desire, Knowledge, Ability, and Reinforcement. This model targets the individual needs that are required for change and can be used to determine where support may be needed.

4. **Prosci's 3-Phase Process:** Prosci's change management process comprises three phases, namely preparing for change, managing change, and reinforcing change. It offers an integrated view of managing change on both the organizational and individual level.

5. **McKinsey 7-S Model:** This model takes into account seven interrelated factors to evaluate an organization's change readiness: strategy, structure, systems, shared values, style, staff, and skills. It focuses on the interdependence of these factors and how altering one can affect others.

6. **Satir Change Model:** Family therapist Virginia Satir created this model, which centers on the psychological and emotional nature of change. It identifies the phases of adapting to change as late status quo, resistance, chaos, and integration.

7. **Bridges' Transition Model:** This model, created by William Bridges, is centered on the psychological and emotional process of change. It emphasizes the three phases of transition: endings, the neutral zone (a time of ambiguity), and new beginnings.

8. **The Change Curve:** This model shows the emotional process people experience through

change. It often consists of stages such as shock, denial, frustration, depression, experimentation, and acceptance.

9. **The Agile Change Management Model:** This model is specifically for organizations that are adopting agile methodologies. It focuses on flexibility, iterative planning, and strong interaction among teams and change management experts.

10. **The Six Sigma DMAIC Model:** Although mainly a process improvement technique, the Define-Measure-Analyze-Improve-Control (DMAIC) model can be applied for organizational change management by organizations seeking to push change through defect reduction and elimination of inefficiencies in processes.

Selection Criteria and Relevance of Contemporary Change Management Models for Ethical AI Products:

The relevance and selection criteria of the above change management models applicable in today's scenario to review ethical AI products can be categorized by their application to various levels of AI adoption, organizational requirements, and ethical aspects. Following is a systematic categorization:

1. **Stage-Specific Guidance:** All models provide tools and information specific to various phases of change—initiating, planning, navigating, and implementing. Organizations can choose models according to what phase they are working on.
2. **People vs. Processes Focus:** Some models (such as ADKAR, Bridges, Satir) have a strong focus on individual and emotional reaction to change, which is important when implementing ethically sensitive AI systems. Others (such as DMAIC, McKinsey 7-S) are more structural and process-oriented.
3. **Scalability and Flexibility:** Models such as Agile Change Management are more suitable for fast, iterative environments common in AI development. These might be preferred by organizations for rapid innovation cycles.
4. **Ethical Alignment:** Frameworks that prioritize communication, empowerment, and shared values (e.g., McKinsey 7-S, Kotter's) ensure ethical principles are integral to the change process.

5. ***Organizational Culture and Readiness***: The selection might be influenced by whether the organization is hierarchical, collaborative, innovation-oriented, or risk-averse.

The selection and relevance of change management models for ethical AI product adoption is a nuanced process. Organizations must consider their stage of change, the balance between people and processes, scalability needs, ethical imperatives, and cultural context to determine the most effective approach. Combining multiple frameworks may often be necessary to address the complex realities of ethical AI integration.

The rationale behind transitioning from a discussion on change management for adopting AI and its models to an exploration of Hinduism:

Hinduism provides profound revelations about the nature of change, impermanence, and transformation—concepts that are key to both AI integration and change management. Karma and Dharma, for instance, can be translated in organizational settings as ethical obligation and purposeful change.

While AI is increasingly becoming part of our society, there is a need for ethical frameworks. Hinduism, with its own valuable moral and spiritual heritage, can provide guidance on making ethical choices in AI development and use. Cultural insights that assist in building inclusive and respectful AI systems, particularly in multicultural societies such as India.

Hinduism stresses the precedence of consciousness and awareness, which can act as a counterbalance to the mechanistic approach of AI. This can lead to debates on human dignity, empathy, and wisdom in AI systems. A reminder that technology must serve humankind, not replace it.

In a nation like India, where tradition and modernity are intertwined, studying Hinduism along with AI adoption will ensure that generational and cultural divides in organizations are bridged. It will ensure holistic change management principles that honour both technological progress and cultural heritage. Hence, the rationale is

- To infuse ethical depth into AI change processes.
- To bridge modern management with timeless wisdom.

- To create culturally resonant frameworks for organizations.

Shad Darshan Shastra for Ethical AI and Change Management

In Hinduism change management is associated to six systems in Darshan Shastra, also known as Shad-Darshan. Darshan literally means showing the path (of life) or vision or realization of the Self. Darshans are schools of philosophy based on the Vedas. Darshans are part of the six scriptures of the Hinduism, the other five being Shrutis, Smritis, Itihasas, Purans, and Agamas. Darshans are the intellectual sections of the Hindu writings useful for the learned scholars. The other five are for common people and appeal to the heart, whereas the Darshans appeal to the intellect. Darshan literary means vision or view.

This paper proposes a Preliminary model of ‘Shad-Darshan for Ethical AI and Related Change Management’.

Hindu philosophy has six divisions—*Shad-Darsan*—the six Darshans or ways of seeing things, usually called the six systems or schools of thought. These are the instruments of demonstrating ‘Truth’. Each school has interpreted, assimilated and correlated various parts of Vedas in its own way. Each system has its *Sutrakara*, who systematized the doctrines of the school and put them in short aphorisms or *Sutras*. These six systems are: 1. Nyaya 2. Vaisesika 3. Sankhya 4. Yoga 5. Purva Mimansa 6. Uttar Mimansa or Vedant.

There are two ways to view and understand the meaning of scripts in Hinduism. The first is broad view called ‘sthul’ view, which is for overall public view. The second is micro view called ‘sukshma’ view that is for deep understanding of the meaning held by the script. The Sukshma view for understanding the things through the microscope of the universe under the action of ‘kruti’ (action, creation) and ‘prakruti’ (basic nature of substance, the mother nature itself). The ethical AI should be a balance between kruti and prakruti. The kruti by AI product must not be harmful by any way to prakruti. The prakruti of AI product must be supportive to the universe by its kruti. That means the composition and product of AI should be the action that would not harm the nature. This is the basic essential requirement of ethical AI. Hence, the Shad-Darshan scripts can be understood in sthul or broader public view for its greater use as well as Sukshma or micro view for their applications. For example, managing

the change within the organization is sthul view for employees and middle management, but vision and planning of change is sukshma view for the employers and upper level management.

Application of Shad-Darshan Shastra in ethical AI and change management:

Though Shad Darshan Shastra is very broad topic, here I have tried to explain the core of each Darshan in view of change management. The AI product mentioned in this paper encompasses all aspects related to it, including its codes, algorithms, input, output, process, etc.

1. **Nyay** - The meaning of the term Nyay is right or justice. Nyay is related to inquiry. Nyay is rule or method of reasoning. It means an inquiry of entities need changes. An inquiry about what, why, when, where and how of the changes required. Its main objective is to help to eliminate ignorance of knowledge. It is for judgement and justification of the ethical AI product, along with the associated changes it brings and their effect on human beings and the universe. In the Matsya-Purāṇa it is pointed out that Nyāya-vidyā along with the Vedas, proceed from the mouth of Brahmā (Matsya-purāṇa, 3,4). "System, rule; logic." A system of logical realism, founded sometime around 300 BCE by Rishi Gautama, known for its systems of logic and epistemology and concerned with the means of acquiring right knowledge or truth. It's tools of enquiry and rules for argumentation were adopted by all schools of Hinduism.

2. **Vaisesik** – Vaisesik means special, peculiar, specific, distinguished, excellent, pre-eminent, extraordinary characteristics. Vaisesik is a supplement of the Nyaya. It is the 'Philosophy of Discrimination' and individualities in terms of substance (dravya), quality (guna), activity (karma), generality (samanya), particularity (vishesha), and inherence (samavaya) and absence (abhaava). It is an analysis of the phenomenal world at atomic level, i.e. extremely minute level. "Distinctionism" from "vishesha differences". The founder of Vaiśeṣika Philosophy is Kaṇāda (ca 300 BCE) teaching that liberation is to be attained through understanding the nature of existence, which is classified in nine basic realities (dravyas): earth, water, light, air, ether, time, space, soul and mind. Nyaya and Vaisheshika are viewed as a complementary pair, with Nyaya emphasizing logic, and Vaisheshika analyzing the nature of the world. Vaisesik Darshan investigates to understand the specific and distinguished characteristics of the ethical AI products.

3. **Sankhy** – Sankhy means systematic enumeration and rational examination. Even though, it is related to numerical but it also acknowledges observation, deduction and proof as a way of information and awareness. Sankhy system rejects the rigid categories of the Nyaya-Vaisesika system as inadequate instruments for defining the universe. It substituted evolution for creation. It is about realization of the true nature and original condition, the universal cosmic spirit. This is related to exploring the different forms and orders of the existing issue in need of change in terms of three gunas—sattva (goodness, truth, purity etc.), Rajas (passion for activity) and Tamas (inertia, stolidity, obstruction etc.). Sankhy is an analysis of matter and spirit taught by sage Nirīśvara Kapila, "Enumeration, reckoning." A philosophy founded by the **sage Kapila** (ca 500 BCE), author of the **Sankhya Sutras**. Sankhya is primarily concerned with "categories of existence," **tattvas**, which it understands as 25 in number. The first two are the unmanifest purusha and the manifest primal nature, prakriti—the male-female polarity, viewed as the foundation of all existence. Prakriti, the supreme, out of which all things evolve, is the unity of the three gunas: **sattva**, **rajas** and **tamas**. Where Purusha - the soul, spirit or pure consciousness governs the three gunas associated with entities. Prakruti and purush tatvas are required to be considered together for any entity. Sankhy and Yoga are considered an inseparable pair whose principles permeate all of Hinduism. Sankhy helps in examining the pros and cons of the AI product. It helps in structured analysis, rational evaluation, risk assessment, in systematic, methodical way.

4. **Yoga** – Yoga means 'to join' or 'to unite' or 'to control'. Yoga is a supplement to the Sankhya. It denotes union of the soul with the supreme, i.e. union of prakruti and purusha, and a methodical effort to attain perfection through the control of the physical, mental and astral elements of human nature. It indicates how people should be integrated into the required changes and leading to its smooth functioning. Yoga is first mentioned in the *Rigveda* with the meaning "Yoking; joining." Ancient tradition of philosophy and practice codified by Patanjali (ca 200 BCE) in the Yoga Sutras. It is also known as Raja Yoga, "King of Yogas," or Ashtanga yoga, "eight-limbed yoga." Its objective is to achieve, at will, the cessation of all fluctuations of consciousness, and the attainment of Self Realization. Yoga is wholly dedicated to putting the philosophy of Hinduism into practice, to achieve personal transformation through transcendental experience, samadhi. For change management samadhi means a state of deep focus, equanimity, heightened awareness and free from distractions. Yoga improves

understanding by intense concentration and increased awareness, enabling better appreciation of the perfection of the AI product, its results, and general influence. Yoga is required for pre-testing of AI products or applications to take the note of all related minute forces and effects.

5. Purv Mimansa – Mimansa is Sanskrit word for 'reflection' or 'interpretation'. Purv means 'earlier'. Mimansa presents material activity and its results as the whole of reality, elevation 'Through the Performance of Duty'. Mimansa is based on the rituals of good karma. The ritual required for systematic operations in an organisation includes Rules and regulations, acts, standard operating procedures, routines, etc. It is a purely mechanical means of operations. Its scope is to interpret the actions enjoined in the Vedas, leading to Liberation. Purv Mimansa Sutras is written by Rishi Jaimini. "Inquiry" (or Purva, "early," Mimansa). Founded by **Jaimini** (ca 200 BCE), author of the Mimamsa Sutras, who taught the correct performance of Vedic rites as the means to liberation. For change management purv mimansa means pilot research. The first step in using Purva Mimansa in AI product change management is to determine the goal of integration. Clear objectives must guide AI technology adoption, including identifying problems to solve and expected benefits. Purva Mimansa emphasizes proper planning and procedures, which involves assessing readiness for change, identifying risks, and developing a solid implementation plan. Organizations may need to adjust their AI product strategies based on evaluations. Change management should be ongoing, with continuous feedback and opportunities for adjustments.

6. Uttar Mimansa or Vedanta - *Uttar* means "latter". Uttar mimansa means to interpret the knowledge for Self-realization through knowledge and contemplation leading to Liberation. Uttar Mimansa or Vedant is an amplification and fulfillment for achievements, which is an ultimate. In fact, most of the prominent features of modern intellectual Hinduism were contributed by this school. It is similar to SWOT analysis, but does not end in itself. It is related to awakening and reconstruction on the basis of fundamentals. "End (or culmination) of the Vedas." For Vedanta, the main basis is the Upanishads and Aranyakas (the "end," anta, of the Vedas), rather than the hymns and ritual portions of the Vedas. The teaching of Vedānta is that there is one Absolute Reality/truth (called Brahman in Hindu philosophy). Man is one with Brahman (Aham Bramhasmi), and the objective of life is to realize that truth through right knowledge, intuition and personal experience. The Vedanta Sutras (or Brahma Sutras) were composed by Rishi Badarāyana (ca 400 BCE). After conducting pilot research, if the results

are satisfactory, then entity is applied to or utilised by the whole organisation or masses. Uttar mimamsa for change management does not end the process, because the improvements are the necessary part of change. By focusing on critical thinking and logical analysis, Uttar Mimamsa offers a way to understand complex systems in artificial intelligence. It helps professionals make ethical choices in AI design, ensuring they match societal values. Additionally, it teaches pramana (proof, measure, means of knowledge), which helps verify AI algorithms' accuracy and reliability, and promotes a mindset for continuous improvement and innovation.

Comparison of Shad Darshan Shastra with Contemporary Change Management Models:

In the context of ethical AI and organizational transformation Shad Darshan Shastra and the contemporary change management models comparison:

1. Nyaya (Logic and Reasoning)

- Emphasis: Critical thinking, epistemology, and systematic reasoning.
- Example: Nyaya delineates four viable methods of knowledge (pramāṇa): perception, inference, comparison, and testimony.
- Relevance: As with data-informed decision-making in change management. It facilitates ethical AI audits emphasizing logical validation and evidence-based assessment.

2. Vaisheshika (Atomism and Categorization)

- Emphasis: Categorization of reality into sets such as substance, quality, action, etc.
- Example: It differentiates the universe into individual components—most conducive to analytical thinking.
- Relevance: Reflects process mapping in frameworks such as Six Sigma DMAIC, in which processes are decomposed into measurable elements for improvement.

3. Sankhya (Enumeration and Dualism)

- Emphasis: Purusha-Prakriti dualism of consciousness and matter.
- Example: Change is viewed as the transformation of Prakriti (matter) under influence of Purusha's (consciousness).

- Relevance: Corresponds with Lewin's model—unfreezing past habits (Prakriti), bringing in conscious transformation (Purusha), and refreezing new conditions.

4. Yoga (Discipline and Integration)

- Emphasis: Mental discipline, ethical living, and self-realization.
- Example: The eight limbs of Yoga (Ashtanga Yoga) involve moral principles (Yama, Niyama), concentration (Dharana), and integration (Samadhi).
- Relevance: Similar to Kotter's framework, wherein ethical foundation and vision alignment play an important role in change success. Also provides for emotional resilience within the transitions.

5. Mimamsa (Ritual and Duty)

- Emphasis: Dharma (responsibility), ritual propriety, and performance.
- Example: Stresses the value of doing what is right and following rules.
- Relevance: Resonates with Prosci's ADKAR and Bridges' Transition Model, where individual responsibility and ethical behavior are central to change.

6. Vedanta (Metaphysics and Unity)

- Emphasis: Non-duality (Advaita), self-realization, and liberation.
- Example: The understanding that Atman (self) is Brahman (universal consciousness).
- Relevance: Encourages holistic thinking and value alignment, similar to the McKinsey 7-S model, where shared values unify organizational change.

Preliminary Model of Shad-Darshan for Ethical AI and Related Change Management:

A Preliminary Model of Shad-Darshan for Ethical AI and Related Change Management is given in Fig. 4 below.

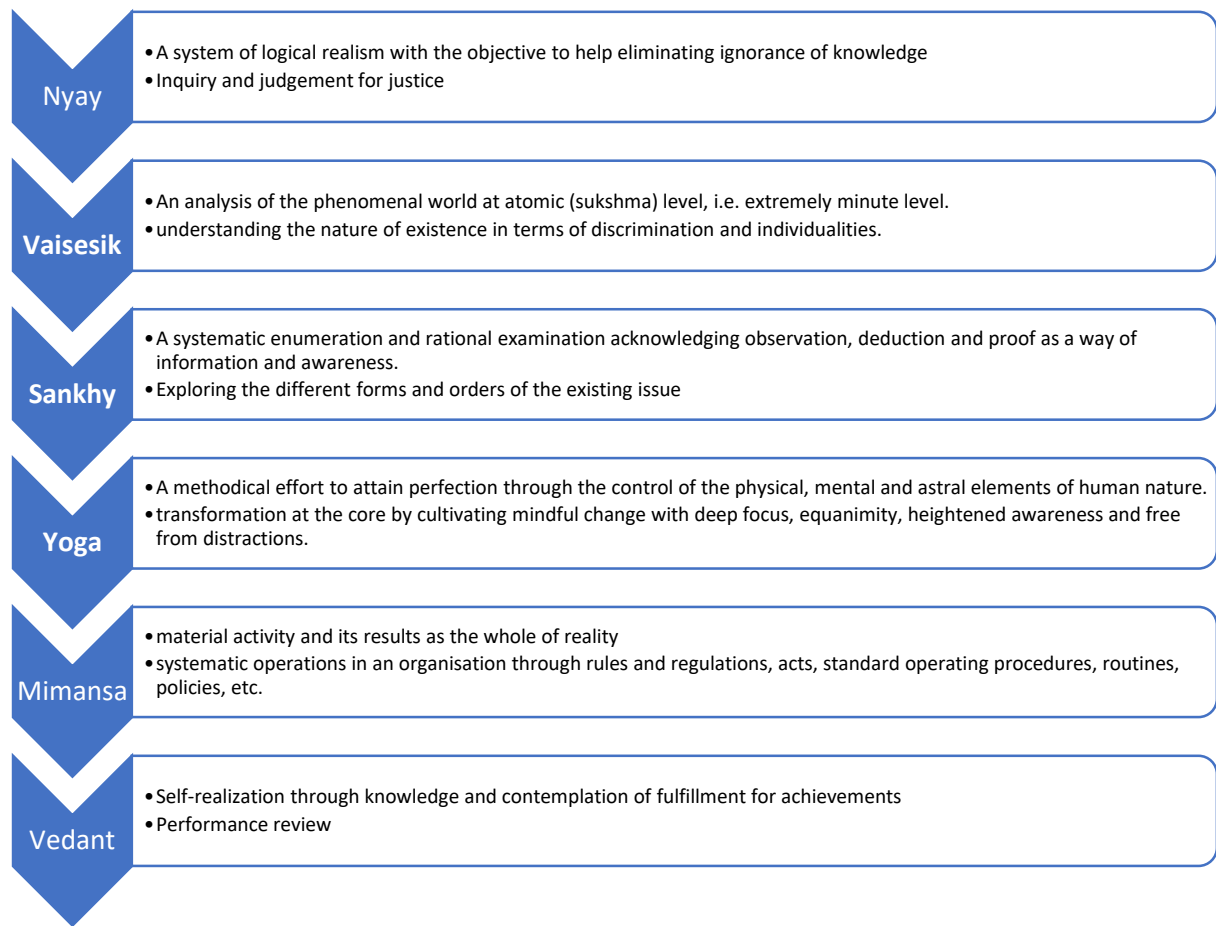


Fig. 4: Preliminary Model of Shad-Darshan for Ethical AI and Related Change Management

Interpretation and application of the model:

The Preliminary Model of Shad-Darshan for Ethical AI and Related Change Management consists of Shad Darshan in the first column. The first line of the second column specifies the scope of the Darshan and the second line presents how to achieve the desired results of that Darshan. Nyay can be achieved through inquiry and judgement for justice. Vaisesik can be achieved through understanding the nature of existence in terms of discrimination and individualities. Sankhy can be reached through exploring the different forms and orders of the existing issue. Yoga can be attained by transformation at the core by cultivating mindful change with deep focus, equanimity, heightened awareness and free from distractions. Mimansa can be accomplished by systematic operations in an organisation through rules and regulations, acts, standard operating procedures, routines, policies, etc. and Vedanta by Performance review.

Conclusion:

This Preliminary Model of Shad-Darshan for Ethical AI and Related Change Management presents the essential procedures to be followed while developing any AI product and algorithms. It works as a guide while developing the ethical AI products. Since the future of mankind with artificial intelligence is uncertain, it is very important to follow some rules while creating AI products and algorithms, so that it should not turnout as 'vikruti'. Shad-Darshan shastra, an age-old school of philosophical principles of Hindu philosophy, offers a firm framework for the new AI movement. Historically, Shad-Darshan has become a major guide for Hindu monarchs in effectively ruling their empires; hence Shad-Darshan Shastra provides a tried, tested and trusted guideline for any new AI initiatives.

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Enhancing Holistic Development through Co-Curricular Subjects under NEP: A Student-Centric Evaluation

***Ms. Geeta Desai**

Abstract:

The present paper highlights the co-curricular activities (Music, Yoga, Dance, Theatrics, sports) as advocated by the Indian National Education Policy (NEP) 2020, for the all-round development of children. The study's findings further suggest that co-curricular participation also affects emotional intelligence, leadership, creativity, resilience, and well-being via the effect of co-curricular on student feedback and philosophy principles. It also recommends institutional mechanisms for the envisaged implementation of such programmes in line with the aspirations of NEP.

Introduction:

Education, as they understood meant not merely intellectual or academic achievement but overall intellectual, moral, physical, and spiritual growth and development. NEP 2020 does this through the integrated approach by integrating co-curricular learning with mainstream academic education. The present study attempts to understand how extra-curricular activities such as music, yoga, dance, drama, and sports which have traditionally been thought of as scholastic, are in fact co-curricular in shaping the persona of students. The present study talks of the multiple value-addedness of these assignments in the context of the current educational ills of India and why the Indian classroom needs it now.

Objectives of the Study:

1. To evaluate the advantages of Participating College Students in Co-Curricular Activities
2. To assess formally the emotional, social and cognitive effects of involvement..

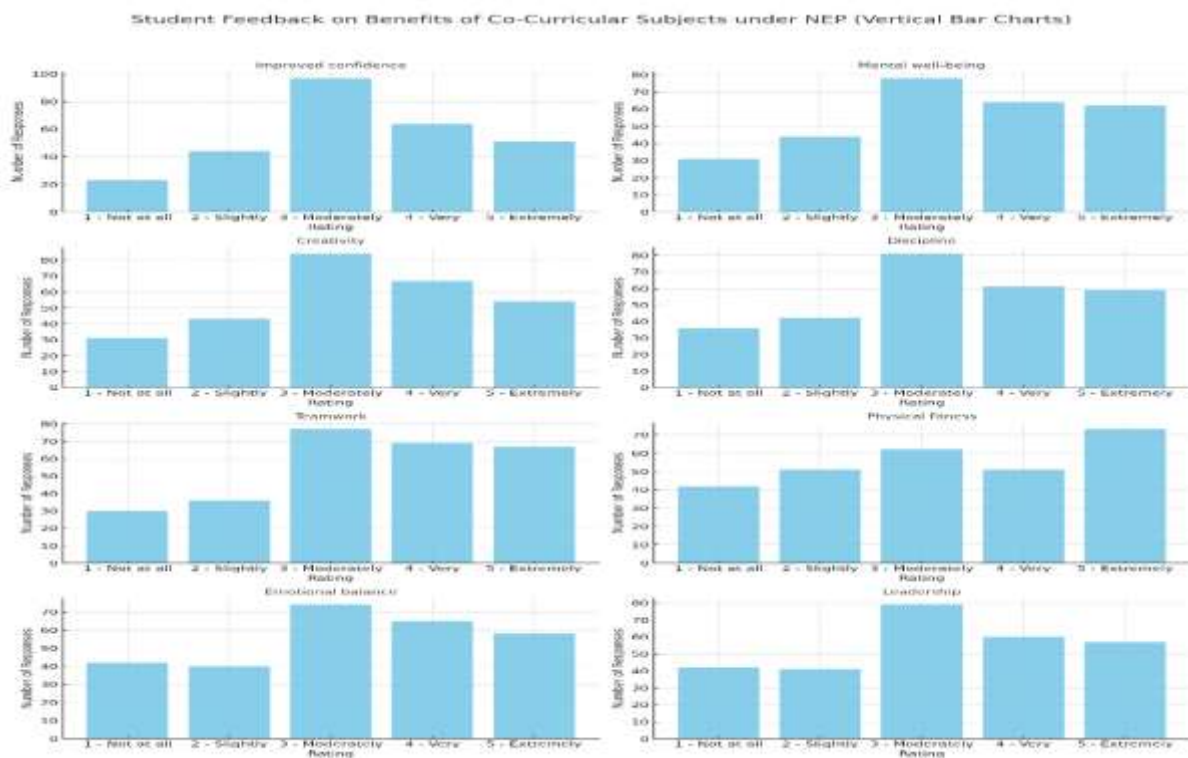
3. To examine the compatibility between the current institutional practices and the NEP 2020.

For the ways in which co-curricular can be integrated into the mainline assessment and infrastructure.

Methodology:

A descriptive survey research design was used in the study. Undergraduate students (N = 268) from a range of disciplines involved in co-curricular units during the academic years 2023–24 and 2024–25 took part. A questionnaire was used to collect data; weighed on a five grade Likert scale that the research focused specially on attributes such as self-confidence, creativity, discipline, teamwork, physical health or emotional balance and leadership. We examined the survey responses with basic statistical analysis (including percentage distribution and mean scoring) to ensure the sample was representative. Microsoft Excel and Google Forms were used for the analysis.

Data was obtained using a descriptive survey over two academic years and the responses were collected by means of structured five-point Likert scale. This article reports



findings from student feedback, statistical analysis and the emerging philosophy of this study, with recommendations for a strong institutional integration

Review of Previous Literature and Contribution of the paper:

Although past studies (Goleman, 1995; Singh, 2007; Kumar, 2004) have stressed on importance of emotional intelligence, value education and experiential learning but there is lack of empirical research focusing specifically on the implementation part co co-curricular subjects under NEP in higher education context. This study fills that gap by providing learner perspective real time feedback, with measurable impacts directly linked to NEP developmental indicators.

Analysis and Findings:

The above graphs provided the consolidated students' perception towards the competency-based learning and attainment of co-curricular subjects on the developmental universals recognized in the NEP 2020:

	1 Not at all	2 Slightly	3 Moderately	4 Very	5 Extremely
Improved confidence	8.20%	15.80%	34.80%	22.90%	18.30%
Mental well-being	11.10%	15.80%	28.00%	22.90%	22.20%
Creativity	11.10%	15.40%	30.10%	24.00%	19.40%
Discipline	12.90%	15.10%	29.00%	21.90%	21.10%
Teamwork	10.80%	12.90%	27.60%	24.70%	24.00%
Physical fitness	15.10%	18.30%	22.20%	18.30%	26.20%
Emotional balance	15.10%	14.30%	26.50%	23.30%	20.80%
Leadership	15.10%	14.70%	28.30%	21.50%	20.40%

The aggregated students' opinion on the competency-based learning and achievement of co-curricular subjects in the developmental universals identified in the NEP 2020 are as follows in the graphs above:

Analysis and Findings

1. Confidence and Well-being

Performing arts help students fight stage fright and communicate with more confidence. Yoga creates a sense of awareness and tranquillity that leads directly to stress reduction, emotional thriving, and overall psychological well-being. It has been the experience of many of our students that the regular practice of yogic techniques such as pranayama and asanas has not only improved concentration, reduced examination stress, and improved sleep patterns (factors which together contribute to overall academic performance and emotional well-being), (Goleman 1995)

2. Creativity and Discipline

As art-based disciplines, both music and drama are, by their nature, improvisatory, and allow students to play with new thoughts, ideas and perspectives. These are domains that grow with divergent thinking and are often neglected by systems of learning built on rote. At the same time, strict, structured drills such as classical music lessons or concerted sports rituals are able to build commitment and repetition, inculcating student tenacity and resilience (Dewey, 1938). This combination of freedom and structure is why revolutionary thinker Arne Næss suggested that character is cultivated not in the classroom but through co-curricular programs.

3. Teamwork and Resilience

The co-active participation in group performances, dance troupes, orchestras, and team sports teach students how to lead and follow. They learn to share responsibility, listen to different perspectives, and work out disputes in a productive manner. Resilience is earned not only by persevering physically but by recovering emotionally from great disappointments, be it a sour note played in a concert or a lost match. And these real-world experiences are often the cauldron that real character is formed in. Students involved in ensemble performances and team sports began developing conflict resolution, cooperation, and recovery from failure, all of which are central aspects of resilience (Singh, 2007)

4. Leadership

Leadership came naturally in activities as student life, especially in producing and directing any show or team competition. These spaces fostered soft skills – of negotiation,

decision-making and group management.

