

Vision 2047:
Prosperous
and
Great Bharat

Pradeep S. Chauhan
Sarabjeet Kaur

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Expert Views on the Book

Sridhar Vembu

As someone deeply committed to building a self-reliant and innovation-driven Bharat, I found "*Vision 2047: Prosperous and Great Bharat*" to be an inspiring and visionary contribution. The book outlines a holistic roadmap for Bharat's future that resonates with the values we uphold at Zoho—decentralization, local empowerment, sustainability, and indigenous innovation.

What impressed me most is the emphasis on blending traditional Bhartiya wisdom with modern technology and entrepreneurship. The idea of "Zero Job – Full Employment," rooted in self-employment and cooperative ownership, aligns perfectly with the rural revival we are striving for. The authors rightly argue that Bharat's growth must not imitate the West but should emerge from our own civilizational foundations—rooted in dharma, simplicity, and community welfare.

The focus on nurturing local talent, investing in research, and promoting a creative economy showcases a deep understanding of what Bharat truly needs to thrive in the 21st century. This book is more than just a vision—it is a call for action towards a decentralized, inclusive, and ethically driven model of development.

I highly recommend this work to policymakers, entrepreneurs, educators and all those invested in shaping Bharat's future from the grassroots up.

— Sridhar Vembu
CEO, Zoho Corporation

Rajiv Kumar

As someone who has been closely involved in Bharat's policy discourse, I find "*Vision 2047: Prosperous and Great Bharat*" a timely and thought-provoking work. The authors present a comprehensive and ambitious blueprint that aligns with the vision of a Viksit Bharat. The book intelligently weaves together historical wisdom with futuristic aspirations, grounding its ideas in Bharat's civilizational ethos while embracing modern technological and policy innovations.

What stands out is the integration of economic, environmental, social and spiritual dimensions—a much-needed departure from purely materialist

models of development. The emphasis on full employment through entrepreneurship, decentralization and trusteeship resonates deeply with our national priorities. Moreover, its vision of a green, digitized, and self-reliant Bharat strikes a powerful chord with the goals I advocated at NITI Aayog.

Crucially, the book champions indigenous models of governance and economics, offering an alternative to Western paradigms. This intellectual independence is vital for Bharat's sustainable and inclusive growth. I commend the authors for presenting such a multidimensional framework for Bharat's centenary of independence. It is both a call to action and a manifesto of possibilities.

— **Dr. Rajiv Kumar**

Chairman, Pahle India Foundation

Former Vice Chairman, NITI Aayog

Bhagwati Prakash Sharma

"Vision 2047: Prosperous and Great Bharat" stands as a monumental and visionary work for those, who have constantly advocated a development model inspired by Bharatiya values and traditions. The authors have masterfully articulated a holistic framework that draws from Bharat's rich civilizational heritage while embracing cutting-edge innovations and futuristic aspirations.

The book rightly critiques the unsustainable and exploitative nature of Western economic models and makes a compelling case for a Bharatiya model based on dharma, decentralization and ethical wealth creation. Its emphasis on self-reliance, natural farming, indigenous technology and spiritual well-being is not only timely but essential for achieving true swaraj.

What makes this book stand out is its deep integration of ancient wisdom—from Kautilya to Gandhi—with contemporary policy challenges, offering practical and implementable solutions across sectors like education, environment, defense and entrepreneurship. The vision of "Zero Job – Full Employment" through trusteeship and local enterprise echoes the ideals of our traditional Bharatiya system and the spirit of self-sufficiency.

This work is a must-read for scholars, policymakers and youth who seek to reimagine Bharat's journey towards becoming a Vishwa Guru by 2047.

— **Prof. Bhagwati Prakash Sharma**

Chairman, MGIEP, UNESCO

Former Vice Chancellor, GBU, Greater Noida

Kumiko Haba

As a professor from Japan, I found *"Bharat@2047: A Prosperous and Great Bharat"* by Prof. Pradeep S. Chauhan and Dr. Sarabjeet Kaur to be a compelling vision document rooted deeply in Bharat's civilizational ethos. The book skillfully blends ancient Indian wisdom—especially that of Kautilya—with modern economic strategies to chart Bharat's journey toward becoming a global economic powerhouse by 2047. What stands out is the emphasis on ethical governance, sustainability and inclusive growth, values that resonate with Japanese models of long-term planning and harmony with nature.

The holistic focus on self-reliance (Atmanirbhar Bharat), skill development, digital transformation and green economy echoes Japan's post-war recovery strategies. However, the Indian model proposed here goes further by integrating spiritual values and cultural continuity—something that Japan deeply respects. The inclusion of concepts like *"Vasudhaiva Kutumbakam"* (the world is one family) adds a much-needed humanistic dimension to global development discourse.

The detailed data, historical references, and innovative policy suggestions make it an excellent resource for scholars and policymakers worldwide. I recommend this book as a visionary framework not only for Bharat but as a model for other nations seeking to harmonize tradition, modernity and sustainable development. Bharat's future, as depicted here, is indeed inspiring.

– Prof. Kumiko Haba

*Aoyama Gakuin University, Tokyo
Ambassador, Min. Tourism, Japan
Member, Science Council of Japan*

Ram Singh

"Vision 2047: Prosperous and Great Bharat" is a bold and insightful articulation of India's developmental aspirations as the nation approaches the centenary of its independence. The book presents a multidimensional framework grounded in indigenous values, historical wisdom, and pragmatic policy innovation.

Noteworthy is its emphasis on employment generation through entre-

preneurship, sustainability via green innovation, and national security through technological self-reliance. The chapters skillfully integrate economic, environmental, technological, and social dimensions, offering a holistic roadmap for India's future.

Particularly commendable is the book's focus on decentralization, inclusivity, and ethical governance—foundational principles for building a resilient and vibrant Bharat. This work is a compelling and timely contribution for scholars, policymakers, and citizens invested in India's emergence as a global leader in the 21st century.

– **Prof. Ram Singh**

Director, Delhi School of Economics, Delhi

FOREWORD

Vision 2047: Prosperous and Great Bharat

Bharat: A Model for a Unique Economic System with Assimilating Diversity

In his renowned book *A History of the World*, Arnold Toynbee wrote: “Bharat is a country where antiquity and modernity coexist, unity thrives in diversity, and a deep spirituality permeates every aspect of life.” He elaborates extensively on the richness and diversity of Bhartiya culture.

Historical overview

For thousands of years, Bharat has been a flourishing and cultured economy. Not only has it been known for its spiritual and metaphysical values, but it has also been an economically prosperous nation. In his book *Economic History of the World: Millennium Perspectives*, Angus Maddison asserts that from 1 AD to 1500 AD, Bharat accounted for more than 33% of global production. Similarly, Prof. Utsa Patnaik, in her seminal work, states that during the 1857-1933 period of British colonial rule, approximately \$45 trillion was extracted from Bharat through taxes and other direct or indirect means. Despite successive invasions by Islamic rulers and later British colonial exploitation, Bharat’s share in global GDP remained at 17% in world production until 1870, which declined to approximately 1.5% by 1947. However, Bharat is now rising as the world’s fastest-growing economy, ranking as the 5th largest, consistently growing at about 6.5% of GDP.

Flaws in the Western Economic Models

The Western economic paradigm, primarily led by the United States and Europe, has raised significant global concerns due to three key issues:

1. High energy consumption and environmental degradation.
2. Rising economic inequality.
3. The proliferation of mental and physical ailments.

Since the collapse of the Soviet communist economy in 1990-91, this

economic thought has permeated global economic policies. However, the world continues to face challenges such as wars, terrorism, social fragmentation, unemployment and economic recessions, indicating that the current paradigm is unsustainable.

Bharat, now 77 years post-independence, is on the verge of transitioning to a development model that integrates ancient economic and social principles with cutting-edge technology. This model aligns well with the rapidly evolving global landscape and technological advancements.

Vision 2047: Prosperous and Great Bharat

The research initiative *Vision 2047: Prosperous and Great Bharat* identifies eight foundational pillars that can guide Bharat toward sustainable and inspiring development. If society remains aware and the government implements policies accordingly, Bharat can present a robust and enduring development model.

1. Dynamic Population: Post-World War-II, a global discourse emerged that considered high population growth detrimental to economic development. However, recent demographic trends challenge this notion. Fertility rates in 130 countries have fallen below the replacement level of 2.1, leading to population decline. Countries such as South Korea, China, Japan and Germany face severe demographic crises.

Conversely, Bharat's current GDP growth of approximately 7% is attributed mainly to its youthful population. The IMF reports that a dynamic and young population contributes 1-1.5% to a nation's GDP growth. Bharat's historical perspective supports the view that human capital is a crucial economic asset.

However, Bharat's fertility rate has also fallen below 2.1, prompting states like Telangana, Andhra Pradesh, and Tamil Nadu to introduce incentives to encourage higher birth rates. If Bharat maintains a fertility rate above 2.1, it will support its transition to a high-income economy by 2047.

2. Zero Unemployment: A fundamental measure of a high-income economy is whether its citizens are fully employed. Western economic models accept unemployment as an inherent condition. However, historical evidence suggests that pre-colonial Bharat, contributing one-third of the global economy, maintained near-full employment through entrepreneurship and self-

sufficient agriculture.

Bharat must redefine employment beyond conventional job-based metrics to focus on entrepreneurship, self-employment, and value-added agriculture. If Bharat is to sustain a 10% GDP growth rate over the next 25 years, a significant proportion of youth must engage in innovation, startups, and business creation.

3. Rising Economic Power: Bharat is the world's fifth-largest economy at nearly \$4 trillion and it is poised to become the third-largest economy by 2027 and the largest by 2047. However, this requires:

- Retaining top talent within the country.
- Encouraging entrepreneurship and innovation.
- Enhancing research and development.
- Expanding agricultural productivity and exports.

With 37 crore (370 million) youth aged 15-29, Bharat has a unique opportunity to leverage its demographic dividend by promoting an innovation-driven economy.

4. Indomitable Security System: A strong economy alone is insufficient for global leadership—national security must be equally robust. History reveals that Bharat's past wealth did not prevent repeated foreign invasions due to inadequate military preparedness.

Artificial intelligence, machine learning technology, algorithms and cyber warfare are as crucial as traditional military hardware in modern warfare. Strengthening intelligence networks and leveraging Bharat's global diaspora can significantly enhance national security.

5. Leader in Science, Technology, Research and Innovation: Historically, Bharat was a global leader in science and technology, with luminaries such as Aryabhata, Charaka, Sushruta, and Varahamihira contributing to various fields. However, in the past 300 years, Western nations have dominated technological advancements.

To reclaim its leadership, Bharat must:

- Invest heavily in higher education and research.
- Retain top talent by offering competitive opportunities.
- Develop policies that attract global scientific talent to Bharat.

6. Sustainable Environment: The Western model of development,

based on high energy consumption and materialism, has led to severe environmental degradation. In contrast, Bharat's traditional economic model was inherently sustainable.

Bharat must lead the global discourse on sustainable development by promoting:

- Solar energy alliances.
- Decentralized and eco-friendly industrial practices.
- Global adoption of its ancient environmental wisdom.

7. Vision: *Vasudhaiva Kutumbakam* (The Globe is One Family):

Unlike Western economic paradigms prioritizing markets over human values, Bharat's philosophy envisions the world as one family. Historically, Bharat's contributions to Buddhism and peacebuilding have influenced civilizations globally. The current geopolitical landscape, marred by conflicts, underscores the need for Bharat's philosophy to guide international relations.

8. Ethics and Values-Based Economic Development: Material wealth alone does not ensure societal well-being. The West faces a moral crisis, with high divorce rates, declining mental health and social alienation. In contrast, Bharat has a rich tradition of family values, spiritual living and community-based support systems.

To sustain its rise as a global leader, Bharat must:

- Reaffirm its moral and ethical foundations.
- Preserve its cultural heritage while embracing modernity.
- Promote holistic well-being alongside economic growth.

'Vision 2047: Prosperous and Great Bharat' is a research-driven blueprint for Bharat's future. As Swami Vivekananda envisioned, "I do not prophesy, but I see with my own eyes the rising of Bharat as the world's leader, illuminating the path for all nations." It is time to bring more actionable models to these ideas so that they can be implemented effectively; this model can inspire Bharat and the world toward sustainable and equitable progress.

Sh. Satish Kumar

*Sah-Sangthak, Swadeshi Jagran Manch &
Author of many books on Economic Issues*

Acknowledgement

This book, “*Vision 2047: Prosperous and Great Bharat*”, is not merely a collection of ideas and essays—it is an inspiration, a call to action for every countryman to unite and strive with excellence to make Bharat a great nation once again.

Bharat has always been revered as the Vishva Guru, leading the world with its unparalleled contributions in the realms of economy, politics, culture, spirituality, values, family systems and peace. The rich legacy forms the foundation of our vision for 2047, as we approach the centenary of Bharat’s independence.

Mere words cannot express our deepest gratitude to Shri Satish Kumar, *Akhil Bhartiya Sah-Sanghthak*, *Swadeshi Jagran Manch (SJM)*, whose unwavering commitment to the mission of making Bharat Samridh (prosperous) and Mahan (great) again has been the cornerstone of this book. It was his inspiring vision and firm belief in national resurgence that led to the creation of this book under this significant title. He envisioned it as a vision document for every Bhartiya dedicated to the cause of national development.

“We express our sincere gratitude to Shri Satish Kumar for graciously agreeing to write the Foreword of this book, reflecting its core spirit and vision.”

We extend our heartfelt thanks to all the mentors and experts who contributed their invaluable insights and guidance throughout this journey:

- Dr. Jaya Sharma
- Dr. Rajinder Singh
- Dr. Compesh Pannu
- Dr. Chetna Gupta
- Dr. Manish Kumar
- Dr. Smita Sundaram
- Adv. Gagan Kumar (CA)
- Shri Gunakar

We are equally grateful to the researchers of Swadeshi Shodh Sansthan whose dedication and hard work brought life to this vision:

- Nishant Chaturvedi
- Naman Kashyap
- Prateek Pandey
- Alok Dwivedi
- Sonali Chadda
- Anuksha Verma
- Kisan Sharma

Our sincere thanks also go to the research scholars of Kurukshetra University, Kurukshetra and Jawaharlal Nehru University, whose academic inputs added depth to this work.

We are immensely thankful to Man. R. Sundram, *National Convener, SJM*, for his constant encouragement and inspiration. Our heartfelt gratitude also goes to Man. Kashmiri Lal, whose blessings and wisdom have always guided us in our efforts to contribute meaningfully to society and the nation.

Finally, we extend our sincere appreciation to all the members of Swadeshi Shodh Sansthan, both in Bharat and abroad, for their continued scholarly engagement and contributions over time.

This book is a collective effort — a reflection of our shared dream for a self-reliant, prosperous, and globally respected Bharat by 2047.

Prof. Pradeep S. Chauhan
Dr. Sarabjeet Kaur

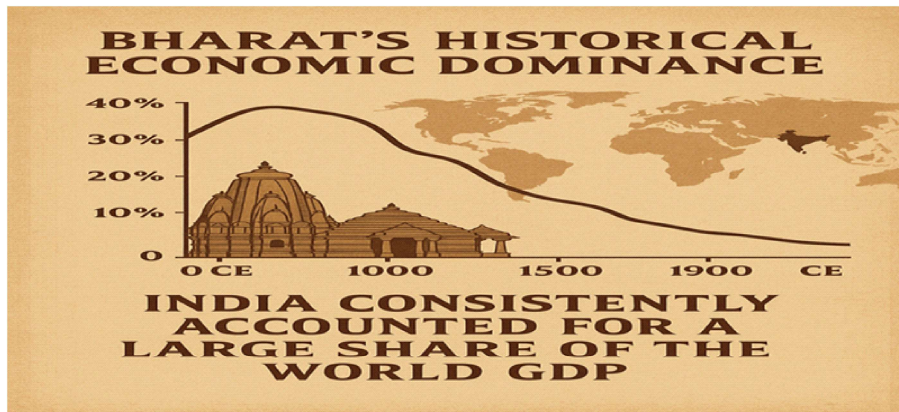
Chapter-1

Bhartiya Economic Renaissance: Rise of Bharat into an Economic Powerhouse

“धनं च न संचिनुयात्, व्ययं च नात्यर्थं कुर्यात् ।
धनं धर्मे निवेशयेत्, ततः प्रजाः सुखं व्रजन्ति” ॥

“One should not hoard excessive wealth, nor should one spend it wastefully. Wealth should be invested in righteous causes, for that brings well-being and happiness to the people.” (*Arthashastra* by Kautilya)

Bharat, historically the wealthiest nation with a rich and diversified heritage, suffered economic decline due to invasions and colonial exploitation, losing more than \$45 trillion to British rulers. Today, Bharat is on an ambitious journey to reclaim its global stature by 2047, leveraging its demographic dividend, robust democracy and stable governance. Initiatives like Make in Bharat and PLI have revitalized manufacturing, attracting global giants like Tesla and Amazon. With advancements in solar, semiconductors and space exploration, alongside improved ease of doing business, Bharat is positioned for sustainable growth. Celebrating its heritage and embracing innovation, Bharat is set to become an advanced, inclusive nation.

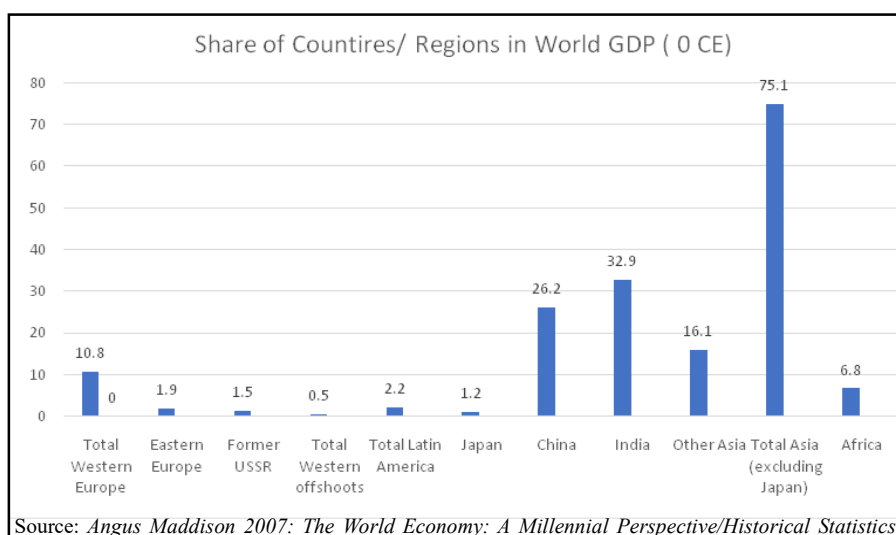


Source: Angus Maddison 2007: *The World Economy: A Millennial Perspective/Historical Statistics*

Bharat’s historical economic dominance reflects unparalleled prosperity, innovation and global influence. With advanced agriculture, skilled craftsmanship and thriving trade networks, Bharat was a beacon of wealth and culture. Its contributions extended beyond material riches, showcasing intellectual and cultural advancements that enriched the global economy for millennia.

At the dawn of the Common Era (0 CE), Bharat accounted for an estimated **32.9% of the world’s GDP**, making it the largest economic contributor globally, ahead of China at 26.2%. Combined, these two Asian powerhouses dominated over 75% of the global GDP, reflecting Asia’s economic supremacy at the time.

Bharat alone was Contributing almost One-Third of the Global GDP



Bharat’s economic dominance was rooted in a diversified economy comprising agriculture, industry and trade. Bhartiya artisans excelled in **textiles, metalwork and pottery**, with exports like woods steel, cotton and spices being highly valued worldwide. Innovations in **irrigation** supported surplus crop production, enabling global trade. Bharat played a pivotal role in the Silk Road and maritime trade, fostering cultural and economic exchanges. Urban centres like Mohenjo-Daro showcased advanced urban planning, while scholars contributed significantly to mathematics, medicine and

science. Bharat thrived as a global powerhouse in the light of sustainable practices and ethical governance. However, **colonial exploitation**, including the loss of \$45 trillion to British rulers, led to economic decline. **Post-independence, Bharat is revitalizing its legacy of innovation and sustainability** to reclaim its status as a global leader.

Bharat's historical economic dominance serves as both a reminder of its rich legacy and a roadmap for its aspirations to reclaim its status as a global powerhouse. By revisiting its strengths in agriculture, craftsmanship, trade and sustainability, Bharat can draw valuable lessons for future growth. As the nation sets its sights on becoming a developed economy by 2047, reconnecting with its historical ethos of innovation and ethical governance will be instrumental. The resilience and ingenuity that characterized ancient Bharat continue to inspire its modern economic journey, positioning it as a beacon of prosperity and progress on the global stage.

Post-Independence Challenges and Recovery

Bharat's post-independence economic journey was marked by significant challenges stemming from colonial exploitation, which reduced its global GDP share from 24.5% in 1750 to 4.2% by 1950. Bharat's growth rate at the time of interdependence was below 1 percent and the Bhartiya economy was suffering from many structural issues like poverty, illiteracy, weak industrial output and inadequate infrastructure compounded the struggles. Agriculture was un-modernized and vulnerable, while partition further disrupted trade and economic networks.

Under Jawaharlal Nehru's leadership, Bharat adopted a state-led economic model, focusing on self-reliance, industrialization and land reforms. Public sector enterprises were established and five-year plans prioritized heavy industries and agriculture. Growth, however, remained modest at 3-4%, hindered by inefficiencies, limited private sector participation and rapid population growth.

Momentum increased with the Green Revolution of the 1960s, boosting agricultural productivity. However, **macroeconomic instability** persisted until the 1991 economic crisis. The nation was in turmoil during 1991 crisis when Bharat was left with just 15 days of import cover. To prevent the economy from collapsing, Liberalization, Privatization and Globalization reforms were

brought. This led to the opening of Bhartiya Economy to foreign investments, dismantling restrictive policies and encouraging private sector growth. This triggered rapid industrialization, export growth and the IT revolution, making Bharat a global technology hub.

While challenges like income inequality and regional disparities remain, Bharat leverages its demographic dividend, technology, innovations and policy initiatives to build an inclusive and resilient economy, aspiring to become a developed nation by 2047.

Economic Trajectory (2000–2024)

Bharat’s economic trajectory from 2000 to 2024 highlights a remarkable period of sustained growth, driven by structural reforms, demographic advantages and strategic policy initiatives. During this period, Bharat’s GDP grew from \$476 billion in 2000 to a \$3.84 trillion by 2024, making it the fifth-largest economy globally. This growth especially in last 10 years reflects the nation’s transformation into a significant player on the global economic stage.



(Source – World Bank)

Innovative Strategies that Propelled Bharat to Become the 5th Largest Economy

Bharat’s rise to become the 5th largest economy in terms of GDP and 3rd largest in terms of PPP (Purchasing Power Parity) in the world by 2024 is a result of innovative strategies that focused on structural reforms, infrastructure development and leveraging its demographic dividend. The government implemented transformative policies such as the **Goods and Services Tax (GST)**, which streamlined the taxation system and created a unified national

market. The **Make in Bharat** initiative, coupled with **Production-Linked Incentive (PLI) schemes**, fostered domestic manufacturing and attracted significant foreign investments in key sectors like electronics, pharmaceuticals and semiconductors. To enhance connectivity and industrial competitiveness, Bharat launched massive infrastructure projects, including **Bharatmala** for road networks and **Sagarmala** for port-led development, which significantly reduced logistics costs.

Bharat’s **digital transformation** through the Digital Bharat program has expanded internet access, improved e-governance, and fostered innovation via initiatives like **Jan Dhan Yojana** and **Startup Bharat**. The IT and software services sector became a global leader, significantly boosting exports and GDP growth. Economists suggest leveraging Bharat’s large domestic market and 18% share of the global population to negotiate better terms with international firms while protecting domestic industries. Additionally, the vast wealth in temples, surpassing the GDP of smaller nations, presents an opportunity for national development. Redirecting these resources to health, education and infrastructure can drive inclusive and sustainable growth.

Projected GDP Growth to 2047: A Vision for Bharat’s Economic Transformation

Bharat’s projected GDP growth to more than \$40-50 trillion by 2047 reflects the nation’s ambition to emerge as a global economic powerhouse. This transformative journey underscores consistent policy-driven initiatives, robust economic fundamentals and a sustainable, inclusive growth focus. Moving from a GDP of \$476 billion in 2000 to nearly \$50 trillion in 2047 signifies a blend of strategic planning, innovation and resilience in the face of global challenges.

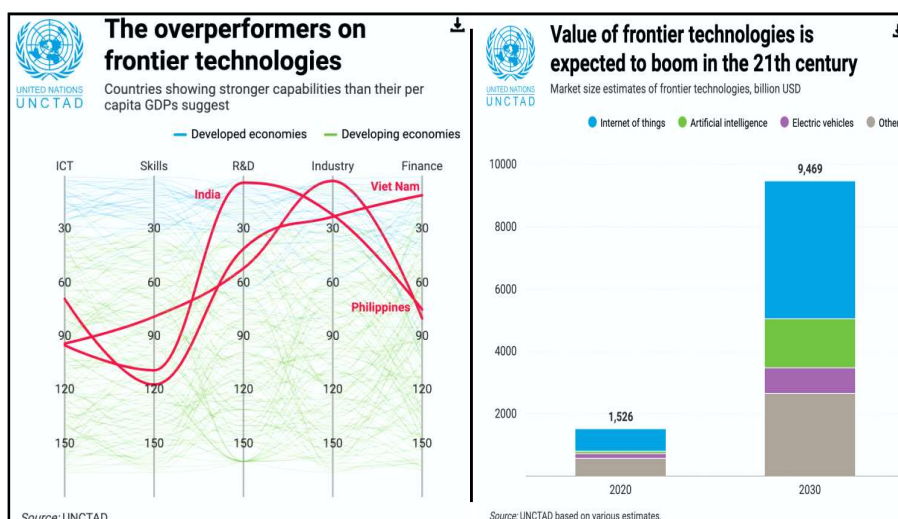
<i>Year</i>	<i>GDP (Trillions USD)</i>	<i>Major Growth Factors</i>
2000	0.476	IT revolution, early reforms
2005	0.834	Infrastructure focus.
2010	1.657	Service sector growth, financial inclusion
2020	2.950	Policy reforms, GST, digital economy
2024	3.840	Post-pandemic recovery, industrial growth
2030	7.00*	Advanced manufacturing, exports
2040	13.00*	Infrastructure-led growth, green energy
2047	35.00*	Inclusive development, global leadership

(Source:- IMF, World Bank, BIS)

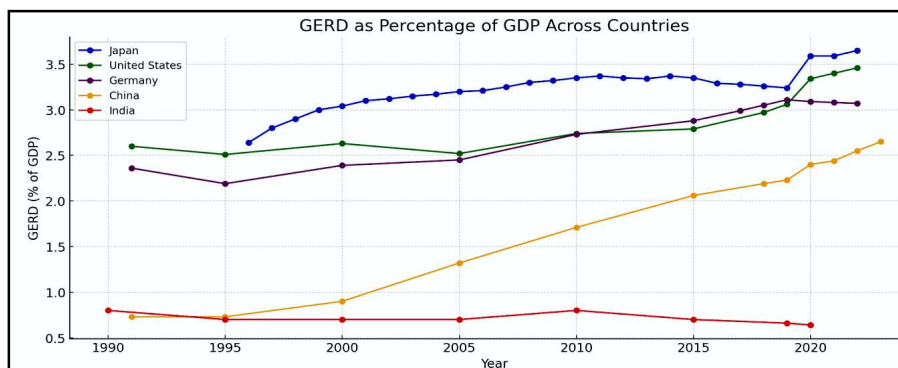
Key Factors Driving the Projected Growth

● **Demographic Dividend and Workforce Expansion:** Bharat’s demographic dividend is a key driver of its economic growth and development. With a young and dynamic workforce expected to dominate until 2047, this population will contribute significantly to productivity and innovation. Government initiatives like **Skill Bharat** aim to equip millions with skills for high-value sectors such as IT, manufacturing and green energy. This large workforce not only supports industrial expansion but also drives consumer demand, sustaining economic growth. Combined with **improved infrastructure, digital connectivity and a rising Ease of Doing Business ranking**, Bharat is well-positioned to leverage its demographic advantage for long-term prosperity and global competitiveness.

● **Harnessing potential of creative economy:** The creative economy, driven by **creativity, intellectual property and technology**, spans industries like arts, design and **R&D**. It blends cultural and commercial value, fostering innovation, cultural exports and sustainable growth. As a dynamic sector, it enhances economic diversification and global competitiveness, enabling developing nations to enter high-growth areas and drive transformation. Bharat ranks as the greatest over-performer in the **Frontier Technologies Readiness Index**, exceeding expectations by **67** positions among 166 countries due to its strong R&D and ICT capabilities, supported by a vast pool of skilled, cost-effective talent.



This positions Bharat to harness advanced technologies like AI, robotics and 3D printing, driving productivity and economic transformation. Creative economy booms with service led growth, which suggest huge potential of Bharat. **With its innovative edge and investment potential, Bharat is poised to become a global hub for advanced technologies**, playing a pivotal role in the transition to high-tech economies worldwide.



Source: (UNCTAD)

Figure: Gross expenditure on Research and Development as a percent of GDP

The above graphs illustrate that advanced nations have created a strong backbone of resilient growth through its strategic investment on research and development. **Bharat's Gross Expenditure on Research and Development (GERD)** stands at 0.6% of GDP, significantly lower than countries like the USA (3.46%), Germany (3.07%), Japan (3.65%) and China (2.65%).

Technological Advancement and Digital Economy

The **Digital Bharat initiative** has created a robust foundation for a tech-driven economy, by 2047:

- Digital connectivity is expected to reach every village, integrating rural and urban economies seamlessly.
- Artificial Intelligence (AI), blockchain, and quantum computing will revolutionize industries like healthcare, manufacturing, and finance.
- E-commerce and fintech innovations will drive consumer spending, enhance productivity and reduce economic inefficiencies.

Manufacturing and Industrialization

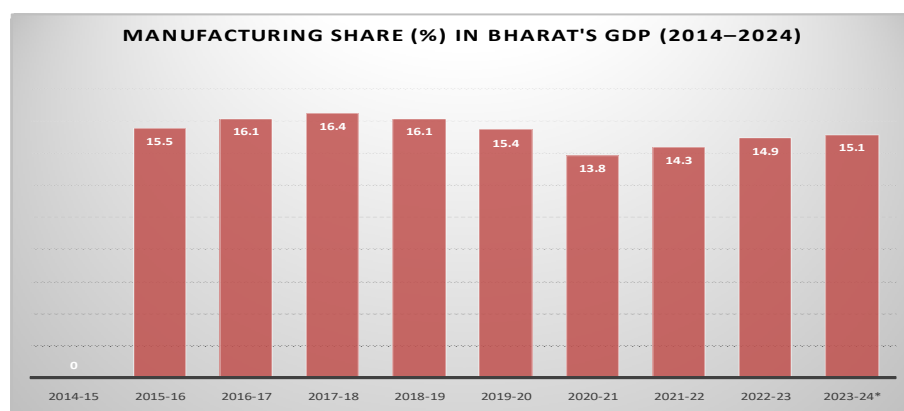
Bharat's manufacturing share in GDP was 16.5% in 2014, reflecting stagnation compared to global hubs like China. The government launched

Make in Bharat in 2014 to address structural challenges and foster a robust manufacturing ecosystem, aiming to boost the sector’s contribution to GDP and drive economic growth.

Between 2014 and 2018, the manufacturing share rose modestly to **17.5%**, driven by efforts to attract investors to improve ease of doing business and implement production-linked incentives (PLI). However, growth slowed between 2018 and 2020 due to external factors such as global trade uncertainties, sluggish domestic demand and disruptions caused by the COVID-19 pandemic. The sector’s contribution dipped to **16.9%** in 2020, underscoring vulnerabilities in supply chains and production processes.

Post-pandemic recovery, supported by strong policy measures, began to show results by 2022, with the manufacturing share climbing to **18.3%**. Key drivers included expanded infrastructure projects, increased domestic and export demand and the adoption of advanced manufacturing technologies. The rising emphasis on sectors like electronics, pharmaceuticals and electric vehicles, coupled with the **Make in Bharat** and **Atma-nirbhar Bharat** (Self-Reliant Bharat) campaigns, positioned the manufacturing sector for further growth.

By 2024, the manufacturing share is projected to reach approximately **15.5% of GDP**, reflecting renewed focus on industrial corridors, enhanced export competitiveness and the integration of sustainability into production processes. This upward trend aligns with Bharat’s ambition to position itself as a global manufacturing hub and achieve a **25% GDP contribution from manufacturing** by 2047, driven by policy support, innovation and a young workforce.



(Source: - MOSPI)

Bharat's manufacturing and industrialization strategy is pivotal to its economic transformation, aiming to increase the sector's contribution to GDP from ~16% to 25% by 2047.

Infrastructure Development and Connectivity

Infrastructure projects like the **Delhi-Mumbai Industrial Corridor (DMIC)** and **Dedicated Freight Corridors (DFCs)** have enhanced connectivity, reduced logistics costs and improved supply chain efficiency.

Massive investments in infrastructure will play a pivotal role in Bharat's GDP growth:

- **Bharatmala Pariyojana:** Enhanced Road connectivity will lower logistics costs and increase industrial efficiency.
- **Sagarmala Project:** Modernized ports and improved coastal trade will boost exports.
- **High-Speed Rail Projects:** Faster transportation systems will connect economic hubs, facilitating trade and commerce.
- **Gati Shakti National Master Plan:** By integrating multi-modal connectivity, Bharat aims to ensure seamless movement of goods and services across the country.
- **National Monetisation Pipeline (NMP)** has led to asset creation and reduced average turnaround time.

Green Energy Revolution

Bharat's leadership in renewable energy is expected to fuel long-term sustainable growth:

- Achieving 500 GW of non-fossil fuel capacity by 2030 under the **National Solar Mission** will reduce energy costs and dependence on imports.
- The **Green Hydrogen Policy** will make Bharat a major exporter of clean energy, boosting global trade relations and GDP.

