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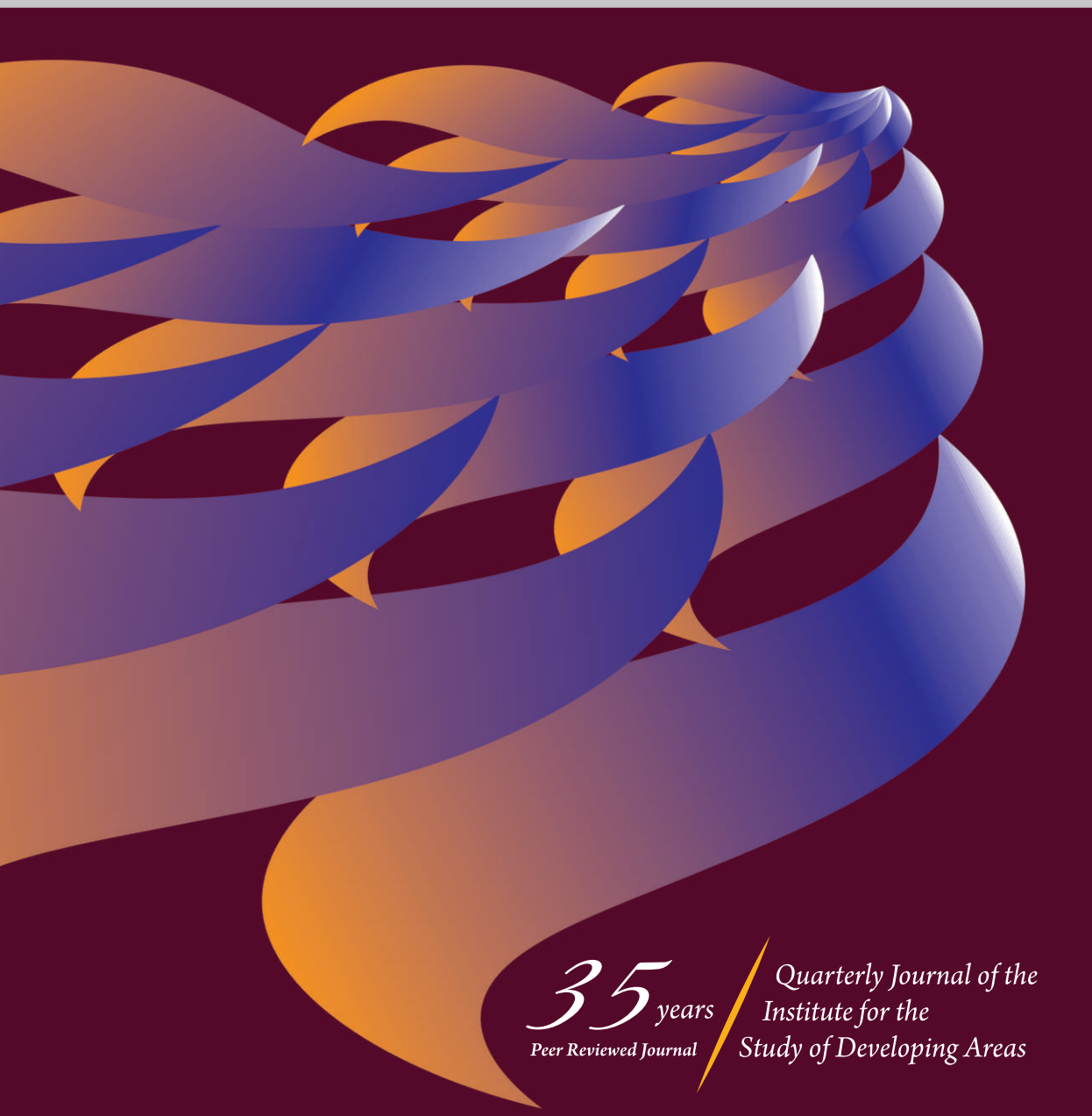

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CONTENTS

INTRODUCTION

In a world increasingly shaped by knowledge systems, technological disruptions, and shifting political alignments, scholarly inquiry must rise to meet the complexity of our times. This issue brings together a collection of articles that reflect the dynamism of contemporary academic research and address pressing societal, economic, and geopolitical challenges across diverse contexts. As academics, researchers, policymakers, and students, our role in addressing these challenges is crucial.

We begin with an in-depth examination of intellectual capital, where innovation and patents increasingly serve as the engines of economic growth. A comprehensive analysis of WIPO indicators situates India within the global patent landscape, underscoring both advancements and potential opportunities. The nation's increasing proportion of international patent filings signifies an enhanced capacity for knowledge-driven development—a trend that necessitates strategic focus from policymakers and industry leaders alike.

Technology, however, represents a double-edged sword. The article regarding artificial intelligence and digital equity provides a timely critique of how artificial intelligence, while promising efficiency, can exacerbate existing inequalities if left unchecked. The paper advocates for governance frameworks that promote transparency, accountability, and inclusive access, ensuring that artificial intelligence serves all segments of society rather than being limited to a privileged few.

Regarding foreign policy, the evolving relationship between India and Israel, characterised by pragmatism, strategic realignment, and nuanced recalibration under the Modi administration, has been examined. While balancing historical commitments with contemporary interests, this transformation in India's diplomatic stance provides valuable insight into how nations navigate an increasingly dynamic geopolitical order.

On the domestic front, the article on Kerala's cooperative movement analyses and uncovers both resilience and vulnerability—financial soundness and diversification, as well as the imminent threats posed by globalisation and antiquated practices. This paper articulates a persuasive argument for integrating foundational cooperative principles with the competitive realities of contemporary society.

Kerala is also included in a study regarding municipal finance during the COVID-19 pandemic. The study provides empirical insights into revenue mobilisation, fiscal stress, and recovery patterns across municipalities. The findings raise significant questions regarding local governance,

decentralisation, and fiscal resilience during times of crisis.

Public health, particularly within Scheduled Tribes in India, constitutes a significant scholarly contribution. By utilising data from the National Family Health Survey, the study illustrates notable reductions in child mortality rates; however, it also reveals ongoing challenges related to anaemia and undernutrition. The paper emphasises the pressing necessity for targeted and culturally sensitive health interventions to mitigate these disparities.

The volume culminates in a comprehensive examination of autonomy as a mechanism for conflict resolution within ethno-nationalist contexts. In an era characterised by the increasing prominence of identity-based assertions globally, the article reaffirms the significance of autonomy frameworks as viable and peaceful solutions that reconcile the imperatives of self-determination with national unity.

The issue concludes with a powerful and poignant book review of Alpa Shah's The Incarcerations: Bhima Koregaon and the Search for Democracy in India. The review delves into the arrest and persecution of sixteen civil society activists—the BK-16—who championed the rights of Adivasis, Dalits, and Muslims. The book lays bare the growing criminalisation of dissent in India through a rich narrative and incisive critique. It weaves together the personal struggles and political convictions of figures like Sudha Bharadwaj, Stan Swamy, and Anand Teltumbde, revealing how neoliberal authoritarianism and Hindutva nationalism have converged to silence opposition. However, as the review poignantly concludes, even in the shadow of state repression, the seeds of democracy endure, awaiting the conditions to flourish once more. It is a fitting end to this volume: a reminder that scholarship, like resistance, must persist in the face of rising intolerance.

Together, these articles and book review provide rich, multidisciplinary insights into a world in transition. We hope readers find both intellectual engagement and policy relevance in these pages—hallmarks of the kind of scholarship we aim to foster. More importantly, we hope these insights inspire hope and optimism for the future.

ISDA JOURNAL • VOL.35 • NO.2 • 2025 • ISSN (PRINT) 0971-2550 • pp. 117-133

Dynamics of Global Innovation System vis-à-vis India: A Case of Patents

Shimnamol M * & Christabell P. J. **

Abstract: Intellectual capital has become a primary driver of economic growth in the knowledge economy, often outweighing the significance of traditional resource-based inputs. The study highlights the importance of patents in a successful innovation system. A well-designed patent system can significantly enhance innovation outcomes and support economic growth. The study's objectives include understanding the innovation ecosystem's global dynamics of the innovation ecosystem and exploring India's innovation landscape concerning patents. The methodology analyses WIPO indicators from 1985 to 2023, focusing on the Revealed Technological Advantage Index (RTA) and the Compound Annual Growth Rate (CAGR). The study identifies fluctuating trends in patent applications with notable peaks and troughs. The analysis indicates that Asia has become a hub for patent activity, accounting for approximately 68.7 per cent of global applications in 2023. The patent filing trend has shown a notable increase in India over the past two decades, with a significant growth rate of 24.59 per cent in 2022-2023.

Keywords: Knowledge Economy, Innovation System, Intellectual Capital, Patents, Patent Filing Trends in India.

Introduction

The premise of the knowledge economy has become a key force behind national growth and development in today's rapidly changing global environment. The knowledge economy underscores the growing significance of intellectual capital in driving economic growth, unlike past economies that relied heavily on material resources such as land and capital (Shapiro & Varian,1999).

The World Bank identifies four pillars of a knowledge economy: an innovation system that facilitates the creation, dissemination, and application of knowledge, encompassing research and development, technology transfer, and innovation in ICT infrastructure, ensuring a well-developed information and communication technology (ICT) ecosystem.

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This system facilitates the efficient creation, dissemination, and application of knowledge. Additionally, a trained and educated workforce, or human capital, can create, absorb and apply knowledge, supported by a system of financial and economic incentives. (Goldin,2024). The foundations of a knowledge economy lie in rewarding innovation, fostering entrepreneurship, and encouraging investment in knowledge-intensive activities (World Bank, 2007; OECD, 1999; European Commission, 2006)

The study begins with an introduction highlighting the significance of an effective innovation system within a knowledge economy. The second section outlines the research objectives. The third section details the research methodology, describing the techniques and approaches employed in the study. The fourth section presents the analysis and discussion of the findings. Finally, the fifth section provides the conclusion, summarising key insights and implications.

1. Objectives of the Study

1. To analyse the dynamics of the global innovation system through the lens of patents – This objective aims to examine the evolving trends and patterns within the global innovation ecosystem, emphasising the role of patents.

2. To explore India's innovation landscape with a focus on patents – This objective seeks to investigate the trajectory of India's innovation system by analysing patent filings, grants, and trends over time.

3. To assess India's technological advancements across various domains – This objective focuses on positioning India's technological growth within a global context by identifying key fields of innovation where the country has demonstrated significant progress. By examining patent data across different technology sectors, this study aims to highlight India's strengths, emerging areas of specialisation, and potential gaps that need to be addressed to enhance its global competitiveness in the knowledge economy.

2. Methods

This study employs a systematic approach to analyse the World Intellectual Property Organization (WIPO) indicators (1985-2023) and particularly focuses on the Revealed Technological Advantage Index (RTA) (Balassa,1961,1965) and Compound Annual Growth Rate(CAGR) In addition to WIPO, data specific to India is gathered from various authoritative sources, including the Office of the Controller General of Patents, Designs, and Trade Marks (CGPDTM) Indian Patent Office (IPO) Annual Reports, Statistical Data from Government Publications.

3. Analysis and Discussion

3.1. Patent Filing: A Global Overview

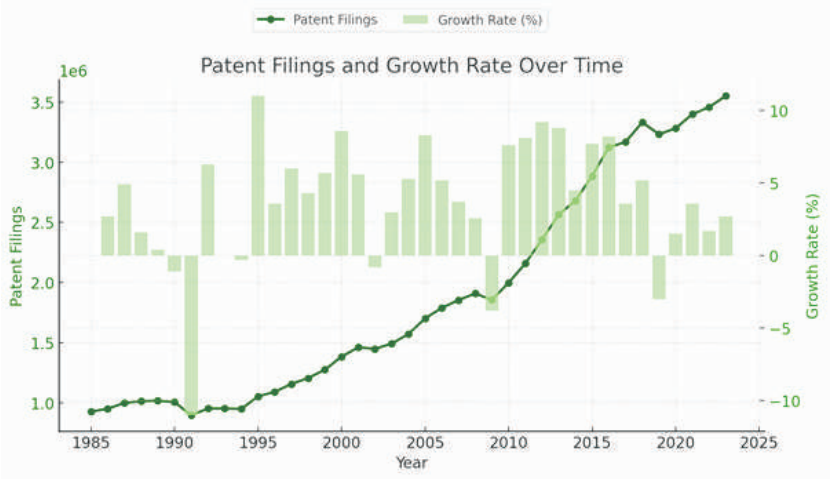
Over the past few decades, innovation, technical developments, and

changes in regional policies have all contributed to substantial shifts in the worldwide patent-filing environment. These patterns have been recorded by the World Intellectual Property Organisation (WIPO), which emphasises the dynamics of global patent activity and the significance of intellectual property (IP) rights in promoting innovation and economic growth. Information about the geographic distribution of patent filings can be found in the WIPO database. The WIPO framework has 193 member states as of 2023, all contributing to the worldwide ecology of patent filing. Over the past few decades, the global patent-filing landscape has undergone significant transformations driven by technological advancements, policy shifts, and the increasing importance of intellectual property (IP) rights in fostering innovation and economic growth. In 2023, global patent applications reached a record 3.55 million, marking a 2.7 per cent increase from the previous year, with Asia leading the innovation ecosystem, accounting for 68.7 per cent of total filings. China remained the top filer, followed by the United States, Japan, and South Korea, while India entered the top 10 for the first time, reflecting its growing focus on technological advancement. Germany led the continent in patent activity in Europe, though the region lags behind the U.S. and China in high-tech sectors. A key trend in recent years has been the rise of cross-border patenting, emphasising the globalisation of innovation and the strategic importance of securing IP rights in multiple jurisdictions. However, despite overall growth, the world's most innovative companies have shown a slowdown in patent filings, with a 2.3 per cent reduction in applications between 2019 and 2022, suggesting a potential shift in innovation strategies. Moreover, industry-specific analyses, such as those in smart manufacturing, indicate the need for aligning research and development strategies with evolving technological trends. As reported by the World Intellectual Property Organisation (WIPO), the dynamics of global patent activity continue to shape economic competitiveness, requiring policymakers, businesses, and researchers to closely monitor these trends to navigate the evolving innovation ecosystem effectively (WIPO, 2024).

Growth of Patent Filing: Global patent filings reached a significant milestone in 2023, with over 3.55 million applications, a 2.7 per cent increase from 2022. This steady upward trend reflects the growing reliance on patents to protect inventions and drive innovation. Factors such as the rise in innovators and entrepreneurs, increased Research and Development (R&D) activities, and market globalisation fostering cross-border collaboration have contributed to this growth. Notably, countries like the United States, China, and the Republic of Korea have played a pivotal role in driving the surge in patent applications.

Figure 1 shows the growth rate of patent filings worldwide, identifying the significant players in the patent landscape and evaluating the trends from 1985 to 2023. The global patent filings increased significantly over 39 years

Figure 1. Patent Filings Growth Rate Over Time



Source: Computed

from 1985 through 2023. Notably, most patent applications are concentrated in a few key countries: China, the United States, Japan, and South Korea. The trend in patent filings between 1985 and 2023 showcases a complex growth pattern, characterised by peaks and declines. For instance, during this period, the highest growth rate was recorded in the year 1996, reaching 24.9 per cent, a reflection of the surge in innovation activities at the time. In contrast, the lowest growth rate occurred in 1991, with a substantial decline of -11.0 per cent. This period coincided with economic recessions that affected many countries, reducing investments in R&D and innovation activities.

Trends in total patent filings show that Asia has emerged as a hub for patent activity, representing approximately 68.7 per cent of all patent applications submitted globally in 2023. This remarkable statistic reflects the continent's strategic focus on innovation and intellectual property protection as a driver of economic development. Nations like China have significantly enhanced their ability to file patents due to a strong national policy that encourages innovation and the utilisation of intellectual property, contributing nearly 1.68 million applications in 2023 alone.

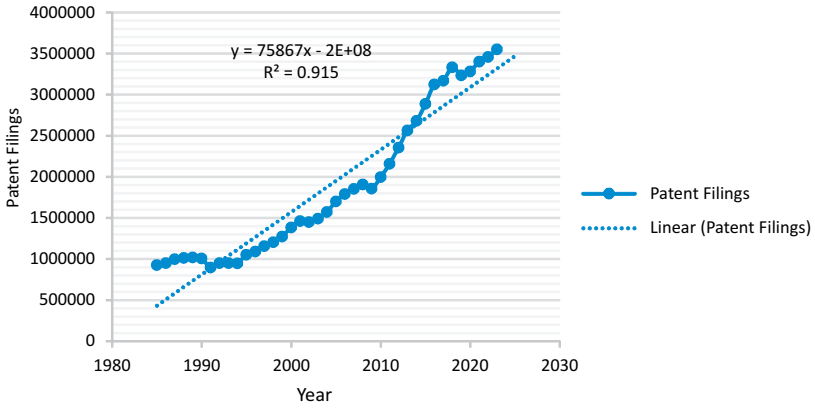
On the other hand, during the ten-year period from 2013 to 2023, the proportion of patent applications from North America and Europe steadily decreased. Europe's share dropped to 10.3 per cent over this period, while North America's portion decreased from 23.6 per cent in 2013 to 17.8 per cent in 2023 (WIPO, 2024). This change in the geographic distribution of patent applications highlights Asia's growing impact on the intellectual property landscape and signals a strategic realignment in the global innovation ecosystem.

Figure 2 presents a comparative analysis of patent-filing trends, revealing a diverse landscape characterised by distinct growth trajectories among leading nations. The trend line demonstrates a positive coefficient of 75867 for the period from 1985 to 2023. As nations continue to invest in innovation, the differences in patent filing trends highlight the impact of unique national policies and market dynamics. While China's trends reflect a dramatic increase in the innovation ecosystem, the United States, Japan, and South Korea exhibit varying degrees of growth influenced by multiple factors. The equation illustrates domestic statistical trends and serves as a lens through which to view global shifts in patent activities and the broader implications for innovation across continents. According to WIPO analysts, continuous investments in technological industries, including artificial intelligence (AI), biotechnology, renewable energy, and telecommunications, are significant drivers of this growth, which is expected to continue at a compound annual growth rate (CAGR) of roughly two to three per cent until 2030.

Distribution of total patent filings by resident and non-resident: Significant patterns illustrating the changing dynamics of international patenting behaviour can be observed in resident and non-resident patent filings from 1985 to 2023. The increasing prevalence of resident filings over non-resident registrations suggests a greater emphasis on local innovation and creating more robust R&D ecosystems across various regions.

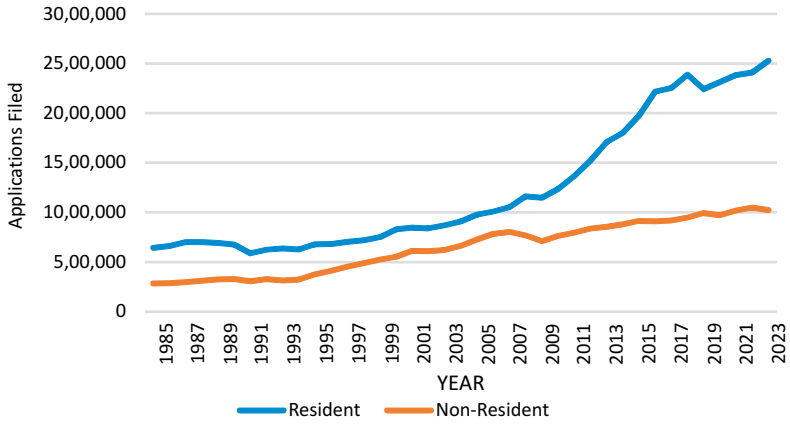
From Figure 3, it can be observed that there is a difference between resident and non-resident patent filings over the years. Resident filings are applications submitted by inventors or companies registered within the specific jurisdiction, while applicants outside that jurisdiction make non-resident filings. Both resident and non-resident filings have generally

Figure 2. Trends in total patent filings



Source: WIPO (Various Years)

Figure 3. Distribution of total patent filings by resident and non-resident



Source: WIPO,2024

shown an upward trajectory, particularly from the mid-1990s into the 2010s. This long-term growth aligns with increasing global innovation efforts and advancements in Technology. The years 1991 and 2009 saw declines in resident filings (with sharp drops of 11 per cent and 3.8 per cent, respectively), likely influenced by broader economic downturns. Conversely, the period from 2012 to 2014 demonstrates strong growth, indicating resilience and recovery in the innovation sector during these times.

After 2019, data shows a stabilisation of both resident and non-resident filings, suggesting a potential plateau influenced by market dynamics and shifting innovation priorities. The years from 2000 to 2012 generally reflect robust growth in both filing categories, with resident filings substantially increasing by over five million patents collectively during that period.

Per Capita Resident Patent Applications and R&D Expenditure, Selected countries 2019–2023: It explains how Research and Development expenditures by the public and private sectors result in tangible outputs such as patents, which are crucial indicators of economic growth and technological advancement. The number of patent filings made by citizens of a nation relative to its population size is referred to as resident patent applications per capita. This measure acts as a stand-in for a country's ability to innovate by demonstrating how effectively domestic organisations convert their research into patentable ideas. Conversely, R&D expenditure per capita calculates the amount spent on research and development in a nation in relation to its population. This investment illustrates the commitment of the government, business, and academic institutions to fostering innovation and technological development.

Countries with high scores in the resident filing per capita log and the

Research and Development per GDP log are typically innovation leaders, demonstrating a strong commitment to research and development activities. These countries often possess well-established technological infrastructures, robust protection of intellectual property rights, and significant government support for Research and Development.

Table 1 shows that the Republic of Korea exhibits a high resident filing per capita log (8.169) and a significant R&D per GDP log (3.874), indicating a strong innovation ecosystem. Japan, with a resident filing per capita log of 7.506 and an R&D per GDP log of 3.490, showcases a long-standing commitment to technological advancement and research. The United States of America displays moderate resident filing (6.698) and R&D spending (3.504), while Singapore also demonstrates moderate scores in both resident filing (5.745) and R&D spending. The third set of countries reflects lower scores, indicating emerging innovation ecosystems or economies with a different focus. India has a lower resident filing (3.104) than its R&D expenditure (1.875), suggesting potential inefficiencies in converting R&D investments into patentable outputs. Brazil has low resident filing (3.142) and R&D spending (2.454).

Global Published Patent Applications by Technology Sector: The analysis of Patent Applications Published by the Technology Field highlights the rapid evolution of various technologies over the last decade. Understanding these trends offers stakeholders critical insights that inform investment decisions, policy formulation, and strategic planning in the ever-evolving technology landscape.

Table 1. Per Capita Patent Filings and R&D Investment, selected countries 2019–2023

Origin	Resident filing per capita log	RD per GDP log
High Resident Filing and R&D Expenditure		
Korea	8.168858	3.873698
Japan	7.506108	3.489513
Moderate Resident Filing and R&D Expenditure		
USA	6.697573	3.504355
Singapore	5.745281	3.014063
Low Resident Filing and R&D Expenditure		
India	3.103709	1.874874
Brazil	3.141915	2.453588

Source: WIPO

The analysis of patent applications from 2011 to 2021 indicates pronounced growth across multiple technology sectors. Electrical Engineering has experienced a steady increase, with applications rising significantly, reflecting advancements in energy-efficient systems and machinery. The Computer Technology sector has shown particularly robust growth, signifying a thriving innovation environment driven by increasing digitisation. Medical Technology also reported notable growth, showcasing a heightened focus on health-related innovations, including devices and diagnostic tools. Similarly, Biotechnology has gained momentum, emphasising developments in genetic engineering and various biological applications. The pharmaceutical sector continues to grow, indicating a sustained commitment to improving drug development and treatment options. Digital Communication Technologies have also seen a meaningful increase in patent activity.

Trend in Patent Grants Worldwide: The growth and distribution of grants over the years reveal significant patterns that can guide strategic financial decision-making in various organisations and sectors. The year with the highest growth rate was 2010, at 12.4 per cent, reflecting a substantial increase in grants that year, possibly influenced by increased funding priorities or the introduction of new grant opportunities. Conversely, the year with the lowest growth rate was 2014, reporting a mere 0.3 per cent, indicating stagnation and potentially linked to budget constraints or shifts in funding policy.

Table 3 presents several observed trends. Grants experienced rapid growth in the early years, particularly from 2009 to 2012. However, the period between 2013 and 2014 saw a notable decline in growth. Although growth

Table 2. Published Patent Applications Worldwide by Field of Technology

Technology Sector	-Total Published Patent Applications 2011	Number of published applications-2016	-Total Published Patent Applications 2021	The proportion of the Total (per cent)-2021	Growth Rate Average(per cent) (2011-2021)
Electrical Engineering	588456	818950	1132615	33.06	7.82
Instruments	263437	400761	552450	16.125	7.84
Chemistry	423402	472114	728684	21.269	5.32
Mechanical Engineering	372956	603600	732285	21.374	6.8
Other fields	140218	227759	279892	8.169	6.18
Total	1788469	2523184	3425926	100	33.96

Source: Computed from WIPO,2024

Table 3. Trend in Patent Grants Worldwide, 2009–2023

Year	Filed	Grants	Patent Gap	Growth Rate of Patent Grants (per cent)
2009	18,55,900	8,13,900	1,042,000	4.2
2010	19,97,500	9,15,200	1,082,300	12.4
2011	21,58,300	10,02,000	1,156,300	9.5
2012	23,56,500	11,38,000	1,218,500	13.6
2013	25,64,400	11,69,700	1,394,700	2.8
2014	26,80,100	11,73,500	1,506,600	0.3
2015	28,86,600	12,39,400	1,647,200	5.6
2016	31,24,700	13,51,400	1,773,300	9.0
2017	31,68,700	14,03,500	1,765,200	3.9
2018	33,32,700	14,28,100	1,904,600	1.8
2019	32,32,900	15,06,100	1,726,800	5.5
2020	32,82,300	15,96,900	1,685,400	6.0
2021	34,00,600	17,55,100	1,645,500	9.9
2022	34,57,800	18,23,900	1,633,900	3.9
2023	35,52,100	20,08,200	1,543,900	10.1
CAGR of Patent Grants = 8.68%				

Source: Computed From WIPO,2024

rebounded significantly from 2015 onwards, the rates were generally lower than during the earlier rapid expansion. The analysis of grant dynamics over the years illustrates an overall positive trend in funding availability, with an 8.68 per cent CAGR indicating consistent growth, despite certain years experiencing notable slowdowns or increases.

Patent grants for the top ten origins: The patent grant statistics for the top ten origins in 2023 highlight important trends in worldwide innovation. China (16.9) and India (57.7), two nations with high patent counts and strong growth rates, demonstrate the crucial need to promote innovation and safeguard intellectual property in a cutthroat global market. Conversely, the stagnant growth of established economies raises questions about their future contributions to the innovation landscape.

Table 4 reveals that China continues to lead in patent grants, showcasing both significant resident applications and total patents. The impressive 16.9 per cent growth indicates a robust innovation ecosystem where local inventors actively pursue patent protection. The United States follows closely, with its patent numbers reflecting a strong global presence, albeit with a much slower growth rate than China. Interestingly, India recorded the highest growth rate of 57.7 per cent among the countries listed, highlighting a burgeoning inventive culture and increased investment in innovation. Despite having a relatively lower total of patent grants, India's trajectory suggests it could become a future powerhouse in technological advancements. In contrast, countries like Germany and France displayed negative growth percentages, which may signal challenges within their innovation ecosystems or market saturation. Such declines necessitate a closer examination of their R&D policies and market conditions to

Table 4. Patent grants for the top ten origins, 2023

Origin	Resident	Abroad	Total
China	8,19,234	69,746	8,88,980
US	1,48,071	1,46,771	2,94,842
Japan	1,58,587	1,25,770	2,84,357
The Republic of Korea	99,315	55,343	1,54,658
Germany	28,138	45,136	73,274
France	15,405	19,610	35,015
India	16,931	8,859	25,790
UK	7,265	16,861	24,126
Switzerland	4,622	17,113	21,735
Italy	10,926	8,728	19,654
Russian Federation	17,647	1,444	19,091

Source: WIPO, 2024

stimulate renewed growth.

Patent grants by region: Understanding the grant environment in various geographical areas is essential for a study of this nature. Analysing data from 2013 to 2023 can provide insights into funding trends, changes in regional priorities, and the overall dynamics of international grant distribution.

Table 5 illustrates that Asia experienced the largest rise, with an impressive growth rate of 112.63 per cent, elevating its share of worldwide awards from 56.1 per cent to 69.7 per cent. The comparison of grant distribution among regions in 2013 and 2023 reveals notable differences in funding trends. Meanwhile, Africa's share decreased from 12.7 per cent to 10 per cent, despite a substantial increase of 47.19 per cent. Europe maintained a more moderate growth rate of 22.74 per cent and observed a decline in its share from 62.2 per cent to 54.9 per cent, while Latin America and the Caribbean reported an increase of 87.61 per cent. Even though its overall

Table 5. Regional Distribution of Patent Grants: 2013 vs. 2023

Region	Total Patent Grants		Resident Share of Patent Grants (per cent)		Global Share of Total Patent Grants		Average growth (per cent)	CAGR
	2013	2023	2013	2023	2013	2023	2013–2023	
Africa	8,900	13,100	12.7	10.0	0.8	0.7	3.9	47.19%
Asia	6,55,900	13,99,900	73.2	79.2	56.1	69.7	7.9	112.63%
Europe	1,61,900	1,98,800	62.2	54.9	13.8	9.9	2.1	22.74%
Latin America and the Caribbean	19,300	36,100	6.6	8.2	1.6	1.8	6.5	87.61%
Northern America	3,01,700	3,42,800	45.2	44.0	25.8	17.1	1.3	13.66%
Oceania	22,000	17,500	6.4	6.1	1.9	0.9	–2.3	–20.45%
World	**11,69,700**	**20,08,200**	**61.6**	**68.4**	**100.0**	**100.0**	**5.6**	

Source: Computed from WIPO,2024

contribution to worldwide grants dropped significantly from 25.8 per cent to 17.1 per cent, North America experienced a growth of 13.66 per cent. In contrast, Oceania faced challenges due to a significant decline of 20.45 per cent in its grants.

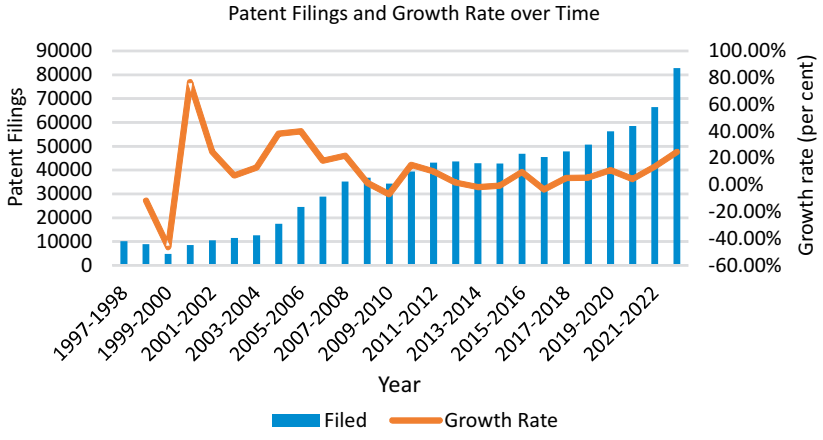
3.2. Overview of Growth in Patent Filing in India

Over the past twenty years, India's patent filing trend has shown a notable increase, which is indicative of the nation's developing innovation environment and growing focus on intellectual property rights. This paper explores the development of patent applications in India, emphasising significant data, patterns, and ramifications for the nation's innovation landscape going forward.