5. Implications for NEP 2020

NEP 2020 has focused on ‘multidisciplinary and holistic education across the sciences, social sciences, arts, humanities and sports. As much of a holistic education that can be provided by an institution, when subjects like Art Music and Sport are part of the curriculum, children will be given holistic developmental education in the physical, cognitive, emotional and aesthetic aspects of learning. The research has also concluded that schools and colleges which promote and assess co-curricular activities significantly enhance student satisfaction, motivation and good conduct. If the goals of NEP are to be met, a new paradigm is in order where these sectors are not merely considered extraneous add-ons but are made integral pegs of the educational frame.

Conclusion:

The findings of this study certainly appear to support this theory as co-curricular based subjects are not secondary to, but a key element in the development of the complete person. They aren’t just nurturing young people’s capacities for academics, but for life skills, like empathy, leadership, resilience and self-awareness. As we travel the path to realise the vision of NEP 2020, how we integrate these subjects in a substantial manner in educational policy and pedagogy will be the touchstone of our achievement. Schools and teachers that educate towards these characteristics of children will contribute not only to successful individuals, but also to responsible, emotionally literate, value driven citizens.

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Harnessing the Wisdom of Indian Yoga Systems: A Comparative Study of Patanjali and Kundalini Yoga in Jñānēśwarī for Viksit Bharat

***Ms. Geeta Desai**

Abstract:

This article attempts an in-depth comparative study between Patanjali's (Bryant, 2009) Yogashastra and the path of *Kundalini Yoga* (Sivananda, 2006) as portrayed in the *Jñānēśwarī* (Jñānēśvara, 1998). It is in the context of making a mental image of India in the heart of the world, as far as comprehensive development is concerned that, there is need to measure their efficacy in the initiative of 'Viksit Bharat'. An analysis grounded in the most highly acclaimed classical sources and commentaries, the text demonstrates that these most ancient yogic philosophies are as complementary today as they were once developed in disparate eras. They are nothing if not practical aids for the inner, moral, intellectual, and spiritual man. It is far from that these teachings are considered as abstract or mystical things but they became like the main columns for the formation of the society which is proportionate, self-conscious, and ethically based.

Keywords: Patanjali Yoga, Kundalini Yoga, Jñānēśwarī, Indian Knowledge Systems, Viksit Bharat, Moksha, Chakras, Axiology, Samādhi

Introduction:

The Indian nation has been concentrating on trying to know the world ever since its inception while also taking to studying the world within themselves. "HAVING A MEANINGFUL IDEA OF VIKSIT BHARAT" The idea of "Viksit Bharat" itself is founded in the sustainable development, moral strength and spiritual expanse. "Renewing interest to IKS (Indian Knowledge Systems) is interesting in this context, particularly from the

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perspective of Yoga. Patanjali's *Yogashastra* is an easily understandable, unfolded and the initial, disciplinary trail to mind control, and *Jñānēśwarī* takes a very spiritual path to achieve this. It focuses on the inner nature transfiguration in an intuitive, poetic, and experiential way. This article is a philosophical investigation of these two systems, and it seeks to understand the possibility of these two becoming the fountain of inspiration for education in India, the carriers of ethical lives and a propeller of national development from within.

1. Theoretical Framework of Patanjali Yoga

1.1 The Path of Eight-limbs: *Ashtanga Yoga*

Patanjali's system of Yoga is based on eight sequential steps which were described as one complete process, namely the '*Ashtanga Yoga*'. They are *Yama* (moral commandments), *Niyama* (moral observances), *Asana* (posture), *Pranayama* (breath control), *Pratyahara* (sense withdrawal), *Dharana* (concentration), *Dhyana* (meditation), and *Samādhi* (absorption into the unity of existence). This is not a path as much as a process-a process of total inner growth, including ethical foundation, physical health, mental calm, and spiritual awakening.

1.2 Mastery of The Mind: *Chitta–Vritti–Nirodha*

Patanjali said that Yoga is nothing but calming our mind. (As well, in Yoga Sutra 1.2), "*Yogaḥ cittavṛtti nirodhaḥ*", Yoga is the cessation (*nirodha*) of the modifications (*vritti*) of the mind. This silence is very important to be attained to open the door for the original nucleus of knowledge of the self, so the Yogi feels a state of peace.

The end-goal of Patanjali's Yoga is *Kaivalya*, the state of absolute freedom in which the soul (*Purusha*) is detached from material nature (*Prakriti*). In this free state, pure awareness is as it is and is free of foreign agitation.

2. Kundalini Yoga in *Jñānēśwarī*

2.1 The *Chakra* System and Energy Pathways

Using vivid metaphor and spiritual analogy, *Jñānēśwarī Kundalini Yoga* portrays the movement of life force *Prāṇa* through three principal subtle channels: *Sushumnā* (central), *Idā* (left) and *Pīṅgalā* (right). This energy gradually ascends through the *chakras* of the body from

Mūlādhāra (root) to the *Sahasrāra* (crown). This inward journey represents the awakening of dormant power and the metamorphosis of the consciousness of the seeker.

2.2 The Moment of Awakening

Jñānēśwar renders the scene of spiritual awakening with lyric poetry. And he writes in 6:244:

इडा पिंगळा एकवटती । गांठी तिन्ही सुटती ।
साही पदर फुटती । चक्रांचे हे ॥६-२४४॥

Meaning: This verse from the *Jñānēśvarī* (6.244) describes the yogic awakening process. When the *Ida* and *Pingala nāḍīs* unite, the three *granthis* (spiritual knots) are released. The six chakras are pierced, symbolizing transcendence of bodily limitations. This leads to the rise of *Kundalini* and the realization of higher consciousness.

The poem describes the union of polar energies, the unblocking of the unconscious and a shining forth of higher consciousness. It symbolizes the ending of inner struggle and the emergence of the deepest states of seeing.

2.3 Liberation as Communion with the Divine

In contrast to the dry dispassionate liberation of Patanjali's system, Jñānēśwar looks at Moksha as a state of blissful intimacy with God. It's not a departure from the world any longer but a flowering into bring in it, a place where love, *bhakti* and inner light press flush up against each other, a place to soothe the soul.

3. Comparative Analysis:

3.1 Common Threads

The fundamental objective of Patanjali's Yoga and of the *Kundalini* path of the *Jñānēśvarī* is to purify the self. They promote to clean the mind and heart to transcend the ego and elevate to a higher state of consciousness. Both traditions consider discipline, detachment, and developing a more profound internal consciousness as requisite stages on the spiritual path.

3.2 Points of Divergence

These systems, while having the same objective, are however very different in how they have addressed the issue. Philosophy of *Sāṅkhya* in numbers no Patanjali's *Yogashastra* is the works of the philosophy of *Sāṅkhya* describes in a dualistic world view which freedom is the release of the *Purusa* from the *Prakṛtī*. *Jñānēśwarī*, on the other hand, is a composition of essentially metaphysical poetry, based on non-dualistic ideas (*Advait*) tinged with the glow of *Bhakti*. Patanjali provides the anatomy, while Jnaneśwar (Bahirat, 1961) adorns both the emotional and the mystical

4. Relevance to Viksit Bharat:

4.1 Transforming Education

The imagination of a 'Viksit Bharat' is really an imagination of a future India which is not only economically prosperous, but also spiritually awakened and mentally liberated. Those are yogic traditions and these are very, very old, and these are tried and tested old observations and can be a big energy source in that journey towards realizing such a future. They are at the receipt of the education system and they are handed the attributes of resilience, self-discipline and morality. Including texts like *Jñānēśwarī* in curricula, and that too in regional languages, will not only recognise India's cultural and linguistic diversity, but it will also enrich the psychological power and cultural pride of students.

4.2 Facilitating Mental Emotional, and Well-being of Students

Yoga and meditation are activities that have the power to offer great power to become tension-free and emotionally stable. Incorporating these tools into community services and wellness programs would allow for mental health access at the local level, which can help shape a healthier and well-balanced society.

4.3 Renewal of Cultural and Ethical Foundations

Reintroduction of classical texts like the *Jñānēśwarī* could be a way of getting in touch with the roots. Whereas Yoga not only promotes the personal responsibility and peace but gravitates towards Dharma – the ethical life and path of right action.

4.4 A Universal Model of Spiritual Leadership

India's opportunity to emerge as a village of global spiritual wisdom by profoundly integrating Yogic sciences into. federal government policy, and proving their significance to the present day, and beaming messages of the country's commitment to sustainability. The norms react ethically and pragmatically to fresh challenges, therefore making India a moral and cultural guide to the community and the world.

Conclusion:

In short, the *yogas* of Patanjali and Jñānēśwar may be powerful homing devices for navigating the concerns of our 21st century. The no-nonsense, orderly approach of Patanjali; and the lyrical, spiritual tone of Jñānēśwar both point to the path to self-enlightenment and self-knowledge. Beyond their ethos of the personal realm, the effects of their theories are evident in schools, medicine and government policy. As a result, they offer the rest of humanity the example of a springtime of following spirit and of morality, able to feed on its ancestral system of knowledge and adapt it to today's needs by unleashing these evergreen systems and re-reading them in the context of today, India can reaffirm its own appearance and inspire the rest of humanity, itself as a wellspring of spiritual and moral awareness and one rooted in its ancient soil and yet adaptive.

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Bridging Gaps in Fintech: Strategic Audit Techniques for Risk Mitigation and Efficiency

***Jena Yogen Thakkar and Dhruvil Bhavesh Vyas**

Overview:

Fintech refers to use of technology to solve financial problems and leverage quality of work performed in financial domains. A classic example of fintech tool is Computer Assisted Audit Techniques which are performed with the help of QR code technology. For eg: When you ride a metro you have to scan your ticket for you to ride the metro. You may feel where is finance involved here? You may not realize but you scanning the QR code helps auditor to verify number of transactions that travel in metro every day and number of rides that take place for each station. Now, there is no need for auditor to perform sampling techniques as per SA 505 because technology automatically gives you following details

1. Revenue generated for each station journey and number of passengers
2. Verify the details mentioned above with cash collected to detect discrepancies

You may not have realized here that a simple QR code that you used here to carry out transaction also helped auditor to conduct audit easily.

What is fintech?

Fintech is use of technology for leveraging quality of finance functions performed.

Scope:

Till date use of fintech has been discovered in very few aspects which are as follows

1. Carrying out transactions
2. Checking validity of parties
3. Insurtech
4. RegTech
5. Stock trading and brokerage functions

*Corporate Professionals, Morgan Stanley Financial Services.

6. Digital lending and credit
7. Automated advisors such as asset allocation, investment advisory, portfolio management.

Fintech in India:

We all are aware with names VISA and MASTERCARD. These payment card services corporations were successful in establishing monopoly over card payments business in whole Europe and USA. Basically, for almost all bank-to-bank transactions other than mobile banking their help was necessary. But shockingly they were not able to establish their monopoly in India because so such great variety and volume of indian population and diverse Indian banking diaspora. A need was felt for more efficient and cost-effective systems to facilitate bank to bank transactions and reduce reliance of black money. Through government schemes of zero balance bank accounts almost every indian started having bank accounts. Inability of these multinationals (Visa and Mastercard) to penetrate at all levels of indian populations and spread of banking gave rise to fintech payments systems that we know today.

Major Fintech Companies and Entities in India:

What are the major names that come to your mind when I say UPI transactions?
Statistics have shown following names

1. Phone pe
2. Paytm
3. Google pay or Gpay

Let us take a look at major areas.

- Ranking in terms of **volume** and **value of transactions**:

Rank 1- Phone pe

Rank 2- Gpay

Rank 3- Paytm

➤ Rank 1- Phone pe

It was quite shocking that Phone pe has Rank 1. Now this ranking has a major loophole

in it. It was observed that Phone pe was ranked 1 because of their successful marketing campaign. They hired famous Bollywood celebrities like Aamir Khan and Alia Bhatt to conduct aggressive advertising campaigns which led to deep rural penetration.

➤ **Rank 2 Gpay**

It is noted that Gpay has strong urban penetration. It is most user friendly out of all 3. Most fast and most convenient among the three.

➤ **Rank 3 Paytm**

A forerunner in the fintech space, Paytm gained wide acceptance at the time of demonetisation by initiating digital payment infrastructure in the country. However, further scrutinization revealed that there were several loopholes in the fintech transaction systems followed by these companies. To understand these loopholes first we need to first understand basic terms of fintech ecosystem of India.

There are 2 types of persons who can conduct or take part in fintech transactions in India which are:

1. Payment processors

He is a person that enables payments to be affected between a payer and a beneficiary and involves the process of clearing, payment or settlement or all of them.

It also includes debit and credit cards, online payment gateways, money transfer or prepaid payment instruments (PPI). It also requires RBI authorization. Either of the following or in some cases all of the following are applicable on payment processors:

- a. Banking Regulation act 1949
- b. RBI act 1934
- c. Appropriate guidelines by RBI and NPCI (National Payments Corporation of India)
- d. Payments settlement act 2007

2. Third party processors

They are persons on whom above mentioned acts and guidelines are not applicable and they are mere “technology service providers” who operate as a partner to its partner banks and facilitates payments via UPI infrastructure.

On further analysis it was found that due to legal drawbacks even IT act or Information Technology Act,2000 was not applicable on them because as per their terms of agreement their partner banks describe them as outsourced activities. This loophole that IT act is applicable only on main entities or partner entities and not outsourcing service provider is huge drawback in the system. Due to this drawback our Rank 2 company- Gpay is no longer liable for any discrepancies in such large volume of number of transactions it deals with. It is an unrecognized threat to hard earned money of Indians. The proof to this statement is Case study judgement.

Delhi high Court VS RBI 2019

An appeal was filed in Delhi High Court in 2019 that whenever there is failed transaction and money has been deducted from bank account of one entity but does not reach other the victim customer has no option but to consult banks where in majority cases either refund periods were very long or in case of transactions of small amount no solution was provided. An appeal was made against Gpay who was payment platform in the case that instead of banks who play blame game and provide no solution payment platform (Gpay) shall be held accountable and must compensate victim customers. However, Delhi high Court gave judgement that Gpay is a mere “Third party processor” and not a payment processor hence it can't be held liable. Also, as per terms of agreements of Gpay policy it is not responsible for discrepancy in transactions and loss of money.

As per judgement Gpay maintains its stance as a “Technology service provider” to its partner banks and facilitates payments via UPI infrastructure

However, as per 2023 NPCI guidelines few regulations were placed on Gpay but are not yet implemented. There are further loopholes in terms of agreement of Gpay. It states that following transactions are prohibited to be performed using Gpay

1. Purchasing or selling drugs, narcotics etc
2. Transactions in relation to alcohol for human consumption.
3. Transactions in relation to human trafficking
4. Transactions in relation to sell and purchase of tobacco

However, no internal controls exist regarding the same to implement it.

Hence, here a need is felt to conduct an internal audit regarding risk of material misstatements regarding state of internal controls before conducting a Statutory audit. But according to our legal framework it is not possible only to conduct mandatory audit on it because it is a third-party processor.

Paytm Being a limited company some information is available regarding its operations. However, here when it conducts international transactions there are no disclosures regarding bank rate used for conversion purposes.

This problem is faced in above 2 companies as well.

Loopholes in India's Fintech System

We are till date unable to fully take our fintech system to global level and deal in various international currencies using our current fintech systems. This is because of the problems discussed below we are unable to export our fintech systems to other banks of the world such as HSBC Bank, Deutsche Bank, Bank of America etc. and also increase volume of transactions in terms of international currencies.

1. Private companies

Most Fintech companies in India are private limited companies. There is no strong authority in India that regulates private limited companies. These companies are so large in terms of nature and volume of transactions and revenue earned that they can become limited companies if they wish to do so but still prefer to be private limited companies. What happens is even if they fall under mandatory audit requirement of private limited companies as per Companies act 2013 strictness of audit gets compromised due to lack of reporting authority like SEBI because of huge difference between how audit of private limited and limited company is conducted. Also, if company has serious drawbacks in internal controls due to its private nature people will be still unaware of this fact as audit reports of private companies are not available to general people easily. People will continue conducting transactions without realizing actually how risky it is.

2. Weak cyber law

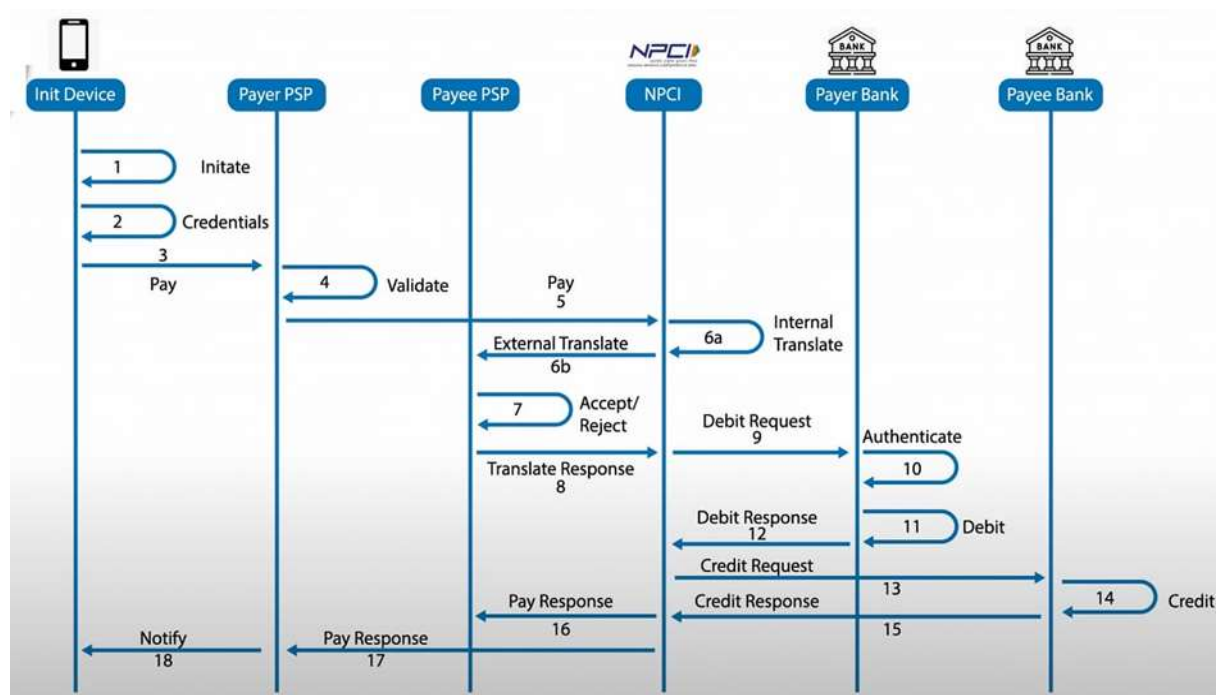
Cyber Law is still in introductory stage in India as compared to advanced countries. Hence it is very difficult and time-consuming process to actually prove in court of law that companies are taking advantage of these loopholes.

3. Third parties

In Conducting transactions Third party companies are also included. These are also private limited companies and majority of them don't even conduct audit placing risk of material misstatements levels to be very high. Safe parties should be involved in making transactions which can be determined only by conducting fair audit of these companies.

For example: Worldline India Private Limited is associated with Gpay and even Bhim at times in conducting international transactions has disputes going on with Income tax department for significantly large amounts. It casts doubts on reliability of company to involve them in transactions.

Understanding operation of fintech system and entities involved for better understanding of loopholes



Entities or parties involved in fintech ecosystem are as follows:

1. Sender's bank
2. Receiver's bank
3. Fintech platform
4. Third party processor

1. Sender's bank

Bank account of person sending money is referred here as Sender's bank

2. Receiver's bank

Bank account of person receiving money

3. Fintech platform

It is platform through which the transaction takes place. It can either be regulated by NTPC or unregulated

4. Third party processors

There are certain transactions which involve third party processors. The money sent by sender through UPI or fintech platform is sent to third party processor who further transfers it to Receiver's bank.

Due to many parties involved in Indian banking system risk of material misstatements increases and it becomes difficult to determine materiality as per SA 320 and state of internal controls. Further research conducted by Hong Kong University states that this risk can be reduced by introducing DEFI system or introducing elements of DEFI system in high-risk areas.

Fintech in China

It is to be noted that growth prospects of fintech industry and volume of transactions in China are very much similar to indian fintech ecosystem. However, Chinese fintech ecosystems were able to effectively overcome some of the loopholes mentioned above that we still face today and they were able to make their fintech systems international and export reliant. In fact, Hong Kong is most fintech advanced in world followed by Singapore.

Some of the comparisons between Indian and Chinese fintech ecosystems and problem dealing are as follows:

1. Laws and Regulations

In India still there is not much development in cyber law and laws related to fintechs. We still incorporate fintechs in payments settlements act 2007. However, as per current scenario need is felt in legal and regulatory framework of fintechs.

What China has done here is due to its socialist principles the people's government of China signs a bylaw with all the fintech companies including their payment processors and pass burden of risk and responsibility on fintech companies unlike India where this risk is on banks.

In India there is not much emphasis on quality of third party processors involved in making transactions. However, in China government is very alert and responsible regarding quality of third party processors. Generally, these third party processors are extension of or subsidiaries of banks who are engaged in transactions so as a result they comply with all banking regulations and acts and audit requirements.

2. Strategic partnerships

Chinese Fintech companies which are extension or subsidiaries of banks are in strategic partnerships with various major banks around the world such as HSBC bank, Deutsche Bank, Swiss Bank etc. So basically, Chinese banks offer full package that is, banking services as well as their own payment processors who will conduct the transactions. So, as a result transactions are secure, risk of material misstatements is low because in actuality number of parties involved reduces. This increased their scope of international currencies in which they can deal. However, in india, there is no background check carried out of these third party processors. Also, majority of these companies are private limited who do not fall in category of mandatory audit as per Companies act 2013 so risk of material misstatements and risk levels in general increase. Also, NPCI powered Bhim app is currently in partnerships only in Dubai and few middle east countries. Hence, there is a lot of scope for improvement here.

Use of deep map technology and double step authentication in fintech

Fraud risk management which is tried to be tackled using fintech. Imagine that you started a new online business of selling watches. Now, you received a huge order for 100 watches online. The buyer promised to pay via Fintech platform for eg BHIM. The main fear that seller here is facing to determine genuineness of buyer since both of them have never physically seen each other. Seller asked for order details and location where watches are to be delivered as well address of seller along with other financial information. Fintech systems now use following information to verify genuineness of buyer

1. Adhar number pan number or phone number whichever is available. For eg: every fintech platform asks you for your upi number which in majority of cases in following format.
Phone Number@upi
Eg: 1234567891@upi
2. When you put this UPI number a request is sent to your fintech application
3. You have to accept this request and put your pin number
4. After putting your pin your payment is successfully processed

However, in Gpay and Phone pe there is no such double step authentication followed and it directly allows you to pay any phone number or contact number without any approval of request. Also, you are required to put pin number only once as compared to multiple pin input checks in BHIM. This reduces security of transactions.

It is new innovation now a days that information systems companies provide to fintechs. The service provided is when buyer provides location where the goods are to be delivered, it uses deep map technology and provides a background check of location where goods are to be delivered. It also checks whether location provided by buyer really exists.

It has particularly been useful in case of Credit lending through fintechs. Now borrower cannot run away after taking money.

Company planning to provide such services is CE Info systems(Map my India) Ltd. It is a listed company on NSE and BSE. It provides significantly high security as compared to debit and credit card transactions.

Due to Loopholes as mentioned earlier in the UPI Infrastructure, there exists a need to eliminate them. These can't be completely removed but monitored to such an extent that they do not cause harm to users of UPI Payment Ecosystem. Like every other system UPI Infrastructure will also have its own limitations but an UPI specialized audit can curb its limitations to great extent. That's why an UPI Based audit is necessary. As seen in Delhi High Court VS RBI case of 2019 when companies like Gpay were able to successfully escape regulatory framework a need for UPI Based audit was felt. An audit is more focused on regulatory compliance, documentation , operations and internal controls in system hence making companies compliant with regulations of Payment Processors act 2007. This audit process also aligns with the document's call for risk mitigation and stronger internal controls and strategic partnerships, drawing parallels with China's fintech ecosystem, where stringent regulations and bank-backed processors minimize risks, offering a model for India to strengthen its UPI framework. The following section details the key components of a UPI audit, underscoring its critical role in addressing the vulnerabilities discussed and ensuring the integrity of India's digital payment ecosystem.

Introducing Fintech UPI Audit

Main parts of UPI audit are as follows:

1. Application of security lifestyle
2. Patch/ vulnerability management
3. Change management

1. Application of security lifestyle

First step is determining nature of industry in which company operates i.e. whether it is in transactions industry, stock market intermediary, credit lending etc. Then determine which type of QR code should be used and then comparing it with management's use of QR code to determine appropriateness of management use of QR code. There are precisely 2 types of QR code

- I. Static QR code
- II. Dynamic QR code

If auditor is of the opinion that management use of QR code is not appropriate, then auditor shall modify his opinion as per SA 705

2. Patch/ Vulnerability management

It is the process of applying updates to software, drivers and firmware to protect against vulnerabilities. It is also process of identifying scanning and prioritizing vulnerabilities for remediation.

In USA in banking applications industry and e-banking industry similar to fintech industry of India this patch or vulnerability management services are provided by IBM.

In India too apart from audit of financial statements such services should be consulted and certificate of such IT company shall be attached and used as audit evidence as work performed by management's expert.

3. Change management

Technologies in fintech also have insurance. So as a result, auditor shall determine by examining premium paid how safe the technology is. The logical is more premium more risk and vice versa. So, in this way auditor can determine how safe is technology used and suggest if it satisfies safety criteria.

And if no insurance with respect to technology is taken then auditor shall determine appropriateness of work performed by management expert as per SA 500 Audit Evidence.

Audit Solutions in Fintech audit

So earlier, we mentioned the problems faced in fintech industry in India. However, if conducted properly audit can provide solutions to reasonable extent. By audit, we not only mean audit of financial statements but system audit and preparation of proper audit report attached with audit report of financial statements.

1. Security provisions

There are many types of transactions that take place through fintech platforms. Examples of some transactions are retail transactions, fees payments, medical payment transactions etc. However, not much adequate data is available about classification of transactions conducted by companies involved in fintech and even by banks. This is because

of volume of transactions. By conducting sampling techniques as per SA 500 auditor shall conclude on what type of transactions roughly the entity is involved in. Accordingly, divide the transactions as high risk and low risk. In case of high-risk transactions create reserves of 1 per cent volume of total transactions to give an idea of high risk involved.

2. Creditability of banks and individuals

In India, there is a diverse banking sector scenario. What we mean is that in India banking sector has some major players but other banks also have significant power which they exercise. Each state has their own state specific banks which people prefer. Similarly, there are certain communities linguistic and others also that prefer certain banks. Due to such large variety of banks, fintech transactions involve various bank accounts. Transactions are executed by fintech. As a result, in case of bank-to-bank transactions it necessary to determine creditability of banks. Individuals shall also be verified with help of Aadhar numbers and phone numbers to ensure that there are 2 individuals involved and only one individual is not conducting fraudulent transactions.

Audit checklist in fintech

1. Regulatory compliance
2. Data security and privacy systems
3. Technology infrastructure
4. Management of risk and assurance
5. Internal control management
6. Financial reporting framework
7. Customer due diligence
8. Anti-money laundering compliances

Acts and laws that shall be applicable to all fintechs as per audit framework:

1. Payments and settlements systems act 2007
2. Peer to peer lending platforms directions 2017
3. NPCI regulations on UPI payments
4. Companies act 2013
5. Consumer protection act 2019

Types of KYC Audit Checklists for fintech companies:

1. Customer due diligence
2. Verification of customer identity
3. Risk assessment
4. Electronic signature
5. Data privacy

Conclusion:

The robust development of fintech industry by leveraging advanced technological solutions for various payment and transaction purposes have led to significant increase in digital payments. While this growth has contributed significantly, the inherent loopholes need to be taken care of.

Loopholes such as exemption of fintechs under certain acts, weaker cyber security law and lack of double verification can cause severe damage, lack of trust for using such payment processing apps and serves as major setback for the industry. In order to prevent such outcomes, fintechs need to adhere to strong internal audit at the same time implement standard fintech audit as proposed earlier. Abiding by the suggested audit checklist will help enhance data security and privacy, ensure seamless and uninterrupted services and mainly detect and prevent frauds.

Thus, fintech audits are critical for ensuring the integrity, security and efficiency of financial technological operations. By adhering to rigorous audit process, fintech companies can enhance operation transparency, foster consumer trust and maintain resilience against potential threats. To conclude, regular audit audits serve as a cornerstone for sustainable growth, regulatory compliance and the long-term success of fintech organisations.

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<https://www.ibm.com/think/topics/patch-management>

Marketing Practices in India Before the 12th Century: A Historical Perspective

***Dr. Parag Ajagaonkar and *Ms. Geeta Desai**

Abstract:

This paper explores into the origins of marketing in ancient India – stretching back well beyond the 12th century – showing how business, buying and selling and values were seamlessly integrated with culture and spirituality. Not merely an economic phenomenon, mercantile marketing in ancient India was a socially enmeshed behavior, which was influenced by religion, guilds, association types of mark and community relations of trust. By analyzing patterns in trade routes, craft guilds, temple economy, and fairs, this study explores advanced branding, communication and quality systems developed in some of the ancient world's largest civilizations (Indus Valley, Gupta and Chola Empires). Oral traditions, their ability to reach tens of thousands of people, emblems, town criers and temple networks were the conduits of advertising, reflecting a competitive and ethical marketplace.