Global Trade and Integration

Bharat's trade performance shows a mixed trajectory. While it excels as a net surplus country in sectors like IT, textiles and automobiles, driven by robust exports, it faces significant trade deficits in critical sectors such as electronics, energy, machinery, fertilizers and steel. Key deficit contributors

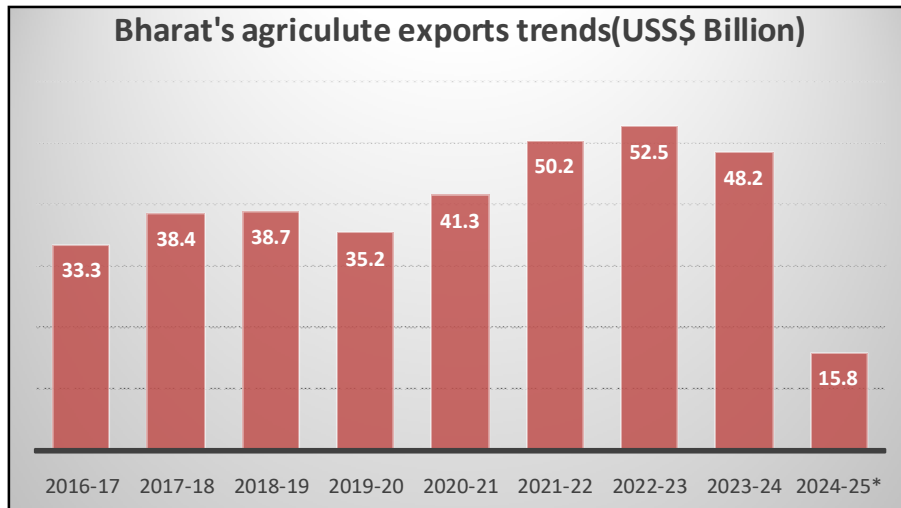
include China, the Middle East and Russia, underscoring Bharat's dependency on imports for technology, energy and raw materials. However, its surplus in IT and textiles highlights its global competitiveness. Addressing these **deficits through domestic manufacturing**, diversification and reducing import dependency will be pivotal for improving Bharat's trade balance and strengthening economic resilience.

Sustained Domestic Demand

Bharat's rising middle class, expected to dominate the population by 2047, will sustain domestic consumption. Urbanization, industrialisation, increased disposable income and improved access to financial services will boost spending on housing, education and healthcare.

Largest Agricultural Land – Our Big Strength

Bharat may not be the biggest country in land size, but it is number one in the area used for farming. With 159.6 million hectares of land for cultivation, Bharat holds the top spot in the world. Agriculture and allied sectors constitute the foundational pillar of the Bhartiya economy, engaging over 50% of the workforce and contributing approximately 18% to the country's Gross Value Added (GVA). Bharat is one of the largest agricultural product exporters in the world. we have done tremendously well in this sector over the years in the year 2000 our total agricultural export was 6 billion dollars and In April-July 2024, the overall value of export of agricultural products stood at US\$ 15.76 billion. In 2023-24 the agricultural exports from Bharat stood at **US\$ 48.15 billion**. In 2022-23, the agricultural exports from Bharat stood at US\$ 52.50 billion. During 2021-22, the country recorded US\$ 50.2 billion in total agriculture exports with a 20% increase from US\$ 41.3 billion in 2020-21. Bharat's agriculture primarily exports Agri & allied products, marine products, plantation and textile & allied products. Agri & allied products exports were valued at US\$ 37.3 billion, recording a growth of 17% over 2020-21. If a focused approach is taken and Bharat's industry and start-ups are invited properly, there is a big chance that we can touch **\$100 billion** in the next 8-10 years.



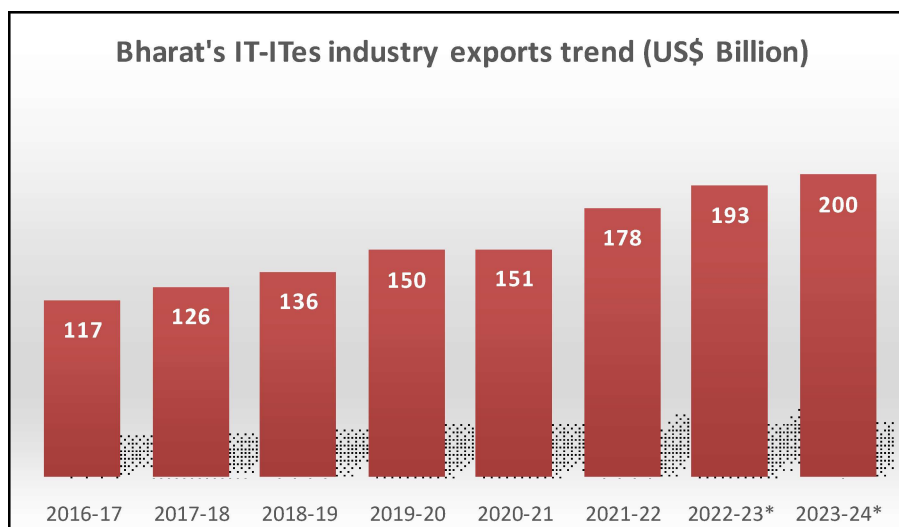
(Source – The Ministry of Commerce and Industry)

Bharat’s Wealth Generator

Bharat is one of the largest exporters of IT and BPM (Business Process Management) services, holding around 56% of the global outsourcing market. Bharat has done tremendously well in this sector in the last 8-10 years. According to a recent **Crisil Ratings** report, Bharat’s IT services sector is expected to grow by 5-7% in FY25. **ESC (Electronics and Computer Software Export Promotion Council)** reports that Bharat’s IT and software exports, including IT-enabled services (ITeS) and BPO (Business Process Outsourcing), grew by 12.2% to reach **\$193 billion** in FY23.

The **NASSCOM** estimates Bharat’s tech exports will hit **\$200 billion** in FY24. The **Reserve Bank of Bharat** also reported an 18.4% rise in software service exports to **\$185.5 billion** in FY23. BPO services made up over 84% of IT-enabled services exports in FY23.

The **BPM sector** saw growth of 8.7% in FY22, reaching **\$42.1 billion**, driven by automation in finance, HR, robotic process automation (RPA) and analytics. There is also a growing shift towards platform-based BPM solutions. If we continue like this and improve the environment for the IT sector, then we can hit 1 trillion in exports in the next 8-10 years.



(Source- Ministry of Electronics and Information Technology, NASSCOM)

Opportunities & Strategy for Bharat in Post Tariff War

The global tariff war, particularly between the US and China, has triggered a major shift in international trade dynamics. Many experts believe this disruption can significantly benefit the Bhartiya economy. Bharat must act swiftly to capitalize on these changes while protecting its vulnerable sectors.

Opportunities for Bharat

- **Supply Chain Realignment:** Global firms are seeking alternatives to China; Bharat can emerge as a preferred destination.
- **New Trade Partnerships:** Bharat can explore and strengthen trade ties with more reliable and emerging partners.
- **Leadership in Global South:** Bharat's active role in BRICS, BIMSTEC and other platforms provides a foundation to lead the Global South.
- **Global Influence:** This is the right moment to push for reforms in multilateral institutions like WTO and IMF to reflect current global realities.

Strategic Actions Required

1. **Swift Policy Response:** Bharat must respond quickly with policy-level reforms to attract investments and boost exports.
2. **Protect Affected Sectors:** Sectors hit by US tariffs should be sup-

- ported through subsidies, trade diversification and innovation incentives.
3. **Comprehensive Trade Strategy:** Bharat needs a clear roadmap to deal with global trade uncertainty and position itself as a stable trade partner.
 4. **Institutional Reforms:** Use this global shift to demand greater representation and reform in international economic institutions.
 5. **Global Realignment:** Bharat must position itself smartly in the emerging world order, balancing economic interests with geopolitical strategies.

Digital Transformation in Bharat: Revolutionizing Bharat's Growth Trajectory

Digital transformation has been one of the most defining elements of Bharat's economic and social progress over the past decade, laying the foundation for a robust digital economy that is integral to Bharat's vision for 2047. Leveraging advancements in technology and connectivity, Bharat has embarked on a journey to digitize governance, industries and daily life, ensuring inclusive growth and global competitiveness. The transformation is fuelled by initiatives like **Digital Bharat**, a flagship program launched in 2015 to create a digitally empowered society and knowledge economy.

1. Digital Bharat Initiative: Aims to bridge the digital divide and bring e-governance, internet access and digital infrastructure to every corner of the country. Key pillars of the initiative include:

- **Digital Infrastructure:** Bharat-Net, the world's largest rural broadband project, connects over 2.5 lakh gram panchayats with high-speed internet, ensuring that rural areas are integrated into the digital economy.
- **Governance and Services on Demand:** Online portals for services like Aadhaar (identity management), Digi-Locker (secure document storage) and e-Hospital (digital healthcare services) streamline public service delivery.
- **Universal Access to Mobile Connectivity:** Expanding mobile penetration to remote areas ensures that even the most underserved populations are included in Bharat's digital growth story.

2. E-Commerce and Digital Payments: Bharat's digital transformation has revolutionized the way businesses and consumers interact:

- **Rise of E-Commerce:** Platforms like Flipkart and Amazon Bharat, supported by increased internet penetration and digital payment solu-

tions, have driven consumption, especially in tier-2 and tier-3 cities.

- **Digital Payments Revolution:** Unified Payments Interface (UPI) has made Bharat a global leader in real-time digital transactions. In 2023 alone, UPI processed over 8 billion transactions per month, showcasing its adoption even in rural areas.
- Bharat has made impressive progress towards innovation in digital payments. Reserve Bank of Bharat has launched **Central Bank Digital Currency** to meet the public's need for digital currencies, and eliminate geographical barriers which restricted physical movement of cash.

3. Empowering Entrepreneurial eco-system through Start-ups and Innovation: Bharat's tech-driven entrepreneurial ecosystem has thrived in the digital era:

- **Startup Bharat:** This initiative has fostered innovation, resulting in over 100 unicorns (startups valued at \$1 billion or more) by 2023.
- **Technological Advancements:** Innovations in AI, machine learning, block chain, and IoT are transforming industries like healthcare, agriculture and logistics.

4. Industry 4.0 and Smart Manufacturing: Digital transformation has integrated **Industry 4.0 technologies** into Bharat's manufacturing sector:

- The adoption of automation, robotics and AI has improved production efficiency and reduced costs.
- Smart factories and digital supply chains enable Bhartiya manufacturers to compete globally.

5. Digital Literacy and Inclusion: Ensuring that citizens are equipped to participate in the digital economy is a priority:

- **Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA)** aims to make over 60 million rural households digitally literate.
- Initiatives like e-Shram provide digital platforms for unorganized workers to access social security benefits.

6. 5G and Future Technologies: Bharat's rollout of 5G technology is set to revolutionize connectivity and open avenues for advancements in:

- Smart cities, autonomous vehicles and telemedicine.
- Enhanced agricultural productivity through precision farming and IoT-based solutions.

Global Integration and Bharat's Comparison with Largest Economies

Bharat's journey toward becoming one of the largest economies in the world has been deeply influenced by its strategic integration into the global economy. From reforms in 1991 to becoming a hub for technology and services, Bharat has steadily climbed the economic ladder. By 2024, Bharat is projected to be the 5th largest economy in terms of GDP and 3rd largest in terms of purchasing power parity competing closely with Germany and Japan while striving to reduce the gap with global giants like the United States and China.

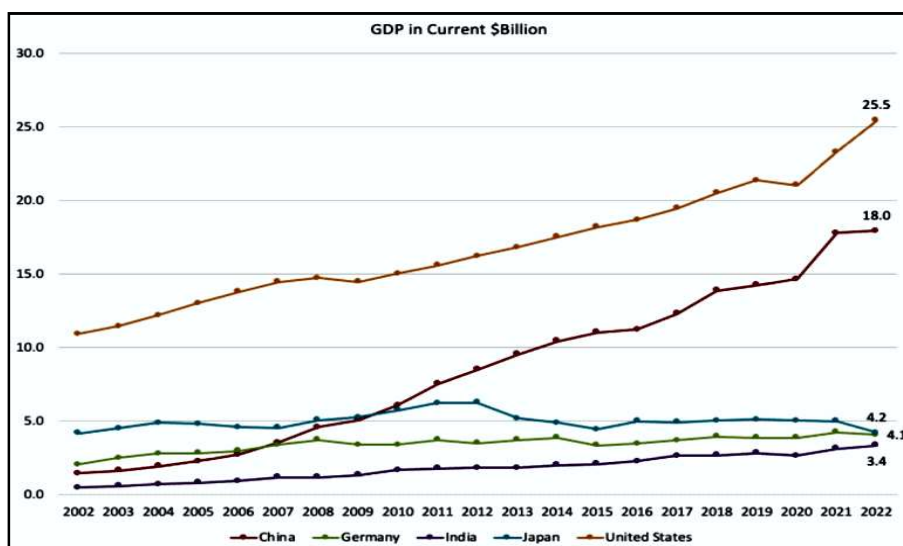


Figure: GDP in billion current dollars from 2002 to 2022: USA, China, Japan, Germany and Bharat

Source: *Author's construction using data from WDI, World Bank.*

Bharat's global integration highlights record exports of \$447 billion in 2023, driven by electronics, pharmaceuticals and IT services. Initiatives like Make in Bharat and PLI schemes boost manufacturing and renewables. Strategic FTAs and sustainability targets position Bharat as a key global economic player.

Bharat's Comparison with the Advanced Nations

Bharat's remarkable economic ascent is best appreciated when compared to the world's largest economies. As of 2024, Bharat stands as the **5th largest economy**, trailing behind the United States, China, Japan and Germany. However, its consistent growth trajectory, bolstered by structural reforms and policy initiatives, positions Bharat to bridge this gap in the coming decades.

United States and Bharat

The United States remains the largest global economy, with a projected GDP of **\$30 trillion in 2024**, nearly eight times that of Bharat's **\$3.84 trillion**. The U.S. economy benefits from a mature infrastructure, diversified industries, and high consumer spending, with sectors like technology, finance and healthcare dominating its GDP. In contrast, Bharat, while smaller in size, outpaces the U.S. in growth rates. Bharat's **6.3% projected growth rate for 2024** far exceeds the **1.8%** growth expected for the U.S., highlighting Bharat's potential to gradually close the gap by leveraging its demographic dividend, digital transformation and manufacturing initiatives.

China and Bharat

China, with a GDP of **\$20 trillion in 2025**, is the second-largest economy and a major competitor in global trade and manufacturing. While China's growth has slowed to around **4.5%** due to domestic challenges and global trade tensions, Bharat's growth remains robust at over **6% annually**. Bharat's **Make in Bharat** initiative aims to emulate China's success in becoming a global manufacturing hub, particularly in sectors like electronics, semiconductors and electric vehicles. Additionally, Bharat's democratic political system, English-speaking workforce and commitment to sustainability provide long-term advantages over China in attracting foreign investment.

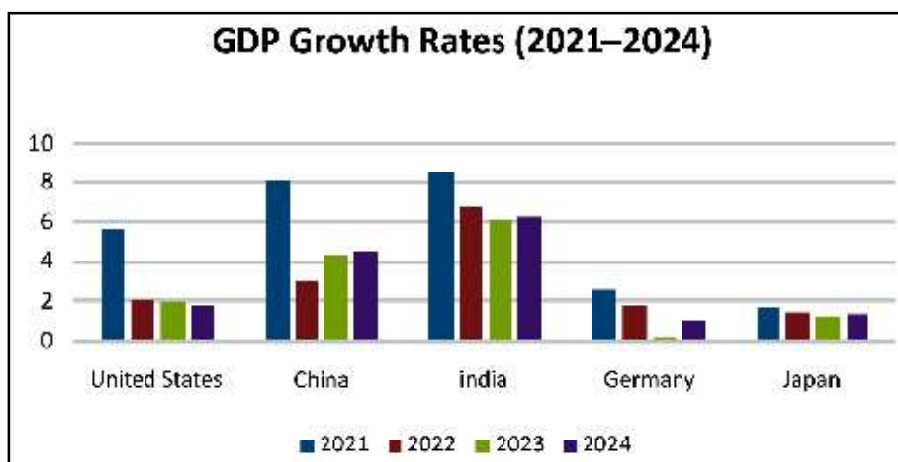
Germany, Japan and Bharat

Germany and Japan, with projected GDPs of **\$4.34 trillion** and **\$5.03 trillion** respectively in 2024, represent mature, export-driven economies. Both countries are experiencing slower growth rates—**1% for Germany** and **1.3% for Japan**—compared to Bharat's **6.3%**. Bharat's young workforce, expansive domestic market, and focus on infrastructure development give it a competitive edge over these aging economies. Furthermore,

Bharat's emphasis on green energy and digital infrastructure positions it to diversify its economy, making it more resilient and sustainable.

Global Integration: Growth Opportunities

The ongoing efforts to negotiate Free Trade Agreements (FTAs) with major partners such as the European Union and the United Kingdom provide Bharat's access to markets that are vital for its export-led growth. In contrast, Germany and Japan's export-oriented models are heavily reliant on stable global demand, which is increasingly uncertain due to geopolitical shifts.



(Source:- IMF)

The above chart highlights the disparity in growth trajectories among these nations, showcasing Bharat as the fastest-growing economy during this period. In 2021, all economies experienced a recovery from the COVID-19 pandemic, with Bharat achieving a high growth rate of approximately 8.7%, driven by robust domestic demand and government stimulus. China also rebounded strongly with 8.1% growth, though subsequent years show a significant slowdown, reflecting challenges such as demographic constraints and trade tensions.

Bharat maintains consistently high growth rates through 2022–2024, averaging over 6%, due to its expanding domestic market, infrastructure development and industrial policies like Make in Bharat. In contrast, the United States, Germany and Japan display modest growth rates, averaging between 1% and 2%, reflective of their mature economies and post-pandemic stabilization. Germany's growth slows notably in 2023, affected by energy crises

and reduced industrial output, while Japan's steady growth reflects its reliance on innovation and exports. This chart underscores Bharat's economic resilience and emerging role as a global growth leader, contrasting the slower growth trajectories of developed economies.

Rebuilding Economic Sovereignty – Reflections on Trump's Liberation Day Tariffs

The Liberation Day Tariffs offer a strategic opening for nations to reclaim their economic autonomy by raising import duties and distancing themselves from the burdens of unchecked globalisation. This includes the dismantling of the current free trade and investment regime, along with the stifling obligations embedded in the Multilateral Trade Agreements (MTAs) under the WTO—regimes that have constrained national policy space since the 1990s and severely compromised economic sovereignty.

Without such an initiative, surpassing bound tariff rates and bypassing WTO-imposed restrictions would have remained an unachievable dream. Individually, it was virtually impossible to dismantle the WTO's binding commitments, enforced since 1995. With this shift, we now have a realistic opportunity to reassert our **pre-reform and pre-WTO era sovereignty** over economic decisions.

While there may be some short-term challenges—such as reciprocal tariffs by the US and a potentially volatile economic environment—these are manageable and may not even materialise to a significant extent.

The so-called free trade and investment regime, masquerading under the banner of globalisation, has deeply distorted the global economic landscape. As a result, **60% of global manufacturing is now concentrated in just four countries**, with China alone commanding a massive **28.8% share**—a shocking imbalance among 200+ nations.

Bharat, in particular, has borne the brunt of this inequity. Imposed through Euro-American policies of the late 80s and 90s—namely the Structural Adjustment Programme and WTO-led trade obligations—our merchandise trade deficit has skyrocketed from **\$1.56 billion in 1991–92 to \$288 billion**, while the **rupee has depreciated from Rs. 18 to Rs. 87 per dollar**. Moreover, **three-fourths of Bharat's manufacturing sector is now owned by foreign MNCs**, stripping the country of indigenous industrial control and economic self-determination.

New Global Economic Order: Deglobalisation, as heralded by these tariffs, is not a step backward—it is a path toward balance and fairness. It will allow countries to reclaim equitable participation in a **new global economic order** across **industry, trade, agriculture and services**.

It is both insightful and timely, accurately diagnosing the long-standing distortions inflicted by globalisation, free trade absolutism, and exploitative multilateral agreements. This reveals how the WTO regime has not only undermined economic independence but also eroded the cultural, industrial, and agricultural integrity of nations like Bharat.

Opportunity of Fairness: While the Liberation Day Tariffs may seem geopolitically disruptive, they present a rare **opportunity for reset**—to realign global trade and commerce with principles of fairness, sovereignty, and sustainability. For Bharat, this marks a moment of liberation from decades of externally imposed liberalisation, which has crippled indigenous enterprise and entrenched dependence on foreign capital.

The consequences are clear: ballooning trade deficits, foreign domination of key industries and the erosion of national economic identity. These are not just numbers—they represent **lost livelihoods, weakened local economies and diminished innovation**.

In this light, **deglocalisation is not regressive—it is restorative**. It heralds a new global economic model rooted in:

- **Equity among nations**
- **Mutual respect for sovereignty**
- **Protection of cultural and industrial identity**
- **Balanced trade and sustainable development**
- **Peaceful and cooperative coexistence**

It is also time to **critically examine the cultural and moral consequences** of hyper-globalisation, which glorified unrestrained competition, consumerism, arms races and environmental degradation—all under the misleading guise of “progress.” The Western-led model—particularly that of the US—has left the world economically skewed, culturally diluted, and environmentally compromised.

Bharat must now lead—not through mimicry, but through **a resurgence of its own civilisational model**. The time has come for a **Bharatiya alternative** rooted in *Swadeshi*, decentralisation, self-reliance and spiritually

grounded economics.

There is need and time to support strongly the call to rebuild Bharat's economic foundation with focus on:

- **Restoration of SSI (Small Scale Industry) reservations**
- **Revision of patent laws to protect indigenous innovation**
- **Phased indigenisation of strategic sectors**
- **Reinstatement of protective tariffs**
- **Strengthening the domestic tax base through rational indirect taxation**

Let this mark the dawn of a new economic era—one **not dictated by Western narratives**, but by the timeless wisdom and ethos of Bharat. A just, inclusive and culturally rooted Bharatiya global order is not only **possible**, but **urgently necessary** for the well-being of the world.

Sustainability and Green Economy

The different studies and reports suggest that Green innovation opportunities are time-bound and can only be seized through changes in policy, without which the windows may close. Countries like China and Brazil leveraged government policies, such as China's renewable energy law and solar subsidies, to develop green industries. For economic gains from new technologies, developing countries require firm capabilities, including technical skills, supportive policies, regulations, and infrastructure. However, these nations need an enabling international economy with trade rules aligned with the Paris Agreement. Without this, green sectors in developing economies will struggle to grow, hindering cleaner production and economic progress in alignment with global climate goals.

Sustainability and the green economy are central to Bharat's vision of becoming a global economic leader by 2047. With a commitment to achieving **net zero emissions by 2070**, Bharat has launched ambitious initiatives such as the **National Solar Mission**, targeting 500 GW of renewable energy capacity by 2030. This includes significant investments in solar, wind and hydropower projects, making Bharat one of the largest producers of renewable energy globally. Furthermore, the **Green Hydrogen Mission** positions Bharat as a global hub for producing and exporting clean hydrogen, a key resource for decarbonizing energy-intensive industries like steel and cement.

Bharat's focus on sustainability extends to promoting circular economy practices, such as recycling and waste management and transitioning to en-

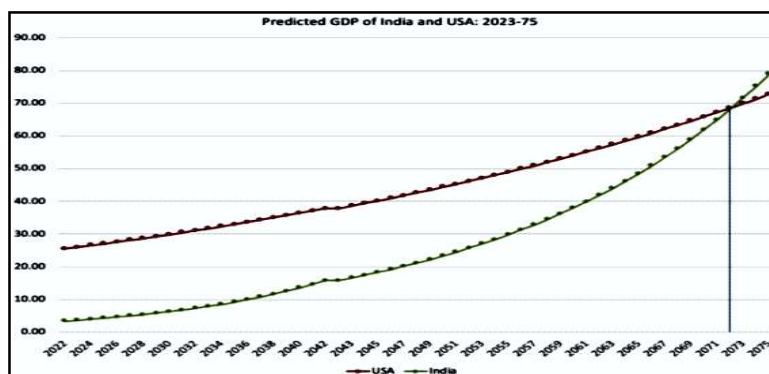
ergy-efficient infrastructure through green buildings and smart cities. Programs like **Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME)** aim to reduce fossil fuel dependency and promote electric mobility, with a target to electrify 30% of vehicles by 2030. Additionally, afforestation projects under the **National Afforestation Programme** and conservation efforts for water resources through **Jal Shakti Abhiyan** highlight Bharat’s holistic approach to sustainable development.

Bharat is also leveraging international collaborations to finance green initiatives, securing funding through mechanisms like green bonds and partnerships with other nations and the International Solar Alliance (ISA). By integrating sustainability into its growth strategy, Bharat not only addresses environmental challenges but also creates new economic opportunities in renewable energy, green manufacturing and eco-tourism. This transition to a green economy underpins Bharat’s ambition to lead by example, ensuring long-term prosperity and environmental resilience.

Innovative Ideas for Making Bharat a Prosperous and Great Economy by 2047

To achieve the vision of Bharat as a developed and self-reliant economy by 2047, a combination of innovative, inclusive and forward-thinking strategies is necessary.

Bharat has grown at the annual average rate of 7.0 percent during the first decade (2002- 2012) and 5.8 per cent during the second decade (2012-2022). A decline in the average growth rate during the second decade has been principally on account of the COVID-19 shock.



Source: Author’s (Arvind Panagariya) construction using data from WDI, World Bank.
Figure Predicted GDP of Bharat and USA: 2023-75

Figure plots the paths of predicted GDPs of Bharat and the USA during 2023-2075 if Bharat continues to grow at the current rate and USA at the current growth rate of 2 per cent. The growth trajectory in figure 2 suggests that at the assumed growth rates, Bharat will catch up with the USA in 2072. Therefore, Bharat requires a **double-digit growth rate** (11 percent), a higher growth trajectory to converge with advanced nations by 2047.

1. Strengthen Local Manufacturing with Global Competitiveness (Based on Decentralization)

Bharat must leverage the **Make in Bharat and Production-Linked Incentive (PLI) schemes** to transform into a global manufacturing hub. By adopting cluster-based development as similar to China's industrial zones, Bharat can integrate MSMEs into global supply chains and make them competitive in exports. For instance:

- **Develop electronics clusters** to produce semiconductors and smartphones locally, reducing import dependence.
- **Promote green manufacturing**, including solar panels, wind turbines and electric vehicles, positioning Bharat as a leader in sustainable technologies.
- Promote **domestic manufacturing of pharmaceutical drugs** including bulk drugs and medical devices. Promotion of Bulk Drug Parks, Strengthening of Pharmaceutical Industry (SPI) and "Promotion of Medical Devices Parks" aim towards indigenous manufacturing of drugs.
- Investment is not just about capital flows. It is about human potential, environmental stewardship and the enduring pursuit of a more equitable and sustainable world. Therefore, **Government should align environment, skills, science, technology and innovation into industrial policies.**
- Promote **Atma-nirbhar (self-sufficiency) Bharat** through Local Innovations: Bharat needs to build their **own indigenous production** units in order to increase manufacturing to GDP ratio.
 - Developing local industries will reduce dependence on foreign nations and lower vulnerabilities of Bhartiya firms. Increase in economies of scale due to massive production of indigenous goods will improve competitiveness of Bhartiya products in global markets. Bharat being one of the diverse market offers immense po-

tential in both size and choice enabling indigenous manufacturers to capture domestic and international markets effectively.

- ❑ Encourage local innovation and start-ups by Creating Innovation Hubs in every state, offering funding, incubation and mentorship.
- ❑ Collaborate with global tech leaders to build cutting-edge technologies in order to match dynamism in the global economy.
- ❑ **Revitalize MSMEs and Crafts:** Provide micro-credit schemes for MSMEs to adopt advanced machinery and green manufacturing techniques. Launch an Artisan Digital Market where rural craftspeople can sell their goods globally.
- ❑ To promote domestic production units' government should Invest in infrastructure, simplify regulations, enhance skill development, incentivize local manufacturing, promote R&D and support exports to boost Bharat's indigenous production and competitiveness.

2. Zero Job – Full Employment Model for Bharat

The vision for the Great Bharat cannot be based on providing mere survival jobs to its youth. Rather, it is proposed that the policy should aim at **'Zero Job –Full Employment 'model for Bharat**, where full potential of creative energy of the Youth can be channelized so as to make them propellant of economic growth and development. The irony of post-colonial regime in Bharat has been that it turned Bharatiye Youth into job seekers whereas in the past the economic model was based on the enterprising spirit of the young Baharat. There is a well-known saying in '**Bharat Uttam Kheti, Madhamvyapar, Niman Chakari**'. This literally meant that the best employment is Agriculture, the medium one is trading and the lowest is to be in service or job. The whole paradigm shifted in British times when they destroyed our Agriculture and Manufacturing sectors and encouraged Service sector as they wanted cheap labour from Bharat. The education system developed by them was also suited to this model and destroyed the creative and enterprising spirit of Bharat.

The trusteeship model given by Dattopant Thengadi and MK Gandhi also talked about the same that production should not be based on owner and employee model but on trusteeship model where each participant

in the productive activity is owner of the enterprise. This approach only can lead to full expression of the creative and productive powers of our youth, there is a profound need to review our thirst on jobs creation. Rather it should be employment promotion based on entrepreneurship and trusteeship, which can lead to '**Zero Jobs - Full Employment**'. The way ahead for this has to be based on **Decentralization (Vikendriyakaran)** approach in governance and planning; promotion of **Local, Swadeshi and Swawlamban (Self-Reliance)** in production, economic and employment policies; Cooperative and Trusteeship model in production; Skilling for Entrepreneurship, and the Sustainable and Giving Back to Nature should be the development model. The initiative for this mission of involvement or inclusiveness should be taken at the non –government level, which can be more effective than the government level, as mentioned by many great leaders. This can be done by increasing the awareness level, which is the decisive factor of any policy.

3. Enhanced Digitization of Bhartiya Economy

- **Expand digital infrastructure and promote digital literacy to bridge digital divide and ensure financial inclusion.**
 - Expand **Bhartiya net** to connect all villages with high-speed internet and provide e-commerce platforms for farmers and artisans to sell directly to consumers, bypassing intermediaries.
 - Use **blockchain for transparent supply chain management in agriculture and commodities markets**, ensuring fair prices for farmers.
- **Foster Industry 4.0 Adoption** providing incentives for businesses to adopt AI, IoT and robotics. Establish innovation hubs and centers of excellence to promote research in emerging technologies.
- **Enhance data protection frameworks to build trust in digital platforms.** RBI Ombudsman Scheme for Digital Transactions, 2019 facilitates the satisfaction or settlement of complaints regarding digital transactions.
- **Collaborate internationally** to share knowledge and best practices for **digital governance**. Participate actively in **global digital trade agreements** to boost exports of digital services and products. Align digital policies with climate and sustainability goals.
- **Green Digital Transformation:**

- ❑ Encourage the use of renewable energy for data centers and digital infrastructure.
- ❑ Implement e-waste management regulations and promote circular economy practices in the technology sector.
- ❑ Mandate energy efficiency in digital infrastructure and invest in **low-emission data centres**. Introduce regulations to limit the environmental footprint of digital technologies.

4. Combat Climate Change to Promote Green Growth:

Accelerate Renewable Energy Transition: Bharat has the opportunity to lead the global green economy by:

- Establishing **Green Energy Industrial Zones** to attract investments in solar, wind, and green hydrogen production.
- Exporting green hydrogen to energy-deficient countries, generating foreign exchange and reducing carbon emissions globally.
- Invest in more complex and greener sectors through policy instruments such as clusters, smart specialization initiatives and demonstration projects.
- Stimulate green innovation and green finance by **establishing green banks** in Bharat. Collaborate internationally and seek a multilateral fund to stimulate green innovations.
- **Making Bhartiya market conducive to adopt economic instruments such as Carbon Pricing and Subsidy.**
 - ❑ Implement a **gradual carbon pricing mechanism** to incentivize low-carbon technologies.
 - ❑ Create awareness about high and low carbon content goods.
 - ❑ Standardize emission metrics across industries for transparency and accountability.
 - ❑ Phase out fossil fuel subsidies and redirect funds to green energy projects. Encourage decarbonisation in energy-intensive industries through **public-private partnerships**, green procurement policies, and subsidies for low-emission technologies.
- **Strengthen Governance and Research for inclusive and just transition:**
 - ❑ Formulate a **National Green Strategy** integrating the 2047 and 2070 goals, aligning policy with the SDGs.

- ❑ Increase funding for R&D in green technologies, focusing on breakthrough areas like carbon capture and hydrogen
- ❑ **Invest in Climate-Resilient Agriculture** to ensure food security and protect farmers. Promote climate- resilient crops like millets, aligning with the **International Year of Millets 2023** initiative.

5. Invest on Frontier Technologies and Enhance Creative Economy

Bharat's creative economy holds immense potential to drive global leadership by focusing on sustainability, inclusivity and innovation while addressing structural challenges. To position itself as a dynamic global player by 2047, Bharat must promote capacity building through a National Creative Economy Policy that integrates culture, IT and education and by establishing SEZs and regional creative hubs for skill development and innovation. Participation in international platforms will help showcase Bharat's talent and open trade opportunities for creative services. Strengthening intellectual property laws and incentivizing startups in sectors like AI-driven design is crucial. Additionally, raising R&D expenditure to 2% of GDP by 2030 and 3% by 2047, supported by a National Research Fund, will foster multidisciplinary research in key areas such as AI, clean energy, healthcare and indigenous defense technologies. Regional innovation hubs, Technology Transfer Offices and partnerships with global institutions will enhance Bharat's research ecosystem. Investment in frontier technologies like quantum computing, green tech, and space, alongside modernization of traditional sectors like agriculture and textiles, will ensure balanced growth. A Future Skills Mission must prepare youth for careers in AI, robotics, biotechnology and smart agriculture. By building strong vocational training under Skill Bharat, Bharat can harness frontier technologies effectively, ensuring inclusive growth and reducing global inequalities.