Figure 4 outlines patent application submissions over multiple years, showing a steady increase in filings leading up to 2023. The data reveals that the highest number of patent filings occurred in 2022-2023, indicating a thriving innovation environment. This marks an impressive growth rate of 24.59 per cent compared to the previous year (2021-2022). In contrast, the period from 1998-1999 experienced a substantial decline of -11.75 per cent, followed by an even sharper decrease of -46.30 per cent from 1999-2000. The most significant growth rates emerged post-2000, particularly during 2000-2001, which saw an astounding increase of 76.75 per cent, potentially reflecting the tech boom and significant advancements in various sectors.

Trend in Patent Grants in India: The trend in patent applications granted in India from 1997 to 2023 indicates substantial growth and reflects the country's evolving innovation landscape. Over the years, the number of patents granted has experienced significant fluctuations, mirroring

Figure 4. Patent Filings and Growth Rate Over Time in India



Source: Computed from

broader economic and technological changes.

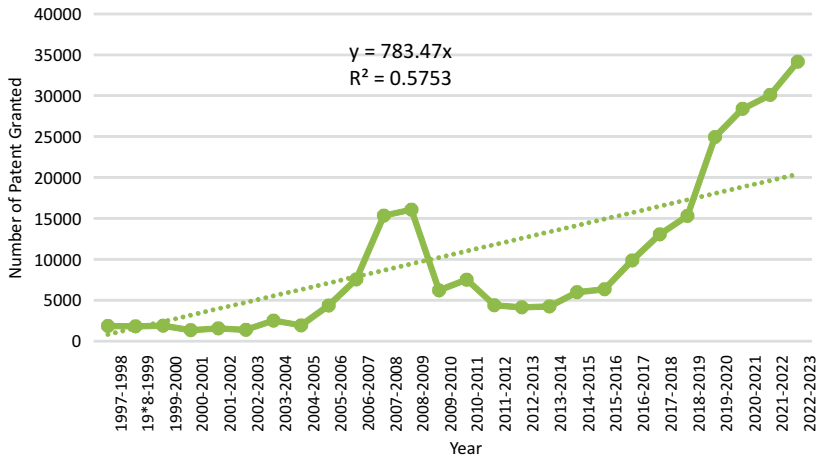
Figure 5 illustrates the trend line of Patent Grants in India from 1997 to 2023, displaying a positive linear trend with a slope coefficient of 783.47. The subsequent financial years maintained a strong upward trajectory, peaking in 2019-2020, which indicated an increase of approximately 63 per cent compared to the previous year (2018-19). The years 2020-2021 continued this trend.

Assess India's technological advancements across various domains

To assess India's technological advancements across various domains, we focus on positioning India's technological growth within a global context by identifying key fields of innovation where the country has demonstrated significant progress. By examining patent data across different technology sectors, this study aims to highlight India's strengths, emerging areas of specialisation, and potential gaps that need to be addressed to enhance its global competitiveness in the knowledge economy. For this, the Revealed Technological Advantage Index is used. The Revealed Technological Advantage (RTA) Index is a well-established metric used to assess a country's specialisation in specific technological fields. It was introduced by economist Béla Balassa in 1965. This methodology has been widely applied in various studies and reports. For instance, the Organisation for Economic Co-operation and Development (OECD) utilises the RTA index to analyse technological specialisation in fields like biotechnology, providing insights into national strengths and guiding policy decisions. Similarly, the European Patent Office (EPO) employs the RTA under the term "patent specialisation index" to assess countries' technological focuses.

The Revealed Technological Advantage Index (RTA) is a measure used to

Figure 5. Trend in Patent Grants in India from 1997 to 2023



Source: Government of India,2024

analyse a country's patenting activity in specific technology fields. It also allows for international comparison, enabling an assessment of how much a nation patents in specialised technology areas. This helps compare global patenting activity in a particular technology field and identify the level of technological advancement within a nation.

$$\text{Revealed Technological Advantage Index (RTA)} = \frac{\text{The Number of Patents in the given field of Technology of the given country}}{\text{The Total Number of Patents filed in the world for that particular Technology}}$$

Table 7 explains the context of electrical machinery, apparatus, and energy in the technology field, accounting for a 6.8 per cent share of total global applications. India has a share of 4.7, reflecting an RTA of 0.25. This is a relatively modest figure compared to some counterparts. For instance, China, the frontrunner in this area, demonstrates an impressive RTA of 2.51, underscoring its dominant position in patenting electrical machinery. The United States follows with an RTA of 1.98, signifying above-average engagement, while Korea and Japan show solid, albeit less competitive, RTAs of 1.34 and 0.85, respectively.

Table 8 explains that India has demonstrated significant engagement across various technological subcategories. Nevertheless, its RTA of 0.25 indicates substantial room for growth compared to leading nations such as Japan (1.5) and the USA. The country's relatively low RTA values in optics,

Table 7. Field of Technology - Electrical engineering

Sub Categories	Number of published applications, Global (2022)	Share of Total (per cent) 2022	India's Share	RTA				
				India	China	USA	Japan	Korea
Electrical machinery, apparatus, energy	230382	6.8	4.7	0.25	1.34	0.85	2.51	1.98
Audio-visual Technology	101542	3.0	1.2	0.25	0.58	0.62	1.07	1.22
Telecommunications	55728	1.6	1.6	0.25	0.32	0.47	0.49	0.54
Digital communication	180330	5.3	5.4	0.25	1.11	1.77	0.79	1.32
Basic communication processes	18158	0.5	0.4	0.25	0.09	0.17	0.18	0.12
Computer technology	420634	12.4	11	0.25	2.97	2.93	1.66	2.21
IT methods for management	92936	2.7	5.2	0.25	0.60	0.57	0.61	0.94
Semiconductors	108053	3.2	1.2	0.25	0.41	0.57	1.36	1.62

Source: Government of India. (2024)

Table 8. Field of Technology - Instruments

Sub Categories	Number of published applications, Global (2022)	Share of Total (per cent) 2022	India's Share	RTA				
				India	China	USA	Japan	Korea
Optics	70809	2.1	1.4	0.25	0.32	0.45	1.30	0.56
Measurement	201364	5.9	2.8	0.25	1.54	0.81	1.25	0.85
Analysis of biological materials	20689	0.6	0.2	0.25	0.11	0.19	0.10	0.12
Control	77256	2.3	4.1	0.25	0.53	0.45	0.72	0.47
Medical Technology	182367	5.4	8.7	0.25	0.79	2.02	0.97	1.06

Source: Computed

measurement, and analysis of biological materials signify a pressing need for enhanced focus and strategic investment in these fields. In the field of optics, India accounted for only 1.4 per cent of the global Total of 70,809 applications in 2022, leading to an RTA of 0.25. This relatively low index reflects a significant gap in comparative capabilities, especially when compared to China's RTA of 0.32, the USA's 0.45, and Japan's 0.56. India's position indicates a need for increased focus and investment in optics to enhance its technological standing in this domain.

Table 9 explains that India exhibits a mixed performance in the field of chemistry when compared to leading nations such as China, the USA, Japan, and Korea. In organic fine chemistry, India holds a share of 5.1 per cent of the global total applications with an RTA of 0.25, significantly lagging behind China (0.34), the USA (0.57), and Korea (0.47). Similarly, in biotechnology, India's share stands at 3.2 per cent, with an RTA of 0.25, trailing both China and the USA, which have RTAs of 0.34 and 1.06, respectively. The pharmaceuticals sector presents a slightly better picture, with India's share at 4.7 per cent, but still far from the USA's leading RTA of 1.47. In fields such as macromolecular chemistry, polymers, and food chemistry, India's RTAs further emphasise the need for increased focus, standing at 0.25 compared to notable performances from China and other countries. Environmental Technology reveals a more promising scenario for India, with a higher RTA of 2.63, indicative of a growing emphasis on sustainability and innovation in this area.

Table 10 exhibits India's mechanical engineering performance, revealing strengths and areas requiring further enhancement compared to leading nations such as China, the USA, Japan, and Korea. In the handling subcategory, India has a modest share of 1.9 per cent with a Relative Specialisation Index (RTA) of 2.77, signifying a competitive edge in this

Table 9. Field of Technology - Chemistry

Sub Categories	Number of published applications, Global (2022)	Share of Total (per cent) 2022	India's Share	RTA				
				India	China	USA	Japan	Korea
Organic fine chemistry	66077	1.951635751	5.1	0.25	0.34	0.57	0.36	0.47
Biotechnology	81657	2.411803207	3.2	0.25	0.34	1.06	0.31	0.42
Pharmaceuticals	105211	3.107488974	4.7	0.25	0.38	1.47	0.36	0.52
Macromolecular Chemistry, polymers	50086	1.479329089	1.4	0.25	0.28	0.26	0.67	0.38
Food chemistry	40439	1.194397417	2.1	0.25	0.30	0.19	0.23	0.45
Basic materials chemistry	67393	1.990504837	3.9	0.25	0.43	0.43	0.59	0.40
Materials, metallurgy	74146	2.189959961	2.1	0.25	0.58	0.21	0.61	0.40
Surface technology, coating	51297	1.515096919	1	0.25	0.30	0.26	0.67	0.33
Micro-structural and nanotechnology	5941	0.17547207	0.6	0.25	0.04	0.02	0.03	0.02
Chemical engineering	102656	3.032025056	2.2	2.39	0.92	0.40	0.38	0.54
Environmental Technology	58013	1.713459219	2	2.63	0.56	0.19	0.26	0.35

Source: Computed

Table 10. Field of Technology - Mechanical Engineering

Sub Categories	Total Published Patent Applications Worldwide (2022)	Percentage of Global Total (percent) 2022	India's Share	RTA				
				India	China	USA	Japan	Korea
Handling	99076	2.93	1.9	2.77	0.73	0.43	0.84	0.52
Machine tools	102288	3.02	1.3	4.05	1.00	0.28	0.61	0.40
Engines, pumps, turbines	54861	1.62	2.4	2.19	0.28	0.32	0.54	0.33
Textile and paper machines	39041	1.15	1	5.27	0.28	0.17	0.61	0.19
Other special machines	114068	3.37	3.3	1.60	0.83	0.62	0.74	0.71
Thermal processes and apparatus	51360	1.52	1.4	3.76	0.41	0.17	0.46	0.40
Mechanical elements	69544	2.05	1.6	3.29	0.43	0.34	0.67	0.47
Transport	137709	4.07	4.8	1.10	0.66	0.72	1.46	1.08

Source: Computed

area. However, it remains considerably behind the USA's RTA of 0.84. The machine tools sector presents further divergence, where India's share is only 1.3 per cent. At the same time, it vastly underperforms with an RTA of 4.05, indicating a significant gap compared to China (1.00) and others. In the engines, pumps, and turbines category, India's share is 2.4 per cent with an RTA of 2.19, slightly ahead of Korea (0.54) but still below the indices of the USA (0.33). The textile and paper machines subcategory reflects a larger disparity, with India's RTA peaking at 5.27, sharply lower than the indices of its competitors. Nevertheless, in areas such as thermal processes, apparatus, and transport, India shows promise with RTAs of 3.76 and 1.10, respectively, indicating a robust presence.

Table 11 analyses India's performance across various fields- specifically in furniture and games, consumer goods, and civil engineering- and provides an overview of its innovation landscape compared to leading nations such as China, the USA, Japan, and Korea. In the furniture and games subcategory, India holds a 2.1 per cent share of global applications with a Relative Specialisation Index (RTA) of 2.51, indicating a competitive presence; however, it still trails behind the USA (1.18) and faces competition from China (0.36) and Korea (0.61). In the domain of other consumer goods, India achieved a two per cent share, boasting an impressive RTA of 2.63, outperforming China (0.30) and Korea (0.36) in this category while also demonstrating solid effort compared to Japan (0.75). Conversely, in civil engineering, India's share is 2 per cent with an RTA of 2.63, again reflecting competitiveness but falling short of China's stronger RTA of 0.96, suggesting that India has opportunities to develop its

Table 11. Other Technological Fields

Sub Categories	Number of published applications, Global (2022)	Share of Total (percent) 2022	India's Share	RTA				
				India	China	USA	Japan	Korea
Furniture, games	70797	2.09	2.1	2.51	0.36	0.43	1.18	0.61
Other consumer goods	59821	1.77	2	2.63	0.30	0.36	0.43	0.75
Civil engineering	115517	3.41	2	2.63	0.96	0.53	0.59	0.82

Source: Computed

capabilities in this area further.

Conclusion

This study aims to comprehensively analyse the global innovation ecosystem, focusing on patents as a key indicator of technological progress. By examining global patent trends, the research sheds light on the evolving dynamics of innovation systems worldwide. Additionally, by investigating India's patent landscape, the study seeks to assess the country's innovation trajectory, the effectiveness of its intellectual property framework, and its contributions to the global patent ecosystem. Furthermore, through an in-depth evaluation of India's technological advancements across various domains, this research identifies areas of specialisation, strengths, and gaps that need to be addressed to enhance India's global competitiveness in the knowledge economy. Ultimately, the findings of this study contribute to a better understanding of how patents drive innovation, technological leadership, and economic growth both globally and within India.

The comparative analysis of India's performance across various fields of Technology and innovation reveals a complex interplay of strengths and weaknesses relative to leading nations such as China, the USA, Japan, and Korea. While India demonstrates robust capabilities in specific sectors, such as civil engineering and consumer goods, where its RTA reflects a competitive edge, it continues to face substantial challenges in others, particularly in critical areas like machine tools and advanced mechanical engineering. Furthermore, the innovation landscape showcases India's potential but underscores the need for strategic investments and a concerted effort to enhance research and development funding, particularly in the private sector. To secure a stronger position in the global market, India must continue diversifying its technological capabilities, fostering international partnerships, and adapting its policies to promote greater competitiveness and innovation in established and emerging sectors.

References

Chen, D. H., & Dahlman, C. J. (2005). *The knowledge economy, the KAM methodology, and World Bank operations*. World Bank Institute Working Paper, (37256).

Goldin, C. (2024). *Human capital. In Handbook of Cliometrics* (pp. 353–383). Cham: Springer International Publishing.

Government of India. (2023). *Research and Development Statistics at A Glance 2022–23*.

Government of India (2023). *S&T indicators 2022-2023*. Department of Science and Technology

Jemala, M. (2021). Long-term research on technology innovation in the

form of new technology patents. *International Journal of Innovation Studies*, 5(4), 148–160.

Joshi, P. L. (2023). India needs to boost investments in research and development (R&D) to increase its global might. *Global Journal of Accounting Economy Research*, 4(1), 1–13.

Kitch, E. W. (1977). The nature and function of the patent system. *Journal of Law and Economics*, 20(2), 265–290.

Mani, S. (2009). *Has India become more innovative since 1991? Analysis of the evidence and some disquieting features*, CDS working papers, No. 415. Trivandrum: CDS

Shapiro, C., & Varian, H. R. (1999). *Information rules: A strategic guide to the network economy*. Harvard Business Press.

World Intellectual Property Organisation (WIPO, 2009) Economics & Statistics Series. World Intellectual Property Indicators

World Intellectual Property Organisation (WIPO, 2012) Economics & Statistics Series. World Intellectual Property Indicators

World Intellectual Property Organisation (WIPO, 2014) Economics & Statistics Series. World Intellectual Property Indicators

World Intellectual Property Organisation (WIPO, 2019) Economics & Statistics Series. World Intellectual Property Indicators

World Intellectual Property Organisation (WIPO, 2024) Economics & Statistics Series. World Intellectual Property Indicators

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From Algorithms to Access: Navigating Governance and Digital Equity in the AI Era

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Abstract: As artificial intelligence (AI) becomes more embedded in governance, it has the power to both improve efficiency and deepen inequalities. This paper explores how AI impacts digital equity, particularly in societies with uneven access to technology. This paper critically examines the intersection of artificial intelligence (AI), governance, and digital equity. The paper also addresses key governance challenges, including algorithmic bias, data privacy, and regulatory oversight. The research emphasises the need for inclusive digital policies and fair governance frameworks to ensure equitable distribution of benefits. The paper concludes by arguing for policies that promote algorithmic transparency and public accountability, ensuring AI serves as a force for social progress rather than exclusion.

Keywords: Governance, Digital Equity, Digital Divide, AI.

Introduction to Digital Equity and AI

Artificial intelligence (AI) has become a driving force for transformation in the rapidly evolving digital landscape by reshaping industries, societies, and governance frameworks. The proliferation of AI algorithms, while enhancing efficiency and innovation, has also introduced significant challenges related to equity and access. Digital equity and artificial intelligence (AI) are increasingly intertwined in societal progress and inclusion discussions. Digital equity encompasses access to technology and the ability to engage meaningfully with digital content and participate in civic life (Willems et al., 2019). As governments increasingly rely on AI to streamline public services, manage data, and inform policy decisions, the pursuit of digital equity strives to guarantee that all individuals possess egalitarian access to technology, information, and the benefits of AI. AI has the potential to narrow disparities and expand opportunities, particularly in sectors like education and agriculture, but it

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also risks exacerbating existing inequalities if not implemented thoughtfully (Jessy et al., 2024; Li, 2023). Digital equity involves access to hardware, software, and high-quality content, ensuring everyone can participate in the digital economy (Willems et al., 2019).

The concept of digital equity extends beyond mere access to devices or internet connectivity; it involves addressing the socio-economic, geographical, and systemic disparities that influence an individual's ability to leverage AI-driven technologies. It is a civil rights issue, emphasising the need for equitable access to knowledge and resources in the age of information (Willems et al., 2019). Effective AI governance must balance the innovation potential of algorithms with considerations of fairness, transparency, and inclusivity. This paper investigates the intersection of AI algorithms and governance mechanisms in shaping digital equity. It examines the ethical and policy challenges inherent in using AI in governance, focusing on the implications for marginalised communities often disproportionately impacted by digital inequality. Understanding how algorithms influence governance and access becomes crucial for creating a more just and inclusive digital future as AI permeates various sectors.

This study contributes to the ongoing discourse on digital equity by examining the role of governance in addressing ethical and practical difficulties presented by AI, focusing on how these challenges can be mitigated to foster a more equitable society. Building an equitable digital governance landscape that caters to all of India's citizens is a challenging task for policymakers, which requires meticulous consideration of ethical issues, regulatory frameworks and inclusive practices. The prospects of adopting AI technologies in governance also point to its difficulties. In India, a significant national strategy and policy development discourse revolves around incorporating artificial intelligence (AI) into governance frameworks. The Indian government has made substantial strides in this area, particularly with introducing the "Digital India Strategy" in 2015 and the "National Strategy for Artificial Intelligence" in 2018. These initiatives aim to utilise AI to enhance various sectors, including healthcare, agriculture, and education, establishing India as a major actor in the global AI sphere (Wang, 2024; Chatterjee, 2020). As part of the Digital India campaign, the government actively pursues and leverages every emerging digital technology to enable a quick service delivery system for citizens, ensuring the current development needs. Digital equity and artificial intelligence (AI) are emerging as critical pillars in India's socio-economic development, especially in light of the country's rapid digital transformation. Despite these advancements, India's AI governance confronts an array of impediments.

While ambitious, the National Strategy for AI has been critiqued for its lack

of comprehensive regulatory frameworks addressing ethical concerns, data privacy, and security vulnerabilities associated with AI technologies (Chatterjee, 2020; Reddy et al., 2019). With a population of over 1.4 billion, India portrays a peculiar case where technology can act as a powerful equaliser and a potential source of further inequality if not managed thoughtfully. The equitable distribution of technological resources and opportunities, irrespective of socio-economic class, geographic location, or other demographic criteria, is known as digital equity. With its potential to automate tasks, provide predictive insights, and enhance decision-making, AI can address many of India's pressing challenges, ranging from healthcare to education, agriculture to financial inclusion. However, a significant obstacle to guaranteeing the fair benefits of AI is the "digital divide", which refers to the differences in infrastructure, digital literacy, and internet access. India's entrepreneurial spirit and vast engineering workforce present unique opportunities for leveraging AI in governance. The burgeoning startup ecosystem is well-positioned to innovate AI solutions to improve public service delivery and enhance civic engagement (Pradhan et al., 2021). However, this potential can only be realised through effective policy navigation and collaboration between government bodies and private enterprises to create a conducive environment for AI development (Pradhan et al., 2021). In rural areas, for example, access to high-speed internet is limited, constraining the integration of AI-driven solutions. Similarly, socio-economic disparities hinder marginalised communities from accessing the necessary digital tools and education to leverage AI. Policymakers and private sector players in India face the challenge of creating an ecosystem where AI fosters inclusivity rather than deepening societal divides. The push for digital equity, supported by initiatives like Digital India, must be accompanied by robust frameworks that ensure AI is deployed ethically and inclusively. In the Indian context, India's AI governance requires robust policies that address privacy, data governance, and ethical AI practices, as highlighted by ongoing government initiatives and strategies (Bansal & Jain, 2023).

The implications of AI governance and digital equity are particularly pronounced due to the country's diverse socio-economic landscape. India's digital ecosystem has grown rapidly, driven by government initiatives like Digital India, Aadhaar, and the rise of affordable internet access. However, this growth has also brought to light glaring differences in digital knowledge and access. Even though India is one of the greatest digital markets in the world, many Indians still have difficulty obtaining AI-powered services, especially those living in rural areas and marginalised communities. Impact of AI on economic governance challenges traditional market dynamics, necessitating an equilibrium between market forces and government intervention to ensure equitable outcomes (Yu, 2024). The digital divide in India is not merely technological but deeply intertwined

with issues of economic inequality, education, and infrastructure, making the equitable governance of AI a pressing concern. As they pertain to AI, governance mechanisms in India must be designed to address these underlying disparities.

Public perception and policy foresight are critical in shaping effective AI governance, emphasising the need for stakeholder collaboration (Kadambi et al., 2024). The Indian government has taken steps toward AI integration in governance through programs like AI for All. Sections such as agriculture, healthcare, and public welfare increasingly use AI to improve service delivery. However, without careful attention to transparency, inclusivity, and accountability, AI-driven solutions risk making already-existing disparities worse. For instance, AI-based decision-making systems in welfare distribution or credit scoring might inadvertently disadvantage communities lacking digital literacy or access, reinforcing structural biases. Therefore, the challenge lies in creating policies that promote AI innovation and ensure that these innovations are available to all citizens, irrespective of their socio-economic status. Moreover, India's unique democratic governance model provides an opportunity to implement AI in ways that promote greater inclusivity. The decentralised governance structure allows tailored AI solutions to address regional and local disparities. However, this also requires state and local governments to have the necessary resources and technical expertise to oversee AI deployments. Bridging the digital divide in India will require a multi-stakeholder approach, where cooperation between the state, business sectors, academia and civil society is essential.. Through comprehensive and inclusive AI governance frameworks, India can leverage the advantages while minimising potential risks of exacerbating societal inequities in its journey toward a digitally inclusive future.

Governance in the Context of AI

As artificial intelligence is incorporated increasingly into public and private sectors, effective governance is essential to ensure the ethical and transparent usage of these technologies and in ways that benefit society as a whole. Data privacy, algorithmic transparency, accountability, bias, fairness, and inclusivity are only a handful of the issues that are covered by AI governance. A key aspect of AI governance is the requirement for regulatory frameworks that are flexible enough to keep up with the developments in AI technology, ensuring that innovation is not stifled, while at the same time protecting individuals and communities from potential harms. A key challenge in AI governance is the issue of algorithmic bias. The rapid influx of data, which AI systems rely on, raises significant issues regarding privacy and the potential for biases in AI algorithms, necessitating robust governance models that can ensure transparency and accountability (Reddy et al., 2019; Misra et al., 2020).

Large datasets are frequently used to train AI systems, and if the data is skewed or unrepresentative, the systems may reinforce or even magnify societal biases. Numerous factors, such as biased training data, poor algorithm design, and a lack of varied viewpoints throughout development, can lead to algorithmic bias (Chaudhary, 2024; Dwivedi, 2023). For instance, facial recognition technologies have been shown to perform poorly on certain racial or gender groups, leading to discriminatory outcomes. In finance and healthcare, biased algorithms can have severe consequences, impacting livelihoods and health outcomes (Sengar, 2024). A multi-disciplinary approach, integrating insights from social sciences, is crucial for identifying and mitigating biases throughout the AI lifecycle (Ukanwa, 2024).

Table 1.1 Impact of AI in Various Sectors

Sector	**Use of AI Algorithms**	**Impact on Access**	**Risk of Exclusion**	**Mitigation Strategies**	**Actors/ Companies Involved**
Healthcare	AI- Powered Diagnostics, Telemedicine, Personalised treatments	Expands access to remote areas	Algorithmic bias in diagnostics	Use diverse datasets for training AI models	Mayo clinic TATA Elxsi PFIZER Benevolent AI etc
Education	Personalised Learning Algorithms, Online assessment tools	Enhances Individualised Learning	Excludes students without digital access	Provide digital infrastructure in low - income areas	National Digital Education Architecture, Toppr Vedantu etc
Finance	Credit Scoring, Fraud Detection, Automated Loan Approvals	Increases Financial Inclusion	Bias against low-income or Unbanked Individuals	Use alternative credit data	Zerodha Cred HDFC Bank RBI National Payment Corporation of India, etc
Law Enforcement	Predictive Policing, Facial Recognition	Enhances efficiency in crime prevention	Misidentification Racial Bias in Policing	Regular audits and transparency in algorithm use	National Intelligence Grid CCTV & AI Surveillance National Crime Record Bureau, etc
Social Welfare	Automated Welfare distribution, Identity verification using	Speeds up delivery of welfare schemes	Exclusion due to digital illiteracy	Improve digital literacy and provide offline alternatives	Poshan tracker Aadhaar Digi locker AI in PM KISAN etc

Source: Data compiled by the researcher

Guidelines for ethical utilisation of AI systems must thus be incorporated into governance procedures, guaranteeing that they are evaluated fairly and that bias mitigation techniques are used. The principle of "explainability" is crucial here, requiring that AI systems explain their decisions, enabling accountability and trust. Governments, international organisations, and private companies must collaborate in the broader governance context to create global standards for AI ethics and regulation. As AI is a borderless technology, discrepancies in governance across countries can lead to regulatory loopholes and ethical concerns, such as the export of AI systems developed under lax oversight to countries with fewer protections. The governance of AI also involves addressing the socio-economic impacts of AI adoption, such as job displacement and the need for reskilling in an AI-powered economy. The increasing integration of AI systems into public services requires ethical governance frameworks to build public trust and ensure that AI technologies are used responsibly (Winfield & Jirotka, 2018; Guan, 2019). The EPIC (Education, Partnership, Infrastructure, Community) framework suggests a structured approach to mapping AI implementation requirements. It facilitates its successful and sustained deployment to maximise social impact and serve the public good (Tjondronegoro,2024). Mechanisms for collectively challenging decisions that fail to reflect public interests serve as crucial safeguards against errors, exclusion, and arbitrary governance. In this context, aligning AI with the public interest through democratic participation can be significantly enhanced by reinforcing avenues for public contestation beyond traditional aggregative and deliberative processes. (Cohen, T., & Suzor, N.P., 2024). Governments must actively ensure that AI benefits are distributed equitably, particularly for vulnerable or marginalised populations, and that automation-affected workers can access education and upskilling possibilities. Overall, AI governance must balance fostering innovation and protecting public interest, ensuring that AI technologies contribute to societal progress without compromising ethical values or social equity. AI governance is particularly significant given the country's vast population, diverse socio-economic conditions, and rapidly expanding digital infrastructure.

The Indian government has recognised the importance of AI through various initiatives, such as the National Strategy for AI, which outlines the roadmap for AI adoption across sectors like healthcare, agriculture, and education. However, integrating AI across sectors necessitates transparency and human oversight to mitigate risks associated with decision-making processes (Kumar et al., 2023). The challenge remains in assuring the implementation of AI technology in ways that do not deepen existing inequalities. Law enforcement organisations in India are trying to utilise AI-driven technology like facial recognition and predictive policing. For instance, the National Crime Records Bureau proposed a nationwide

Automated Facial Recognition System (AFRS) to assist in identifying criminals and missing persons and verifying identities. Union Home Minister Amit Shah stated that facial recognition software identified 1900 Delhi rioters (The Week, 2020). The use of Multi-tasked Convolutional Neural Networks (CNN) has improved the accuracy of facial recognition systems which allows for faster and more accurate identification, even when images are blurred or of low quality However, challenges remain in ensuring the clarity and recognisability of images, which are crucial for successful identification(Shelokar et al., 2024). Although these technologies, privacy, and monitoring promise efficiency, and possible abuse pose additional concerns, particularly in a country without comprehensive data protection laws. Therefore, effective AI governance in India must focus on developing robust regulatory mechanisms that protect individual rights, ensure algorithmic transparency, and establish accountability for AI-based decisions. The call for ethical AI governance is echoed in various studies, emphasising the need for frameworks that translate ethical principles into practical governing procedures (Mäntymäki et al., 2022). Inclusivity in governance is crucial as AI adoption accelerates, requiring multi-stakeholder engagement to ensure that AI benefits are extended to all sections of society, particularly those currently underserved by the digital economy.

Role of Algorithms: Access and Inclusion

Algorithms are key in determining how people in the digital era can access opportunities, services, and information. They are at the core of various technologies that drive sectors like healthcare, education, finance, and governance. Algorithms have the potential to bridge divides by facilitating access to essential services, but they can also reinforce existing inequalities if not designed and governed carefully. Integrating AI across sectors necessitates transparency and human oversight to mitigate risks associated with decision-making processes (Kumar et al., 2023). Because algorithms increase the efficiency and scalability of operations, they have the potential to democratise access to services. In sectors like healthcare and education, algorithm-driven technologies have expanded access to underserved populations, particularly in developing countries. For example, telemedicine platforms powered by AI algorithms have allowed individuals in rural areas to consult with doctors remotely, bypassing the geographical and financial barriers to healthcare access.