An interesting read for marketing professionals who are trying to understand and decode of Indian consumers” – ‘EXCHANGE4MEDIA’ a book that draws, insightful parallels with today’s marketing strategies, the book reveals how ancient Indian systems intuitively anticipated modern branding principles—such as identity, value-driven messaging, and corporate social responsibility. It serves as an essential guide for marketers rooted in Indian culture, values, and ethical traditions, making connections to today’s marketing tactics, the book shows how Indian systems foresaw modern branding concepts such as identity, values, and corporate social responsibility, making it just the source for a marketer with roots digging into Indian values, culture and ethics.

Keywords: Ancient marketing practices, marketing, marketing in IKS, traditional marketing

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Introduction:

Marketing is entrenched in the history of the human civilization long before it was conceptualized as a business concept. Marketing in the ancient India, which was full of animated cities, spiritual prosperity, and trade prosperity was not only a process of transaction. It was a subdued cultural practice that blended with the society, religion and economy. Intended streets of the Indus Valley or busy markets of the Chola Empire, marketing was the blood of Indian life community, trust, ethics and innovations. This paper explores how ancient Indians engaged in marketing not only to trade things, but to establish identities, groupings and an orderly commercial system supported by dharma.

Study Objectives:

This paper explores how ancient Indians engaged in marketing not only to trade things, but to establish identities, groupings and an orderly commercial system supported by dharma. This is representation of an account that tries to comprehend the way marketing was conducted in India in the prior to 12th century based on the following objectives:

1. In order to study ancient means of commerce and advertising within the ancient Indian society.
2. In order to discuss how artisan guilds, symbolic representation and coinage can be discussed as early marketing devices
3. In order to investigate the social and cultural purpose of marketplaces, fairs and trade roads.
4. To find out how dharmic principles defined the moral code of marketing in ancient days

Scope of the Study:

This paper discusses about the marketing India before 12th century. It deals with trade routes, market ethos, God and the moral code, means of communication and the mode of transmission of advertising in ancient India. It combines elements from various historic references such as the Indus valley, Vedic age, Gupta and Chola empires.

Research Methodology:

The present paper follows a historical-analytical, qualitative approach, believing in the scrutiny of ancient Indian texts, inscriptions and things-archaeological. The primary sources are recognized works such as Kautilya's Arthashastra and Manusmriti and Dharmashastras and epigraphic records from the Guptas and Cholas, as well as trade-related inscriptions from Lothal and Kanchipuram. These sources are read against the views of semiotics and culture to decipher the branding devices, ethical norms and communication strategies as practiced by ancient Indian merchants.

This study also utilizes secondary data like, academic books, historical journals, and archaeological discovery, thematic analysis to follow the development of business activities through dynasties. They reconstruct ancient systems of branding, quality control and customer-information from case studies like guild-marked cloth in Kanchipuram, temple-sponsored trade systems in the territory of the Cholas and the port economy at Lothal. A comparative model associates these practices with modern marketing concepts such as brand identity, CSR, and ethical trade.

This approach provides a nuanced view of how dharma-driven commercial trade, guild-based ethics, and oral marketing techniques figured as systems of marketing from the time before industrial capitalism.

Trade and Marketing in Early Indian Civilizations:

The exposure of trade and marketing of early Indian civilization, sophisticated grasp of trade is found in the Indus Valley Civilization (C.2600-1900 BCE) among the oldest cities of the world. Engraved seals with imprinted symbols, which resembled the brand marks or signatures, they reflected on the source and validity of merchandise. The regularized weights and measures indicate the controlled commerce, whereas the connections with Mesopotamia and Egypt indicate that Indian selling was global, when the term globalization was not even introduced. Trade did not occur solely on utilitarian grounds; trade involved checks and balances as regards quality, reputation and even the marketing of tales passed down through many generations of traders and craftsmen. Beads, textile, metal, and ceramics were traded and

sold proudly with representation of craftsmanship and cultural symbolism. During the Vedic and Epic phases, Sabhas and samitis have turned into the place of trade and national deliberations. Widely important to trade, notably in rural and temple towns, were fairs (*melas*) and weekly Haats. In addition to the religious importance, the Kumbh Mela was a huge trading centre. The Gupta and Chola inscriptions speak of busy markets in such cities as Patliputra, Ujjain, Madurai and Kanchipuram. The role played by royal patronage and temple economics in the emulation of trade could be ignored.

Marketplaces and Periodic Fairs:

“The Vedic age witnessed the rise of public assemblies, *sabhas* and *samitis*, which were centres of good governance as well as of commerce.” In course of time, they grew into organized weekly markets (*haats*) and large fairs (*melas*) related to temples and religious festivals. These fairs were not only religious assemblies, but centres of active commerce as well.

Large pilgrimage fairs like the Kumbh Mela also emerged as centers of commercial activity where buyers and sellers from distant parts of the region gathered. Gupta and Chola inscriptions.

Artisan Guilds and Branding Mechanisms:

No account of ancient Indian advertising would be accurate or complete without reference to the *Shrenis* or guilds of artisans and commercial classes. They weren't just professional collectives; they were autonomous, self-regulating entities that had power over everything from product standards to dispute resolution.

Guilds created brand-like reputations. Emblems, brands and stamps were the original means of branding, providing a sense of confidence to buyers about the item's source and quality. Kautilya's *Arthashastra* advocated state-controlled markets, norms of fair trade, scale for pricing, and pricing of agricultural products.

Dharma and Ethical Marketing:

One of the most remarkable features of ancient Indian marketing was its total commitment to *dharma*; the moral and ethical principles of life. Scriptural authorities such as *Manusmriti* and *Dharmashastras* were sources of rules for fair prices, reasonable profit, and tax. The merchants were encouraged to be honest and follow the principle that wealth acquired through unethical means would not be sufficient for happiness.

Similarly, Buddhist and Jain texts stressed compassion, truthfulness, and non-exploitation in trade. They held that the peaceful conduct of the business was important for the attainment of the spiritual goal. Specifically, Jain merchants were the ones whose principles of non-violence and fairness were so strict that they considered ethical business only as a spiritual practice.

Temples, aside from their religious importance, were also the centers of the economy as they possessed extensive lands, granted various kinds of loans, kept granaries, and helped the establishment of the exchange system.

Advertising and Communication:

Even if the mass media were not available in ancient India, the nation was still not without its marketing communication tools. Oral storytelling, colorful signs, painted carts, and symbolic flags were the ways that traders utilized to get noticed in crowded bazaars. Town criers, musicians, and bards went from one village to another, and from one city to another, informing people about products and events.

The hectic activity of the vendors and the persuasiveness of the sellers characters were the most prominent features of market scenes that were painted. Language, sound, and visuals were the driving forces which helped even the simplest forms of marketing become art.

Examples of Pre-12th Century Trade and Marketing:

1. **Lothal (2400 BCE)** – A major port in present-day Gujarat, Lothal had a sophisticated dockyard and warehouse system. Traders used symbols and markings to identify ownership and quality, an early form of labeling and branding.
2. **Kanchipuram (Pallava Era)** – Known for silk production and temple commerce, the city saw guild-based cloth trading with unique pricing codes and product standards. Branding was achieved through reputation and symbol-marked cloth rolls.
3. **Chola Trade Missions** – The Chola dynasty's traders ventured to Southeast Asia with royal charters, gold coins, and clan symbols. These not only protected their goods but also ensured credibility in foreign markets, acting as early passports of commercial identity.

Through specific historical examples such as Lothal's dockyards, guild branding in Kanchipuram or Chola maritime trade, the course offers empirical grounding to marketing practices. Here is evidence of symbols, seals, and codes of ethics addressing quality and identity. There are patterns across dynasties that show the synthesis of commerce, culture, and ethics.

Comparison with Modern Marketing:

Despite the technological gulf, many core principles of ancient Indian marketing resonate with today's practices. Brand identity, consumer trust, fair trade, and community-driven commerce were all present in early Indian trade. What we now call Corporate Social Responsibility (CSR) was once simply dharma in business. Trade fairs, promotional tactics, and regulated commerce all reflect a historical continuity that bridges the past and present.

Conclusion:

Long before formal marketing theories were known, India had deeply integrated ethical and cultural marketing system. This was a system that treated the customer like family, respected the product, and held the trader to high moral standards. Marketing in pre-12th

century India was no less a practical and philosophical affair. It was also from the symbols on seals to the slogans that were sung in village squares.

We can visit those indigenous traditions of marketing once again to look for the inspiration for not only economically effective but also ethically and culturally grounded marketing models. Today, when the whole world is reawakening to sustainability and authenticity, ancient Indian marketing wisdom is not only a history but also a source of guidance for the future.

Limitations of the Study:

This research was conducted using archaeological and literary records, and may not represent all regional or undocumented practices. Interpretation is restricted to the evidence available and reflects lacunae and bias in the historiographic record of antiquity. No numbers or quantitative measures utilized here.

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Global Economic Integration and Geopolitical Challenges

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****CA Pravin Pawar**

Introduction:

The Liberalisation, Privatization and Globalization, has changed the world economics, creating complex relations among countries via trade, investment, and transfer of technologies. This change represents emerging economies, particularly India, with plenty of opportunities to influence, promote development, in the creation of a "VIKSIT BHARAT" (Developed India). These changes bring opportunities along-with changing geopolitical tensions, frequent changing alliances, and increasing groupism, trade war and strong policy measures.

Since independence, Bharat has started its journey with agriculture-based industry to technology-based industry. But actually, India paced only after first economic reform 1991. India made many changes including Primary, Secondary and Tertiary sector. After 1991, India has move towards service-based sector, mainly IT enables services. India become IT hub for the world. This sector contributes 50% of the GDP with large scale employment opportunities. Mr. Narendra Modi got elected as a prime minister in 2014. He introduced second economic reform. He put forward the vision of "VIKSIT BHARAT by 2047". To achieve this vision, India needs to do multiple changes including Tax Reforms, Industry Reform, Foreign trade policy changes, change in economic integration with multiple countries, securing strong border defence, self-reliance in technological advancement, Improvement in export led industries etc. Though this vision is achievable but yet challenging too. Challenges such as Low per capita income, less tax paying population, Pandemics, weakening relations with neighbouring countries, Changing geopolitics, War among many regions in the world, Global warming, Trade war between US and China, Tariff war from US.

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Objectives of the study:

- To highlight the achievements of India towards “Vikasit Bharat Vision 2047”, Especially from first economic reform 1991.
- To identify and analyse recent geopolitical events that can highlight India’s importance in world trade and emergence of global leadership at various international platform.
- To identify challenges that create hindrance for the “Vikasit Bharat Vision 2047”
- To share recommendations to overcome effect of this challenges.

This research paper mainly focusing:

A) Parameters that can highlight the growth story of India

1. The importance of trade and Foreign Direct Investment (FDI) in India's multi-fold development;
2. India's transition from an emerging economy to global leader;
3. India's participation in global supply chains and related strategies;

B) Barriers that create hindrance in India’s “Vikasit Bharat Vision 2047”

Geopolitical challenges on globalization, business, and development and its impact.

- Border Tension with neighbouring countries (China, Bangladesh, Pakistan, Nepal, Maldives)
- Trading Blocks issue (BRICS, SCO)
- Double standard of international institutions, i.e. WTO, IMF, and EU West
- Lagging in the race of Technological Advancement and Innovations
- US-EU Tariff War
- Burden of foreign migrants, including illegal migrants in India.
- India is losing in Information Narrative warfare.

Achievement of India Towards “Vikasit Bharat Vision 2047”:

Trade and FDI for Economic Growth

Trade openness and foreign direct investment (FDI) are important factors that contribute to

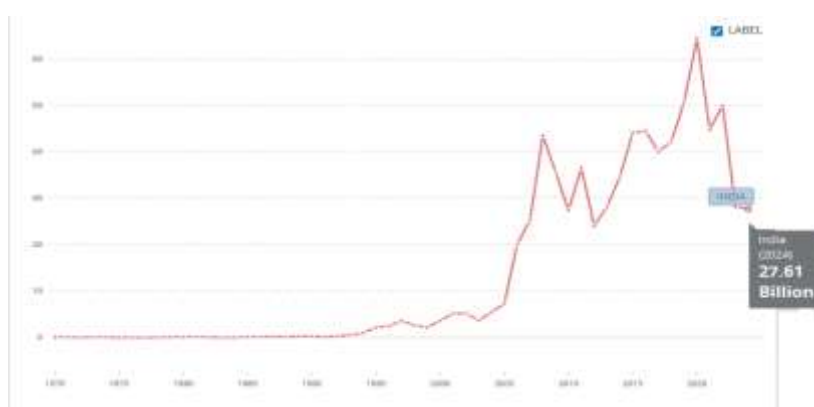
productivity growth, job generation, and capital accumulation in developing nations. In the case of India, the economic reforms 1991, have opened access to foreign investments, technology transfer, and export expansion, thereby boosting the overall GDP.

In order to achieve “Vikasit Bharat” (A developed, Inclusive and competitive India), Foreign Direct Investment is crucial not only for trade balance but also for maintaining foreign exchange reserve, better relations with many countries, growing interdependence among the nations, and national security.

Trends in FDI and Trade in India:

Since 1991, the FDI inflows was just of 455 Mn., reaches to its peaks in the year of 2020 with 6.43 lakh Mn., and structural change in sectoral contribution, where services sector favoured over the traditional manufacturing focus. Government policies like “Standup India” and “Make in India” have further accelerated the speed of ecosystem for investment in Indian economy.

Foreign direct investment, net inflows (BoP, current US\$ - in Millions)



Source:

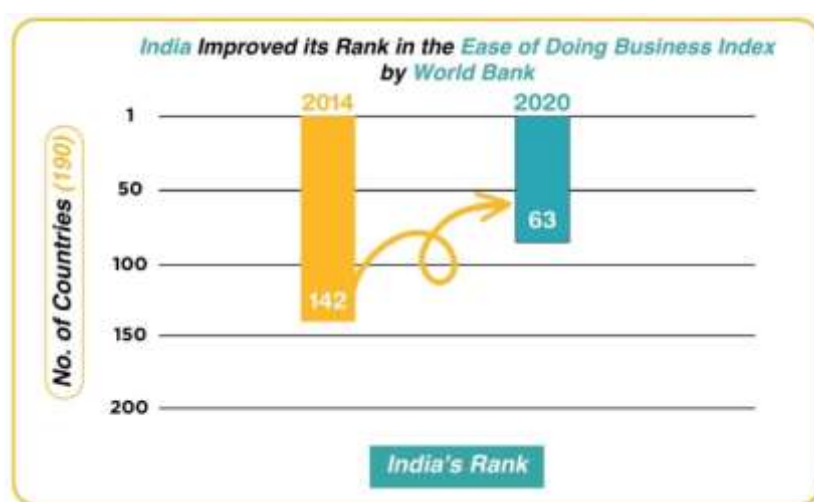
<https://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD?end=2024andlocations=INandtart=1970andview=chart>

We can see Goods export has increased 24 times, since 1991 with 18.09 Bn US\$ to 447.17 Bn. US\$ in 2024. We have seen a surge in export of service sector, with 75 times, since 1991 with 4.93 Bn US\$ to 374.88 Bn. US\$ in 2024. In India, the top contributors of FDI

including Mauritius, Singapore, Japan, and the US, with shifting attention from European nations towards the Asia-Pacific region.

The Impact of FDI on Viksit Bharat:

Ease of doing business Ranking – Last 1 decade India as emerged as most attractive place for business. India is becoming most favoured destination for many international companies, including big giants like Apple, Tesla, Foxconn etc. India's ranking of "World Bank's Ease of Doing Business Index" has improved from 142nd position to 63rd position.



Source - <https://dashboard.doj.gov.in/eodb/> and <https://www.makeinindia.com/eodb>

Mindset shift towards entrepreneurship:

In terms of new business startups, India is achieving milestone year after year. World Economic forum has reported that India registered 3rd largest economy in the world for setting up unicorns (1Bn. \$ Company). In India, 1.20 lakh startups have been registered in last 10 years.

India has launched New Education Policy (NEP), in the year 2020. NEP is more inclined towards skill development, innovation and Employability. Development of Technology advancement and change in student's mindset for innovation is encouraged. Government of India has set up Foundation and Innovation Technology Transfer (FITT), Atal Incubation Centres (AIC), Startup India Seed Scheme to support and development of

Innovation culture. (Reference: <https://www.weforum.org/stories/2024/12/india-startup-entrepreneur-trends/>)

Positive shift towards unicorn creation:

With 121 unicorns created, India ranks third in the world, followed by China (248 unicorns) in second place and the United States (1,047 unicorns) in first. Bengaluru has 52 unicorns, making it the most unicorn-rich city in India. Mumbai (19 unicorns) and Gurugram (19 unicorns) come next. With 62 unicorns, the consumer sector has produced the most, followed by enterprise applications with 41 and retail with 38. (Reference - https://tracxn.com/d/unicorns/unicorns-in-india/_ujYf3QI9FSnpS3x-zJCSwnay2nENQhm1kAN-U8-6Kfg)

Historical Perspective and Policy Evolution:

Non-Alignment to Multi-alignment: India's foreign policy has evolved from Jawaharlal Nehru's principle of non-alignment to a pragmatic, assertive diplomacy under recent administrations. Recent times, under leadership foreign minister Dr. S. Jaishankar. India's engagement in global institutions signals a shift towards multi-alignment and collective leadership. Especially partnering with USA, Europe, China and Russia shows significant change in India's foreign policy.

Bi-polar to Multi-polar – India's foreign minister Dr. S. Jaishankar has highlighted that now the world has shift from Bi-polar to multi-polar ecosystem. Earlier only USA and Russia was having importance in the world economy. No countries like India, China, Australia, Singapore etc. also contributing vital role in world economy.

Key Global Platforms: Active participation in the BRICS, United Nations, World Trade Organization, G20, and other multilateral forums has allowed India to contribute to setting the rules and norms of global economic governance.

India's Emergence as a Global Leader:

The expansion of India's GDP and the rise in living standards have led many to view India as a strategic and economic powerhouse rather than a beneficiary of global aid. In spite of global service exports are double from 1.9% in 2005 to 4.3% in 2023.

India has managed external debt in control. It remained stable over the past few years. At the end of September 2024, India's external debt recorded at 711.8 billion. In Sept'24, Debt to GDP ratio stood 19.4% against 18.8% at the end of June'24. (Reference <https://www.pib.gov.in/PressReleaseDetailm.aspx?PRID=2097911>)

India's recent G20 presidency marked a high point in its international engagement, emphasizing themes of inclusive growth, sustainable development, and "Vasudhaiva Kutumbakam" ("One Earth, One Family, One Future"). India had been supported Sustainable Growth and Development, mainly focusing on inclusive growth, infrastructure, and new sources of renewable energy, advocating reforms in global institutions for fairer representation. India's global significance can be highlighted in international trade was its G20 presidency in the year of 2023.

After its long history of struggles with Invaders including Mughals, Britishers, Portuguese etc. and crucial participation in the Non-Aligned Movement, this leadership role has bonded India's place at the safeguarding of the Global South. India is playing a crucial role in redefining the influence of the Global South in the modern era. The African Union's admission as a permanent member of the G20, which highlighted the Global South's historical ignorance of global governance, is a historic accomplishment of this G20 summit. India demonstrates its crucial role in the South African region's development. (Reference - <https://diplomatist.com/2025/01/15/indias-rising-influence-leading-the-global-souths-agenda-in-a-multipolar-world/>)

India's Role in Global Supply Chain: Opportunities and Strategies for "Viksit Bharat":

Investments in port infrastructure, digitalization, and regulatory reforms (exemplified by initiatives at Adani Ports and the National Logistics Policy) have improved India's trade efficiency and supply chain competitiveness.

India's bold National Green Hydrogen Mission and its active leadership in the International Solar Alliance (in partnership with France) have shown the country's strong commitment to reducing carbon emissions and promoting clean energy alternatives. In addition

to supporting global efforts to reduce carbon emissions, these initiatives showcase India's growing importance as a major participant in the global green economy. India is putting itself in a position to shape future energy supply chains and promote global cooperation toward sustainable development goals by encouraging sustainable energy transitions.

Between March 2014 and June 2025, India's installed renewable energy capacity nearly tripled, from 76.37 GW to 226.79 GW. India, one of the leading nations in the world for renewable energy, is ranked fourth overall. (Reference - <https://diplomatist.com/2025/02/14/renewable-energy-indias-path-to-a-sustainable-future/>)

India has increased invested in infrastructure over the period of time, thru public private partnership. India's has budgeted ₹10 lakh crore in 2023-24 for Infrastructure.

The “**PM Gati Shakti National Master Plan**” (2021), India initiates a programme to integration of Ministries, such as Railways and Roadways, to facilitate integrated planning and coordination of implementation of infrastructure projects. This effort helps in smooth and effective connectivity across multiple transport modes.

World Bank Logistics Performance Index (LPI) - India's ranking is 38 out of 139 countries in 2023, earlier it was 44.

India road network is 2nd largest in the world with total length of 1.46 lakh km. The Government of India has launched programmes such as the “**Bharatmala Pariyojana**” to improve logistics infrastructure.

- ✓ India's National Highway network is 1.46 lakh km (2024). In the year 2004 it was 65 thousand km.
- ✓ National Highway construction making speed reached 33.8 km/day in 2023-24.
- ✓ Capital expenditure marked highest ever to ₹3.01 lakh crore in 2023-24.
- ✓ Operational High-Speed Corridors 2,138 km (2024), In thr year 2014 it was 93 km.

Pradhan Mantri Grameen Sadak Yojana – 7.71 lakh km length roads completed with a total expenditure of ₹3.31 lakh crore.

Civil Aviation -

- ✓ Total 157 airports built and operating in 2024.
- ✓ Higher number women pilots with 15% than global average.
- ✓ Domestic air passenger reached 5 lakhs in a single day on 17th Nov, 2024.
- ✓ The numbers of aircrafts have increased to 723 in 2023, It was approx. 400 in 2014

Shipping and Ports – Since ancient times, marine transport is one the main mode of transport, and played pivotal role in the growth in India. The India's shipping sector including Goods logistic transport Shipbuilding, Ports Management, Vessels Maintenance and Inland Water Transport Systems.

- ✓ Cargo handling capacity has increased to 1,630 million tonnes per annum in 2024.
- ✓ India marked 22nd rank in the International Shipment.
- ✓ The number of vessels increased by 22% and reached to 1,526 in 2023-24.

Railways - Indian Railways marked 3 crore passengers in a single day in Nov. 2024.

- ✓ Bio-toilets coaches increased to 80,478 in year 2014-2023.
- ✓ Indian railway has achieved installation of railway tracks 14 km / per day In the year 2022-23,.
- ✓ Indian Railway connect each states including North-East states.
- ✓ In 2024, Railway has installed CCTV on 1051 stations.

(Reference - <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2098788>)

Challenges in Achieving Vikasit Bharat Vision 2047:

Global tension is becoming more and more characterized by competition among major powers, trade wars, and geopolitical fragmentation. These forces emerging nations like India to revise their economic survival, growth, and sovereignty strategies.

Tensions between the US and China, increased trade tensions, and sanctions dictatorships have brought attention to the need for international institutions to undergo reform in order to guarantee equitable and efficient governance that takes into account the interests of developing nations like India.

Recent economic failures in regions like Bangladesh, Pakistan, Myanmar, and Sri Lanka have drawn attention to the stresses of world instability. Regulatory obstacles, changing trade routes, and supply chain risks all make it difficult for businesses to be adaptable. Multinational corporations are forced to reevaluate risks and develop more strong, geographically diverse operations.

In order to provide stability, resolve conflicts, and jointly promote for development interests, regional institutions and partnerships are playing an increasingly important role.

Border Tension with neighbouring countries:

There are enough territorial disputes between India and a number of its neighbours, primarily China and Pakistan. These conflicts, which are frequently made worse by nationalist feelings and military motion, involve territorial claims and old grievances. The unresolved borders with China and Pakistan continue to be a potential point of conflict, despite India having settled its border disputes with Bangladesh and Sri Lanka.

China: The main cause of conflict between India and China is the Line of Actual Control (LAC), a sharing boundary stretching approximately 3,488 kilometers (2,167 miles). Since the LAC lacks a clear demarcation, it often results in stand-offs between the military forces of both nations. In 2020, confrontation turns into casualties on both sides. This Galwan Valley clash, highlighted the severity of the border dispute. Territorial claims in the eastern sector (Arunachal Pradesh) and western sector (Aksai Chin) contribute to the ongoing tensions.

Pakistan: India is facing long term border clash with Pakistan. Kashmir is the primary point of contention, with both India and Pakistan claiming the entire region. The Line of Control (LoC) separates Indian-administered Kashmir from Pakistan-administered Kashmir. Kargil War, Recent Operation Sindhoor highlights, Trum led US support to Pakistan is another challenge for India.

Bangladesh - The long and tedious (4096.7 km) border between Bangladesh and India is tense in some places, especially around border separation, fence construction, and suspected illegal border crossings. The relationship with India is now even more complicated due to the political climate in Bangladesh after Sheikh Hasina was overthrown. Due to recent events, both nations

have called in their envoys to discuss issues. Human rights organizations express concerns about the treatment of individuals trying to cross the border, while India cites worries about illegal migration from Bangladesh. There have been incidents of cross-border firing and violence, resulting in deaths and injuries on both sides.

Nepal - India and Nepal share a long border with some areas of dispute, primarily Kalapani, Lipulekh, and Limpiyadhura. In November 2019, India released a political map that included the disputed areas within Indian territory, leading to protests in Nepal. In May 2020, India inaugurated a road through Lipulekh pass, further angering Nepal. Nepal responded by revising its map to include Kalapani, Lipulekh, and Limpiyadhura, which India rejected. The dispute has led to a temporary breakdown in communication and strained relations between the two countries.

Trading Blocks issue (BRICS Currency, SCO):

BRICS was started with 5 nations, now it turns into group of 10 nations. As per recent data BRICS surpassing G7 countries in terms of GDP. The BRICS countries account for 35% of global GDP, while the G7 only represents 30%.

Reference - <https://www.theglobalist.com/brics-brics-g7-economy-population-just-the-facts/>

These days, Washington, USA, is concerned about the BRICS' growing power and the global shift away from the dollar. India and other countries were asked to publicly and privately promise Donald Trump in 2025 that they "will not establish a new BRICS Currency, nor support any alternative Currency to supplant the powerful U.S. Dollar."

In response, the Indian Reserve Bank and Foreign Minister denied any plans for BRICS currency or de-dollarization efforts.

Despite being a member of the SCO, China has recently dominated the organization, and the SCO is not giving India's geopolitical concerns enough attention. At the recent SCO Summit, Mr. Rajnath Singh declined to sign the document because it included militant activities in Balochistan but omitted the horrific Pahalgam attack on innocent Indians in the Kashmir region.

Double Standard of international forums like WTO, IMF, and EU:

India is a founding member of WTO. Every now and then India had given respect of agreements made in WTO. Especially toward the WTO's principal, "Most-Favored Nation (MFN) treatment". But now days WTO is behaving like a "Western Trade Organisation". USA and UK is openly threatening of 500% tariff to many Asian countries including India, and WTO not interring stopping USA and UK. It seems WTO is puppet of western world.

Recent time, India has witnessed Pakistan sponsored terror attack over Pahalgam, India. In response India had launched "Operation Sindoor" to secure own sovereignty. In the middle of the Operation Sindoor, despite India's objections, IMF has approved \$1bn bailout to Pakistan and agreed to support with a total of \$7 billion under the EFF programme. Such financial support from IMF, for a country like Pakistan, a terrorism factory, is real concern for India.

On July 18, 2025 EU imposed sanctions on Indian companies for dealing with Russian companies. Restrictions includes Asset freezes, travel bans, and restrictions on financial, shipping, and insurance services linked to refining or transporting Russian oil.

India imported 2.08 million barrels per day of Russian crude in June, the highest since July 2024, whereas EU has imported 1.08 million barrels per day. Whereas The EU was the fourth-largest buyer of Russian fossil fuels, with its imports accounting for 10% (EUR 1.47 bn) of the top five purchasers. (Reference - <https://energyandcleanair.org/june-2025-monthly-analysis-of-russian-fossil-fuel-exports-and-sanctions/>)

Fuel Imports from Russia in July'25 (in barrels per 1000)		
	India	EU
Per day fuel import from Russia	2,080,000	1,084,000
Population	1,438,100,000	450,000,000
	(143 Crore)	(450 million)
Fuel Imports in Barrels per 1000 people	1.45	2.41

Above table depicts double standard of European union. EU is purchasing more fuel per capita than India, still imposing sanctions on Indian companies for using Russian oil.