6. Quality Education to Strengthen Bharat's Soft Power

To strengthen Bharat's soft power and advance as a global power by 2047, a focus on quality education and youth empowerment is essential. Establishing Centers of Excellence in emerging fields, collaborating with global institutions and offering scholarships with return incentives can reverse brain

drain. Policies such as tax benefits, competitive salaries, and research funding should support returning talent to lead innovation. A comprehensive youth employment guarantee program, GROW (Guaranteed Resources for Work), under the YESSS (Yuva Ekatma Suraksha evam Samaveshi Sujeevika Samadhan) strategy, should ensure every youth under a certain age has access to employment, skill development, entrepreneurship support, military or community service, or further education within six months of completing studies. Backed by a Youth Budget, this initiative can drive inclusive and sustainable growth, reduce migration, and propel Bharat toward its \$40 trillion economy vision with full employment.

7. Trade Policy Reforms to Improve Bharat's Trade Balance

- **Trade Infrastructure Modernization:** Bharat must invest in **modernizing ports, logistics and supply chains** to reduce trade costs. Smart trade zones and digital platforms should be developed to streamline export-import processes, improving efficiency for businesses of all sizes.
- **Export Diversification and Innovation:** Bharat should shift from **low-value exports to high-value products** like electronics, machinery, and pharmaceuticals. Encouraging foreign direct investment (FDI) in advanced manufacturing and promoting R&D collaboration between industries and academia will strengthen Bharat's global value chain integration.
- **Green and Inclusive Trade:** Bharat should focus on **sustainable trade practices**, aligning policies with global environmental goals. **Incentivizing green exports** and promoting renewable energy technologies will enhance competitiveness while addressing climate commitments. An initiative should be taken to provide information on products with lower carbon footprints. Trade rules should permit developing countries to protect nascent green industries through tariffs, subsidies and public procurement.
- **Strengthening Trade Partnerships:** Deepening trade relations with the United States, Europe and ASEAN, while fostering South-South cooperation, will create resilient trade networks, promoting regional trade. This will further promote greater cooperation through interna-

tional trade.

- **Enhance Climate Resilience in Trade** by aligning trade policies with environmental goals to reduce carbon leakage. International cooperation on green technologies and climate action will promote green exports.
- **By 2047, Bharat must be a central player in global trade:**
 - Use the **Bharat-Middle East-Europe Economic Corridor (IMEC)** to position Bharat as a bridge between Asia and Europe.
 - Negotiate new **bilateral and multilateral trade agreements** to enhance export competitiveness.
 - Introduce **hyper loop projects** to connect major economic hubs for faster freight movement.
 - **Develop Next-Generation Infrastructure** with advanced technologies to boost industrialization.

8. Inclusivity Drives Resilient and Sustainable Growth:

- **Encourage Urban-Rural Integration by developing smart villages to reduce rural-to-urban migration.**
 - Equip villages with urban amenities like healthcare, education, and digital services while retaining their cultural identity.
 - Promote agro-industrial parks where raw produce is processed locally, increasing rural incomes.
- **Increase female labour force participation:** Special emphasis should be taken to increase Female labour force participation rate and bridging structural unemployment gap. Flexible work hours along with increase in crèche facilities should be provided. Women, working in the night shift should be protected by adequate safety measures.

9. Transparency accountability in governance

- **Strong administrative reforms are essential for effective execution of policy reforms in Bharat.** The colonial legacy of All Bharat services should be scrapped to evolve new kind of administrative set on the basis of expertise in the new Bharat. Corruption, inefficiency and delays in systems like NCLT and IBC hinder ease of doing business and economic growth.

- Key measures include modernizing laws, expanding e-governance, streamlining bureaucracy and linking performance-based accountability in governance. **Digitalization of courts**, enhancing tribunal capacity, and promoting alternative dispute resolution can reduce delays. Empowering regulatory institutions and ensuring citizen-centric governance are vital for transparency. Learning from global models like Singapore’s streamlined systems and Scandinavian transparency can help Bharat build a responsive governance framework, fostering economic growth and global competitiveness.
- **Labor Market-Smoothing the School-to-Work Transition, Job Mobility and Structural Rigidities:** Labor market interventions include: improvements to information about the labor market, reduction of the costs of job search for both workers and employers, helping youth to overcome obstacles to job taking; and removing discriminatory barriers to employment. The objective is to reduce the period of search and the duration of unemployment spells, thereby facilitating a better match. School-to-work transition interventions aim to shorten this job search period by creating platforms such as employment exchanges, creating internship and apprenticeship opportunities etc.

10. Marching towards Global Leader

Bharat’s engagement in 2047 is characterized by robust diplomatic relations and strategic partnerships, promoting international cooperation, peace, and sustainable development. As a leading voice in global forums such as the United Nations and G20, Bharat advocates for multilateralism, climate action, and equitable global governance. Humanitarian initiatives, including disaster relief and development aid, underscore Bharat’s commitment to fostering global solidarity and addressing shared challenges collectively. The world is one family, or “Vasudhaiva Kutumbakam,” is a key idea in Bharat philosophy that has come to define the nation’s perspective on the world. This philosophy’s foundation is the conviction that all living things on Earth are interrelated and that each person’s well-being is inextricably linked to everyone else. The most recent illustration of this is the fact that our nation supplied 101 countries with 3012.465 units of Covid-19 vaccination. The efforts towards enhancing global outreach, promoting Swadeshi approach towards international diplomacy identifying underlying challenges and ways to overcome should be strengthened.

Strategies Bharat should adopt to Boost its Economy by 2047 (towards Prosperous and Great Economy)

Bharat's vision of becoming a global economic powerhouse by 2047 requires learning and adapting strategies that have driven the success of the world's largest economies. While Bharat has unique strengths, emulating proven policies and approaches from countries like the United States, China, Germany and Japan can significantly enhance its growth trajectory.

Below are key lessons and examples Bharat can leverage: -

- **Technological innovation is the backbone of sustained economic growth**, as demonstrated by the **United States**. The U.S. invests heavily in R&D, accounting for **3.5% of GDP** in 2022, driving advancements in IT, pharmaceuticals, and aerospace. Companies like Google, Apple, and Tesla are global leaders due to their focus on innovation. Bharat should increase public and private investments in R&D, currently at only **0.7% of GDP**, and create ecosystems to support startups and innovation. Initiatives like **Startup Bharat** and promoting AI, blockchain and quantum computing will strengthen Bharat's position in the global tech space.
- **Efficient infrastructure** reduces logistics costs and boosts industrial competitiveness, as seen in **China and Germany**. China's investments in high-speed rail networks and ports under the **Belt and Road Initiative (BRI)** connect domestic industries to global markets. Similarly, Germany's superior roadways and freight corridors enhance supply chain efficiency. Bharat must prioritize completing projects like Bharatmala, Sagarmala, and Dedicated Freight Corridors to integrate its economy and improve global connectivity. Developing urban infrastructure under Smart Cities Mission will make cities more efficient and livable.
- **Trade openness and integration into global markets** drive economic resilience and growth, as evidenced by **Germany and China**. Germany's trade-to-GDP ratio exceeds **70%**, reflecting its success as an export-oriented economy, particularly in machinery and automobiles. China's dominance in trade stems from its extensive Free Trade Agreements (FTAs) and competitive pricing. Bharat's current trade-to-GDP ratio of **43%** indicates room for improvement. Expanding export markets through FTAs, such as ongoing negotiations with the EU & UK, and strengthening logistics will enhance Bharat's export competitiveness.

- **A focus on renewable energy** ensures long-term growth and reduces dependence on imports, as demonstrated by **Germany**. Germany leads in renewable energy adoption, with **40% of its energy needs met by wind and solar power**. Its Energy Transition policy that has become a global model for sustainable energy. Bharat's ambitious target of **500 GW of renewable energy capacity by 2030** aligns with global trends. Accelerating investments in solar, wind, and green hydrogen under policies like the **National Solar Mission** will bolster energy independence and reduce import bills.
- Economic prosperity must benefit all sections of society, as exemplified by Scandinavian countries like **Norway and Sweden**. Norway combines high per capita income with extensive welfare programs, ensuring a high standard of living and reducing inequality. Bharat must ensure that rural and marginalized populations are integrated into the growth process. Expanding financial inclusion through Jan Dhan Yojana and welfare delivery via Direct Benefit Transfers (DBT) will support inclusive development.
- **Maintaining fiscal discipline** while ensuring high public investments is key to stability, as demonstrated by **Germany**. Germany's debt-to-GDP ratio is maintained at a sustainable level, while public investment in infrastructure and R&D remains high. Bharat must continue its focus on fiscal consolidation while prioritizing investments in health, education, and infrastructure. Programs like **the National Infrastructure Pipeline (NIP)** should balance fiscal prudence with growth needs.

The Bhartiya Way: Harmonizing Tradition, Economy, and Well-Being.

Economic Wisdom in Ancient Bharat: Some Insights from Kautilya and other inscripts

It is right time to re-modelling of developmental strategies in the spirit of Bhartiya model of development. Bharat has a long history of developing by its own way to become the wealthiest nation of the world.

In ancient Bharat, the discipline encompassing what we now call economics was known by various names, including **arthashastra, varta** and **upaveda**. Kautilya identified **arthashastra** as one of the four *vidyas* (branches of knowledge), stating:

आन्वीक्षिकी त्रयी वार्ता दंडनीतिश्च इति विद्याः”

Among these, वार्ता (Varta) closely aligns with the modern concept of economics. Due to its significance, it was recognized as an *upaveda* and was specifically taught to children, particularly those from royal families. **Varta** covered various economic domains, including agriculture, trade, industry and banking.

पाशुपाल्यं कृषिः पण्यं वार्ता वार्ता तु जीवनम् ।
संपन्नो वार्तया साधु नावृत्तेर्भयमच्छति ॥

This verse emphasizes that activities such as **agriculture, dairy farming, trade, industry, money management (saving and lending) and distribution** were integral to economics, as they sustain human life and other living beings. Mastery of these fields ensured economic security. The concept of वार्ता encompassed **production, distribution, exchange and consumption**, which are fundamental aspects of economic theory.

The Mahabharata highlights the crucial role of economics in society:

‘वार्ता मूलोद्भयं लोकः तया वै धार्यते जगत् ।
तत् सर्वं वर्तते सम्यक् यदा रक्षति भूमिपः ॥’

This means that the world relies entirely on economics for sustenance, and prosperity prevails only under a well-governed state. This underscores the ancient belief in the interdependence of **good governance and a thriving economy** for societal welfare.

Kautilya’s Economic Philosophy vs. Modern Economics

A fundamental principle set by Kautilya differentiates his economic philosophy from modern economic theories. Contemporary definitions of economics—such as the **science of wealth, satisfaction of wants, monetary transactions and human behavior under scarcity**—fail to emphasize **balance in resource utilization and mental well-being**. Ancient Bhartiya economic thought, however, integrated these aspects.

For instance, the **Shrimad Bhagavata** states:

‘**Dhanam hi dharmakaphalam**’ (धनं हि धर्मकफलं)

Wealth is the outcome of a disciplined and righteous life.

Similarly, Chanakya's Neetidarpana says:

‘वित्तेनरक्ष्यतेधर्मः’

Wealth should be used to uphold righteousness.

This perspective contrasts with the modern principle of **profit maximization without ethical considerations**, which often disregards its impact on mental well-being.

Chanakya's **Nitisutra** further establishes the ethical foundation of wealth creation through the following principles:

Chanakya *Nitisutra* also lays down the **ethical principle** of wealth creation in the very first few sutras, which say as follows:

1. **“Sukhasya mulam dharmaha** (सुखस्य मूलम् धर्मः) - righteous living is the basic foundation for happiness.
2. **Dharmasya mulam arthah** (धर्मस्य मूलं अर्थः) - righteous living is supported by morally generated wealth
3. **Arthasya mulam rajyam** (अर्थस्य मूलं राज्यम्) - wealth can be generated in a properly ruled state
4. **Rajyasya mulam indriyajayah** (राज्यस्य मूलं इन्द्रियजयः) - a state can remain well-integrated only when there is *a control on senses and hence limitation on wants*.
5. **Indriyajayasya mulam vinayah** (इन्द्रियजयस्य मूलं विनयः) – self imposed discipline is the secret of the control over senses
6. **Vinayasya mulam vrudhohaseva** (विनयस्य मूलं वृद्धोपसेवा) – respect for the elders and the needy would provide the basis for disciplined living.

Thus, ancient Bhartiya economic thought emphasized ethical wealth creation, self-discipline and responsible governance, making it distinct from modern economic theories that focus primarily on material gain. Integrating these principles into Bharat's contemporary economic model could foster sustainable growth, social harmony and long-term prosperity.

Bharat should chart its own path of development by drawing from its cultural, ethical and spiritual traditions. The Bharatiya economic model must be **rooted in dharma, sustainability and family values**, ensuring prosperity that is both **material and moral**. The future of Bharat should not be a

replica of the West but an **ideal blend of tradition and modernity, ensuring holistic well-being for all.**

Bharat's economic development must be guided by its own indigenous models rather than relying on Western narratives. This book explores how Bharat can achieve sustainable and inclusive development by drawing from its traditional knowledge systems, including Kautilya's Arthashastra, Gandhian economics, J.K. Mehta's model, the Vakil-Brahmanand approach and classical texts like the Vedas, Upanishads, Thiruvalluvar's teachings, and Nitisutra. By analyzing historical evidence, including the work of Angus Maddison, who noted that Bharat had the highest share in global GDP for centuries, this paper advocates for an economic framework aligned with Bharat's civilizational ethos.

Bharat has a rich economic history that predates colonial influences and modern Western economic theories. The country was once the world's largest economy, contributing over 30% of the global GDP. However, the imposition of Western economic models led to a distortion of Bharat's natural economic trajectory. This study argues for an economic model rooted in Bharat's traditional wisdom, capable of fostering self-reliance, sustainability and holistic well-being.

Key Principles for a Future Bhartiya Economic Model

1. **Self-Reliance (Atmanirbhar Bharat):** Encouraging indigenous industries and reducing dependence on foreign capital.
2. **Sustainability and Environmental Harmony:** Inspired by Vedic and Gandhian principles, focusing on eco-friendly development.
3. **Decentralization:** Strengthening village economies as per Gandhi's vision.
4. **Swadeshi:** Emphasis on Bhartiya-made products, not looking towards foreign Direct Investment.
5. **Holistic Development:** Balancing material prosperity with ethical and spiritual well-being.
6. **Cultural and Knowledge-Driven Economy:** Leveraging Bharat's intellectual traditions and ancient sciences for economic progress.

Bharat's economic model should not be a mere replication of Western theories but a revival of its indigenous wisdom. The principles derived from Kautilya, Gandhi, J.K. Mehta, Vakil-Brahmanand, Thiruvalluvar and the Vedic-Upanishadic traditions offer a time-tested, sustainable and holistic frame-

work. By realigning with these values, Bharat can reclaim its historical position as a global economic leader while ensuring inclusive and ethical growth.

Conclusion

As Bharat journeys toward its centenary of independence in 2047, it is poised to transform into a prosperous economy, one that balances growth with sustainability, inclusion and innovation. Over the past decades, Bharat has demonstrated resilience and adaptability, emerging as the **5th largest economy** globally and positioning itself as a hub for manufacturing, technology and renewable energy. The foundation for this transformation lies in strategic initiatives like **Atmanirbhar Bharat**, which has emphasized self-reliance through investments in local manufacturing, infrastructure and digital transformation. Policies such as **Make in Bharat** and **Production-Linked Incentive (PLI) schemes** have revitalized industrial growth, enabling Bharat to integrate into global supply chains while fostering indigenous innovation. Simultaneously, Bharat has leveraged its demographic dividend, with programs like **Skill Bharat** preparing a workforce adept at meeting the demands of future industries like AI, robotics and green energy.

Initiatives like the **Digital Bharat Mission** have revolutionized governance and service delivery, bridging the urban-rural divide and empowering millions. Bharat's emphasis on renewable energy, with ambitious targets of 500 GW of non-fossil fuel capacity by 2030 and leadership in green hydrogen, aligns its economic goals with global sustainability imperatives. Meanwhile, the push for financial inclusion, sustainable agriculture and circular economy practices ensures that growth benefits all sections of society, reflecting a commitment to equity and resilience.

However, challenges remain. Bharat must address income inequality, infrastructure gaps and the need for greater investments in research and development (R&D). Bharat can adopt the best innovation, trade and sustainability practices while tailoring solutions to its unique strengths. A strategic focus on scaling MSMEs, fostering public-private partnerships and advancing digital and physical infrastructure will further accelerate its transformation. By embracing inclusivity and leveraging its cultural and technological strengths, Bharat can bridge the gap with the world's largest economies and redefine what it means to be a great economy.

Looking ahead, Bharat's vision for 2047 encompasses more than economic growth; it aspires to be a model of sustainable development, technological leadership, global collaboration and leader of human values. With its unique blend of youthful energy, cultural heritage, family values and forward-thinking policies and by aligning its developmental trajectory with the aspirations of its people, Bharat will not only achieve its goal of becoming a great economy but also emerge as a beacon of hope, innovation and inclusivity on the global stage, firmly reclaiming its rightful and natural place as one of the most prosperous and great nation.

Bharat's economic model should not be a mere replication of Western theories but a revival of its indigenous wisdom. The principles derived from Kautilya, Gandhi, J.K. Mehta, Vakil-Brahmanand, Thiruvalluvar and the Vedic-Upanishadic traditions offer a time-tested, sustainable and holistic framework. By realigning with these values, Bharat can reclaim its historical position as a global economic leader while ensuring inclusive and ethical growth.



Chapter 2

Samridh Bharat in 2047: Navigating the Demographic Shift

Introduction: Bharat's Demographic Crossroads and Vision 2047

Bharat stands at a significant demographic crossroads as the year 2047, which will mark the centenary of the country's independence creeps near. This milestone holds profound demographic implications for Bharat. The ongoing decline in the reproduction rate is a key barrier that limits the fulfilment of the goal of a fully developed or "Viksit" Bharat. This is a significant impediment that prevents the achievement of the target. Compared to the replacement level of 2.1 births per woman, the fertility rate in Bharat reached 2.0 births per woman in the year 2021-22. This revealed a considerable decline in comparison to the previous level. When viewed from the perspective of Vision 2047 Bharat, this demographic change presents both challenges and opportunities. Because of the altering landscape, there will be significant repercussions for the economic future of the nation, as well as for the role that the youth of the country will play in determining the road that lies ahead. The changing demography will have far-reaching consequences for the nation's economic future and the role of its youth in shaping the path forward.

Population Statistics and Demographic Dividend

Bharat, with a population of approximately 1.43 billion, is at a turning point. The country's fertility rate, now at 2.0 children per woman, is steadily declining, nearing below-the-replacement level fertility. The median age of the population is 28.4 years, with around 40% of the population under the age of 25. The working-age population (15-59 years) represents about 61% of the total population, offering a potential demographic dividend if appropriate policies are implemented. This demographic dividend, if harnessed effectively, could lead to significant economic growth. However, the increasing share of the elderly population, projected to rise to 19% by 2050, is a growing concern.

Historical Demographic Trends: A Transitioning Population

Bharat's demographic trends from 1950 to 2024 reflect significant transformations. In 1951, the population was approximately 361 million, growing to around 1.43 billion by 2023, marking an increase of nearly four times in seven decades. Over the decades, the country has consistently declined its

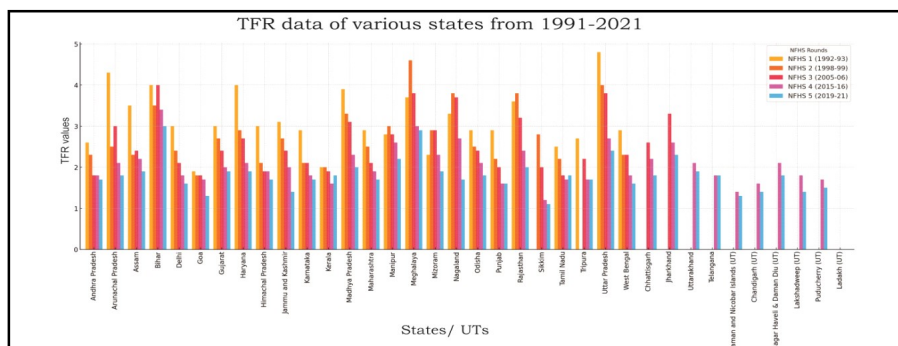
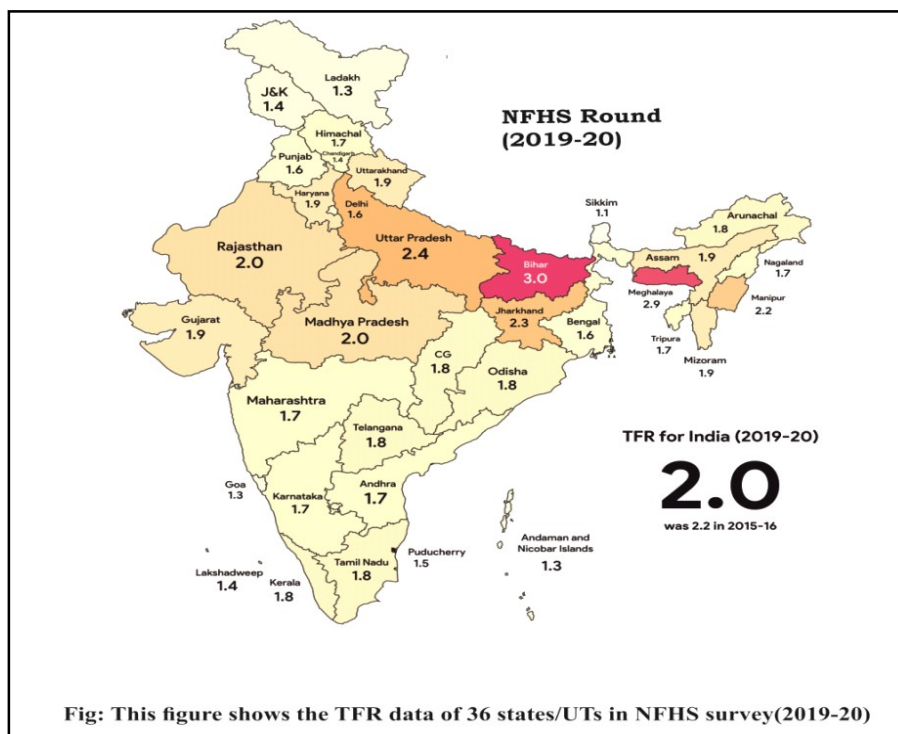


Fig-2 shows the TFR rate across the states/UTs from 1992 to 2021.

fertility rate, from 6.18 children per woman in 1950 to 1.91 children per woman in 2021 (NFHS-5, 2019-21). A recent study suggests that by 2050, Bharat's TFR may fall to 1.29. This decline has coincided with an increase in life expectancy, which has risen from 41 years in 1951 to 70 years in 2023. The urbanisation rate has also accelerated, with the proportion of the urban population rising from 17.3% in 1951 to 34.9% in 2021 (Census, 2021). The age structure also has shifted, with the proportion of the elderly (60 years and above) rising from 5.6% in 1951 to an estimated 8.6% in 2024, and it is expected to increase further in the coming decades (NFHS-5, 2019-21). These trends suggest a demographic transition from a young, rapidly growing population to an ageing one, with implications for labour force participation, healthcare and social security.

Regional Disparities in Fertility Rates and Policy Responses

In many developed countries, the Total Fertility Rate (TFR) has dropped below the replacement level of 2.1 children per woman, with some nations reporting rates as low as 1.5 in recent years. This trend is also evident within Bharat, where significant disparities exist between states. Southern states like Andhra Pradesh and Tamil Nadu have TFRs of approximately 1.7, reflecting a declining birth rate. In response, the Chief Ministers of these states have expressed concerns and are considering policies to encourage more large families. Recently, Andhra Pradesh Chief Minister N. Chandrababu Naidu, expressing concern about the low fertility rate and ageing population, said that his government is coming up with incentives for those with more children; some European countries have adopted similar policies.

“Though we have a demographic advantage until 2047, signs of the ageing problem are starting to appear in south Bharat, including Andhra. In South Bharat, the problem is compounded by young people migrating to other parts of the country,” Naidu said.

Telangana also decided to scrap the two-child policy in the state to increase the birth rate. This approach aligns with the Bhartiya perspective that views humans as creators capable of addressing challenges through innovation and effort.

Population and Consumption Demand: An Economic Perspective

Various research and reports from international organisations studied the effect of population and consumption demand. In their study, they find that there is a direct and significant impact of population and consumption demand because the people will demand goods and services in the economy, thus helping to move the wheel of the economy. Nicole Maestas et al., in their study, opined that in the US, a decline in fertility and mortality rates has the potential to negatively impact the economy and lead to a decline in consumption for the population as a whole. He also mentioned that an ageing population has a detrimental effect on economic growth and found that the annual GDP will slow down by 1.2 per cent points in a decade. Some research highlights that the young population's consumption is more than that of the older population, so it is crucial to maintain the consumption demand in the economy.

Demographic Dividend to Demographic Burden: Challenges Ahead

Bharat has been in a position to harness the benefits of the demographic dividend; it has substantial time. A large population of people who are of working age and willing to contribute to the economy is referred to as a demographic dividend. This demographic dividend is beneficial to the expansion of the economy since it helps the economy grow. A large rise in population can be attributed to the demographic dividend that has been accumulated. Due to the fact that the Total Fertility Rate (TFR) is decreasing, it is feasible that this condition will evolve in a manner that is different from what was initially envisaged. This shift is a direct consequence of the declining TFR. It is not out of the question that by the year 2047, this occurrence will have the effect of transforming the demographic dividend into a demographic burden.

There is a chance that this will occur. This shift has been brought about by a number of factors, including the increasing empowerment and education of women, the implementation of government policies that encourage family planning, the urbanisation and economic growth of the country, the postponement of marriages and the shifting of social norms that favour having children who are younger. All of these factors have contributed to this shift. Each of these elements has had a role in bringing about this change. Each

component has contributed to this transformation. The overall design of this pattern has been impacted by each of these distinct components, each of which has been influenced by its own specific context.

Factors Driving Fertility Decline in Bharat

There are a great number of diverse causes that might be connected to the significant decline in fertility rates in Bharat and every factor is individually responsible for the decline in fertility rates. There has been a delay in marriage and a reduction in the number of children that are present in households as a result of the development of educational options, notably higher education for women. Women now have been given more opportunities to further (furnish) their education. Consequently, this has resulted in a reduction in the number of children who are currently residing in households. This has become a consequence of the increase in educational possibilities, which is one of the effects of the expansion. When it comes to making decisions regarding family planning, women who have achieved higher levels of education have a greater degree of autonomy than women who have not completed higher levels of education.

Regarding the question of whether or not to have children, this is for the purpose of determining. One of the factors that contribute to the overall decline in fertility that is taking place all across the world is the fact that this is what is happening. The deployment of family welfare programs, community health workers and healthcare facilities by the government has resulted in an additional acceleration of the trend towards increased access to family planning information and contraception. This has occurred as a result of the government's intention to improve access to family planning. The number of individuals who are able to make use of these resources has increased as a consequence of this happening. This is a consequence of this. A decrease in the number of incentives available to families with a greater number of children has been brought about as a direct consequence of the shift in lifestyles that has taken place as a direct result of urbanisation and economic development. This is due to the impact that urbanisation and economic development have had on people's ways of living since its implementation.

The average age at which men and women get married has also increased, which has led to a delay in childbirth and a reduction in the number of family

units. In addition, the average age at which pregnancy occurs has also increased. The maturation process, commonly referred to as maturity, is the cause of this outcome. Individuals of both sexes have recently been observed to take part in this pattern of behaviour. A movement in cultural attitudes has also taken place, with smaller nuclear families becoming more acceptable in Bhartiya society. This shift has occurred in recent years. There has also been a shift in people's cultural attitudes. These alterations have been accomplished throughout the course of the past few years. In this particular situation, the movement that was stated earlier took place at the same time as this change.

Demographic Projections and Economic Challenges

According to United Nations forecasts, it is projected that Bharat will go through a period of major demographic transformation in the years that are to come. Between 2021 and 2031, forecasts by the United States Census Bureau suggest that individuals aged 60 and above will constitute 41% of Bharat's elderly population. The projections that were devised by the Census Bureau of the United States of America serve as the basis for this prognosis. There will be more elderly people in Bharat than children by the year 2046 and by the year 2050, one in every five Bhartiyas will be considered to be elderly. This trend is expected to continue until the year 2050. Handbook of Bharat had projected the TFR data of Bharat up till 2035 and in which Bharat's TFR has declined to the significant level.

The number of Bhartiya people who will have reached the age of sixty or older is expected to reach thirty-six per cent by the time this century comes to an end, according to estimates. Indeed, this is a really important quantity.

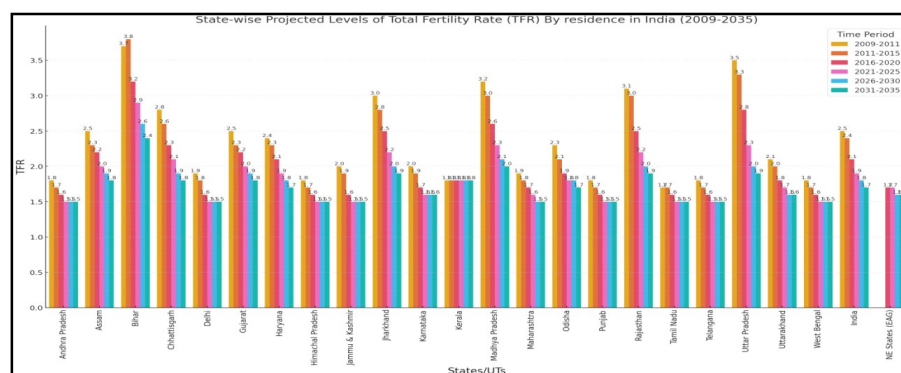


Fig-3 shows the State wise projected levels of total fertility rate (TFR) by residence in Bharat (2009-2035)
Source: Author's compilation from data collected from www.Bharatstat.com

When it comes to the forecast, this is the conclusion that has been reached. These projections incorporate additional information that is derived from the data by supplying the a fore mentioned information. The fact that this population is getting older is producing considerable economic challenges, particularly in terms of the growing dependency ratio among the elderly. Both of these factors are contributing to the problem. To be more specific, this increasing dependency ratio has an impact on the economy. A population that is getting older and the likelihood of them being unemployed is increasing and will put them under stress. As a result, the population will be subjected to a great deal of strain.

Addressing Ageing and Economic Stagnation

Bharat faces the challenge of managing an ageing population at an earlier stage in its growth trajectory compared to industrialised countries, which experience ageing more gradually and at higher income levels. In other words, Bharat is facing the challenge of managing an ageing population. This presents Bharat with a big economic problem. To put it another way, Bharat is facing the challenge of figuring out how to efficiently manage a population that is starting to get older.

This is the situation that exists here, which stands in stark contrast to the conditions that are often prevalent in industrialised nations. The individuals who are accountable for the development of public policy and society, in general, are confronted with a distinct set of challenges that would not otherwise be there in the event that they do not have this responsibility. This is a result of the circumstances that have arisen. It is believed that this will have a significant impact on Vision 2047 Bharat, which would, in turn, have consequences for a wide variety of other elements.

In addition to having ramifications for a wide range of other aspects of Bharat's efforts to develop its social economy, this notion is also thought to have ramifications for a wide range of other aspects. In the case that there is not a large rise in productivity, there is a potential that the expansion of the economy may come to a halt as a result of a drop in the total number of people who are engaged in the manufacturing sector. This is because the manufacturing sector is responsible for the majority of the jobs in the economy. In order to address the issues that are connected with ageing, as well as the provision of long-term care for an ageing population that is rising, the

healthcare system will need to undergo rapid transformation. This will be necessary in order to meet the demands of the situation. It is anticipated that the number of people who are dependent on social security and pension systems will continue to increase. This implies that these institutions will be subjected to a significantly greater amount of strain than they are already experiencing. To be successful in finding a solution to this issue, it will be essential to have solutions that are not only risk-free but also considerate of the natural world.

Impact of Demographic Transition on Innovation and Urban Planning

Additionally, the activity that is leading to innovative and entrepreneurial initiatives that are currently taking place may be impacted by the demographic transition. More specifically, this is because a decline in the number of young individuals in the population may result in a fall in the number of new firms that are created, as well as a decrease in the number of technological innovations that are accomplished. It is anticipated that the educational system will need to shift its attention towards programs that provide possibilities for retraining and learning throughout one's entire life for an older population. This is necessary in order to ensure that the labour force will continue to be productive and flexible in the future.

Role of Youth in Realising Vision 2047

Despite the challenges faced, the younger generation in Bharat has a significant part to play in the process of bringing the vision of Viksit Bharat into the realm of reality. The greatest significance is to place a strong emphasis on the development of high-value skills that have the potential to raise both the level of productivity and the level of creativity among young people in Bharat. This needs to be carried out immediately to make up for the impending lack of people present in the workforce in the years to come. It is feasible for the promotion of entrepreneurialism and the development of new business models to still result in the creation of employment opportunities and the acceleration of economic growth, even in the event that there is a decline in the number of individuals of working age. In spite of the fact that there is a decrease in the number of people in the population who are of working age, this continues to be the situation. The utilisation and development of new

technologies, particularly in the sectors of automation and artificial intelligence, can be of significant assistance when it comes to maintaining economic productivity and competitiveness in the global arena. This is especially true in the domain of Artificial Intelligence.

In light of the fact that the average age of the population is rising, it will be absolutely necessary to devise novel approaches to the problem, such as the development of telemedicine and preventative care technologies. When it comes to the process of developing these solutions, it is hoped that the participation of young people who are now employed in the healthcare profession would be of tremendous aid. In addition, young people have the capacity to take the initiative in a range of pursuits, including the creation of environmentally friendly technologies, the promotion of models for circular economies and the construction of sustainable cities.

In the event that these were to be carried out, it would ensure that Bharat's development would be both commercially lucrative and environmentally sustainable at the same time. To find solutions to the issues that arise as a consequence of an environment that is getting increasingly senior, young people will be responsible for building new models of community assistance and intergenerational cooperation. This will be done in order to find answers to the problems that arise. It will be possible to overcome the difficulties as a result of this. In order to find solutions to the issues that are becoming more and more apparent, it is intended to carry out these actions. Additionally, the notion that social innovation is of prime importance is going to be of utmost significance in the years to come.