In India, telemedicine providers reported an increase in momentum during the COVID-19 pandemic, mainly due to AI-driven diagnostic tools and consultation platforms, allowing millions to receive care they otherwise would not have been able to access (NITI Aayog, 2021). In 2023, India's telemedicine market generated approximately USD 4.04 billion in revenue and is projected to reach USD 15.11 billion by 2030, reflecting a compound annual growth rate (CAGR) of 20.7% from 2024 to 2030 (Grand View

Research, 2024). Establishing a National Digital Health Authority (NDHA) has been proposed to govern the deployment of AI in healthcare, highlighting the need for specialised governance structures to manage sector-specific challenges (Deo & Anjankar, 2023; Kumar et al., 2021). In education, algorithms have enabled personalised learning experiences, allowing students to access tailored content based on their learning needs. Platforms like Khan Academy use algorithms to recommend lessons and track progress, guaranteeing that every student can access a quality education, regardless of location or financial situation. (Khan Academy, n.d.). Coursera employs artificial intelligence to suggest courses tailored to learners' preferences and past interactions, enhancing personalisation (Redress Compliance, 2024). Duolingo integrates AI-powered chat and adaptive learning features, helping users improve language skills based on their performance (Vincent, 2024).

Table 1.2 AI-driven solutions for Digital Inclusion in India

AI Application	Targeted Sector	Population Benefited	Description	Challenges	Actors/ Stakeholders
Telemedicine Platforms	Healthcare	Rural and Underserved population	Remote diagnostic services and AI-powered consultation	Lack of internet access in rural areas	1mg, Practo, Qure.ai etc
UPI and Digital Payments	Finance	Unbanked Population	Seamless digital transactions and financial inclusion	Low digital literacy in some regions	NPCI Phone pay Google pay etc
AI-Based Crop Advisory Systems	Agriculture	Smallholder farmers	Real-time advisory on weather, soil health and pest management	Digital divide in rural farming communities	Fasal Cropin eNAM(National Agri Market) PM Kisan etc
AI-Powered Education Platforms	Education	Students in remote areas	Personalised learning modules and remote education opportunities	Unequal access to devices and connectivity	Vedantu Toppr NPTEL etc
Automated Welfare Distribution	Social Welfare Programs	Low-income citizens	Faster and more efficient distribution of subsidies and benefits	Errors in biometric authentication through Aadhaar	PDS Adhaar Direct Benefit Transfer

Source: Data compiled by the researcher

Fintech solutions, powered by machine learning algorithms, have brought banking and credit services to unbanked populations. In India, the introduction of the Unified Payments Interface (UPI) has led to a surge in online transactions, with over 16.99 billion transactions recorded in January 2025 alone (National Payments Corporation of India, 2025). Algorithms that facilitate credit scoring based on alternative data sources have allowed individuals without formal credit histories to access loans, contributing to greater financial inclusion. AI can play a proactive role in facilitating comprehensive crop health monitoring. By leveraging remote sensing data, high-resolution weather data, and AI platforms, farmers can receive timely insights into crop conditions, leading to increased revenues and stability within the agricultural community (Kumar et al., 2020).

Bias in algorithms typically arises when the data used to train them reflects historical inequalities or is unrepresentative of the population they are meant to serve. Facial recognition algorithms have been demonstrated to perform worse when identifying people with darker skin tones (Basheer, 2024). The author traces the roots of algorithmic biases to historical and systemic discrimination, emphasising that these biases are often embedded in the data used to train AI systems (Basheer, 2024). According to an MIT research, specific commercial facial recognition software had error rates of up to 34.7% for women with darker skin tones. In contrast, lighter-skinned men only had an error rate of 0.8%." (Buolamwini & Gebru, 2018). Recent studies highlight biases in facial recognition technologies, particularly concerning gender and skin tone. A 2023 report by the US Department of Homeland Security revealed that 57% of facial recognition models exhibited lower matching accuracy for individuals with darker skin tones, and 75% showed decreased accuracy for female subjects. Additionally, 96% of the models were less accurate when subjects wore eyewear (Nash, 2023). This bias can have real-world consequences, such as denial of access to services based on erroneous identity verification. In the context of financial services, algorithmic biases can also perpetuate exclusion. Credit scoring algorithms that rely on traditional data points like income or employment history can disadvantage individuals from lower-income backgrounds or those working in the informal sector. As a result, many of the people who need financial assistance the most are unable to access credit, perpetuating cycles of poverty.

Even in education, algorithms can inadvertently widen gaps if they are not designed to account for disparities in access to technology. The change to online learning during the COVID-19 pandemic disproportionately affected students from lower-income households who did not have access to devices or reliable internet connections. Governance frameworks must be put in place to ethically direct the creation and application of algorithms to reduce the hazards of bias and exclusion. Navigating the difficulties of AI requires ethical frameworks and norms to ensure that technologies reflect

social ideals (Elliott et al., 2021). These frameworks should focus on transparency, accountability, and fairness in algorithmic decision-making. Transparency requires that algorithms be open to scrutiny, with clear documentation of how they operate and what data they use. This is particularly important for public sector algorithms, such as those used in law enforcement or social welfare distribution, where the stakes are high. For example, in the Netherlands, an algorithmic system used to detect welfare fraud was scrapped after it was found to disproportionately target low-income neighbourhoods, raising concerns about discrimination and privacy violations (Eubanks, 2018; Rachovitsa & Johann, 2022). Accountability mechanisms are essential to ensure that algorithmic decisions can be challenged and corrected when they lead to harmful outcomes. One aspect of this is giving people the option to challenge algorithmic judgments, such as credit or job rejections. To find and fix biases, algorithms should undergo routine audits.

The Algorithmic Accountability Act, which was introduced in the US in 2019, requires businesses to assess their AI systems for discriminatory effects, establishing a standard for governance practices globally (US Congress, 2019). The Algorithmic Accountability Act (AAA) has been debated for its transparency requirements and alignment with global AI regulations, particularly in comparison to the EU AI Act (Mökander et al, 2023). On February 3, 2022, Senators Ron Wyden, Cory Booker and Representative Yvette Clarke reintroduced the Algorithmic Accountability Act in both the Senate and the House. This bill aimed to mandate that companies assess the impacts of automated decision systems, particularly those affecting critical areas such as finance, healthcare, and housing (S.3572, 2022). Despite being introduced in Congress, the AAA has faced legislative hurdles and is yet to be enacted (UNC School of Law, 2023). Federal policymakers continue to push for AI regulations, discussing whether comprehensive legislation or sector-specific policies would be more effective (Gibson Dunn, 2024). The European Union's General Data Protection Regulation (GDPR) has established a framework for algorithmic accountability, including a "right to explanation" for algorithm decisions. This framework is considered more comprehensive than previous data protection directives and serves as a model for similar legislative efforts in other regions, including the United States (Kaminski, M, 2018). China released a position paper in November 2022, advocating for integrating ethical considerations throughout the AI lifecycle. The document calls for establishing rules, norms, and accountability mechanisms to address potential risks associated with AI, emphasising the importance of international cooperation in AI governance (Ministry of Foreign Affairs of the People's Republic of China, 2022). In September 2024, China proposed new draft measures mandating explicit labelling of AI-generated content, including metadata embedding for enhanced traceability (Pandey, K.

(2024). Fairness in algorithms involves designing systems that account for different user groups' diverse needs and experiences. This requires using representative datasets while developing algorithms, ensuring they work equally well across different demographic groups.

In India, the government's National AI Strategy emphasises the need for inclusive AI, calling for the application of AI to social issues like access to healthcare and education disparities (NITI Aayog, 2018). Despite India's rapid AI adoption, challenges like data privacy, algorithmic bias, and regulatory gaps persist. Biju and Gayathri (2024) highlight a gap in the current AI policy drafts, noting that they are predominantly crafted by industry stakeholders, technocrats, bureaucrats, and technical experts. They advocate for greater involvement of social scientists to address the social implications of AI, suggesting that a multi-disciplinary approach is essential for developing policies that consider the broader societal context. In their 2023 article, Misra et al. highlight the critical role of user trust and acceptance in successfully implementing AI technologies. Building trust through transparency, involving users in the design process, and demonstrating tangible benefits are essential strategies to overcome resistance and ensure the effective adoption of AI in government services. (Chatterjee, 2020) advocates for accelerating AI adoption by promoting data sharing activities, highlighting the importance of opening government data sets to facilitate innovation and research. Chavali et al. (2024) underscore the significance of involving diverse stakeholders, including legal authorities, enterprises, and individuals, in shaping AI governance. The authors argue that collaborative efforts are essential to establish comprehensive regulatory frameworks that balance innovation with ethical considerations. The lack of high-quality, structured data poses a significant barrier to AI implementation. Government organisations often struggle with incomplete, outdated, or siloed data, making developing and deploying effective AI solutions challenging (Misra et al., 2023). India provides a compelling case study for algorithms' role in enhancing and hindering access. With a population of over 1.4 billion, the country faces significant challenges in ensuring equitable access to services across its vast and diverse demographic. The use of algorithms in governance has increased rapidly in recent years, with initiatives such as the Aadhaar biometric system playing a key role in identifying and accessing government services.

As of 2024, over 1.3 billion Indians were enrolled in Aadhaar, which is used for various purposes, including direct benefit transfers and identity verification (Unique Identification Authority of India, 2024). However, Aadhaar has also faced criticism for excluding vulnerable populations, particularly those without access to digital literacy or stable internet connections. India's Digital Public Infrastructure (DPI), notably exemplified by the 'India Stack', has been instrumental in transforming the

nation's digital economy by providing foundational platforms for digital identity, payments, and data exchange (Kant & Nilekani, 2024). The Unified Payments Interface (UPI), a significant component of India's DPI, processed 172 billion transactions worth USD 2.9 trillion in 2024, showcasing its extensive adoption and impact (CIGI, 2024). India's approach to DPI has enhanced public service delivery and catalysed private sector innovation, creating a robust ecosystem for digital services (ORF, 2024). The 'DPI as a packaged Solution' (DaaS) model, emerging from India's experience, offers a framework for rapid DPI deployment, potentially benefiting other nations seeking to enhance their digital infrastructures (Varma et al., 2024). India's DPI initiatives have positioned the country as a leader in the Global South, providing valuable lessons for other developing nations aiming to implement similar digital infrastructures (CSIS, 2024).

Effective governance is essential to ensure that algorithms are transparent, accountable, and fair, particularly in contexts where marginalised groups are at risk of exclusion. The establishment of governance structures which promote digital equality and ensure that algorithms are used as instruments for inclusion rather than exclusion needs to be given the highest priority as the nation continues to adopt AI and algorithm-driven

Table 1.3 Ethical AI Guidelines across countries

Country/Region	**Key Ethical Guidelines for AI**	**Focus Area**	**Concerned Authority**
European Union	GDPR, AI Act: Focus on privacy, bias mitigation and human oversight	Data privacy, bias, and accountability	European Data Protection Board
United States	Algorithmic Accountability Act: AI fairness, transparency and explainability	Fairness, Accountability, Transparency	Federal Trade Commission
China	AI development regulations: AI - driven social governance and security	National security, Economic growth	Ministry of Industry and IT
India	National Strategy for AI: Inclusive AI and governance	Inclusivity, Fairness	NITI Aayog

Source: Data compiled by the researcher

technological advancements. A commitment to strong governance and digital equality marks India's journey in AI development. By balancing innovation with regulation and addressing structural inequalities, India aims to leverage AI's possible utility for socio-economic development while ensuring ethical and inclusive governance. As India continues to engage in global AI governance discussions, it is well-positioned to lead efforts in promoting the interests of the Global South and addressing the digital divide.

Conclusion

Integrating artificial intelligence (AI) into governance structures presents both transformative opportunities and major obstacles, particularly concerning digital equity. As AI-driven systems become increasingly embedded in public service delivery, they hold the potential to enhance efficiency, accessibility, and inclusivity. This study underscores the necessity for inclusive digital policies and robust governance frameworks prioritising ethical AI implementation, transparency, and accountability (Mäntymäki et al., 2022). Without comprehensive regulatory mechanisms, AI-driven decision-making may perpetuate bias and exclusion, as seen in algorithmic disparities in welfare distribution, financial credit scoring, and facial recognition technologies (Basheer, 2024; Ukanwa, 2024). India's AI governance landscape exemplifies both the potential and pitfalls of technological integration. This study has illustrated that the digital divide remains a fundamental challenge, with marginalised communities often excluded from AI-driven advancements due to infrastructural, economic, and literacy barriers (Kadambi et al., 2024). While initiatives such as the Digital India Strategy and National AI Strategy demonstrate a commitment to leveraging AI for national development, gaps in regulatory oversight remain a critical concern (NITI Aayog, 2018; Bansal & Jain, 2023). AI can potentially reinforce structural inequities without comprehensive policy interventions, particularly in financial inclusion, predictive policing, and welfare distribution (Ukanwa, 2024). Bridging the digital divide requires a multi-stakeholder approach, involving government agencies, private sector actors, and civil society to ensure equitable access to AI-driven services. Ethical AI governance must incorporate principles of algorithmic fairness, public contestation, and sector-specific policy frameworks to mitigate unintended harms (Cohen & Suzor, 2024). A commitment to social justice and digital inclusivity should guide the role of AI in governance. Future governance strategies must adopt algorithmic fairness principles and prioritise public oversight mechanisms to mitigate unintended harms (Cohen & Suzor, 2024). Policies must evolve in tandem with technological advancements to prevent the exacerbation of inequalities while adopting innovation. Future research should explore mechanisms for participatory AI governance, where diverse societal perspectives contribute to shaping equitable digital futures. As AI redefines governance structures, India and

other nations must balance innovation with ethical responsibilities, crafting policies that embed equity at the core of AI governance. A participatory, rights-based AI governance framework anchored in principles of fairness, accessibility, and accountability can transform AI from a potential tool of exclusion into a powerful instrument for digital inclusion (Mäntymäki et al., 2022).

Notes

1. A proposed law in the United States called the Algorithmic Accountability Act would mandate that businesses evaluate the accuracy, fairness, bias, discrimination, privacy, and security of their AI systems and automated decision-making technologies. The objective is to increase accountability and transparency in the creation and utility of AI systems, especially in fields like financial services, housing, healthcare, and employment, which immensely affect people's lives.

2. Algorithmic bias refers to systematic and repeatable errors in a computer system that create unfair outcomes, such as privileging one group over another (Mehrabi et al., 2021). Algorithmic bias occurs when a computer program systematically and unfairly discriminates against specific individuals or groups based on protected characteristics, often due to biased data or flawed model design (Barocas, Hardt, & Narayanan, 2019).

3. NITI Aayog created India's National Strategy for Artificial Intelligence, emphasising the use of AI to promote social progress and inclusive growth. The strategy identifies five sectors in which AI can significantly impact: healthcare, agriculture, education, smart cities and infrastructure, and smart mobility and transportation. The National Strategy for Artificial Intelligence emphasises the need for data protection frameworks and the promotion of international standards to ensure ethical AI development (NITI Aayog, 2018).

4. The Government of India introduced the Digital India scheme in 2015 as a prime initiative to make India a knowledge economy and technology-enabled society.

5. According to Pick (2015) and the OECD (2001), "the term digital divide includes digital inequalities between individuals, households, businesses or geographic areas." Van Dijk (2005) states that the digital divide includes "lack of any digital experience caused by lack of interest, computer fear and unattractiveness of the new technology." Van Dijk (2005) identifies the digital divide as comprising four sequential forms of access: motivational, material, skills, and usage.

6. The practice of guaranteeing that all facets of society, predominantly low-income and vulnerable groups, possess the ability to appropriate financial products and services (such as credit, insurance, savings, and payments is referred to as financial inclusion. This refers to ensuring that

individuals and businesses access valuable and affordable financial products and services that meet their needs, delivered responsibly and sustainably (World Bank, n.d.). The development of digital financial services is increasingly important, particularly in today's world marked by social distancing and lockdowns (Marza et al., 2025). By incorporating them into the official financial system, it seeks to empower people and businesses, promote economic growth, and lessen poverty.

7. Bias in the Aadhaar System refers to concerns about potential discrimination, exclusion, or unfair treatment arising from the design, implementation, or use of India's Aadhaar biometric identification system. Aadhaar has excluded marginalised communities due to authentication failures, lack of technological access, and bureaucratic inefficiencies (Panigrahi,2021). The design of Aadhaar does not adequately account for the needs of all citizens, particularly those with unstable biometric data, leading to systematic marginalisation (Singh & Jackson, 2021). While Aadhaar has significantly improved service delivery and reduced corruption, addressing biases and ensuring inclusivity remain critical for its equitable implementation. The design of Aadhaar does not adequately account for the needs of all citizens, particularly those with unstable biometric data, leading to systematic marginalisation (Singh & Jackson, 2021).

8. The National Digital Education Architecture initiative, which was launched under NEP 2020, aims to create a unified digital infrastructure by integrating various education-related platforms, which is a substantive step towards digital-first education in India

References

S. Bansal and Dr. Neelesh Jain. (2023). “A Comprehensive Study Assessing the Transformative Role of Artificial Intelligence in India\'s Governance Policy Framework." *International Journal for Research in Applied Science and Engineering Technology* . https://doi.org/10.22214/ijraset.2023. 54973.

Barocas, S., Hardt, M., & Narayanan, A. (2019). *Fairness and machine learning: Limitations and opportunities*. (arXiv:1904.07239)

Basheer, I. P. (2024). Bias in the Algorithm: Issues Raised Due to Use of Facial Recognition in India. *Journal of Development Policy and Practice*, 10(1), 61–79. https://doi.org/10.1177/24551333241283992. (Original work published 2025)

Biju, P.R., Gayathri, O.(2024). The Indian approach to Artificial Intelligence: an analysis of policy discussions, constitutional values, and regulation. *AI & Soc* 39, 2321–2335 . https://doi.org/10.1007/s00146-023-01685-2

Buolamwini, J., & Gebru, T. (2018). Gender shades: Intersectional accuracy disparities in commercial gender classification. Proceedings of Machine

Learning Research, 81, 1-15.

Centre for International Governance Innovation (CIGI). (2024). *A novel institutional architecture for digital public infrastructure*. Retrieved from https://www.cigionline.org/articles/a-novel-institutional-architecture-for-digital-public-infrastructure

Centre for Strategic and International Studies (CSIS). (2024). *Approaches to digital public infrastructure in the Global South*. Retrieved from https://www.csis.org/analysis/approaches-digital-public-infrastructure-global-south.

Chatterjee, S. (2020). AI strategy of India: policy framework, adoption challenges and actions for the government. *Transforming Government People Process and Policy*, 14(5), 757–775.

CHAUDHARY, A. K. (2024). Algorithmic Bias: An Integrative Review and Scope for Future Research.

Chavali, D., Baburajan, B., Kumar, V., & Katari, S. C. (2024). Regulating artificial intelligence: Developments and challenges. *International Journal of Pharmaceutical Sciences*, 2(1), 1250-1261. https://doi.org/10.5281/zenodo.10898480.

Cohen, T., & Suzor, N.P. (2024). Contesting the public interest in AI governance. *Internet Policy Review*, 13(3). https://doi.org/10.14763/2024.3.1794

Pandey, K. (2024, September 20). *China proposes new AI regulations mandating clear labels and metadata requirements for synthetic content*. MediaNama. https://www.medianama.com/2024/09/223-china-new-ai-regulations-mandate-labels-metadata/ retrieved on 10-03-2025

Deo, N. and Anjankar, A. (2023). Artificial intelligence with robotics in healthcare: a narrative review of its viability in India. Cureus. https://doi.org/10.7759/cureus.39416

Dwivedi, D. (2023). Algorithmic Bias: A Challenge for Ethical Artificial Intelligence (AI). In *Immersive Technology and Experiences: Implications for Business and Society* (pp. 67–84). Singapore: Springer Nature Singapore.

Elliott, K., Price, R., Shaw, P., Spiliotopoulos, T., Ng, M., Coopamootoo, K., & Van Moorsel, A. (2021). Towards an equitable digital society: artificial intelligence (AI) and corporate digital responsibility (CDR). *Society*, 58(3), 179–188.

Eubanks, V. (2018). Automating inequality: How high-tech tools profile, police, and punish the poor—St Martin's Press.

Gibson Dunn. (2024). Federal policymakers' recent actions seek to regulate AI. *Gibson Dunn AI & Tech Insights*. https://www.gibsondunn.com/federal-

policymakers-recent-actions-seek-to-regulate-ai/.

Grand View Research. (2024). *India telemedicine market outlook*. Grand View Research. https://www.grandviewresearch.com/horizon/outlook/telemedicine-market/india Retrieved on 10/03/2025

Guan, J. (2019). Artificial intelligence in healthcare and medicine: promises, ethical challenges, and governance. Chinese Medical Sciences Journal, 0(0), 99. https://doi.org/10.24920/003611

Kadambi, P., Seshadri, R., Munjandira, C., & Appaji, A. (2024, January). Public Insight and Policy Foresight: A Policy Review of AI Governance in India. In *2024, 16th International Conference on COMmunication Systems & NETworkS (COMSNETS)* (pp. 1175-1180). IEEE.

Kant, A., & Nilekani, N. (2024). *India Stack and the transformation of digital public infrastructure*. Harvard Business School. Retrieved from https://www.hbs.edu/faculty/Pages/item.aspx?num=64379

Kaminski, M. (2018). The right to explanation is explained. *Research Handbook on Information Law and Governance*. https://doi.org/10.2139/SSRN.3196985.

Khan Academy. (n.d.). *Help your students track their learning*. Khan Academy. https://www.khanacademy.org/khan-for-educators/k4e-us-demo/xb78db74671c953a7%3Ausing-course-mastery-on-khan-academy-gr/xb78db74671c953a7%3Ausing-khan-academy-s-activity/a/help-your-students-track-their-learning retrieved on 10/03/2025

Kumar, K. M., Madhu, M., Pratyaksha, B., Sushmita, S., & Javed, G. S. (2023, December). Ethical AI Conundrum: Accountability and Liability of AI decision making. In *2023 IEEE Technology & Engineering Management Conference-Asia Pacific (TEMSCON-ASPAC)* (pp. 1–6). IEEE.

Kumar, P., Dwivedi, Y., & Anand, A. (2021). Responsible artificial intelligence (AI) for value formation and market performance in healthcare: the mediating role of patients' cognitive engagement. Information Systems Frontiers, 25(6), 2197–2220. https://doi.org/10.1007/s10796-021-10136-6

Kumar, S., Sharma, R., Gupta, P., & Verma, A. (2020). Artificial intelligence: New technology to improve Indian agriculture. *International Journal of Chemical Studies*, 8(2), 2999–3005.

Li, H. (2023). AI in Education: Bridging the Divide or Widening the Gap? Exploring Equity, Opportunities, and Challenges in the Digital Age. *Advances in Education, Humanities and Social Science Research*, 8(1), 355–355.

M., D., Jessy., Kibukamusoke, Martha, Drake, Patrick, Mirembe. (2024). Harnessing AI for Socio-economic Equity in Uganda: Bridging the Digital

Divide through Agricultural Innovation. International Journal for Multi-disciplinary Research, doi: 10.36948/ijfmr.2024.v06i04.24956

Marza, B., Bratu, R.-D., Serbu, R., Stan, S. E., & Oprean-Stan, C. (2025). Applying AHP and FUZZY AHP management methods to assess the financial and digital inclusion level. *arXiv preprint arXiv: 2501.10001*.

Masiero, S. (2018). Explaining trust in large biometric infrastructures: A critical realist case study of India's Aadhaar project (Version 1). Loughborough University. https://hdl.handle.net/2134/35413.

Mäntymäki, M., Minkkinen, M., Birkstedt, T., & Viljanen, M. (2022). Defining organisational AI governance. Ai and Ethics, 2(4), 603-609. https://doi.org/10.1007/s43681-022-00143-x

Mehrabi, N., Morstatter, F., Saxena, N., Lerman, K., & Galstyan, A. (2021). A survey on bias and fairness in machine learning. ACM Computing Surveys, 54(6), 1-35. (DOI:10.1145/3457607)

Ministry of Foreign Affairs of the People's Republic of China. (2022). Position Paper of the People's Republic of China on Strengthening Ethical Governance of Artificial Intelligence (AI). Retrieved from https://www.mfa.gov.cn/mfa_eng/zy/wjzc/202405/t20240531_11367525.html

Misra, S., Das, S., Gupta, S., & Sharma, S. (2020). Public policy and regulatory challenges of artificial intelligence (AI), 100–111. https://doi.org/10.1007/978-3-030-64849-7_10

Misra, S. K., Sharma, S. K., Gupta, S., & Das, S. (2023). A framework to overcome challenges to adopting artificial intelligence in Indian government organisations. *Technological Forecasting and Social Change*, 194(2), 122721. https://doi.org/10.1016/j.techfore.2023.122721.

Mökander, J., Juneja, P., Watson, D.S. et al. The US Algorithmic Accountability Act of 2022 vs. The EU Artificial Intelligence Act: what can they learn from each other?. *Minds & Machines* 32, 751–758 (2022).https://doi.org/10.1007/s11023-022-09612-y.

Nash, J. (2023, October 9). Race and gender bias in the matching algorithm remain – DHS report. *BiometricUpdate*. report.BiometricUpdate. https://www.biometricupdate.com/202310/race-gender-bias-in-matching-algorithm-remain-dhs-report

National Payments Corporation of India. (2022). *UPI transaction statistics*. National Payments Corporation of India. https://www.npci.org.in/what-we-do/upi/product-statistics

NITI Aayog. (2018). *National strategy for AI: #AIForAll*. NITI Aayog. https://www.niti.gov.in/sites/default/files/2023-03/National-Strategy-for-Artificial-Intelligence.pdf.

Ramanan, R., Agarwal, N., & Agarwal, H. (2020, May 6). Telemedicine: A blessing in disguise. NITI Aayog. https://www.niti.gov.in/telemedicine-blessing-disguise retrieved on 10-03-2025

Observer Research Foundation (ORF). (2024). *Digital public infrastructure as a catalyst for private sector innovation*. Retrieved from https://www.orfonline.org/research/digital-public-infrastructure-as-a-catalyst-for-private-sector-innovation

Organisation for Economic Cooperation and Development. (2001). *Understanding the Digital Divide*. OECD Publications.

Panigrahi, S. (2021). Marginalised Aadhaar: How the world's largest digital identification programme led to the exclusion of marginalised communities. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3971724

Pick, J. (2015). *The global digital divides: Explaining change*. Springer Verlag.

Pradhan, K., John, P., & Sandhu, N. (2021). Use of artificial intelligence in healthcare delivery in India. *Journal of Hospital Management and Health Policy*, 5, 28-28. https://doi.org/10.21037/jhmhp-20-126

Rachovitsa, A., & Johann, T. (2022). The human rights implications of using AI in the digital welfare state: Lessons learned from the Dutch SyRI case. *Computer Law & Security Review*, 45, 105686.

Redress Compliance. (2024). *AI in online learning platforms: Enhancing education with artificial intelligence*. Redress Compliance. Retrieved from https://redresscompliance.com/ai-online-learning-platform/ retreived on 10/03/2025

Reddy, S., Allan, S., Coghlan, S., & Cooper, P. (2019). A governance model for the application of AI in healthcare. Journal of the American Medical Informatics Association, 27(3), 491–497. https://doi.org/10.1093/jamia/ocz192

S.3572,117thCong.(2022). https://www.congress.gov/bill/117th-congress/senate-bill/3572

Sengar, D. (2024). Implications of Algorithmic Bias in Financial Services: A Survey of Sources and Levels of Algorithmic Bias Contributing to Social Implications. In *Revolutionising the Global Stock Market: Harnessing Blockchain for Enhanced Adaptability* (pp. 60–82). IGI Global. DOI: 10.4018/979-8-3693-1758-7.ch004

Shelokar, N., Surwase, P., Jadhav, R., Lohana, A., & Jaiswal, V. (2024). Facial Recognition Technology for Identifying Missing Individuals and Wanted Criminals. *International Journal For Multi-disciplinary Research*. https://doi.org/10.36948/ijfmr.2024.v06i03.21374.

Singh, R., & Jackson, S. (2021). Seeing like an infrastructure: Low-resolution citizens and the Aadhaar identification project. *Proceedings of the ACM on Human-Computer Interaction*, 5(CSCW1), 1–25. https://doi.org/10.1145/3476056.

The Week. (2020, March 13). Amit Shah said 'facial recognition' identified 1,900 Delhi rioters. How does it work? *The Week*. https://www.theweek.in/news/india/2020/03/13/amit-shah-said-facial-recognition-identified-1900-delhi-rioters-how-does-technology-work.html retrieved on 10-03-2025

Tjondronegoro, D. W. (2024). *Strategic AI governance: Insights from leading nations*. arXiv. https://arxiv.org/abs/2410.01819

Unique Identification Authority of India. (2025). *Aadhaar statistics*. Unique Identification Authority of India. https://uidai.gov.in/aadhaar_dashboard/

U.S. Congress.(2019). *Algorithmic Accountability Act of 2019*. https://www.congress.gov/bill/116th-congress/house-bill/2231

Ukanwa, K. (2024). Algorithmic bias: Social science research integration through the 3-D Dependable AI Framework. *Current Opinion in Psychology*, 101836. https://doi.org/10.1016/j.copsyc.2024.101836

UNC School of Law. (2023). The Algorithmic Accountability Act and the future of algorithmic regulation. *North Carolina Journal of Law & Technology*. https://journals.law.unc.edu/ncjolt/blogs/the-algorithmic-accountability-act-and-the-future-of-algorithmic-regulation/

Van Dijk, J. A. G. M. (2005). *The Deepening Divide: Inequality in the Information Society*. Sage Publications

Varma, R., Singh, P., & Gupta, A. (2024). *The future of digital public infrastructure: A thesis for rapid global adoption*. Carnegie Endowment for International Peace. Retrieved from https://carnegieendowment.org/research/2024/02/the-future-of-digital-public-infrastructure-a-thesis-for-rapid-global-adoption

Vincent, J. (2024). *Duolingo is using AI to improve the language learning experience*. TheVerge. https://www.theverge.com/24267841/luis-von-ahn-duolingo-owl-language-learning-gamification-generative-ai-android-decoder Retreived on 10/03/2025

Wang, R. (2024). Bibliometric analysis of the application of deep learning in cancer from 2015 to 2023. Cancer Imaging, 24(1). https://doi.org/10.1186/s40644-024-00737-0

Winfield, A. and Jirotka, M. (2018). Ethical governance is essential to building trust in robotics and artificial intelligence systems. Philosophical Transactions of the Royal Society: Mathematical, Physical and Engineering Sciences, 376(2133), 20180085. https://doi.org/10.1098/rsta.2018.0085

Willems, J., Farley, H., & Campbell, C. (2019). The increasing significance of digital equity in higher education: An introduction to the Digital Equity Special Issue. *Australasian Journal of Educational Technology*, 35(6), 1–8.

World Bank. (n.d.). *Financial inclusion overview*. Retrieved March 10, 2025, from https://www.worldbank.org/en/topic/financialinclusion/overview

Yu, C. (2024). *AI and Economic Governance: Navigating the Visible and Invisible Hands in a Digital Era* (No. tvchw). Centre for Open Science.