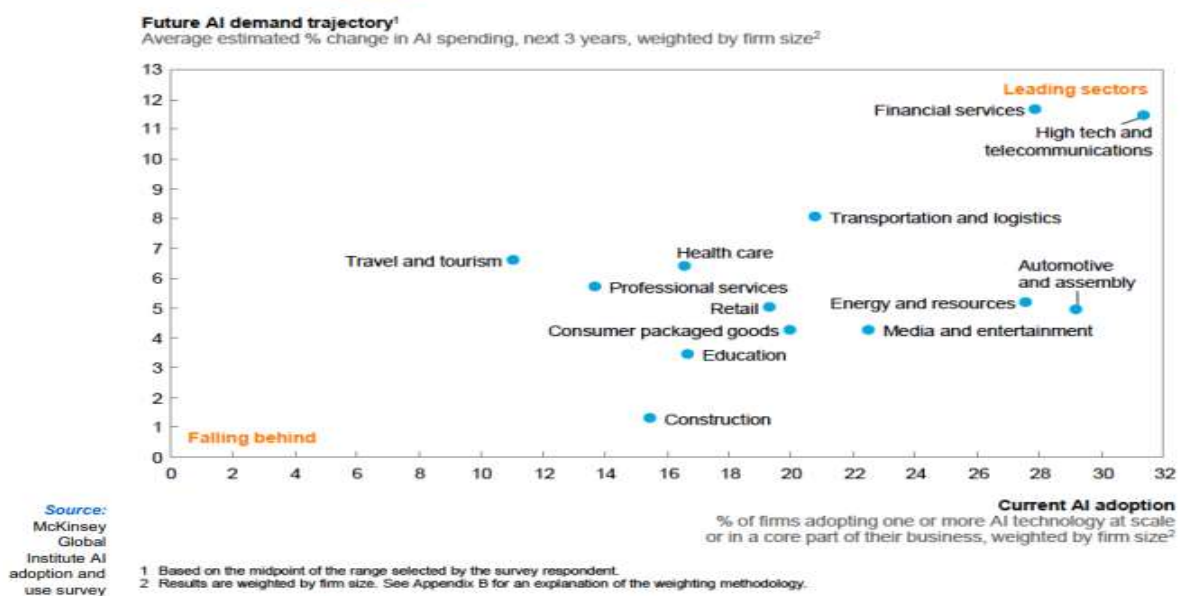
Lagging Performance of in Artificial Intelligence and Innovation:

India is far behind in the race of technological advancement. US comes with ChatGPT, China with DeepSeek. These countries are leading in innovation. India ranks 39th position out of 133 economies, in Global Innovation Index (GII).

Recent introduction of AI created another big concern for India. “Atomberg” founder Arindam Paul has raised serious concerns over the potential impact of artificial intelligence (AI) on India’s white-collar job market. He warns AI could wipe out '40-50% white-collar' Indian jobs. This is major concern for India, because India’s service sector remained leading sector with 50% plus contribution into GDP. It includes exports from IT enabled services with nearly \$200 billion and 10% into GDP. As per expert opinion, artificial intelligence will create pressure on IT enable service. (Refer <https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/superagency-in-the-workplace-empowering-people-to-unlock-ais-full-potential-at-work>)

Niti Ayog of India circulated “**NATIONAL STRATEGY FOR ARTIFICIAL INTELLIGENCE #AIFORALL**” in 2018. In this report Niti Ayog has discussed about Future of AI, Challenges and opportunities.

Figure 6: Current AI adoption and future AI investments by sector



Reference: <https://www.niti.gov.in/sites/default/files/2023-03/National-Strategy-for-Artificial-Intelligence.pdf>

At present, India-US relation is going thru a difficult situation, especially after US election result and appointment of president Donald Trump. Trump’s harsh decisions on Indian Students VISA permission, and Big Beautiful Tariffs imposes tension over India’s future relations with USA.

USA is deporting illegal migrants all over the world, pointing national security threat. At the same time US criticises India's internal policies such as the **Citizenship Amendment Act (CAA)**. This shows how US has double standard towards problems faced by other countries.

US Senator Lindsey Graham has warned the rest of world, "US President Donald Trump will impose steep tariffs on countries continuing to buy oil from Russia, specifically naming India, China, and Brazil". He openly gave threat to the countries buying cheap Russian oil, that US will impose tariffs and crush your economy"

US President Donald said Apple would have to pay 25% tariff if it sold in the US iPhones that are built in India or anyplace else. He has criticised American technology companies for turning to China for manufacturing and hiring workers from India, and warned that such practices would no longer continue under his leadership.

Such tariffs and warning may create burden on exports of India, and worsens the Balance of Payment of India.

Issue of illegal migrants into India:

India has long history of migrants. Invaders from west were pioneer of migrants. Like Arabs, Portuguese, Dutch, Britisher's etc. They had only looted India all the way. Recent time India is facing issue of illegal migrants from neighbouring countries like Bangladesh. According to the 2001 census, 3,084,826 people in India came from Bangladesh. (Recent census data is not available). Issue of Rohingya Muslim is pitching Indian politics. India has handling 4.8 million official international migrants and 18.5 million official emigrants.

(Reference https://www.migrationdataportal.org/international-data?i=stock_abs_andt=2024andcm49=356

<https://gulfmigration.grc.net/media/pubs/book/BookChapters/GLMM%20-%20IM%20Volume%20-%20Chapter%20XV%20-%20Extract%20-%202017-05-19.pdf>
<https://www.arabnews.com/node/2604024/pakistan>)

These illegal migrants create a challenge to the citizen i.e., Job competition, shortage of public services like healthcare, education, and housing, Competition for resources and cultural differences. Issue of national security, smuggling and maximum participation into criminal activity is complex and important.

Recommendations to overcome challenges to achieve vision of “Vikasit Bharat”:

- India should maintain healthy relations with neighbouring countries to the possible extent. India should showcase the real meaning of "Vasudhaiva Kutumbakam". The great philosopher, statistician “Kautilya” emphasised the importance of strategic alliance in his book “Arthshatra”, he wrote “The king shall be ever active in the management of the economy and relations with neighbouring states”.
- India should gain and maintain leading position in the BRICS. Invite more countries to become a member, especially from Global South region. It will help India to access natural resources, rare earth minerals, especially when China control over the supply.
- India should highlight its importance in the world trade, exports and imports. Also remind WTO, and IMF, their role as mediator to maintain balance in world trade. If these international institutions becoming selective, especially towards the west, they will lose their importance and will have adverse effect on global trade.
- India should highlight EU’s double standard across the globe. Europe must realise the power of “NEW BHARAT” and should accept the importance of Asian region, including India.
- India should encourage Innovation in Artificial Intelligence and Technologies. Find more strong cyber security, and ways to protect confidential information from AI world.
- US tariff war is a big headache for the world trade. India should use Tit for Tat strategy with US. India should follow multilateralism and maintain balance among all the nations.
- India should increase border security. Make strong laws for expel migrants to their own land. Implement Citizenship Amendment Act (CAA) and National Citizen of Citizens (NRC) effective manner.
- India should increase investment in information sharing organisations. Introduce its own Global news channels. Install information filter system to identify fake propaganda on social media platforms targeting India.

Conclusion:

India's power as emerging global leader, in terms of trade, international relations, global supply chains. India's contribution in infrastructure development, including roadways, railway, waterways. Introducing advance transport facilities, Business friendly environment, Ease of doing business, Increasing contribution in secondary sector. Shifting of production facilities in India.

India stands at a pivotal intersection of global economic integration and geopolitical realignment. By fostering trade and FDI, assuming leadership roles in global forums, and embedding itself in global supply chains, India is positioned to drive forward the vision of Viksit Bharat. However, success will require persistent reforms, adaptive strategies to counterbalance geopolitical risks, and a commitment to sustainable, inclusive growth.

As recommended, we should use different strategies like Neighbour first policy, AtmaNirbhar Bharat, Shastra se Shakti, rejecting bi-polar and encouraging multi-polar system. Integration with middle east countries, especially OPEC countries. Reducing dependence on single nation for supply of energy, technology etc. Maintaining good relation with all countries upto possible extend. Strong reply on any terrorist activity.

Recent report from Goldman Sachs, states that, India will become 2nd largest economy by 2075 overtaking US, Japan and Germany. This outcome is possible with participation of people from India in India's vision of "VIKASIT BHARAT".

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Empowering Youth through Peace Education; A Foundation Pillar for Viksit Bharat

***Dr. Anju Chaplot**

Abstract:

‘Peace, development, and justice are all connected to each other. We cannot talk about economic development without talking about peace. How can we expect economic development in a battlefield?’ - Aung San Suu Kyi, 1991 Nobel Peace Prize Awardee

Prime Minister Shri Narendra Modi’s vision 2047 for ‘New India’ or ‘Amrit Kaal’ is an envision of coming twenty-five years to restructure all fragments of the Indian economy and re-awakening the world’s trust in India. But how can we do this when the global economic impact of violence was \$17.5 trillion in 2022, equivalent to 12.9 per cent of global GDP, or \$2,200 per person. Violence amongst young generation is a serious global problem since it can have a lifelong impact on their physical, psychological and social functioning. Therefore, to fulfil this nation’s aspiration it is essential to eliminate violent attitude in our youths by introducing peace education. Also, The National Education Policy (NEP) 2020 emphasizes values like ethics, empathy, and global citizenship, thus focuses on building peace. For India to be ‘Viksit Bharat’ and ‘Vishwaguru’ it is necessary that we imbibe the values of ‘Vasudhaiva Kutumbakam’ in our future Economic work force through peace education. This paper shares the research findings of student’s attitude towards violence. The paper discusses the Violence and the Economic Issues faced by India and other Nations and the paper also discusses the role of teachers in eliminating student’s violent attitude through peace education and inspiring them to build Viksit Bharat because without peace no nation can develop.

Key words: Attitude towards Violence, Peace education, Viksit Bharat

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Introduction:

As India embarks on its development journey, the youth emerge as vital partners in this transformative process. With their energy, innovation, and vision, they will be shaping a brighter future for the nation. Together, they will build a prosperous and sustainable India,

where every young mind contributes to growth and progress. The Panch Pran (5 fundamentals) of 'Amrit Kaal' include the goal of developing India, elimination of any trace of the colonial mind-set, honour and pride in our roots, development of unity, and a sense of duty among citizens. Research in peace and economic development explores the mutually reinforcing relationship. Peace is often seen as a prerequisite for sustainable economic growth, while economic development can contribute to building and maintaining peace. The Global Peace Index (GPI) produced by Sydney-based Institute of Economics and Peace notes India has a dismal rank of 72. The 2020 violence has cost India \$646 billion, enough to fund most of its budget expenditures and welfare programmes.

There is constant activation of evils of violent behaviour by youth; bullying, hitting, using abusive language and vandalism which is affecting the wellbeing of entire fabric of the society. Attitudes are formed or learnt by the individual either by direct personal experience or from observation as he grows up in a society. Studies have shown a strong association between adolescent exposure to violence and behaviour problem outcomes. Hence, social environment plays an important role in the development of attitudes in youngsters.

According to NEP 2020, 'Teachers truly shape the future of our children - and, therefore, the future of our nation', hence, the teachers play the most important role in nation-building by giving their best quality peace education to their learners. And for this the teachers have to make the future citizens ready by imparting Social, Emotional and Ethical Learning (SEE Learning) and be the ambassador of peace. The learners of the nation become the responsible and peace-loving global citizens and harness their potential to bring transformative change and pave the way for a thriving Bharat.

Review of Related Literature:

Waters, H. R., Hyder, A. A., Rajkotia, Y., Basu, S., and Butchart, A. (2005)
international

article review on 'The costs of interpersonal violence' collects the evidence of the economic impact of interpersonal violence internationally. The article says that in the United States, estimates of the costs of interpersonal violence reach 3.3% of GDP. The article also says that these types of violence disproportionately affect poorer countries.

The 2021 study on 'Estimating the Global Economic Cost of Violence: Methodology Improvement and Estimate Updates' presents updated estimates of the global economic impact of violence at \$14.8 trillion in 2017. This is equivalent to 12.4 per cent of global GDP or \$1,988 per person. In the analysis, 163 countries are examined accounting for 99.5 per cent of the global population. It comprised of three domains; costs of interpersonal violence, the costs of collective violence and the expenditures on violence containment which aggregate to yield a global estimate of the economic impact of violence. A model of the economic cost of violence is established using a bottom-up accounting approach. This model follows the methodology of the 2018 Global Peace Index (GPI).

The 2017, study on 'What are the costs of violence?' present estimates of the global cost of collective and interpersonal violence for the period of one year. This includes war, terrorism, homicides, assaults and domestic violence against women and children. The cost of conventionally defined interpersonal violence, that is, homicides and assault, are about 7.5 times higher than the cost due to war and terrorism. The study states that violence reducing interventions comes from high-income countries, and it is uncertain whether these programs would be similarly effective in low- and middle-income countries. The study suggests that further research is needed to examine the effectiveness of violence-reducing interventions.

All these reviews states that, violence causes pain and suffering, affects individual's and also the nation's development. Violence affects communities and societies, leading to losses in business sectors, financial divestment, and increased burden on the healthcare and justice systems which is beyond the measurable costs. Therefore, it is essential to know the attitude towards violence in the youths and then take steps to eliminate violence attitude and develop peace in the nation's youth to contribute for the nation's development.

Objectives of the Study:

1. To discuss the issues of violence and its economic issues faced by India and other Nations.
2. To study the attitude towards violence of junior college students.
3. To suggest the role of teachers in eliminating student's violent attitude through peace education and inspiring them to build Viksit Bharat.

Hypothesis of the Study:

There is no significant difference in the junior college student's attitude towards violence and its dimensions (i) self-directed, (ii) inter-personal and (iii) collective

Operational Definitions of the Study:

Attitude towards Violence

Attitude towards violence for the present study is operationalised as the positive or negative response of junior college student's physical or psychological violence through beliefs, emotions and behavior. It exclusively deals with the general concept of violence and is studied in the following terms;

a. Self-directed violence: The attitude of students to self-harm, be self-destructive and abuse oneself.

b. Interpersonal violence: The attitude of junior college student's students to physically and psychologically harm, abuse or maltreat other individuals.

c. Collective violence: The attitude of junior college student's students towards conflicts, social tensions, riots and wars.

Method of the study: survey method and the data is analysed using descriptive analysis.

Tools of the Study: the tool for the study was the questionnaire being prepared by the researcher on attitude towards violence.

Sample of the Study: 450 First Year Junior College of Commerce, Science and Arts (228 boys and 222 girls) offering English as a medium of instruction from Mumbai.

**Attitude towards Violence and its dimensions of Junior College Students
on the Basis of Gender**

Dimensions	Groups	N	df	Mean	SD	t ratio	p value	Significant
Total	Boys	228	448	116.80	11.32	4.41	<0.0001	S at 0.01 level
	Girls	222		121.43	10.93			
Self-directed	Boys	228		34.07	4.07	3.81	0.0002	S at 0.01 level
	Girls	222		35.54	4.09			
Inter-personal	Boys	228		43.31	4.73	4.44	<0.0001	S at 0.01 level
	Girls	222		45.18	4.23			
Collective	Boys	228		39.42	4.69	2.87	0.004	S at 0.01 level
	Girls	222		40.70	4.80			

Findings and Conclusions:

From table, it can be seen that the p values for attitude towards violence and its dimensions of junior college students is less than 0.01. Hence, there is a significant difference with respect to attitude towards violence and its dimensions on the basis of gender. Hence, the null hypothesis is rejected. The low mean scores for attitude towards violence and its dimensions indicates that boys have high attitude towards violence compare to the girls.

Violence and the Economic Issues faced by India and other Nations

Violence in India and other Nations	Economic Issues faced by India and other Nations due to Violence
Violence in India, including interpersonal, social unrest, and collective violence.	All the violence has a significant economic impact, estimated at \$646 billion in 2020.
Communal violence in India	Studies estimate the economic impact of violence in India at 6-9% of GDP. This includes both direct costs like destruction and indirect costs like lost productivity and investor confidence. A week after communal riots ravaged parts of the Indian capital Delhi, trade bodies have estimated a loss of \$34.65 billion (2020)

The 2020 GPI mentions South Asia deteriorated in peace.	The economic impact of violence in the South Asia region is largely due to military and internal security expenditure and costs arising from armed conflict and terrorism.
The fifth annual Terrorism Risk Index (TRI) 2013 out of 18 countries and territories, including India. India as ranked 13th in the list, as an 'extreme risk' nation in the index of global terror risk.	Terrorism significantly impacts India's economy including decreased foreign investment, damage to infrastructure, redirection of public funds towards security, and reduced trade.
Environmental degradation, pollution, climate change poses long-term security threats, affecting resources, displacement, and social stability.	The Reserve Bank of India's latest report suggests that up to 4.5 per cent of India's GDP could be at risk by 2030, owing to lost labour hours from extreme heat and humidity.
India's armed forces require modernization to meet evolving threats and challenges from violent neighbouring countries.	The Indian defence budget 2025-26 allocation is Rs. 681210 crore, with emphasis on modernising the armed forces and enhancing indigenous defence production.
Juvenile delinquency in India encompasses a range of offenses and is influenced by multiple socio-economic and cultural factors.	Juvenile delinquency has significant negative impact on individual potential, family stability, and overall national development. The cost of addressing delinquency, including law enforcement, legal proceedings, and rehabilitation programs, places a burden on taxpayers and the government.
Wars between nations	Wars disrupt international trade routes and relations, affecting the import and export of goods. It leads to shortages of essential goods, inflation, and a decline in economic activity.

The above mentioned few economic consequences of violence extend beyond direct costs, impacting long-term productivity, destabilizing institutions, and reducing business confidence and hindering overall economic stability of the nation and also of world at

large. Issues of Violence in India and other nations shows the need of developing peace in our future generation is extremely essential for attaining the goal of 'Viksit Bharat'. If we do not sow the seeds of peace in our young generation then it will be too late to make them realise the value of peace in building a developed-peaceful nation. Let's make India into an economically and spiritually developed nation, where the citizens have inner peace, where they work towards the sustainable growth and development and spread the culture of peace in the world.

Teacher's Role in eliminating student's violent attitude through peace education and inspiring them to build Viksit Bharat

The National Education Policy (NEP 2020) have placed the teacher at the centre of the fundamental reforms in the education system. It is the teachers that needs to prepare the students as the ambassadors of peace. **Following points discusses about the role of teachers in eliminating student's violent attitude through peace education and inspiring them to build Viksit Bharat:**

1. Co-curricular Activities: Teachers should deliberately educate the students to make use of various co-curricular activities and imbibe in it the values of living in harmony, living together, adapting as per the environment, respecting all religions, and many more. Let the students at all levels of education, celebrate the culture of 'unity in diversity' through dance, drama, songs, music, cultural fest, food festivals, celebrations of important days, daily assemblies, poetry, exhibitions, poster-making, extempore, debate, discussion, dialogue. All these learning experiences of the students will be later utilized by them in their personal and vocational life as a responsible global citizen. Thus, the values of peaceful existence will be transferred effectively.

2. Integration with Subjects: Teacher's duty is not just delivering and passing the subject knowledge. Teachers are responsible and accountable to imbibe in the learners the core-elements and the values. The present 21st century demands the teachers to inculcate at least one value during their teaching-learning. The teachers along with the content knowledge inculcate the values like integrity, honesty, humility, loyalty, kindness, citizenship, acceptance, creativity, truthfulness, sincerity, sustainable environment, equality, removing social barriers, and may more in their teaching-learning activities. These learning will help the future citizens to develop positive attitude and make correct and peaceful decisions in their business, profession and employment.

3. Special Sessions: Apart from the above-mentioned activities, the education system should now seriously imbibe in their learners the importance of educating the values of peace. Let's now make it mandatory for all stages of education to make their students do the activities like doing the certificate course in peace education, helping the community, reading and reflection sessions on the hazardous effects of wars in history, participation in the dramas and roleplays of resolving conflicts through dialogue, Social Emotional and Ethical Learning (SEE Learning), learning the art of managing emotions, case studies of entrepreneurs and solving their business issues through peaceful means, and many more. All these will assist the future generation of our nation to develop peace as a habit.

4. Forming Peace Law: The way we have our constitution and its fundamental duties as a citizen similarly the students need to be educated to form their own peace law. For example, **My Peace-Law; F-R-E-S-H; F-Forgive, R-Respect, E-Empathy, S-Self-aware, H-Humble**

I will forgive and forget the wrong doing of others. I will stop blaming or being angry with someone for something they have done. F- Forgive 	I will always give respect to everyone. I will accept somebody for who they are, even when they're different from me or if I don't agree with them. R- Respect 	I will understand other individual'. I will develop the ability to emotionally understand what other people feel, see things from their point of view. E- Empathy 
I will develop the ability to see myself objectively through introspection. I will understand the things that makes me as an individual, including my thoughts, beliefs, emotions, and S- Self-aware 	I will develop the value of down-to-earthness and humility. I will develop the quality of being modest and eliminate pride or arrogance. H- Humble 	

Similarly, let each student prepare their own peace law and imbibe the same in their behaviour. This personal SEE Learning will be carried forward by the students and they will be following the same in their future.

5. Planning and Executing Lesson plan; It is been said that ‘Values has to be caught and not taught’ but the present situation demands to educate the values through various means. Thus, it is important to specifically conduct sessions on peace education for their learners by actually preparing the lesson plans and execute it especially related to SEE Learning and thus inculcating the values of peace. This preparing and executing peace lessons will assist the future citizens of the nation to use all the four C’s of 21st Century skills i.e., Critical Thinking, Collaboration, Creativity and Communication and build the peaceful attitude.

Conclusion:

As per the Kothari Commission, ‘of all the different factors which influence the quality of education and its contribution to national development, the quality, competence and character of teachers are undoubtedly the most significant.’ Thus, the concerted efforts by the teachers through peace education will develop positive attitude towards peace in the learners. Peaceful productive efforts and participation of all sections of society will lead India towards the ‘Amrit Kaal’. Nurturing the new possibilities and moving ahead with peaceful attitude, India will be a shining star of the world economy in times to come.

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Swachh Bharat Mission and Its Role in Promoting Sustainable Waste Management in Mumbai: A Critical study

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Abstract:

Focusing on the idea of sustainability and recycling, this paper tries to study the factors responsible for the success of Swachh Bharat Mission(SBM) on a broader level in Mumbai city. It tries to explain the significance of recycling to decrease the flow of waste to the environment connecting with variables like utilization of raw materials and environment conservation. The role of recycling processes on waste management in a sustainable way for making a city smarter is the main focus of this study. The findings reveal the mixed effectiveness of the Swachh Bharat Mission indicating that while some initiatives have succeeded in improving waste management and environmental quality others require further evaluation and

enhancement to foster greater public engagement. It also highlights the importance of governmental initiatives in driving behavioral change and promoting environmental sustainability in densely populated urban settings.

Keywords: Swachh Bharat Mission, Environmental Sustainability, Waste recycling, Mumbai Urban Management

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Introduction:

The Prime Minister of India, Shri Narendra Modi launched the campaign The Swachh Bharat Mission (SBM) on October 2, 2014, and it was titled "Satyagraha Se Swachhagraha." This mission represents a comprehensive national endeavor to improve sanitation and hygiene across the country. There are two subsections in this mission. Swachh Bharat (Urban) is run by the Ministry of Housing and Urban Affairs, whereas Swachh Bharat (Gramin) is handled by the Ministry of Drinking Water and Sanitation. This initiative is also called as Clean India Mission or Swachh Bharat Mission. Together, these efforts targeted both urban and rural areas, aiming to eliminate open defecation, eradicate manual scavenging, promote scientific waste management, and improve overall sanitation infrastructure. The mission's goals extended beyond constructing toilets to fostering awareness about hygiene practices and sustainable waste disposal systems.

The concept of recycling where waste products are converted into reusable items is getting momentum in this age where collection, segregation and process of used items and then getting changed to new products are on a trend. Recycling benefits environment protection and

thereby leads to sustainable development. In order to attain specific intended social, economic, and environmental consequences, sustainability is also defined as the capacity to make responsible decisions regarding the use and allocation of resources to economic and non-economic activities. (Grant 2010) Green initiatives and energy saving methods for a city development takes years to reach the proper stage where the city will be labeled as a green city or smart city due to its less awareness of the public stakeholders. The concept of smart city is in the stage of incubation where a right combination of information, digitalisation and sustainability can facilitate the concept to grow more efficiently in the coming years (Yigitcanlar 2006).

In an urban city like Mumbai, there is a high significance of innovative initiatives like smart cities for the betterment of the public in various ways.

Objectives of the Research:

- To examine the effect of the Swachh Bharat Mission on garbage recycling rates and landfill waste reduction in Mumbai.
- To assess the influence of SBM-promoted green interventions on public awareness and participation in sustainable waste management practices in Mumbai.
- To evaluate the role of green interventions under the Swachh Bharat Mission in enhancing environmental quality in Mumbai, with a focus on pollution reduction and increased green cover.

Theoretical framework:

Anna Verkuilen et al. (2023) explained the significance of Swachh Bharat Mission (SBM) on open defecation in India. The study has made inferences on SBM and its efficiency in India by undergoing an in-depth study on the areas like lack of financial stability, no water supply, lack of trust by the government agencies, diverse cultural practices and individual preferences. This connects closely with the work of Behera et al. (2021), who analyze the accomplishments and challenges of the Swachh Bharat Abhiyan and outline the gaps and difficulties that must be filled for this mission to be successful. Their study outlines the activities under SBM during both the phases i.e., 2014–2019 and 2020–2025 and their relevance in supporting India to attain

the Sustainable Development Goals. The article provides valuable recommendations like developing independent, credible, robust monitoring tools and addressing reasons for non-usage of toilets. It also highlights the accomplishments of SBM at the local village level and depicts the guidelines to improve the quality of activities undertaken at the national level.

Building on this, Bhanot et al. (2017) in the study “Making India open-defecation free: Lessons from the Swachh Bharat Mission–Gramin process evaluation” in social marketing clearly brought the idea that building a village which is free from open defecation is the act of the hour, requiring attitudinal changes in the cultural setup of the community in the villages. The study also stresses that SBM will contribute deeply to the management of wastes on a wider level, with many independent agencies concentrating on research, facilitating, and leading data dissemination in villages. The role of public participation is also seen in Raj and Kajla (2015), who conducted sentiment analysis using Twitter to find out the popularity of Swachh Bharat Abhiyan in their study. They highlighted the importance of social media analytics to promote this campaign and understand user behavior, revealing that the campaign has gained immense popularity amongst Indians.

However, not all studies portray SBM positively. Shekhar (2023) critically analyzes the Swachh Bharat Mission and its impact on poorer communities, claiming that caste-based prejudice and social isolation in India are fundamental problems that have not been addressed by the mission. It demonstrates how the mission contributed to their exploitation and marginalization, but only discusses the drawbacks without offering a fair assessment of its successes and difficulties. Similarly, Kopal Khare (2023) in the article “The right to sanitation in India: Realization of what?” explained the importance of sanitation in the context of stories from Uttar Pradesh where women were forced to remove their uterus due to a wrong notion created in their workplace. The survival of the concept of sanitation as a major right follows the footsteps of Dr. Amartya Sen’s ideology of justice interrelated with the human rights principles, focusing on individual freedom and opportunities that can make a sustainable difference where human beings exist with pride and value for life.

Other research examines the mission through behavioral change and targeted interventions. Sneh et al. (2018) investigated the impact and adoption of the Swachh Bharat Abhiyan campaign, outlining its features in depth and emphasizing its role in improving the standard of living of Indians and ensuring cleanliness in both urban and rural areas. Primary

data from respondents was obtained after identifying various dependent and independent variables like demographic, sanitation, and hygiene. Friedrich et al. (2020) in the paper “Increasing latrine uses in rural Karnataka, India using the risks, attitudes, norms, abilities, and self-regulation approach: A cluster-randomized controlled trial” explain how the lack of mental support models or theories to bring awareness on use of latrine for defecation results in adverse effects in the progress of any project. The utilization of the RANAS approach really made the SBM succeed in diverse methods, with external factors playing a major role in its reach in India. In a similar direction, Amit Adlakha et al. (2022) in the study “Antecedents and consequences of adopting CLTS among tribal communities to become open defecation free: case study on Indian Swachh Bharat Abhiyan” mentioned that, in association with the Sustainable Development Goals (SDG), India was able to make satisfactory progress towards achieving the Swachh Bharat Mission. A model blending the Theory of Reasoned Action (TRA) and Theory of Planned Behavior (TPB) was also suggested to understand attitudinal changes and practices in the local community after the mission’s implementation.

Finally, Showkat (2016) examines the role of print media in educating the Indian population about sanitation concerns, also analyzing several environmental sanitation intervention options in India and emphasizing the necessity of prioritizing them according to the situation at hand. The study underlines the Swachh Bharat Abhiyan’s importance in the coverage of sanitation concerns in Indian publications and suggests that SBM initiatives can leverage the use of media to promote their objectives.