As a consequence of this, there is a need for young people in Bharat to participate actively in the political process because it is the only method to guarantee that policies handle long-term issues like social security and healthcare for a population that is continuously becoming older. More specifically, it can be attributed to the fact that Bharat is currently experiencing a substantial demographic shift. Bharat has the capacity to bring forward fresh ideas from all around the world when it participates in international collaborations and exchanges through its participation in these activities. The specific demographic difficulties that Bharat is currently facing can receive support from these ideas, which can be of service in finding solutions to those challenges. When one takes part in activities of this nature, they acquire an additional benefit.

Strategic Initiatives to Tackle Demographic Challenges

In order for Bharat to successfully manage this demographic shift, it needs to adopt strategic efforts across a wide variety of businesses, as Bharat is a nation that is continuing to develop. Through the utilisation of this approach, the nation will be able to achieve its goal in the only way possible. Making investments in human capital through educational and skill development programs will be absolutely necessary in order to boost the productivity of a labour force that is experiencing a reduction in size.

This will be attempted to achieve the goal of increasing the overall productivity of the workforce. Whenever it comes to achieving the objective of enhancing production, this is going to be the circumstance that takes place. Growing the number of women who are engaged in the formal sector can be supported and made easier by a variety of efforts. They can assist in mitigating the effects of a declining population of people who are of working age, accomplished by increasing the number of women who are employed in the official sector. To achieve this goal, the number of programs that are now available must be increased. Possible that it will be able to achieve this target if there is an increase in the number of women who continue to hold jobs.

Utilising technology, in particular by making investments in automation and artificial intelligence, has the ability to keep economic production at a steady level, even in the face of a rising number of workers. Specifically, this is due to the fact that technology possesses the capacity to automate and enhance the quality of work. Technical developments have the potential to maintain economic output, which is why this is the case. To provide a more particular explanation, technology possesses the capability to automate processes that were previously deemed to be tedious. To establish a pension system that is not only dependable but also long-lasting, to the extent that it is able to provide assistance to a population that is growing, it is of the utmost importance that the institutions that are responsible for social security go through a process of change. Because for the purpose of establishing a pension system that is not only dependable but also long-lasting for the elderly population, the promotion of preventative healthcare and wellness activities will result in a healthier population, which may contribute to a reduction in the demand that is placed on healthcare systems.

As a result of these efforts, this will be an achievement. It is possible to

encourage healthy ageing among those who have successfully retired from their previous jobs. There is a possibility that Bharat may become a leader in the fight against the challenges that are brought about by an ageing global population if it were to establish an ecosystem that provides support for research and development in age-related technologies and services, a significant step forward in the fight against these challenges. Through the construction of an ecosystem that provides both emotional and material support, it is feasible to accomplish this objective by fostering creative expression and encouraging its expression.

In order to build cities that are accessible to people of all ages and that provide infrastructure and services that are easy to reach, it is vitally necessary for urban planning to go through a process of evolution. It is absolutely essential. Following the completion of this stage, the physical environment will be able to cater to the requirements of individuals of varying ages. Within the framework of social cohesion and support systems, the promotion of intergenerational solidarity will be an essential component. There are a number of factors that will contribute to this outcome. This goal will be accomplished through the formation of initiatives that promote interaction and understanding between individuals of different generations. These initiatives will provide the methods by which this target will be accomplished. The execution of programs, which will be the means by which it will be completed, will be the means by which this goal will be attained.

Conclusion: Youth as Architects of Viksit Bharat 2047

In spite of the fact that the population that “Viksit Bharat @2047” intends to serve is confronted with major demographic limits, the challenges that it faces have the potential to create tremendous opportunities for transformation. The fertility rate in Bharat has been falling for an extended period of time, which indicates that the contribution of each and every young person is becoming an increasingly significant aspect. Therefore, it is essential for the young people of today to consider it not as a burden but rather as an opportunity to construct a new paradigm of advancement on their own, rather than viewing it as a burden. Due to the fact that they are obligated to perform to the best of their abilities, they should not regard this challenge to be a burden of any type. When it comes to determining whether or not Bharat is capable of successfully handling this demographic change and evolving as a devel-

oped nation, the activities and innovations that Bharat performs will be beneficial to the matter itself, as Bharat is constantly evolving and developing new technologies.

When Bharat celebrates a century of independence in the year 2047, the efforts of the youths will be the determining factor in whether or not Viksit Bharat will eventually become a reality. This is going to be the case because today's generation is comprised of children. In the event that they have the foresight, commitment and imagination that are required to make this a reality, they have the ability to create an Bharat that not only attains the status of a developed nation but also becomes a model for the management of demographic transitions in developing countries. It would be a tremendous achievement for them to achieve this condition. It is vital to strike a delicate balance between catering to the requirements of an ageing population and making the most of the talents of the younger generation in order to achieve the goal of Viksit Bharat 2047. This is necessary in order to achieve the goal. It is imperative that this phase be completed in order to get the intended outcome, as it is an important stage. If Bharat places a significant emphasis on the development of skills, technological innovation, environmentally responsible practices, and inclusive policies, the demographic shift that the country is currently experiencing has the potential to be transformed into an opportunity for growth and development that is unparalleled.

The period of time in which Bharat is seeking to manage this change in its population would be a time when people from all over the world will be keeping a close eye on our country. The achievements of the 'Viksit Bharat @2047' initiative have the potential to serve as illustrative models for other developing nations that are coping with demographic difficulties that are comparable to those that they are currently confronted with. It is a definite possibility. The youth of Bharat are the ones who will bear the responsibility of determining the destiny of the nation, and the choices that they make right now will have an impact on the nation that will continue to have an impact on the nation for generations to come. Despite the massive demographic shift that is taking place across the nation, the path that leads to Viksit Bharat is not just about economic measures; rather, it is about establishing a society that is wealthy, egalitarian and sustainable, the path that leads to Viksit Bharat. It is conceivable for Bharat to achieve a position of leadership on a global scale if it takes the required steps to put into practice the necessary plans and

policies, as well as if it actively encourages the engagement of young people through participation. In the event that Bharat was to choose this course of action, it would be able to demonstrate how to effectively manage the transition to an older population while simultaneously sustaining economic vitality and social development. If Bharat were to achieve this, it would be a huge accomplishment.



Chapter 3

Bharat @2047: Achieving Full Employment Economy

As Bharat marches toward its centenary of independence in 2047, the vision of “**Samriddh aur Mahaan Bharat**” — a developed Bharat — resonates as a collective national aspiration. However, this vision raises a critical question: *What does it mean to be a developed nation?* Historically, the idea of development has been framed by Western metrics such as GDP growth, industrial output, and material wealth. These measures, while valuable, often ignore deeper dimensions of well-being, sustainability and cultural identity.

Bharat, with its unique history, civilizational wisdom and vibrant traditions, cannot simply borrow these definitions wholesale. Instead, it must carve out its own path to progress, one that honors its roots and reflects its ethos. “Samriddh aur Mahaan Bharat” should not merely aspire to be a reflection of the West but must emerge as a model rooted in Bhartiya values — one that is not only Viksit (developed) but also Samriddh (prosperous) and Mahaan (great).

Over the past three and a half decades, Bharat has achieved remarkable economic progress, maintaining an average annual growth rate of approximately 6%. Between 1991 and 2023, its contribution to the global GDP has surged more than threefold, rising from 1.1% to 3.5%. This exceptional trajectory has positioned Bharat as one of the world’s fastest-growing major economies, showcasing its resilience even amid periods of global economic downturn. (*GoI 2024*)

Bharat’s robust economic growth has significantly reduced absolute poverty and enhanced living standards, though pockets of deprivation persist. The government envisions a *Samriddh aur Mahaan Bharat*—a prosperous and self-reliant nation—by 2047, with a projected GDP of \$30 trillion and an annual per capita income of \$18,000. Achieving this ambitious vision for *Great Bharat* requires sustained GDP growth of 7%–10% annu-

ally, translating into a ninefold expansion of the economy and an eightfold increase in per capita income (*NITI Aayog 2023*).

A cornerstone of this transformative journey towards a “*Vishwaguru Bharat*” is the creation of decent and productive employment opportunities, ensuring *fully employed Bharat*, as the labor force and the incomes of the majority remain pivotal to this aspiration.

At the onset of Bharat’s planned development, poverty alleviation was rightly prioritized, with the assumption that economic growth, particularly through the modern industrial sector, would naturally address unemployment. In the 1950s and 1960s, the focus on establishing heavy industries under the public sector was intended to generate jobs. However, by the 1970s and 1980s, it became evident that these efforts were insufficient to meet the demands of a growing labor force. As a result, various poverty alleviation and employment generation programs were introduced, gradually evolving over the years.

During this period, economic growth remained sluggish, hovering around a mere 3%, with three-quarters of the labor force confined to low-productivity subsistence agriculture and allied sectors. While growth rates began to climb in the mid-1980s and accelerated post-1990s, this momentum failed to translate into adequate job creation. Instead, labor productivity saw a notable rise, but open unemployment persisted, reflecting a backlog of unaddressed issues.

A critical flaw in this strategy was the disproportionate increase in the share of non-agricultural GDP, primarily driven by services, without a corresponding shift of the workforce from agriculture to higher-productivity industrial and services sectors. This disconnect hindered urbanization, which remains strikingly low even today. Alarming, 46% of Bharat’s workforce is still engaged in agriculture—one of the highest proportions globally—and urbanization lags at around 30%. Furthermore, nearly 90% of the workforce is informally employed, marking Bharat as an outlier among major economies. These structural deficiencies underscore the consequences of decades of misaligned priorities and inadequate policies.

The prevailing growth trajectory reveals a significant mismatch between GDP contribution and employment distribution in agriculture. Despite accounting for only about 15% of GDP, agriculture employs a staggering 46%

of the workforce. Conversely, the services sector contributes approximately 55% to GDP but engages merely 30% of the labor force. Manufacturing, meanwhile, lags with both GDP and employment shares hovering between 15% and 18%. This pattern starkly contrasts with the developmental trajectories of advanced economies and presents a globally atypical phenomenon, where labor has transitioned—albeit gradually—from agriculture to services, largely bypassing the manufacturing sector. Such an imbalanced growth paradigm has been extensively linked to sluggish structural transformation and the inadequate generation of high-quality employment opportunities. (*Ghose 2016; IHD 2014*)

Major Sectors	GDP contribution	Workforce engaged
Agriculture sector	15%	46%
Manufacturing sector	15-18%	7.5%
Service sector	55%	30%

Bharat’s labor market indicators, including the labor force participation rate (LFPR), worker-population ratio (WPR) and unemployment rate (UR), reveal dynamic trends over recent decades. For individuals aged 15 and above, the LFPR reached 60.1% in 2024, closely mirroring the global average of 60.4%. Historically, Bharat’s LFPR exhibited a declining trajectory, falling from 66.2% in 1983 to 50.2% in 2018. However, a notable recovery

Shape 1 – LFPR, WPR, UR (Rural+Urban combined) 1983-2024.

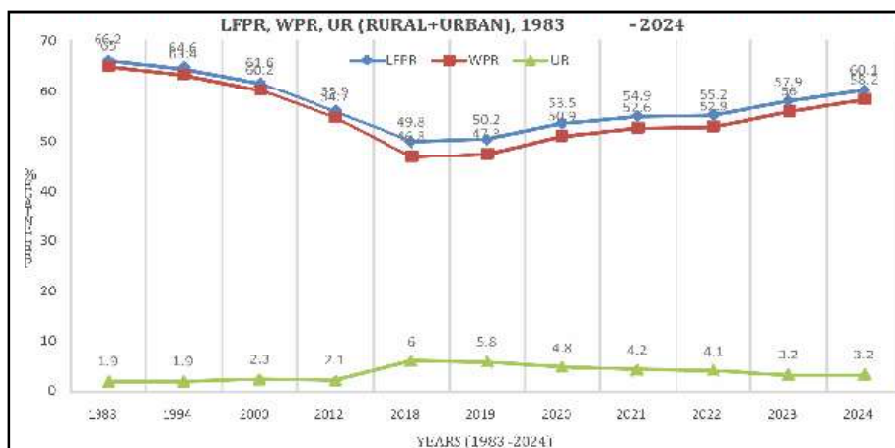
Sources: Computed from various years of Employment and Unemployment Survey data and the Periodic Labour Force Survey unit-level data.

LFPR= Labor Force Participation Rate, WPR= Worker Population Ratio, UR= Unemployment Rate

Followed, with the rate climbing back to 60.1% in 2024. Similarly, the WPR declined from 65.1% in 1983 to a nadir of 47.3% in 2018, before rebounding to 58.2% by 2024.

In contrast, the unemployment rate (UR) remained low, averaging around 2% between 1983 and 2012, before surging to 6% in 2018. By 2024, the UR had substantially declined to 3.2%. These labor market shifts since 2018 reflect broader economic disruptions, including a protracted economic slowdown exacerbated by the pandemic and its aftermath. These patterns underscore complex structural transformations in Bharat’s labor market, warrant-

ing deeper analysis to identify the underlying factors driving these changes, as elaborated in subsequent sections (**Basole 2022; IHD-ILO 2024**).



Between 1983 and 2000, Bharat’s working-age population (15+ years) grew substantially by 215 million, driven by high birth rates and an expanding youth demographic. This surge in population translated into a labor force growth of 110 million—comprising individuals either employed or actively seeking work—and an increase in the workforce by 107 million. The near-parallel growth of jobs and the labor force kept unemployment relatively stable, rising by only 3 million. However, the quality of employment remained a concern, as the economy absorbed new entrants but not always into decent jobs.

From 2000 to 2012, population growth remained robust, adding 217 million people, while the labor force and workforce grew by 83 million and 81 million, respectively. This alignment between labor supply and job creation limited unemployment to a marginal increase of 1 million, reflecting a characteristic feature of developing economies where labor absorption is nearly proportional to its supply.

	Numbers (15+ Years) (in million)					Change or Addition (in million)			
	1983	2000	2012	2018	2024	1983-2000	2000-12	2012-18	2018-24
Population	431	645	862	974	1,064	214	217	112	90
Labor Force	286	396	479	483	639	110	83	4	156
Work Force	280	387	468	454	619	107	81	-14	165
Unemployed	6	9	10	29	20	3	1	19	-9

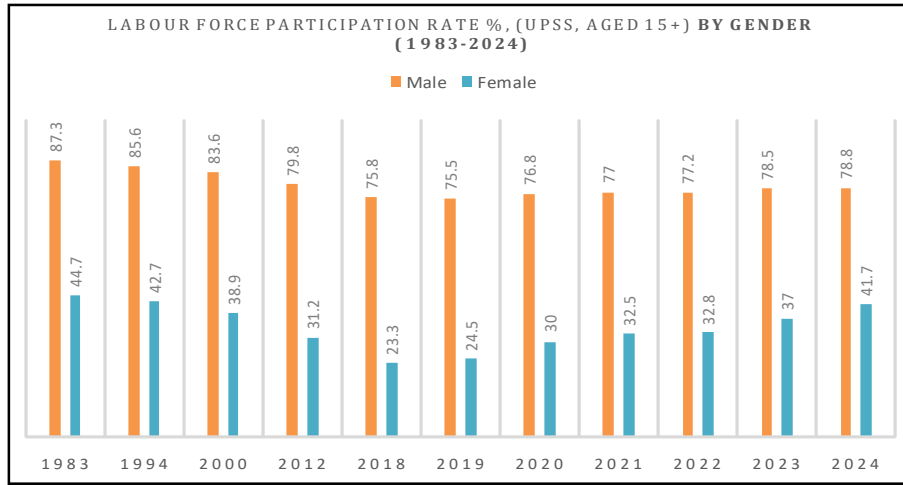
Source: Computed from various years of Employment and Unemployment Survey data and the Periodic Labour Force Survey unit-level data and population projection from the Ministry of Health and Family Welfare 2020.

However, the period from 2012 to 2018 marked a significant shift, as Bharat encountered mounting employment challenges. Despite an increase of 112 million in the population, the labor force saw minimal growth of only 4 million, signaling a stagnation likely influenced by a lack of job opportunities or disillusionment with the job market. More notably, the workforce contracted by 14 million, leading to a sharp rise in unemployment by 19 million. This troubling trend underscored the widening gap between labor supply and demand, highlighting the economy's inability to generate sufficient employment.

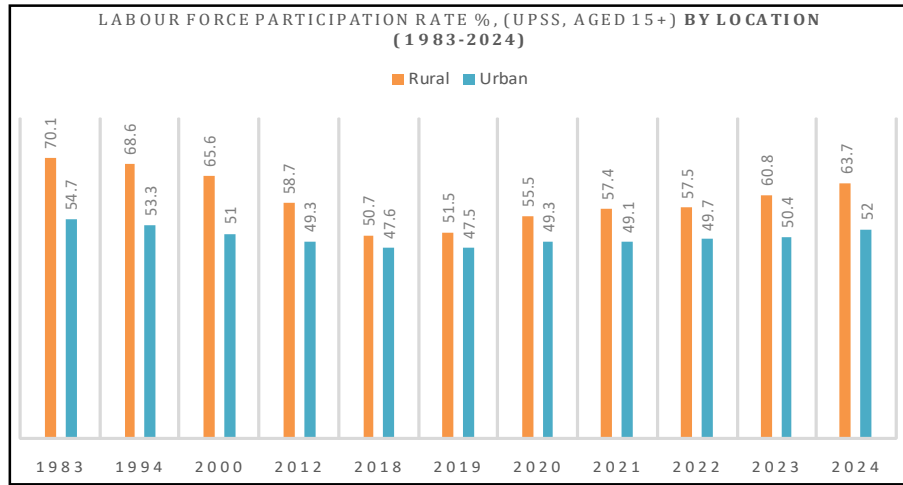
A reversal of this trend was observed between 2018 and 2024. Population growth decelerated, contributing an additional 90 million people, while the labor force expanded significantly by 156 million, and the workforce grew even further by 165 million. This unprecedented increase in employment opportunities reduced unemployment by 9 million, signaling a recovery in the labor market. The surge in job creation not only accommodated the newly added labor force but also began addressing the backlog of unmet demand for employment.

Bharat's labor force participation rate (LFPR) reveals a stark gender disparity, with men consistently outpacing women in workforce engagement. As of 2024, the male LFPR stands at 78.8%, closely aligning with levels in developed nations and surpassing the global average of 72.9%. In contrast, the female LFPR remains significantly lower at 41.7%, falling short of the global average of 48.2% and the East Asian average of 59.5%.

A longitudinal perspective reveals a steep decline in women's LFPR, which dropped from 44.7% in 1983 to a historical low of 23.3% in 2018. However, it has since experienced a remarkable resurgence, reaching 41.7% in 2024. During the same period, men's LFPR also exhibited a downward trend, albeit more modest, increasing slightly from 75.5% in 2019 to 78.8% in 2024. These shifts underscore that the fluctuations in Bharat's overall LFPR over the past four decades are largely attributable to changes in women's participation rates.



Shape 2 – LFPR (UPSS, Aged 15+), By Gender 1983-2024.
Sources: Same as Shape 1.



Shape 3 – LFPR (UPSS, 15+), By Location, 1983-2024.
Sources: Same as Shape 1.

The sharp rise in women’s LFPR in Bharat is an exceptional phenomenon, unparalleled globally in recent years. Comparatively, other South Asian nations, such as Bhutan (6.3%), Pakistan (4.7%), Maldives (1.7%), Nepal (1.1%) and Bangladesh (0.3%), recorded increases in women’s LFPR between 2019 and 2023, but none approaches the magnitude of Bharat’s surge (**World Bank, 2023**). This unprecedented growth raises critical questions. Have long-standing social norms that restricted women’s labor market participation suddenly and unexpectedly relaxed over the past six years? Or do

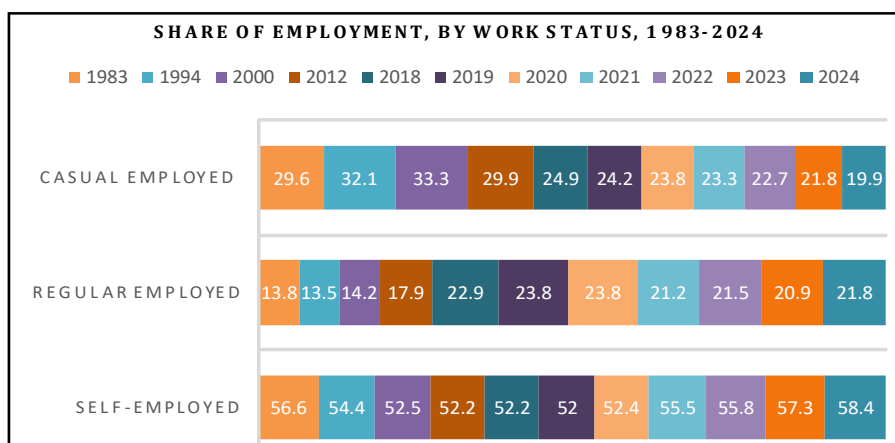
these figures reflect improvements in the Periodic Labour Force Survey (PLFS) methodology, which may now more accurately capture women's contributions to the workforce? Notably, when the PLFS was introduced in 2018–2019, the female LFPR (FLFPR) showed little to no increase. However, it surged significantly in 2019–2020, during the pandemic and continued to grow thereafter, particularly in rural areas, where FLFPR rose from 24.6% in 2018 to a staggering 47.6% in 2024. In urban areas, the increase was comparatively marginal. Such a dramatic 23% rise in rural FLFPR over six years is highly unusual, given that similar transformations typically occur over decades. This remarkable trend invites further inquiry: does it signify a genuine and sustained entry of women into productive employment, or are other factors at play? The answers could have profound implications for understanding and addressing gender dynamics in Bharat's labor market. A regional analysis of labor force participation rates (LFPR) highlights that rural Bharat has consistently recorded higher participation rates compared to urban areas. This disparity can be attributed to the dominance of agriculture and informal employment in rural regions, where economic engagement is primarily driven by necessity, limited formal employment opportunities in the non-farm sector and the relative accessibility of agricultural jobs. Similarly, the worker-population ratio (WPR) reflects this trend, with rural areas maintaining higher levels than urban counterparts, emphasizing their reliance on informal labor and agricultural activities. Although the gap between rural and urban WPRs has narrowed to some extent, its persistence underscores fundamental structural differences like employment and economic activity between these regions. Urban unemployment rates (URs), however, have consistently exceeded those in rural areas, revealing distinct challenges in urban labor markets, such as limited absorption capacity in the formal sector and heightened job competition. Conversely, rural regions, despite their higher LFPRs and WPRs, grapple with underemployment and dependence on seasonal agricultural work, which often obscures hidden unemployment. Additionally, rural employment frequently masks underemployment, reflecting the precariousness of rural livelihoods.

These trends point to deep-seated structural issues within Bharat's labor market, particularly for women and rural populations. Women, in particular, face significant socio-cultural barriers that limit their access to stable and formal employment opportunities. Meanwhile, rural workers are often

compelled by economic necessity to engage in insecure, low-paying jobs (Himanshu 2011; Abraham 2009; IHD-ILO 2024).

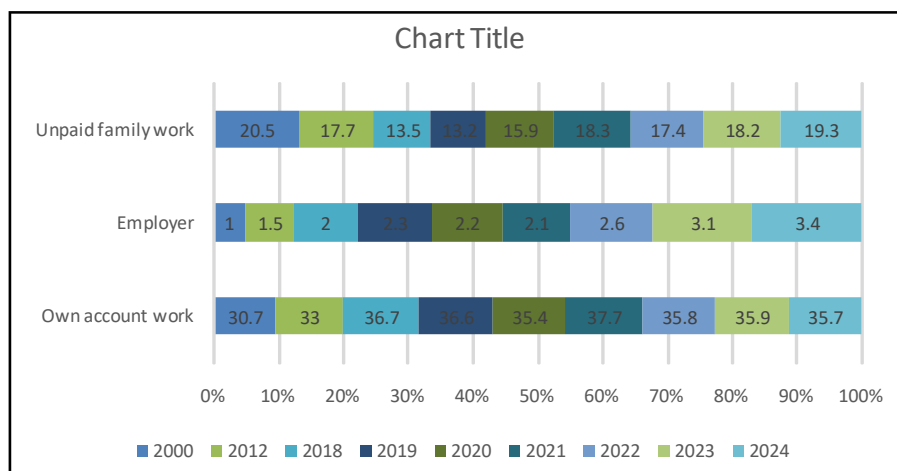
A critical dimension of the labor market concerns the quality and conditions of employment. Key indicators of these aspects include shifts in employment status, such as transitions from casual to regular employment, the movement of workers from the informal (unorganized) to the formal (organized) sector, and the progression from informal to formal employment arrangements. Additionally, improvements in earnings signify enhanced employment quality. These transformations reflect broader structural shifts within the labor market, underscoring significant changes in the composition and dynamics of employment (Ghose, 2016).

Employment status, a key indicator of job quality, is generally classified into three categories: self-employment, regular employment, and casual work. Regular employment is typically associated with better job security and social benefits, while casual work tends to be unstable and offers lower earnings. In Bharat, self-employment remains the predominant form of employment, followed by casual and regular employment. As of 2024, 58.4% of workers were self-employed, while 21.8% and 19.9% were engaged in casual and regular employment, respectively. Notably, the share of self-employment increased from 52.5% in 2012 to 58.4% in 2024, reversing the prior trend of growth in regular employment. Conversely, the proportion of casual employment, which peaked at 29.6% in 1983, declined over time, reaching 19.9% by 2024.



Shape 3 – Share of Employment by Work Status, 1983-2024
Sources: Same as Shape 1.

There are also significant gender disparities in employment status. In 2024, 67.4% of women were in self-employment, compared to 53.6% of men. Regular employment was more common among men (24.9%) than women (15.9%). Rural women exhibited a notably higher participation rate in self-employment (73.4%) compared to their urban counterparts (39.8%), a trend that has become more pronounced since 2019, when there was a significant rise in the proportion of women in self-employment. In contrast, the share of women in regular employment increased substantially between 2000 and 2019, but declined during the pandemic years, reflecting the broader challenges women face in accessing stable, formal employment.



Shape 3 – Share of Self-employment category in total employment, (UPSS, Aged 15+), 2000-24.
Sources: Same as Shape 1.

Within the self-employment category, the proportion of unpaid family workers declined significantly from 20.5% in 2000 to 13.5% in 2019 but then began to rise again, reaching 19.3% in 2024. Meanwhile, the share of self-employed individuals working as own-account workers (those operating their own businesses) steadily increased from 30.7% in 2000 to 35.7% in 2024. The share of women in this category also grew, from 16.6% in 2000 to 30.1% in 2024. Despite these shifts, a significant proportion of women continue to be engaged in unpaid family work, particularly in rural areas, where 42% of women are in this category, compared to just 12.6% in urban areas.

Several researchers have suggested that these trends point to a rise in vulnerable forms of self-employment, especially among women in rural re-

gions, indicating a shift toward more precarious work situations (**Mahapatra 2024; Deshpande 2024**).

Bharat’s labor market continues to be characterized by a pronounced divide between “formal (organized)” and “informal (unorganized)” employment. The informal sector remains a dominant feature of the economy, employing a significant portion of the workforce in informal roles. While the formal sector has expanded over time, there has been a concurrent rise in informalization within the formal sector itself, leading to an increase in informal workers even in traditionally formal industries.

<i>Share in Total Employment</i>	2000	2012	2018	2020	2021	2024
Formal Employment	8.5	7.8	9.5	9.6	9.4	10.2
Informal Employment	91.5	92.2	90.5	90.4	90.6	89.8
Organized sector	10.9	17.5	19.5	17.5	19.9	17.1
Unorganised sector	89.1	82.5	80.5	82.5	80.1	82.9
Regular formal employment (% of total employment)	7.6	7.5	14.3	14.3	13.6	14.9
Regular workers without a written contract (% of regular employment)	59.6	64.5	71.5	67.2	64.4	57.8
Regular workers with long-term contract (>3years) (% of regular emp.)	35.9	29.1	21.4	22.5	24.4	29.2

Table 2 – Status of Employment (UPSS, Aged 15+), 2000-24.
Sources: Same as Shape 1.

	Rural (₹)			Urban (₹)			Total (₹)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Self-employed	13,999	4,898	11,467	23,485	8,040	20,310	16,255	5,442	13,420
Regular	17,991	11,567	16,540	26,111	19,595	24,376	22,495	16,445	20,990
Casual	9,671	5,962	8,684	11,433	7,017	10,767	9,983	6,062	9,010

Table 3 - Average monthly earnings of Self-employed, Regular, Salaried and Casual workers by location and gender, 2024.
Sources: Same as Shape 1.

Between 2000 and 2024, the share of organized sector employment rose from 11% to 17.1%. However, this growth also encompassed a higher proportion of informal workers. Similarly, the share of formal employment within total employment showed only a marginal increase, rising from 8.5% in 2000 to 9.4% in 2024, reflecting the persistent trend of informality within formal employment. The rise in formal employment, particularly between 2000 and 2018, signified progress toward higher-quality jobs, yet this development coincided with an increase in informal contractual positions.

The proportion of regular workers lacking a written contract climbed from 59.6% in 2005 to 71.5% in 2018, before declining to 64.4% by 2021 as the pandemic curtailed vulnerable regular jobs. This trend of contractualization has also been pronounced in the formal manufacturing sec-

tor. Data from the Annual Survey of Industries (ASI) shows that 41% of workers in organized manufacturing were employed on a contractual basis in 2022–23. Additionally, the share of workers with long-term contracts (exceeding three years) consistently decreased from 35.9% in 2005 to 21.4% in 2018 but rebounded to 29.2% in 2024, indicating some reduction in precarious regular jobs during the latter period (**IHD-ILO 2024**).

These patterns underscore the evolving dynamics of Bharat’s labor market, where the growth of formal employment is tempered by persistent and rising informality within the workforce.

The average monthly earnings of workers in Bharat exhibit substantial variation based on employment status (self-employed, regular salaried, or casual), gender, and geographic location (rural or urban). Regular salaried workers command the highest average monthly income, followed by self-employed individuals, with casual workers earning the least. In 2024, regular salaried employees earned an average of Rs. 20,990 per month, compared to Rs. 13,420 for self-employed individuals and Rs. 9,010 for casual workers. These figures highlight a clear hierarchy in earnings, reflective of the greater stability and security associated with regular salaried jobs, as opposed to the often inconsistent incomes of self-employed and casual workers (**Ghose 2021**).

Self-employment, however, is a heterogeneous category encompassing both highly compensated professionals and employers, as well as vulnerable groups such as hawkers, artisans, and small-scale cultivators with limited or no capital. Alarming, approximately 30% of self-employed individuals earn less than the average wage of casual workers. This percentage is significantly higher among women (43%) compared to men (24%), indicating that self-employment disproportionately exposes women to lower earnings. Indeed, self-employed women in both rural and urban settings frequently earn less than casual workers, underscoring the precarious nature of many self-employment roles, particularly for women.

Moreover, the prevalence of low earnings among regular workers is also increasing, reflecting the growing number of vulnerable workers in this category. Although government employees benefit from wages indexed to inflation, the category of regular employment includes many low-paid roles such as domestic workers and security guards. Consequently, approximately

one-fifth of regular workers in 2024 earned less than the average income of casual workers. This issue was more acute among women, with 29.5% earning below the casual worker average, compared to 17.5% of men in the same category.

A pronounced gender pay gap persists across all employment categories, with men generally earning more than women. This disparity is particularly stark among self-employed individuals, where men earned an average of Rs. 16,255 per month in 2024, compared to just Rs. 5,442 for women. The gap is less pronounced in regular salaried employment, where men earned Rs. 22,495 per month on average, compared to Rs. 16,445 for women. Similarly, among casual workers, men earned Rs. 9,983, while women earned Rs. 6,062, reflecting consistent gender-based disparities.

Earnings disparities also exist between rural and urban areas, with urban workers generally earning higher wages than their rural counterparts across all employment categories. Urban self-employed men earned an average of Rs. 23,485 per month, compared to Rs. 13,999 for rural self-employed men. Regular salaried workers in urban areas earned significantly more, with urban men in this category averaging Rs. 26,111 per month, compared to Rs. 17,991 earned by rural men. The trend holds for casual workers, where urban male casual workers earned Rs. 11,433 per month, exceeding the Rs. 9,671 earned by their rural counterparts.

These patterns of wage disparities, driven by employment status, gender, and geographic location, underscore the structural inequities in Bharat's labor market and highlight the challenges faced by vulnerable groups, particularly women and rural workers.

Unemployment has remained a persistent challenge for both the Bhartiya state and society since independence. Despite numerous efforts, significant progress in addressing this issue was largely absent until about a decade ago, when the current government introduced a transformative focus on entrepreneurship through initiatives such as Mudra loans and the Start-up Bharat campaign. This marked a paradigm shift in the nation's approach, emphasizing the generation of work opportunities over the pursuit of traditional employment.

This strategy reflects a more pragmatic outlook, recognizing that it is unrealistic for any government to create millions of jobs annually. The sustainable solution to unemployment lies in fostering a society-driven ecosystem

that generates work opportunities. The role of the government should not be that of a direct job creator but rather that of an enabler, facilitating the environment and resources necessary for individuals and communities to create meaningful and productive work avenues (**Arun Anand; Money control 2024**).

Role of Entrepreneurship in Achieving Samriddh aur Mahaan Bharat

Entrepreneurship is a transformative force capable of driving Bharat toward its vision of Samriddh aur Mahaan Bharat @ 2047. However, this progress must align with the Bhartiya parameters of development — emphasizing inclusivity, sustainability, and cultural integrity. Startups and businesses can play a pivotal role in this journey by embodying principles that prioritize local empowerment, ethical practices, and innovation inspired by Bharat’s heritage.

1. Supporting Local Artisans and Crafts

Bharat’s vast pool of artisans and craftsmen represents a treasure trove of heritage and skills. Despite their unique offerings, many artisans struggle to sustain their livelihoods due to the lack of market access, technological support and fair remuneration. Entrepreneurs can bridge this gap by:

- i. Building e-commerce platforms to connect artisans with global markets.
- ii. Offering micro-financing and skill-development programs to empower rural and tribal craftspeople.
- iii. Using innovative technologies like block chain to ensure transparent pricing and traceability for handmade goods.

Startups like Jaipur Rugs and Fab Bharat have already demonstrated the impact of integrating traditional crafts into modern business models. By scaling such efforts, entrepreneurs can preserve Bharat’s cultural heritage while fostering samriddhi across all sections of society.