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Caught in an Ethical Quagmire: India's Shifting Priorities and the Palestinian Cause under Modi Government

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Abstract: India's relationship with Israel has been shaped by complexity and strategic recalibration. Both nations gained independence around the same time, shared colonial histories, and aspired to build democratic nation-states. However, India hesitated for decades before normalising ties with Israel in 1992, primarily due to its long-standing support for the Palestinian cause and deep engagements with the Arab world since before independence. Since normalisation, bilateral cooperation has expanded significantly, particularly in defence. Under the Modi government, relations have further strengthened, marked by increased trade, deepening defence ties, and shifts in India's voting patterns at international organisations. While India continues to endorse a two-state solution, its approach has evolved from unequivocal support for the Palestinian cause to a strategy of balancing interests. This paper examines India's evolving ties with Israel, analysing the challenges of balancing under the Modi government amid accusations of a radical shift or abandonment of the traditional commitment.

Keywords: India-Israel relations, evolution of foreign policy, Palestinian cause, Modi government, strategic partnership, multi-vector diplomacy, ethical quagmire.

India's engagement with Israel has been one of great intrigue and anomaly—two nations that gained independence around the same period, shared colonial backgrounds, and envisioned creating modern nation-states based on freedom, equality, and democracy. If Nehru was a Fabian socialist, then Ben Gurion was a champion of the thriving Kibbutzim and Moshavim collective agricultural movements. Despite these affinities, it took India four long and painful decades to decide whether there should be an Israeli ambassador in New Delhi. At the same time, the Pakistani High Commission, the Chinese embassy, and later the

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Palestinian embassy (PLO) operated in the national capital. This non-engagement was primarily influenced by the ethical commitments India inherited from its nationalist movement and the Nehruvian and Gandhian positions on the question of Palestine. Combined with India's geopolitical and domestic considerations, these ethical commitments often justified the latter. The fall of Arafat from Arab grace, the peace process, the demise of the USSR, and the emergence of American hegemony pushed India to revise its former position on Israel.

Additionally, Pakistan's proximity to the US and India's quest for technological advancement favoured normalisation. After India revised its Israel policy on January 29, 1992, bilateral engagements swiftly gained momentum as both countries found a multitude of avenues to cooperate, while asserting their identities as thriving democracies amidst crippled democratic or authoritarian regimes in their respective regions. During Modi's state visit in 2017, although it was initially anticipated that he would visit the Palestinian territories in parallel, such a manoeuvre was deferred by another year. This visit by an Indian prime minister, almost 25 years after normalisation, marked a paradigm shift in India's foreign policy approach towards Israel and its neighbours. Under Modi, bilateral relations scaled up, with arms imports from Israel witnessing a 175% increase between 2015 and 2019, making Israel a close competitor with Russia in meeting India's growing defence requirements (Wezeman, Fleurant, & Kuimova, 2020). In 2019, India voted in favour of Israel to exclude the Palestinian human rights body, Shahed, from being granted observer status in ECOSOC. In light of the October 7 2023, attacks, PM Modi was one of the first responders to convey solidarity with the people of Israel and condemn Hamas's aggression as terrorism. The same month, India abstained at the UNGA from voting in favour of a resolution brought by Jordan for a ceasefire.

In contrast, in a similar vote in December 2023, India favoured a ceasefire, reiterating its long-standing commitment to humanitarian considerations. In April 2024, India abstained from a UNHRC resolution calling for a ceasefire and an arms embargo against Israel, primarily due to the inclusion of the arms embargo clause. Similarly, in September 2024, India abstained from a UNGA resolution which called for an end to the Israeli occupation. Under the Modi government, it is clear that India has recalibrated its foreign policy posture towards Israel, but this has not been a complete departure from the idea that India has abandoned the legacy of having solidarity with the Palestinians. India under Modi has consistently reiterated its support for a two-state solution and the Palestinian cause. Nevertheless, unlike its previous track record of vehemently criticising Israel, India today takes a nuanced approach—exhibiting solidarity with the Palestinians while also being mindful of Israel's right to self-defence and the strategic need to have Israel as a vital partner. This is the ethical

quagmire discussed in this paper.

Jew and Gentile

Jews have been a distinct community that worked to preserve their identity despite adversities, persecution, wars, and exiles. This often led to a reluctance to assimilate into the cultures of the nations where they sought refuge. In the West, this exclusivity and non-assimilative lifestyle sometimes fuelled scepticism about Jewish communities, giving rise to myths such as child sacrifice, witchcraft, and other dubious practices. Conversely, this nature facilitated a harmonious coexistence with Hindu culture in the East, particularly in India. While Judaism and Hinduism share certain similarities, they also present stark contrasts. For instance, Judaism upholds monotheism, whereas Hinduism embraces polytheism. Jews view themselves as the chosen people and regard other cultures as pagan or gentile, with Jewish scriptures, especially the Torah, warning against idolatry. Despite these theological differences, Jews generally experienced a peaceful existence in India compared to their tumultuous history in Europe, marked by government crackdowns, persecution, pogroms, and the Holocaust. This contrast can be attributed to neither Hinduism nor Judaism having a global conversion mission, unlike Christianity or Islam. Throughout history, India provided sanctuaries for Jews fleeing persecution in Europe. A notable example is the Cochin Jews, who arrived in southern India by the 1st century AD. Indian rulers often granted them asylum and trading rights. Indian rulers often granted Jews asylum and trading rights. Due to the destruction of the First and Second Jewish Commonwealths, no direct diplomatic relations are recorded between the courts of Jewish and Indian kings. Any potential diplomatic interactions before these periods remain speculative, primarily inferred from the extensive trade ties between ancient Indian and Jewish regions.

Throughout the larger Nehruvian era, until the 1990s when India reassessed its Israel policy, India maintained a vastly distant and, at times, adversarial stance toward Israel, despite moments of cooperation during some of India's darkest hours, such as the India-China war of 1962 and the India-Pakistan war of 1971. The ideals of Mahatma Gandhi, Jawahar Lal Nehru and the commitments of the Indian nationalist movement were carried forward by the Congress party in the post-independence period. As we observed earlier, Jews and Hindus have maintained peaceful relations across the ages, with thriving Jewish communities across India. However, as Israel marched towards Jewish self-determination and statehood, India voted against the UN Partition Plan and also opposed Israel's membership in the UN. India's position was that "India could not recognise an Israel which had been achieved through the force of arms, not through negotiations," (Setalvad, 1992), which delayed the Jewish state's recognition by India.

Furthermore, even after recognising Israel, India did not immediately establish full diplomatic relations with it. Foreign policy has traditionally been a key area of interest for India's elites, with public discourse often focused on immediate concerns such as Pakistan, China, and India's relations with global powers like the US and USSR. These issues had immediate ramifications for India's territorial integrity and international standing. In contrast, neither Israel nor Palestine posed a risk to India's security interests, as neither was a neighbouring or strategic state for India. That said, it remained a contentious issue within and outside Parliament, mainly due to its impact on India's broader strategic equations with the Arab world. The Arab countries, India, and Israel shared colonial experiences marked by unrest, chaos, and exploitation. However, India was more aligned and friendly toward the Arab countries than toward Israel. This was primarily due to Afro-Asian solidarity, Nehru's hopes for a diplomatic resolution of Kashmir at the UN, and his aim to secure Arab goodwill rather than hostility in India's dispute with the Islamic Republic of Pakistan over Kashmir.

Palestine Question

The Palestine question predates India and Israel, tracing back to the 1917 Balfour Declaration. For Indian nationalists, the Arabs in Palestine were another oppressed nationality fighting for their independence against British imperialism, due to which a sense of solidarity emerged from their shared experience of colonial subjugation. Indian leaders viewed Zionist claims over Palestine as similar to Jinnah and the Muslim League's demand for Pakistan along religious lines. Still, the unfolding situation in Palestine was less about religion and more about the Jewish historical connection to the land, and their vision of creating a modern democratic nation-state of Israel, rather than a theocratic or authoritarian state. British India hosted the world's largest Muslim population, approximately 94.5 million, comprising 24.3% of the total population (Davis, 1949). This made it clear that a democratic and inclusive national movement could not ignore the strong aspirations of such a significant portion of the population, particularly on religious matters like the Khilafat and the Palestine question. Mahatma Gandhi was among the first of the secular leaders to share in these concerns of the Indian Muslims, thereby attempting to foster the prospect of Hindu-Muslim solidarity in British India. For Indian Muslims, Palestine held profound religious significance, particularly the Old City of Jerusalem, which is home to Al-Haram Al-Sharif, where the Al-Aqsa Mosque, the third holiest site in Islam, is located and is also believed to be the place where Prophet Muhammad ascended to the heavens during the Night Journey (Isra and Miraj) in Islamic tradition (Speaks, 2024). Moreover, Palestine had been under the now-collapsing Ottoman Caliphate. The Indian nationalist movement accommodated these aspirations by declaring, in 1922, the “effective guardianship of Islam” and

calling for "Jazirat al-Arab [to be] freed from all non-Muslim control." (Kumaraswamy, 2010). The Congress Party, as a gesture of support, declared September 27 as Palestine Day in 1936.

Non-Alignment and Nehru's Dilemma

After independence due to its own colonial experience, India became a staunch supporter of decolonisation elsewhere in Asia and Africa. The Zionist reliance on Britain placed it on the wrong side of Indian favour, as leaders like Nehru, Nasser, and Sukarno came to view Zionism as an extension of British imperialism. For Jawaharlal Nehru, India's stance towards Israel was heavily influenced by the need to maintain strong relations with key allies in the Afro-Asian movement, without whom the success of the Non-Aligned Movement could have been jeopardised. The friendship and vision shared by Nehru, Nasser, and Sukarno ultimately led to the formation of NAM, which became a defining principle of India's foreign policy. Both Nasser and Sukarno had adopted a hostile stance towards Israel from the outset, primarily due to various factors, including imperial patronage of Zionism. For Nehru and the Indian nationalists, the situation in Palestine mirrored what had already unfolded in the Indian subcontinent. British colonial rule had culminated in the bloody partition of India, and events in Palestine, including the 1917 Balfour Declaration, came to be seen as a colonial ploy to divide a united land. Although Nehru took a hostile position against the formation of a Jewish state, he was not ignorant of the fact that Israel had emerged as a reality among world nations. In line with India's overall cooperative spirit, Nehru wished to recognise and cooperate with Israel, similar to how India had hoped for China's recognition by the international community. On December 6, 1949, Nehru addressed the Constituent Assembly:

"Israel is now a member of the United Nations, and its recognition by other member states cannot obviously be indefinitely deferred. The Government of India would like to act in this matter, which has been the subject of controversy among nations with whom we have friendly relations, to avoid misunderstanding or ill-feelings, and we hope a satisfactory decision will be possible in the near future" (Constituent Assembly of India, 1949).

By stating this, Nehru acknowledged that Israel's existence was no longer a matter of debate but a reality that could not be ignored indefinitely. However, he also sought to avoid misunderstandings with Arab countries, with whom India had traditionally maintained favourable relations. After two years of deliberation, the Nehru government recognised Israel in 1950. However, the prospect of normalisation and diplomatic relations remained unclear. To clarify the situation, veteran Israeli diplomat Walter Eytan visited New Delhi in March 1952 and secured a commitment from Nehru towards normalisation and the establishment of an Indian mission in Tel Aviv; however, the final decision was left to the new cabinet after India's

first general election (Eytan, 1958). Despite this commitment, diplomatic relations did not materialise in the 1950s. In the 1960s, Nehru lamented it to another Israeli diplomat, Gideon Rafael (Rafael, 1981).

Foreign Policy Remnants

Jawaharlal Nehru's enduring personal charisma and role in shaping India's foreign policy were so influential that Nehruvian positions continued to shape India's diplomatic engagements long after his tenure. While his successors may have reconsidered some aspects of foreign policy, as he did in the 1960s, the geopolitical landscape by the 1970s had evolved mainly in ways unfavourable to Israel. The frequent military escalations and wars between Arab states and Israel deepened hostilities, forcing Israel to rely more on military strength for its survival rather than on negotiations. This was further reinforced by the Arab League's 1967 Khartoum Resolution, which declared the "Three Noes"—no peace with Israel, no recognition of Israel, and no negotiations (Zieve, 2012)—which effectively eliminated any prospect for reconciliation until Israel's détente with Egypt in the late 1970s. India's closeness with the Soviet Union (USSR) further contributed to Israel's difficulties engaging with India. Since Nehru's time, the USSR had invoked the admiration of Indian socialists and communists, and by 1971, India formalised this bonhomie through a treaty. Throughout the 1960s and into the early 1970s, the USSR was a patron and primary arms supplier to Egypt and its allies, until Egypt's Anwar Sadat tilted towards Washington.

Additionally, the Non-Aligned Movement primarily evolved into an anti-Israel bloc, mainly because of Israel's absence, despite being an Asian country, as it was excluded from the 1955 Bandung Conference, which paved the way for NAM at the insistence of Arab states. A similar instance occurred when the Jewish state was barred from the first Africa Freedom Day event in 1959 due to the threat of an Arab boycott (Gidron, 2021). If Lal Bahadur Shastri's brief tenure prevented significant developments in India-Israel relations, Indira Gandhi's long tenure made normalisation seem virtually impossible. During the Janata government, there were attempts to improve relations, and it initially supported the Camp David Accords of 1978. However, India later joined other NAM members in condemning the accords, fearing potential repercussions from the Arab world. By then, a pro-Arab, pro-Palestinian stance had become a precedent in India's foreign policy, making any deviation politically sensitive. Even today, India carefully reassures its Arab counterparts of its continued support for the Palestinian cause and the two-state solution. Nevertheless, the growing Arab-Israeli rapprochement has eased some diplomatic pressures India faced in maintaining a delicate balance.

Breaking the Taboo

Prime Minister Narasimha Rao's government ultimately recalibrated

India's Israel policy. However, this did not mean India compromised on its long-standing ethical commitment; instead, it aimed to position India as a bipartisan actor in the emerging Arab-Israeli peace process. It was a strategic attempt to reassure Arabs and Israelis that alternative paths to security existed beyond military means. In the lead-up to formalising diplomatic ties on January 29, 1992, India secured tacit approval from Yasser Arafat during his visit to Delhi on January 19-20, 1992. He acknowledged that the recognition of Israel and the exchange of ambassadors were matters of national sovereignty beyond his influence, and he emphasised his respect for India's independent decision-making in this regard (Roy, 2023). India's policy revision was necessitated by changing global dynamics, particularly from the fall of the USSR. The disintegration signalled the end of the Arab states' ability to rely on a military solution for the Israel-Palestine conflict. For India, it also meant the loss of a crucial ideological and strategic patron and a counterweight to the U.S. With the Cold War over, both India and the Arab states had to adapt to a unipolar world order dictated by the United States—Israel's strongest ally. The winding up of decades-long super-power rivalry between the two blocs also marked the decline of NAM's relevance, particularly given the pro-Western shift of Russia's new leadership under Boris Yeltsin. Several irritants arose in India-Russia relations, including issues related to cryogenic deals, arms transfers, rupee-rouble exchange, and the Kashmir issue, with Russia's favourable vote on a Pakistan-sponsored resolution declaring South Asia a nuclear-free zone further alarming India (Ghosh, 2023). This uncertainty at the beginning of the post-Soviet era and Russia's attempt to strengthen relations with Pakistan prompted India to be cautious of a potential breach of Soviet-era commitments. This led her to look elsewhere for defence supplies, with Israel emerging as a key alternative. Israel had, by then, built a reputation for producing state-of-the-art military technology, particularly in defensive warfare. After establishing diplomatic relations, the bilateral relationship grew significantly, with trade expanding from USD 200 million in 1992 to over USD 2 billion by 2004. When Atal Bihari Vajpayee became Prime Minister in 1998, India-Israel ties saw further advancements, particularly due to the Bharatiya Janata Party (BJP)'s favourable view of Israel, both ideologically and strategically. Counterterrorism cooperation became a focal point, as exemplified by the notable diplomatic exchanges, including L.K. Advani and Jaswant Singh's visits to Israel in 2000, followed by visits from Shimon Peres and Ariel Sharon to India in the subsequent years. In all these interactions, combating terrorism was a key agenda point. When the BJP was ousted by the UPA in 2004, there was speculation that it might reconsider the previous government's Israel policy, particularly regarding arms imports. However, the new administration treaded carefully, ensuring that bilateral progress was not undone. Israeli military technology was crucial for India's defence modernisation, particularly for upgrading

Soviet-era military hardware and advancing joint defence ventures. India thus continued to steadily strengthen ties with Israel, albeit without drawing excessive attention to the relationship. On bilateral matters, cooperation flourished, but on multilateral matters, such as the peace process, India continued to uphold its traditional stance—supporting a two-state solution, advocating Israel's withdrawal from occupied territories, and balancing its relations with the Arab world. This careful diplomatic approach allowed India to engage with Israel pragmatically without jeopardising its long-standing favourable relations with Arab countries.

India's Multi-Vector Engagement

India's foreign policy has shifted significantly as the BJP-led NDA secured three consecutive electoral victories under Prime Minister Narendra Modi. The country has greater overlapping strategic and economic interests with America and her allies—including Israel and the Gulf countries—than with Palestine and its supporters, such as Iran and Russia. While Russia has historically been India's key arms supplier since the Soviet era, Israel's cutting-edge military technology competes closely with Russian defence exports to fulfil India's evolving security needs. This was evident following the Balakot airstrikes when Indian officials highlighted the strategic significance of Israeli SPICE-2000 bombs, which enabled precision targeting of enemy bunkers and buildings (Negi, 2020). India's firm stance against terrorism has further shaped its foreign policy. In response to the Hamas attack on October 7 2024, Prime Minister Modi swiftly condemned it as terrorism on X (formerly Twitter), highlighting a stark contrast to Iran's perception of Hamas and Hezbollah as resistance movements against Israel. The Abraham Accords, which normalised relations between Israel and several Arab states, have further reinforced India's growing ties with both Israel and the Gulf nations, pushing it further away from the Palestinian cause. The Trump administration's move to revoke India's sanction waiver for Iran's Chabahar port (Tripathi, 2025) is expected to strain India-Iran relations further, making India less wary of upsetting Tehran over its sensitivities regarding Palestine. Iran's global isolation, exacerbated by its association with the so-called Axis of Resistance, the Shia-Sunni divide, its nuclear ambitions, and its patronage of designated terrorist organisations, has left it relying on partnerships with Russia, China, and North Korea. Meanwhile, sanctions have complicated India's ties with Iran, particularly in the energy sector. This was evident when sanctions choked India's oil imports from Iran, drastically declining bilateral trade from USD 17 billion in 2019 to just over USD 2 billion in 2023 (BW Online Bureau, 2024). Under the Biden administration, Washington adopted an understanding approach toward India's relationship with Russia at the height of the Ukraine war. On the other hand, the second Trump administration might maintain this leniency only

as long as Putin remains in Trump's good graces. In contrast, it is unlikely to show the same flexibility regarding India's ties with Iran or any potential drifting away from Israel, as the Trump administration has a strongly pro-Israel stance, which at its peak facilitated the transfer of the US embassy to Jerusalem during its previous tenure. Despite Russia's condemnation of Israeli actions in Gaza, Moscow has refrained from urging India to take a similar stance, recognising New Delhi's complex geopolitical positioning. Additionally, India's security concerns, particularly China's claims and encroachments over Indian territories, along with China's ties with Pakistan, make it imprudent to antagonise the West. As Arab states normalise relations with Israel, India finds it increasingly difficult to pursue a divergent course. This raises ethical questions: Can India continue aligning with Israel without compromising its historical support for Palestinian self-determination? While India has become more overt in its ties with Israel, especially under the NDA government of PM Modi, it has sought to maintain a careful balance in multilateral forums. This is evident in the voting patterns of the United Nations. For instance, in 2014, India supported the UNHRC resolution "Ensuring respect for international law in the Occupied Palestinian Territory, including East Jerusalem," which condemned human rights violations in Palestinian territories (United Nations Human Rights Council, 2014). In 2015, India shifted from voting in favour to abstaining, citing concerns over references to the ICC, to which India is not a signatory (Mitra, 2015). A UNESCO resolution in 2016, which downplayed Jewish historical claims on Jerusalem, received India's support. In 2017, despite Modi's historic visit to Israel, India joined 127 nations at the UN in voting against the American recognition of Jerusalem as Israel's capital. This trend continued, reflecting India's strategy of maintaining diplomatic neutrality while solidifying its bilateral ties with Israel. The "de-hyphenation" policy under Modi has further cemented this approach, allowing India to engage with Israel independently rather than through the prism of the Arab-Israeli conflict. However, some of India's recent moves have sparked criticism. In 2019, India voted in favour of an Israeli-backed proposal at ECOSOC to deny consultative status to the Palestinian NGO Shahed, which Israel accused of having ties to Hamas (Press Trust of India, 2019). This prompted debates in India's Parliament, where concerns were raised about whether the government was abandoning the national consensus on Palestine in favour of closer ties with Israel (Viswam & Raja, 2019). However, the Minister of State for External Affairs reassured that India's vote was primarily based on terrorism concerns, not a fundamental shift in policy (Muraleedharan, 2019). India welcomed the Abraham Accords, recognising its potential to legitimise India's growing engagement with Israel further. This was later reflected in India's participation in initiatives such as I2U2 (India, Israel, United Arab Emirates, and United States) and IMEC (India-Middle East-Europe Economic Corridor). During the UN's response to the October 7

attacks, India abstained from a Jordanian-backed resolution calling for an immediate ceasefire, citing its failure to condemn Hamas's actions. Instead, India supported a Canadian amendment calling for the unconditional release of hostages and condemning terrorism. Nonetheless, in December 2023, India backed a call for an immediate ceasefire in Gaza, emphasising both Israel's right to security and the need for a two-state solution, thereby reaffirming its long-standing commitment to the Palestinian cause and humanitarian efforts (ANI, 2023). Amid the ongoing Gaza war, India has faced allegations of supplying weapons to Israel. Calls for an arms embargo gained momentum in 2024, with former diplomats, activists, and academics petitioning the Indian Supreme Court to halt arms exports to Israel. Companies such as Munitions India Limited, Premier Explosives, and Adani Defence & Aerospace Ltd were cited in these appeals, with arguments that India is bound by international law to restrict arms sales to nations accused of war crimes (The Hindu Bureau, 2024). However, the judiciary declined to intervene, leaving the decision to the government. India's reluctance to support an arms embargo is rooted in its security concerns. Given its history of wars with Pakistan and ongoing territorial disputes with China, India cannot afford to disrupt its cooperation with Israel, especially in defence. The strategic partnership between the two nations has deepened significantly, as seen in joint ventures such as the Adani-Elbit UAV complex in Hyderabad, underscoring India's aspirations to become a defence manufacturing powerhouse. Despite facing isolation from India and the Arab states in the past, Israel has leveraged its technological prowess to align with the modernisation goals of these states. This convergence ensures that the Indo-Israeli relationship will remain robust, regardless of which party governs India. The failed course correction by the UPA in 2004 serves as a reminder that the trajectory of Indo-Israeli ties is unlikely to be reversed. While India has not abandoned its commitment to a two-state solution, its growing ties with Israel have necessitated a more pragmatic approach. The Modi government's strategic silence and India's abstentions on key votes reflect an effort to balance its traditional commitments with contemporary geopolitical realities. As India navigates this delicate path, it seeks to maintain its historical legacy of supporting Palestine while ensuring that its burgeoning relationship with Israel remains intact.

Conclusion

India's evolving stance on the Palestinian cause under the Modi government reflects a broader shift in its foreign policy priorities. While historical ties and ideological commitments once anchored India's pro-Palestinian position, contemporary geopolitical realities have led to a recalibration of its approach. Furthermore, India has learned to act beyond ideological constraints and reciprocate based on its experiences, recognising that Israel has consistently offered assistance during India's

turbulent times. Consequently, India now regards Israel as a reliable partner. India's economic, connectivity, and security interests with Israel and the GCC countries, along with its growing alignment with Western powers, have pushed Palestine further down in New Delhi's diplomatic agenda. The lack of incentive does not mean eliminating India's historical commitment to a two-state framework. Instead, it signals a pragmatic approach that balances historical commitments with present-day strategic imperatives. As India continues to navigate an increasingly complex global order, it may consider reconciling its ethical commitments with its national interests, ensuring that one does not jeopardise the other.

References

ANI. (2023, December 13). *India at UNGA Votes in Favour of Resolution Demanding Immediate Ceasefire in Gaza*. Retrieved from timesofindia.indiatimes.com: https://timesofindia.indiatimes.com/india/india-at-unga-votes-in-favour-of-resolution-demanding-immediate-ceasefire-in-gaza/articleshow/105946024.cms

BW Online Bureau. (2024). *India-Iran Bilateral Trade Dips 90% In 3 Years Due To US Sanctions*. Retrieved February 2025, from www.businessworld.in: https://www.businessworld.in/article/india-iran-bilateral-trade-dips-90-in-3-year-due-to-us-sanctions-518609

Constituent Assembly of India. (1949). *Constituent Assembly of India (Legislative) Debates* (Vol. IV). Constituent Assembly of India. Retrieved February 2025, from https://eparlib.nic.in/bitstream/123456789/761567/1/cald_06_06-12-1949.pdf

Davis, K. (1949, September). India and Pakistan: The Demography of Partition. *Pacific Affairs*, Vol. 22, No. 3, 257. Retrieved from https://www.jstor.org/stable/2751797?origin=JSTOR-pdf

Eytan, W. (1958). *The First Ten Years: A Diplomatic History Of Israel*. Simon & Schuster.

Ghosh, P. (2023). *International Relations* (Fifth ed.). Delhi: PHI Learning Private Limited.

Gidron, Y. (2021, February 6). *Kwame Nkrumah and Israel*. Retrieved February 2025, from africasacountry.com: https://africasacountry.com/2021/06/kwame-nkrumah-and-israel

Kumaraswamy, P. (2010). *India's Israel Policy*. Columbia University Press.

Mitra, D. (2015, July). *India Abstains from the UNHRC Resolution Against Israel*. Retrieved from www.newindianexpress.com: https://www.newindianexpress.com/nation/2015/Jul/04/india-abstains-from-unhrc-resolution-against-israel-778674.html

Muraleedharan, V. (2019). *Question No. 2096: Policy Approach on Palestine*.

Retrieved 2025, from www.mea.gov.in: https://www.mea.gov.in/rajya-sabha.htm?dtl/31588/QUESTION_NO2096_POLICY_APPROACH_ON_PALESTINE

Negi, M. (2020, June 30). *Indian Air Force to buy SPICE-2000 bombs from Israel, last used in Balakot airstrikes*. Retrieved February 2025, from www.indiatoday.in: https://www.indiatoday.in/india/story/indian-air-force-buy-spice-2000-bombs-missile-israel-balakot-pakistan-air-strike-1695606-2020-06-30

Press Trust of India. (2019, June 11). *India votes in favour of Israel against Palestinian NGO in UN*. Retrieved February 12, 2025, from www.indiatoday.in: https://www.indiatoday.in/world/story/india-votes-in-favour-of-israel-against-palestinian-ngo-in-un-1546999-2019-06-11

Rafael, G. (1981). *Destination Peace*. Rowman & Littlefield.

Roy, S. (2023, October 10). *How India-Israel ties progressed: from Palestine-leaning to a strategic embrace of the Jewish nation*. Retrieved from indianexpress.com: https://indianexpress.com/article/explained/arc-of-indias-ties-with-israel-8974060/

Setalvad, M. (1992). India and Israel: A Study of Evolution in Relations (1948 - 92). In J. P. SHARMA, *Proceedings of the Indian History Congress* (Vol. 53, p. 594). Indian History Congress. Retrieved 2025, from https://www.jstor.org/stable/44142875

Speaks, M. (2024, March 31). *Why is Al Aqsa Mosque So Important to Muslims?* Retrieved February 2025, from www.as-salaamfoundation.co.uk: https://www.as-salaamfoundation.co.uk/why-is-al-aqsa-mosque-so-important-to-muslims/

The Hindu Bureau. (2024, September 4). *Retired diplomats, intellectuals move Supreme Court to halt Indian firms' 'supply' of arms to Israel during Gaza conflict*. Retrieved February 2025, from www.thehindu.com: https://www.thehindu.com/news/national/pil-in-supreme-court-seeks-direction-to-centre-to-halt-export-of-arms-military-equipments-to-israel/article68604698.ece

Tripathi, V. (2025, February 6). *Trump Ends Sanctions Waivers on Chabahar Port Ahead of PM Modi's US Trip: What's the Impact on India?* Retrieved from www.outlookbusiness.com: https://www.outlookbusiness.com/economy-and-policy/trump-ends-sanctions-waivers-on-chabahar-port-ahead-of-pm-modis-us-trip-whats-the-impact-on-india

United Nations Human Rights Council. (2014). *Report of the Human Rights Council on its twenty-first special session*. Retrieved February 2025, from www.un.org: https://documents.un.org/doc/undoc/gen/g14/159/89/pdf/g1415989.pdf

Viswam, B., & Raja, D. (2019). *QUESTION NO.2096 POLICY APPROACH ON*

PALESTINE. Retrieved February 2025, from www.mea.gov.in: https://www.mea.gov.in/rajya-sabha.htm?dtl/31588/QUESTION_NO2096_POLICY_APPROACH_ON_PALESTINE

Wezeman, P. D., Fleurant, A., & Kuimova, A. (2020, March). *Trends in International Arms Transfers*, 2019. Retrieved February 2025, from www.sipri.org: https://www.sipri.org/sites/default/files/2020-03/fs_2003_at_2019.pdf

Zieve, T. (2012, August 26). *This Week In History: The Arab League's three no's*. Retrieved February 25, 2025, from www.jpost.com: https://www.jpost.com/Features/In-Thespotlight/This-Week-In-History-The-Arab-Leagues-three-nos

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Status, Challenges and Prospects of Cooperatives in Kerala

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Abstract: The United Nations General Assembly declared 2025 the International Year of Cooperatives, focusing on "cooperatives build a better world". The cooperative movement spread across the borders, including India. Kerala state is one of the dominant states practising cooperation with its spirit and rigour. Hence, this paper was prepared with the objective of knowing the current status, challenges and prospects. Analysis revealed that the cooperatives in the state are spatially spread, financially sound and diversified. However, the threats of globalisation, conventional practices, and problems limit the scope of cooperatives in this competitive environment. The primary policy change required is the integration of noble cooperative principles with the new international order, which is challenging, competitive, and unavoidable. If so, the prospects of cooperatives are sunny.

Keywords: Cooperative Movement, Financial Performance, Governance Challenges, Globalisation Impact, Sustainable Development.

Introduction

The industrial revolution replaced human labour and skills with technology, retrenching skilled workers and poverty. Different initiatives emerged to accommodate the retrenched workers, including "cooperatives". Robert Owen is considered the father of cooperation. The first cooperative society was established in Rochdale, Pioneers in 1844 in northern England, titled the Rochdale Equitable Pioneers Society. Because of the noble causes (self-help, self-responsibility, democracy, equality, equity and solidarity) behind cooperatives, the movement received commoner acceptance and quickly spread to different parts of the world. Today, cooperatives are an inevitable part of the development process in almost all countries, but are prominent in Brazil, Singapore, France, Germany, Finland, India, etc. The momentum of cooperatives was restricted in recent decades due to globalisation. Today, the question and challenges are corporates v/s cooperatives. The recent challenges are, lack of professionalism, out dated legislations, unnecessary government

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controls, dual and multiple controls, issues with elections, problems of diseconomies of scale, poor member participation, reluctance from youth population, lack of knowledge about the cooperatives to the commoner, reservations from upper and middle income consumers because of "global consumerism" etc. Problems and challenges vary from country to country and region to region.