International studies:

VerKuilen A. et al. (2023), through a systematic review of SBM, identify the challenges of decreasing open defecation (OD) in India and assess the impact of the Swachh Bharat Mission (SBM) on OD. The findings of the study highlight that SBM increased the coverage of improved sanitation among households without toilets by 6.8%–10.4% from 2014–2010. Inadequate infrastructure and lack of education are identified as barriers to eliminating OD in this study. This concern over the health implications of poor sanitation is echoed in the work of Briend A. (1990), who in the paper “Is diarrhea a major cause of malnutrition among the under-fives in developing countries? A review of available evidence” describes the relationship between diarrhea and malnutrition and whether it creates any retardation or physical

deformities in children in rural India. The study's hypothesis mainly focused on the correlation between diarrhea and malnutrition and proposed assumptions on areas such as biological inferences, ambiguity on social issues, temporary factors, and many more criteria on causality. Similarly, Kalinda C. (2023), in the paper "Socio-demographic and environmental determinants of under-5 stunting in Rwanda: Evidence from a multi sectoral study", focused on the level of stunting with the support of a multilevel logistic regression model to study its impact on individual and community growth and development. The paper also points out that socio-demographic factors and the nature of the ecosystem play an important role in the issue of childhood stunting in Rwanda. Adding a more India-specific perspective, Spears et al. (2021) examine the impact of SBM on rural sanitation by decoding findings from the National Family and Health Survey (NFHS) Factsheets in India. These factsheets offer data on the availability of sanitary facilities and reveal that open defecation is still practiced by almost half of the rural population in four significant Indian states. It was suggested that the focus should move from mere access to the adoption of sanitary facilities.

The broader global perspective is provided by the UNICEF/WHO report, which demonstrates the potential influence of sanitation advancements on enhancing the health and wellness of populations, especially the most vulnerable and underprivileged, based on previously conducted studies. The report covers countries from all regions of the world, including India, Bangladesh, China, Nigeria, and Pakistan, and emphasizes the need for ongoing initiatives to enhance access to clean water, proper sanitation, and good hygiene, particularly in educational institutions and healthcare facilities. Along similar lines, Justice Kofi Debrah (2021), in the paper "Raising Awareness on Solid Waste Management through Formal Education for Sustainability: A Developing Countries Evidence Review", analyzed the significance of Solid Waste Management (SWM) as a high-level issue in addressing the social, political, and economic aspects of a nation. The major problem for waste management was found to be the unmanageable gap between various generations on environmental knowledge in developing countries.

From a more systematic approach to waste management, Rafaela Garbelini Anuardo (2022), in the paper "Toward a cleaner and more sustainable world: A framework to develop and improve waste management through organizations, governments and academia", explained the shortcomings of governmental initiatives and suggested models or parameters by

which waste management can be carried out more effectively. Complementing this, Dahlbo et al. (2015), in the paper “Construction and demolition waste management – a holistic evaluation of environmental performance”, explained the applicability of Best Available Technology (BAT) for waste management and evaluated its level of efficiency. The idea of recycling was also explained in the study, which can be considered a novel and innovative approach. Similarly, Bordoloi et al. (2022), in the paper “Feasibility of construction demolition waste for unexplored geotechnical and geo-environmental applications – a review”, elaborated that the carbon neutralization strategy utilized in solid waste management was found to be more effective, and the use of recycled construction waste in geo-environmental infrastructure as a carbon neutralization strategy has acquired high-level recognition in recent times.

Finally, Alexander et al. (2016) adopt a comprehensive approach to pinpoint the causes of recurrent open defecation in India, taking into account the complex interactions of social, behavioral, cultural, and infrastructure issues. They provide information on how to execute and alter behavior for the Swachh Bharat Abhiyan and suggest further research to comprehend the social, cultural, and behavioral factors that contribute to open defecation.

Research Methodology:

The research adopts descriptive research design with cross sectional analysis of the data in an elaborate way. The study will be based on the quantitative data obtained from 150 respondents in which the samples from various categories of respondents belonging to various generations in Mumbai will be taken for the study(mccrindle.com.au)

According to the information the respondents are divided into major categories of generations mainly builders (born <1946), baby boomers (1946-1964), Generation X (1965-1979), Generation Y (1980-1994) and Generation Z (1995-2009). The respondents fall in the category of minimum age group of 14 years (Generation Z) and maximum age group of 77 years (Builders generation)

The time period of data collection is from Jan 2025- March 2025. The project will adopt simple random sampling technique mapping with the research questions mentioned above

while selecting the respondents who will also form the focus group for this topic. The ratio of male female will also found 45(female):55(male) in the study

Interviews with semi structured questions were conducted until theoretical understanding was achieved. Questions were asked on various consequences and experiences, satisfaction level of respondents by the mission and the changes and suggestions of them were also incorporated for discussion simultaneously. The data analysis will be handled using chi-square test in order to study the significance of variables in detail. Questions will be framed separately for each generation to avoid confusion to cater all categories by consulting the experts from this field. The response rate will be considered as more than 80 percent and error range of responses falls in a minimal level. The below table shows the demographic division of respondents

Hypothesis of the study:

- **Hypothesis 1:** Mumbai's garbage recycling rates have increased dramatically since the Swachh Bharat Mission (SBM) was put into place, which has resulted in a discernible decrease in landfill waste.
- **Hypothesis 2:** The green interventions promoted under the Swachh Bharat Mission have positively influenced public awareness and participation in sustainable waste management practices in Mumbai.
- **Hypothesis 3:** The integration of green interventions in the Swachh Bharat Mission has resulted in improved environmental quality in Mumbai, as evidenced by reduced pollution levels and increased green cover.

These hypotheses aim to explore the multifaceted impact of the Swachh Bharat Mission in Mumbai, focusing on recycling, community engagement, and environmental improvements.

Results and Discussions:

There are three hypotheses in the study which was analysed using chi-square test which derived the following results

Sl. No.	Variables	Chi-square test values	Result obtained
1	Mumbai's garbage recycling rates have not increased dramatically since the Swachh Bharat Mission (SBM) was put into place, which has resulted in a discernible decrease in landfill waste.	0.692>0.05	Accept null
2	The green interventions has not promoted under the Swachh Bharat Mission have not influenced public awareness and participation in sustainable waste management practices in Mumbai	0.016<0.05	Reject null
3	The integration of green interventions in the Swachh Bharat Mission has resulted in improved environmental quality in Mumbai, as evidenced by reduced pollution levels and increased green cover in a moderate level	0.00<0.05	Accept alternative

Major Findings in the study

a) Demographic Details of the respondents

Details of the respondents		Frequency	Percentage
builders	Male	12	8%
	Female	10	6.67%
Baby Boomers	Male	10	6.67%
	Female	9	6%
Gen X	Male	10	6.67%
	Female	10	6.67%
Gen Y	Male	11	7.33%
	Female	24	16%

Gen Z	Male	24	16%
	Female	30	20%
		150 respondents	100

b) The more the awareness of SBM mission among various generations contributed for the more initiatives for recycling rates of wastes in Mumbai

Independent variable			Response					Total
			SA	A	N	D	SA	
Male	Awareness about the objectives and key elements of SBM	F	5	4	5	4	3	21
		%	23.8	19.05	23.89	19.04	14.28	100
	Success of Government led SBM Initiatives	F	7	9	3	4	3	26
		%	26.92	34.61	11.53	15.38	11.53	100
	The information on SBM by various media is found accurate and sufficient to publicise the project	F	4	5	5	5	4	25
		%	16	20	20	20	16	100
Female	Awareness about the objectives and key elements of SBM	F	7	7	6	8	7	35
		%	20	20	17.14	22.85	20	100
	Success of Government led SBM Initiatives	F	2	4	7	4	5	22
		%	9.09	18.18	31.81	18.18	22.72	100
	The information on SBM by various media is found accurate and sufficient to publicise the project	F	5	5	3	4	6	23
		%	21.73	21.73	13.04	17.39	26.09	100

c) Adoption level of any green practices (e.g., composting, planting trees, reducing plastic use) inspired by the Swachh Bharat Mission campaign

Independent variable			Response					Total
			SA	A	N	D	SA	
Male	Participated in at least one tree plantation drive/ Planted at least one tree	F	10	10	5	4	3	32
		%	31.25	31.25	15.62	12.5	9.37	100
	I have reduced the use of plastic and non-recyclable materials after learning about SBM initiatives	F	12	6	2	1	0	21
		%	57.14	28.57	9.52	4.76	0	100
	Actively participate in waste segregation and recycling at home or workplace.	F	5	4	1	2	1	13
		%	38.46	30.76	7.69	15.38	7.69	100
Female	Participated in at least one tree plantation drive/ Planted at least one tree	F	10	6	3	2	3	24
		%	41.67	25	12.5	8.33	12.5	100
	I have reduced the use of plastic and non-recyclable materials after learning about SBM initiatives	F	10	8	5	4	2	29
		%	34.48	27.58	17.24	13.79	6.89	100
	Actively participate in waste segregation and recycling at home or workplace.	F	9	9	3	4	2	27
		%	33.33	33.33	11.11	14.81	7.40	100

d) Active contribution level to the goals of the Swachh Bharat Mission in Mumbai by

various generations

Independent variable			Response					Total
			SA	A	N	D	SA	
Male	Practicing green initiatives inspired by SBM in the neighbourhood	F	7	9	9	3	4	32
		%	21.9	28.1	28.1	9.37	12.5	100
	People of my generation are actively involved in achieving the goals of SBM.	F	7	8	1	3	2	21
		%	33.4	38.09	4.76	14.2	9.52	100
	Influenced others (family/friends/colleagues) to follow SBM practices like recycling and sanitation	F	5	10	3	3	4	27
		%	18.52	37.0	11.1	11.1	14.81	100
Female	Actively participate in waste segregation and recycling at home or workplace.	F	5	7	4	3	1	21
		%	23.8	33.4	19.0	14.2	4.76	100
	I have reduced the use of plastic and non-recyclable materials after learning about SBM initiatives	F	8	10	3	3	2	26
		%	30.7	38.4	11.5	11.5	7.6	100
	Influenced others (family/friends/colleagues) to follow SBM practices like recycling and sanitation	F	8	9	1	3	2	23
		%	34.7	39.1	4.34	13.04	8.6	100

e) Assessment of impact level of SBM in the promotion of green initiatives in the locality

Independent variable	Response	Total
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			SA	A	N	D	SD	
Male	Better air quality and cleaner surroundings in my locality	F	03	12	05	5	6	31
		%	9.7	38.7	16.12	16.12	19.3	100
	Noise, air, and visual pollution in my area have decreased	F	4	6	8	3	2	23
		%	17.4	26	34.7	13	8.69	100
	Noticed an increase in green cover	F	3	6	3	2	3	17
		%	17.6	35.2	17.6	11.7	17.6	100
Female	Better air quality and cleaner surroundings in my locality	F	3	4	7	5	4	25
		%	12	16	28	20	16	100
	Noise, air, and visual pollution in my area have decreased	F	5	5	9	7	8	34
		%	14.7	14.7	26.4	20.5	23.5	100
	Noticed an increase in green cover	F	2	4	5	3	7	21
		%	9.52	19.04	23.8	14.2	33.4	100

Implications:

Findings of this study will provide insights to BMC about ways to promote recycling and green initiatives in Mumbai. This will enable them to draft policies to transform Mumbai into an Eco City. Further, the findings can be used by decision makers of other Metro Cities for effective implementation of SBM. Also, the research will be instrumental in advising the Ministry of Housing and Urban Affairs, Ministry of Urban Development, and other relevant regulatory bodies to devise strategies for sustainable urban development especially in densely populated cities like Mumbai. The insights gained from the SBM experience in Mumbai can serve as a valuable blueprint for other cities facing similar waste management issues, reinforcing the notion that proactive governmental interventions, coupled with community engagement, are essential for achieving long-term environmental sustainability.

Conclusion and Recommendations:

Although the SBM has been successful in raising public awareness, ongoing initiatives are needed to better inform the public about the significance of sustainable waste management techniques. There is a trend of preference and awareness on SBM by different groups but needs more media strategies for enhancing environment sustainable initiatives in Mumbai. Participation rates can be increased by targeted efforts that highlight the advantages of recycling and appropriate waste segregation. Local governments and groups should put in place community involvement activities like seminars, clean-up drives, and educational events to preserve and increase participation in sustainable practices. Incorporating locals into waste management decision-making procedures helps promote a feeling of accountability and ownership. The SBM's interventions should be continuously monitored and evaluated in order to determine their efficacy and make necessary strategy adjustments. Community members' regular input can identify areas that need work and guarantee that the programs continue to be effective and relevant. Working together with neighborhood non-profits, educational institutions, and community organizations can assist awareness campaigns reach a wider audience and involve a variety of demographics, especially families and young people. These collaborations can make it easier to share resources and knowledge in support of sustainable practices. It is advised to broaden green activities under the SBM to incorporate more thorough waste management techniques, like composting programs and waste-to-energy projects, given the beneficial effects on environmental quality. This can further improve the city's waste management system's sustainability. These results demonstrate the importance of ongoing efforts to enhance community engagement, education, and the integration of green initiatives in order to foster a sustainable waste management culture. Mumbai can build on the SBM's accomplishments to further its goals of sustainable development and ecologically conscious living.

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Viksit Bharat 2047: Legal Innovations and Reforms for a Just and Developed India

***Dr. Deepa Chitnis**

ABSTRACT

As we will witness that India will turn its 100 years as a Progressive, Sovereign Country, a self-governing country in 2047, we foresee big goals set for this Nation. This research paper claims that the dream of becoming developed progressive nation is possible with strong legal process, enforceability of laws and stronger courts. This research speaks about how legal changes developments and new thoughts in providing justice can add on into India reaching that goal of Viksit Bharat. In One of the Bollywood movies when the Hero pleads ‘*Tareekh pe Tareekh*’ it is not at all a deviation from the reality. There are 46million and more cases still pending in Indian courts. The courts lack in the set infrastructure. The courts lack in the technology as it has not yet introduced to them. This research paper has undergone with the literature stating big changes happening right now. For example, India has its own criminal laws introduced in

July 2024, called as BNS. Based on literature review, this research paper also looked at the e-courts project and how AI has significantly taken a place in court room proceedings in developed countries. To justify the above, this research paper used authoritative data, courts records and the study in the field. The study found out that over 33 million cases have already been heard through video conferencing. We have progressed so much that almost many of the courts are now digitally connected to the process. But there are still serious gaps to fill. Masses are still deprived of the proper and urgent help. Legal aid is not known to masses. Monetary issues are there while filing the petitions. Number of Judges in the court is not adequate. The technology and the tools are not utilized evenly across the Nation. This is a big hurdle in marching towards the goal of Viksit Bharat.

Keywords: Viksit Bharat, legal reforms, legal innovations, legal aid

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Introduction:

Today when the need and urgency of dealing with the complex dispute arises, we think of solutions, based on the dream of Viksit Bharat 2047. On crossing 100 years we foresee the dream coming true, the dream of becoming a developed nation. For this dream come true we need to work on the legal system. There are three pillars of our constitution Legislators, Administrators and Judiciary. With reference to Judiciary many hurdles are there in achieving the goal of Developed Nation in 2047.

Right now, our judiciary is under huge stress. There are more than 46 million disputes unsolved and are waiting to be resolved. For every million people we have only 21 judges, and the reality as told by the experts that India must have at least 50 judges, per million of masses. One need not be a lawyer to feel the need of speedy justice. The process is slowed down due to these lacking the efficient channels. And hence Justice delayed Justice denied.

As schools and colleges, we have observed that new education policy states about Indian knowledge system. When we see we are in use of British laws legislated during British Rule, we are surprised and feel sad. We're still using laws made during British rule. That

doesn't feel right in today's progressive India. Circumstances, relations, combinations, globalization and urbanization has brought India at its pinnacle. On the other hand due to these developments there are crimes and disputes. Cyber crime is spreading day by day. Digital money offences have become rampant. India is changing new commerce, new business transactions are taken place far away from barter exchanger. Hence the old laws like The Sale of Goods Act, Standards weights and measure Act are becoming of less use. But the laws like consumer Protection Act 2019, Competition law are becoming more popular. Introducing BNS was the advanced step in Indian Legal arena. This replaced old British IPC.

Towards Viksit Bharat when the Nation is marching, technology is that area where India as a developing country has a hope. There e-courts projects are advance and deployed all over the country, the Indian courts are becoming digital day by day. The administration has put in over ₹7,000 crore to push this forward. Tools like AI, machine learning, and even blockchain are slowly finding space in our system. I think this could really help speed things up and make legal services easier to access for everyone—not just people in big cities.

Courts are coming to the doors of the parties to the dispute. The mobile Lok Adalat had a full month tour in the rural areas of Maharashtra in the Raigad district. At Adilabad Telangana a special mobile vans with the virtual court set up was launched. This worked for the people to connect with the courts. People who had issues and disputes from the remote places could get the justice on the wheels. This was thanks to MG Priyadarshini, the Principal District Judge there. I felt that was a really smart and human solution. It showed that justice doesn't always need a big courtroom—it just needs intent and innovation.

This paper sees the need to work on and a check on what is possible for speedy justice what is not, and what extra can be done so as to reach to the masses. This progressive nation, if wants to soar high in this competitive economies, to bring the harmony, and peace the judicial system should be fairer and concrete for the masses. We are on the right path with technology in hand, efficient techno savvy judiciary will be guided by the nation. But on the other hand, we have long way to go.

Objectives of Research:

India will be on the right path when we understand how legal changes and better court systems can help India become a truly developed country by 2047.

Main Objective is to understand and know, how new ideas in law and big changes in our courts can help build a faster, fairer, and more modern justice system in India. The foundation of this objective lies in the goal given by the Viksit Bharat 2047 document by India as to how to bridge the gap in laws rule and their implementation in India. One that supports the vision of Viksit Bharat 2047.

Other Objectives:

1. To observe the existing channel of Indian Courts.
2. To study the impact on new criminal laws introduced in India
3. To know whether e tools are helping judges
4. To study Supreme Court rulings in the light of reforms.
5. To suggest the concrete steps India to take for speedy, apt and accurate justice.

Hypothesis:

Main Idea

When India as a Nation is marching towards establishing itself as a developed country by 2047, being Viksit Bharat, the legal system should be concrete and speedy. The modernization of the legal system, digitization of the court rooms and training to the Judges are some of the key areas.

H1: When courts use digital tools like e-Courts and AI, they work faster. This can help reduce the huge number of pending cases.

H2: The new criminal laws introduced in 2024 could help bring India's justice system up to date and improve conviction rates.

H3: India can't deliver timely justice without more judges, better courtrooms, and basic infrastructure.

H4: If people in rural areas get proper legal help and know their rights, Justice will be precise.

Methodology:

For this study, in this paper, mix of methods of study are used secondary data and primary data is worked on. Numbers and data are used. Articles are read and understood. Case laws are read and interpreted. Some of it is based on numbers and data. Some of it comes from reading and understanding real cases and legal changes.

Research Design:

The research design open and flexible. It's both exploratory (to find out what's working and what's not) and descriptive (to clearly explain what's found). The focused is mostly on reading and analysing existing reports, judgments, and official data. Study few cases to help in understanding the hypothesis.

Data Collection:

The data sources: The National Judicial Data Grid (NJDG) – for stats on pending and resolved cases, Judgments from the Supreme Court and High Courts in 2024, Press releases and policies published by various ministries, Reports from the e-Courts projects Articles and research

papers on legal and judicial reforms and International reports on how other countries are improving their courts.

Data Analysis

For the numbers and statistics, used simple analysis—mostly comparing trends and looking for patterns.

For the case laws and policies, used a method called content analysis. I tried to understand what the courts said what it meant for reforms. It was also looked at how similar reforms have been done in other countries and whether something like that could work in India.

Limitations

There are a few limitations. While studying through, it was observed that laws and policies are changing fast these days. Some of the latest updates might not have been published yet.

Key Findings:

Current State of Indian Judiciary

The following critical statistics about India's judicial system is self-explanatory It highlights both challenges and progress:

Table 1: Pending Cases by Age Category (2024)

Age of Pending Cases	Civil Cases	Criminal Cases	Total Cases	Percentage
Less than 1 year	4,094,239	11,768,034	15,862,273	34%
1 to 3 years	2,814,346	8,894,239	11,708,585	25%
3 to 5 years	1,210,557	4,661,703	5,872,260	13%
5 to 10 years	1,929,624	6,755,705	8,685,329	19%
Above 10 years	807,294	3,661,703	4,468,997	10%
Total	10,856,060	35,741,384	46,597,444	100%

Source: National Judicial Data Grid, 2024

Digital Transformation Achievements

The e-Courts project is showing a lot of success. It has demonstrated significant success in digitalizing India's judicial system:

Table 2: e-Courts Project Achievements (2024)

Metric	Achievement	Impact
Court Connectivity	99.5% of court complexes connected via WAN	Enhanced communication and data sharing
Video Conferencing Cases	33.8 million cases handled via VC	Reduced travel time and costs for litigants
Mobile App Downloads	2.69 crore lawyer app downloads	Improved accessibility for legal professionals
Virtual Traffic Courts	6 crore cases processed, ₹649.81 crore collected	Efficient handling of routine traffic violations
Training Programs	605 programs covering 6.64 lakh stakeholders	Enhanced digital literacy in judiciary

Source: Press Information Bureau, 2024

Legislative Reforms Impact:

- As India has legislated three new criminal laws, in July 2024, a great impact of the same is very evident. It has introduced major modernization by adding cyber crimes, online cheques, voyeurism and other offences in BNS.
- Authenticity criterion is now overtly recognised for digital evidence.
- Forensic examination for crimes with punishment of seven years or more is compulsory now.
- Witness protection is granted during the proceedings and victims compensation during the proceedings is taken care of.
- Body worn cameras and videography is made compulsory
- Time-bound investigation and trial procedures established

Study of Landmark Supreme Court Judgments 2024

There are several significant judgments that have contributed to judicial reforms:

- **Association of Democratic Reforms v Union of India:** Quashed Electoral Bond Scheme, enhancing transparency in political funding.
- **Arvind Kejriwal v Directorate of Enforcement:** Reinforced "bail is the rule, jail is the exception" principle in PMLA cases.
- **Demolition Guidelines Case:** Established procedural safeguards against arbitrary demolitions, protecting fundamental rights
- **Mineral Rights Cases:** Clarified federal-state legislative boundaries, strengthening constitutional federalism

Discussion and Analysis:

India has a goal of Viksit Bharat 2047; it is just not any slogan. We will build strong just fair and progressed India when we complete 100 years of Independence. With the help of developed legal systems, appropriate judicial machinery along with other essentials the goal is achievable. Right now, our legal framework still has too many leftover parts from the British era. These don't always work well with today's challenges—like digital payments, cybercrime, or protecting creative work. If we want a future-ready India, we need future-ready laws.

Existing problems of the existing legal machinery:

1. **Too many cases, too little time:** We have about 46.6 million cases pending. That's a huge number. What is more shocking is almost 30% of these cases have been waiting for more than three years. This is called as Justice delayed is as good as Justice denied.
2. **Not enough judges:** For every million people, we have only 21 judges. Experts say we need at least 50. In many High Courts, more than one-third of judge posts are empty. No wonder people wait so long.
3. **Tech isn't reaching everyone:** Projects like e-Courts are doing well on paper. But when I looked closer, I saw that rural courts are struggling. Many don't have the right tools. Some judges and staff aren't trained in using new systems. So progress is uneven.

What's Working: Going Digital:

The e-Courts project is one of the largest digital court systems in the world. It got a big push with ₹7,210 crore in its third phase. Over 33 million cases were heard via video conferencing. That's huge. It shows that technology can improve access to justice. Tools like SUVAS (for

legal translations) and SUPACE (AI for judges) are also promising. The government even set aside ₹53 crore just for AI and blockchain in courts. I see that as a clear signal that change is happening. In July 2024, India replaced some of its oldest criminal laws with three new ones. This, I believe, is a turning point. The Bharatiya Sakshya Adhinyam, for example, now accepts digital evidence. Investigations must use forensic science. This shift towards scientific and tech-based law enforcement feels long overdue. Also, these new laws are starting to focus more on victims' rights and witness protection. That's a step in the right direction.

Supreme Court: A Strong Voice:

The Electoral Bond verdict was big. It pushed for more transparency in political funding. Another case on building demolitions made sure the government can't act without clear procedures. To me, this shows the Supreme Court is playing its role as a guardian of fairness and democracy—something that's critical for a strong, developed India.

Justice for All? Still a Long Way to Go:

Even with all the digital tools, there's a big gap when it comes to people in villages. About 68% of our population lives in rural areas. But most legal aid centers are in cities. That doesn't sit right with me. We have around 1,394 e-Sewa Kendras, which help connect people to courts. That's good. But it's not enough. Many people still don't know their rights. Even though 80% of Indians are eligible for free legal aid, only 15 million have ever used it. That's a wake-up call.

Study of legal systems of other countries:

Countries like Singapore and Estonia are handling legal modernization. Singapore has one of the smoothest court systems in the world. Estonia runs its whole government digitally. India is way more diverse and has its own challenges. But can adapt parts of their systems. The key is to stay true to our Constitution and culture while still moving forward.

Suggestions and Recommendations

After going through data, real cases, and recent changes, to achieve the goal of Viksit Bharat Not just a list, but something can work.

1. Go Fully Digital – in Phases

Right away (2025–2027):

- Put every court file online. Use blockchain so no one can tamper with records.
- Use AI to manage court schedules, read documents, and find old cases.
- For serious trials, test virtual reality hearings so people can “see” the evidence properly.
- Add digital support for all 22 Indian languages—and some tribal ones too.

By 2047:

- Build systems that can guess case outcomes and help courts plan better.
- Make courtrooms smart—auto transcriptions, live translations, facial recognition for attendance.
- One legal database for all of India, searchable by anyone. Judges, lawyers, students, even regular people.

2. Fix Infrastructure. Add More Courts and Judges

- We need at least 1,000 fast-track courts—especially for crimes against women, children, and serious cases.
- Recruit more judges—aim for 50 judges per million people by 2030. We’re far behind that right now.
- Every district with over 5 lakh people should have a court for business cases.
- Every state capital should have a court that focuses only on cybercrime.

3. Update Our Laws

- We’re still stuck with too many British-era laws. I say—scrap at least 1,000 useless ones by 2027.
- We urgently need a Data Privacy Law that protects people and also helps startups grow.
- Make new laws for AI, blockchain, biotech—before problems get out of hand.
- Our environment laws should include climate issues—so courts can handle them better.

4. Make Dispute Resolution Easy and Quick

- If two people are fighting over less than ₹50 lakh, let them try mediation first, not court.
- Set up special centers to resolve fights in sectors like banking, insurance, and e-commerce.

- Take these centers to villages too—mobile vans with legal experts.
- Use AI tools to suggest fair settlements based on past case data.

5. Start Legal Education Early

- Add legal basics to school syllabus from Class 8—rights, duties, how to file a complaint.
- One legal aid clinic in every district, and smaller ones in blocks.
- Use YouTube, radio, and local shows to teach law in everyday language.
- Run special awareness drives for women, tribal communities, and minorities. They often get left out.

6. Make Courts Accountable Too

- Track how fast and how fairly judges are working. Make this public.
- Let people give feedback on court experiences—like online ratings and complaint forms.
- Set up an independent ombudsman for handling complaints against court staff.
- Use dashboards to show real-time updates on cases, delays, and resources.

7. Make the System Financially Strong

- Raise the budget for courts to at least 0.5% of GDP by 2030.
- For rich or corporate cases, charge some fees—but keep access free for poor people.
- Build a Judicial Infrastructure Fund. Big companies can donate through CSR.
- Use public-private partnerships to bring better tech and buildings to our courts.

8. Link Legal Reform with Other National Missions

- Connect court improvements with Digital India and Skill India. They go hand in hand.
- Make government services talk to each other—land, police, courts, welfare—all on one platform.
- Courts shouldn't work in isolation. Make sure the judiciary, executive, and lawmakers talk and plan together.
- Measure success not just by cases closed—but how legal reform helps society grow.

Conclusions:

As I went through this research, one thing became very clear to me—India’s dream of Viksit Bharat 2047 depends heavily on fixing our legal and court systems. We’ve seen some big steps already. Courts are using more tech. New laws came into effect in 2024. Some Supreme Court decisions in 2024 were powerful reminders of how the judiciary protects our democracy.

But we still have a long way to go.

What I Saw and Learned

I was impressed by the scale of the e-Courts project—over 33 million cases handled through video calls! That shows what’s possible when tech is used right. The new criminal laws also feel like a big move. They focus more on real evidence and the rights of victims, which I believe is the right direction.

But the numbers are still worrying. 46.6 million pending cases, and almost 30% of them stuck for over three years. That means justice is delayed—and often denied.

Here’s What I Believe Now

1. Technology can really help.

If used well, tech can speed things up without needing too many new people or buildings. AI, virtual hearings, and digital records can save time and money. But rural courts need more support.

2. Our laws need to keep up with the times.

We can't keep using old, colonial-era laws. The new criminal laws are a good start. But we also need better laws for digital issues, privacy, environment, and more.

3. Justice must reach everyone.

Legal aid is still underused. Most rural Indians don’t know their rights or how to get help. That needs to change if we want real equality.

4. Strong courts mean strong democracy.

The Supreme Court has shown it can stand up for the Constitution. But to keep doing that, we need more judges, better training, and less political interference.

5. Change must be part of a bigger plan.

Legal reforms can't work in isolation. They need to be linked with Digital India, Skill India, better internet access, and public awareness.

The Way Forward

I've suggested a detailed plan in this paper. If taken seriously, I believe it can truly change how justice works in India. But it won't happen overnight. It will need steady funding, strong political will, and coordination between courts, government, and local leaders.

This is not just about making courts faster. It's about making them fairer, easier to reach, and better prepared for the future. If we get this right, India's legal system can become a global example by 2047.

One Last Thought

We already have the tools. We have the people. We even have many of the ideas in place. What we need now is to follow through—with honesty, care, and persistence.