2. Promoting Green Technologies Inspired by Traditional Bhartiya Wisdom

Bharat’s traditional practices, such as rainwater harvesting, organic farming, and energy-efficient architecture, offer timeless solutions to modern

sustainability challenges. Entrepreneurs can draw inspiration from these practices to develop innovative green technologies:

- i. Designing affordable solar and wind energy solutions tailored to rural areas.
- ii. Developing bio-based fertilizers and pesticides rooted in Ayurvedic principles for sustainable agriculture.
- iii. Creating eco-friendly construction materials inspired by ancient methods like lime plastering and bamboo structures.

By promoting such green technologies, startups not only contribute to environmental conservation but also create scalable business opportunities that align with Dharma-centric progress. Initiatives like SELCO Solar have already shown how integrating traditional knowledge with modern innovation can create impactful solutions.

3. Encouraging Community-Owned Enterprises

Community-owned enterprises represent a model of entrepreneurship that combines economic growth with social equity. These enterprises operate on the principle of shared ownership and collective decision-making, ensuring that wealth generation benefits the entire community. Entrepreneurs can foster such models by:

- i. Setting up cooperatives in sectors like agriculture, dairy, and handicrafts.
- ii. Encouraging Self-Help Groups (SHGs) to manage micro-businesses in rural areas.
- iii. Partnering with government programs like Startup Bharat and Stand-Up Bharat to provide financial and logistical support for community-led initiatives.

Examples like Amul and Lijjat Papad showcase how community-owned enterprises can achieve remarkable success while promoting inclusivity and sustainability. Expanding such models will be crucial to achieving Samridhaur Mahaan Bharat.

Entrepreneurship, when aligned with Bhartiya values, has the potential to address critical challenges while fostering inclusive growth.

Call to Action

As Bharat prepares for its centenary of independence in 2047, the time is ripe to redefine the country's vision of progress. Samridh aur Mahaan

Bharat must transcend the narrow definitions imposed by Western models of development and adopt a vision that integrates material prosperity with spiritual and cultural enrichment. This redefined vision calls on policymakers, entrepreneurs, and citizens alike to work in tandem to reshape Bharat's development path in alignment with its unique values and traditions.

1. Role of Policymakers

Policymakers have a crucial role in creating an enabling environment that supports entrepreneurship aligned with Bhartiya values. This can be achieved through:

- i. **Incentivizing Local Innovation:** Providing subsidies, tax breaks, and infrastructure support for businesses that focus on traditional crafts, green technologies, and community-owned enterprises.
- ii. **Fostering Inclusive Growth:** Enacting policies that ensure equitable wealth distribution, reduce regional disparities, and empower marginalized communities.
- iii. **Sustainable Development Initiatives:** Strengthening regulations around environmental sustainability, resource conservation, and the promotion of renewable energy sources inspired by traditional practices.

In this context, government initiatives like Startup Bharat and Atmanirbhar Bharat can be expanded to encourage entrepreneurs who not only focus on economic gains but also contribute to the broader societal goals of sustainability and ethical progress.

2. Role of Entrepreneurs

Entrepreneurs, as the driving force of Bharat's economy, must integrate the principles of Samriddhi, Dharma-centric progress and sustainability into their business models. They can:

- i. **Adopt Circular Business Models:** By focusing on waste reduction, resource recycling, and local supply chains, businesses can not only increase their profitability but also promote environmental sustainability.
- ii. **Create Ethical Products and Services:** Incorporating ethical considerations in the supply chain, ensuring fair wages, and minimizing exploitation.
- iii. **Invest in Community-Led Initiatives:** Entrepreneurs should actively engage with local communities and empower them through job cre-

ation, skill development and capacity-building initiatives.

3. Role of Citizens

Citizens also have an integral part to play in this transformative journey. As consumers, they can support businesses that align with their values of sustainability, ethical practices and cultural preservation. As workers, they can contribute to the growth of enterprises that emphasize community well-being and shared prosperity.

Roadmap for Aligning Entrepreneurship with Bhartiya Values

1. **Nurturing Local and Indigenous Businesses:** Startups should prioritize products and services that promote Bharat's cultural heritage, such as traditional crafts, indigenous agricultural practices, and ethical business models.
2. **Fostering Education for Ethical Entrepreneurship:** Educational institutions should equip young entrepreneurs with the knowledge of both business acumen and ethical practices rooted in Bhartiya philosophy.
3. **Scaling Green Technologies:** Invest in research and development to create green technologies based on traditional Bhartiya wisdom, such as solar energy systems inspired by ancient water conservation practices.
4. **Encouraging Community-Centric Growth:** Focus on collective wealth creation through cooperatives and community-driven enterprises that prioritize equitable resource distribution.
5. **Collaborating with Global Networks:** Bharat can use its position in the global economy by collaborating with international markets that value sustainability, ethical production, and fair trade practices.

Limitation of Western Development Parameters

For decades, Western frameworks have dominated the global discourse on development, defining success primarily through metrics like GDP, industrialization and technological advancement. While these measures have boosted economic growth in many countries, they often come with inherent limitations that make them unsuitable as universal benchmarks.

1. **Unsustainability:** Western development models frequently priori-

tize rapid industrial growth and consumerism, leading to significant environmental degradation. This approach often overlooks the long-term consequences of overexploitation of natural resources. From rising carbon emissions to deforestation and loss of biodiversity, the ecological costs of this growth paradigm have reached a critical tipping point. For Bharat, a civilization historically rooted in harmony with nature, adopting such a model would be not only unsustainable but also culturally incongruent.

2. Inequity: The Western development path has often resulted in wealth concentration within a small elite, leaving large segments of the population behind. High levels of economic disparity, coupled with social exclusion, are byproducts of an emphasis on corporate-centric growth.

3. Lack of Cultural Grounding: Western frameworks frequently disregard the cultural and historical contexts of the societies they are applied to, promoting a one-size-fits-all approach to progress. This has led to the erosion of indigenous knowledge systems, traditions and values in many parts of the world. Bharat, with its millennia-old heritage of holistic living and ethical commerce, must resist the temptation to sideline its unique cultural identity in pursuit of external validation.

A Path Rooted in Bhartiya Values

Bharat's definition of progress must rise from its own soil, drawing strength from its ancient wisdom and contemporary aspirations. Unlike the Western emphasis on individualism and material gain, Bhartiya philosophy promotes a balanced view of life — one that values Dharma (righteousness), Artha (wealth), Kama (desires), and Moksha (liberation) as interconnected goals. Development in this context is not merely about economic growth but about fostering holistic well-being, sustainability and ethical practices.

By reimagining progress through its own lens, Bharat can craft a model of development that is inclusive, equitable and sustainable. This model would not only ensure material prosperity but also nurture spiritual and cultural richness, offering a vision of “Samridh aur Mahaan Bharat” that is uniquely Bhartiya. Entrepreneurship, deeply ingrained in Bharat's heritage, can be the bridge that connects this vision to reality, fostering innovation while staying true to the nation's values.

Bharat's rich heritage of entrepreneurship is a testament to its ability to innovate, adapt, and thrive while maintaining ethical and community-oriented

principles. By revisiting and reviving these age-old practices, we can redefine entrepreneurship in a way that aligns with our cultural identity and modern aspirations. This will not only strengthen our economic foundation but also guide our journey toward becoming a self-reliant, prosperous, and sustainable global leader by 2047.

To redefine progress in Bhartiya terms, it is essential to harness the intrinsic strengths that have sustained the nation for millennia. Among these, entrepreneurship stands out as a cornerstone of Bharat's identity — a force that has not only driven economic prosperity but also upheld ethical values and community welfare. This rich entrepreneurial spirit, deeply embedded in Bharat's culture and history, offers a powerful framework for achieving holistic and inclusive development (*sabka sath sabka vikas*). By revisiting this legacy, Bharat can forge a path that is uniquely its own, blending ancient wisdom with modern innovation.

Bharat's Rich Heritage of Entrepreneurship

Bharat has a long-standing tradition of entrepreneurship, deeply rooted in its history, culture, and economic practices. Unlike the modern view that often equates entrepreneurship solely with startups and innovation, Bhartiya entrepreneurship has historically been a holistic endeavor, encompassing trade, community welfare, and ethical wealth creation. By understanding and drawing inspiration from this heritage, Bharat can redefine entrepreneurship for its journey toward Samriddh, Mahaan and Samriddh aur Mahaan Bharat.

1. Ancient Trade Routes and Global Commerce

Bharat's entrepreneurial spirit can be traced back to its role as a major hub of global trade. The Silk Road, Spice Route, and maritime trade networks connected Bharat with regions as far as Europe, Africa, and South-east Asia. Bhartiya goods like textiles, spices and gemstones were highly sought after, making the subcontinent a significant player in the ancient world economy. Cities like Pataliputra, Kanchipuram and Bharuch thrived as centers of trade, with merchants mastering the art of negotiation, logistics, and market expansion.

2. Guilds (Shrenis) as Proto-Corporations

The shreni system, prevalent during the Mauryan and Gupta periods,

exemplifies Bharat's advanced approach to organized entrepreneurship. These guilds were cooperative associations of artisans, merchants and traders that regulated production, maintained quality, and ensured fair wages. They also acted as financial institutions, providing credit and pooling resources for collective growth. The shrenis were not just economic entities but also custodians of ethical practices, ensuring that business aligned with social and environmental responsibilities.

3. Indigenous Industries and Local Innovation

Bharat has been a cradle of indigenous industries, from the cotton and silk textile industries to metallurgy and shipbuilding. For instance, the world-famous Bhartiya muslin and Dhaka silk showcased unparalleled craftsmanship, while the Wootz steel from South Bharat was renowned for its strength and quality. These industries thrived not only due to their innovation but also because they were deeply integrated with local communities, sustaining livelihoods and promoting self-reliance.

4. Entrepreneurial Wisdom in Ancient Texts

Bhartiya scriptures and treatises, particularly the Arthashastra by Chanakya, provide deep acumens into entrepreneurship and economic management. The Arthashastra emphasizes the importance of market regulation, fair trade, and resource management for sustaining a prosperous state. It also advocates for ethical leadership, strategic thinking, and community welfare — principles that remain relevant to modern entrepreneurship.

5. Self-Sufficiency (Swadeshi) & Ethical Wealth Creation

The philosophy of Swadeshi, underscores Bharat's emphasis on self-sufficiency and locally driven development. By prioritizing indigenous industries and minimizing dependence on foreign goods, the Swadeshi movement highlighted the resilience and adaptability of Bhartiya entrepreneurship. This approach also emphasized wealth distribution within the community, ensuring that economic growth benefited the many rather than the few.

6. Community-Oriented Wealth Distribution

Bhartiya entrepreneurship has historically focused on creating wealth that serves the broader community. Ancient Bhartiya kings, merchants and

artisans often directed their wealth toward building temples, schools and water systems, reflecting a culture where business success was tied to social responsibility. This ethos contrasts with profit-centric models, showcasing an approach that aligns economic success with collective well-being.

7. Ethical Practices at the Core

A distinctive feature of Bhartiya entrepreneurship has been its emphasis on ethical practices. Ancient Bhartiya commerce operated on principles like satya (truth), dharma (righteousness) and ahimsa (non-violence). Contracts were honored, exploitation was discouraged and businesses often balanced profit with morality. This ethical foundation ensured long-term trust, sustainability, and resilience in the marketplace.

Bhartiya Parameters for a Developed Nation

For Bharat to truly achieve the vision of SamriddhaurMahaan Bharat @ 2047, its development must go beyond Western paradigms and be guided by values and criteria that reflect its unique cultural and historical essence. These Bhartiya parameters redefine progress, placing emphasis on collective well-being, ethical practices, cultural preservation, and sustainability.

1. Samriddhi (Prosperity)

In the Bhartiya context, prosperity is not just about economic growth; it is about equitable wealth distribution that uplifts every segment of society. True samriddhi ensures that development reaches the grassroots, bridging the rural-urban divide and empowering marginalized communities. This includes creating opportunities for small businesses, artisans and farmers, alongside fostering large-scale industries. An inclusive approach to prosperity aligns with Bharat's ethos of "**Vasudhaiva Kutumbakam**" (the world is one family), where individual success contributes to the collective good.

2. Dharma-Centric Progress

Bhartiya philosophy places Dharma—righteousness and ethical conduct—at the center of human endeavors. Development guided by Dharma prioritizes ethical governance, fair business practices and ecological balance. This parameter rejects exploitative practices and instead fosters growth that respects human dignity and the environment. By aligning with nature, such

progress creates sustainable ecosystems where development is a harmonious process rather than a disruptive one.

3. Cultural Sovereignty

A truly developed Bharat must retain and celebrate its cultural identity. Cultural sovereignty ensures that development does not come at the cost of erasing Bharat's traditions, languages and knowledge systems. Reviving ancient crafts, promoting local arts and incorporating Bhartiya philosophy in education and governance are integral to this parameter. By using its cultural wealth, Bharat can also lead the world in areas like wellness, spirituality and holistic living.

4. Sustainability and Localism

Sustainability and localism are foundational to Bharat's developmental ethos. Drawing from traditional practices like water conservation, organic farming, and zero-waste lifestyles, Bharat can build resilient communities that thrive on circular economies. The Atmanirbhar Bharat (Self-Reliant Bharat) vision encapsulates this principle, emphasizing the importance of local production and consumption. By encouraging micro-enterprises and reducing dependence on global supply chains, Bharat can create a model of development that is resilient to global disruptions while empowering local communities.

Conclusion

As Bharat moves toward its 100th year of independence in 2047, the opportunity to reshape its destiny lies in the hands of its entrepreneurs, policymakers, and citizens. A Samriddh aur Mahaan Bharat is one where development is not measured solely by material wealth, but by the well-being of its people, the preservation of its cultural heritage, and the harmony between its economic growth and environmental sustainability. The path forward must be rooted in the values that have sustained Bharat for millennia — Samriddhi, Dharma, cultural sovereignty and sustainability.

The latest data underscores the urgency of this transformation. Bharat's GDP has grown to \$3.89 trillion in 2024, making it the world's fifth-largest economy. Yet, more than 20% of the population still lives below the poverty line. This stark contrast highlights the need for a more Bhartiya centric approach to growth. By adopting the ancient Bhartiya ethos, Bharat can not

only overcome these challenges but set a new benchmark for what true development looks like.

Bharat has always been a land of innovation, sustainability and ethical commerce. By strengthening its entrepreneurial legacy, Bharat can build a future that is prosperous, self-reliant, and spiritually enriched.

Another challenge that Bharat faces is providing employment opportunities to its vast and growing population. With over 1.3 billion citizens, creating jobs for all remains a daunting task. Estimates suggest that Bharat needs to create at least 90 million new non-farm jobs by 2030 to absorb the expanding workforce. And the solution lie in empowering individuals to become job creators rather than mere job seekers. By fostering a culture of innovation and entrepreneurship, Bharat can unlock the immense potential of its youth, build a more prosperous and developed nation. The evidence is already visible, as Bharat has seen a significant surge in startup activity, with over 100 unicorns and a thriving ecosystem of incubators, accelerators, and venture capitalists. Entrepreneurship is emerging as a powerful tool for inclusive growth, enabling individuals from diverse backgrounds to participate in the economy, generate wealth, and create sustainable jobs for others. With entrepreneurship at the forefront, Bharat can redefine progress and work towards achieving a truly Mahaan evam Samriddh Bharat by 2047.

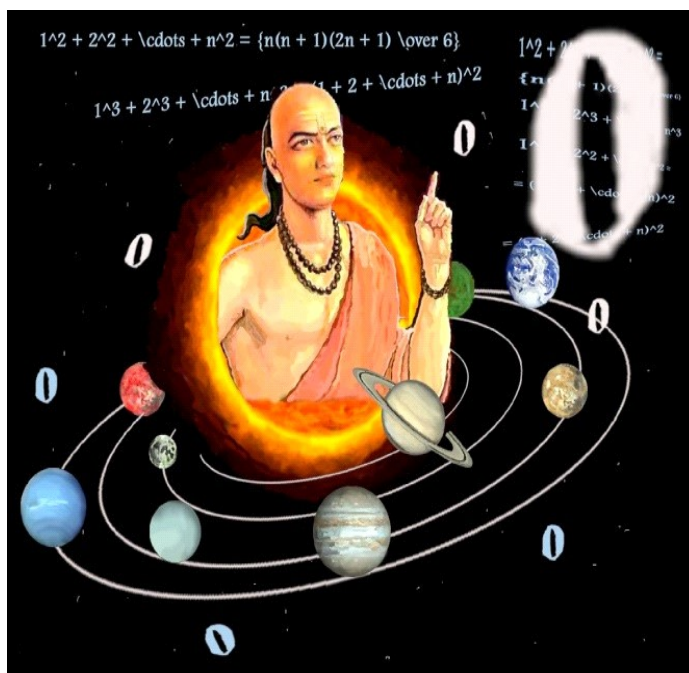
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Chapter 4

Vision Document for Science & Technology for Bharat

Bharat has long been a leader in the realm of science and technology. From its ancient beginnings as the birthplace of some of the most fundamental innovations, the nation has consistently contributed to the world's progress. Ancient Bharat was a hub of learning and discovery, fostering breakthroughs in medicine, engineering, mathematics, and astronomy. The principle of *vasudhaiva kutumbakam*—**the world as one family**—was not just a guiding philosophy but a lived reality, where Bharat contributed knowledge freely without the need for patents, driven by the desire to benefit humanity.



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Bharat contributions in medicine are notable, with Ayurveda and the Sushruta Samhita being among the earliest comprehensive medical treatises. Sushruta, known as the “father of surgery,” laid the foundations for modern surgical techniques. Similarly, in urban planning, the Indus Valley Civilization was advanced with grid layouts, drainage systems, and standardized materials, demonstrating Bharat’s early expertise in civil engineering. Bharat mathematicians introduced the concept of zero, the decimal system, and precise approximations of π (pi), which remain the bedrock of modern mathematical sciences. The Iron Pillar of Delhi, which has stood rust-free for over 1,600 years, reflects Bharat’s mastery in metallurgy, and Bharat thinkers like Rishi Charak and philosophers from the Nyaya and Vaisheshika schools shaped early developments in logic and epistemology.

Education and Skill Development for Future Challenges

As Bharat charts its course to 2047, one of the pillars of its progress will be the emphasis on STEM (Science, Technology, Engineering, and Mathematics) education. Bharat is already enhancing its education system with programs like the National Education Policy 2020, which emphasizes the integration of technology, interdisciplinary learning and practical skill-building. Over the next two decades, the government will continue to upskill and reskill millions of individuals to address the needs of emerging technologies such as artificial intelligence (AI), machine learning, and quantum computing. With high-speed internet access now reaching more than 800 million citizens through the Digital Bharat initiative, Bharat is setting the stage for a workforce that will drive the next global technology revolution.

By 2047, digital universities and AI-powered learning platforms will have transformed the way education is delivered, ensuring that the benefits of quality education reach every corner of the country. Bharat will also invest heavily in research and development (R&D), creating centers of excellence across different domains. The goal is not only to catch up with global standards but to set new ones, making Bharat a global innovation hub.

IT and Software: Towards Digital Sovereignty

Bharat is already the world’s IT powerhouse, with a thriving software services industry contributing over \$194 billion to the economy in 2021-22. Looking ahead to 2047, Bharat will leverage its strength in software devel-

opment, cloud computing and cybersecurity to achieve digital sovereignty. The Bharat Stack—which includes infrastructure like Aadhaar, UPI, and DigiLocker—already serves over 1.2 billion people, and will evolve into a blockchain-driven and AI-empowered ecosystem by 2047, ensuring data privacy, transparency, and financial inclusion for every citizen.

Bharat’s fintech sector is also experiencing unprecedented growth. With 40 billion UPI transactions processed in 2021 and 500 million bank accounts opened under the Jan Dhan Yojana, financial inclusion has reached new heights. By 2047, Bharat’s fintech industry—currently valued at \$50 billion—will exceed \$150 billion, powered by advancements in decentralized finance (DeFi), AI-driven banking systems and central bank digital currencies (CBDCs). Bharat will lead the global movement in ethical fintech, creating a financial ecosystem that promotes prosperity while maintaining its spiritual principles of fairness and equity.

Space Technology: Expanding the Frontiers

Bharat’s space program has evolved rapidly, with ISRO establishing itself as a leader in low-cost space exploration. By 2047, Bharat will not only play a dominant role in global space exploration but also in the commercial satellite market. With plans for launching 100+ satellites annually and the successful completion of the Gaganyaan human spaceflight mission, Bharat is well on its way to becoming a key player in space tourism, interplanetary exploration, and international collaborations on space research.



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The Bharat Space Economy is projected to reach \$50 billion by 2030, with Bharat at the forefront of innovations such as sustainable space practices and space-based solar power stations. With ISRO's growing capabilities, Bharat will also play a crucial role in global space security, ensuring that outer space remains free from conflict and accessible to all nations.

Biotechnology and Pharmaceuticals: Towards a Healthier World

Bharat's biotechnology and pharmaceutical sectors have already made significant contributions to global healthcare, especially evident during the COVID-19 pandemic. Bharat is the largest producer of generic medicines, with exports exceeding \$24 billion annually. By 2047, Bharat will emerge as a leader in personalized medicine, genomics, stem cell research, and tissue engineering. The creation of 100+ biotech parks and innovation hubs across the country will fuel breakthroughs in gene editing and synthetic biology. These innovations will lead to more precise medical treatments, longer life expectancies, and enhanced quality of life.

Telemedicine and AI-driven healthcare will also expand, allowing Bharat to provide healthcare access to its entire population of over 1.7 billion people. By then, robotic surgeries will become commonplace, with AI-assisted diagnostics enabling quicker and more accurate detection of diseases.

The Future of Ayurveda with Technology

Ayurveda, one of the world's oldest medical systems, has seen a resurgence globally. With the wellness industry expected to grow to \$6 trillion globally by 2030, Bharat's rich tradition in holistic health is well-positioned for innovation. The integration of modern technology in Ayurveda will transform its practice and accessibility. Digital platforms for telemedicine and e-Ayurveda consultations are already reaching rural and urban populations alike. By 2047, AI-driven diagnostics will analyze patient data to recommend personalized Ayurvedic treatments, blending traditional wisdom with precision medicine.



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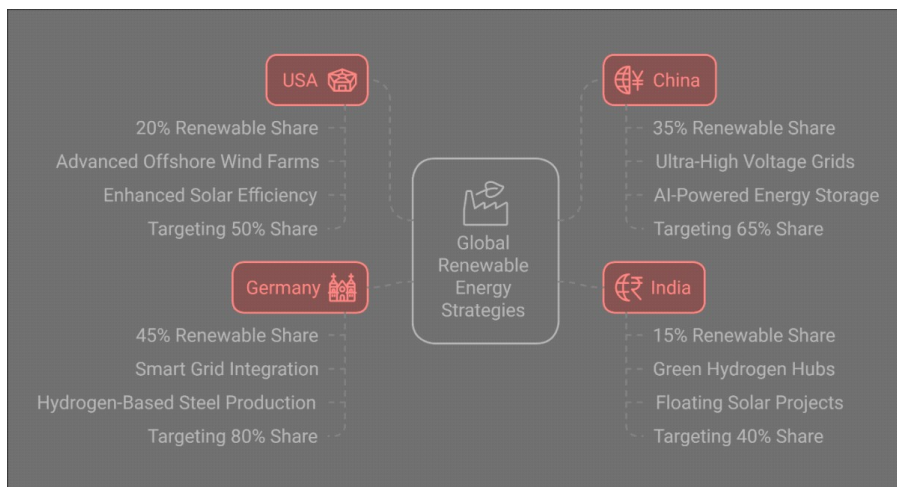
Research from the Ministry of AYUSH projects that by integrating Ayurveda with AI and genetic research, Bharat could reduce healthcare costs by 20% while addressing the unique health needs of its population. Increased funding in Ayurvedic R&D will yield innovations such as plant-based pharmaceuticals, precision herbal treatments and bioinformatics platforms that track the efficacy of Ayurvedic therapies. Bharat's investment in digital Ayurveda platforms will help address the global wellness market, exporting both products and knowledge rooted in Bhartiya tradition.

Renewable Energy: Leading the Global Green Revolution

Bharat's commitment to sustainability is central to its vision for 2047. With ambitious goals under the National Solar Mission, Bharat is targeting 450 GW of renewable energy capacity by 2030. By 2047, Bharat will be a global leader in green energy, with breakthroughs in battery technology, energy storage solutions, and green hydrogen. Bharat will not only achieve net-zero carbon emissions by 2070 but will also lead the world in developing sustainable solutions for energy-efficient cities and climate-resilient infrastructure.



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By that time, Bharat will also have established an international solar grid, allowing for transcontinental energy trade. This will cement Bharat's role as a global energy exporter, ensuring energy security for its neighbours and beyond.

Agriculture: Feeding the World Sustainably

Bharat's agricultural sector will undergo a digital transformation by 2047, with AI-powered precision farming and climate-resilient crops ensuring food security in the face of global climate change. The use of blockchain for supply chain transparency and digital agriculture platforms will revolutionize how

farming is managed and monitored. With over 600 million people dependent on agriculture.

In addition, drone technology is being deployed in real-life applications for crop monitoring and pest control. For instance, the Maharashtra government, in partnership with Agri-Tech startups, has successfully implemented drones to spray pesticides over cotton crops, reducing the manual labour required and minimizing chemical exposure for farm workers.

The Bharat Agricultural Research Institute (IARI) has developed drought-resistant and flood-tolerant rice varieties, benefiting farmers in regions susceptible to extreme weather conditions. In 2019, the release of climate-smart rice varieties like DRR Dhan 44, capable of withstanding drought conditions, helped farmers in Odisha maintain yields despite a below-average monsoon season.

Swadeshi Farming Technology: Revitalizing Agriculture for Sustainability and Self-Reliance

In agriculture, the swadeshi or self-reliant approach has fueled innovations in indigenous farming practices, which are being modernized with technology to ensure food security for Bharat's projected population of 1.7 billion by 2047. Currently, over 600 million Bharatiya's depend on agriculture. The government's push towards sustainable practices includes precision farming, where real-time data from sensors optimizes water and fertilizer usage, and drone technology, which assists in crop monitoring and pest management.

The Rashtriya Krishi Vikas Yojana (RKVY), for example, has been instrumental in encouraging organic farming and traditional practices in states like Sikkim, which became Bharat's first fully organic state in 2016. Sikkim's transition to organic farming not only improved soil fertility but also boosted agricultural exports, showcasing a scalable model for other regions.

Additionally, in states like Andhra Pradesh, Zero-Budget Natural Farming (ZBNF) is gaining traction. ZBNF eliminates the need for synthetic fertilizers and pesticides, instead promoting the use of locally-sourced inputs. This technique has been adopted by over 600,000 farmers in Andhra Pradesh, leading to significant reductions in production costs and improvements in soil health. By 2047, Bharat aims to expand ZBNF practices across more regions, making self-reliant, low-cost farming the standard.

Projects like the Digital Agriculture Mission and Soil Health Card Scheme offer data-driven insights to farmers, helping them make informed decisions that can increase crop yield and maintain soil health. Irrigation techniques like drip and sprinkler systems are combined with AI to ensure water is used judiciously in drought-prone regions. Today, blockchain is also being implemented in the agriculture supply chain, creating transparency and fairness in pricing for small-scale farmers.

Manufacturing and EVs: Smart, Green, and Sustainable

Bharat's manufacturing sector is on the cusp of a transformation, driven by a strategic focus on smart, green and sustainable practices. With initiatives such as the Production Linked Incentive (PLI) Scheme, which aims to boost domestic manufacturing in sectors like electronics, automotive and renewable energy, Bharat is setting a foundation for a self-reliant industrial ecosystem. The government has committed nearly \$26 billion under the PLI scheme to promote high-tech manufacturing, reduce import dependence and enhance exports, positioning the country as a global manufacturing hub.

One of the most visible examples of this transformation is the electric vehicle (EV) industry. As part of the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) scheme, the Bharat government aims to have 30 percent of all vehicles on its roads be electric by 2030. Today, cities like Delhi and Bengaluru are adopting EV-friendly policies, with dedicated EV charging stations and tax incentives for EV buyers. The country has already achieved significant growth in EV adoption, with over 1 million EVs registered as of 2023. This shift is supported by domestic manufacturers like Tata Motors and Mahindra & Mahindra, which are producing affordable EV options for the mass market.

To support the EV ecosystem, the Bharat government is investing in green charging infrastructure. In partnership with companies like Reliance Industries and Ola Electric, Bharat is establishing charging stations across major highways, ensuring EV drivers can access charging points nationwide. According to a report by the Bharat Energy Storage Alliance, the Bharat EV market is expected to grow at a compound annual growth rate (CAGR) of 36 percent from 2023 to 2030. This expansion is driven by consumer demand and the falling costs of lithium-ion batteries, which make up around 40 percent of an EV's cost. Localizing battery manufacturing has become a pri-

ority, with companies like Amara Raja Batteries and Exide Industries investing in battery cell production plants within Bharat, reducing the country's reliance on imports.

In addition to EVs, Bharat's broader manufacturing landscape is undergoing a digital transformation. The adoption of Internet of Things (IoT) technologies, artificial intelligence (AI) and robotics is revolutionizing the way factories operate, making them smarter, more efficient and environmentally friendly. For instance, companies like Maruti Suzuki have introduced smart factories that utilize IoT sensors to monitor equipment health, optimize energy use, and reduce waste. Such practices not only lower operational costs but also minimize environmental impact. A recent report from McKinsey estimates that IoT and AI integration in Bharat manufacturing could increase productivity by up to 20 percent, significantly enhancing Bharat's competitiveness in the global market.

Green manufacturing has become another cornerstone of Bharat's industrial strategy, with a focus on reducing emissions and promoting recycling. By 2047, Bharat aims to be a leader in sustainable production, with over 50 percent of its manufacturing energy needs met by renewables. The GreenCo rating system, launched by the Confederation of Bharat Industry (CII), is guiding companies toward sustainable practices. More than 600 Bharat companies, including heavyweights like JSW Steel and Tata Steel, have received GreenCo certifications for implementing energy-efficient processes, waste reduction, and water conservation practices.

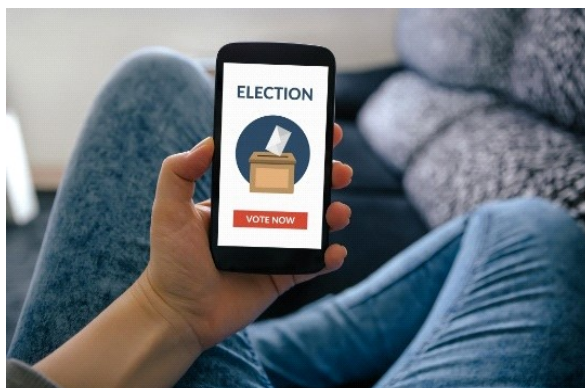
With a rising focus on circular economy principles, Bharat's manufacturing sector is also addressing the environmental impact of waste. Recycling initiatives are being developed in sectors such as electronics, where e-waste management is critical. The Electronic Waste Management Rules, set forth by the government, require manufacturers to take responsibility for collecting and recycling e-waste, helping reduce environmental degradation and resource depletion.

Semiconductor Manufacturing: Bharat's Strategic Move into Chip Production

Bharat's semiconductor sector, a long-standing gap in the country's tech infrastructure, is now receiving focused investment and attention. Through

initiatives like the Production Linked Incentive (PLI) Scheme and the Semicon Bharat Program, the government has committed \$10 billion to establish a local semiconductor manufacturing ecosystem. The goal is to reduce reliance on global semiconductor imports, which currently fulfill 100% of Bharat's semiconductor demand.

Global companies like Micron Technology and Foxconn have announced partnerships with the Bharat government to establish chip fabrication units in states like Gujarat and Tamil Nadu. By 2047, Bharat aims to produce a significant portion of its semiconductor needs domestically, fostering resilience against global supply chain disruptions and establishing itself as a key player in the \$1 trillion global semiconductor market. The establishment of these facilities will also support sectors like automotive, smart devices, and 5G infrastructure, allowing Bharat to become self-sufficient in the production of critical technology.



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Blockchain Technology and Elections

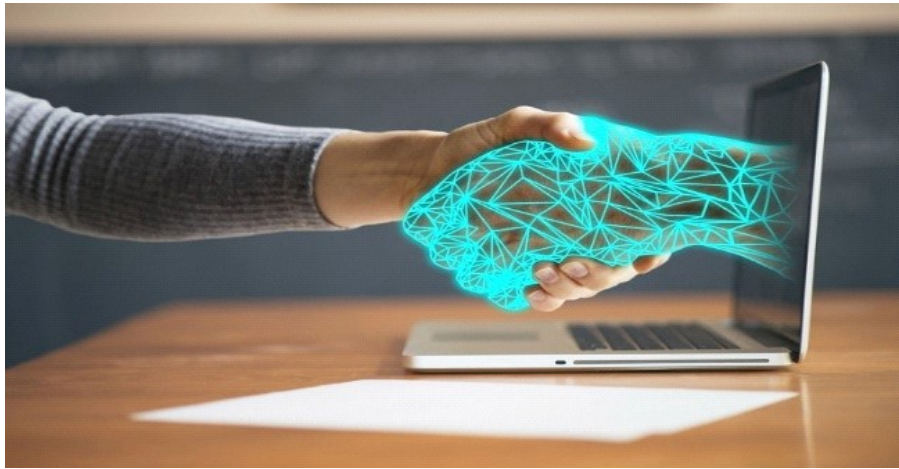
Blockchain technology, which has gained traction worldwide for its secure, transparent and tamper-resistant framework, has promising applications in Bharat's democratic processes. As the largest democracy with over 900 million eligible voters, Bharat faces challenges in ensuring fair, accessible, and efficient elections. By 2047, Bharat is likely to adopt blockchain-based election systems, allowing voters to cast ballots securely from anywhere. Blockchain's decentralized nature will ensure transparency, allowing citizens to verify each vote without compromising voter privacy.

The Election Commission of Bharat has already begun exploring blockchain for migrant voting, with pilot programs expected in the coming years. Studies show that a blockchain-enabled voting system could reduce electoral fraud, increase turnout, and make elections more accessible to all, including those in rural areas. According to research from the National Blockchain Strategy, blockchain in governance could boost transparency and trust, positioning Bharat as a pioneer in digital democracy.