Indian Cooperative Movement – A quick assessment

The first cooperative society in India was started in 1904. The foremost visionaries behind the launch of the cooperatives in India are Sir Frederic Nicholson, Shri Sidannagouda S. V. Metha, Amul Kuriean, etc. Since its independence, the movement has spread across regions, and the current status of cooperatives is that the cooperatives operate in 29 categories, spread over 812526 cooperative institutions with a total membership of 291280275. Of this, 808914 are primary societies (99%), 622845 are functional (76%), non functional are 145676 (18%) and under liquidation 43646 (6%) (National Cooperative Data Base 2023) Table I gives a more illuminating view of cooperatives in India generated based on latest data base available (2023).

Table 1. Share of Cooperatives in the Indian Economy 2023(%)

Types of societies	SHARE
Rural network covered by cooperatives	98
Rural network covered by PACS	91
Total agricultural credit disbursed by cooperative s	13
Short-term credit to small and marginal farmers	19
Kissan credit cards	67
Fertiliser distributed (estimated)	35
Sugar produced	30
Sugar production capacity (	46
Liquid milk marketed	86
Active fishermen's cooperatives	20
Paddy procurement	20
Retail fair price shops	23
Direct employment generated by cooperatives	13
Self-employment generated for persons	10

Source: compiled from (1) Ministry of Finance, Government of India, Economic Survey, New Delhi (various years), (2) National Cooperative Data Base, 2023

This table indicates some interesting facts. The cooperatives cover 98 per cent of rural areas, and the rural network covered by PACS is 91 per cent, meaning the movement has penetrated every nook and corner of the country. One of the objectives of cooperatives is to protect the interests of the farmers and commoners. The spatial coverage justifies this goal, but it is very dismay to notice that the total agricultural credit disbursed by cooperatives in 2022-23 is only 12 per cent of the total agricultural credit disbursed by all institutions and the share of credit to small and marginal farmers is only 19. However, the previous decade's data show that cooperatives played a significant role in the disbursal of agricultural credit. For instance, at the time of independence cooperatives contributed 64 per cent (crude data) agricultural credit, in 1980 it reached 57 percent and in 2000 it stood at 38 percent (sini Thomas) A close look into the details presented in table I also infer that the role of cooperatives is declining in the economy. However, this does not mean that the "doomsday" of cooperatives is near; it cautions that it is high time to “revamp” and “restructure “to meet the challenges of the 21st century. The challenges at global, national and regional levels are mentioned in the earlier paragraph. The opportunities are the formation of a new ministry for cooperatives (2021), the preparation of Model Byelaws for cooperatives by the central government, the formation of national-level experts for reviving cooperatives, diversified agricultural and industrial activities like agri-business and startups, developments in technology, etc. Suppose these recent policy changes are appropriately mixed with and put into practice. In that case, the cooperative sector can regain its prominence even during globalisation because cooperatives play a vital role in fostering inclusive growth and equitable development in India. Cooperatives stand as a symbol of collective strength and shared prosperity, empowering individuals while nurturing community bonds. Across the country, the cooperative movement is widespread, and Kerala state is one of the states where the movement flourished significantly.

Kerala State Cooperative Movement

After the enactment of the State Reorganisation Act, 1956, states were formed based on a linguistic basis. The Kerala state was born on 1st November, 1956 amalgamating, Cochin, Travancore princely states and Malabar district under Madras Presidency. Over the years, politically, the state was administered by two fronts with conflicting interests. The state received international attention due to its unique development experience, commendable improvement in human development indicators, and unstable performance in productive sectors. This "contradiction" is aptly labelled as "Kerala Model Development," Social scientists across countries have discussed its relevance, features, and sustainability.

The cooperative movement in the erstwhile Travancore and Cochin states

are the parts in the present state of Kerala, originated as a result of initiatives taken by Sri P Rajagopalachari, the Diwan of the princely state of Travancore. The first cooperative society in Kerala was the Trivandrum Central Cooperative Bank, which was established in 1915. A common cooperative law became inevitable when Travancore, Kochi and Malabar were integrated to form the Kerala state. Accordingly, the Kerala Cooperative Societies Act came into existence on 15th May 1969. The Cooperative Act in Kerala was revised and modified at various stages. The cooperative movement across the country and in Kerala substantially contributed to the grassroots-level development. Equally, experienced many challenges also.

Kerala's cooperative sector has been severely criticised recently because of a few “bad practices", and the public is losing confidence in cooperatives. The state's credit cooperatives network is extensive and widespread, but "withering away" from the farmers. The consumer cooperatives struggle to survive compared to their old “golden days”. Still, cooperatives are integral to development, particularly local and regional development. Recognising this importance United Nations General Assembly declared 2025 as International Year of Cooperatives with the theme "Cooperatives Build Better World". In this backdrop, this paper is prepared with the following objective.

Objective

The only objective of this paper is to evaluate the performance of the cooperative sector in Kerala, covering status, challenges, and prospects.

Data and Analysis

The study is based on secondary data collected from different published sources and examined with appropriate arithmetic and statistical tools. While trying to develop a database, significant difficulties experienced were the non-availability of time series data, lack of uniformity in measuring units, and changes in concepts in different periods. To overcome these problems, the study period was split into three parts: 2004-05 to 2007-07, 2018-19 to 2020-21, and 2022-23. The first period was treated as a base period for comparisons, and the third period was used to assess the current status. Of course, it is well admitted that the deficiencies and inaccuracies create interpretation problems, but provide reasonable indications.

Table II provides a prelude of the cooperative movement in the state during the period 2004-05-2006 -22207, and Table III provides the status of cooperative movement between 2019-19 and 2020-21. These two tables will provide a baseline for terminal year comparisons.

Table II presents a comprehensive picture of cooperatives in Kerala from 2004-05 to 2006-07. During this period the number of societies (all societies

Table 2. Progress of Cooperatives in Kerala (2004-05 TO 2006-07

Particulars	2004-05	2005-06	2006-07	Period growth (%)
Number of societies	12612	12818	13044	3.42
Membership in cores	3.44	3.44	2.91	-15.4
Share capital in core	13.88	19.80	16.52	19.02
Deposits in cores	227.49	286.31	316.76	39.20
Loans advanced in cores	213.75	249.06	291.58	36.61
Working capital in cores	386.25	506.71	525.81	36.15

Source: compiled and computed from The Registrar of Cooperative Societies, Kerala Statistical Abstract Hand Book Thiruvananthapuram (various years)

together) increased by 432 societies. This indicates that cooperative societies have mushroomed due to political and religious interests, which will be clear in later discussions. In the case of deposits, there is an increase of 41 per cent, while credit increases by 36 per cent. This trend is also visible in later years, and this is because of the deposit campaigns conducted by cooperatives across the states during campaign months. However, timely and efficient disbursement and utilisation of this deposit at the grassroots level is the need of the hour. The cooperative regulations and other legal restrictions limit this scope. Comparing these trends with what is given in Table III makes a comparison. Over the years, the growth of cooperative societies has been sluggish, possibly because of the dormancy experienced by many societies during this period. At the same time all other parameters made a quantitative leap over the years. However, these macro details will not be disclosed much unless we go for the disaggregated

Table 3. Progress of Cooperatives in Kerala (2018-19 TO 2020-21)

Particulars	2018-19	2019-20	2020-21	Period growth %
Number of societies	11892	16256	14326	20.46
Membership in cores	9721	10241	11037	13.53
Deposits in cores	235875	237651	242187	2.67
Loans advanced in cores	186574	165483	175631	4.87
Working capital in cores	218569	276509	287674	31.67

Source: compiled and computed from The Registrar of Cooperative Societies, Kerala Statistical Abstract Handbook Book Thiruvananthapuram (various years)

details of financial indicators. As mentioned, there are data problems in this respect; hence, the current status is discussed below with one year-specific data, 2023, for which the latest statistics are available.

Table IV gives the status of cooperatives in Kerala in 2023. The total number of cooperatives increased by 24 per cent compared to 2006-07. The share of working societies remained at 75 per cent in 2023, which indicates that dormancy is increasing over the years. Different reasons can be attributed to this, mainly the fewer preferences from the side of youth, administrative issues, loss-making, etc. This is evident from the number of societies under liquidation in 2023 compared to 2006-07. Another interesting observation is that of the total number of societies in 2006-07, the share of primary and consumer societies stood at 33 and 32 per cent, respectively. These shares in 2023 are 25 per cent and 28 per cent, which implies that over 18 years, changes in the composition are not significant in Kerala. Primary credit societies across the country have dominated the cooperative sector over the years, and the same trend has continued in the state. There is reasonable growth of consumer societies, but the primary questions of customer preferences, youth segment preferences, and multiple brand availability are challenging. In the era of globalisation, there is sufficient potential for marketing and processing cooperatives, but their growth is only marginal over the years. Overall, the growth of cooperatives in the state has been sluggish over about 18 years, and the quality of service is not very

Table 4. Distribution of Types of Cooperative Societies in Kerala 2023

Types of societies	Number
Apex societies	11
Federal societies	11
Central banks	1
Primary credit societies	4147 (25)
Consumer societies	4620 (28)
Marketing and processing societies	612
Others	6833
Total	16255(42)
Working	12284
dormant	3312 (75)
Under liquidation	659 (4)

Source: compiled and computed from The Registrar of Cooperative Societies, Kerala Statistical Abstract Handbook Book Thiruvananthapuram (various years)

competitive.

Current financial status

Below, an attempt is made to assess the current status of the cooperative sector in Kerala based on 2023 details. The variables covered under this discussion include total paid-up share capital, deposits outstanding, borrowings, loans outstanding, working capital, investment, net profit, and net loss.

(a) Paid Up Share Capital

The paid-up share capital of cooperatives in Kerala (2023) remained at Rs13037 cores, of which the shares of members, government, and others remained at 80 per cent, 13 per cent, and 7 per cent, respectively. Members' shares arrive from the public, and the larger share of this component shows the public confidence in cooperative organisations. At the same time, type-wise, the maximum pubic share went to credit societies, which underscores the public affiliation to traditional type cooperatives. This is a landmark. The cooperatives can retune their strategies only if diversification into different types of cooperatives takes place. At the same time, capital-wise, the sector is still healthy.

(b) Deposits outstanding

Table VI details of deposits outstanding among cooperatives in Kerala 2023(amount in cores)

It is seen from table VI that the per unit deposits outstanding of credit

Table 5. Total Paid-up Share Capital in Cooperatives in Kerala 2023 (in cores)

Type	Members	Govt	Others	Total
Credit societies	7100	146	318	7564
Consumer societies	22.87	7.82	4.72	11.88
Marketing and processing societies	16.70	10,78	4.97	32.45
Other societies	12	76	325	413
Apex societies	1215	1801	152	2449/
Federal societies	0.81	80.2	9.94	90..95
State total	8827	1487	723	11037

Source: compiled and computed from The Registrar of Cooperative Societies, Kerala Statistical Abstract Handbook, Thiruvananthapuram (various years)

Table 6. Details of deposits outstanding among cooperatives in Kerala 2023(amount in cores)

Type	No of societies	Deposits outstanding	Per unit	Share in total
Credit societies/banks	12	178913.9	14909.4	68.18
Consumer societies/ primary societies	6	70.3	11.71	N
Marketing and processing societies	3	204.81	68.27	N
Others	34	7797.07	229.3	2.97
Apex societies	11	70748.1	6431.6	26.96
Federal societies	11	47.37	4.30	N
District co-op banks	1	4606.6	4606	1.75
State total		262388.27		100

N = insignificant share
Source: compiled and computed from The Registrar of Cooperative Societies, Kerala Statistical Abstract Handbook, Thiruvananthapuram (various years)

societies remained at 68 per cent in 2023 and apex societies share remained at 27 per cent. All other cooperative organisations had a relatively low share. The total deposits outstanding by all cooperatives stood at Rs 262388 crore in 2023, a considerable amount. This is the result of a "deposit mobilisation campaign conducted by cooperatives. This gives cooperatives a strong resource base. Borrowings further support this. Table VII shows that borrowings are done mainly by credit societies (50.56%) and apex societies (43.14%). This happens mainly because of the refinance facility provided by NABARD. Per unit borrowings by the credit societies remained at Rs 1696 core in 2023, and by apex societies remained at Rs 1578 core. This refinance facility's interest cost is reasonable and does not significantly burden society. Further, the low cost of borrowings increases the "credit offering power" of credit cooperatives. The total deposits and borrowings together reflect in the credit/loan operations of the societies.

(c) Borrowings

Table VII presents the composition of borrowings made by cooperatives in the state. Borrowings strengthen the financial base of cooperatives, and they also increase the lending capacity. The primary borrowing cooperatives are credit societies and apex societies. This happens because they enjoy the refinance facility that the National Bank for Agriculture and Rural Development (NABARD) and the National Cooperative Development Corporation (NCDC) offer. The remaining types of societies are not

Table 7. Details of borrowings of cooperative societies in Kerala 2023 (Rs core)

Type	No of societies	Borrowings	Per unit	Share in total
Credit societies/banks	12	20357.5	1696.4	50.56
Consumer societies/ primary societies	6	19.1	3.18	N
Marketing and processing societies	3	112.8	37.6	N
Others	34	1769.2	52.03	4.39
Apex societies	11	17368.4	1578.9	43.14
Federal societies	11	321.2	29.2	N
District co-op banks	1	311.4	311.4	N
State total		40259.5		100

N = insignificant share
Source: compiled and computed from The Registrar of Cooperative Societies, Kerala Statistical Abstract Handbook Book Thiruvananthapuram (various years)

borrowing much, and their share in the total borrowings is negligible. If the "innovative cooperatives" come forward to use borrowing facilities and use this borrowed fund for further investment in viable alternatives, it will make the cooperatives more competitive.

(d) Loan outstanding

It is seen from table VIII that the share of credit societies and apex societies in the loan portfolio remained at 72 per cent and 26 per cent in 2023. The state total of loans disbursed in 2023 remained at Rs 187413 core against a deposit of Rs 262388 core, with the credit deposit ratio being 71 per cent. However, the combined borrowing and credit deposit ratio declined to 61 per cent. These trends indicate that compared to deposit mobilisation, the credit disbursement is slow, even though the ratio is relatively higher compared to state average credit deposit ratio (58 per cent). Thus, cooperatives have immense potential for financing state development efforts, but the hurdle is the cooperative legislation and the problem of double, triple or multiple administrative controls. Taking segment-wise, the credit deposit ratio of credit societies remained at 75 per cent in 2023; for the apex societies, this ratio remained at 69 per cent.

(e) Working capital

Working capital is the difference between an organisation's assets and liabilities. High working capital ensures more financial health. Table IX

Table 8. Details of loan outstanding of cooperatives in Kerala 2-23 (in cores)

Type	Number of societies	Loan outstanding	Per unit	Share in total
Credit societies/banks	12	134551.1	11212.6	71.79
Consumer societies/primary	6	0	0	N
Marketing and processing cooperatives	3	0	0	N
Others	34	21.73	0.64	N
Apex societies	11	49326.8	4484.3	26.31
Federal societies	11	0	0	N
District Cooperative Bank	1	3514.20	3514.20	1.87
State total		187413.80		100

N = insignificant share
Source: compiled and computed from The Registrar of Cooperative Societies, Kerala Statistical Abstract Handbook, Thiruvananthapuram (various years)

presents the working capital composition of cooperatives in the state in 2023. The total working capital in cooperatives in the state remained at Rs296908 core, of which credit societies contribute Rs189413 cores, apex societies Rs91273 and district cooperative banks R5067 cores; respectively shares being 64 percent, 31 per cent and 1.74 per cent. All these trends suggest that credit cooperatives still dominate the state cooperative structure. Even after a century, this convergence to credit cooperatives indicates that the cooperatives are not penetrating enough into new

Table 9. Details of the total working capital of cooperatives in Kerala 2023 (Rest cores)

Type	Number of societies	Working capital	Per unit	Share in total
Credit societies/banks	12	189413.3	15784.4	63.79
Consumer societies/primary	6	272.04	45.34	N
Marketing and processing societies	3	163.46	47.82	N
Others	34	9981.1	293.6	3.36
Apex societies	11	91273.6	8297.5	30.74
Federal societies	11	738.15	67.1	N
District cooperative banks	1	5067.13	5067.1	1.70
State total		296908.8		100

N = insignificant share
Source: compiled and computed from The Registrar of Cooperative Societies, Kerala Statistical Abstract Handbook, Thiruvananthapuram (various years)

alternatives and options. In other words, one can opine that the cooperatives in the state act as "risk avoider" to some extent. This is supported by Table X, where the investment portfolio also remained with credit and apex societies, with the shares being 48 per cent and 47 per cent, respectively. Compared to earlier parameters, it is evident that, in the case of apex societies, the share in investment is higher in the reference year. Regarding asset composition, 82 per cent of assets are held by credit societies, followed by the district cooperative banks.

(f) Investments

The financial health of an organisation is reflected in its ability to make investments. Together, the cooperatives in the state invested Rs 80865 crore, which is a notable amount. Type-wise, the maximum investment is made by credit cooperatives, followed by apex bodies. In all indications, the financial contribution of consumer societies and marketing societies is limited. This indicates that the diversification in the cooperative sector is minimal.

(g) Profit and loss

Table XI presents the cooperatives' net profit and net loss position in 2023. Two thousand one hundred twenty societies made a net profit of Rs1565 cores, per society share being 0.74 core. In the case of another category of societies, the net profit rate is negligible. On the other hand, in the case of loss-making societies, there are 1550 loss-making credit societies and their accumulated loss in Rs7430 core, per credit society loss being Rs4.80 core. This is a comparatively huge amount compared to the per-credit society's net profit. These trends suggest that cooperatives struggle to survive

Table 10. Details of investment by cooperatives in Kerala 2023 (in cores)

Type	Number of societies	Investment	Per unit	Share in total
Credit societies/banks	12	39175.8	3264.6	48.44
Consumer societies /primary	6	34.59	5.76	N
Marketing and processing societies	3	30.62	10.20	N
Others	34	1315.64	38.67	3.36
Apex societies	11	38697.07	38.67	47.85
Federal societies	11	0.41	0.037	N
District cooperative banks	1	1611.38	1611.38	1.99
State total		80865.32		100

N = insignificant share
Source: compiled and computed from The Registrar of Cooperative Societies, Kerala Statistical Abstract Handbook, Thiruvananthapuram (various years)

Table 11. Details of net profit and net loss of cooperatives in Kerala 2023 (Rest Core)

Type	Per unit profit	Share in total profit	Per unit loss	Share in total loss
Credit societies/banks	0.74	62.03	4.80	67.55
Consumer societies/primary	0.004	N	0.056	0.008
Marketing and processing societies	0.011	N	1.61	2.59
Others	0.151	11.07	0.49	12.03
Apex societies	222.97	26.50	112.89	8.18
Federal societies	0,02	N	107.45	8.76
District Cooperative Bank	2	N	0	0
State total		100		100

N = insignificant share
Source: compiled and computed from The Registrar of Cooperative Societies, Kerala Statistical Abstract Handbook, Thiruvananthapuram (various years)

compared to previous decades, or the significance of cooperatives is diminishing in society, not because cooperatives are unsuitable and inappropriate forms of business organisation. However, they are not reshaping or returning their business strategies to meet the 21st-century challenges and capture opportunities.

In the above section, we have seen the performance of financial indicators in Kerala cooperatives. The highlights of this discussion are the following.

1. The majority of the cooperatives in the state are financially sound and have a substantial resource base.

2. Credit societies are "withering away" from agricultural credit operations, and this shift has been evident in recent years. In 2023, cooperatives contributed only 16 per cent of agricultural credit, compared to more than 20 per cent a few years back.

3. Even though cooperatives are diversifying, this diversification is not seriously reflected in financial transactions; that is, noncredit societies are very shy in their activities.

4. The cooperatives are very interested in enjoying the refinance facility because of its low cost.

5. The number of loss-making societies has increased in recent years compared to profit-making societies, which may affect their sustainability in the long run.

Significant challenges of the cooperative sector in Kerala

The significant challenges experienced by the cooperative sector in Kerala state are listed below.

1. Feasibility and viability of cooperatives: A cooperative-associated project will be viable only if utmost care is taken in the different stages of project formulation. A project is to be assessed from technical, financial, economic and organisational perspectives. Even though a cooperative project undergoes these stages theoretically, many projects are location-specific or region-specific. A quick look into the projects sanctioned by the cooperative credit agencies will reveal that about 60 per cent of projects are not "precisely suitable" to serve the purpose. For instance, in the case of agricultural projects, the need of the hour is post-harvest technology efforts. However, our focus on marketing and processing is limited compared to conventional credit-centred projects. There are problems with the disbursement of agricultural credit by the primary agricultural credit societies. Economic prosperity and food security can be ensured only if long-term agricultural credit is disbursed. However, data indicate that about 79 per cent (2022) of credit is short-term, exclusively for production purposes. In the case of performance of industrial cooperatives in Kerala, the picture is not different. Though the cooperative sector started with a few industrial cooperatives in the state, they failed to ensure long-run feasibility and viability due to the quality of products, marketing efforts, and competition from global products and brands, particularly since globalisation.

2. Cooperative leadership and member participation: lack of quality management, over dependence on government, dormant membership, non-conduct of elections, lack of strong human resources etc are the important managerial challenges. Even though cooperatives are highly democratic institutions, the “cluster of people” who controls the cooperatives act as a constraint for professional growth of cooperatives. It is widely agreed that different political parties control the cooperatives, and their interests dominate them, keeping the noble cooperative principles away. In absolute terms, the membership in the cooperatives is vast, but most of the members remain dormant. A study by Mahalingam on Kerala cooperatives (2022) suggests that about 20 per cent of members are only actively involved in the cooperative process in the state. This dormancy leads to concentration of day-to-day administration into the hands of a few and ultimately protection of vested interests and manipulation. Inordinate delay in conducting elections also acts as a problem in cooperatives' smooth and efficient operation.

3. Misappropriation of funds: Because of the inefficiencies in management and limited democratic process, different malpractices arose, including misappropriation of funds. Across the country and in the state, there are

ample instances of misappropriation of funds, and investigations by the regulating authorities are proceeding in many cases. Misappropriation of funds may include credit operations against the cooperative rules and spirit. It is reported that the average NPA in cooperatives in the state is about (Rs20000 cores), 36.3 per cent (2023) of advances compared to 3 per cent NPA of commercial banks in the state. This happens mainly because of inappropriate loans, non-viability and feasibility of loans and unhealthy political interference in keeping overdue without settling. The sequential relation between NABARD, State Cooperative Bank, District Cooperative Banks and Primary societies also widens this interest cost spread and burden gap. Until recently, one of the profitable operations of the cooperatives was running "chit kuri" (a form of indigenous financial operation), but the regulatory system recently banned this. It is also learnt that the auditing is not taking place promptly and accurately in many cooperative institutions.

4. Problem of dual and multiple controls: The central bank and state cooperative regulations control the cooperative banks. This dual control creates problems in coordinating activities. Similarly, the rich resource base of cooperatives cannot be effectively linked with the decentralised planning process under panchayat raj. If this gap is bridged, there will be better liaison between cooperatives and local development. This can be done only if new regulations exist in the state's cooperative rules. Similarly, another constraint is the overlapping of operations by the cooperatives. For instance, certain activities done by a type of cooperative are also done by another cooperative.

5. Birgegaard and Genberg (2000) pointed out that "unless the cooperatives can meet the challenges of globalisation, they will end up in down turn spirals of decreasing volume of business, deteriorating profitability of their operations, reduced capacity to pay remunerative and competitive prices and provide useful services to their clients. Globalisation has affected the functioning of all types of cooperatives in Kerala. For instance, the need for the hour is restructuring the functioning of agriculture cooperatives to accommodate post-harvest technology strategies. However, even today, many agriculture cooperatives remain traditional cooperatives involved in pre-harvest and harvest operations. Similarly, globalisation is a big threat to the smooth working of consumer societies. The state had a glorious past of consumer cooperatives. However, their significance drastically falls because of the challenges of corporate marketing tactics like starting super markets and malls and also highly competitive marketing efforts covering all Ps (product, price, physical distribution, promotion, etc). As mentioned earlier, the challenge is between corporate V/S cooperatives. Evidence proves that the youth population, which covers about 58 per cent of the state population, is not interested in associating with cooperatives in banking or consumer needs. This impacts globalisation. The cooperatives

fail to reach the youth population characterised by "corporate and new gen interests"

6. Limited access to digital platforms: As mentioned earlier, the cooperative sector has not yet captured the impact of globalisation and technology in its operations. Because of this, even today, activities in the cooperative sector are mainly manual. This consumes time, energy and resources with less optimum output. A further consequence is that this limits the scope of interbank transactions and consequently results in fewer preferences by the youth and employed population who are technology savvy.

7. Weak database: The cooperatives operate with a weak database for the above-mentioned reasons. A close look into the database revealed that whatever data are available in the sector are untimely, inaccurate, and not comparable. Even in preparing this paper, the current status was discussed at a single point because sequential data are unavailable. The issues of data collection, storage, analysis, retrieval, and technology use are complementary.

8. Public confidence: An institution will be preferred only if there is public confidence. Recently, the central banks instructed the cooperative societies not to use the term "bank" in their titles because of technical and administrative reasons. In recent years, different types of fraud have been reported, which has reduced the sector's confidence and transparency.

From the above discussions, it is clear that the cooperative sector in the state is experiencing different challenges. Recently, the centre made a few enactments that apply to the state and make the sector healthy enough to accommodate the shocks and settle at an optimum point with better prospects. These measures are listed below.

Roadmap towards cooperative prosperity

The United Nations has officially designated 2025 as the International Year of Cooperatives, a global initiative aimed at reorganising and promoting the invaluable contributions of cooperatives to sustainable development, economic inclusion and community resilience. It is appropriate to develop a mission and vision based on the backdrop of the UN development goals. The United Nations' five sustainable development goals concerning cooperatives are (i) zero hunger, (ii) food security, (iii) gender equality, (iv) decent work and economic growth, and (v) combating climate change.

The following arguments are relevant while evaluating the current role and perspective of cooperatives in Kerala. Kerala state is much ahead of poverty reduction, and this achievement is made possible mainly because of grassroots efforts in which cooperatives have played a key role. However, in the current visionary thinking, it is important to note that there is a nexus between poverty reduction, food production, food security and gender equality. As mentioned earlier, though the cooperatives play a key role in

the agriculture sector, their role is limited to conventional responsibilities. There should be changes in this approach, and the new approach should focus on post-harvest technology, which includes value addition, processing, logistics, marketing, and exports. Across the country, food security is an emerging issue due to crop diversification and climatic changes. Whenever food security is threatened, the gap between the population's upper, middle, and lower strata based on income status is widened. This divergence will move towards poverty.

The role of women in the production process is also important. Starting women-centred cooperatives that emphasise agricultural enterprises and informal industrial units is also important. In short, grassroots development efforts will be fruitful only if agriculture enterprise-oriented, women-focused cooperatives emerge. It is high time to come up with a cooperative strategy that assimilates UN policy.

Recently, the central government introduced different measures to strengthen cooperatives in the county. The important measures that can be adopted in Kerala state are reviewed below.

1. In the earlier discussions, it was made clear that a lack of professionalism at the director board and employee levels limits the scope of cooperatives in the context of the competitive world. This problem can be overcome by strengthening cooperative training institutions, making professional degrees a minimum qualification for employment and also starting a cooperative university. There are a few credible institutions at the national level, but what is suggested is the relevance of the regional level or the district level with more professionalism and infrastructure.

2. As mentioned earlier, the workings of agriculture credit societies are not up to the modern requirements. The emphasis on short-term credit will not contribute to agriculture infrastructure or post-harvest technology. The need of the hour is an integrated approach covering input management, value addition, processing, etc. This aspect has already been discussed in detail earlier.

3. Measures may be strengthened to attract the young generations towards cooperative institutions. This is possible only if the cooperative infrastructure is made more appealing, technology focused, and time saving with less operational problems. The cooperative principles may be integrated with new generation sentiments. These efforts can be started at the school level so that the children may develop an emotional attachment towards the cooperative movement, which they will continue in their future endeavours.

4. The success of cooperative consumer stores depends on how far they cater to the needs of "modern consumer", where branding, quality, availability, packing, etc, are arranged under one roof, the concept of malls

and supermarkets in the corporate world. In earlier decades, there were emotional and sentimental attachments to consumer stores, but during that period, they were lost because of the absence of upgrades and updates by consumer cooperatives. It is high time to bring a U-turn to the cooperative consumer philosophy and practice.

5. Earlier, it was mentioned that databases are weak in cooperatives. Revitalisation strategies may be formulated only if sufficient research and enquiry are put into each small issue. This is possible only if the concept of "data bank" is conceived, which is the need of the hour. The problem of technology upgradation and data compilation can move together.

6. Corrections and improvements can be made promptly, only if a Research and Development (R&D) function systematically monitors and reviews the state cooperative mechanism somewhat tacitly," arrangements.

Conclusion

When the cooperative societies celebrated the centenary of their operations in India (2004), the then president of India raised a concern whether the cooperatives were diverging away from cooperative principles. Today the real challenge is whether the noble cooperative principles are properly and effectively integrated with the globalisation policy and strategies. If this balance is struck, cooperatives are still the best form of business organisation to contribute to nation building, particularly rural development. This integration, which is the need of the hour, will become a scientific, systematic and practical reality in Kerala state and other states.

References

Government of India, Ministry of Cooperation, National Cooperative Data Bank (different years), New Delhi

Government of India, Ministry of Finance, Economic Survey (different Years), New Delhi

Government of India, Ministry of Cooperation, Model Bye Laws for making PACS multiple purpose (2023), New Delhi

Government of Kerala, State Planning Board, Economic Review (different years), Thiruvananthapuram

Government of Kerala, Department of Cooperation, Registrar of Cooperative Societies, Cooperative Statistics (different years), Thiruvananthapuram

Government of Kerala, Department of Cooperation, Kerala Cooperative Policy

Mani K P (2006) Performance of Agriculture Sector in Kerala, in Sanathana Moorthy, Achievements and Challenges, ICFA Press, Hyderabad

Mani K P (2018). Performance of Agriculture in Kerala, in B A Prakash and

Jerry Alwin, *Kerala's Economic Development, Emerging Issues and Challenges*, SAGE, India

National Cooperative Union of India, Cooperator (different issues), New Delhi

National Cooperative Union of India, Indian Cooperative Review (different issues), New Delhi

Sini Thomas M (2017). Capital Formation in Kerala Agriculture, PhD thesis submitted to the University of Calicut (unpublished)

State Cooperative Union Kerala Cooperative Journal (different issues) Thiruvananthapuram

Vaikunth Mehta National Institute of Cooperative Management, Cooperative Perspective (different issues), Pune.