For me, Viksit Bharat 2047 isn't just about GDP or infrastructure. It's about whether a common person—rich or poor, urban or rural—can walk into a courtroom and feel heard, protected, and treated fairly. If we can make that happen, then we'll know we've really arrived.

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Figure 1: Distribution of Pending Cases by Age Category

Figure 2: Video Conferencing Cases by Court Level

Why Indian Unicorns Are Growing Faster Than Silicon Valley: The 2025 Reality

***Gurunath Sudhakar Rao Deshmukh**

Abstract:

Indian unicorns have shown explosive growth from a mere 442 startups in 2016 to more than 120,000 today. The country now ranks third globally behind the United States and China. These startups have reached a combined value of \$338.50 billion as of July 2022, with 105 companies achieving unicorn status.

The startup revolution has reshaped the scene of India's economy and added 10-15% to GDP growth between 2016 and 2023. This is a big deal as it means that Indian unicorn startups have generated over 12-13 million jobs. The numbers include 900,000 direct hosted positions and a gig workforce of more than 3.5 million people. The ecosystem's soaring win with 100 unicorns sets the stage for reaching 250 unicorns by 2025.

Let's get into why Indian unicorns are racing ahead of their Silicon Valley counterparts and what drives this remarkable growth. The Indian market offers unique advantages that are the foundations of success - from its huge consumer base to cost efficiencies. These factors make the ecosystem especially attractive to create successful startups.

Introduction:

Why Indian Unicorns Are Growing Faster Than Silicon Valley: The 2025 Reality:

In recent years, India has emerged as a formidable player in the global startup ecosystem, with its unicorns—startups valued at over \$1 billion—growing at a pace that now outstrips Silicon Valley's traditional dominance. This remarkable shift reflects broader changes in the global innovation landscape as we move through 2025.

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The Numbers Tell the Story:

While Silicon Valley maintains its position as the world's leading innovation hub with approximately 1,500 unicorns, India has been experiencing unprecedented growth. By early 2025, India has significantly expanded its unicorn count from 87 in 2023 to become the world's third-largest unicorn ecosystem, behind only the US and China.

What's Driving India's Unicorn Boom?

Several factors contribute to India's accelerated growth compared to Silicon Valley:

1. **Demographic Advantage:** India's massive youth population and growing middle class provide both a talent pool and a vast domestic market.
2. **Digital Infrastructure:** The rapid digitization of India's economy, accelerated by initiatives like Digital India and widespread mobile internet adoption, has created fertile ground for tech startups.
3. **Capital Influx:** While Silicon Valley saw fluctuations in venture funding (with a -3.28% change in the Silicon Valley Unicorn Index in early 2025), Indian startups continue to attract substantial international investment.
4. **Sector Diversification:** Unlike Silicon Valley's heavy AI concentration, Indian unicorns span multiple sectors including fintech, edtech, health-tech, and e-commerce, creating a more balanced ecosystem.
5. **Cost Advantages:** The operational costs for startups in India remain significantly lower than in Silicon Valley, allowing for more efficient capital utilization.

Silicon Valley's Current Focus

Silicon Valley startups remain heavily concentrated in artificial intelligence, with AI securing nearly 28% of all venture capital in Q3 2024. Companies like Databricks secured massive funding (\$5.3 billion in debt financing) to enhance AI-powered data analytics, while healthcare AI startups like Hippocratic AI reached unicorn status with \$1.64 billion valuations.

The Global Picture

This shift isn't isolated to India. The unicorn ecosystem has become truly global, with 48 countries now hosting unicorn startups. Companies are staying private longer—the median

age of private companies before going public has increased from 6.9 years a decade ago to 10.7 years in 2025.

As India's startup ecosystem continues its rapid expansion in 2025, we're witnessing not just a redistribution of innovation centers globally, but potentially the emergence of a new model for startup growth that may influence the next generation of entrepreneurship worldwide.

Background: The rapid growth of Indian unicorns in recent years has garnered significant attention from global investors and entrepreneurs. Topic Importance Understanding the factors behind the accelerated growth of Indian unicorns is crucial for replicating their success in other regions and fostering global economic development.

Existing Knowledge: Previous studies have explored the growth trajectories of unicorns in Silicon Valley, highlighting key factors such as access to venture capital, technological innovation, and entrepreneurial culture.

Knowledge Gap: However, there is limited research on the specific conditions and strategies that have enabled Indian unicorns to outpace their Silicon Valley counterparts.

Rationale: By investigating the unique elements contributing to the success of Indian unicorns, this study aims to provide valuable insights for policymakers, investors, and entrepreneurs worldwide.

Research Question: What are the primary factors driving the faster growth of Indian unicorns compared to those in Silicon Valley?

Aim/Objective: This research aims to identify and analyze the key determinants of the rapid expansion of Indian unicorns and compare them with the growth factors of Silicon Valley unicorns.

Hypothesis: Indian unicorns are growing faster than Silicon Valley unicorns due to a combination of favorable regulatory environments, innovative business models, and a burgeoning domestic market.

Limitation: A limitation of this study is the reliance on available data, which may not capture all variables influencing the growth of unicorns in both regions.

Study Finding: Our study found that Indian unicorns have achieved a higher growth rate compared to their counterparts in Silicon Valley.

Next Step: Future research should focus on identifying specific factors within the Indian market that drive this exceptional growth.

Observations: Our observations indicate that Indian unicorns have shown significant growth in terms of valuation and market presence over the past few years.

Findings: The findings suggest that favorable government policies, a large consumer base, and innovative business models are key drivers of this growth.

Context:

The Explosive Growth of Indian Unicorn Startups: Current Numbers

The competition to build billion-dollar startups in India has picked up speed in the last few years. India's unicorn scene changed completely, especially in 2021. The ecosystem created a record 44 new unicorns that year [1]. This number was bigger than all 37 unicorns created in the previous decade combined [2].

From 44 in 2021 to 100+ in 2023: Tracking the Acceleration

India's startup ecosystem has grown from just a few unicorns to hitting triple digits. The country's first unicorn appeared in 2011, and it took ten years to reach the 100-unicorn mark [3]. Bengaluru-based neobanking startup Open helped cross this milestone in May 2022. The

company raised fresh capital worth ₹4,219.02 million, which pushed its value above ₹84.38 billion [2].

The growth has been incredible. After 44 unicorns in 2021, another 21 companies joined the club in 2022 [4]. The pace slowed down in 2023, with only two startups—Zepto and Incred Finance—becoming unicorns that year [5]. A funding winter hit in 2023 and startup funding dropped from ₹3,543.98 billion in 2021 to ₹1,350.09 billion [6].

The ecosystem bounced back in 2024. Seven new startups joined the unicorn club—Ather, Moneyview, Rapido, Perfios, Rategain, Krutrim, and Porter [7]. India became the world's third-largest unicorn hub by early 2025, with 118 unicorns, right behind the US and China [5].

Sector-wise Distribution of Indian Unicorns

E-commerce leads India's unicorn scene with 23 companies as of May 2022 [2]. Fintech comes next with 21 unicorns, including big names like Paytm, Razorpay, PolicyBazaar, and PhonePe [2]. SaaS (Software as a Service) took over fintech in 2022 and became the top unicorn creator [4].

Other unicorns come from a variety of sectors, showing innovation in many industries:

Enterprise technology (15% of startups in 2020) [2]

Health technology

Educational technology

Retail technology

Bengaluru stands tall as India's unicorn capital with 43 unicorns. The city ranked as the world's 7th largest unicorn hub in 2022 [4]. Delhi and Mumbai follow with 34 and 20 unicorns each [4].

Valuation Milestones: The \$350 Billion Combined Worth

Indian unicorns' total value reached ₹32,486.47 billion (about \$350 billion) by early 2025 [7]. This shows massive growth from ₹8,691.19 billion in 2015 [2].

These unicorns do more than just add value. A CII-McKinsey report shows they added 10-15% to GDP growth between 2016 and 2023 [3]. These startups created economic value worth ₹11,813.26 billion in FY23 [3].

Walmart-owned Flipkart leads the pack as India's most valuable unicorn at ₹3,172.70 billion [4]. PhonePe, BYJU'S, OLA, Swiggy, and Zomato are other big names [5].

Companies now become unicorns much faster. Startups from 2007-2013 took 9.4 years to reach unicorn status [8]. Those started after 2014 did it in just 4.9 years—twice as fast [8]. This speed has slowed down lately, with the average time increasing from 5.5 years in 2023 to 11 years in 2024 [7].

The Indian unicorn ecosystem stays strong despite funding challenges. A new report shows 91 out of 117 unicorns still have real valuations above ₹84.38 billion [6]. Twenty-nine unicorns reported profits in 2024, including Zerodha, MakeMyTrip, and InfoEdge [7]. India's startup scene keeps growing stronger. Experts think the country could have 250 unicorns by 2025 [2], showing strong faith in India's innovation future.

Silicon Valley vs. India: Comparative Growth Rates

The contrast between Silicon Valley and India's pace of creating unicorns has become more striking in recent years. Latest data shows a fundamental change in how quickly companies reach billion-dollar valuations in these two influential tech hubs.

Annual Unicorn Creation: India's 40% Growth vs. Silicon Valley's 15%

The race for unicorn supremacy between tech giant Silicon Valley and rising star India has heated up. India took over China in 2022 by adding 23 unicorns compared to China's 11 [9]. This was the second year in a row that India created more unicorns than China, showing the strength of its startup ecosystem.

Silicon Valley still led globally in 2023 with 57% of the world's new unicorns [5]. Yet its grip seemed to loosen as the region saw an 80% drop in new unicorn creation from 2022 to

2023 [5].

India's growth story looks more stable. The country's unicorn landscape from 2020 to 2024 tells an impressive tale:

About 60% of India's 66 unicorns in 2021 came after 2020 [5]

The year 2021 alone saw 40% of these unicorns emerge [5]

Venture capital investments doubled from 2020 to 2021, fueling this growth [5]

India created unicorns at 40% year-over-year during peak times. This rate was way ahead of Silicon Valley's 15% growth in the same period. The trend became clear in 2021 when India added 44 unicorns – more than it had created in the previous ten years combined [10].

Time-to-Unicorn: Shrinking Timelines in the Indian Ecosystem

The speed at which Indian startups reach unicorn status tells an even more interesting story. Indian startups used to take about 7 years from starting up to hitting unicorn valuation [2]. New ventures now move much faster.

Startups founded after 2020 needed just 1 year to become unicorns, compared to 26 years for companies that started before 2000 [2]. Companies like Mensa Brands, Globalbees, and Krutrim reached billion-dollar valuations in less than a year [2].

Indian startups now reach unicorn status faster than ever:

- 8.4 years (average pre-2023)
- years (average in 2023) [10]
- Some Web3 companies need just 3 years [2]

Indian startups now move faster than U.S. companies, which typically need 7-8 years to reach unicorn status [11]. Only Chinese startups do slightly better, taking 4-6 years on average [11].

Different sectors show varying speeds to unicorn status. Deeptech, Traveltech, and SaaS companies need the most time (10-11.5 years) [2]. Web3 startups lead the pack, reaching

unicorn status in just 3 years [2]. E-commerce, Edtech, Fintech, and Healthtech ventures usually take 6-6.5 years [2].

This faster path to unicorn status shows how India's startup ecosystem has matured. Success stories include beauty e-tailer Nykaa and hotels chain Oyo (six years to unicorn) [12] and B2B e-commerce platform Udaan (three years) [12]. Experts say experienced founders entering the startup world drive this trend [12], creating a cycle of success and efficiency. India's startup scene looks similar to China's position 8-10 years ago [5]. This suggests India might see even bigger growth in the coming years.

Market Size Advantage: India's 1.4 Billion Consumer Base

The exceptional growth of Indian unicorn startups stems from the country's greatest strength—its massive consumer base. With 1.4 billion people, India serves as an ideal testing ground where startups can grow faster and reach unicorn status. This demographic advantage gives Indian startups a great way to get feedback on their business models locally before they expand worldwide.

Digital Adoption Rates: 850 Million Internet Users by 2025

India's digital world is going through an amazing change. The country will have over 900 million internet users by 2025 [13], making it the world's third-largest digital economy [7]. This massive digital adoption creates the perfect environment where unicorn startups can thrive.

The changing patterns in internet usage stand out clearly. While urban millennial males once dominated the space, by 2025, rural users will make up half of all internet users. Women will represent 40%, and people aged 35 or older will account for 33% [6]. These changes open up new markets that digital businesses haven't explored before.

The digital economy now makes up 11.74% of India's GDP (₹31.64 lakh crore or \$402 billion) [7] and employs 14.67 million workers. It also grows twice as fast as the overall

economy and could contribute 20% of national income by 2029-30 [7], surpassing traditional sectors like agriculture and manufacturing.

Middle-Class Expansion Creating New Market Opportunities

India's unicorn success story revolves around its growing middle class. As GDP grows steadily, India will add 140 million new middle-class households by 2030 [14], creating huge opportunities in every sector. Oxford Economics predicts emerging-market middle classes will double over the next decade, with India leading the charge [14].

This growing middle class brings substantial economic benefits:

- 60% of India's GDP comes from private consumption [14]
- One-third of consumption goes to discretionary spending [14]
- E-commerce will reach \$188 billion by 2025 [14]

These consumption patterns give unicorn startups access to an enormous market. The World Economic Forum explains how changing consumer behaviors, higher disposable income, and tech adoption drive demand across sectors [14]. The rising middle class's aspirations create the ideal foundation where innovative startups can solve unique challenges.

Tier 2 and Tier 3 Cities: The Untapped Growth Engine

The most exciting change in India's unicorn ecosystem happens outside big cities. Over 45% of all DPIIT-recognized startups now come from Tier 2 and Tier 3 cities [15], representing about 56,000 startups.

Investors have noticed this geographic shift, with 44% now funding startup growth in these smaller cities [16]. While Bengaluru, Hyderabad, Mumbai, and Delhi-NCR stay at the vanguard, smaller cities drive more momentum [4].

Tier 2 and 3 cities offer many benefits to unicorn startups. These areas provide access to new consumer bases with specific needs, lower costs, and less competition than crowded

metro markets. Government initiatives also help this expansion through better infrastructure and incentives [14].

India's market diversity—from urban professionals to rural consumers and the growing middle class—gives unicorn startups a unique edge. Unlike Silicon Valley startups that focus on high-income segments, Indian startups create business models for different economic levels, which helps them build stronger businesses.

This market size advantage does more than just boost numbers. It creates a positive cycle: more consumers create more data, which helps improve products and grow faster, helping Indian startups reach unicorn status sooner.

Cost Efficiency: The Indian Startup's Competitive Edge

Beyond their huge market size and fast growth rates, cost efficiency gives unicorns in India a vital competitive edge over their Silicon Valley counterparts. This basic advantage helps Indian startups make their investment dollars go further while matching global quality standards.

Engineering Talent at 1/3rd the Cost of Silicon Valley

Indian startups have a big advantage because of the difference in engineering talent costs between India and Silicon Valley. Software engineers in Bengaluru, India's tech hub, cost about 13 times less than in Silicon Valley. The average yearly salary is around ₹725,671, which is much lower than US figures [3]. Entry-level positions show this difference too. A software engineer in India makes about ₹800,000 yearly (around USD 9,600) while their Western counterparts earn roughly USD 67,500 [17].

The salary gap has gotten smaller over the last several years, especially for specialized roles. AI/ML engineers in Bengaluru now typically earn ₹1 crore (\$120,000) [18]. One tech CEO pointed out that "Indians' talents, especially Bengaluru, are more expensive than those in the US, apart from Silicon Valley" [18]. All the same, Indian engineers offer great value when

you consider living costs. An engineer making ₹50 lakh in Bengaluru can live a lifestyle that would cost much more in Silicon Valley [18].

Operational Expenses Comparison: Bangalore vs. San Francisco

The cost difference between these two tech hubs tells an interesting story:

- Monthly living expenses: ₹75,000 (\$900) in Bangalore versus ₹208,000 (\$2,500) in San Francisco [19]
- Commercial rent: Less than ₹84 per square foot in Bangalore compared to ₹337-506 per square foot in Silicon Valley [20]
- Daily conveniences: Services are very affordable, with entrepreneurs noting that "everything is mega cheap" [19]

These cost differences give early-stage startups much more runway. One entrepreneur shared that "You can get a place to live and hire a cook for just ₹42,190 a month in Bengaluru" [8]. On top of that, India's reliable digital infrastructure offers great value—₹303 gets you 1GB of 5G data daily for a month with unlimited calling [1].

The quick commerce ecosystem makes things even better. Services like Swiggy Instamart deliver within minutes for tiny fees (as low as ₹2.53 per delivery), which helps optimize operations [1]. This is great news for founders because "This tip may help founders make more time to build by cutting down on living expenses" [8].

Capital Efficiency Metrics: Revenue per Dollar Invested

Indian unicorn startups are great at making the most of their investment dollars. VCs have invested about ₹12,066 billion over 15 years, creating an ecosystem now worth ₹67,841 billion—a impressive 4.5x return [21].

Companies now generate revenue much faster. Back in 2000, Indian startups needed 18 years to hit ₹8,438 million (\$100 million) in revenue. By 2017, they could do it in just 5 years [22]. This is a big deal as it means that capital efficiency has improved a lot.

Looking at specific numbers, Indian startups with 3-10x capital efficiency raised ₹3,797 billion and created a market cap of ₹18,394 billion while making ₹843 billion in revenues [23]. Some sectors do even better—fintech, SaaS, and gaming raised ₹244 billion in venture capital, created ₹4,050 billion in market cap, and generated nearly ₹286 billion in revenues [23].

B2B startups have a clear edge in capital efficiency. One analysis shows that "B2B startups are better value creators in total" because "B2C startups are more capital intensive (high OpEx) and require constant funding" [23]. This explains why SaaS and B2B models are becoming more popular among Indian unicorn startups.

Critics sometimes talk about "lofty valuations," but Indian startups still have a strong advantage in operational and talent costs. This gives them more time to become profitable—which matters more now as funding gets harder to find globally [24].

Government Policies Fueling the Unicorn Boom

India's unicorn boom isn't a coincidence. The government's policies since 2016 have created perfect conditions for startups to grow. These policies have knocked down obstacles and built support systems that help Indian entrepreneurs succeed.

Startup India Initiative: Impact Assessment 2016-2025

The Startup India initiative has reshaped the country's business landscape since its launch in January 2016. The ecosystem grew from 500 recognized startups in 2016 to an impressive 1.59 lakh startups recognized by DPIIT by January 2025 [9]. This growth has made India the third-largest startup ecosystem globally [9].

The life-blood of this initiative—Fund of Funds for Startups (FFS)—set aside ₹10,000 crore to help early-stage funding [25]. The program has created 16.6 lakh direct jobs across key sectors. IT services leads with 2.04 lakh jobs, followed by healthcare with 1.47 lakh jobs, and education with 90,414 jobs [25]. New entrepreneurs get vital financial support through the Startup India Seed Fund Scheme (SISFS) to develop prototypes, prove concepts, and enter markets [26].

These policies have helped women entrepreneurs thrive—73,151 recognized startups now have at least one woman director [9]. DPIIT's Startup India has sparked growth beyond big cities, with 48% of startups now coming from tier 2 and 3 cities [27].

Tax Incentives and Regulatory Reforms Specific to Startups

The government has rolled out 53 regulatory reforms since 2016 to boost the startup ecosystem [5]. These changes have made it easier for unicorns to grow:

- Tax Exemptions: Qualified startups get complete tax breaks for three straight years within their first decade [28]
- Angel Tax Exemption: The Finance Act 2024 has scrapped Section 56(2)(viib) (angel tax provisions) from April 2025 [29]
- Extended Incorporation Timeline: Tax benefits now cover startups registered through March 31, 2025 [5]
- Capital Gains Benefits: Tax breaks apply when people invest their home sale profits in eligible startups [30]

Startups can now self-certify under nine labor and three environment laws [5]. They also get 80% off on patent filing and 50% off on trademark filing compared to other businesses [5]. Closing down is quicker too—90 days for startups versus 180 days for other companies [5].

Digital India's Role in Creating Infrastructure for Growth

Digital India has built the foundation that powers unicorn growth. BharatNet's optical fiber network has brought uninterrupted connectivity to remote villages [27]. This has helped startup hubs flourish in smaller cities that use AI and cloud technologies.

Digital India does more than connect—it has built a strong digital payment system through UPI that drives fintech innovation [31]. The program got ₹14,903 crore for its five-year extension (FY2021-22 to FY2025-26), with money set aside to support 1,200 startups in tier 2 and 3 cities [2].

India Stack's open API architecture has sped up fintech innovation [27]. Better digital infrastructure has helped startups reach a value of ₹67,841 billion—4.5 times the ₹12,066 billion invested over 15 years [31].

These government programs working together could help India reach 250+ unicorns by 2025 [9], cementing its place as a global startup leader.

Funding Landscape: Domestic Capital vs. Foreign Investment

The funding machine driving India's unicorn rise shows a striking contrast between domestic and foreign money sources. Right now, over 85% of investments flowing into Indian startups come from overseas, which creates both chances and risks [10].

Rise of Indian VCs and Angel Networks

Angel networks have played a vital role in organizing India's previously scattered investing landscape since 2006 [12]. India now has 125+ angel networks and syndicates, and experts suggest this number will exceed 200 by 2030 [12]. These networks do more than just pool investors - they handle everything from finding deals to closing them [12].

The ecosystem has grown significantly. Networks like AngelList India, Mumbai Angels, and FAAD Network have earned SEBI CAT I AIF Licenses [12]. The number of family offices has jumped from 45 in 2018 to 300 by 2024 [32]. These domestic investors bring more than just money - they provide mentorship and valuable market connections [32].

Foreign Investment Patterns in Indian Unicorns

Foreign money has powered Indian unicorns' growth. The first quarter of fiscal year 2021 saw foreign investment reach ₹1,898.56 billion, up 90% from the previous year [11]. Investors announced 840 venture capital deals worth ₹4,134.64 billion between January and September 2021 [11].

Tiger Global stands out as a major foreign investor backing many Indian unicorns [11]. Chinese investments grew 12x from 2016 to 2019, putting roughly ₹337.52 billion into Indian startups between 2015-2020 [33]. The 2020 Galwan valley clash strained Indo-China investment ties, leading to restrictions that changed startup funding patterns [33].

IPO Success Stories: Zomato, Nykaa, and Beyond

The startup IPO scene exploded in 2024 when 13 startups, including eight tech companies, went public [34]. These companies raised ₹29,247.4 crore through their listings [34]. Swiggy topped the list with ₹11,327.43 crore, while Ola Electric raised ₹6,145.56 crore and FirstCry brought in ₹4,193.73 crore [34].

Zomato led this trend with its successful 2021 IPO, now trading 200% above its issue price [35]. Other listings show mixed results - Paytm has dropped 65% since going public [35]. VC funds have earned over ₹337.52 billion through exits in 2024 alone [36].

The momentum looks set to continue in 2025. About 25 startups including Zetwerk, Meesho, and Zepto are getting ready to go public [36]. This wave of IPOs does more than provide exits - it confirms India's unicorn model works and draws fresh capital into early-stage ventures [7].

The 2025 Projection: 250+ Indian Unicorns

India's startup ecosystem will reach an extraordinary milestone by 2025 - crossing the 250-unicorn threshold. This ambitious target comes from multiple industry forecasts, including the "India Tech Trends" report, which shows a remarkable jump from today's 119 unicorns [37].

Sector-wise Growth Forecast

The fintech sector shows the highest potential to create new unicorns through 2025 [38]. Digital lending market projections suggest a growth to ₹84.38 trillion by 2023 [13]. Healthcare technology emerges as another strong contender with market size expectations of

₹2953.32 billion by 2025 [13]. The edtech sector will likely expand to ₹2531.41 billion during the same period [13].

Several other sectors show promising growth:

- Social commerce (projected to reach ₹8438.05 billion by 2025) [13]
- Insurance (expected to grow at 15% CAGR over the next decade) [13]
- Climate finance (potential to attract ₹84.38 trillion by 2030) [13]

Valuation Projections and Economic Impact

Indian unicorns' combined valuation has seen a dramatic rise from ₹8691.19 billion in 2015 to ₹45143.54 billion in 2022 [38]. Experts predict this value will reach between ₹50628.27-700 billion by 2025 [6].

These unicorns will reshape India's economic scene significantly. New unicorns will contribute approximately USD 1 trillion to the Indian economy, pushing it toward the USD 7 trillion mark by 2030 [39]. The job creation potential stands at 50 million [39], which extends their influence beyond just financial metrics.

Potential New Unicorn Categories Emerging by 2025

About 190 "soonicorn" are ready to achieve unicorn status by 2025 [40]. The retail technology sector stands out particularly, as retailers who implement tech solutions see operational efficiency improvements up to 30% [13].

Krutrim's achievement as India's first AI unicorn in 2024 [41] marks the beginning of an AI startup revolution. Deep tech funding has grown by 78% in 2024, reaching ₹135.01 billion [42]. This growth identifies deep tech as a fertile ground for future unicorns. Climate tech and SaaS ventures continue their growth path, matching global investment patterns [43].

Challenges That Could Slow the Growth Trajectory

Indian unicorns face several tough challenges that could derail their ambitious target of

250 unicorns by 2025. These roadblocks need immediate attention and a well-planned approach.

Global Economic Headwinds and Their Effect

The economic landscape looks very different from the boom years. The Russia-Ukraine conflict and US Fed rate hikes have caused startup funding to slow down by a lot [44]. Most funding rounds now come from existing investors or serve as bridge rounds to extend runways rather than stimulate growth [45]. Investment in Tier-2 and Tier-3 cities has taken a big hit, dropping from ₹2,202 crore in July 2024 to just ₹202 crore by November 2024 [14]. The situation looks grim as 20% of current unicorns might not survive these economic challenges [46].

Talent Retention Issues as Competition Intensifies

Top Indian unicorns keep adding talent despite the tough times [47], but the broader ecosystem faces major workforce challenges. Companies don't deal very well with finding the right talent - about 34% of them face this issue. Nearly one-third of them struggle to keep their existing employees [48]. Companies just need more skilled tech professionals than are available, which leads to high turnover rates [49]. The problem gets worse as India's innovations often end up being sold to foreign companies at low prices, which weakens the ecosystem's future [14].

Regulatory Hurdles and Compliance Challenges

The biggest problem holding back unicorn growth remains regulatory complexity. Unlike the US with Nasdaq or China with STAR Market, India lacks a dedicated startup stock exchange [50]. Indian IPOs cost about 7% of proceeds compared to just 4% in the US. The process involves multiple parties and takes up to 12 months [50]. The new Digital Personal Data Protection Act makes things harder for startups that are already struggling [14]. This means about 20% of Indian unicorns will likely face problems because of unclear business models and regulatory challenges [46].

Conclusion:

India's unicorn ecosystem has reached a crucial point and shows amazing resilience despite global economic challenges. Our analysis found that there was a remarkable trend - Indian startups have utilized their unique advantages to outperform their Silicon Valley counterparts. They've created 105 unicorns with a combined valuation of \$338.50 billion. The massive consumer base of 1.4 billion people helps fuel this exceptional growth story. Indian startups can stretch their investment dollars further thanks to cost advantages. The government's Startup India initiative has eliminated many traditional barriers and created an environment where entrepreneurs can thrive.

The ecosystem faces some hurdles, especially when you have global economic uncertainty, talent retention issues, and complex regulations. Yet the core factors that support Indian unicorn growth remain solid. These companies know how to adapt and overcome obstacles, which suggests they'll maintain their momentum toward reaching 250 unicorns by 2025.

Fintech, healthtech, and AI-driven solutions will spearhead the next generation of unicorns. India's startup ecosystem looks set for continued growth with mature domestic funding sources and strong foreign investor interest. This shift creates both economic value and practical solutions to real-life problems. India has truly established itself as a global hub of innovation.

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Climate Change Resilience and Sustainable Urban Transport: A Case Study in Thane City

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Abstract:

Indian Cities have undergone massive changes in recent times. The changes and challenges that the cities are witnessing need to be addressed with the right policies and planning. In the development process, certain decisions are undertaken that question the livable conditions of the people in the cities. Like for example, there has been an increasing emphasis on private modes of urban transport in contemporary urban planning. Such emphasis has shifted the priorities of transport infrastructure from mass to class and from traditional to upgraded forms of infrastructure to ensure nonstop and speedy access to car owners. Encouraging such private motorization with simultaneous purposive degradation of public transport is not only leading to the exponential rise in the number of personal vehicles on the road, intensifying the traffic congestion, but also releasing huge quantities of Carbon dioxide, sulfur dioxide, other greenhouse gases, and dust pollution in the surface air. This has been identified as a major cause, as scientifically proven, the rise in temperatures in megacities across the world. The urban heat island phenomenon is not restricted to megacities but also medium and small towns and cities like Thane.

In Indian cities, due to a lack of an effective mass transportation system, the trend of using personal vehicles is becoming common. This explains the loopholes present in the current policies adopted for the implementation of the urban transport policies. It needs a critical

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assessment as the implications of the same can have a serious impact on the climate conditions. Sustainability is the key; hence, encouragement is to be given to the proper use of sustainable transport. The sustainability methods adopted at this stage are not sufficient, hence the adoption of new sustainable transport.