Artificial Intelligence: Paving the Path to a Smarter Bharat

As Bharat strides towards 2047, Artificial Intelligence (AI) is poised to be a transformative force, shaping the nation's socio-economic landscape while positioning it as a global leader in technology and innovation. Under initiatives like NITI Aayog's National AI Strategy and the #AIforAll campaign, Bharat is leveraging the full potential of AI to address its unique challenges, from improving healthcare and agriculture to transforming education and governance. The integration of AI across sectors is not just a technological shift; it embodies a vision of inclusive growth, where the benefits of AI are shared by all sections of society.

AI's role in healthcare is already evident, with AI-powered diagnostic tools, telemedicine platforms, and robotic surgeries making quality healthcare more accessible, even in rural areas. These technologies promise to reduce healthcare costs and enable early detection, personalized treatments, and more efficient care delivery. Similarly, in agriculture, AI's potential to revolutionize farming practices is immense. By providing farmers with tools for precision farming, real-time data on weather patterns, and disease prediction, AI can significantly enhance agricultural productivity and reduce waste. Bharat's focus on Zero-Budget Natural Farming combined with AI-driven solutions ensures that technological progress aligns with sustainable practices, allowing Bharat's agricultural ecosystem to thrive in the face of climate change and labourer shortages.



While AI is transforming various sectors, it is also reshaping urban infrastructure. The integration of AI into smart cities will lead to efficient traffic management, waste disposal and energy optimization. AI-powered smart mobility solutions, including autonomous electric vehicles and improved public transportation systems, will enhance safety, reduce environmental impact, and increase connectivity, making urban living more sustainable and efficient. However, as AI expands its reach, it also brings new challenges and risks, especially around data privacy, security, and algorithmic biases. Bharat's approach to these issues is grounded in a commitment to ethical AI governance. The establishment of regulatory frameworks, such as the National AI Marketplace (NAIM), will play a crucial role in ensuring AI development is transparent, accountable, and responsible. These frameworks will address key challenges, such as the ethical use of AI in sectors like healthcare, law enforcement and finance, while balancing innovation with the protection of citizen rights.

Bharat's future success in AI depends not only on technological advancements but also on leadership and governance. To lead the AI revolution responsibly, Bharat must adopt a collaborative approach, involving stakeholders from government, industry, academia and civil society. Leadership in AI requires a deep understanding of both the technical aspects and the societal implications of these technologies. As AI continues to evolve, Bharat is embracing a model that fosters inclusive leadership, aligning innovation with the nation's goals for economic and social development. The AI for All initia-

tive embodies this approach, ensuring that AI benefits sectors such as agriculture, healthcare, education and urban development. However, Bharat must also remain vigilant in addressing the potential pitfalls of AI, such as job displacement, data privacy concerns, and the risk of AI exacerbating existing societal inequalities.

The future of AI presents both immense opportunities and critical challenges. In the predictions for the future, AI is expected to revolutionize various industries, with generative AI becoming a central focus. While the adoption of generative AI could drastically reduce the cost and time of content creation across sectors like media, gaming, and healthcare, it also raises concerns about its energy consumption, the potential for deep fake content, and the implications for job markets. The gap between AI investments and returns presents a significant challenge for businesses and governments. Companies worldwide are pouring billions into AI infrastructure—ranging from chips to data centers—but the returns have often not yet met expectations. Additionally, gender gaps in AI usage and concerns around AI’s role in perpetuating bias further complicate the path forward. These issues highlight the need for strong regulatory bodies to monitor AI development and ensure its benefits are equitably distributed.

As AI becomes more deeply embedded in global and national economies, its regulation will become more complex. The importance of regulatory bodies cannot be overstated, as they will help manage the implementation of AI technologies while addressing key issues like algorithmic bias, data privacy, and job displacement. Bharat’s intellectual property (IP) framework is evolving to address these challenges, ensuring that AI innovations are protected while also promoting collaboration. As AI continues to shape industries, its ability to disrupt the workforce will require governments to rethink skills development and the future of work. Bharat’s focus on AI-driven education and skilling programs aims to ensure that future generations are equipped with the tools to thrive in an AI-dominated economy, while also preparing those displaced by automation for new opportunities.

A major aspect of Bharat’s AI strategy is addressing the eight key gaps in AI implementation. These gaps, including the high costs of AI adoption, lack of broad-based expertise and the absence of an enabling data ecosystem, are critical barriers that must be overcome to fully realize the potential of

AI. Data governance will be a key issue, with Bharat needing to ensure that AI technologies are developed in a way that respects citizens' privacy and promotes fairness. The risks associated with poorly managed data, such as biased datasets and the exploitation of personal information, necessitate robust data protection policies and Bharat's ongoing work to pass the Personal Data Protection Bill is a significant step forward.

By 2047, AI is expected to contribute significantly to the global economy, with Bharat playing a key role in the AI ecosystem. The country's AI market is projected to reach \$7.8 billion by 2025 and by 2047, it could be a leader in areas like AI-driven healthcare, fintech and smart manufacturing. Bharat's AI advancements will be characterized by a unique approach—one that blends ethical principles with cutting-edge innovation to foster inclusive growth. In healthcare, AI's role in personalized medicine and genomics will revolutionize treatment plans, while in agriculture, AI's integration with blockchain will create more transparent and equitable supply chains. Bharat's space program, underpinned by AI, will also see transformative changes, driving innovation in satellite technology, space exploration and commercialization.

Bharat's approach to AI has been characterized by its focus on bridging these gaps, particularly in areas such as research and development, data accessibility and ethical governance. Collaborative efforts across public and private sectors are fostering the creation of a robust AI ecosystem that aligns with the nation's vision of equitable growth. Programs like the National AI Strategy have emphasized the development of enabling data ecosystems, ensuring access to high-quality datasets while maintaining strict data privacy and security protocols. By addressing barriers such as the high cost of AI adoption and the lack of broad-based expertise, Bharat is paving the way for scalable, sustainable AI solutions that can be deployed across diverse sectors.

One of the most significant opportunities lies in the development of a **National AI Marketplace (NAIM)**, a centralized platform designed to connect AI developers, researchers, and users. This platform aims to facilitate the sharing of data, annotated models and deployable solutions, creating a self-sustaining cycle of innovation and adoption. By 2047, NAIM and similar initiatives will position Bharat as a hub for global AI collaboration, enabling the country to not only meet its domestic needs but also contribute to international advancements in AI technology.

The importance of ethical governance in AI cannot be overstated, as Bharat navigates challenges such as algorithmic bias, digital exclusion, and potential misuse of AI systems. Regulatory frameworks will play a pivotal role in ensuring the responsible development and deployment of AI, with Bharat adopting global best practices while tailoring solutions to its unique socio-economic context. Efforts to train regulators, judges, and intellectual property authorities in the complexities of AI will further strengthen the legal and ethical oversight of this transformative technology.

Future trends in AI, such as the rise of generative AI, autonomous systems, and decentralized intelligence, hold tremendous promise for innovation but also present new challenges. The increasing adoption of generative AI in industries like media, gaming and real-time applications highlights its potential to revolutionize content creation and consumption. However, Bharat must remain vigilant against risks such as energy-intensive AI systems and the misuse of deepfake technologies. Investments in clean energy solutions and advanced detection tools will be essential to mitigate these risks, ensuring that AI's growth aligns with the nation's sustainability goals.

As AI reshapes industries, it will also redefine the nature of work and skill requirements. Skilling and reskilling programs are already being implemented to prepare Bharat's workforce for this shift, with decentralized teaching models and industry partnerships creating opportunities for upskilling in areas like data annotation, AI model development and human-AI collaboration. By fostering a culture of continuous learning and innovation, Bharat can ensure that its workforce is not only prepared for the challenges of an AI-driven economy but also empowered to drive its growth.

In conclusion, Bharat's journey towards 2047 is a testament to its rich heritage, innovative spirit, and commitment to sustainability. By integrating ancient wisdom with cutting-edge technology, Bharat will not only become a global leader in science and technology but will also set an ethical and spiritual example for the world. With renewable energy, space exploration, fintech, biotechnology, Artificial Intelligence (AI) and manufacturing driving the country forward, Bharat will emerge as a beacon of prosperity, peace, and progress on the global stage.



Chapter 5

Defence and Security of Bharat: From Ancient Times to the Present

From ancient times to the present day, Bharat's defence structure has seen a lot of phases, adapting to various historical, geopolitical and technological changes. In ancient times, Bharat's military was a combination of well-trained infantry, cavalry and war elephants. Forts like those in Chittorgarh, Gwalior and the Chola naval fleet were symbols of strategic thinking and military capability. The military leaders, such as Ashoka the Great, Samudra Gupta and later, Shivaji Maharaj, set the foundations for a strong defence and security infrastructure. However, Bharat's security landscape drastically changed with the arrival of Islamic invaders in the 11th century. The Delhi Sultanate and later the Mughal Empire brought both conflict and cultural integration. These invaders often ruled through military might, bringing new tactics and weaponry into Bharat's historical battlefield.



Ashoka

By the 17th century, the Mughal Empire had weakened and the British East Bharat Company expanded its influence. The British colonial rule restructured Bharat's military, establishing a system that favoured British dominance while undermining local power structures. The Bhartiya Army was restructured to serve British interests, with a significant portion of its resources devoted to the defence of the Empire rather than Bharat itself. The British used divide-and-rule tactics, which eventually culminated in the Bhartiya Rebellion of 1857, a violent but ultimately unsuccessful revolt. Under British colonialism, Bharat's technological advancement in military warfare stopped. Local rulers were disarmed and Bharat's vast manpower was used for British wars in various parts of the world. It wasn't until the mid-20th century, with the struggle for independence, that Bharat regained control of its own security and defence infrastructure.

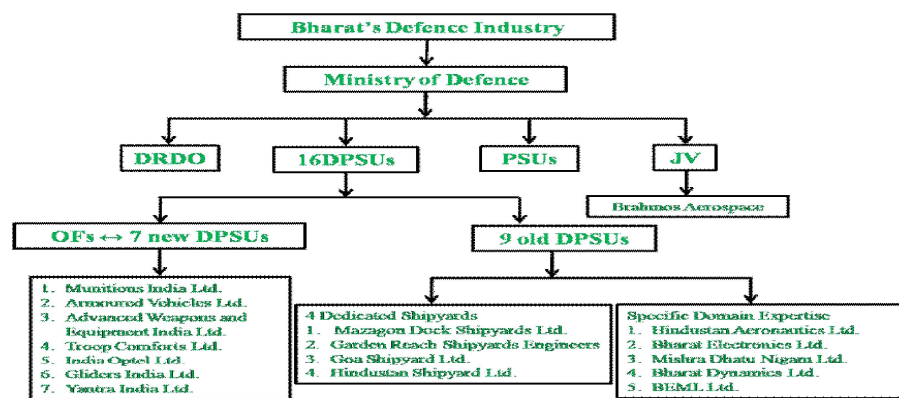
After Bharat gained independence in 1947, it faced immediate challenges to its sovereignty and territorial integrity. The partition of Bharat led to the creation of Pakistan and the two nations have had a turbulent relationship since. One of the first military challenges came in 1947-48, when Pakistan invaded Kashmir, leading to the first Bharat-Pakistan war. The war ended with a ceasefire brokered by the United Nations, and Kashmir was divided along the Line of Control (LoC), but the issue of Kashmir has remained unresolved. In 1965, another war broke out between Bharat and Pakistan over Kashmir. Though the war ended with a return to pre-war positions, it highlighted several weaknesses in Bharat's defence strategy and military readiness. Bharat's lack of modern weaponry and logistics were exposed, leading to serious introspection within the military establishment. The war of 1965 set the stage for Bharat's resolve to modernize and strengthen its defence capabilities. However, the most significant and humbling setback came in 1962, when China, under Mao Zedong, launched a surprise invasion of Bharat in the northeastern region. The war exposed the unpreparedness of Bharat's military and its vulnerabilities in the high-altitude Himalayan region. The defeat was a wake-up call for Bharat, leading to a comprehensive overhaul of its defence strategy, with greater emphasis on modernisation, border security, and strategic alliances.

The wars with Pakistan and China provided important lessons for Bharat in terms of defence strategy and national security. In response, Bharat embarked on a path of modernization, developing indigenous arms and ammunition. The strategic importance of modernisation was reinforced by these

defeats, leading to the establishment of institutions like DRDO (Defence Research and Development Organisation) and the development of domestic arms production. The surprise nature of both the 1962 China war and Pakistan’s repeated provocations emphasized the need for robust intelligence networks. Bharat has since made significant investments in intelligence infrastructure, including the creation of agencies like RAW (Research and Analysis Wing) to enhance security. Both wars underscored the importance of building international alliances and its global presence through strategic partnerships, particularly with countries like the United States, Russia, and Japan, in the context of regional security concerns.

Current Status, Key Developments and Capabilities of Bharat’s Defence Sector

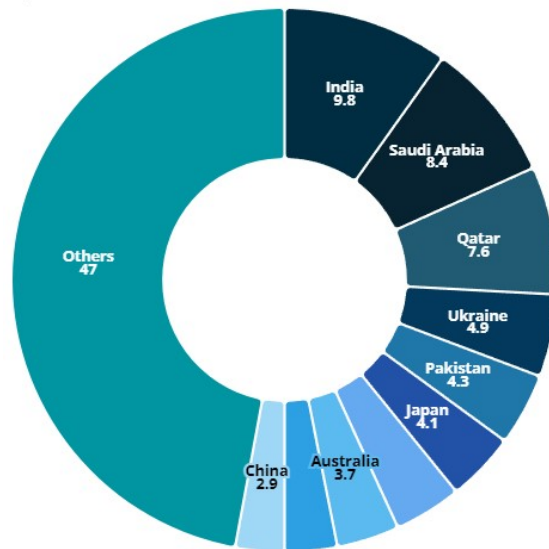
With an annual budget allocation that consistently ranks among the highest in the world, Bharat’s defence expenditure reflects its strategic importance and the necessity to maintain a robust military presence. With a defence budget that ranks among the top globally, Bharat allocates substantial resources towards maintaining and enhancing its strategic defence assets. In the fiscal year (FY) 2024-25, the defence budget is pegged at around \$74.3billion, the figure is 4.79% higher than last year’s defence budget and 18.43% higher than the FY2022-23 sum. FY 2024-24 defence budget positions Bharat as the third-largest military spender globally, following the United States and China which emphasize the nation’s commitment to strengthening its military infrastructure and capabilities. This substantial investment underscores the country’s commitment to ensuring its sovereignty and preparing for any potential security challenges.



Bharat's defence structure organization

The Government has taken several policy initiatives in the past few years under ‘Make in Bharat’ and ‘Atmanirbhar Abhiyan’ and brought in reforms to encourage indigenous design, development and manufacture of defence equipment in the country, including design and development of the complex and crucial projects. Historically, the defence sector in Bharat has been dominated by state-owned entities such as the DRDO, Hindustan Aeronautics Limited, and Bharat Electronics Limited. However, recent policy shifts have aimed at encouraging greater participation from Micro, Small, and Medium Enterprises (MSMEs) and startups, recognizing their potential to drive innovation and agility in the sector. As a result of ‘Make in Bharat’ Atmanirbhar Bharat Abhiyan and greater participation from private sector, Bharat’s defence exports have reached an all-time high, surging from Rs. 686 crore in FY 2013-14 to Rs. 21,083 crore in FY 2023-24. It reflects a remarkable increase of over 30 times in export value over the past decade. Bharat’s export portfolio boasts a diverse range of advanced defence equipment, including bulletproof jackets and helmets, Dornier (Do-228) aircraft, Chetak helicopters, fast interceptor boats, and lightweight torpedoes. A noteworthy highlight is the inclusion of ‘Made in Bihar’ boots in the Russian Army’s equipment, marking a significant milestone for Bhartiya products in the global defence market and showcasing the country’s high manufacturing standards.

Despite the government’s significant efforts and policies, Bharat’s defence industry continues to face numerous challenges as well. One major issue is bureaucratic inefficiency, which slows down decision-making processes and hinders progress. Additionally, the industry is slow in adopting new technologies, limiting its ability to modernize. These issues have hindered the domestic production of advanced defence equipment, resulting in Bharat remaining heavily reliant on imports to meet its defence needs. Bharat’s arms imports rose by 4.7 percent between 2014-18 and 2019-23, positioning it as the largest arms importer globally in 2019-23 with a 9.8 percent share of the total arms imports. While Russia remained the primary supplier, its share of Bharat’s arms imports has declined from 76 percent in 2009-13 to 58 percent in 2014-18, and further to 36 percent in 2019-23. Instead, Bharat has increasingly turned to Western suppliers, particularly France and the USA, underscoring the urgent need for enhanced self-reliance and indigenous development in the defence sector.



Global arm imports 2019-23 (Stockholm International Peace Research Institute, factsheet 2024)

The Changing Nature of Warfare: Beyond Traditional Hardware

The nature of warfare has significantly evolved in recent years, moving beyond traditional battlefields and hardware to encompass emerging technologies that redefine strategies and outcomes. This transformation is largely driven by advancements in Artificial Intelligence (AI), drones, and hypersonic weapons, which are shaping both the conduct and consequences of modern conflicts.

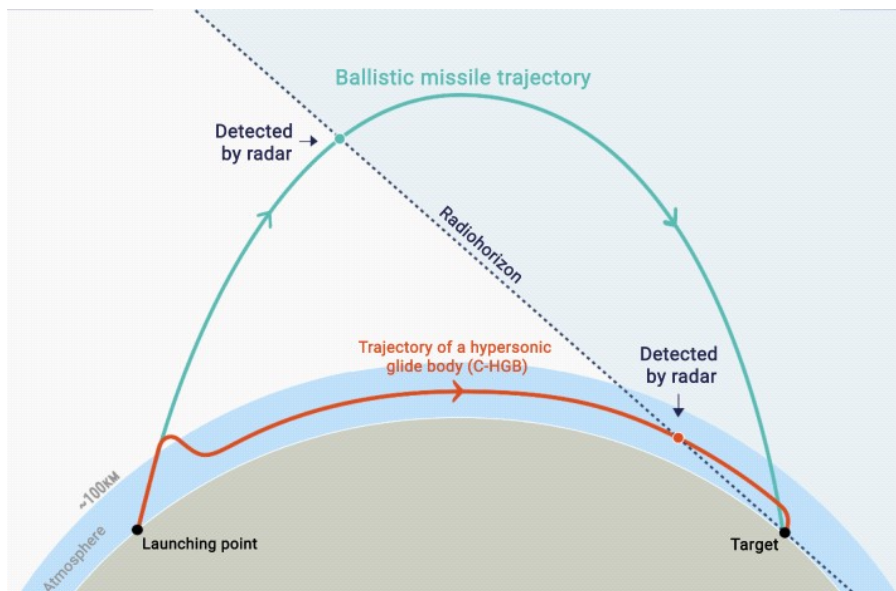
The Role of AI and Drones: AI has become a cornerstone of modern military operations, enabling precision targeting, real-time battlefield analysis, and autonomous decision-making. For example, Ukraine's use of AI-powered drones in its conflict with Russia highlights how technology can level the playing field. These drones, varying in size from palm-held devices to larger models, have been pivotal in surveillance, directing artillery, and launching precision strikes against targets. Such innovations reflect a broader trend where relatively affordable and adaptable technologies disrupt traditional military hierarchies

Israel's use of drone swarms, guided by AI, demonstrates the potential of integrating autonomous systems to outmaneuver defenses. Similarly, the

deployment of loitering munitions or “kamikaze drones” in Ukraine underlines the growing relevance of drones in asymmetrical warfare. These drones operate independently, guided by AI systems that identify and strike high-value targets

Hypersonic Weapons: A New Dimension - Hypersonic weapons add a new layer of complexity to modern conflicts. These weapons, capable of traveling at speeds exceeding Mach 5, combine speed, maneuverability, and precision, rendering existing missile defense systems largely ineffective. hypersonic weapons are extremely difficult to track and intercept by existing defence systems is what makes them a particularly dangerous novel form of weaponry. The US has developed Aegis ships equipped with the sea-based terminal (SBT) capability, which can engage some hypersonic threats in the latter part of the missile’s flight path, what is known as the terminal phase. Aegis SBT is the only active defence for countering hypersonic missile threats at the moment. The US Space Development Agency (SDA) is working on a Tracking Layer constellation which is envisioned as a global network of sensors meant to act as a defence shield against ballistic and hypersonic missiles.

When it comes to Bharat, while undertaking the BrahMos-II and



Comparison of Ballistic missile and Hypersonic glide vehicle

HSTDV projects are certainly welcome steps in the development of its hypersonic capabilities. Defence Research and Development Organisation (DRDO) conducted a successful flight-trial of Bharat's first long-range hypersonic missile from Dr APJ Abdul Kalam Island off the coast of Odisha late on November 16, 2024. This hypersonic missile is designed to carry various payloads for ranges greater than 1,500 kms for the Armed Forces. The Bhartiya Space Research Organisation (ISRO) can also serve as a viable candidate for developing space-based sensors, which could potentially be developed along the lines of the US SDA's ongoing project. Given the constant threat posed by China and its growing prowess in hypersonic weapons development, Bharat needs to accelerate its efforts not only in hypersonic weapons, but deterrence as well. Russia's use of hypersonic missiles in the Ukraine war has underscored their strategic significance. Additionally, claims by Yemen's Houthi rebels and North Korea about testing such weapons reveal their potential proliferation, raising concerns about their role in future conflicts.

Emerging Threats and Challenges: The shifting dynamics of warfare extend beyond the battlefield. Cyberattacks, misinformation campaigns, and space-based technologies are increasingly critical in modern conflicts. For example, cyber operations have been employed to disrupt communications and logistics, as seen in various global conflicts. Nations like Israel and China are heavily investing in AI-driven cyber defense and offense capabilities to secure critical infrastructure and maintain strategic advantages

For Bharat, adapting to these trends is crucial. While the nation has made significant strides in self-reliance through the "Make in Bharat" initiative, it must now prioritize the development of cutting-edge technologies. Investment in AI-driven intelligence, drone swarms, and hypersonic weaponry should complement traditional defense capabilities. Furthermore, establishing strong cyber defense systems and advancing space technology can ensure preparedness against non-traditional threats.

Internal Security Threats: The Role of Social Unrest

Country's defence and security are not limited to external threats, internal threats are equally critical. These arise due to its geographical diversity, neighbouring countries with whom relationships are complex, and the socio-political dynamics within the nation. Major internal threats in Bharat are ter-

rorism in Jammu and Kashmir (J&K), the insurgencies in North East and Central Bharat, left wing extremism, cross-border infiltration, organised crime, inflow of refugees, interstate disputes, natural disasters, pandemic, disinformation campaigns, mass protests etc. One of the most dangerous aspects of modern warfare is the ability to destabilize a country through internal unrest. Terrorism in J&K has been the biggest internal security threat to Bharat since the late 1980s. According to the South Asia Terrorism Portal, more than 15,000 civilians and around 7,000 security personnel have been killed by terrorists in J&K from 1988 to March 2024. The farmers' protest of 2020-21 in Bharat is also a prime example of how external forces, whether state-sponsored or not, can use social movements as a vehicle to instigate unrest within a country.

Many of the groups behind such movements have no direct interest in the issues they claim to champion. Their true aim is often to create internal chaos and weaken the fabric of national unity. The farmers' protests were used by certain foreign elements to fund and instigate violence and disorder within Bharat, threatening its internal security. This highlights the need for Bharat to address not only external military threats but also domestic unrest and potential internal sabotage.

Furthermore, examples like Bangladesh, where political turmoil can lead to abrupt shifts in power and governance, underline the necessity of maintaining strong internal security mechanisms. Bharat must remain vigilant and ensure that any external efforts to manipulate internal politics are thwarted swiftly and decisively.

Recommendations

Bharat's defence and security strategy must be multifaceted. While military self-reliance and technological advancement are essential, the country must also focus on strengthening internal security and countering non-traditional threats. Atmanirbhar Bharat must extend beyond manufacturing to include the creation of advanced cyber capabilities, AI, and space technologies, as well as fostering resilience against internal dissent and destabilization. Key recommendations are:

I. Military Modernization

- **Accelerate Procurement and Development:**

- ❑ Expedite the acquisition of advanced weapon systems such as Rafale-M jets, hypersonic missiles, and fifth-generation stealth fighters to counter threats from China and Pakistan.
- ❑ Prioritize indigenous production under the “Make in Bharat” initiative to reduce dependency on imports, especially from Russia.
- ❑ Focus on acquiring light tanks, nuclear submarines, and strategic bombers to address specific geographical challenges like those in the Himalayan region and the Bhartiya Ocean.
- **Strengthen Naval Capabilities:**
 - ❑ Invest in additional aircraft carriers and nuclear-powered submarines to enhance maritime security and counter China’s growing influence in the Bhartiya Ocean Region.
 - ❑ Accelerate delayed projects such as the indigenous aircraft carrier and submarine development programs.

II. Private Sector and Innovation

- **Leverage Private Participation:**
 - ❑ Increase the involvement of private firms in manufacturing, innovation and R&D through partnerships with DRDO and public sector enterprises.
 - ❑ Incentivize start-ups and MSMEs to develop niche technologies, including AI, robotics and unmanned systems, for defence applications.
- **Enhance Technology-Driven Warfare:**
 - ❑ Develop capabilities in new domains such as space warfare, electromagnetic spectrum control and AI-powered battlefield intelligence.
 - ❑ Adopt a multi-dimensional approach to information warfare by integrating cyber, digital and psychological operations.

III. Internal Security

- **Strengthen Counter-Terrorism Efforts:**
 - ❑ Enhance coordination between intelligence agencies like IB and RAW, using advanced tools such as artificial intelligence, drones and geospatial intelligence for tracking and targeting.
 - ❑ Expand efforts to dismantle overground worker networks and

- freeze assets of terrorist supporters.
 - ❑ Focus on de-radicalization programs for youth and provide employment and counseling to reduce recruitment into extremist groups.
- **Address Left-Wing Extremism (LWE):**
 - ❑ Boost infrastructure and economic development in Naxal-affected areas to address root causes of unrest.
 - ❑ Equip police forces with modern tools and foster better collaboration between state and central agencies.
 - ❑ Empower tribal communities through transparent land policies, education via institutions like Eklavya Model Schools, and inclusion in developmental projects.
- **Resolve Northeast Conflicts:**
 - ❑ Prioritize the completion of peace accords, especially the Naga Peace Accord, through continued dialogue with insurgent groups.
 - ❑ Address grievances in volatile regions like Manipur by fostering community-led reconciliation and addressing refugee crises.
 - ❑ Modernize infrastructure to integrate the region with the national economy and reduce insurgency incentives.

IV. Cybersecurity

- **Enhance Cyber Defenses:**
 - ❑ Develop a national-level cybersecurity strategy with dedicated agencies for threat intelligence, incident response, and public-private partnerships.
 - ❑ Expand investment in research on emerging threats like AI-based cyberattacks and ensure comprehensive training for government and corporate sectors.
 - ❑ Collaborate with international partners to combat state-sponsored cyber espionage, especially targeting critical infrastructure and financial systems.

These measures will help transform Bharat’s defence sector into a more robust, technologically advanced, and self-reliant system, better equipped to handle both traditional and emerging threats.



Bhartiya Agricultural Traditions, Techniques and their Dimensions: Towards Self Reliant Agriculture

Farming and its Dimensions

Farmers are backbone of food security in our country. Since ancient times, Bharat has been a country dominated by agriculture and entrepreneurship. The proof of which is obtained from our ancient texts, from which it becomes clear that farming is possible without using chemicals, which is called as **natural farming, organic farming, bio-dynamic farming, cow based natural farming, shashwatkheti, chemical free agriculture and bhartiya prakritik krishipaddhati** etc. Here under natural farming term has been used for chemical free farming. Since beginning of farming there was only farming and no such names like chemical farming, natural farming, organic farming, bio-dynamic farming etc.

Farmers in all the states of Bharat are practicing Chemical Free Farming., using different names. Prominent among them are Sikkim, Himachal Pradesh, Gujarat, Andhra Pradesh, Chhattisgarh, Odisha, Madhya Pradesh, Rajasthan, Uttar Pradesh and Karnataka. State governments of different states are promoting natural farming through various schemes.



Natural Farming:- Natural farming is a chemical -free farming method that uses locally available resources and traditional methods. It is totally based on Agro-ecology and integrates crops, trees, plants and livestock. Natural farming also uses beneficial micro-organism to improve soil health and quality as well.

Principles of Natural Farming: The principles of natural farming are: Soil strength, quality seed, water management, crop rotation, mix crop, involvement of maximum creatures, plants and cow.

Why Research is Needed in Natural Farming

Natural farming is a method in which farmers grow crops for sustainability of agriculture. It leaves positive impact on bio-diversity, environment and human health. Chemical fertilizers, pesticides and other harmful chemicals are quite not required in this method. Natural farming improves soil quality and is able to sustain with climate change.

However, there are still many challenges in the field of natural farming. Some practices in the name of natural farming are poor in crop production in comparison to chemical farming but many farmers have experienced natural farming as most successful method. Some of known farmers who is doing natural farming, facing dynamic change in his cultivation technique and gain lots of profit in it which helps him to increase his income, crop productivity, employment generation, soil health and ground water etc. These are some names of natural farmers who is affiliated with Akshay Krishi Parivar and shared his experiences about natural farming, names are: Sh. Jairam Patidar, Sh. Vinod Jnyani, Sh. Sanjeev Kumar, Sh. P. Ramakrishanan etc.

More research is needed to establish natural farming and meet the challenges being faced by farmers. Since last 50 years research have been focused in chemical farming but now due to adverse effects of chemical farming, fast research activities on natural farming are required. Some of the main fields of research in natural farming are: **Crop production, Soil health, Seed quality, Food nutrition, Increase in farmers' income, Storage facility, Availability of market, Environmental impact, Climate Change, Pest Management, Education and training, Government support, Government policies, etc.**

Various Dimensions of Natural Farming:-

Social Dimension

Farmer Empowerment: Farmer empowerment means making them prosperous for the prosperity of country. It includes their rights and interests, so that they can improve their lives and social status. The main objective of farmer empowerment is: To make farmers self-reliant, To increase the income of farmers reducing crop cost, To improve the social and economic condition of farmers, To help farmers adopt new technologies and To provide market support to the farmers. The farmers and soil of Bharat has potential to grow nutritious, diverse and sufficient food grain to quench the hunger of all creatures.

● **Methods of Farmer Empowerment:-** Education and training, Formation of farmer groups, Financial support, Market support, Technical support, Policy support, and Social support.

● **Benefits of Farmer Empowerment:**

- Improvement in the economic stability, rural development and agricultural production.
- Growth in GDP.



2. Community participation: Community participation refers to the active involvement of farmers and local community in agricultural development, particularly to support natural farming efforts. It ensures that agricultural development decisions and programs are in accordance with the needs and priorities of the local community environment.

Methods of community participation:

- Formation of farmer groups to learn, practice and gain.
- Community meetings, Workshop, Training, Projects etc.

Benefits of community participation:

- Fulfilling the needs of the local community.
- Participation of local community in agricultural planning.
- Active role of community organizations.

- Use of local resources.

3. Role of Women Farmers: The role of women farmers has always been important in agricultural development. They contribute significantly in agricultural growth and help to improve the economic condition of their families. In many ways they can contribute in a better way like, Crop Production, Animal Husbandry, Horticulture, Fisheries activity, Plant Business and Food Processing.

Challenges of Women Farmers:

- Health condition to work hard.
- Availability of Special farm implements for ease of work.
- Lack of Financial Resources, Training and Education, etc.
- Social and Family Pressure.

4. Role of Young Farmers: The role of young farmers is extremely important in agricultural development. They add new dimensions to the agricultural sector with new energy, ideas and techniques. They can contribute in many dimensions of natural farming such as: Innovation and technology adoption, Establishment of agribusiness, Crop production and animal husbandry, Food processing and marketing, Agricultural research practice, education and training. They are able to bring positive change in our society and farming sector as well by their innovative ideas.

Challenges of Young Farmers:

- Lack of financial resources and experience in agriculture sector.
- Future security.
- Sense of power and reputation.
- Facilitates social environment.

5. Organizations for Farmers: Farmer organizations are being formed to protect the rights of farmers. But these organizations should build their capacity towards agriculture business growth. The main objective of the Kisan Sangathan can be: To protect the interests and rights of farmers, unite farmers for their voice to approach the government and other institutions, Provide support and services to the farmers.

Benefits of Kisan Sangathan:

- Strengthening the voice of farmers.
- Upliftment of farmers and Linking farmers with each other for their needs.

- Reduce dependency on Governments.

Motives of Kisan Sangathan: Political gains, Personal benefits, Organizational development, Farmers' welfare, Social unrest etc.

Major Government schemes for the farmers:

- National Agricultural Development Scheme.
- Kisan Kalyan Yojana.
- Farmer Producer Organization (FPO) Scheme.
- Yuva Kisan Yojana.
- Mahila Kisan Yojana.

Role of NGOs for the farmers:

- Providing training and education, access to financial resources, markets, social support to the farmers.
- Supporting farmers for specified requirements.

Economic Dimension

1. Profitable Farming: Profitable farming refers to such farming in which farmers add improvement in their economic condition. The methods of profitable farming are: Crop selection, Availability of water and other input resources, Farming technique, Risk management, Cost reduction, Advantage of government schemes, Marketing strategy, etc.

Benefits of Profitable Farming:

- Increase employment opportunities.
- Improvement in food security.
- Motivation towards continuous farming.

2. Market Access: Market access refers to providing farmers access to the market to sell their crops. It helps in improving the economic condition of farmers and increases their satisfaction. There are some forums of market access: Online direct Market, Kisan Mandi, APMC (Agricultural Produce Marketing Committee), Housing society Market, Farmers Group, FPOs, Cooperative Society, Weekly Bazar, etc.

Benefits of Market Access:

- Improvement in Food Security.
- Creating supply chain.
- Contribution in Rural Development.

3. Employment Opportunities: Employment opportunities means pro-

viding employment opportunities in various sectors for farmers and rural people. It plays an important role in rural development and helps in increasing the income of farmers. There are some important sectors of employment in agriculture such as: Farm services, Seed and fertilizer sale, Animal husbandry, Storage facilities, Food processing and Packaging, Fisheries and Aquaculture, Vegetable and fruit farming, Rural tourism, Craftsmanship & handicrafts, other service sector, etc.