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Unravelling the Impact of COVID-19 on Municipal Finances of Kerala

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Abstract: This study takes a unique approach by examining the impact of the COVID-19 pandemic on municipal finances in Kerala. It analyses the average revenue and expenditure, along with fiscal indicators such as the Collection Efficiency Ratio (CER) of tax and non-tax revenue, Cost Recovery Ratio, and Revenue Administrative Efficiency (RAE) ratio of six municipalities in Kerala from 2016-20 to 2020-21. A comparison is made between 2016-20 and 2019-20, and 2020-21, which was most affected by the COVID-19 pandemic and the lockdown. The study also attempts to compare the fiscal indicators of the best and least-performing municipalities. The findings reveal that the pandemic negatively affected the mobilisation of own resources for municipalities in Kerala. Another finding indicates that the devolution fund experienced a significant increase in 2020-21, offsetting the decline in its own sources of revenue.

Keywords: Municipal Finances, COVID-19, Collection Efficiency.

Introduction

The COVID-19 pandemic seriously impacted the world economy, negatively affecting economic activities and causing a severe global recession. Although various factors contributed to earlier recessions, the COVID-19 pandemic and related issues are the most important reasons for the 2020 global recession. India's economy also experienced a severe recession, with the annual rate of gross national income at constant prices falling by -7.2 per cent in 2020-21 (GOI, 2022). The Kerala economy faced an unprecedented crisis during 2020-21, the first of its kind since its formation in 1956. The recession severely impacted various sectors of the economy. Therefore, this study aims to examine the impact of the COVID-19 pandemic on the municipal finances of Kerala.

The study is presented in five sections. The first section provides the introduction. The second section presents the literature review. The third

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section outlines the methodology adopted for the study. The fourth section discusses the impact of the pandemic on Kerala's economy. The fifth section examines the pandemic's effect on Kerala's municipal finances.

Review of Literature

This section attempts to review the studies that examine the impact of COVID-19 at the national and regional levels. The Indian economy has been characterised by slower economic development, rising unemployment, and increased poverty. The epidemic has negatively influenced rural non-farm enterprises, with unskilled individuals being more severely affected. COVID-19 has highlighted the situation of international migrants from India and the main migration routes connecting India to the rest of the world. The issue of return emigration is a cause for concern. Some studies claim that subsidy rationalisation is the best strategy to raise health and direct transfer spending while maintaining fiscal discipline. (Rama Kumar et. al, 2020; Indrajit Bairagya, 2021; R.B. Bhagat. et. al, 2020; and Anurangh Balajee et. al, 2022). One study that examined the pandemic's impact concluded that more structural reforms are prerequisites for growth (Ashima Goyal, 2022).

The Kerala State Planning Board has briefly analysed the effects of the COVID-19 pandemic and the State's economic lockdown. In the first part, the report examines the pandemic's adverse effects and the resulting shortage in state value added. The second section looks at the estimates of losses in the different sectors. The report reveals that the main pillars of Kerala's economy have suffered due to COVID-19. (KSPB, 2020). Due to the COVID-19 pandemic and the widespread use of lockdown procedures, societal problems and financial concerns arose. Understanding the scope of the issue and developing solutions should be a priority for both the public and private sectors. (Sajna M Vijayan et. al, 2022).

The COVID-19 pandemic offers local governments and healthcare providers opportunities to seek and facilitate community engagement in various COVID-19 control and prevention efforts. Kerala's tradition of people's participation at the local level has fostered the creation of an invited space for involvement, even if the community has not established the terms of engagement. Kerala has effectively contained COVID-19, achieving a low transmission rate, a high recovery rate, and a low fatality rate. It is essential to emphasise the significance of the public health system and the population's active participation at the local level, which played a crucial role in Kerala's response. The lessons learned from managing Nipah were applied to combating the COVID-19 pandemic. The practical focus and robust social welfare system have yielded positive results during this crisis. India should take a lesson from Kerala, where challenges can be addressed through good, participatory governance that builds local institutions (Gloria Benny et. al, 2023; T.M Thomas Issac et. al, 2020; and

Aruna Roy and Sabha Kohli, 2020). From the review of studies, it is evident that while some studies have analysed the impact of COVID-19 at the national and State levels, there is a lack of research addressing the pandemic's impact on the municipal finance of Kerala. This study aims to fill this gap.

Hypothesis

The COVID-19 pandemic negatively impacted the mobilisation of municipal own resources for 2020–21 compared to the period from 2013-14 to 2019-20. The decrease in their own resources was offset by the devolution of funds from the central and state governments.

Methodology and Sources of Data

The following methodology was adopted for data collection. In 2010, the total number of municipalities was 60; thus, the selected samples comprised six municipalities. The proportion of the sample selected was 10 per cent of the population under study. A multi-stage sampling technique was used for the study. The selection of municipalities was made from three regions of Kerala. The southern part of Kerala consists of 5 districts: Thiruvananthapuram, Kollam, Pathanamthitta, Kottayam, and Alappuzha. The central part of Kerala comprises five districts: Ernakulam, Idukki, Thrissur, Palakkad, and Malappuram. The northern part of Kerala includes the remaining four districts: Kozhikode, Wayanad, Kannur, and Kasargod. Two municipalities were selected from each region based on the highest and lowest average own revenue collection, with the one showing the highest value considered the best and the one with the lowest value regarded as the least performing Municipality. The selection was based on data from the period 2009-10 to 2013-14, collected from the office of the 5th Kerala State Finance Commission. From the southern part of Kerala, two municipalities were selected: Kottayam Municipality (best) and Eloor Municipality (least) out of 19 municipalities; Palakkad Municipality (best) and Eloor Municipality (least) out of 29 municipalities from the central region; and Thalassery Municipality (best) and Nileswaram Municipality (least) out of 12 municipalities in northern Kerala. The study examines the average revenue, expenditure, and fiscal indicators such as the Collection Efficiency Ratio (CER), Cost Recovery Ratio, and Revenue Administrative Efficiency (RAE) ratio of six Kerala municipalities for 2013-14 to 2020-21.

Data was collected from the report of the Annual Financial Statement Report's Income and Expenditure Schedules (Demand), Receipts and Payments Schedules (Collection) from the Information Kerala Mission (IKM). The average receipts and expenditures of the six municipalities mentioned above were taken for the study. The period from 2013-14 to 2020-21 was selected for the study. The study's objective is to examine the impact of COVID-19 on the municipal finances of Kerala.

Impact of COVID-19 on the State Economy

In this section, we examine the trend in the growth of the State's GSDP before and during COVID-19 (Table 1). The provisional estimate of Kerala's GSDP for 2020-21 suggests that the State economy experienced an unprecedented decline in the growth rate during the COVID-19 crisis year. The indicators of per capita GSDP and Gross Value Added also registered a significant drop.

Impact of COVID-19 on Municipal Finances of Kerala

The fiscal performance of a municipality can be assessed using indicators such as revenue receipts (Income) and revenue expenditures (expenditures). Revenue receipts include tax revenue, non-tax revenue, devolution, interest paid, and more. Revenue expenditure encompasses establishment expenditure, operation and maintenance expenditure, administrative expenditure, and decentralised plan programmes.

This section presents an analysis of each Municipality's revenue receipts and expenditures.

Table 2 presents the revenue receipts (Income) per Municipality in Kerala for the period from 2013–14 to 2020–21. The fiscal year 2020–21 can be regarded as the period affected by the COVID-19 pandemic. Although the absolute amount of tax revenue increased from 2019–20 to 2020–21, the

Table 1. State Domestic Product and Per Capita Income of Kerala

	Income, in Rs Crore				Growth Rate, in %		
	2018-19	2019-20	2020-21 (P)	2021-22(Q)	2019-20	2020-21 (P)	2021-22 (Q)
	Gross State Domestic Product (Rs. in Crore)						
a) At Constant (2011-12) prices	554228	559194	512076	573591	0.9	-8.43	12.01
b) At Current prices	788285	812935	771008	906921	3.13	-5.16	17.63
	Gross State Value Added (GSVA) at basic prices (Rs. in Crore)						
a) At Constant (2011-12) prices	480226	493974	444800	498589	2.86	-9.95	12.09
b) At Current prices	696182	730192	684425	808133	4.9	-6.27	18.07
	Per capita GSDP (Rs)						
a) At Constant (2011-12) Prices	159878	160506	146246	162992	0.39	-8.88	11.45
b) At Current Prices	227397	233338	220196	257711	2.61	-5.63	17.04

P: Provisional estimate, Q: Quick estimate
Source: KSPB, 2023

Table 2. Revenue Receipts Per Municipality in Kerala (Rs. in lakh)

Components		Year							
		2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
A	Tax Revenue	457.1 (17.4)	499.0 (15.6)	532.6 (22.4)	610.6 (20.7)	574.1 (17.5)	594.6 (11.1)	527.6 (15.6)	589.6 (11.3)
B	Non-tax Revenue	289.1 (11.0)	295.0 (9.2)	246.8 (10.4)	268.5 (9.1)	331.2 (10.1)	389.8 (7.3)	289.4 (8.6)	228.0 (4.4)
Own Revenue (A+B)		**746.2 (28.4)**	**794.0 (24.8)**	**779.4 (32.9)**	**879.2 (29.8)**	**905.2 (27.6)**	**984.4 (18.4)**	**816.9 (24.2)**	**817.6 (15.6)**
C	Devolution	1859.2 (70.9)	2385.5 (74.5)	1573.9 (66.3)	2048.6 (69.5)	2352.8 (71.7)	4314.9 (80.8)	2528.7 (75.0)	4414.4 (84.2)
D	Interest Earned	16.7 (0.6)	19.8 (0.6)	17.4 (0.7)	15.3 (0.5)	16.7 (0.5)	9.4 (0.2)	13.1 (0.4)	7.3 (0.1)
E	Other Incomes	1.3 (0.0)	3.0 (0.1)	1.9 (0.1)	6.2 (0.2)	6.3 (0.2)	30.4 (0.6)	13.5 (0.4)	1.3 (0.0)
Total (A+B+C+D+E)		**2623.4 (100.0)**	**3202.4 (100.0)**	**2372.5 (100.0)**	**2949.2 (100.0)**	**3281.0 (100.0)**	**5339.0 (100.0)**	**3372.3 (100.0)**	**5240.5 (100.0)**

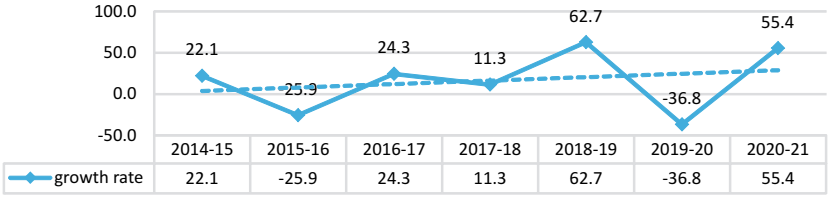
Source: Computed from AFS report's R&P Schedules of Municipalities, IKM (2013 to 2021)
NB: AFS= Annual Financial Statement, R&P= Receipts and Payments
Figures in the brackets are shares

share of tax revenue in total revenue receipts experienced a decline. In contrast, non-tax revenue recorded its lowest amount of Rs. 228.0 lakh in 2020–21, and its share also fell to 4.4 per cent during that year. Devolution funds the municipalities received showed growth in absolute amounts and their share.

The growth rate of revenue receipts for municipalities is given in Figure 1. The high growth rate of 55.4% in 2020–21 can be attributed to the rise in devolution.

Table 3 presents the revenue expenditure (Expenditure) per Municipality in Kerala for the period 2013–14 to 2020–21. When examining the expenditure trends, we observe that in 2020–21, there was an increase in expenditure. Two factors contribute to this trend: the rising devolution trends and the growing expenses to address the COVID-19 pandemic. The growth rate of revenue expenditure for municipalities is illustrated in Figure 2.

Figure 1. Growth rate of Revenue receipts of Municipalities in Kerala



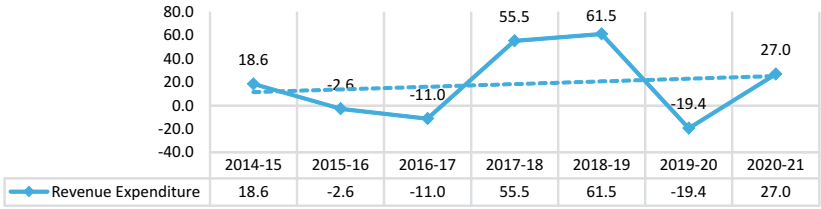
Source: Computed from AFS report's R&P Schedules of Municipalities, IKM (2013 to 2021)

Table 3. Revenue Expenditure per Municipality in Kerala (Rs. In Lakh)

Components	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Own Expenditure (A)	**254.7 (20.9)**	**252.1 (17.4)**	**293.5 (20.8)**	**336.7 (26.9)**	**435.5 (22.3)**	**1047.1 (33.3)**	**964.1 (38.0)**	**972.2 (30.2)**
Decentralised Plan Programmes: Sectors	540.9 (44.3)	491.4 (34.0)	626.8 (44.5)	606.8 (48.4)	847.3 (43.5)	962.8 (30.6)	542.3 (21.4)	1447.4 (44.9)
Programme Expenditure (B)	**959.7 (78.7)**	**1191.1 (82.3)**	**1113.5 (79.0)**	**906.8 (72.3)**	**1501.1 (77.0)**	**2088.6 (66.4)**	**1569.6 (61.9)**	**2241.3 (69.6)**
Other Expenditure (C)	5.3 (0.4)	3.6 (0.2)	2.2 (0.2)	10.0 (0.8)	12.5 (0.6)	11.6 (0.4)	3.1 (0.1)	8.4 (0.3)
Total Expenditure (A+B+C)	**1219.7 (100.0)**	**1446.7 (100.0)**	**1409.2 (100.0)**	**1253.5 (100.0)**	**1949.1 (100.0)**	**3147.2 (100.0)**	**2536.8 (100.0)**	**3222.0 (100.0)**

Source: Computed from AFS report's R&P Schedules of Municipalities (2013 to 2021)
NB: AFS= Annual Financial Statement, R&P= Receipts and Payments
Figures in the brackets are shares

Figure 2. Growth Rate of Revenue Expenditure of Municipalities in Kerala



Source: Computed from AFS report's R&P Schedules of Municipalities, IKM (2013 to 2021)

Collection Efficiency Ratio (CER) of Own resources of the Municipalities ' Own Resources during the pandemic

The collection efficiency of own-tax revenue is assessed by estimating the "demand-collection statement" of own-tax revenue, which includes tax revenue and non-tax revenue. This demand-collection statement compares the actual collection of tax and non-tax (receipts and payments schedule) to the demand (income and expenditure schedule). (C. Anil Kumar & K.C. Baiju, 2016). The efficiency of the own-tax collection ratio is calculated by dividing the collection of tax and non-tax revenue by the municipalities' data on anticipated demand for both tax and non-tax revenue.

Table 4 shows the collection efficiency ratio of own taxes for municipalities from 2013-14 to 2019-20, as well as for 2020-21. Before COVID-19, the CER of tax revenue for municipalities averaged 77.7 per cent, whereas after COVID-19, it dropped to an average of 64.2 per cent. This indicates a thirteen per cent decline in the tax revenue receipts collected by municipalities following COVID-19. Tax revenue receipts comprise two main components: property tax and professional tax. The property tax experienced a decline in CER for the year 2020-21, while the professional

Table 4. CER of the own tax revenue of municipalities in pre- and post-COVID-19

Group Statistics					
	Period	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
CER of tax revenue	**2013-20**	**42**	**.7767**	**.12923**	**.01994**
	2020-21	**6**	**.6417**	**.14959**	**.06107**
CER of property tax	**2013-20**	42	.7307	.15584	.02405
	2020-21	6	.5917	.16192	.06610
CER of professional tax	**2013-20**	42	.9564	.23480	.03623
	2020-21	6	.9350	.03082	.01258
CER of non-tax revenue	**2013-20**	**42**	**.7602**	**.21977**	**.03391**
	2020-21	**6**	**.6067**	**.21695**	**.08857**
CER of fees and user charges	**2013-20**	42	.7945	.24751	.03819
	2020-21	6	.6950	.22007	.08984
CER of rental income	**2013-20**	42	.7857	.25133	.03878
	2020-21	6	.5233	.21342	.08713

Source: Computed from AFS's I&E and R&P schedules of the municipalities

tax saw only a slight decrease. Before COVID-19, the CER of non-tax revenue for municipalities averaged 76.0 per cent, changing to an average of 60.7 per cent after COVID-19. This reveals a decline of over fifteen per cent in the collection of non-tax revenue receipts by municipalities post-COVID-19. Non-tax revenue receipts consist of two main components: fees and user charges, as well as rental income. Both fees, user charges, and rental income experienced a decline in CER for the year 2020-21.

From the above analysis, we can infer that the collection efficiency ratio of all components decreased for the year 2020-21 compared to the average for 2013-14 to 2019-20. The professional tax experienced a slight decrease in CER for 2020-21. This is a clear indication of the negative impact of the COVID-19 pandemic on the collection of its sources of revenue.

Table 5 shows the significant difference in the collection efficiency ratio (CER) of the own source of revenue for different municipalities before and after COVID-19. The t-test for equality of means of CER of tax revenue revealed a statistically significant difference (since the p-value is ≤ 0.05). This indicates a marked difference in tax revenue collection before and after the COVID-19 pandemic. Tax revenue consists of two main components: property tax and professional tax. The t-test for equality of means of CER of property tax also revealed a statistically significant difference (since the p-value is ≤ 0.05). Non-tax revenue comprises two main components: rental income and fees and user charges. The t-test of CER for rental income indicated a statistically significant difference (since the p-value is ≤ 0.05).

From the t-test of equality of means, we find a significant difference in items such as CER of tax revenue, property tax, and rental income.

Table 5. T-test for equality of Means of the own revenue of municipalities

		t-test for Equality of Means			
		t	df	Sig. (2-tailed)	Mean Difference
CER of tax revenue	Equal variances assumed	**2.351**	**46**	**.023**	.13500
	Equal variances not assumed	2.101	6.115	.079	.13500
CER of property tax	Equal variances assumed	**2.036**	**46**	**.048**	.13905
	Equal variances not assumed	1.977	6.397	.092	.13905
CER of professional tax	Equal variances assumed	**.221**	**46**	**.826**	.02143
	Equal variances not assumed	.559	45.999	.579	.02143
CER of non-tax revenue	Equal variances assumed	**1.603**	**46**	**.116**	.15357
	Equal variances not assumed	1.619	6.556	.152	.15357
CER of fees and user charges	Equal variances assumed	**.932**	**46**	**.356**	.09952
	Equal variances not assumed	1.019	6.943	.342	.09952
CER of rental income	Equal variances assumed	**2.429**	**46**	**.019**	.26238
	Equal variances not assumed	2.751	7.143	.028	.26238

Source: Computed from AFS's R&P and I&E schedules of the municipalities

However, there is no significant difference in items like professional tax, non-tax revenue, fees and user charges.

Cost Recovery Ratio

Cost recovery, defined as the ratio of non-tax revenue to total municipal expenditure, is a key indicator of municipal finances and is linked to the fiscal self-sufficiency of urban local authorities. Due to the unavailability of service-specific user charges, the study employed a general indicator, namely the ratio of municipal fees and user charges to total expenditure, as a proxy variable for cost recovery (Mohanathy et al, 2007). Municipalities' non-tax revenue comprises rental income from municipal properties, fees and user charges, sale and hire charges, and assigned revenue.

Table 6 shows the cost recovery ratios of six municipalities from 2013-14 to 2019-20 and for 2020-21. Before the COVID-19 pandemic, the cost recovery ratio of the Kottayam municipality was 21.2 per cent, while during 2020-21, it dropped to only 6.7 per cent. This indicates a 68 per cent decline in the cost recovery ratio of the Kottayam municipality for the year 2020-21. A

Table 6. Cost recovery ratio of Best and Least performing municipalities in Kerala (Rs. in Lakh)

Year	Cost recovery ratio of the best-performing Municipality			Cost recovery ratio of the least performing Municipality		
	Kottayam Municipality (South)	Palakkad Municipality (Central)	Thalassery Municipality (North)	Paravur Municipality (South)	Eloor Municipality (Central)	Nileswaram Municipality (North)
2013-14	48.2	15.1	19.5	4.4	3.3	4.5
2014-15	37.5	10.9	17.2	5.9	2.5	4.3
2015-16	13.3	10.5	18.9	2.4	14.5	4.9
2016-17	14.4	14.0	12.8	4.3	13.5	4.5
2017-18	8.9	15.2	14.0	2.8	2.7	2.4
2018-19	13.8	5.0	24.1	4.1	3.8	3.1
2019-20	12.6	5.2	17.3	5.6	6.3	2.4
Average (2013-20)	**21.2**	**10.8**	**17.7**	**4.2**	**6.7**	**3.7**
2020-21	**6.7**	**3.7**	**10.0**	**1.6**	**2.8**	**2.3**

Source: Computed from AFS's R&P schedules of the Municipalities

similar trend was observed in Palakkad, Thalassery, Paravur, Eloor, and Nileswaram municipalities.

Revenue Administrative Efficiency (RAE) Ratio

Revenue administrative efficiency is one of the composite indicators used to assess the ULB's effectiveness in levying and collecting taxes under its purview. The effectiveness of revenue administration can be roughly estimated by the ratio of per capita municipal own revenue to state GDP per capita (Mohanathy et al, 2007).

Table 7 shows six municipalities' Revenue Administrative Efficiency (RAE) ratio from 2013-14 to 2019-20 and 2020-21. Before the COVID-19 pandemic, the RAE of Kottayam municipality was 0.7 per cent, while during 2020-21, it was 0.4 per cent. This indicates a 43 per cent decline in the growth of the RAE ratio for Kottayam municipality in the year 2020-21. A similar trend was observed in the best-performing municipalities, Palakkad and Thalassery. The least-performing Municipality experienced no change in its RAE ratio during 2020-21 compared to the earlier period.

Conclusion

The regional economy of Kerala was adversely affected by the effects of COVID-19. The study found that the COVID-19 pandemic negatively impacted the fiscal performance of the municipalities, particularly

Table 7. Revenue Administrative Efficiency of Best and Least performing municipalities in Kerala (Rs. in Lakh)

Year	Revenue Administrative Efficiency of the Best-performing Municipality			Revenue Administrative Efficiency of the Least Performing Municipality		
	Kottayam Municipality (South)	Palakkad Municipality (Central)	Thalassery Municipality (North)	Paravur Municipality (South)	Eloor Municipality (Central)	Nileswaram Municipality (North)
2013-14	0.9	0.8	0.7	0.2	0.3	0.2
2014-15	0.9	0.8	0.6	0.3	0.3	0.2
2015-16	0.7	0.8	0.6	0.2	0.4	0.2
2016-17	0.7	0.7	0.6	0.2	0.3	0.2
2017-18	0.6	0.8	0.5	0.2	0.2	0.2
2018-19	0.6	0.6	0.6	0.2	0.3	0.2
2019-20	0.5	0.5	0.4	0.2	0.3	0.1
Average	**0.7**	**0.7**	**0.6**	**0.2**	**0.3**	**0.2**
(2013-20) 2020-21	**0.4**	**0.6**	**0.4**	**0.2**	**0.3**	**0.2**

Source: Computed from AFS's R&P schedules of the Municipalities, Kerala State's Budget in Brief' (2022-23)

concerning their revenue receipts in the fiscal year 2020-21. At the same time, the devolution fund experienced a substantial increase in 2020–21, which offsets the decline in own-source revenue. The COVID-19 pandemic and its effect on the municipal finances of Kerala serve as a wake-up call, highlighting vulnerabilities in revenue generation and fiscal management. The pandemic has caused revenue disruptions, increased expenditures, and altered spending priorities. Diversifying revenue sources, building contingency funds, and improving local health care infrastructure are crucial to enhancing fiscal resilience. Strengthening intergovernmental fiscal relations can provide municipalities a more stable financial footing during crises.

References

Anil Kumar, C., Baiju, K.C. (2016). *Fiscal decentralisation and urban service delivery in Kerala: A micro-level study*. New Delhi. Serials Publications Ltd

Anuragh Balajee, Gautham Udupa, & Shekhar Tomar. (2022). Fiscal Situation of India in the Time of COVID-19. *Economic & Political Weekly*. Vol LVII. No.26: pp. 62–68.

Aruna Roy, & Saba Kohli Dave. (2020). When People and Governments come together to analyse Kerala's response to the COVID-19 pandemic. *Economic and Political Weekly*, VOL LV No.18: pp. 10–13.

Ashima Goyal. (2022). "What does the COVID-19 experience tell us about Indian Growth drivers?". *Economic & Political Weekly*. Vol LVII. No.37: pp.

52–59.

Bhagat, R.; Reshmi. R.S; Harihar Sahoo; Archana K. Roy; and Dipti Govil. (2020). The COVID-19, Migration and Livelihood in India. Mumbai. A Background Paper for Policy Makers. Mumbai. International Institute for Population Sciences.

Gloria Benny, Hari Shankar, P., Jaison Joseph, Surya Surendran, & Devaki Nambiar. (2023). "On the farmers, contributions and Impact of community mobilisation involved with Kerala's COVID-19 response: Perspectives of health staff, Local Self Government Institution and Community leaders". PLOS ONE, https://doi.org/10.1371/journal.pone.0285999. accessed on August 5th, 2023.

Indrajit Bairagya (2021). "Effects of COVID-19 pandemic on the rural non-farm self-employed in India: Does still make a difference?". ISEC working paper No. 515. Bangalore. Institute of Social and Economic Change.

Government of India (GOI). (2022). Economic Survey 2021-22, Statistical Appendix. New Delhi. Publication Division. Kerala State Planning Board (KSPB). (2020). Quickly assess the impact of the COVID-19 pandemic and Lockdown on Kerala's economy. Thiruvananthapuram. KSPB.

Kerala State Planning Board (KSPB). (2023). Economic Review 2022. Thiruvananthapuram. KSPB.

Mahendra Dev S., & Rajeswari Sengupta. (2020). COVID-19: Impact on the Indian Economy. Mumbai. Indira Gandhi Institute of Development Research.

Mohanthy, P. et. al (2007). Municipal Finance in India: An assessment, Reserve Bank of India.

Rama Kumar, R., and Tejal Kanitkar. (2020). Impact of COVID-19 pandemic on the Indian Economy. Investigacion Economica. ENERO-MARU DE 2021, Vol.80. No.315: pp. 3-32.

Sajna M.Vijayan., Ruth Abraham., and Emmanuelle Vanlalhriatpuii. (2022). Socio-economic Impact of COVID-19 pandemic and its coping measures in a rural area of central Kerala, International Journal of Community Medicine and Public Health. eissn. 2394-6040.

Thomas Issac, T.M., & Rajeev Sadanandan. (2020). Covid-19, Public Health System and Local Governance in Kerala. Economic and Political Weekly. Vol . 21: pp. 35-40.

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Health Status of Women and Children Among Scheduled Tribes in India

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Abstract: India's Scheduled Tribes are a heterogeneous community with distinct socio-economic and cultural traits. Their socio-economic circumstances, geographic location, access to healthcare, level of education, and other factors all impact their complex health status. This study uses National Family Health Surveys (NFHS) data to investigate women's and children's health among India's Scheduled Tribes (STs). Key health variables such as Anaemia, nutrition, immunisation coverage, infant and child mortality, and maternal mortality are the main focus of the investigation. Over several NFHS periods, there has been a significant decline in the rates of infant, neonatal, child, and under-five deaths. Nevertheless, a considerable percentage of ST children experience severe Anaemia, making Anaemia a persistent issue. Targeted intervention is crucial to improve further the health and well-being of ST communities in India.

Keywords: Scheduled tribes, Fertility Rate, Infant Mortality rate, Child mortality rate, maternal mortality, Antenatal Care, Nutritious status.

Introduction

Health is a complete well-being encompassing the body, mind, and social relationships. It goes beyond merely being free from illness, involving physical fitness, emotional stability, and positive interactions with others. Maintaining good health requires balancing several factors, such as eating nutritious food, staying physically active, getting enough rest, caring for mental health, and having access to healthcare services. Health is a dynamic and multifaceted concept that varies among individuals and communities and is influenced by genetic, environmental, and lifestyle factors. The World Health Organisation (WHO) defines health as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."

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Article 342 of the Indian Constitution defines Scheduled Tribes as tribes or groups within tribal communities that the President of India can identify through a public notification (Article 342 of the Indian Constitution). According to the 2011 Census, India has a tribal population of 10,42,81,034, spread across 705 categories, making up 8.6% of the total population. Over two-thirds of India's tribal population lives in seven states: Madhya Pradesh, Chhattisgarh, Jharkhand, Odisha, Maharashtra, Gujarat, and Rajasthan. 90% of the tribal population resides in rural areas, and 40.6% live below the poverty line (Ministry of Tribal Affairs, Government of India). India's tribal health system faces many obstacles, such as infectious diseases, genetic problems, and malnourishment (Mavalankar, 2016; Pandey, 2020). Tribal communities in India exhibit significant diversity, yet they share a commonality characterised by poorer health indicators, a higher incidence of morbidity and mortality, and limited access to healthcare services (Mot, Government of India). Historically, tribal populations in India have faced challenges related to healthcare, including limited access to medical facilities, poor infrastructure, and disparities in health indicators compared with nontribal populations (Pathak et al., 2020). Malnutrition, infectious diseases, and maternal and child health issues are areas of concern in some tribal areas. Healthcare delivery to these communities is hampered by remote locations, cultural differences, and inadequate infrastructure (Deb Roy et al., 2023). Health problems are exacerbated by socio-economic inequality, ignorance, and unclean living conditions (Pandey, 2020).

Numerous studies have been conducted on the health of tribal communities at the local and community levels. Research on the overall issues or conditions of Indian tribal people is relatively inadequate. Tribal health indices highlight the need for attention, as they are marginalised, facing social and economic disparities and isolated from other sections of society. A review of various reports from the National Family Health Survey shows the backwardness of the tribal community in India across many health indices. Although many programs have been implemented to improve their health status, this group has lagged behind other social groups. In this context, the study aims to examine the health conditions of women and children in the Scheduled Tribe community using data from various rounds of the National Family Health Survey.

Review of Literature

Studies have revealed notable variations in health outcomes between scheduled tribes (STs) and other populations in India. Basu (1993) analysed tribal women's health and found that it was worse regarding sex ratio, marital age, fertility, mortality, life expectancy, nutrition, and mother-child health than the general female population. He identified knowledge gaps and proposed solutions to address them. Tribal women face higher

risks of illiteracy, early pregnancy, insufficient prenatal care, and undernutrition (Agrawal, 2013; Jungari & Bomble, 2013), leading to worse health and nutritional outcomes than nontribal women. Tribal children in Orissa also have poorer health and nutrition, with lower immunisation rates, higher anaemia/underweight rates, and higher infant and under-5 mortality rates. Several sociodemographic characteristics are linked to the nutritional status of scheduled tribe women in India (Biswas et al., 2022). Income, caste, and regional disparities play crucial roles in determining women's and children's health (Jungari & Chauhan, 2017). The mortality and alcohol consumption rates of indigenous inhabitants of India are greater than those of non-indigenous populations, and the main reason for these discrepancies is the socio-economic divide between the two groups (Subramanian et al.,2006).