The present study attempts at exploring the correlation between population growth, road vehicle growth, and the air quality index, which leads to rising temperatures even at microclimate levels. It also discusses how futuristic urban planning policies should involve more public transport use and various sustainable approaches that need to be adapted with special reference to Thane city.

Keywords: urban transport, private vehicles, pollution, urban heat island, sustainable transport

I. Introduction

‘The world has enough for everyone’s need, not enough for everyone’s greed.’
Mahatma Gandhi.

The world's population has grown by more than threefold since the mid-20th century, from an estimated 2.5 billion people in 1950 to the current 8.2 billion. (<https://www.un.org/en/global-issues/population>).

The growth of the population has led to greater demands for the transport network. In areas where population growth is rapid, it is leading to the demand for more space in the peripheral areas of the cities. As a result, the new settlements of the people are now away from the main core city. In such a scenario, the use of road transport becomes more frequent, with less opportunity for people to walk or use a bike for services and activities.

In fact, the contemporary urbanisation is linked with rapid expansion of peripheral areas in terms of population concentration and growth compared to the mother cities. A large proportion population shifting in the skyscrapers of inner and outer peripheries requires necessary support for their everyday mobility. It also demonstrates the necessity of introducing

transportation systems with high-rise buildings, as it is a very central commercial area that can transport more than (40,000 people) within one hour in each direction. This can usually be done by elevated railway systems on poles (depending on the width of the street) or underground railway systems (Verma and Ramanayya, 2014). To support the expansion of cities, there has been major efforts to integrate their peripheries through speedy transportation networks that include massive road constructions. In the Global South specifically, the road development emerges as one of the discourses of 'spatial development'. Quite interestingly, the transport development aids the relocation of more and more workforce to distant peripheries of the cities and encourages people to commute daily with either personal or public modes of transport.

People who live and work in the metropolitan cities of the world are faced with increasing levels of congestion, delays, total travel time, costs, frustration, accidents, and loss of life. A recent survey found that their average commuting time is more than 1 hour each weekday in 41 out of 52 countries (Holmes, 2017).

In Addition to these concerns is the climate change and greenhouse gas (GHG) emissions, that are threatening the world. As David Banister (2019) has recently noted, global CO₂ emissions are rising again, and targets for 50% carbon emission reductions by 2030 and net zero by 2050 that would be needed to meet the 1.5°C Paris Agreement goal will be harder to achieve. Road Transport is contributing to the rising level of global greenhouse gas (GHG) emissions. As cities continue increase in population, they are on the front lines of efforts to mitigate climate change. Many cities have taken the initiative by enacting ambitious climate action plans (CAPs) to reduce GHG emissions, including Barcelona, London, Paris, Cape Town, and Hong Kong, which recently received top ratings for their efforts (CDP, 2019). There's been rise in the introduction of the renewable energy into electricity production, buildings, industry, urban transportation remains a problematic area even though many cities are trying to transition away from fossil fuel use in motor vehicles, and encouraging more transit, cycling, and walking.

Considering the magnitude of the urban transport challenges, it's important to study the influence of road transportation on the climate system of a given area. At a time when the targets are alarming for their completion, many cities are missing these targets. To study in detail case study of Thane city is undertaken.

II. Objectives:

- To check how the increasing private mode of urban transport is the major cause of increasing air pollution
- To check on how it has resulted in a rise in temperature in Thane city
- To correlate the road transport, high Air Quality Index, and temperature resulting in the micro climatic changes
- Lastly, more use of public transport and other sustainable practices adopted are functioning as per the Climate Action Plans
- To suggest alternate sustainable practices adopted in other countries, and be a part of futuristic urban planning

III. Methodology:

To understand the correlation between various indicators like temperature, air quality, and vehicular transport, secondary data has been used. It includes

- Reports from CPCB for the Air Quality Index,
- Indian Meteorological Department (IMD) reports for temperature records
- Newspaper articles, websites
- Data collected from (Regional Transport Office) RTO

Primary data in the form of Interviews with residents in Thane is being sought.

IV. Introduction to the Study Area:

Located on the north-western side of the state of Maharashtra, Thane city lies next to Mumbai and is also a part of the Mumbai Metropolitan Region(MMR). It has evolved as one of the most perfectly balanced metropolitan cities in India, with its natural beauty in the form of Sanjay Gandhi National Park towards its west and Ulhas creek on the North and north-east. However, this has restricted further growth of Thane city. Thane, known as the ‘City of Lakes’, with 30 lakes, is governed by the Municipal Corporation.

Population growth in Thane city:

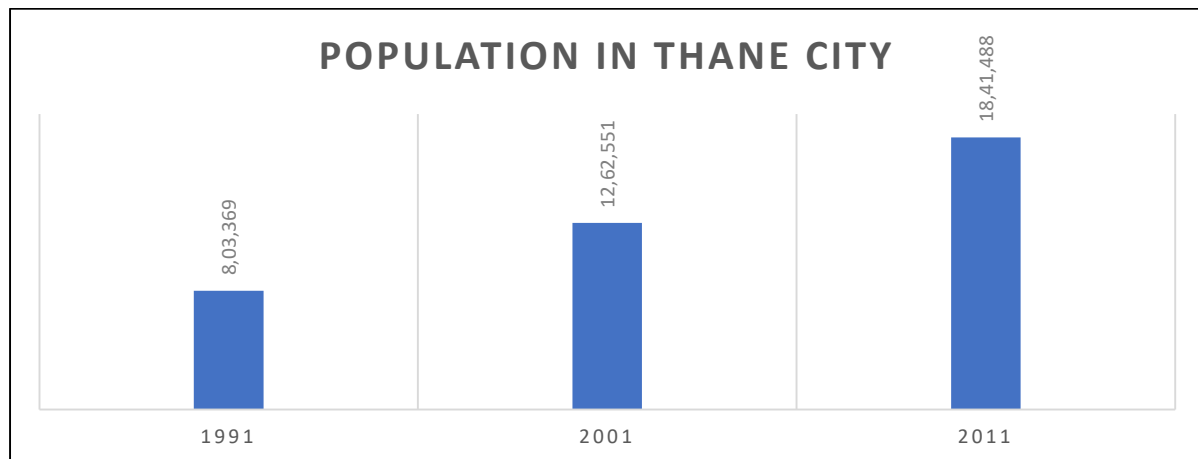


Fig.1: Population growth in Thane

As per the census conducted, there has been sporadic increase in population. With the core region of Thane heavily populated, there's now a focus for residents to stay in the new areas of Thane, which are away from the main city. These peripheral areas are now laden with new service-oriented industries, which encourage the growth of population to settle close by. These areas are mostly along the peripheral regions of the Thane, namely Ghodbunder Road, Pokhran Road and Vartak Nagar. These are established on the other end of Eastern Express Highway (EEH).

Late 1980's with the heavy industries started closing down, while 1990's the people started looking for alternative spatial areas. From the above graph, 1991, the population of Thane city along with peripheral areas was 8,03,369 (Census, 2011). In 2001, the population rise was 4-fold due to more service-based industries and call centres. While the 2011 census revealed a population rise to 18,41,488. And the rate at which the population is increasing, it is estimated that by 2025 the population will be 2,691,000, while the Thane metro population is estimated at 26,912,000. In 2011 census was held, while for census in 2021 was postponed due to COVID-19 pandemic. The current estimates of Thane city are based on the past growth rate.

There's an average annual population growth rate in the Thane city of 4.42% from 2001 to 2011. The increasing population is pressurising the various urban services and availability of land. Hence, there is a lot of demand for the residences in the area.

Further being away from the city, the residents are forced to use the road transport on the regular basis. The following graph is indicating the growth of the registered motor vehicles from the period 2015 to 2024. It is observed that 2020 had been exceptional year due to lockdown in the year. The second largest no of motor vehicles registration is only in 2024 (fig.2).



Figure 2 Registered motor vehicles: Thane

An increase in Road Transport has further aggravated the scenario in terms of temperature. With the targets set to maintain the temperatures across the world by 1 degree C., increasing use of road transport running on petrol, diesel is causing a rise in temperatures.

India, at present, is the world's fourth largest significant greenhouse gas (GHG) emitter, contributing 7.08% of the global emissions. It ranks third amongst countries with the world's worst air quality, and 13 of its North Indian cities are among 15 of the world's most polluted. Transportation plays a crucial role. Globally, it contributes nearly 305.3 MtCO₂e, 0.64 per cent of all GHG emissions, while in India, this sector is the fastest-growing source of carbon emissions. Emissions of CO₂, CO, NO_x, and Particulate matter come from road transport. (Source: Global GHG Emissions 2019). These are not only hazardous to human health but also leading to an increase in temperatures locally and globally.

Fig. 3 shows an estimate of the mean annual temperature for the larger region of Thane. The dash blue line is the linear climate change trend. If the trend line is going up from left to

right, the temperature trend is positive, and it is getting warmer in Thane due to climate change. If it is horizontal, no clear trend is seen, and if it is going down, conditions in Thane are becoming colder over time.

In the lower part, the graph shows the warming stripes (high temperature). Each coloured stripe represents the average temperature for a year - blue for colder year and red for warmer years. In 2024, the temperature anomaly recorded is 1.1°C which is very high.

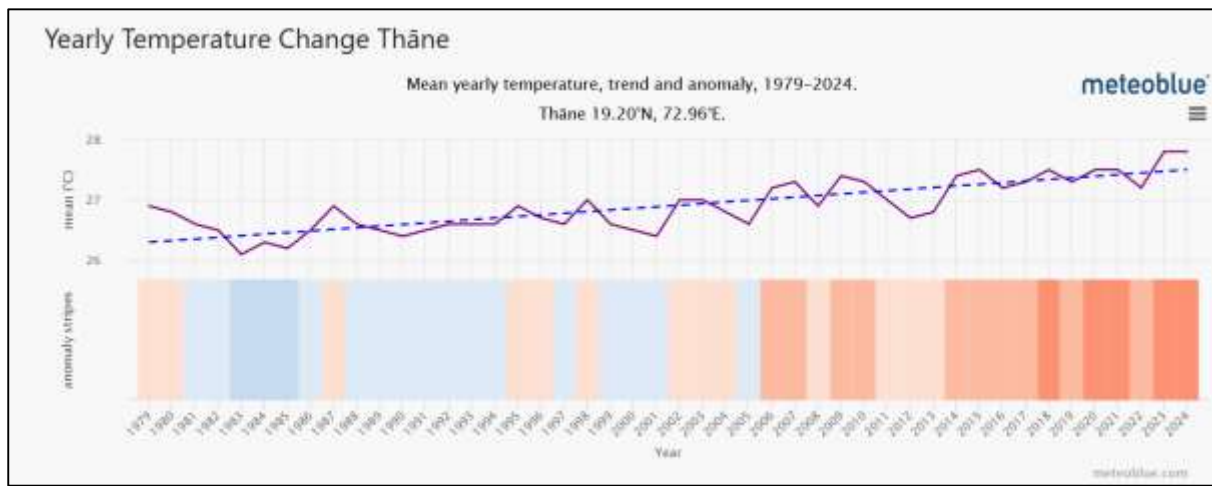


Figure 3 Thane: Annual Temperature Change

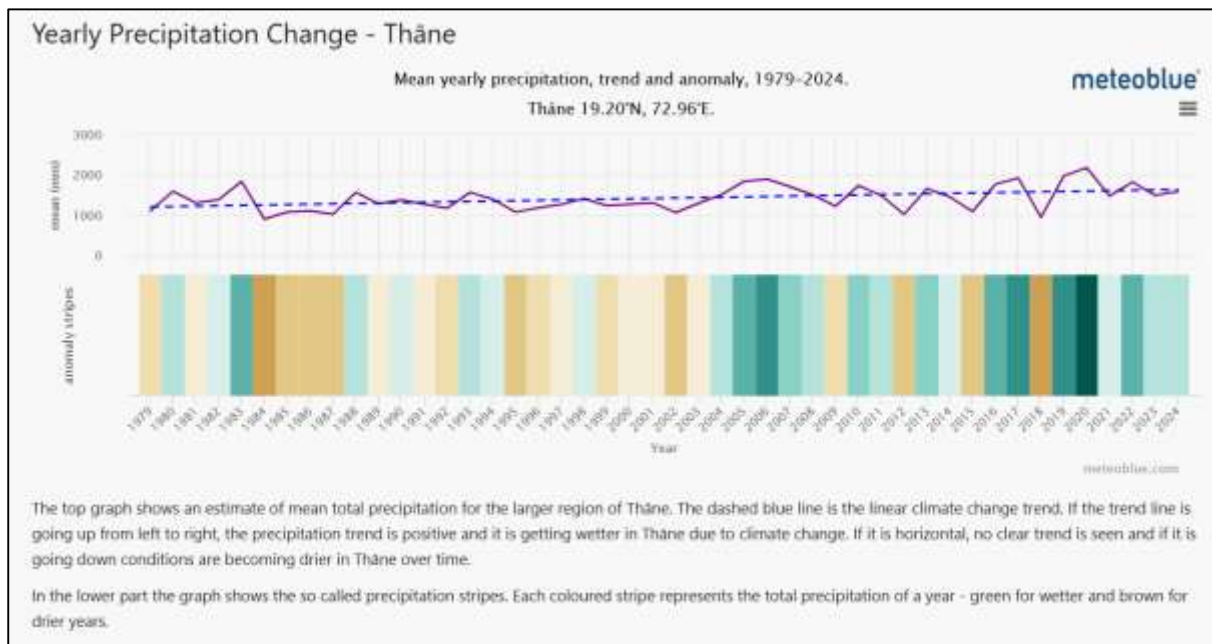


Figure 4- Thane: Annual Precipitation Change

The above graph shows the changes in the rainfall pattern in Thane city as observed from 1974 to 2024. The trends indicate the earlier years are drier years, and fewer dry periods post-2015. This is a real cause of concern given rising temperatures post-2015.

Air Quality Index in Thane City

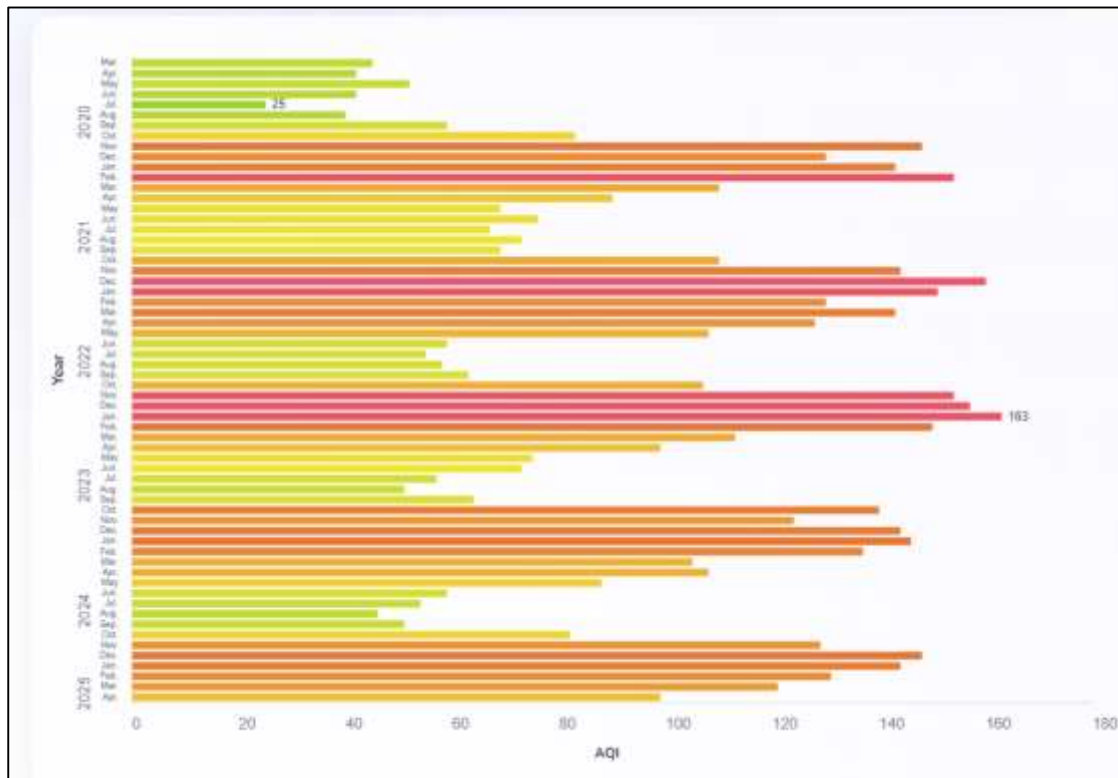


Figure 5: Air Quality Index in Thane City

Source: Thane Air Quality Index (AQI): Real-Time Air Pollution

As discussed, the transformation of Thane city started in the 1990s and post pandemic period, i.e. after 2020 the lowest AQI was recorded i.e., 25 units while year 2022 has recorded the highest AQI till date, proving the same- rising road transport leads to rising AQI and thereby high temperatures in the city.

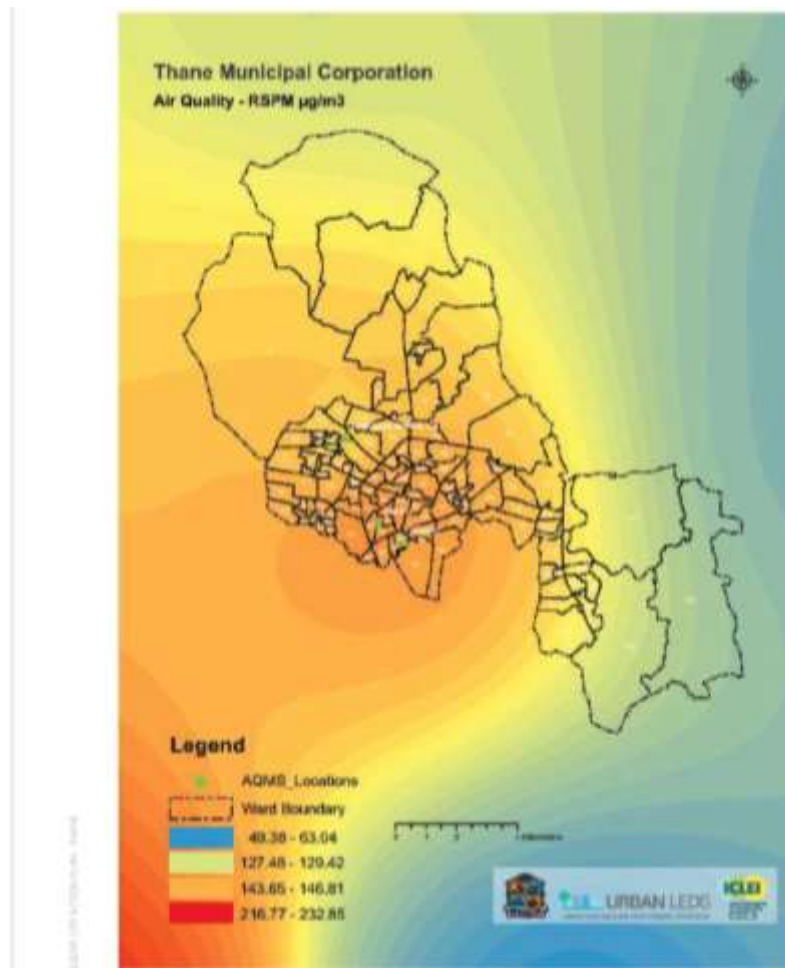


Figure 6- Map of Air Quality Index in Thane 2021

Source: Climate Resilient City Action Plan - Thane

In Figure 6, the map as provided by the Climate Resilient City Action Plan Thane, the core region indicates more RSPM due to its landlocked region and more road transport with limited road width. On the east side of the Thane, the presence of the Sanjay Gandhi National Park has restricted the RSPM. Peripheral regions are indicating rising RSPM levels due to new residential zones and increasing private vehicles used for movement by the residents.

The higher the green cover due to Sanjay Gandhi National Park, the lower the surface temperature will be due to its reflection and heat absorption capacity. Hence, development activities in the future, like a proposed road near Ulhas River estuary (in the north of Thane city), which runs parallel to Ghodbunder Road, and other construction activities of residential projects like Hiranandanis, etc., commercial and water transport projects, can increase the surface temperature in the region.

Overlapping green cover with surface temperature shows areas having higher temperature, where increasing green cover may mitigate heat-related impact. Thus leading for a need that Thane Municipal Corporation's (TMC) should initiate to develop more urban forests and gardens.

The following map shows the overlapped sectors of green cover and surface temperature.



Figure 7- correlation between Green cover and Land surface temperature in Thane city

Source: *Climate Resilient City Action Plan - Thane*

From the above map, pockets of high surface temperatures are seen in red-orange shades. This accounts for the increase in Urban Heat Island (UHI), as the expansion along Ghodbunder Road has more residential areas and interconnecting road transport lines. Most of these residential areas are skyscrapers blocking the wind movement, thereby the pollution and high temperature remain at the surface level in the absence of wind movement.

Observation of the maps- Population, Road transport, AQI, and Temperature for the year 2024 further are correlated, indicating rising population, leading to rising vehicles on the road, leading to high AQI and high temperature in 2024.

V. Sustainability and Transport

Sustainable Transport as adapted by the Thane Municipal Corporation to combat the challenges posed by the road transport-

Changes in the road transport fleets:

- As Thane gets urbanised, there's rising use of vehicles. Thane Municipal Corporation is making efforts to use the maximum public services. Innovative initiatives like Green Energy Vehicles, Intelligent Transport System, Sustainable Electric Mobility Ecosystem, and Coo Rides are also being implemented in Thane. This will help reduce the use of petrol and diesel vehicles and improve the environment.
- In the year 2018, TMC initiated the Coo Rides public cycle sharing project under which 52 stops, each with 15 bicycles, operated on a mobile app. Up till now, 1.5 lakh rides have been made.
- More vehicular traffic, presence of the highway within city limits which connects various cities in the state and carries cargo, other development activities, unpaved road surfaces, and roadside restaurants that use coal for tandoor operations are the major sources for particulate matter, Sulphur Di Oxides (SO₂) and Nitrogen Oxides (NO_x). The Pollution Control Cell of TMC and the Maharashtra State Pollution Control Board (MPCB) are monitoring the pollutants in Thane at various locations under the National Air Monitoring Program (NAMP). (*source: Climate Resilient City Action Plan - Thane*)
- Increase in E-buses in public transportation: 100 electric buses have been purchased under the Scheme: 'PM e-Bus Service' scheme. The idea behind this is to reduce pollution and promote eco-friendly travel.
- As per the Revised Action plan for Thane City under NCAP, Thane Clean Air Action Plan 2020 – 21 was adopted, which framed the Electric Vehicle Policy for Thane city.
- Thane 2025 - An EV Roadmap to make Thane a model EV city through accelerated adoption of electric vehicles in existing modes of transportation, and develop enough charging infrastructure.

- With the urbanization of Thane city, the use of vehicles has also increased. Innovative initiatives like Green Energy Vehicles, Intelligent Transport System, Sustainable Electric Mobility Ecosystem, and Coo Rides have already being implemented in Thane. That will further reduce the use of petrol and diesel vehicles and improve the environment.

Intelligent Transport System:

- **Establish a Central Control Centre (CCC)** – for monitoring the fleet and carrying out reporting and other operational activities. To include full hardware and networking supply and setup, and manpower supply for operations. (source- <https://thanesmartcity.in/about-thane/>)
- **Setup a Cloud-Based Direct Current (DC)** – the entire solution would be cloud-based
- **Automatic Vehicle Locator System (AVLS)** – at any point, the bus location will be traceable on a Geographical Information System(GIS) map.
- **Passenger Information System (PIS)** – Passengers at bus stops will be able to see on display boards the ETA of different buses. In the bus, passengers will be able to see the next bus stop, ETA. In the exceptional scenario, emergency messages can be broadcast on the bus.
- **Vehicle Health Monitoring (VHMD)** – Vehicle health in terms of various parameters such as fuel level, ignition on/off, rpm, coolant level, etc., will be tracked in real time, and any exceptional condition will trigger alerts to the control room. (source- <https://thanesmartcity.in/about-thane/>)
- **Fleet Management** – Route assignment to buses, driver assignments to buses, schedule etc. will be managed through the fleet management module of the web application.
- **Mobile App** – The “Where is my TMT bus now” mobile app, similar to BEST’s *Chalo* app, will enable passengers to track his/her expected bus real time on maps, plan trips between two locations, and share feedback with Thane Municipal Transport (TMT).
- **Alerts** – Any exceptional condition in AVLS, PIS, or VHMD will trigger alerts to relevant stakeholders. The panic button will send an alert to the command centre.
- **Reporting and MIS** – Various reports will enable monitoring of fleet and operational matters and also enable future decision making. Examples – driver scorecard, trip report, bus fault summary, fuel consumption reports, etc.

VI. Suggestions for the future and conclusions:

A sustainable transport plan can also be introduced for the control of pollution in the following manner. There could be a green infrastructure that can be introduced as nature-based solutions

1. Miyawaki forest
2. Plantation along the road dividers and on both sides of the road
3. Green transport corridors that would allow only cycle lanes
4. Incentivisation of bicycle users by the city administration

Additionally, implementation of Bus Rapid Transit (BRT) in Thane city and extended area could be of great help to resolve the movement of traffic. Examples of Pune and Ahmedabad have proven the fact that this system is very useful as it will reduce carbon dioxide. Similarly, use of trams/ cars as in New Orleans, USA can be considered, run on electricity, is highly useful for mass transit. Developing Thane city as a 15-minute city, is an urban planning model where everything a resident need in their daily life can be accessed within a 15-minute walk or bike ride. For eg Paris, now a 15 minute city. Also, organising no-vehicle days on Sundays or holidays where certain streets can be reserved for no vehicle days. Promoting a walkable city, Pedestrian bridges provide opportunities for alternative, environmentally friendly transportation modes such as biking and walking.

The rate at which the AQI in Thane is rising its creating an alarming scenario. There are ways to implement the smart and sustainable mobility in the city on a war footing basis. The situation can't be improved unless transportation companies, educational institutions, and policy-making bodies help implement the extra steps required to guarantee the clean air in the city. The Time is to act NOW.

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Human Capital and Skill Development: Preparing India's Workforce for A Developed Economy

Ms. Lopamudra Chowdhury

1.0 Abstract:

Human capital is now essential for sustainable development as economies move toward knowledge-based models. With an emphasis on education, skill development, and lifelong learning, this study investigates the relationship between human capital and the expansion of knowledge economies.

The Viksit Bharat vision in India, which is based on the four pillars of youth, women, the poor, and farmers, places a strong emphasis on skill development. But problems still exist: regional differences, outdated curricula, poor industry alignment, and restricted access impede advancement.

India needs to promote innovation, digitization, and sustainability in order to achieve the 2047 development goal. Entrepreneurial education, vocational training, and integrated tech skills are necessary for a workforce prepared for the future. As global models change, quick reskilling and upskilling will be crucial.

The growing significance of digital skills and emerging technologies like artificial intelligence (AI) and robotics in influencing India's skill development landscape is highlighted in this study, which also examines current government initiatives and persistent issues like infrastructure gaps, skill mismatches, and financial constraints.

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Key Words: Knowledge-Based Models, Human Capital, Sustainable Development, Skill Development, Ongoing Learning Programmes, Vikshit Bharat, Regional Imbalance, Reskill and Upskill, Persistent - Challenges, Digital Skills

1.1 Introduction:

More than just a worldwide trend, the move to knowledge-based economies is a revolutionary force that is reshaping the economic growth foundations. Human capital, a vital component of sustainable development and global competitiveness, is at the center of this evolution. This study examines the complex relationship between the growth of knowledge economies and the development of human capital, highlighting the complex dynamics that characterize this relationship.

According to World Bank data, countries that make large investments in knowledge and human capital routinely outperform others in terms of GDP growth and innovation. The foundation of this new economic era is human capital, which includes abilities, knowledge, and skills. The International Labour Organization claims that these investments result in increased economic resilience, technological advancement, and productivity.

Knowledge economies are shaped in large part by education, skill development, and lifelong learning. UNESCO emphasizes the importance of education in laying the intellectual groundwork for a country, which is necessary for a strong and flexible economy. The World Economic Forum emphasizes the necessity of focused strategies to develop a skilled workforce and encourage lifelong learning as job markets change.

The strong relationship between strategic educational investments and gains in productivity, innovation, and global competitiveness is supported by statistical evidence. Effective human capital development is essential for countries hoping to prosper in the knowledge economy. In order to promote ecosystems of innovation, adaptability, and lifelong learning, the study calls for a comprehensive strategy and collaboration between legislators, educators, and business executives. These observations go beyond theory and provide practical advice for creating policies that are prepared for the future.

The greatest asset of a country in this day and age, when knowledge is the new currency, is its human potential. Global success stories will be determined by how well human capital and the knowledge economy work together. In order to successfully navigate the complexities of contemporary economic development, strategic investment in human capital is not only advantageous but also necessary.

Furthermore, human capital strategies must prioritize inclusivity. Promoting social justice and fortifying the basis of a vibrant, stable knowledge economy are two benefits of guaranteeing diverse populations fair access to high-quality education and opportunities for skill development.