Benefits of Employment Opportunities:

- Increase in employment opportunities and self-reliance of farmers.
- Improvement in economic condition and Contribution in national development.

4. Economic Sustainability: Economic sustainability refers to promoting stability and security in the economic condition of farmers and allied communities. It helps farmers secure their economic future and contributes to rural development. There are some Ways of Economic Sustainability: Increase in Income, Decrease in Expenditure, Increase in Savings, Increase in Investment, Improve Financial Management, Improve Risk Management, Increase in Market Access, etc.

Benefits of Economic Sustainability:

- Increase in standard of living, self-reliance and employment opportunities.
- Balance in demand and supply.

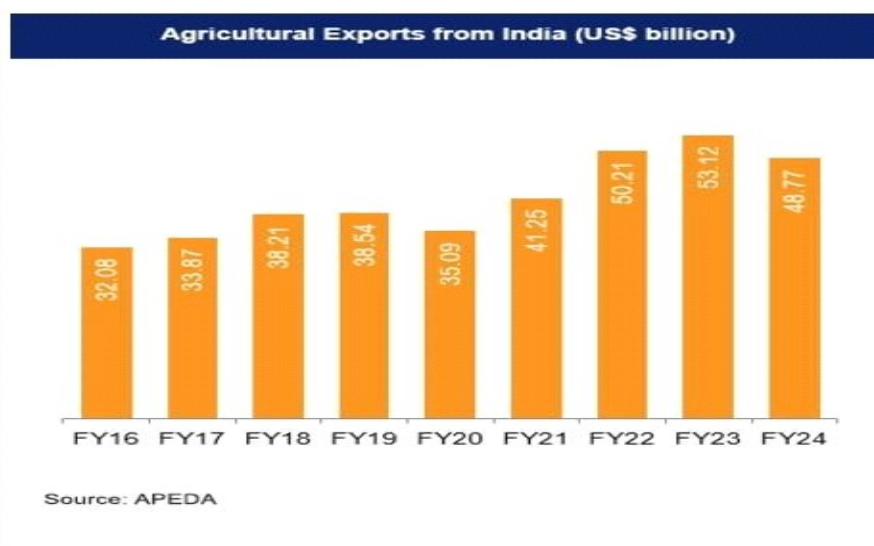
5. Economic Stability: Economic stability refers to stability and security in the economic system of a country or region. It is essential for economic growth, employment and improvement in living standards. These are the Components of Economic Stability: Economic Growth, Employment, Inflation Control, Financial Stability, External Trade Balance, Economic Diversification and Social Security.

Benefits of Economic Stability:- Increased Economic Growth, Economic Security, Foreign Investment, Economic Diversification, Social Stability etc.

Major Government Policies for Economic Stability:- Monetary Policy, Fiscal Policy, Trade Policy, Investment Policy, Labour Policy, Social Security Policy, Economic Development Policy etc.

6. Increase in Exports: Bharat has seen a significant increase in exports of chemical free nutritional products, driven by the growing demand for organic and chemical-free produce globally. The country has a rich history of (Non-chemical) farming practices, with no use of chemicals, making it an ideal location for natural farming. To promote natural farming, the Bhartiya government has launched several initiatives, including the **National Centre for Organic and Natural Farming (NCOF)**. NCOF provides training, certification, and marketing support to farmers, enabling them to tap into the lucrative global market for organic products. Many national organizations and small contributors are supporting farmers in Natural farming.

Some of the key benefits of natural farming in Bharat include: Improved soil health, Reduced costs, Increased income, Protection of indigeneous seed, protection of cows and other animals, Nutrition enrichment, Environmental benefits etc.



The Bhartiya government aims to increase natural farming practices to 10% of the country's total farming area by 2025. With the growing demand of organic products globally, Bharat is well-positioned to become a leading exporter of natural farm products.

7. Contribution to the Local Economy: Contribution to the local economy refers to the contribution made by farmers and rural artisans to the local economy. It plays an important role in local development and improves

the economic condition of the local community. Here are some Ways to contribute in local economy such as: Increase in employment opportunities, Increase in income, Promotion of local businesses, Promotion of local products and Development of local services.

Benefits of Contributing to Local Economy:

- ❑ Increase in demand of local products.
- ❑ Improvement in economic condition of rural community.
- ❑ Growth of local businesses.

8. Economic Independence of Farmers: Economic Independence of Farmers means making farmers self-reliant to fulfill their economic needs. It helps farmers to secure their economic future and makes them financially independent. Here are some Ways of Economic Independence of Farmers such as: Nill market dependency, Mutual seed exchange, Loan free farming, Training of techniques and risk, Increase in Investment, Promotion of post-harvest activities, Increase in Access to Market, etc.

Benefits of Economic Independence of Farmers:

- ❑ Increase in Economic Security, Self-Reliance of Farmers.
 - ❑ Improvement in Standard of Living and Contribution in Rural Development.
- **Major Government Schemes for the Farmers:-** National Agriculture Development Scheme, Rural Development Schemes, Farmer Welfare Schemes etc..
 - **Market Access through Digital Marketing:-** E-commerce Platforms, Social Media Marketing, Online Advertising, Digital Payment Systems, Mobile Apps.
 - **Market Technical Support for Access:-** e-NAM, Kisan Portal, Agri Marketing Platform, Farmers Market Platform, Digital Farming Platform.
 - **Role of NGOs in Employment Opportunities:-** Providing Training, Education, Financial assistance, Market access, Technical assistance to the farmers.
 - **Technical Assistance for Employment Opportunities:-** Such as Digital marketing, E-commerce platforms, Mobile Apps, Online training programmes, Video conferencing etc.

Environmental Dimension

1. Soil Quality: Soil quality refers to the state of soil fertility, water holding capacity, Soil Structure, pH Value of Soil, Nutrient Content and other properties. Soil quality is important for crop productivity and the health of the environment.

Methods of Improving Soil Quality:

- Non-chemical Farming.
- Use of cow dung and other bio-mass.
- Use of Green Manure and Compost Manure.
- Soil Investigation, Testing and Improvement in Soil Structure.
- Water management in soil.
- Presence of earth worms and other microorganisms.

Major Government Schemes for Soil Quality:- National Soil Conservation Scheme, Soil health card, etc.

2. Water Conservation: Bharat has more than 18 % of the world's population, but has only 4% of world's renewable water resources. Water conservation refers to efforts made to reduce water use and conserve water. Water conservation is important for farmers, the environment, and society. These are some methods of Water Conservation such as: Reduction of water use in irrigation, Rainwater Harvesting, Role of earth worms, Mulching, Construction of tanks for water storage, Re-use of water, Improvement in efficiency of water use etc.

Benefits of Water Conservation:

- Saving of water & energy and Prevention of water crisis.
- Improvement in environmental health.

Government Schemes for Water Conservation:- National Water Conservation Scheme, National water mission etc.

3. Biodiversity: Biodiversity refers to the diversity of different types of organisms found on the earth. This diversity is found in plants, animals, insects, micro-organisms and other organisms. These are some components of Biodiversity such as: Plant Diversity, Animal Diversity, Insect Diversity, Microorganism Diversity, Ecosystem Diversity etc.

Importance of Biodiversity:- Ecosystem Stability, Control of Climate Change, Food Security, Availability of Medicinal Plants, Improvement in

Environmental Health.

Methods of Conservation of Biodiversity:

- ❑ Creation of Protected Areas and Development of Policies for Biodiversity.
- ❑ Community Participation, Education, Training and Technical Support for Biodiversity.

Technical Assistance for Biodiversity:- Gene banks, Museums, Databases, Mobile apps, Satellite imaging for biodiversity.

Major Government Schemes for Biodiversity:- National Biodiversity Plan, Biodiversity Conservation Schemes etc.

4. Air Pollution: Air pollution refers to the presence of harmful gases and particles in the atmosphere, which are harmful to human health and the environment as well. The main causes of air Pollution is: Industrial activities, Vehicular smoke, Burning fuels, Agricultural activities and Construction activities.

Effects of Air Pollution:- Respiratory problems, Heart diseases, Cancer, Eye problems, Environmental damage etc.

Government Schemes for Air Pollution:- National Air Pollution Control Plan, Air Pollution Control Act, Environmental Protection Act etc.

Role of NGOs to reduce Air Pollution:- Spreading awareness, Technical assistance, Community participation, Financial assistance etc.

5. Climate Change:- Climate change refers to long-term changes in the Earth's climate. This change is mainly caused by the emission of greenhouse gases. The main cause of Climate Change is: Emission of greenhouse gases, Deforestation, Industrial activities, Vehicle smoke, Natural factors for climate change etc.

Effects of Climate Change:- Increase in temperature, Rise in sea level, Extreme weather conditions, Water crisis, Loss of biodiversity etc.

Methods of Control of Climate Change:

- ❑ Reduction in emission of greenhouse gases.
- ❑ Use of renewable energy sources.
- ❑ Plantation of trees and Saving of energy.
- ❑ Developing bio-diversity.
- ❑ Development of policies for climate change.

Major Government Schemes for Climate Change:- National Climate Change Plan, Climate Change Act, Environment Protection Act, National biodiversity authority, etc.

Role of NGOs for Climate Change:- Spreading awareness, Technical assistance, Community engagement for climate change Partnership, Financial assistance.

6. Use of Pesticides and Fertilizers:- Reduce of pesticides and fertilizers in agriculture means using alternative methods to grow crops. Some harmful effects of pesticides and fertilizers are: Environmental pollution, Harmful effects on human health, Unsafe food, Increase in disease, Economic loss, Loss of biodiversity, Degradation of soil quality and Pollution of air and water sources.

Advantages of reducing the use of pesticides and fertilizers:

- Protection of environment and biodiversity.
- Improvement in human health, soil quality and water harvesting & management.
- Increase in agricultural production and Reduction in Air pollution.
- Increase of farmer income.

Some important techniques which can help in reducing the use of fertilizers are: Precision Agriculture, Drip Irrigation, Soil Investigation and Testing, Use of Organic Fertilizers and growth promoters, Use of organic pest controllers, Role of carnivorous insects, Use of Green Manure etc.

Major Government Schemes: National Agricultural Policy, Organic farming schemes, Integrated pest management schemes, Schemes of alternative methods of fertilizers etc.

Role of NGOs: Providing training and education, Promoting organic farming, Development of alternative methods of pesticides, Assistance in environmental protection, Technical assistance for improving agricultural production.

7. Preventing Soil Erosion: Preventing soil erosion refers to efforts made to prevent erosion and degradation of soil. The main causes of soil erosion is intensity of rainfall, water flow, wind flow, soil fragility and felling of vegetation trees.

Effects of Soil Erosion:

- ❑ Decrease in soil fertility, water harvesting and agricultural production.
- ❑ Loss of biodiversity and Increase in air pollution.
- ❑ Reduction in food production.

Methods of Prevention of Soil Erosion:

- ❑ Fencing by bushes.
- ❑ Minimize the tillage.
- ❑ Soil investigation and testing.
- ❑ Water harvesting and management.
- ❑ New agricultural techniques.

Advantages of Prevention of Soil Erosion:

- ❑ Increase in soil fertility, water harvesting and agricultural production.
- ❑ Protection of biodiversity and Decrease in air pollution.

Government Schemes:- National Soil Conservation Scheme, Plantation of vegetation trees, Soil Erosion Prevention Schemes etc.

8. Conservation of Ecosystem: Conservation of ecosystem means efforts made to maintain the ecosystem and conserve its components. These are some components of Ecosystem such as: Animals, Plants, Soil, Water and Air.

Methods of Conservation of Ecosystem:- Creation of Protected Areas, Conservation of Biodiversity, Improvement in Soil Fertility, Conservation of Water Resources, Control of Air Pollution.

Advantages of Conservation of Ecosystem:

- ❑ Protection of Biodiversity and Control of Climate Change.
- ❑ Increase in Soil Fertility and Availability of Water Resources.
- ❑ Improvement in Human Health.

Government Schemes:- National Ecosystem Conservation Scheme, Plantation Schemes of Plant Trees etc.

Role of NGOs for Employment Opportunities:- Providing Training, Education, Financial assistance, Market access, Technical assistance to the farmers.

Technical Dimension

1. Traditional Agricultural Techniques: Traditional agricultural techniques have been used by farmers for generations which promote sustainability and quality in agricultural production.

Advantages of Traditional Farming Techniques:

- ❑ Protection of environment and biodiversity.
- ❑ Increase in water harvesting, soil fertility and quality in agricultural production.

Government Schemes: National Agriculture Policy, Organic farming schemes, Sustainable farming schemes etc.

Some important techniques that can help traditional farming techniques are: Techniques for manufacturing organic fertilizers, Conservation and development of seeds, Crop rotation, Water harvesting & management, soil investigation and testing.

2. Crop Rotation: Crop rotation is an agricultural technique in which different crops are grown alternately on the same land. This technique improves soil fertility, increases crop productivity, and controls pests and diseases.

Advantages of Crop Rotation:

- ❑ Increase in soil fertility, crop productivity and water harvesting.
- ❑ Protection of biodiversity and Control of pests and diseases.

Government Schemes:- National Agriculture Policy, Natural Farming Schemes, Sustainable Agriculture Schemes etc.

3. Pest Management: Pest management is a set of techniques used to control pests in agriculture. Its aim is to reduce damage caused by pests to crops and increase agricultural production.

Benefits of Pest Management:

- ❑ Reduction in damage caused by pests to crops.
- ❑ Increase in agricultural production.
- ❑ Reduction in the use of chemicals against pests.
- ❑ Protection of environment.
- ❑ Economic benefits.

Government Schemes:- National Agricultural Policy, Organic Farming Schemes, Sustainable Agriculture Schemes etc.

4. Seed Conservation: The aim of seed conservation is to preserve seed diversity and increase their availability. This is important for sustainability in agricultural production and food security.

Methods of Seed Conservation: Seed Banks, Seed Collection, Seed and plant Breeding, Seed Storage, Seed Distribution.

Advantages of Seed Conservation:

- ❑ Protection of Seed Diversity and Environment.
- ❑ Sustainability in Agricultural Production.
- ❑ Increased Food Security.
- ❑ Economic Benefits

Government Schemes: National Seed Policy, Organic Farming Schemes, Sustainable Agriculture Schemes, PPV&FRA, etc.

5. Irrigation Management: The aim of water conservation through irrigation management techniques is to increase the utility of water in agriculture and reduce wastage of water.

Techniques for Irrigation Management: Drip irrigation, Sprinkler irrigation, Micro irrigation, Sensor technology and Drone technology for irrigation

Benefits of Irrigation Management: Water conservation, Energy savings, crop production, Reduction in water pollution and Economic benefits.

Government Schemes: National Water Policy, Water conservation schemes, Irrigation management schemes etc.

6. Crop Insurance: The aim of compensating for the loss of crops by using techniques for crop insurance is to protect farmers from financial losses caused by crop damage.

Types of Crop Insurance: Natural Disaster, Fire, Crop Harvest, Crop Production, Crop Price, Crop Quality Insurance.

Benefits of Crop Insurance:

- ❑ Protection from economic loss due to crop damage.
- ❑ Stability in farmers' income and Increase in crop production.
- ❑ Risk reduction of farmers and Economic security.

Government Schemes:- National Crop Insurance Scheme, Crop Insurance Schemes etc.

7. Agricultural Machinery: The purpose of increasing efficiency and

productivity in agricultural operations by using agricultural machinery is to help farmers complete their tasks more efficiently and in less time. Another aspect of farm machinery is Non-tractorization for more employment generation.

Advantages of Agricultural Machinery:

- ❑ Saving time and labor requirement.
- ❑ Increased productivity and efficiency.
- ❑ Improved quality and Safeguarding health.

Government Schemes: National Agricultural Machinery Scheme, Agricultural Machinery Subsidy Scheme, PM Vishvakarma scheme, etc.

8. Drone Technology: The aim of monitoring and managing crops using drone technology is to help farmers, monitor the condition of their crops and improve their productivity.

Benefits of Drone Technology:

- ❑ Improved Crop Monitoring and Information of Crop Condition.
- ❑ Increased Crop Productivity and Water Harvesting.
- ❑ Identification of Pests and Diseases.

Government Schemes: National Drone Policy, Drone Subsidy Scheme, Farmer Welfare Schemes etc.

Policy Dimension

1. Formulation of Policies: Policy formulation is extremely important for the development and spread of natural farming. Here are some components of the policies such as: Subsidies, Technical assistance, Training and education, Market support, Certification and standardization etc.

Objectives of Policies:

- ❑ To promote natural farming and sustainable development.
- ❑ To increase farmers' income and To improve food security.
- ❑ To protect the environment.

2. Financial Assistance: It refers to financial assistance provided by the government or other organizations to support farmers financially. This assistance can be provided in various forms, such as Grants, Loans, Subsidies, Insurance and Financial assistance schemes etc.

Objectives of financial assistance:

- ❑ Helping farmers remain financially stable.

- ❑ Encouraging farmers to continue producing their crops.
- ❑ Helping farmers adopt new technologies and tools.
- ❑ Providing support to farmers for selling their crops in the market.

3. Market Support: Market support refers to the government or other organizations providing farmers with a minimum price for their crops, so that farmers can get a fair price for their crops. Here are some types of market support like Minimum support price (MSP), Market Intervention scheme (MIS), Agriculture market committee (AMC), etc.

Benefits of Market Support:

- ❑ It helps to keep farmers financially stable.
- ❑ Encourages farmers to continue producing their crops.
- ❑ Keeps crop prices stable in the market.

4. Monitoring and Evaluation: Monitoring and Evaluation are extremely important for effective implementation and improvement of natural farming programs. Like monitoring natural farming programs, The progress of farmers, The quality of crops, Environmental impacts & Economic impacts, Evaluation of natural farming programs, Farmers' satisfaction, Crop productivity, Environmental impacts, Economic impacts, The effectiveness of programs, the sustainability of programs and Increase in farmers' income. For this these are some tools of monitoring and Evaluation such as: Surveys, Interviews, Focus group discussions, Data analysis, Reporting, Monitoring systems, Indicators, Benchmarking etc.

5. Community Participation: Community participation is extremely important for the successful implementation and sustainability of natural farming programs. Here are some community participation methods like: Community meetings, Farmer groups, Co-operatives, Community agriculture projects, Education and training programs, Community fairs, Community radio, Use of social media etc.

Benefits of Community Participation:

- ❑ Increased community support, Increased farmer satisfaction and economic impacts.
- ❑ Improved quality of crops and Reduced environmental impacts.

6. Research and Development: Research and development is extremely important to address new opportunities and inventions in the field of natural farming. Here are some areas of Research and development, where

we need to improve agriculture: Techniques of natural farming, Pest management techniques, Improvement in agro-technics, Water conservation techniques, Improvement in soil quality, Conservation of biodiversity and Study of the effects of climate change, Food quality, Effects of seed fortification, Multilayer farming, Suvrishti Somyagna, etc.

7. Education and Training: Education and training is extremely important to impart knowledge and skills to farmers and community in the field of natural farming. Here are some education and training related points:

Areas of Education:- Basics of natural farming, Use of organic fertilizers, Pest management techniques, Improvement in productivity of crops, Water conservation techniques, Improvement in soil quality, Conservation of biodiversity and Study of effects of climate change.

Methods of Training:- Classroom training, Field training, Online training, Video training, Training camps, Workshops, Seminars and Kisan melas, visits, etc.

8. Standardization and Certification: Both are an important process to ensure quality and authenticity of natural farming products. Here are some points related to them:

Types of Standardization: Product, Process, Service, Quality and Safety Standardization.

Types of Certification: Organic certification, Natural farming certification, Sustainable farming certification and Non-GMO certification, Self declaration.

Advantages of Standardization and Certification:

- ❑ Guarantee of Quality and Authenticity.
- ❑ Ease in sale.
- ❑ Increases Confidence in Market, Demand for Products, Income of Farmers.

9. Government Support: Government support is extremely important for the development and spread of natural farming. Here are some points related to government support:

Types of Government Support:- Subsidy, Technical Assistance, Training and Education, Market Support, Policy Support, Research & Development, Certification & Standardization, Water Conservation and Irrigation.

Government Schemes:

- ❑ National Organic Programme of Government of Bharat.
- ❑ Rashtriya Krishi Vikas Yojana.



Note: This image is created with the help of ChatGPT to fulfill the demand of the paper for the future image of natural farming.

Measures should be taken to promote natural farming:-

- Create alternate market for the Natural farming products.
- **Public Distribution System (PDS):** Integrated natural farming produce into the PDS can not only provide the stable market for farmers but also ensure the availability of healthy and chemical free food to the mass population on reasonable price. Here are some other ways to promote the natural farming products like: Government ration store, Mid-day meal program, Government hospitals and mess etc.
- **Utilize the Existing Mechanisms:** The existing networks of primary agricultural cooperative societies and marketing federation may also be included. Collaborating with farmer producer organizations (FPOs) can enhance the efficiency of production procurement and distribution. Establishment of village clusters.
- Local crops for local requirements must be taken with the help of government initiatives to provide healthier food for the people in the market.

There are many working models of natural farming all over the world, the Natural farming is the most popular tradition in Bharat. Diversity of land, weather and crops is strength to promote natural farming in Bharat. Also

diverse traditional knowledge, farmers' practices have a lot of scope for taking up natural farming in our country. Natural Farming improves soil fertility, environmental health as well as helps in the reduction of greenhouse gas emissions and also promises the enhancement of farmer's income. In broad terms, Natural Farming can be considered as a prominent strategy to save the planet Earth for future generations. It has the potential to manage the various farmland practices and hence sequester the atmospheric carbon in the soils and plants, to make it available for plants. Natural farming is future key of food security of Bharat.



Chapter 7

Towards a Sustainable Future: Bharat's Environmental Vision for 2047

The world faces an unprecedented environmental crisis, characterized by climate change, biodiversity loss, pollution, and resource depletion. Every country and citizen must play a role in conserving the environment. Bharat, with its strong cultural heritage and value system centered around environmental conservation, is uniquely positioned to lead by example. As Bhartiya citizens, it is our responsibility to revisit and uphold our cultural heritage, taking decisive steps towards achieving the Sustainable Development Goals (SDGs).

Sustainability and Bhartiya Culture

Sustainability has been an intrinsic part of Bhartiya culture for centuries, deeply rooted in the country's philosophical, ethical, and spiritual traditions. Unlike contemporary sustainability efforts that often focus on mitigating the effects of modern industrialization, Bharat's traditional practices emphasize living in harmony with nature. These practices serve as a foundation for addressing current environmental challenges.

The yogic principle of **Aparigraha**, which translates to non-attachment or minimalism, is a prime example of how Bhartiya philosophy promotes sustainable living. This principle encourages individuals to reduce their material desires and live with only what is necessary. By curbing consumerism and overconsumption, Aparigraha naturally leads to less resource exploitation and waste generation. It teaches a holistic perspective that aligns personal contentment with ecological balance (Chapple, 2008).

The **Bishnoi community** of Rajasthan is a living example of how Bhartiya cultural practices integrate sustainability into everyday life. This community, whose faith revolves around environmental preservation, has upheld the pro-

tection of trees, wildlife, and natural habitats for over 500 years. Their dedication has inspired several modern conservation movements. For instance, the Bishnoi's resistance to deforestation and wildlife harm underscores the value of ecological ethics within Bhartiya traditions (Lal, 2021).

Traditional Bhartiya health systems such as **Yoga** and **Ayurveda** also exemplify sustainability. Yoga emphasizes physical and mental balance, which often translates to a balanced approach toward resource consumption and lifestyle choices. Ayurveda, Bharat's ancient medical science, promotes the use of natural remedies derived from plants and minerals. Its focus on sustainable harvesting and organic living highlights the interdependence of human health and environmental preservation (Sharma & Singh, 2020).

Sustainability and Bhartiya Culture: Environmental Practices in Festivals

Sustainability has always been an integral part of Bhartiya culture, reflected in the way festivals across the country are celebrated. These festivals not only honor religious and cultural traditions but also demonstrate a deep respect for the environment, embedding sustainable practices into their rituals. In Bihar, the festival of **Chhath Puja** epitomizes environmental awareness through its reverence for the Sun God and rivers. This festival involves offerings to natural elements, primarily water, symbolizing gratitude for life-sustaining resources. Devotees meticulously clean riverbanks and avoid the use of non-biodegradable materials during rituals, promoting water conservation and pollution prevention (Singh, 2021).

In **Odisha**, the **Raja Parba** festival emphasizes the regenerative power of nature. Celebrated during the onset of the monsoon, it allows the Earth to "rest" by pausing agricultural activities for three days. This practice is not only symbolic but also reflects an ecological understanding of sustainable farming cycles and soil regeneration (Dash, 2020).

In the **North-East**, festivals like **Ningol Chakouba** in Manipur and the **Wangala Festival** in Meghalaya highlight the harmonious relationship between humans and nature. **Ningol Chakouba**, a celebration of familial bonds, uses organic, locally-sourced ingredients for feasts, minimizing environmental impact. Similarly, the **Wangala Festival** of the Garo tribe celebrates the Sun God and harvest season with practices such as tree planting and the use of eco-

friendly materials, showcasing a model of cultural sustainability (Sarma, 2022).

In **West Bengal**, agricultural festivals such as the **Kharif Krishak Mahotsav** and the **Seed Festival (Beej Utsav)** reflect the importance of sustainable farming. During the Seed Festival, farmers exchange indigenous seed varieties, emphasizing biodiversity and traditional agricultural knowledge. This festival not only promotes the use of organic and locally-sourced seeds but also safeguards the region's agricultural heritage, encouraging practices that reduce reliance on chemical fertilizers and genetically modified crops (Roy & Das, 2021). Additionally, **Durga Puja**, a cultural cornerstone of Bengal, has embraced sustainability in recent years. Clay idols painted with natural dyes have replaced plaster-of-Paris versions to minimize water pollution. Pandals, the temporary structures housing the idols, are increasingly crafted with biodegradable materials like bamboo, jute, and recycled fabrics. This shift reflects the growing awareness of integrating ecological practices with traditional celebrations (Chakraborty & Bhattacharya, 2018).

These festivals exemplify how deeply sustainability is woven into Bhartiya cultural practices. They offer valuable lessons in integrating ecological consciousness into modern lifestyles. By preserving and adapting such traditions, Bharat can contribute significantly to the global movement for sustainability.

Bharat, with its rich cultural heritage and centuries-old sustainable practices, is uniquely positioned to lead the world toward a greener future. As the country envisions its environmental roadmap for 2047—the centenary of its independence—it must integrate traditional wisdom with modern scientific advancements to address pressing global challenges like climate change, resource depletion, and environmental degradation.

Reviving Traditional Practices

Bharat's cultural legacy offers a wealth of sustainable practices that can be revitalized and adapted for contemporary challenges. For instance, traditional agricultural techniques such as crop rotation, intercropping, and organic farming not only improve soil health but also reduce dependency on chemical fertilizers. By combining these methods with modern technologies like precision farming, drone-based monitoring, and artificial intelligence, Bharat can create a robust and eco-friendly agricultural system (Yadav et al., 2019).

Similarly, ancient water conservation systems like stepwells, tanks and rainwater harvesting structures can be revitalized to address water scarcity. When enhanced with modern tools such as Geographic Information Systems (GIS) and remote sensing, these systems can efficiently manage water resources, ensuring sustainability for future generations (Tiwari et al., 2020).

Addressing Climate Change

Bharat's environmental vision for 2047 must prioritize biodiversity conservation and ecosystem restoration. Sacred groves, preserved for religious purposes, have been recognized as biodiversity hotspots and carbon sinks. Protecting these areas and expanding afforestation initiatives will play a key role in combating climate change. Additionally, communities like the Bishnois, known for their wildlife conservation efforts, serve as a model for integrating cultural practices with modern conservation strategies (Malhotra et al., 2018).

Renewable Energy and Green Technologies

Transitioning to renewable energy is at the heart of Bharat's vision for sustainability. The country has already made significant progress, becoming one of the largest producers of solar energy globally. Expanding the use of solar and wind power, particularly in rural areas, aligns with Bharat's cultural ethos of self-reliance and minimalism. Innovative projects that combine traditional knowledge, such as fireless cooking methods, with modern renewable energy solutions, like solar cookers, highlight how cultural practices can inspire clean energy technologies (Bhattacharya, 2022).

A Holistic Vision for 2047

Bharat's environmental vision for 2047 must embrace a holistic approach that integrates sustainability into every aspect of life. Practices like waste segregation in households, the cultural emphasis on reusing and repurposing, and the principle of *aparigraha* (minimalism) resonate with global efforts to reduce consumption and promote sustainable living. Aligning these traditional values with the United Nations' Sustainable Development Goals (SDGs) will further strengthen Bharat's role as a global leader in sustainability.

As Bharat approaches 2047, its path to a sustainable future lies in blending ancient wisdom with modern innovation. By leveraging its rich cultural heritage and adopting cutting-edge technologies, Bharat can set an example

for the world, demonstrating that a sustainable and prosperous future is achievable through a balanced, inclusive, and environmentally conscious vision.

Sustainable practices are integral to everyday life in Bharat. Households repurpose items, such as turning old clothes into cleaning rags and recycling newspapers. Practices like bucket baths, sun-drying clothes, and hand-washing dishes conserve resources. Rural communities, comprising about 70% of the population as of 2011, live close to nature and follow sustainable principles. According to the Greendex report by National Geographic and Globe Scan, Bharat ranks highly in sustainable living among 18 countries, reflecting the ingrained sustainable practices.

Bhartiya festivals emphasize environmental conservation. For example, Diwali celebrations are increasingly using eco-friendly clay lamps and organic colors for rangoli. Holi has seen a shift towards natural dyes and reduced water usage. Traditional agricultural practices, such as crop rotation, organic farming, and natural fertilizers, contribute to soil health and biodiversity.

Contrasts with Amazon Deforestation

Global environmental challenges like deforestation in the Amazon serve as a stark reminder of the urgent need for sustainable practices worldwide. In Brazil, deforestation is primarily driven by the expansion of the beef industry, which clears vast swathes of forest for cattle grazing and soy cultivation, resulting in significant greenhouse gas emissions and biodiversity loss. The lack of stringent environmental regulations further exacerbates the ecological crisis.

Bharat, on the other hand, offers a contrasting narrative shaped by its cultural ethos and agricultural practices. The cultural reverence for cows, rooted in Bhartiya traditions, has led to a focus on dairy production rather than beef, which substantially reduces the demand for large-scale deforestation. While overgrazing in certain regions does pose challenges such as soil erosion and land degradation, the environmental impact is far less severe compared to the large-scale forest clearances seen in Brazil.

Moreover, Bhartiya laws against cow slaughter, combined with sustainable agricultural practices, help mitigate ecological damage. Traditional mixed farming systems, which integrate crop production with livestock management, optimize resource use and minimize waste. For example, cow dung is repurposed as organic fertilizer and biogas fuel, contributing to circular economies in rural areas (Yadav et al., 2019).

Scientific studies also highlight that Bharat's livestock rearing practices have a lower carbon footprint due to the smaller-scale, diversified agricultural model predominant in the country. This stands in sharp contrast to Brazil's monoculture systems, which heavily rely on deforestation for expansion.

As Bharat envisions its environmental future for 2047, it can build on these sustainable practices to further minimize the environmental impact of cattle grazing. By promoting rotational grazing, agroforestry, and regenerative agricultural techniques, Bharat can achieve a balance between livestock management and ecological preservation. These measures align with Bharat's broader vision of harmonizing cultural values with modern sustainability goals, offering a global model for reducing environmental degradation while supporting livelihoods.

Common but Differentiated Responsibilities

The principle of Common but Differentiated Responsibilities (CBDR) is a cornerstone of international environmental policy and crucial for Bharat, a rapidly developing nation balancing economic growth with environmental stewardship. As Bharat looks ahead to 2047, the centenary of its independence, the commitment to CBDR will remain vital. Bharat has been vocal about the need for developed nations to take the lead in reducing carbon emissions, given their historical contribution to global warming. Simultaneously, Bharat is dedicated to enhancing its own environmental policies, investing in renewable energy and adopting sustainable practices across various sectors.

Carbon Credits and Market Mechanisms

Bharat actively participates in the carbon credit market, promoting projects in renewable energy, afforestation and sustainable agriculture. The *Perform, Achieve, and Trade (PAT)* scheme exemplifies this commitment, setting energy efficiency targets for industries and rewarding those that exceed their targets with tradeable energy-saving certificates. By 2047, Bharat's engagement in carbon markets is expected to expand, fostering innovation and driving the transition to a low-carbon economy.

Conventions, Treaties, and Agreements: Bharat's Stake

Bharat is a signatory to numerous international environmental treaties and agreements, reflecting its commitment to global environmental gover-

nance. Key agreements include:

Paris Agreement (2015): Bharat has pledged to reduce the emissions intensity of its GDP by 33-35% by 2030, compared to 2005 levels, and to achieve 40% of its cumulative electric power installed capacity from non-fossil fuel-based energy resources by the same year.

Montreal Protocol (1987): Focuses on protecting the ozone layer by phasing out the production of substances responsible for ozone depletion.

Convention on Biological Diversity (1992): Aims to conserve biological diversity, promote sustainable use of its components, and ensure fair and equitable sharing of benefits arising from genetic resources.

Bharat's active participation in these conventions highlights its role as a responsible global player. Moving towards 2047, Bharat aims to strengthen its commitments and enhance its role in shaping international environmental policies.

Bharat's Initiatives to Save the Environment

Bharat has launched numerous initiatives to protect the environment and promote sustainability. Key programs include the National Action Plan on Climate Change (NAPCC), Swachh Bharat Abhiyan, Namami Gange Programme, and the International Solar Alliance (ISA).

In 2023-2024, the government introduced several initiatives to enhance environmental sustainability. The **Green Bharat Mission** focuses on increasing forest cover and biodiversity. The **National Water Mission** promotes water conservation and efficient water use. The **National Clean Air Programme** targets a 20-30% reduction in particulate matter by 2024. The Pradhan Mantri Ujjwala Yojana provides free LPG connections to reduce biomass fuel use, and the **Jal Shakti Abhiyan** emphasizes water conservation.