Chandraker et al. (2009) studied the Dhur Gond tribal community in Chhattisgarh, focusing on pregnancy-related issues, reproductive health, and nutrition. The study found that 47.12% of mothers were undernourished, and all children under five were malnourished. Over half (51.72%) of the mothers had no antenatal check-ups, while a large proportion missed tetanus immunisation (41.38%) and iron-folic acid tablets (56.32%). Most deliveries (94.83%) occurred at home, with 57.47% assisted by untrained birth attendants. Infant and child mortality rates were 5.92 and 4.28 per 100 live births, respectively. Scheduled Tribe women, who face social and economic disadvantages, are significantly less likely to access safe delivery services compared to nontribal women, with the disparity being especially pronounced in the Central Indian tribal belt region (Paul & Chellan, 2009).

Maternal care practices vary between tribal regions and urban slums, with tribal women being more dependent on government health centres for antenatal care and more likely to give birth at home (Murthy et. Al, 2015). Most pregnant women in tribal areas receive antenatal care from government health workers, often starting in the second trimester. However, most deliveries occur at home rather than in healthcare facilities, and postnatal care is largely neglected (Sh et. Al, 2010). Key factors influencing ANC service utilisation include education level, family type, awareness about ANC, experiences of infant or child mortality, distance to health facilities, and women's participation in the workforce (Sarma & Bordoloi, 2023). Clinically appropriate maternal and newborn care practices are essentially rare among Central Indian tribes, and maternal and child health service usage remains low. Traditional practices are still widely followed, increasing the risk of hypothermia, sepsis, and other infections in newborns (Sharma, 2010). Maternal and reproductive health indicators among tribal women in Kerala show marked disparities compared to nontribal women (Asha, 2022). Maternal health service utilisation in Kerala revealed that affordable, accessible, and high-quality

public health services, along with motivation from health workers, significantly contribute to high uptake among tribal women. Despite this, utilisation is slightly lower among tribal women (85%) compared to nontribal women (100%), primarily due to lower education levels and a lack of transportation (Jose et. al, 2014).

Objective of the Study

The study evaluates women's and children's health conditions among Scheduled Tribe communities in India.

Methodology

The descriptive and analytical study uses descriptive statistics and primarily secondary data from the National Family Health Survey (NFHS). The NFHS is a comprehensive survey conducted in India aimed at gathering data on various health indicators, such as nutrition, family planning, and the health status of mothers and children. It is a large-scale, multi-round survey that collects essential information on population, health, and nutrition at national, state, and district levels. Comparable to the global Demographic and Health Surveys (DHS), the NFHS is managed by the International Institute for Population Sciences (IIPS) in Mumbai, under the auspices of the Ministry of Health and Family Welfare, with assistance from ORC Macro and various national and international collaborators. As one of the most extensive surveys in the world by respondent count, its primary objective is to deliver extensive insights into maternal and child health, reproductive health, fertility, mortality, family planning, nutrition, Anaemia, gender- based violence, and healthcare access, thereby facilitating health policy and program development in India. Since its launch in 1992–93, the NFHS has conducted five rounds: NFHS- 1 (1992–93), NFHS- 2 (1998–99), NFHS- 3 (2005–06), NFHS- 4 (2015–16), and NFHS- 5 (2019–21), the latter of which covers approximately 610,610,000 sample households across 707 districts in the country. As of March 2017, it introduced new topics such as non-communicable diseases, vaccination, menstrual hygiene, and digital health. The NFHS (National Family Health Survey) employs a multi-stage stratified sampling strategy, dividing districts and states into strata, selecting sample villages or urban blocks, and then choosing households for data collection, aiming for representative demographic and health estimates at national, state, and district levels. The present study mainly focuses on the fertility rate, antenatal care, nutritional status of tribal women and children, and the morbidity rate among tribal women in India.

Analysis and Discussion

Health Status of Scheduled Tribes

Various challenges and disparities have characterised the socio-economic conditions of Scheduled Tribes in India. It is important to note that

conditions can vary among tribal communities, and efforts have been made to address these disparities. Tribal communities face challenges in accessing quality education. Traditional occupations, such as agriculture, forestry, and handicrafts, are common among tribal communities. However, land alienation, displacement, and limited access to modern markets have impacted their economic stability. Limited access to healthcare facilities, especially in remote tribal areas, is a significant concern. Health indicators, such as nutrition and maternal and child health, are lower among Scheduled Tribes than the national averages.

Health Indicators of Scheduled Tribe Women

1. Fertility Rate

In India, a woman's social standing and health are intrinsically related. To address this backwardness, many researchers have discovered that women are devalued as reproductive machines and forced to perform household chores, revealing their exploitation in a male-dominated society. This section analyses the fertility rates among women of reproductive age (15–49).

Various socio-cultural and economic influences shape the reproductive patterns among India's Scheduled Tribes (STs). Generally, ST communities tend to have higher fertility rates compared to other demographic groups (Ganguly & Unisa, 2010), mainly due to cultural practices such as early marriage, specific mate selection customs, and the prevalence of extended family systems (Nanda, 2005). National Family Health Surveys (NFHS) indicate a steady decline in fertility rates across the country over the last thirty years. For instance, the total fertility rate (TFR) recorded in NFHS-1 (1992–93) was 3.55 children per woman, while NFHS-5 (2019–21) showed a notable decrease to a TFR of 2.0, reflecting a trend toward smaller family

Table 1: Fertility rate of ST women over the years

Phases	Fertility Rate
NFHS-1	3.55
NFHS-2	3.06
NFHS-3	3.12
NFHS-4	2.2
NFHS-5	2.0

Source: National Family Health Surveys, India, Mumbai: IIPS

sizes. This reduction is linked to enhanced access to education, job opportunities, family planning resources, and increased awareness regarding reproductive health (Zodgekar, 1996). Government initiatives aimed at promoting family planning have also been crucial. Strategies such as comprehensive sex education, greater availability of modern contraceptives, and community awareness programs are essential for maintaining this downward trend (Ram, 2012). Compared to global trends, India exhibits a similar decline in fertility rates, paralleling patterns seen in various developing and developed nations, influenced by urbanisation, women's empowerment, and improved health literacy (Bongaarts,2008).

2. Maternal Health

Compared to nontribal populations, maternal health outcomes are consistently worse among Indian scheduled tribes. Studies have shown that tribal regions have higher rates of maternal and newborn mortality (Akkiraju, 2022). Maternal health issues disproportionately affect Scheduled Tribes in India. Due to various challenges, historically disadvantaged and socially marginalised communities struggle to access quality healthcare. The utilisation of maternal healthcare services is lower among tribal women, particularly in central India (Shah & Belanger, 2011). Scheduled tribal women frequently experience lower prenatal, postnatal, and institutional delivery outcomes than scheduled caste women (Yadav & Jena, 2020). These differences stem from family income, women's education, access to clean water, and location.

Antenatal Care

Prenatal care, sometimes called antenatal care, is preventive healthcare that consists of routine medical examinations that expectant mothers undergo to ensure a safe pregnancy and delivery. These check-ups typically include a combination of physical examinations, tests, and consultations with healthcare professionals.

The utilisation of antenatal care (ANC) among Scheduled Tribes in India remains a significant issue, particularly in states with large populations of

Table 2: ANC visits among ST women

	Doctor	ANM Midwife/ Nurse	Traditional Birth Attendant	ICDS Worker	Community Health worker	Other	No ANC
NFHS-5	55.2	26.6	0.5	6.9	0.2	0.1	7.3
NFHS-4	47.9	24.9	0.6	5.1	0.2	0.1	19.6
NFHS-3	32.8	28.1	2.3	5.9	1.1	0.2	29.4

Source: National Family Health Surveys, India, Mumbai: IIPS

STs, where inadequate ANC engagement correlates with elevated neonatal mortality rates (Verma & Saha, 2016). However, data from NFHS-3 to NFHS-5 indicate a notable increase in prenatal care coverage, suggesting improved access and awareness. There has been a shift from reliance on traditional birth attendants to licensed healthcare professionals, especially physicians, reflecting a growing confidence in formal healthcare systems. This decrease in dependence on traditional practices is likely due to increased awareness, improved healthcare access, and government initiatives that promote institutional deliveries. Community health workers (CHWs) have also become essential in extending ANC services to remote areas.

4. Place of Delivery

The rise in institutional deliveries among women reflects a growing preference for healthcare facilities with better infrastructure and trained medical staff. This shift is driven by increased awareness of the risks of home births and the benefits of hospital deliveries (Dansou et al., 2018), supported by public health campaigns and outreach programs. Improved accessibility, especially in rural areas, and infrastructural development have further enabled this trend (Jayanthi et al., 2015). Additionally, financial incentives like the Janani Suraksha Yojana (JSY) and transportation support have helped reduce barriers to institutional delivery.

5. Nutrition Status of Tribal Women

In India, the Scheduled Tribes bear a disproportionate share of the cost of malnutrition because they often reside in isolated and neglected areas. Numerous interrelated variables, including poverty, limited access to nutrient-dense food, cultural practices, low nutritional awareness, and inadequate healthcare facilities, all exacerbate this problem (Ghosh-Jerath et al., 2013). Among ST communities, poverty is a prevalent challenge that significantly restricts their ability to purchase nutritious foods. Many ST families struggle to meet their most basic needs, let alone afford a diverse

Table 3: Place of delivery among ST women

Phases	Public Health Institution	Private Health Institution	Own Home	Parents Home	Other
NFHS-1	6.7	2.4	77.9	11.7	0.6
NFHS-2	10.7	5.7	70.4	11.4	1.6
NFHS-3	11.6	5.8	70.9	10.5	0.3
NFHS-4	55.9	11.7	27.9	3.6	0.4
NFHS-5	69.7	12.1	15.4	1.6	0.3

Source: National Family Health Surveys, India, Mumbai: IIPS

range of nutritious food. Geographic isolation worsens food access, as many ST settlements are located in remote areas with insufficient food production and transportation infrastructure. This situation can lead to food insecurity, especially during challenging seasons or after natural disasters.

Research on the dietary status of tribal Indian women has revealed alarming patterns. Chronic energy deficits affect many tribal women, with prevalence rates varying by area from 18.2% to 51% (Mohandas et al., 2019). Approximately 61–98% of tribal women suffer from Anaemia, which is a prevalent condition (Soumya Negi et al., 2024).

Throughout all NFHS surveys, the prevalence of Anaemia in women has remained high, highlighting a serious public health issue in India. This consistently high prevalence raises the possibility that current anaemia treatments may not be adequate to address the underlying causes of the condition. Although efforts have been made to improve women's health and nutrition, Anaemia remains a significant public health issue. Not getting enough iron-rich foods like meat, poultry, fish, beans, and leafy vegetables can cause iron-deficiency Anaemia (Rammohan et al., 2012). According to NFHS 5, only 37.4% of scheduled tribe women consume fruits once a week. 36% had fish, 37.1% had chicken, and 46.4% had eggs once a week in their diet. In the case of men, all of these percentages were slightly higher.

6. Morbidity among Scheduled Tribe women

An important public health problem for ST women is morbidity, or the occurrence of disease or illness, which can be attributed to several reasons. Higher incidences of acute and chronic morbidities, such as diabetes, asthma, and hypertension, are seen in tribal communities, suggesting an early epidemiological transition (Rajesh Raushan & S. Acharya, 2018). Because of their widespread poverty and economic disadvantage, ST

Table 4: Comparison of Anaemic General and ST Women

NFHS	Percentage of Women with any Anaemia	Percentage of Women with Severe Anaemia
NFHS-2	64.9	47.6
NFHS-3	68.5	51.3
NFHS-4	59.8	49.6
NFHS-5	64.6	56.4

Source: National Family Health Surveys, India, Mumbai: IIPS

communities struggle to pay for wholesome food and medical bills. According to S. Biswas et al. (2022), sociodemographic factors like income, education, and living environment greatly affect the well-being of indigenous women. The inability of tribal women to access appropriate medical care or finance for critical treatments may result in a higher incidence of illnesses and chronic problems.

Health Status of Scheduled Tribe Children

Compared to nontribal groups, the health status of tribal children in India reveals significant inequalities. Skin infections, dental cavities, and protein-energy malnutrition are more prevalent among tribal youth (Divakar et al., 2013). Tribal areas exhibit lower maternal and child health indices, including higher maternal and infant mortality rates, than non-scheduled areas (Akkiraju, 2022).

The most remarkable trend is the significant decline in infant, neonatal, child, and under-five mortality rates (U5MR) during the NFHS surveys. This indicates that India's child health has seen notable improvement. The infant mortality rate (IMR), which measures the number of deaths of babies under one year old per 1,000 live births, decreased sharply between NFHS-1 and NFHS-5, falling from 90.5 to 41.6. Improved nutrition, greater access to immunisation, and advancements in maternity and paediatric healthcare primarily account for this reduction. Over time, especially from NFHS-3 to NFHS-5, the percentage of children with severe Anaemia has decreased. This indicates that initiatives to enhance healthcare access and address nutritional deficits have been effective.

An increase in healthcare facilities, particularly in rural areas, has improved access to essential services for children, including immunisation, disease treatment, and nutritional support. Government programs, such as the National Health Mission and the Midday Meal Scheme, have significantly enhanced child health by providing vital services and nourishment.

Nutritional Status among Scheduled tribe Children

The malnutrition problem among the children of scheduled tribes in India is significant. Poor socio-economic status, insufficient food consumption habits, low maternal education, inappropriate child feeding techniques, and nutritional deficiencies during pregnancy contribute to malnutrition (Dey & Bisai, 2019). Although child mortality has decreased significantly in India, malnutrition remains a significant concern. Stunting and wasting are still common in children despite reductions in underweight rates, suggesting ongoing nutritional challenges. These nutritional deficiencies can seriously harm children's health and development, potentially leading to stunted growth, cognitive decline, and increased vulnerability to infections and illnesses.

Table 5: Health Status of ST Children

		NFHS-1	NFHS-2	NFHS-3	NFHS-4	NFHS-5
1	Infant Mortality	90.5	84.2	62.1	44.4	41.6
2	Neonatal Mortality rate	54.6	53.3	29.0	31.3	28.8
3	Child Mortality Rate	49.1	46.3	10.4	13.4	9.0
4	Under five mortality rate	135.2	126.6	53.8	57.2	50.3
5	% of Children with Any Anaemia	-	79.8	79.8	76.8	72.4
6	% of Children with severe Anaemia	-	6.9	6.9	3.3	2.2
7	Full Vaccination	24.8	26.4	31.3	55.8	76.5

Source: National Family Health Surveys, India, Mumbai: IIPS

Table 6: Nutritional Status among Scheduled tribe Children

Status	NFHS-1	NFHS-2	NFHS-3	NFHS-4	NFHS-5
Under Weight (Weight-for-age)	25.3	26.0	24.9	12.6	14.6
Stunting (Height-for-age)	28.8	27.6	29.1	19.7	18.7
Wasting (Weight-for-Height)	4.1	4.4	9.3	7.5	9.4

Source: National Family Health Surveys, India, Mumbai: IIPS

A thorough summary of the nutritional status of children from Scheduled Tribes in India, as determined by numerous National Family Health Surveys (NFHS), is presented in the table. The data indicate the frequency of underweight, stunting, and wasting—three critical markers of malnutrition—over various time intervals. These are the three key indicators for assessing the malnutrition problem. Surveys from the early and late 1990s (NFHS-1 and NFHS-2, respectively) found alarmingly high rates of underweight, stunting, and wasting among ST children. The 2005–2006 NFHS-3 revealed some positive trends, showing a noticeable decrease in wasting rates, although the prevalence of stunting and underweight remained high. This suggested that the government's initiatives to improve access to nutrition and healthcare services were beginning to pay off. The results of the NFHS-4, conducted in 2015–2016, provided further evidence of the progress made in the fight against malnutrition in ST children. Compared to previous surveys, all three malnutrition indicators demonstrated significant decreases, though the latest report indicates an increase in underweight and wasting.

Conclusion

Despite significant advancements in various aspects of tribal health, Scheduled Tribe (ST) populations in India still lag behind the general population regarding essential health indicators. Data from multiple rounds of the National Family Health Survey (NFHS) indicate that, although there has been considerable improvement in areas such as immunisation rates, antenatal care, and institutional deliveries, persistent disparities remain, particularly concerning maternal and child health, nutritional status, and access to quality healthcare services. Women and children from ST communities continue to face multiple vulnerabilities, including high rates of infant and maternal mortality, chronic malnutrition, Anaemia, and limited access to essential health services. These issues are not solely the result of economic hardship; they are also deeply connected to socio-cultural exclusion, geographic isolation, and institutional neglect. While government programs have aimed to address these inequalities, systemic outreach, implementation, and monitoring deficiencies have constrained their effectiveness in tribal areas.

There is an urgent need to reshape tribal health policy into a participatory, inclusive, and culturally relevant framework. Enhancing health infrastructure is vital and can be achieved by increasing staffing levels, establishing mobile clinics, and ensuring the availability of essential medical supplies. Promoting culturally sensitive healthcare by training providers in local languages and customs and engaging local ASHAS can foster community trust. Initiatives focused on maternal and child nutrition, such as ICDS, POSHAN Abhiyan, and Janani Suraksha Yojana, should incorporate locally accepted food options. Tailored health education campaigns can increase awareness about hygiene, family planning, and preventive health measures. Maintaining disaggregated data and integrating traditional health practices will enhance accountability and community engagement. Empowering tribal women through education, active participation in governance, and coordinated efforts across health, education, and livelihood sectors is crucial for achieving sustainable and significant improvements in tribal health outcomes.

References

Agrawal, S. (2013). Disadvantageous situation of tribal women and children of Orissa, India: a special reference to their health and nutritional status. *Journal of Community Nutrition*, 2.

Akkiraju, V. (2022). A Comparative Study of Maternal and Child Health Indicators of Tribal and Nontribal Areas of Selected States in India. *International Journal of Health Sciences and Research*.

Annual Reports 2022-23, Ministry of Scheduled Tribe Department, Govt. of India

Asha, C. M. (2022). Reproductive health of tribal women in Kerala. *International Journal of Creative Research Thoughts (IJCRT)*, 10(2), 1798–1806. https://doi.org/10.1729/IJCRT.25898

Biswas, S., Kumar, C., Singh, N., Malla, V.R., & Pal, A.K. (2022). Determinants of nutritional status among scheduled tribe women in India. *Clinical Epidemiology and Global Health*

Bongaarts, J. (2008). Fertility Transitions in Developing Countries: Progress or Stagnation? *Studies in Family Planning*, 39(2), 105–110, https://doi.org/10.1111/j.1728-4465.2008.00157.x

Chandraker, R., Chakrabarty, S., Mitra, M., & Bharati, P. (2009). A study of reproductive and child health among the Dhur Gond tribal community of Mahasamund District, Chhattisgarh, India. *Studies of Tribes and Tribals*, 7(2), 97–103.

Dansou, J., Adekunle, A.O., & Arowojolu, A.O. (2018). Factors behind Institutional Delivery Preference in the Republic of Benin: An Analysis of 2011-2012 Benin Demographic and Health Survey (BDHS) data. *Journal of Population and Social Studies*, 26, 128-148

Deb Roy, A., Das, D., & Mondal, H. (2023). The Tribal Health System in India: Challenges in Healthcare Delivery in Comparison to the Global Healthcare Systems. *Cureus*, 15.

Dey, U., & Bisai, S. (2019). The prevalence of under-nutrition among the tribal children in India: a systematic review. *Anthropological Review*, 82, 203 – 217

Divakar, S.V., Pa, B., Poornima, S., Varne, S.R., Ali, S.S., & Puttaswamy, M. (2013). A comparative assessment of nutritional and health status between tribal and nontribal children under five in Mysore, India. *Muller Journal of Medical Sciences and Research*, 4, 82.

Ganguly, S., & Unisa, S. (2010). Trends of Infertility and Childlessness in India: Findings from NFHS Data. *Facts, Views & Vision in ObGyn*, 2, 131 – 138

Jayanthi, T.P., Suresh, S., & Padmanaban, P. (2015). Primary Health Centres: Preferred Option for Birthing Care in Tamil Nadu, India, from Users' Perspectives. *Journal of Health, Population, and Nutrition*, 33, 177–186.

Jose, J. A., Sarkar, S., Kumar, S. G., & Kar, S. S. (2014). Utilisation of maternal healthcare services by tribal women in Kerala. *Journal of Natural Science, Biology, and Medicine*, 5(1), 144–147. https://doi.org/10.4103/0976-9668.127314

Jungari, S., & Bomble, P. (2013). Caste-Based Social Exclusion and Health Deprivation in India. *Journal of Exclusion Studies*, 3, 84-91.

Jungari, S., & Chauhan, B.G. (2017). Caste, Wealth and Regional

Inequalities in Health Status of Women and Children in India. *Contemporary Voice of Dalit*, 9, 100 – 87

Mavalankar, D. (2016). Doctors for Tribal Areas: Issues and Solutions. *Indian Journal of Community Medicine: Official Publication of Indian Association of Preventive & Social Medicine*, 41, 172 - 176.

Ministry of Tribal Affairs, Govt. of India

Mohandas, S., Amritesh, K., Lais, H., Vasudevan, S., & Ajithakumari, S. (2019). Nutritional Assessment of Tribal Women in Kainatty, Wayanad: A Cross-Sectional Study. *Indian Journal of Community Medicine: Official Publication of Indian Association of Preventive & Social Medicine*, 44, S50-S53.

Murthy, K.S., Kalyanchakravarthy, B., & Kolli, B. (2015). A COMPARATIVE STUDY ON MATERNAL CARE PRACTICES IN TRIBAL AREA AND URBAN SLUMS. *Journal of Evolution of Medical and Dental Sciences*, 4, 7477–7482.

Nanda, S. (2005). Cultural Determinants of Human Fertility: A Study of Tribal Population in Orissa. *The Anthropologist*, 7, 221–227.

National Family Health Surveys, India, *Mumbai: IIPS*

Negi, S., Jagre, A., & Negi, R.S. (2024). A Study on the Health and Nutritional Status of Mawasi Tribal Women in Villages of Chitrakoot Region in Madhya Pradesh, India. *Advances in Research*.

Pandey, A. (2020). An analysis of the health status of indigenous people in India. (A review paper). *International journal of applied research*, 6, 487-496

Pathak, V.K., Kumar, M., & Ruikar, M.M. (2020). Tribal population in India: A public health challenge and road to the future. *Journal of Family Medicine and Primary Care*, 9, 508 - 512.

Paul, L., & Chellan, R. (2009). Delivery Care for Scheduled Tribe Women in India: A Disaggregated Regional Analysis. *Artha Vijnana: Journal of The Gokhale Institute of Politics and Economics*, 51, 297–314.

Ram, B. (2012). Fertility Decline and Family Change in India: A Demographic Perspective. *Journal of Comparative Family Studies*, 43, 11–40.

Rammohan, Anu, Awofeso, Niyi, Robitaille, Marie-Claire, Addressing Female Iron-Deficiency Anaemia in India: Is Vegetarianism the Major Obstacle?, *International Scholarly Research Notices*, 2012, 765476, 8 pages, 2012. https://doi.org/10.5402/2012/765476

Raushan, R., & Acharya, S.S. (2018). Morbidity and Treatment-seeking Behaviour Among Scheduled Tribes in India: A Cross-sectional Study. *Journal of Social Inclusion Studies*, 4, 325 - 340.

Saha, K.B., Kumar, D., Abbad, A., Jain, D.C., & Roy, J. (2010). Some Aspects of Maternal and Child Health Care Practices: A Case Study of Baiga. *The Oriental Anthropologist: A Bi-annual International Journal of the Science of Man*, 10, 81 - 91. es, 4, 7477-7482.

Sarma, P. J., & Bordoloi, R. (2023, March). Impact of antenatal care on maternal health of the Karbis in Assam. *International Journal of Research and Analytical Reviews*, 10(1), 366–373. https://doi.org/10.5281/zenodo.7765875

Shah, R., & Bélanger, D. (2011). Socio-economic correlates of utilisation of maternal health services by tribal women in India. *Canadian Studies in Population*, 38, 83-98.

Sk, B. (1993). Health status of tribal women in India. *Social Change*, 23(4), December 1993, pp 19-33

Subramanian, S., Smith, G.D., & Subramanyam, M.A. (2006). Indigenous Health and Socio-economic Status in India. *PLoS Medicine*, 3.

Verma, A.K., & Brata Saha, K. (2016). Infant Mortality Among Scheduled Tribes in Central India: A Concern. *Indian paediatrics*, 53 12, 1117.

WHO. Basic documents. 49th ed. Geneva: World Health Organisation; 2020

Yadav, A.K., & Jena, P.K. (2020). Maternal health outcomes of socially marginalised groups in India. *International journal of health care quality assurance*.

Zodgekar, A.V. (1996). Family welfare programme and population stabilisation strategies in India. *Asia-Pacific population journal*, 11 1, 3-24.

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Autonomy and Settlement of Ethno-National Conflicts

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Abstract: Ethno-nationalism emerged as a significant issue in the post-World War era, with many movements challenging states' authority and territorial integrity. In several cases, these assertions escalated into violent conflicts, causing severe human and material losses. As a result, the search for peaceful and lasting settlements became an urgent priority. A review of conflict resolutions shows that autonomy-based arrangements have often been adopted as a workable compromise. Such frameworks involve the legal transfer of specific powers, allowing minority national groups to preserve and develop their distinct social and political systems. The strength of autonomy lies in its ability to balance two often conflicting goals — internal self-determination of these groups and the territorial unity of the state. Its adaptable nature also makes it suitable for diverse situations. The relative success of these arrangements suggests that autonomy remains one of the most promising models for resolving long-standing ethno-national disputes.

Keywords: Autonomy, Ethno -nationalism, Nationalism, Self-determination.

Introduction

After the Second World War, ethno-nationalism became an important political occurrence in many countries. These movements often questioned the state's power and legitimacy by shifting the loyalty of particular groups of people, which created risks for national unity and territorial integrity. Because of this, governments were usually unwilling to support or accept these movements. However, the strength and popularity of many of these demands forced governments to take them seriously and explore different ways to manage and resolve the conflicts.

Solving national identity conflicts has never been an easy mission. Only a small number of such disputes have been fully and permanently resolved. Even when agreements are reached, tensions often remain and can lead to the collapse of the settlement. Several factors affect the success of these efforts, including the willingness of leaders to compromise, the number of groups involved, and the influence of neighbouring countries and international organisations. However, the crucial factor is often the type of

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self-rule or self-determination offered to the national groups, how it is implemented, and the powers it gives them. If the agreement helps minority national groups feel secure about managing their own social, political, and economic affairs, and if the central government honours this arrangement, it can be an important and steady step toward resolving ethno-national conflicts.

This article explores how effective autonomous arrangements are in addressing ethno-national conflicts. An overview of such disputes reveals that autonomy-based settlements have emerged as one of the most widely accepted solutions. The following sections examine different forms of autonomy, including territorial autonomy, arrangements for indigenous communities, and cultural or non-territorial autonomy.

Territorial Autonomy: A Framework for Resolving Ethnic Conflicts

In recent decades, territorial autonomy has emerged as one of the most widely applied strategies for managing and resolving ethno-national conflicts. . This approach is especially relevant when a national minority forms a demographic majority in a particular region. As Lapidoth (1997) notes, territorial autonomy allows a distinct community, which differs from the national majority but dominates numerically in a defined area, to maintain and express its identity through self-governance. Essentially, autonomy establishes a form of minority-led sub-government within the larger state framework. Ghai (2000) explains that it grants such groups the power to govern their cultural and social affairs while the central government retains authority over matters of shared interest.

Autonomy usually involves granting national minorities their political institutions, the authority to legislate, administer, and sometimes adjudicate, without formally creating an independent state. Wolff (2013) defines autonomy as a form of territorial self-rule, in which specific areas are granted wider powers than other regions in the same country. These autonomous entities generally manage cultural, social, and economic affairs, while national security and foreign relations remain under central control. In some cases, as Palley (1978) notes, autonomous units are also permitted to enter into international agreements. The arrangement is typically structured so that the state and the autonomous region share responsibilities and sovereignty, with clear legal boundaries that prevent overlap and conflict, while aiming to balance national unity with respect for diversity (Abushov, 2015).

The strength of autonomy as a solution lies in its capacity to reconcile two often competing objectives: the self-determination demands of minority groups and the state's need to maintain territorial integrity. As Lapidoth (1997) suggests, autonomy disperses power within the state, supporting national unity while acknowledging diversity. Suksi (1998) highlights another advantage — autonomy is flexible and can be adapted to suit

different situations. Some regions, like the Aaland and Faroe Islands, have been granted broad powers, while others receive more limited authority. As Cornell (2002) argues, this flexibility increases the chances of easing ethnic tensions. The popularity of this model is evident in post-conflict agreements: Rothchild and Hartzell (1999) point out that 17 of 35 peace agreements ending civil wars between 1945 and 1992 included some form of territorial autonomy.

A central question is whether autonomy arrangements truly meet the self-determination aspirations of minority groups. Many scholars believe they can, especially by satisfying self-determination's "internal" aspect, which involves control over cultural, political, and economic decision-making within a group's territory. Cassese (1995) even regards autonomy as one possible path to achieving this. While autonomous regions often appear to function like "states within a state," they do not possess full sovereignty (Cornell, 2002). As Hannum (1980) puts it, autonomy gives minority communities the right to be different, allowing them to protect and promote their unique identity. It also gives these groups a local majority status within their autonomous region, which helps strengthen their political influence and pursue their collective interests more effectively (Moore, 2005).

Most autonomy agreements are reached through negotiations between the central government and the national minority. However, external actors — including international organisations and neighbouring states — often play an important role in brokering and supporting such settlements. One significant barrier is the mistrust minority groups often feel toward the central government's commitment to honouring agreements. Fujikawa (2021) suggests that international guarantees can ease this concern and make groups more willing to disarm and accept negotiated autonomy. Because these agreements are usually binding and require the consent of both parties for changes, they offer a sense of long-term stability and security.

For autonomy to reduce the risk of future conflicts, it is also important that minority groups are not politically isolated but included in broader state institutions. Cederman et al. (2015) argue that territorial self-governance, combined with meaningful representation in the central government, contributes to creating more stable and inclusive political systems. However, this is not always feasible, especially in larger states where minority groups form only a small portion of the national population.