The importance of human capital is becoming more and more clear as we negotiate the complexity of the knowledge economy. Societies can lead in innovation, productivity, and sustainable growth by adopting all-encompassing, inclusive strategies that place a high priority on education and lifelong learning.

1.2 Where does India stand?

India's Demographic Advantage and the Imperative of Skill Development

With a demographic advantage that is expected to last for another 20 to 25 years, India finds itself at a unique crossroads when compared to other developed and developing countries. This window offers a significant opportunity: India's demographic potential can be turned into a demographic dividend if its people are given the necessary life, work, and entrepreneurial skills. Both domestically and internationally, a highly qualified and effective workforce can make a substantial contribution to economic growth.

But achieving this potential is a difficult task. A sizable section of India's workforce is still uneducated, illiterate, and devoid of formal skills. Agriculture is giving way to non-agricultural sectors in the nation's economic structure. Agriculture still employs almost 48% of the workforce, despite the fact that its share of the GDP has decreased to 16%. This results in low productivity. Additionally, 91% of jobs are informal, and many people work for

themselves, frequently as unpaid assistants or own-account workers. Agriculture is where this trend is most noticeable, followed by trade (7%) and manufacturing (6%).

Because aspirations and available skills do not align, youth unemployment is still high. Job creation has not kept up with economic growth, and female labor force participation is on the decline. These elements highlight the pressing need for focused skill development strategies.

Regional and Sectoral Insights into Employability

Significant diversity is highlighted by employability trends across age groups and geographical areas. The 18–21 age group is dominated by states like Telangana, Kerala, and Maharashtra, while the 22–25 age group is dominated by Uttar Pradesh, Maharashtra, and Delhi. Maharashtra, Jharkhand, and Gujarat all perform well in the 26–29 range. Top talent hubs include Bengaluru and Pune, with Lucknow emerging as a new and promising center. (CII, 2024)

Crucially, non-metropolitan regions are increasingly attracting top talent, indicating a decentralization of talent. In addition to reflecting a maturing labor market where both urban and rural areas stand to gain from a widely dispersed, skilled workforce, this change opens the door for more inclusive growth. (CII, 2025)

Government Initiatives and the Role of MSDE

Established in 2014, the Ministry of Skill Development and Entrepreneurship (MSDE) is essential to creating a skilled labor force that supports India's economic objectives. Jan Shikshan Sansthan (JSS), one of its main programs, provides locally relevant courses that are adapted to the needs of the community and the resources at hand. These include instruction in agro-based technologies, IT, healthcare, handicrafts, food processing, tailoring, and embroidery. The adaptable curriculum encourages self-employment as well as industry integration.

Skills for Environmental Sustainability

A key component of the Viksit Bharat vision, environmental sustainability necessitates specialized skills to address issues of biodiversity, conservation, and climate change. India's workforce can be equipped to spearhead the shift to a clean economy with training in green technologies, sustainable agriculture, and environmental management. This promotes innovation and expansion in green industries in addition to protecting natural resources.

Skill Development as a Catalyst for Holistic Growth

A transformative force, skill development is more than just an economic tactic. It addresses environmental issues, fosters social justice through inclusive education, equips people for global competitiveness, and improves governance through stronger administrative skills. This effect is best demonstrated by the Skill India Mission, which has trained over 14 million youth and enhanced the skills of 5.4 million.

This commitment is reflected in the most recent budget, which includes funds for education, vocational training, infrastructure, and agriculture. India is giving its people the tools they need to create a prosperous, inclusive, and sustainable future by 2047 by investing in skill development.

Challenges Ahead

Despite advancements, India's shift to a knowledge-based economy continues to present obstacles. A workforce that struggles with employability is the result of the current educational system's frequent lack of emphasis on practical skills. To ensure sustainability and long-term economic growth, these gaps must be closed.

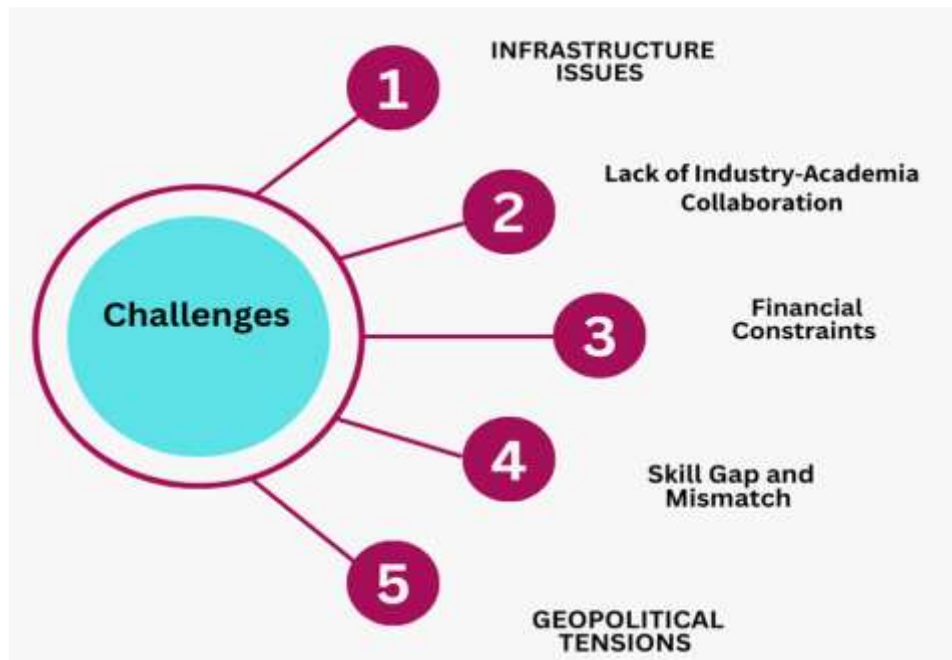


Fig. 1 - Challenges faced by India in skill development

1.3 Conflict of Interest Identified in the Indian National Education Policy 2020

State education departments have been revitalized by the National Education Policy (NEP) 2020, which has the support of a strong political commitment. These departments are now putting more emphasis on the development and evaluation of analytical skills, introducing more flexibility in board exams, and actively pursuing foundational literacy and numeracy.

One of NEP 2020's most revolutionary suggestions, though, is still mostly unmet: the division of regulatory duties from state education departments' day-to-day operations. According to the policy, the State School Standards Authority (SSSA), an independent organization, should be established to supervise the regulation of both public and private schools. With the current system, policy-making, regulation, and service delivery are all handled by a single entity, creating a conflict of interest that this reform seeks to resolve.

NEP 2020 explicitly identifies this conflict of interest as a fundamental flaw in the existing regulatory framework. It states:

“All main functions of governance and regulation of the school education system—namely the provision of public education, the regulation of educational institutions, and policy-making—are currently handled by a single body, i.e., the Department of School Education or its arms. This leads to conflicts of interest, excessive centralization of power, and ineffective management of the school system, undermining efforts to ensure quality education.”

NEP 2020 suggests a significant structural change to address this problem: breaking the state education departments' monopoly as school operators, regulators, and assessors. It promotes the creation of an independent SSSA that would impartially and independently oversee all schools.

Why Has the Establishment of Independent SSSAs Stalled?

There hasn't been much significant progress, despite the National Education Policy (NEP) 2020's explicit support for the establishment of autonomous State School Standards Authorities (SSSAs). The Ministry of Education must give legislative establishment of truly autonomous regulatory bodies in Union Territories top priority in order to go beyond symbolic reforms. These organizations ought to be set up to function with genuine independence, neutrality, and impartiality—a powerful model for state governments to follow.

1.4 Role of Industry in Skill Development

India's growth depends on skill development, but the government cannot accomplish this on its own. Only 36% of Indian businesses provide formal training to full-time employees, compared to 80% in China, according to the World Bank Enterprise Surveys (2014). Employers are reluctant to invest in skilling, and employees lack the resources or motivation to pay for it themselves. The Chairman of the NSDA and NSDC has referred to this as a "market failure."

Industry participation is steadily rising, which is encouraging. PSUs and corporations are stepping up through CSR programs and investing in the skill development of young people. Their contributions include funding, support for infrastructure, acknowledgment of prior

learning, and the adoption of occupational standards and national qualification frameworks. PowerGrid, NTPC, Coal India, Ambuja Cements, Essar, and Coca-Cola are a few notable examples.

More industry investment must be mobilized, and candidates must have access to training materials, in order to scale these initiatives. A strong credit market with collateral guarantees and careful collaboration with the private sector are necessary for this. In order for skill development to be successful, industry must take the lead in determining the curriculum, course content, and relevance; the government's role is to regulate, not to implement.

2.0 Literature Review

The complex interrelationships among education, skill development, and lifelong learning are highlighted by research on human capital development in knowledge-based economies. It is becoming more and more important to comprehend these connections as global economies shift to knowledge-driven models (Akhmedjonov, 2010).

The Basis of Intellectual Capital: Education

The foundation of intellectual capital is generally acknowledged to be education. World Bank studies highlight the importance of education in fostering innovation and economic resilience by demonstrating a strong relationship between GDP growth and educational investment (World Bank, 2014). Additionally, according to the RAND Corporation, workforce training and formal education greatly raise the possibility of innovation in businesses (Akhmedjonov, 2010).

Skill Development and Productivity

One of the main forces behind inclusive growth and the fight against poverty is skill development. It promotes sustainable business development, increases productivity, and improves employability (Singh, 2021). However, a variety of factors affect productivity, from infrastructure investment and macroeconomic strategies to skilled labor and technological innovation.

Productivity increases show up differently at different levels:

- Economic: Real GDP growth

- Businesses: Higher profitability
- Employees: Greater pay

Factors That Influence Productivity Growth:

Better machinery and technological advancements; better management techniques; infrastructure and educational investments; increased worker skills and occupational safety; and favorable labor market and macroeconomic conditions are all factors contributing to the productivity boost. (Singh, 2021)

One of the many factors is skill development, which needs to be incorporated into more comprehensive development policies. These regulations ought to be sector-specific and cover the availability, caliber, and applicability of training for a range of demographic groups.

Global Evidence and Sectoral Needs

Evidence from developed economies demonstrates that the cycle of low wages and low skills can be broken by investing in education and skills to facilitate transitions to high-growth sectors (Akhmedjonov, 2010). Meeting the demands of rapidly expanding sectors for skilled labor is a challenge in India. This calls for

- increased investment in training infrastructure
- closer cooperation between employers and training providers.
- acknowledgment and certification of non-formal skills;
- training in entrepreneurship to ease entry into the formal sector (Singh, 2021).

Although workplace training is essential for increasing productivity, there are obstacles because of India's sizable informal economy. In order to achieve economies of scale and boost productivity across smaller businesses, solutions include creating industrial clusters and motivating lead firms to take the lead in skill development initiatives (Brown & Sitzmann, 2011).

Inclusive Growth through Skill Development

Linking skills to productivity benefits not only enterprises and the economy but also marginalized populations. Lack of access to quality education and training traps vulnerable

groups in low-skill, low-productivity employment. The National Skill Development Policy provides a framework to ensure inclusive access to training, enabling all citizens to contribute to and benefit from economic growth (Ministry of Skill Development and Entrepreneurship, 2015).

Tailored approaches are needed for different groups, such as:

- Improving agricultural marketing and rural infrastructure
- Providing targeted training for persons with disabilities
- Addressing the needs of migrant workers

Strategic Integration for Future Challenges

Businesses, the economy, and marginalized groups all gain when skills are linked to productivity. Vulnerable groups are trapped in low-skill, low-productivity jobs due to a lack of access to high-quality education and training. All citizens can contribute to and profit from economic growth thanks to the National Skill Development Policy's framework for ensuring inclusive access to training (Ministry of Skill Development and Entrepreneurship, 2015).

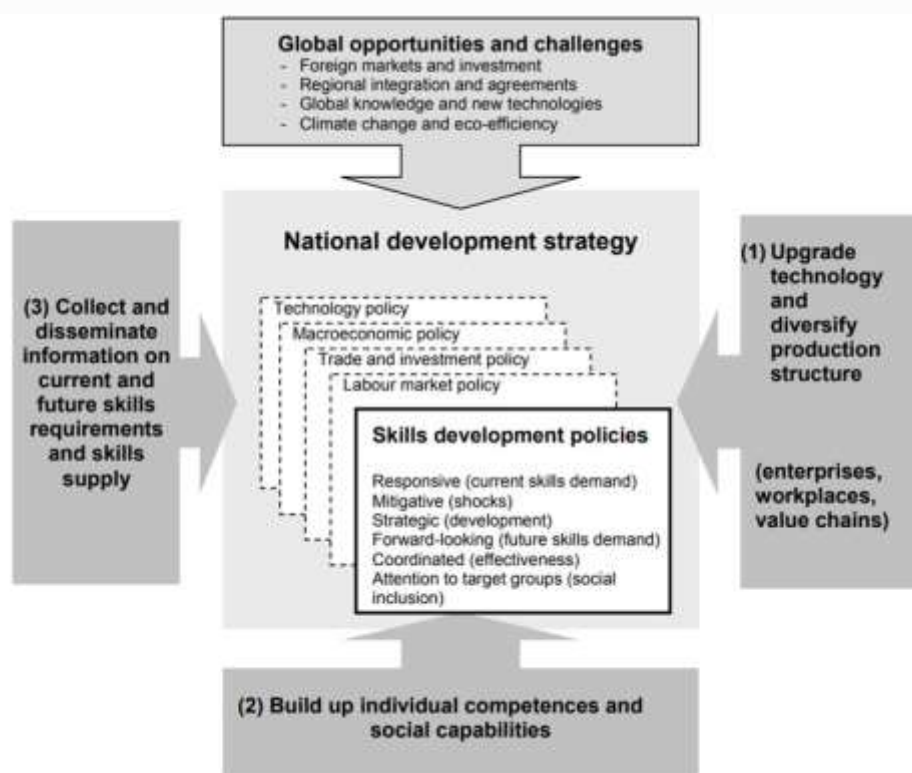


Fig 2 - Skill Development Strategy for Productivity, Employment and Sustainable Development

Source: Skills for improved productivity, employment growth and development ILO 2008

3.0 Objectives and Methodology (Case Studies & Case Analysis)

Objectives:

- To examine the state of skill-development programs in India at the moment.
- To investigate how skill development can improve workforce employability and productivity.
- To determine and assess the main obstacles to efficient skill development across industries.
- To investigate potential avenues for skill development advancement in India as well as strategic directions.

Methodology (Case Studies & Case Analysis)

Case Study	Overview	Key Contributions	Challenges
Digital India Initiative	Launched in 2015 to transform India into a digitally empowered society.	-Boosted internet access, especially in rural areas. -Enabled e-governance and digital services. -Promoted digital literacy.	-Rural infrastructure gaps. -Low digital literacy. -Cybersecurity concerns. -Slow rural connectivity
Tata Consultancy Services (TCS)	A global leader in IT services, consulting, and business solutions, founded in 1968.	-Contributed significantly to IT outsourcing and consulting. -Focused on innovation in AI, cloud computing, blockchain. -Large-scale employment generation.	-Competition with global tech firms. -Regulatory challenges abroad. -Automation reducing IT job opportunities. -Need for continuous innovation

4.0 Findings and Scope of Research

Findings:

- a. The Skills Index assesses learning outcomes as well as skill activation and matching, revealing how well skills are applied in job markets (Brown & Sitzmann, 2011).
- b. Enhancements in education quality, English proficiency, on-the-job training, and improved access to job information are necessary to close the skill gap among educated people in India (Majumder, Mukherjee, & Ray, 2017).
- c. The conceptual underpinnings of India's skill gap are frequently inadequate. Although there are real skill shortages in some industries, others are limited by business issues that might be better resolved by more comprehensive policy changes as opposed to skill development alone (Majumder et al., 2017). Employers frequently report a mismatch between the skills possessed by the educated workforce and the actual competencies demanded by the labor market (Majumder et al., 2017).
- d. To maintain employability and allow businesses to stay competitive, lifelong learning, skill improvement, and ongoing education are crucial (Molina & Schettini, 2021).
- e. To guarantee coherence and efficacy in workforce planning, skill development plans and employment policies need to be closely matched (Press Information Bureau, 2020).
- f. Productivity, innovation, and global competitiveness are all positively connected with strategic investments in education and skill development (Lehmann, 2007).
- g. To effectively develop human capital in response to the changing needs of the knowledge economy, it is essential to foster a culture of ongoing learning and adaptability (Salas & Weaver, 2016).
- h. The intricate relationships between education, skill development, and lifelong learning are revealed by research on human capital in knowledge-based economies (Lehmann, 2007).
- i. Although education imparts fundamental knowledge, continuous skill development and opportunities for lifelong learning are necessary for its effective application (Molina & Schettini, 2021).

Scope of Research

The purpose of this study is to investigate how skill development is changing in India, especially as it relates to new technologies and how they are incorporated into talent development plans. The study emphasizes the multifaceted role of skill development in preparing the workforce for future demands, which is in line with the larger goal of Viksit Bharat 2047.

The following topics have been chosen as important research directions for the future, providing insightful information to maximize skill development programs and improve employability:

- **Government Initiatives' Effectiveness:** In order to improve policy and allocate resources, it is crucial to evaluate the long-term effects of government-led skill development initiatives on employability across a range of demographic groups.
- **Industry Partnerships:** Examining the function of public-private partnerships can show how cooperative initiatives raise training programs' relevance, match them with industry demands, and improve job placement results.
- **Sector-Specific Skills:** To make sure that training programs stay up to date with labor market trends, extensive research is required to determine the skill requirements in developing industries like advanced manufacturing, artificial intelligence, and green energy.
- **Informal Learning:** A more comprehensive understanding of employability outside of formal education can be obtained by investigating the role of informal learning experiences, such as internships, apprenticeships, and community-based training.
- **Examining how cutting-edge technologies (such as AR/VR, AI, and digital platforms) are incorporated into skill-development programs can help determine how they affect learning outcomes, accessibility, and workforce preparedness.**

5.0 How to Make India a Human Capital Powerhouse

India recently overtook China as the world's most populous nation (UNFPA, 2023). By 2030, more than 1 billion people are expected to be in the working-age group (15–64), putting India in a unique position to take advantage of its demographic

dividend. If properly developed, this enormous youth population has the potential to make India a human capital powerhouse on a global scale.

Leveraging the Youth Potential:

Young people in India are spearheading innovation in a variety of fields. The nation's entrepreneurial ecosystem is flourishing, with over 80,000 startups and 100 unicorns. Young Indians' inventiveness is evident in advancements in financial services, healthcare, education, and agriculture. With 47% of STEM graduates being female, India leads the world in STEM education as well—a sign of inclusive progress.

India's competitiveness and GDP can be greatly increased by this demographic advantage, especially in the manufacturing and service sectors. A comprehensive investment in youth well-being that addresses health, nutrition, education, skill development, and financial inclusion is necessary to reach this potential.

Strategic Investments in Human Capital:

Adolescents and young adults must be given priority in development programs in both urban and rural areas, as they make up 26% of the population. Better health and education outcomes are already being achieved as a result of programs like PMJAY (Ayushman Bharat), the National Nutrition Mission, and the National Education Policy (NEP).

The young people will be more prepared to enter the workforce as these results improve. The development of skills becomes crucial at this point. The private sector must actively participate in the shift from a Skill India to a Skilled India. Training will result in meaningful employment if there is a market-aligned, demand-driven skilling ecosystem. As a crucial component of creating jobs and wealth, entrepreneurship must also be promoted.

Empowering Women for Inclusive Growth:

India's human capital strategy places a strong emphasis on women. This priority is reflected in Prime Minister Narendra Modi's focus on women-led development during India's G20 Presidency. There has been progress:

- The percentage of bank accounts run by women increased from 53% in 2015–16 to 79% in 2019–21.
- There has been an improvement in maternal and child health indicators (MMR, IMR, and U5MR).
- Access to menstrual hygiene products and sexual health awareness have grown.
- Delays in marriage and lower fertility rates have resulted from family planning services and education.
- At 2.0, India's total fertility rate is currently below the replacement level of 2.1.

The emphasis is shifted from population control to optimizing the current population composition as a result of this demographic stabilization.

Sustainability and Global Leadership:

India must also give sustainability and climate action top priority in order to create resilient, youth-led communities. Planning for development must take environmental issues into account as they have a growing impact on socioeconomic dynamics.

In addition to being the most populous country in the world, India is also the largest democracy and the fifth-largest economy in the world. India is positioned to become a global manufacturing hub and possibly the startup capital of the world thanks to its expanding digital user base, supportive policy environment, and easy access to capital.

In line with the goals of its G20 Presidency, India must make the most of its young workforce and low dependency ratio in order to achieve resilient, inclusive, and long-term growth, becoming a true human capital powerhouse and a global exporter of skilled labor.

6.0 Concluding Discussion:

Employability and inequality—not just in the economy but also, increasingly, in access to health and education—are two interconnected issues facing India. The nation's poor and unequally distributed health and education systems, particularly at the foundational levels, are primarily to blame for these discrepancies.

Even though education opens doors to opportunity and personal freedom, it is skills that give this freedom purpose by allowing people to prosper economically. Over the next ten years, India's demographic profile is predicted to peak in the working-age group (15–59), providing a brief window until around 2040 to fully capitalize on its demographic dividend. Because of this urgency, concerted, strategic efforts are needed to skill the populace and establish India as the world's skill capital.

It is crucial to:

- Convert research results into workable policies in order to accomplish this.
- Encourage a culture of lifelong learning that encourages ongoing skill development.
- Increase the size and reach of programs for skill development at all governmental levels.

The effectiveness of India's human capital investments will be just as important to its development in the future as economic reforms. The cornerstone of inclusive growth, innovation, and global competitiveness is a workforce that is educated, skilled, and healthy.

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RELATION BETWEEN BANKING SERVICES OPENNESS AND FINANCIAL DEVELOPMENT IN INDIA

***Dr. Rabia Khatun**

Abstract:

The objective of this paper is to examine the relationship between banking service openness and financial development in India for the period 1990-2018. Banking service openness is analysed through foreign investment policy in banking service as well India's specific commitment made to General Agreement on Trade in services(GATS). To understand the impact of openness in banking services on financial development of India, we have done the regression analysis through Ordinary Least Square method(OLS). For the regression analysis, the openness to banking services is defined as the ratio of trade in banking services to GDP and independent variable financial development is defined as bank credit to private sector. The study found that there is a positive and significant relationship between openness in trade in banking services and financial development. It is found that 1 percent increase in trade in banking services, causes 0.11 percent increase in total credit to private sector, indicating that the government should try to remove barriers from trade in banking services to develop better financial structure and therefore promote higher growth.

Keywords: Financial development, banking services, foreign investment,

Introduction:

Strong financial system play very important role in the process of economic development and banking sector plays very important role for overall financial sector development. In developing countries foreign banks are considered as more efficient than domestic banks (Hassan, Sanchez, and Yu, 2011). As developing countries lacks on advanced

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technology as well as research and development, opening the banking sector can help to get economies of scale and help domestic bank to manage the risk. Foreign bank entry increases domestic competition, access to financial services, and enhance financial and economic performance of borrowers (Levine, 1996). In this regard, several literatures find evidence of a positive role of foreign bank entry in the stability of the overall financial sector in developing countries. They claim that foreign banks penetration led to more stable banking sector in these countries (Crystal, Dages, & Goldberg, 2002; Mhadhbi, K., 2014).

While foreign banks entry is generally thought to have positive effects on financial development in host countries, especially through increased credit extension, some studies find more ambiguous results. Some research shows that foreign banks cherry picks borrowers (Azmeah, Al Samman, & Mouselli, 2017; Beck & Martinez Peria, 2008). It weakens the access to financial sector. Detragiache et al. (2008) give evidence of a negative impact of foreign bank entry on private credit. On the other hand proponents of foreign bank entry claim that they should improve the quality, pricing, and availability of financial services. They will directly bring new and better skills, management techniques, training procedures, technology, and products to the domestic market. For example, advances in credit scoring methodologies coupled with enhanced computer power and increased data availability might encourage foreign banks to expand into soft information borrowers (Petersen & Rajan, 2002).

Barriers Based On Specific Commitments:

As per the GATS document every member country has to provides schedule of specific commitment across all services. Member countries may include certain restriction on specific service including banking services to protect their domestic economy (Khatun, R., 2020). Financial services broadly include banking services and insurance services. The study focused on specific commitments on banking services. Specific commitments are minimum guarantee provided by a member country to other member countries that the conditions of entry and operation in the domestic market will not be changed to their disadvantage. In this regard, Borchert et al., 2012, found that policy commitments made by countries do not reflect actual policies in many cases.

Barriers Based On Practice:

Barriers placed on specific commitments does not necessarily represent the actual policies (Borchert et al., 2013). Therefore, there is a need to analyze the barriers placed in practice. Borchert et al., 2012, 2013, tried to measure the barriers in banking services imposed in practice. They collected information on 103 countries for services trade policies across a range of services and the relevant modes of supply and constructed Services Trade Restrictive Database (STRD). STRD includes information on services trade through mode 1, mode 3 and mode 4. The focus of their research remains on how policy measures discriminate against foreign services or foreign service providers (FSPs). With respect to restrictions on financial services, they have found that both banking and insurance services are relatively free from explicit restrictions, contrary to the general perception that governments maintain a precautionary restriction in financial services (Khatun, R., 2020). They found that there is no significant restriction on either Mode 1 or Mode 3 in more than half of their sample countries. Only a few countries remain significantly restrictive namely, Ethiopia, Iran, Zimbabwe and Qatar. The survey also reveals that countries do restrict cross border trade in financial services more stringently than FDI. Within the banking sector, offering deposit by availing services across borders is in general more restricted than borrowing from abroad. They have found this pattern to be uniform across all regions worldwide.

With respect to actual policy and GATS commitments, the survey reveals that, in all regions of the world, actual policy is substantially more liberal than the GATS commitments. Therefore, it is argued that commitment in services are twice as restrictive as the actual policies. As a result, specific commitment in services does not appear to offer much liberalization. Therefore, it is suggested that using GATS commitments as a proxy for openness in services may be misleading (Borchert et al., 2013).

Foreign Investment policy for banking services in India:

On August 28th 2017, the Department of Industrial Policy and Promotion (DIPP) announced the revised Foreign Direct Investment policy 2017. The policy incorporated various notifications regarding FDI issued by the Govt of India during past years. The three main institutions that handle FDI-related issues in India are the Foreign Investment Promotion Board

(FIPB), the Foreign Investment Implementation Authority and the Secretariat for Industrial Assistance. However, FIPB has been abolished dated 5th June 2017. Post abolition of FIPB, now various ministries under the government of India are entitled to receive the foreign investment proposals forwarded by DIPP. The DIPP is renamed as Department for Promotion of Industry and Internal Trade on 27 January 2019, after internal trade was added to its mandate(DPIIT website)

As per the Foreign investment policy in India, in public sector bank foreign equity is permitted till 20% under government route. However, in private sector foreign equity limit is 74%. Out of which 49 % foreign equity is allowed through automatic route and beyond 49 percent to 74 percent under government route. The government of India has taken various reforms to liberalizing and simplifying the FDI policy to provide ease of doing business climate in the country that will also lead to larger FDI inflows (FDI policy 2017).

Data and Methodology

Data Source and Duration

The objective of this study is to examine the relationship between banking services openness and financial development in India for the period of 1990–2018. The data have been collected from world development indicators. The dependent variable for this study is credit to private sector (CRPS)(which has been used as a proxy to measure the financial development). The key independent variable is Openness in Banking Service(OPBS) defined as the ratio of trade in banking services to gross domestic product (GDP). Trade in banking services is defined by the sum of export and import of banking services. Apart from OPBS, some control variables, such as foreign direct investment (FDI), gross savings (GSAV) and GDP, have been included.

Methodology:

Unit root test have been applied on all the variables to check for the stationarity. We have applied both ADF and PP tests of stationarity and it is found that all the variables are stationary at first difference. After making the variables stationary, OLS method was adopted for regression analysis.

Model of the Study:

The model used in this study is as follows:

$$\ln CRPS = \alpha_0 + \alpha_1 \ln OPBS + \alpha_2 \ln FDI + \alpha_3 \ln GSAV + \alpha_5 \ln GDP + \mu$$

$\ln CRPS$ is the log of credit to private sector, $\ln OPTIFS$ is the log of openness in trade in financial services, $\ln FDI$ is the log of FDI defined as a ratio of FDI to GDP, $\ln GSAV$ is log of GSAV defined as ratio of GSAV to GDP and $\ln GDP$ is the log of (GDP) in 2010 constant US dollar.

Conclusion:

The regression result suggests the positive relationship between openness in trade in banking services and financial development. It is found that 1 percent increase in trade in banking services causes 0.11 percent increase in total credit to private sector. Therefore, the findings of the study have significant policy implication that the government of India. It should initiate more liberalisation on trade in banking services in order to strengthen its financial sector development and hence promote economic growth as several studies in the literature have found that there is a positive and long run relationship between financial development and economic growth (Khatun 2019, Bist, 2018; Christopoulos & Tsionas, 2004; Levine, 1993a, 1993b). Therefore, the conclusion drawn from this study is openness in banking services has a positive impact on financial development. It will enhance the financial structure of the economy by inviting foreign capital and competition in the economy, which ultimately increase the economic growth.

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