The idea of territorial autonomy is not new. One of the earliest examples is the Aaland Islands, granted autonomy by the League of Nations after World War I. Other notable cases followed, including South Tyrol and the Faroe Islands after World War II, and later examples such as Sudan (1972), Bougainville, the Chittagong Hill Tracts, the Miskitos in Nicaragua, and the

Bodo and Gorkhaland regions in India. While arrangements like those in Aaland, the Faroe Islands, and the Miskito region have generally succeeded, other cases — including Moro, Bodo, the Chittagong Hill Tracts, Sudan, and Gorkhaland — have not fully resolved conflicts. Often, national groups accept autonomy reluctantly, abandoning aspirations for complete independence under external pressure, although some do find the model acceptable.

A review of global peace agreements shows that nearly half involve some form of autonomy. Scholars like Anderson (2014), Cederman et al. (2015), and Saideman et al. (2002) suggest that autonomy has helped reduce conflicts based on ethnic nationalism in many cases by addressing long-standing grievances. The scope of power granted to autonomous regions varies, especially in federal systems like India and Russia, where autonomous units hold less power than federal ones. Still, the relative success of autonomy arrangements suggests this model remains a promising path for addressing difficult ethno-national conflicts, including unresolved cases like Tibet and the Tamil question in Sri Lanka.

Autonomy and Settlement of Self-determination Demands of Indigenous People

Over the past few decades, many indigenous communities worldwide have raised demands for self-determination. . Gurr and Harff (2004) note that by the 1990s, about sixty-six indigenous groups were actively involved in political movements. Historically, these communities have faced long-term marginalisation, exploitation, and displacement, often due to uncontrolled migration into their ancestral lands. As Anaya (1996) observes, the experience of indigenous peoples closely mirrors that of colonised populations; most were absorbed into modern states without their consent. This forced integration led to the loss of their traditional territories, natural resources, and the autonomy to live according to their customs and ways of life. Walzer (1992) highlights their situation as falling somewhere between being a "captive nation" and being a minority community.

In recent decades, indigenous groups have grown more organised and assertive, transforming from scattered, powerless communities into politically aware and self-confident groups with increasing negotiating power. Their struggle for self-determination has centred chiefly on protecting their traditional lands, resources, and cultural practices. Since indigenous life is deeply connected to their territory, securing ownership and control over their land has been viewed as essential for the survival of their identity, customs, and economic systems. Many indigenous peoples base their claims on the belief that, as the original inhabitants, they are the rightful and sovereign owners of the land from which they were displaced.

International organisations have increasingly recognised and supported the right of indigenous peoples to self-determination. The International Labour Organisation (ILO) addressed these issues through several

conventions, most notably Convention 169 (1989), which emphasised indigenous communities' rights to maintain their cultural traditions, participate in decisions regarding the use of resources on their ancestral lands, and guide their development. This commitment was further advanced by the Draft Declaration on the Rights of Indigenous Peoples (1994), which, in Article 3, asserted that indigenous peoples are entitled to define their political status and independently pursue their social, economic, and cultural development. Likewise, the United Nations Declaration on the Rights of Indigenous Peoples (2007) recognised the profound bond between indigenous peoples and their lands. It affirmed their right to self-governance, particularly about their internal and local matters (United Nations, 2007, Art. 4).

One notable feature of indigenous claims to self-determination is that, unlike many national movements, they do not usually aim for full statehood. Instead, indigenous groups often prefer various forms of autonomy within existing states. Scholars broadly agree on this point. Eide (1995) argues that self-determination for indigenous peoples is usually understood not as the right to create an independent state but as the right to exercise limited self-governance based on ethnic and cultural identity. Daes (1996) suggests that the right to self-determination should be seen as the freedom to negotiate fair political arrangements and representation within the state, rather than secession. This process can be seen as a delayed form of state-building, in which indigenous groups seek a fair and respectful place within the broader state system. Although a few indigenous communities have sought complete independence, most are content with achieving meaningful self-rule or autonomous status.

The combined effect of indigenous activism and growing international recognition has led to the creation of several autonomous regions. Examples include Nunavut in Canada, the Miskito region in Nicaragua, and Greenland in Denmark. Such arrangements allow indigenous communities to govern their affairs and protect their way of life, while the state retains sovereignty (Caspersen, 2017).

Cultural or Non-Territorial Autonomy

Cultural or non-territorial autonomy is often used to protect and promote the culture of minority groups that are spread out across a state rather than living in one specific region. Under this system, groups are free to manage issues related to their language, religion, and cultural life, without being limited by geography. These rights are meant to shield minorities from discrimination and forced assimilation. As Eide (1998:252) explains, cultural autonomy can be seen as a culturally distinct group's right to self-manage matters important for preserving and continuing its cultural identity. By granting groups the authority to guide their cultural activities, non-territorial autonomy can help reduce the traditional divide between

majorities and minorities and the tensions that often arise from such divisions (Nimni, 2007, p. 348).

Eide (1998) further identifies three key ways in which cultural autonomy differs from territorial autonomy: (a) it is designed for groups defined by culture rather than geography, (b) it is limited to cultural matters, and (c) it only applies to people who belong to the cultural group in question. In practice, this usually means the right to set up their schools, maintain and promote their religion and traditions, and sometimes exercise limited economic rights. According to Federica Prina (2013), by allowing minorities the power to choose and direct their cultural futures, this form of autonomy can help ease feelings of exclusion that often come from being part of a non-dominant group in a society.

Historically, cultural autonomy has its roots in various older systems. For example, the Ottoman Empire used the millet system, which gave non-Muslim groups the freedom to manage their personal lives based on their religious and legal traditions (Cobban, 1969, p. 238). Similarly, in some parts of Europe, Jewish communities were sometimes allowed to govern their internal affairs, although usually in a more limited way (Lapidoth, 1997, p. 37). The idea became more formalised at the end of the 19th century when the Austro-Hungarian Social Democratic Party included it in their 1899 Brunn Programme. It was later developed further by Marxist thinkers Karl Renner and Otto Bauer. After World War I, some countries with large minority populations tried to apply it to protect minority rights.

Although cultural autonomy is often seen as a practical and less risky way to meet minority demands without threatening a state's stability, it has rarely been fully implemented. One well-known example is Estonia's Cultural Autonomy Law of 1925, which allowed German and Jewish minorities to form cultural councils (John Coakley 2016: 14). However, these councils lost their influence after an authoritarian government took power in 1934. Estonia later passed a similar law in 1993, but researchers like Lagerspetz (2014) and Smith (2013) argue that the law has had little real impact, and Poleshchuk (2013) calls it mostly symbolic.

Other countries, including Hungary (Dobos 2007, 2013), Serbia (Beretka, 2013), and Slovenia (Sardelić, 2013), have also experimented with versions of cultural autonomy. Similar ideas have been considered in places like Romania (Decker, 2007), Kosovo (Stroschein, 2008), and Ukraine (Solchanyk, 1994), but these efforts have seen limited success. Because of this, some minority groups feel that cultural autonomy offers little more than the individual rights already guaranteed in many Western democracies.

Even so, cultural or non-territorial autonomy can still be helpful for countries looking for ways to handle minority issues without altering state borders. As Prina (2020: 425) notes, these arrangements work

exceptionally well for groups scattered across vast areas, as they allow cultural rights to be protected without challenging the state's territorial unity.

Criticism of Autonomous Arrangements

While various forms of autonomy are often viewed as practical solutions for addressing ethno-national conflicts, they have also faced significant criticism. One of the main concerns raised by critics is that granting autonomy along ethnic or national lines may encourage secessionist ambitions. Caspersen (2017: 16) argues that territorial autonomy can offer ethnic groups the tools and space to organise politically, increasing their influence over the central government. Similarly, Juon and Bochsler (2023: 2002) suggest that the more extensive the autonomy granted to an ethnic group, the more leverage the group gains, allowing its leadership to make more credible threats of prolonged conflict if their demands are unmet. The fragmentation of states like the former Soviet Union, Yugoslavia, and Czechoslovakia is often cited as evidence of this risk.

Another critique highlights that autonomous arrangements reinforce historical and cultural divisions between groups rather than bridging them (Steiner, 1991, p. 1552). In effect, such systems lock ethnic identities within fixed territorial and social boundaries, limiting the chances for integration. Additionally, scholars like Ghai (2000: 500) point out that autonomy can sometimes create new minorities within the autonomous regions, leaving these smaller groups vulnerable to discrimination or forcing them to conform to the dominant group's symbols, language, and cultural norms.

Some theorists have also argued that designing separate institutions based on ethnicity, language, geography, or national origin may run counter to the principle of equal protection, as it establishes divisions that conflict with the ideal of equality before the law (Steiner, 1991).

Another risk of autonomous arrangements lies in the potential for persistent tensions and disputes between the central state and the autonomous region. These disagreements can lead to political deadlock and inefficiency, both administratively and legally. As Ghai (2000: 524) observes, creating and maintaining effective autonomy agreements requires political skill and considerable technical knowledge.

Despite these criticisms, autonomy is still widely regarded as one of the most effective tools for resolving disputes between states and ethnic groups. According to Cornell (2002), autonomy remains the only realistic compromise that can balance the territorial claims of ethnic communities with the sovereignty concerns of the state.

Conclusion

The rise of ethno-nationalist movements during the latter half of the

twentieth century posed a significant threat to the stability and cohesion of many states. These movements were often driven by communities who felt marginalised or excluded from the existing political frameworks. The pressures exerted by these groups quickly emerged as a central political issue in the post-World War II world. Backed by broad-based popular support and, in many cases, controlling extensive territories, these movements raised serious questions about the legitimacy and authority of numerous state governments. For many nations, particularly across Africa and Asia, confronting these challenges demanded diversifying substantial portions of their limited resources. In several instances, these tensions escalated into full-scale civil wars. Indeed, rather than conventional wars between states, it was these internal, ethnic-based conflicts that became the primary threat to peace in the postwar era, often leading to widespread human suffering and the destruction of entire regions.

Given the persistence and intensity of such conflicts, it became essential to develop innovative frameworks to address the competing claims of ethnic groups and central governments. A review of ethno-nationalist struggles reveals that different models of autonomy have frequently been proposed and implemented as part of negotiated settlements. These arrangements, designed to share power between the state and its constituent communities, have featured prominently in nearly half of all peace agreements reached in such contexts. One of the key strengths of autonomy lies in its adaptability, which allows it to be moulded to suit the specific realities of each conflict.

Autonomy can offer a balance between accommodating the demands of national or ethnic groups and maintaining the core authority of the state. This explains why both territorial and cultural autonomy have been widely used. Territorial autonomy typically applies to groups that form a regional majority but remain a minority within the state. In contrast, cultural autonomy enables distinct cultural communities to manage their internal affairs, especially in preserving their traditions, language, and way of life. As a result, autonomous arrangements have proven to be one of the most practical and widely accepted solutions for managing one of the most persistent and complex challenges modern states have faced in recent decades.

The terms self-government and self-rule are often used to express the idea of autonomy. For instance, the Draft UN Declaration on Indigenous Peoples (1994) uses both terms as if they mean the same thing (Welhengama, 2000, p. 100). However, territorial autonomy is not the same as decentralisation, since decentralisation usually involves the central government giving limited powers to local bodies, while still keeping the authority to take them back at any time (Lapidoth, 1997, p. 51).

One of the more common explanations of 'Indigenous People' is by Cobo

(1986:29), "Indigenous peoples and nations are those which, having historical continuity with pre-invasion and pre-colonial societies that developed on their territories, consider themselves distinct from other sectors of societies now prevailing in those territories, or parts of them. They form at present non-dominant sectors of society and are determined to preserve, develop and transmit to future generations their ancestral territories, and their ethnic identity, as the basis of their continued existence as peoples, in accordance with their cultural patterns, social institutions and legal systems."

Kymlicka (2001, p. 122) points out that the situation of indigenous peoples is even more challenging than that of stateless nations. "As a rule, stateless nations were contenders but losers in the European state formation, whereas indigenous peoples were entirely isolated from that process until very recently, and so retained a pre-modern way of life until well into the century. Stateless nations would have liked to form their own states, but lost in the struggle for political power, where indigenous peoples existed outside this system of European states."

References

Abushov, K. (2015). Autonomy as a possible solution to self-determination disputes: Does it really work? *International Journal on Minority and Group Rights*, 22(2), 182–201.

Act No. 1144—Autonomy of Åland Islands, 1991. (1991).

Act No. 670—Concerning Autonomy of Åland Islands, 1951. (1951).

Anaya, S. J. (1996). *Indigenous people in international law*. Oxford University Press.

Anderson, L. (2014). Ethnofederalism: The worst form of institutional arrangement? *International Security*, 39(1), 165–204. https://doi.org/10.1162/isec_a_00164

Bakke, K. M. (2015). *Decentralisation and intrastate struggles: Chechnya, Punjab, and Quebec*. Cambridge University Press.

Beretka, K. (2013). National councils of national minorities in Serbia: Pros and cons of an ethnic self-government. In E. Nimni, A. Osipov, & D. J. Smith (Eds.), *The challenge of non-territorial autonomy: Theory and practice* (pp. 181–196). Peter Lang.

Caspersen, N. (2017). *Peace agreements: Finding solutions to intra-state conflicts*. Polity Press.

Cassese, A. (1995). *Self-determination of people: A legal reappraisal*. Cambridge University Press.

Cederman, L.-E., Hug, S., Schadel, A., & Wucherpfennig, J. (2015). Territorial autonomy in the shadow of conflict: Too little, too late?

American Political Science Review, 109(2), 354–370.

Coakley, J. (2016). Introduction: Dispersed minorities and non-territorial autonomy. *Ethnopolitics*, 15(1), 1–23.

Cobban, A. (1969). *Nation-state and national self-determination*. Collins.

Cobo, J. R. M. (1986). Study on the problem of discrimination against indigenous populations. *United Nations Publication*, Vol. V.

Cornell, S. (2002). Autonomy as a source of conflict: Caucasian conflicts in theoretical perspective. *World Politics*, 54(1), 245–276.

Cunningham, K. G. (2011). Divide and conquer or divide and concede: How do states respond to internally divided separatists? *American Political Science Review*, 105, 275–297.

Daes, E.-I. A. (1996). The right of indigenous peoples to self-determination in contemporary world order. In D. Clark & R. Williamson (Eds.), *Self-determination: International perspectives* (pp. 47–57). Macmillan.

Decker, D. C. (2007). Using cultural autonomy to prevent conflict and meet the Copenhagen criteria: The case of Romania. *Ethnopolitics*, 6(3), 437–450.

Dobos, B. (2013). The role of elections in minority contexts: The Hungarian case. In E. Nimni, A. Osipov, & D. J. Smith (Eds.), *The challenge of non-territorial autonomy: Theory and practice* (pp. 163–180). Peter Lang.

Draft Declaration of Indigenous Peoples' Right to Self-Determination. (1994).

Eide, A. (1995). The national society: Peoples and ethno-nations: Semantic confusion and legal consequences. *Nordic Journal of International Law*, 64(3).

Eide, A. (1998). Cultural autonomy: Concept, content, history and role in the world order. In M. Suksi (Ed.), *Autonomy applications and implications* (pp. 251–272). Kluwer Law International.

Fujikawa, K. (2021). Settling with autonomy after civil wars: Lessons from Aceh, Indonesia. *Global Policy*, 12(2), 204–213.

Ghai, Y. (2000). Autonomy as a strategy for diffusing conflict. In P. C. Stern & D. Druckman (Eds.), *International conflict resolution after the Cold War* (pp. 483–529). National Academy Press.

Greenland Home Rule Act. (1978).

Gurr, T. R., & Harff, B. (2004). *Ethnic conflicts in world politics* (2nd ed.). Westview Press.

Hannum, H., & Lillich, R. B. (1980). The concept of autonomy in international law. *American Journal of International Law,* 74(4), 858–889.

Hannum, H. (1990). *Autonomy, sovereignty and self-determination: The*

accommodation of conflicting rights. University of Pennsylvania Press.

International Labour Organisation. (1957). *Convention (No. 107) concerning the protection and integration of indigenous and other tribal and semi-tribal populations in independent countries*, 328 U.N.T.S. 247.

International Labour Organisation. (1989). *Convention (No. 169) concerning indigenous and tribal peoples in independent countries*, 28 I.L.M. 1382.

Juon, A., & Bochsler, D. (2023). The wrong place at the wrong time? Territorial autonomy and conflict during regime transitions. *Comparative Political Studies*, 56(13), 1996–2029.

Kymlicka, W. (2001). *Politics in the vernacular: Nationalism, multiculturalism, and citizenship*. Oxford University Press.

Lagerspetz, M. (2014). Cultural autonomy of national minorities in Estonia: The erosion of a promise. *Journal of Baltic Studies*, 45(4), 457–575.

Lapidoth, R. (1997). *Autonomy: Flexible solutions to ethnic conflict*. United States Institute of Peace Press.

Moore, M. (2005). Internal minorities and indigenous self-determination. In A. Eisenberg & J. Spinner-Halev (Eds.), *Minorities within minorities* (pp. 271–293). Cambridge University Press.

Nimni, E. (2007). National-cultural autonomy as an alternative to minority territorial nationalism. *Ethnopolitics*, 6(3), 345–364.

Palley, C. (1978). *Constitutional law and minorities* (Report No. 36). Minority Rights Group.

Poleshchuk, V. (2013). Changes in the concept of national cultural autonomy in Estonia. In E. Nimni, A. Osipov, & D. J. Smith (Eds.), *The challenge of non-territorial autonomy: Theory and practice* (pp. 149–162). Peter Lang.

Prina, F. (2013). Introduction: National cultural autonomy in theory and practice. *Journal on Ethnopolitics and Minority Issues in Europe*, 12(1), 1–6.

Prina, F. (2020). Nonterritorial autonomy and minority (dis)empowerment: Past, present, and future. *Nationalities Papers*, 48(3), 425–434.

Roeder, P. G. (2007). *Where nation-states come from: Institutional change in the age of nationalism*. Princeton University Press.

Saideman, S. M., Lanoue, D. J., Campenni, M., & Stanton, S. (2002). Democratisation, political institutions, and ethnic conflict: A pooled time-series analysis, 1985–1998. *Comparative Political Studies*, 35(1), 103–129. https://doi.org/10.1177/001041400203500108

Sardelić, J. (2013). The Roma community acts in the Republic of Slovenia: Legal implementation of Romani nonterritorial autonomy. In E. Nimni, A.

Osipov, & D. J. Smith (Eds.), *The challenge of non-territorial autonomy: Theory and practice* (pp. 197–211). Peter Lang.

Smith, D. J. (2013). Challenges of non-territorial autonomy in contemporary Central and Eastern Europe. In E. Nimni, A. Osipov, & D. J. Smith (Eds.), *The challenge of non-territorial autonomy: Theory and practice* (pp. 117–132). Peter Lang.

Solchanyk, R. (1994). The politics of state building: Centre-periphery relations in post-Soviet Ukraine. *Europe-Asia Studies*, 46(1), 47–68.

Steiner, H. J. (1991). Ideals and counter-ideals in the struggle for autonomy regimes for minorities. *Notre Dame Law Review*, 66, 1539–1555.

Stroschein, S. (2008). Making or breaking Kosovo: Applications of dispersed state control. *Perspectives on Politics,* 6(4), 655–674.

Suksi, M. (1998). On entrenchment of autonomy. In M. Suksi (Ed.), *Autonomy applications and implications* (pp. 151–168). Kluwer Law International.

Tranchant, J.-P. (2016). Is regional autonomy a solution to ethnic conflict? Some lessons from a dynamic analysis. *Peace Economics, Peace Science and Public Policy*, 22(4), 449–460.

United Nations. (2007). *Declaration on the Rights of Indigenous Peoples*.

Walzer, M. (1992). The new tribalism. *Dissent*, Spring, 164–171.

Welhengama, G. (2000). *Minorities' claims: From autonomy to secession*. Ashgate.

Wolff, S., & Weller, M. (2005). Self-determination and autonomy. In M. Weller & S. Wolff (Eds.), *Autonomy, self-governance and conflict resolution: Innovative approaches to institutional design in divided societies* (pp. 1–22). Routledge.

Wolff, S. (2011). A resolvable frozen conflict? Designing a settlement for Transnistria. *Nationalities Papers*, 39(6), 863–870. https://doi.org/10.1080/00905992.2011.617363

Wolff, S. (2013). Conflict management in divided societies: The many uses of territorial self-governance. *International Journal on Minority and Group Rights*, 20(1), 27–50. https://doi.org/10.1163/15718115-02001003

ISDA JOURNAL • VOL.35 • NO.2 • 2025 • ISSN (PRINT) 0971-2550 • pp. 227-231

BOOK REVIEW

Fascism and Dissent Voices

Alpa Shah. (2024). The Incarcerations: Bhima Koregaon and the Search for Democracy in India, Gurugram: Harper Collins Publishers, pp. 561, Rs. 699.

Reviewed By P. M. Joshy

As the largest democracy in the world, India's periodic election rituals project an image of the nation abroad as the "mother of democracy." However, the book 'The Incarcerations: Bhima Koregaon and the Search for Democracy in India' by Alpa Shah challenges these grand claims about democracy and development. The imprisonment of the BK-16, sixteen well-known social activists advocating for the rights of Adivasis, Dalits, and Muslims, reveals a different reality. Despite their incarceration under the pretext of alleged connections with the Bhima Koregaon incidents, these civil society activists continue to fight for democracy from below, demonstrating a resilience that is both inspiring and critically important. Their imprisonment only serves to emphasise the urgency of their cause-the rights of Adivasis, Dalits, and Muslims.

Neoliberalism, the "movement from above," denounced the institutions of democracy and called for a military state apparatus to repress the "resistance movements from below." The quest for decentralisation is risky; yet, people, such as indigenous forest dwellers, struggle hard to safeguard their natural environment from profit-driven multinational mining corporations. The daily battles of Dalits against caste oppression, their struggles for land, and the Muslim resistance against the forceful exclusions of Hindutva majoritarianism have intensified the conflict between the state and the poor in India. Nonetheless, their voices are democratically amplified by activists in civil society. However, the ruling class's perception of these movements as 'anti-national' and the unjust labelling of dissent as 'Urban-Naxal' and 'Urban-Maoist' de-spatialises the targets; therefore, anyone who dares to speak against the regime would be

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dealt with by the draconian law UAPA, highlighting the need for change.

The book is set against the backdrop of the Bhima Koregaon incident. This tragic incident occurred in January 2018 and led to the subsequent arrest of sixteen human rights activists from various parts of India. The Dalits consider the Victory Pillar in Bhima Koregaon a symbol of their resurgence against the caste-ridden Peshwai Empire, where they suffered the worst forms of caste oppression. The Hindutva forces campaigned against the Dalit commemoration, labelling it as 'anti-national.' The question of why Dalits supported the British against their rulers remains unaddressed. Since 1927, Dalits have been celebrating January 1 as Victory Day. In the first meeting, B.R. Ambedkar addressed the Mahar gathering, advocating for an annual commemoration to honour the valour of their ancestors. This has empowered Dalits in their ongoing struggle against persistent caste oppression in India. However, the 2018 commemoration turned tragic when Hindutva-aligned individuals unleashed brutal violence against Dalits gathered in Bhima Koregaon. In response to widespread protests from Dalit organisations, a ten-member Citizens Committee was formed to investigate the situation. The Deputy Mayor of Pune was also part of this committee. They submitted a report to the police containing over two hundred photos and videos that substantiated the claim that the violence against Dalits was orchestrated and executed by individuals and organisations with a Hindutva agenda. However, when the issue was raised concerning two prominent figures with close ties to the Sangh, everything took a U-turn.

The author posits that the arrest of BK-16 was a result of a conspiracy, a blatant attempt to shield the perpetrators at the cost of those fighting for the rights of the destitute. The book opens with a prologue and a detailed introduction, outlining the connection between corporations and the Hindutva movement, the rise of authoritarianism, and the necessity of social movements for democracy to thrive in India. The book is then neatly divided into nine parts, each recounting the stories of BK-16. The book's first part is dedicated to Sudha Bharadwaj, a courageous activist who devoted her life to the rights of the Adivasis in Chhattisgarh state—a region often referred to as a land of plenty for people experiencing poverty. By 'de-classing' herself to understand the life world of the Indigenous people, Bharadwaj was able to address the multifaceted issues faced by the Adivasis in the region. From labour rights to a broader fight for land, forest, and environmental rights of indigenous people, Bharadwaj exposed the unholy nexus between the state and the corporations, unveiling some of the most horrific human rights abuses in the world.

Additionally, Bharadwaj supported local activists in establishing the 'Save Chhattisgarh Movement,' a powerful initiative that united various people's resistance movements to learn from one another and support each other

against displacement. This movement, a testament to the power of collective action, not only united various resistance movements but also demonstrated the strength that comes from learning from each other and supporting each other. It also allied with the anti-displacement movements of Odisha and Jharkhand, where Stan Swamy had formed a similar initiative called 'People's Movement against Displacement.' Moreover, Bharadwaj demonstrated through various examples that a serious leftist movement could not be separated from the grassroots movements of the deprived sections. Furthermore, the movements could not be detached from the necessary legal battles—' paper fights and street fights'—using the Indian Constitution itself to safeguard the democratic rights of people with low incomes.

The second part of the book tells the story of Stan Swamy, a Jesuit priest who dedicated his life to the poorest of the poor in the state of Jharkhand. Swamy addressed the issues of displacement, various laws regarding protecting Adivasis' land and forests, and, most importantly, the urgent need to understand and implement the Forest Rights Act. He also highlighted the use of Adivasis in counter-insurgency to kill other Adivasis, the 'Hindutvasation' of Adivasi space, and worked hard to raise the issue of the under-trialled in various jails in the state. Through his tireless efforts, Swamy brought attention to these critical issues. The majority of the under-trialled are Dalits and Adivasis, who cannot even afford the journey from their villages to the jails and courts in town. Many are unaware of the specific charges against them, nor do they understand the language used in the courts. To them, the state appears to be an alien institution that collaborates with the wealthy to devastate their lives. Stan Swamy observed that the majority of the under-trialled were victims of 'development-induced displacement.' Stan Swamy and his team published a detailed report on the under-trialled in Chhattisgarh. Consequently, Stan became 'a thorn in the flesh of the state.' The Bhima Koregaon case was used to 'silence' him.

Prof. Anand Teltumbde, a renowned public intellectual known for his unique approach to social movements, particularly regarding the rightful assertions of Dalits in India, was also a target of far-right forces in the country. Through various works such as "Republic of Caste," he emphasised the importance of linking the issues of 'caste' and 'class' in the fight against caste oppression and neo-colonial exploitation. Critiquing caste-based reservations, Teltumbde noted that these reservations had created an elite class among Dalits and were fundamentally not beneficial to the vast majority of Dalits. In light of this critique, Teltumbde's broader perspective on social movements was rooted in Ambedkar's concept of the 'annihilation of caste'. Therefore, he believed it was crucial to elevate Dalit consciousness beyond the established reservation boundaries of the state. The book's third part concludes with the observation that 'Anand

Teltumbde's ideas represent a significant alternative and challenge to the right-wing appropriation of Ambedkar and thereby Dalits'.

Part four of the book begins with the historical importance of Bhima Koregaon in the context of the ongoing Dalit resistance against Brahminical impositions. This historical backdrop sets the stage for the firsthand account of Anita Sawale, a thirty-nine-year-old anti-caste activist who witnessed the entire incident in Bhima Koregaon on January 1, 2018. The chapter unravels the politics of the perpetrators, the Sangh, who have historically been disturbed by the Dalits' victory over Brahminical upper-caste rule. The current Hindutva dispensation is well aware that such commemorations pose a significant threat to the political and cultural assimilation of Dalits and Adivasis within the right-wing nationalist agenda; thus, Bhima Koregaon became a target for the Sangh. The fifth chapter examines the shift in the overall narrative. When the Citizens Committee reports on the 2018 riots unveiled those operating behind the scenes, an entirely new narrative emerged, featuring a plot of 'a chilling Maoist conspiracy to assassinate Prime Minister Modi'. This alleged 'conspiracy' was attributed to the 'Elgar Parishad', a gathering of diverse Dalit groups, Muslim organisations, Adivasi groups, and even some Maratha factions known for their strong stance against the neo-colonial exploitation by corporates. Many members of the Elgar Parishad participated in the Bhima Koregaon New Year's Day celebrations of 2018, where right-wing supporters brutally attacked individuals bearing blue flags. Consequently, the coordinated multi-city police raids and arrests of sixteen civil society activists, particularly those opposing the right-wing political agenda, also aimed to divert attention and shield the Sangh supporters who perpetrated the violence against the Dalits.

The book argues that there was a conspiracy to target the BK-16. The letter detected by the police from their computer systems was a ploy involving Trojan horse malware, which can be used to implant files or modify texts from remote locations without the owner's knowledge. When Stan Swamy, Sudha Bharadwaj, Anand Teltumbde, and several other accused individuals saw the purported letters circulating in the media, they raised public objections in various forums. However, their protests had no effect. The sixth chapter offers an in-depth examination of the different aspects of the technical reports and discrepancies with the police's version of the evidence. Further scrutiny of the evidence revealed details about using advanced surveillance technology. Numerous news outlets reported on the crucial role of Pegasus, a powerful and invasive spyware developed by the NSO Group, an Israeli cybersecurity company, in the conspiracy, highlighting the immense magnitude of the threat. The close relationship between the current ruling government in India and Israel is significant, given the use of Israeli-developed spyware in the conspiracy. Typically, right-wing governments are excessively fixated on national security, which

acts as a safety mechanism for unregulated capital accumulation under neoliberalism.

Part seven of the book focuses on Gautam Navlakha, a democratic rights activist and journalist who had been associated with Economic and Political Weekly for over three decades. He has worked extensively on the issue of human rights violations in Kashmir and has participated in various fact-finding teams in the valley. His activism underscores the broader struggle for Muslim rights in India, a cause that has faced significant and alarming challenges under the current government. The arrest of Navlakha signalled a clear message to those advocating for the rights of Muslims in India.

The title of Part Eight, 'The Process Is the Punishment', is a deep dive into the draconian law, the UAPA. All members of the BK-16 were imprisoned under this law. The practice of branding individuals as 'Urban Naxals' or 'Urban Maoists' is a recent strategy that enables governments to quash dissent. The appalling prison experiences of Stan Swamy and Varavara Rao in the BK-16 case bear witness to the inhumane nature of the UAPA law. Originally intended to combat terrorism, the law has, since Narendra Modi's rise to power in 2014, been misused to target those who consistently support grassroots movements against escalating inequality, land usurpation, state atrocities, and the preservation of environmental, land, and forest rights. Despite these daunting challenges, the book ends on a hopeful note for the future of democracy in India.

The book's final part concludes with three simple sentences: "The seeds of democracy will be preserved within fascism. One day they will have the conditions to flourish. This is where the hope for our common future lies" (P.498). Fascism is merely a temporary political phenomenon. The ruling class adopts it as a convenient framework for facilitating capital accumulation. The living conditions of low-income people are worsening daily, but the potential for change through grassroots movements is immense. These movements are expected to bring about qualitative changes in Indian democracy, making us optimistic about the future.

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CONTENTS

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