Bharat's efforts towards the Sustainable Development Goals (SDGs) include the **Jal Jeevan Mission** for clean water (SDG 6), the National Solar Mission for renewable energy (SDG 7), and the Smart Cities Mission for sustainable urban development (SDG 11). Additionally, the National Policy on Biofuels supports responsible consumption (SDG 12), and various initiatives address climate action (SDG 13), marine conservation (SDG 14) and terrestrial ecosystem protection (SDG 15).

Bharat's traditional knowledge, such as organic farming and Ayurveda, aligns with modern sustainability goals, reinforcing the nation's commitment to achieving the SDGs by 2047. This holistic approach ensures economic development and environmental sustainability.

Conclusion

Bharat's journey towards a sustainable and environmentally friendly Bharat by 2047 is underpinned by its commitment to CBDR, active participation in international agreements, innovative initiatives and the integration of traditional knowledge systems. These efforts collectively aim to create a balanced, sustainable, and prosperous future for the nation and the world. By leveraging its cultural heritage and implementing forward-thinking policies, Bharat is poised to lead by example, fostering a global movement towards environmental sustainability and resilience.



Chapter 8

Bharat's Vision of Global Harmony: A Journey of Cooperation and Progress

Bharat's embrace of the "**Comity of Nations**" reflects an enduring vision of global cooperation rooted in its ancient ethos of "**Vasudhaiva Kutumbakam**"—the world is one family. This philosophical foundation underscores Bharat's approach to fostering multilateralism, equitable global development and peaceful coexistence. In a rapidly changing geopolitical landscape, Bharat's role in shaping a harmonious global order is both dynamic and profound.

A Pillar of Multilateral Engagement

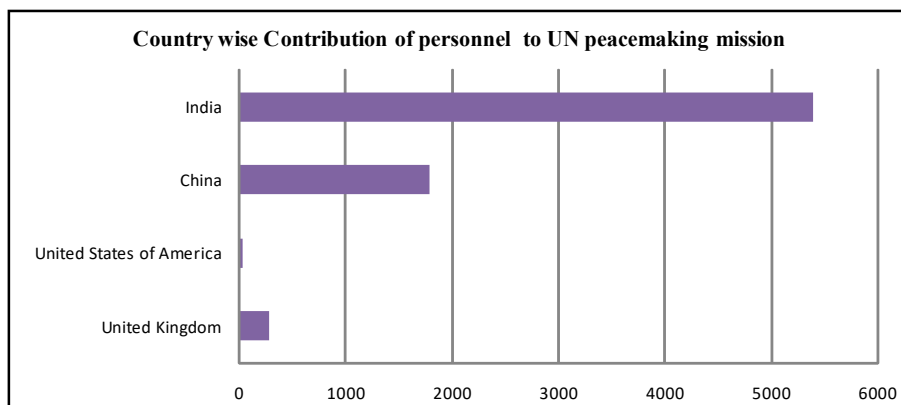
Bharat's commitment to international collaboration is exemplified by its active participation in institutions like the **United Nations (UN)**, **BRICS**, **G20**, and the **World Trade Organization (WTO)**. Advocating for a **multi-polar world**, Bharat envisions power equitably distributed across nations, ensuring diverse voices shape global decisions. This aspiration is intertwined with Bharat's pursuit of sustainable development, peace and collective progress.

Commitment to Peace and Security

As a founding member of the UN, Bharat's contributions to global stability are unparalleled. Over **253,000 personnel have served in 49 UN peacekeeping missions**, the highest by any country. In 2023, Bharat maintained **5,901 peacekeepers** in conflict zones, reinforcing its reputation as a steadfast advocate for peace.

Advancing Sustainable Development

Bharat's achievements under the **2030 Agenda for Sustainable De-**



development Goals (SDGs) exemplify its commitment to global progress. Initiatives like the **Pradhan Mantri Ujjwala Yojana** have provided clean cooking fuel to **96 million households** and the **Jal Jeevan Mission** has delivered clean water to over **100 million rural homes**. These efforts contribute to SDGs like **poverty eradication (SDG 1)** and **clean energy (SDG 7)**, showcasing Bharat as a model for integrating national and global development goals.

A Green Leader: Climate Diplomacy

Bharat’s leadership in addressing climate change is evident in its co-founding of the **International Solar Alliance (ISA)**, which unites **124 nations** to mobilize \$1 trillion in solar investments by 2030. The launch of the **Global Biofuels Alliance (GBA)** during the G20 presidency further underscores its dedication to renewable energy. Bharat’s ambitious target of **500 GW of renewable energy capacity by 2030** aligns seamlessly with its vision for sustainable progress.

Advocating Global Governance Reform

Bharat’s vision for equity extends to global governance. Its **2021–2022 tenure in the UN Security Council (UNSC)** highlighted leadership on issues like counterterrorism and climate action. By advocating reforms in institutions like the **IMF** and **World Bank**, Bharat champions the equitable representation of developing nations, aligning its global stance with its domestic ethos of **Atmanirbhar Bharat (Self-Reliant Bharat)**.

South-South Cooperation: Building Bridges

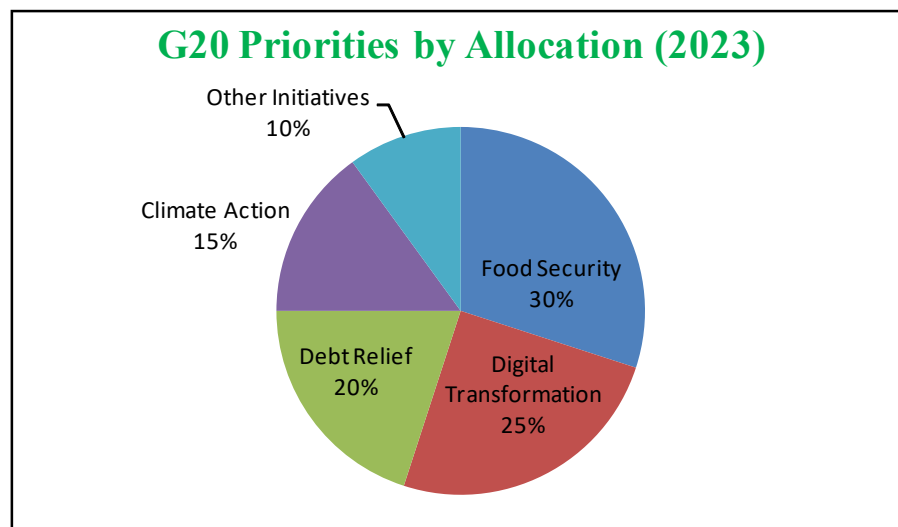
Through the **Bhartiya Technical and Economic Cooperation (ITEC)** program, Bharat fosters development partnerships with over **160 countries**, offering expertise in agriculture, technology, and healthcare. Concessional credit of **\$12 billion** and grants of **\$600 million** to African nations underline Bharat's role as a partner in progress, strengthening bonds with the Global South.

Humanitarian Diplomacy: A Beacon of Compassion

Bharat's humanitarian initiatives, such as the "**Vaccine Maitri**" program during COVID-19, supplied over **300 million vaccine doses** to **100+ countries**, showcasing its capacity to lead in global health crises. Timely aid to **Turkey** after the 2023 earthquake and support to **Sri Lanka** during its financial crisis reaffirm Bharat's position as a global first responder.

Economic Diplomacy: G20 Leadership

The **2023 G20 presidency**, themed "**One Earth, One Family, One Future**", emphasized inclusive growth, food security, and digital transformation. Notably, Bharat facilitated the historic inclusion of the **African Union** as a permanent member, a milestone aligning with its philosophy of equitable global governance.

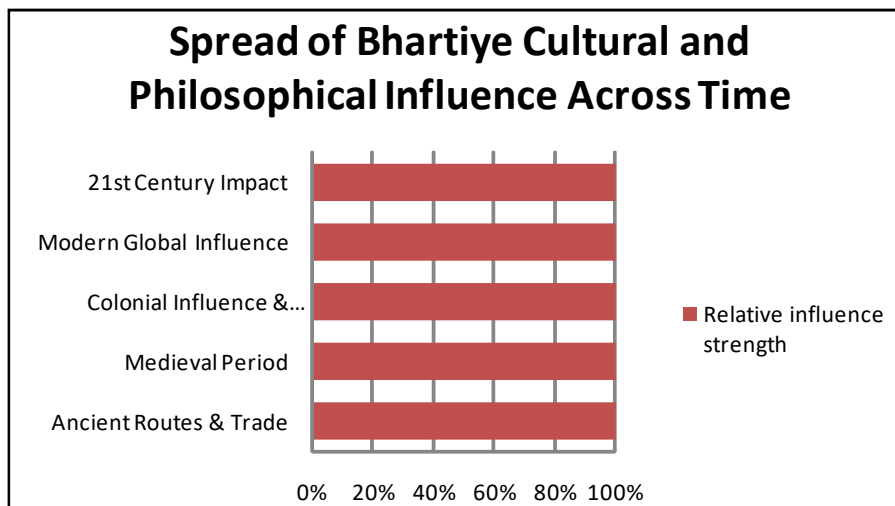


An Ancient Civilisation with Global Cultural Ties

Bharat, as the **oldest continuous civilisation**, has a rich legacy of contributing to the world's cultural, intellectual, and spiritual heritage. Its connections with countries across **Asia, Africa, Europe and the Americas** have not only influenced global traditions but also fostered deep-rooted relationships. From the spread of **Buddhism** and the maritime Silk Route to modern-day partnerships, Bharat's historical engagements demonstrate a commitment to **mutual growth and learning**.

Key Highlights:

- **Buddhist Heritage:** Over **25 countries**, including Thailand, Sri Lanka, and Japan, share Buddhist traditions rooted in Bharat.
- **Bhartiya Art and Science:** Ancient Bhartiya texts on medicine (Ayurveda), mathematics (concept of zero), and astronomy have inspired global knowledge systems.



Bharat's **historical interactions** have transcended trade and commerce, creating a **cultural bridge** that promotes dialogue and understanding among diverse peoples.

Bharat's Respectful Approach to Global Partnerships

Bharat's global vision is distinguished by its emphasis on **non-exploitation and respect for sovereignty**. Whether through economic collaboration, developmental assistance, or cultural exchanges, Bharat values the unique

identity and aspirations of its partner nations. Unlike models that impose dominance, Bharat believes in **uplifting its partners** for mutual progress.

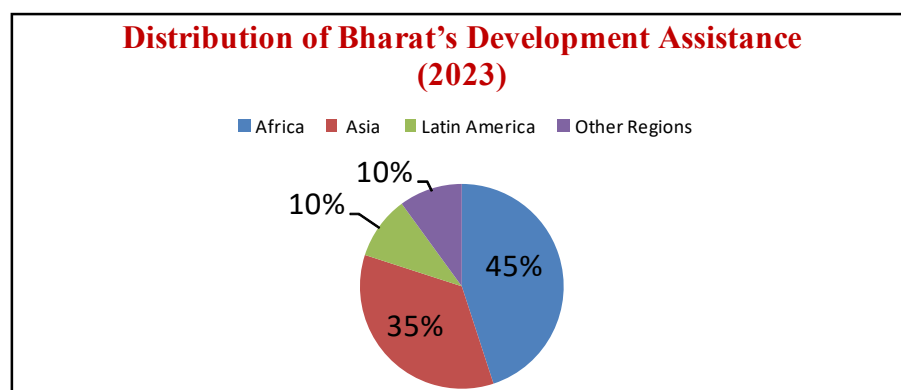
Examples of Impactful Partnerships:

1. Development Assistance in Africa:

- ❑ Bharat has invested in over **600 projects** in **64 African nations**, spanning healthcare, solar electrification, and education.
- ❑ Initiatives such as the **Pan-African E-Network Project** enable African countries to access Bhartiya expertise in medicine and education.

2. Cultural Respect:

- ❑ Bharat has signed cultural exchange agreements with over **120 countries**, celebrating shared traditions and fostering artistic collaborations.



Bharat's partnerships are marked by a sense of **equality and empathy**, ensuring that progress is **inclusive and sustainable**.

The Bhartiya Diaspora: A Global Force for Progress

With over **32 million people** spread across **more than 100 countries**, the Bhartiya diaspora is a vibrant contributor to global development. Bhartiyas abroad excel in diverse fields, including **technology**, **medicine**, **business** and **public service**, fostering economic growth and enhancing cultural ties with their host nations.

Contributions of the Diaspora:

- **USA:** Bhartiyas form **1% of the population** but contribute over **6%**

of GDP, especially in technology and innovation.

- **UAE:** Bhartiya expatriates constitute **30% of the workforce**, sending remittances exceeding **\$18 billion annually**.
- **UK:** Bhartiya are pivotal in the **NHS**, comprising over **10% of healthcare professionals**.

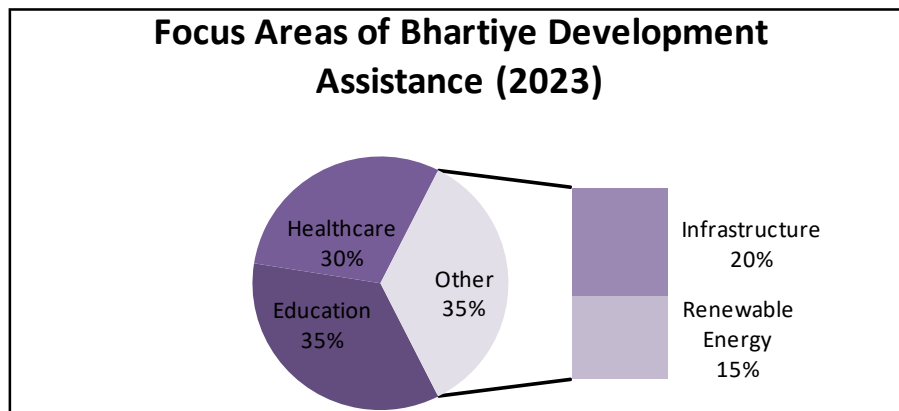
Beyond economic contributions, the diaspora serves as **cultural ambassadors**, showcasing Bharat's values and fostering **global goodwill**.

Development Partnerships for Mutual Growth

Bharat's development partnerships are a cornerstone of its global vision. Through programs like the **Bhartiya Technical and Economic Cooperation (ITEC)**, Bharat trains thousands of professionals from **over 160 countries** annually, helping them develop skills in agriculture, IT, healthcare, and governance.

Key Initiatives:

- **Solar Electrification in Africa:** Over **2,500 villages** equipped with solar power, transforming lives in remote areas.
- **Healthcare:** More than **100 hospitals and clinics** funded globally, offering critical care to underserved populations.



Bharat's collaborative approach ensures that its progress is **interwoven with the advancement of its partners**.

Leadership in Climate Diplomacy

Bharat is a global leader in **sustainable development and climate**

action, guided by the principle of **Common but Differentiated Responsibilities (CBDR)**. Initiatives like the **International Solar Alliance (ISA)** and **Global Biofuels Alliance (GBA)** showcase Bharat's commitment to renewable energy and environmental stewardship.

Achievements:

- **Renewable Energy Capacity (2023): 175 GW**, with a target of **500 GW by 2030**.
- **Vaccine Maitri:** Over **300 million COVID-19 vaccine doses** distributed to **100+ countries**, prioritizing underserved regions.

Bharat's climate diplomacy emphasizes a balanced approach that harmonizes **economic growth** with **environmental sustainability**.

Humanitarian Assistance: A Compassionate Nation

Bharat's humanitarian initiatives reflect its belief in the **dignity and well-being of all people**. From disaster relief in Turkey and Afghanistan to economic aid for Sri Lanka, Bharat consistently demonstrates its solidarity with nations in need.

Key Facts:

- **COVID-19 Response:** Distributed vaccines to over **100 countries**, benefiting millions.
- **Disaster Relief:** Rapid responses to natural calamities worldwide, offering aid and expertise.

Bharat's humanitarian efforts highlight its **compassionate and proactive approach** to global challenges.

A Vision for 2047: Viksit Bharat and Global Prosperity

As Bharat aspires to become a **developed nation** by 2047, its vision encompasses not only domestic growth but also the advancement of its global partners. By aligning its progress with global goals, Bharat aims to build a world where prosperity is shared, diversity is celebrated, and peace prevails.

As Bharat progresses toward this ambitious goal, its "**Vasudhaiva Kutumbakam**" philosophy ensures its global engagements foster unity, equity, and mutual respect.

Conclusion:

Bharat's global vision is one of **peace, mutual growth and respect**

for all nations. Drawing from its ancient heritage and modern aspirations, Bharat continues to foster partnerships that prioritize equity and sustainability. As a cultural bridge, an economic contributor and a champion of peace, Bharat exemplifies the ideals of shared progress, ensuring that its rise benefits not just its people but the entire global family.



Chapter 9

The Rich Bhartiya Value System and its Role in Shaping Bharat@2047

Bharat, with its timeless heritage, stands as a beacon of unparalleled life values and cultural richness. It offers wisdom that transcends time and geography. It has *Sanatana Dharma* as its base which emphasises the harmony of material and spiritual pursuits, encapsulated in ideals like *Vasudhaiva Kutumbakam*, the whole world is one family. Unlike the fragmented and often individualistic values observed in many parts of the modern world, Bharat's way of life prioritises *dharma*, *ahimsa* and *seva*. All these three things together provide us a holistic approach to existence. The depth of Bhartiya values, reflected in practices such as *yoga*, meditation, nature worshipping and *Ayurveda*, highlight a commitment to both inner well-being and collective harmony. Where the western world often focuses on competition and consumerism and results in increased crime rate, health issues, social issues, environmental degradation, Bharat offers a path of coexistence, spiritual awakening and sustainable living. It promotes universal peace and human dignity. Its enduring emphasis on family, respect for elders and reverence for nature further highlights the richness of its cultural fabric, making Bharat a guiding light for a world seeking balance and meaning.

As Bharat approaches its 100th year of independence in 2047, the vision of Bharat@2047 holds the nation's hopes for economic growth, technological innovation and social progress. However, the true foundation for realising this vision lies deeper within the cultural and spiritual values that have long guided Bhartiya society. This chapter explores the significance of such core Bhartiya values and will discuss how these values can help shape the nation's journey toward a more humane and balanced future. The vision of Bharat@2047 imagines a future where Bharat is a prosperous, powerful and inclusive global leader along with its rich culture and life values.

The Crisis in the Western World

The Western world is struggling with a lot of societal issues that arise from excessive materialism, declining family values, and individualism. Among the most pressing concerns are declining family values, increasing divorce rates, rising rates of drug abuse, mental health issues, extreme materialism, decline of purpose in life and violent crimes. The pursuit of instant gratification and consumerism, often celebrated in Western culture, has led to a crisis of meaning, leaving many individuals feeling isolated and disillusioned.

Marriage, once regarded as a sacred bond built on commitment, mutual respect, and shared goals, has increasingly been redefined as a transactional arrangement susceptible to dissolution. In the United States, for example, nearly 40–50% of marriages end in divorce. While individual autonomy and freedom of choice are celebrated, the consequences for families, particularly children, are often devastating.

Children from broken homes are statistically more likely to face emotional and behavioural challenges, perform poorly in school, and struggle with building stable relationships in adulthood. The normalisation of divorce reflects broader trends of individualism and a declining emphasis on shared responsibility within families. In contrast, cultures like Bharat's emphasise the sanctity of marriage as a lifelong partnership, upheld not merely by personal satisfaction but also by duty and familial obligations.

Materialism is another key driver of societal dysfunction in the West. The consumerist culture, fueled by aggressive marketing and the pursuit of wealth, has shifted priorities away from intrinsic values such as personal growth, meaningful relationships, and spirituality. According to the World Health Organization (WHO), mental disorders are among the leading causes of disability in Western countries. Sociological research attributes much of this crisis to the erosion of traditional social support systems. Mental health problems such as anxiety, depression, and chronic loneliness are at epidemic levels, with studies revealing that social isolation is as detrimental to health as smoking 15 cigarettes a day (Holt-Lunstad et al., 2015). The decline of community-oriented structures, coupled with the rise of nuclear families and individualistic living, has left many people without the emotional and social support required to cope with modern stresses.

The Western world faces a significant public health crisis in the form of

substance abuse. The opioid epidemic, particularly in the United States, exemplifies the devastating impact of drug addiction on families and communities. Data from the Centers for Disease Control and Prevention (CDC) reveal that over 100,000 drug overdose deaths were recorded in the U.S. in a single year, highlighting the scale of the problem. Sociologists argue that the alienation and lack of purpose stemming from consumerist and individualistic values contribute to the susceptibility to addiction, as individuals seek escapism from their struggles.

Violent crime, particularly gun violence, represents another critical challenge in many Western nations. The U.S., for example, has one of the highest rates of firearm-related deaths among developed countries, a statistic that underscores the interplay between gun accessibility, socio-economic inequalities, and cultural attitudes toward violence. Criminological theories, such as strain theory, suggest that societal pressures and the lack of legitimate means to achieve culturally prescribed goals lead to frustration, which can manifest as violence.

The Western world stands at a crossroads, where addressing these crises requires a reevaluation of societal values and priorities. Rebuilding community structures, promoting family cohesion and forming spiritual awareness can offer solutions to the growing sense of alienation and despair. In such a scenario, integrating elements of Bharat's cultural wisdom could provide the foundation for a more balanced and fulfilling way of life.

Bharat's High Life Values and Cultural Richness: A Beacon for the World

Bharat, with its ancient heritage and rigorous philosophical traditions, stands as a beacon of unparalleled life values and cultural depth. In an era marked by global crises of identity, societal breakdowns and rising individualism, Bharat's life values and cultural richness offer solutions that can inspire and guide humanity. Rooted in Sanatana Dharma, Bharat presents a way of life that harmonises material aspirations with spiritual enlightenment, a balance often missing in the modern world.

Relevance of the Concept of Dharma

Among the foundational principles that have influenced Bharat's past and continue to be relevant today is the concept of dharma. It represents the

moral order that governs individual behaviour, societal relationships, political governance and even the moral balance in the universe. Dharma balances personal desires with social responsibilities and integrates the material and spiritual dimensions of life. While it acknowledges the natural need for enjoyment, it stands firmly against selfish, indulgent behaviour driven by personal pleasure alone.

In Yajurveda moral values are defined as,

Satyam Brhat Rtam Ugram Diksa Tapo

Brahma Yajnah Prithivim Dharayanti (Griffith, 1899, p. 64)

The core values like truth, eternal order, consecration, austerity, prayer or knowledge, and sacrifice form the foundation of *dharma*. These principles play a significant role in Vedic spiritual and social practices, helping to spread the wisdom of the Vedas to the general public. Furthermore, in Arthashastra, Kautilya portrays dharma as,

Sukhasyamoolamdharma, dharmasyamoolamarthah,

arthasyamoolamraajyam, rajyasyamoolamindriyajayah (Kautilya, 4th century BCE, p. 123)

It means that the basis of *sukha* or bliss is *dharma*, that is the righteous conduct. The basis of all *dharma* is *artha* or wealth. The basis of all *artha* is *Rajya* or the State. The basis for the stability of the State lies in control over the *indriya* or sense faculties providing pleasure. The verse emphasises dharma as something which is not merely an ethical concept but also practical. It focuses on the interdependence of ethical behaviour, economic prosperity, political stability, and personal discipline for individual and societal well-being.

The concept of dharma is central to ancient Bhartiya texts like the Ramayana, Mahabharata, Arthashastra, Vedas, and Upanishads, and serves as a guiding principle to understand complex moral dilemmas.

The Gita also emphasises that dharma is not just external action but is rooted in one's inner state, requiring clarity, detachment, and a focus on the greater good. Arjuna's duty as a kshatriya is to fight for justice and this, Krishna explains, is aligned with dharma.

Yada yada hi dharmasya glanirbhavati bharata.

abhyutthanamadharma tādātmānam sṛjāmyaham (Easwaran, 2007, p. 132)

Krishna here aims to protect the righteous, those individuals who live in accordance with dharma. This protection is essential to ensure that righteousness is preserved and continues to flourish in the world. He seeks to destroy the wicked, those who perpetuate evil and undermine the moral order. The destruction of such forces is necessary to cleanse the world and prevent further degeneration of dharma. This highlights the dynamic nature of dharma, which must be continually refreshed and reinterpreted.

Dharma is dynamic with truth as its core value. Truth is what helps to preserve harmony, justice and moral integrity. This adaptability is evident in how ancient texts apply dharma to different roles, such as *svadharma*, *kuladharmā*, *rajdharmā*, *yugadharmā* and *varnashram dharmā* making it a living, dynamic principle rather than a rigid law. It is the base for leading a righteous life, connecting individuals to their roles in society, the natural world, and the cosmos. It promotes moral discipline, self-control, and the balance between personal desires and societal obligations, ensuring that all actions contribute to the greater good.

The role of *dharmā* in shaping Bharat's future is quite significant. It can hugely contribute to governance, social harmony, economic development, global leadership, and spiritual evolution. Bharat is a state of diversity, in such a country it becomes important to have a spirit of true unity among people for maintaining peace and harmony. Realising *manav dharmā* is necessary for having such unity among people. The values of unity in diversity, tolerance, and inclusiveness are essential for national cohesion. Moreover, the rise of regionalism, communal tensions, and social inequality threatens the social fabric, but the principles of *rashtra dharmā* and *sanatana dharmā* which has sarvodaya as its basis offer a path toward inclusive and equitable progress.

Today, many people struggle to balance their pursuit of material success with emotional and spiritual well-being. The concept of Dharma reminds us that life is about finding a harmonious balance between *artha*, *kama* and *moksha*, where artha and kama signify material wealth and moksha signifies spiritual well-being. By focusing solely on wealth and success, we often lose sight of what truly brings growth and connection to something deeper. Dharma offers a path to a more meaningful life, helping us to indulge in the pressures of modern existence without losing sight of their core values.

The world today is filled with social as well as economic inequality,

discrimination, and injustice. In such a situation dharma teaches us to act with fairness and compassion toward others. The idea of *yugadharma*, that is, the adaptation of dharma to the needs of the time, focuses on the fact that our ethical responsibilities must evolve with society. Whether we're advocating for human rights, fighting inequality, or working to uplift communities, dharma teaches that we all have a role to play in creating a just and compassionate Bharat. It can guide policymakers and leaders to act in the collective interest, balancing economic growth with social equity. In a democratic framework like Bharat, dharma can remind leaders that their primary responsibility is to work for the welfare of the people. There would be no place for corruption and discrimination.

Family as the Bedrock of Society

In the course of life, humans continue to add new thoughts and new ideas to those already existent and sometimes give up some notions which are not considered useful any more. This is the method by which culture is transmitted and carried forward from one generation to the next generation. The culture which humans inherit from ancestors is called cultural heritage. This heritage exists at various levels. Humanity as a whole has inherited a culture which is called human heritage. If a nation inherits such culture it is national cultural heritage. Culture strongly associates with life. There can be no human beings without culture. Culture is formed from the values, traditions, beliefs and way of life, from the most spiritual to the most material. It gives meaning to the way of life a person leads and makes one human.

The advent of western culture drags Bhartiya values and ethos. There is no place for love and respect or for human concern in contemporary society. New culture and technology is dragging people away from their fellow beings. The rich tradition is losing its significance in Bharat due to westernisation. Modern man neither values relationships nor bothers about the country being corrupted.

Family, a cornerstone of all societies, plays an integral role in forming a culture. It is where key aspects such as production, parenting, social interactions, religion, and leisure intersect. Yet, attitudes towards family and marriage have undergone a seismic shift. Traditionally, Bhartiya families thrived within a joint family setup, with three or four generations coexisting under one roof. In such households, members shared responsibilities, celebrated joys,

and supported one another in times of distress. Respect for elders, modesty in behaviour, and strong familial bonds formed the foundation of this system. In a joint family, challenges were met collectively, often preventing the kind of isolation and breakdowns seen in nuclear setups.

The gradual disintegration of the joint family system began when societal priorities shifted, and personal ambitions took precedence. With the adoption of Western values, many urban families moved away from the extended family structure, prioritising independence over interdependence. This departure from tradition has left many individuals disconnected from their roots, often struggling with isolation in new environments. The shift has also deepened the divide between rural and urban lifestyles, contributing to a sense of alienation and emotional struggles.

In Western societies, the concept of family has undergone even more dramatic changes. Marriage and family life have lost their traditional significance, giving way to diverse family structures, including cohabiting couples, single-parent households, and same-sex families. Relationships, often viewed through a transactional lens, lack long-term commitment. The decline in marriage rates and the normalisation of premarital, extramarital, and non-traditional relationships have created a fragmented family system, the relationship between parents and children, husband and wife and between siblings all ends up in futility. The love bond which unites the family becomes thinner and thinner and finally breaks up creating a vacuum in the individuals.

The traditional Bhartiya society, rooted in collectivism, placed high value on family cohesion, cooperation, and solidarity. These principles stood in stark contrast to the individualism dominant in Western cultures, which has contributed to rising divorce rates, weakened family ties, and increased emotional strain on children. The Western emphasis on personal independence often comes at the cost of collective well-being.

Bharat's traditional joint family structure remains a powerful example of unity, respect, and mutual support. It embodies the values of togetherness and shared responsibility that promotes stability and harmony. As Western nations face the challenges of individualism and fragmented families, they can draw valuable lessons from Bharat's time-honoured traditions. For Bharat, it is essential to safeguard these cultural values and resist the tide of cultural dilution. By upholding its rich heritage, Bharat not only preserves its own

identity but also provides a model of resilience and cohesion for the world to emulate.

Vasudhaiva Kutumbakam: Embracing Unity in Diversity

Originating from the *Maha Upanishad*, the text encapsulates the ethos of universal brotherhood, transcending national, cultural, and religious boundaries. At its core, it advocates for the interconnectedness of humanity and promotes a vision of global harmony, mutual respect, and collective progress. Bharat's rich tapestry of languages, religions, and cultures is one of its most defining characteristics, making the nation a living embodiment of diversity. The principle of unity in diversity runs deep in Bhartiya thought, encouraging not only tolerance but also the celebration of differences in belief, practice, and expression. Central to this worldview is the concept of "*Vasudhaiva Kutumbakam*". It means that the world is one family. This ancient idea, drawn from Bharat's spiritual heritage, promotes inclusivity, coexistence, and the shared responsibility of humanity.

The *Rig Veda* beautifully captures this sentiment with the verse,
"*Ekam sat viprābahudhā vadanti*"

It means, Truth is one, though the wise call it by many names (Rig Veda 1.164.46). This expression of pluralism is as relevant today as it was years ago, offering a timeless lesson in embracing multiple perspectives while seeking shared truths.

This principle holds relevance in today's fractured world, where ongoing wars, rising nationalism, and ideological divides threaten global stability. Conflicts in regions like Russia, Ukraine, Palestine, Gaza exemplify the human cost of fragmented ideologies, leaving nations devastated, economies crippled and countless lives lost. The philosophy of Vasudhaiva Kutumbakam challenges such divisiveness by emphasising shared humanity over narrow self-interests, urging nations to prioritise peacebuilding and diplomacy rooted in mutual respect.

Similarly, economic disparities and social injustices call for policies rooted in equity and compassion, prioritising the well-being of the global community over profit-driven motives. The ongoing rise in cultural intolerance, racism, and xenophobia further underscores the need for a unifying vision that celebrates diversity while fostering a sense of global belonging.

Bharat continues to champion Vasudhaiva Kutumbakam in its international relations, promoting sustainable development and inclusive policies through initiatives like the International Solar Alliance and its leadership at global forums such as the G20. This ancient wisdom offers a timeless solution to modern crises, advocating for a harmonious world where cooperation replaces competition, and unity triumphs over division. As humanity grapples with existential threats and the devastating impact of wars, Vasudhaiva Kutumbakam serves as a beacon of hope, reminding us that the well-being of one is intrinsically tied to the well-being of all.

Seva/Lokasamgraha

One of the most profound elements of the Bhartiya value system is Seva, that is, selfless service and *Lokasamgraha* which means welfare of all. Rooted in the belief that serving others is a path to self-realisation, this principle permeates Bhartiya social and spiritual life. The *Bhagavad Gita* teaches,

Karmanyevadhikaraste, ma phaleshukadachana (Bhagavad Gita 2.47).

It means you have the right to perform your duties, but not to the fruits of your actions. This states the importance of acting without attachment to outcomes, embodying the true spirit of selfless service. And it is only through *seva* that we can work for the welfare of all, reaching to a state of *Lokasamgraha*.

In an age marked by materialism and individualism, Seva serves as a reminder of the transformative power of altruism. By prioritising the needs of others over self-interest, individuals and communities can promote empathy, solidarity, and social cohesion. For instance, acts of Seva in volunteer work, disaster relief, or philanthropy bring immediate relief to those in need while creating a ripple effect of positivity and collective well-being. Corporations embracing corporate social responsibility (CSR) can also integrate the spirit of selfless service to prioritise sustainability and equitable growth, aligning profits with purpose.

The principle of Loka-Samgraha resonates deeply in tackling global issues like climate change, poverty, and pandemics, which require collaborative and selfless efforts. Climate action, for example, demands sacrifices and cooperation from both developed and developing nations to achieve the larger

goal of preserving the planet for future generations. Similarly, during the COVID-19 pandemic, countless individuals and organisations embodied the spirit of Seva, providing medical aid, food, and support to vulnerable populations, demonstrating how these timeless values can address contemporary challenges.

By promoting action without attachment to outcomes, the teachings of *Karmanyevadhikaraste* remind leaders, policymakers, and individuals to focus on ethical actions rather than short-term gains. As the world faces polarisation, inequality, and ecological threats, embracing the concepts of Seva and Loka-Samgraha can lead to a more equitable, sustainable, and harmonious global order.

The Quest for Vidya

The Bhartiya value system has historically placed high importance on education, not merely for economic or vocational success but for the holistic development of individuals. The concept of “*Vidya*” (knowledge) is seen as a means to achieve both material prosperity and spiritual liberation. The Upanishads state,

Sa Vidya Ya Vimuktaye (Mundaka Upanishad 1.2.12)

It means that true knowledge is that which liberates. Learning should free the mind and soul, promoting both material well-being and spiritual growth.

In the ancient institutions of *Nalanda* and *Takshashila*, knowledge was pursued not only for intellectual advancement but also for ethical and spiritual reflection. This blend of wisdom and values created a culture of learning that nurtured critical thinking and moral insight. As Bharat moves toward 2047, education must remain a transformative force, integrating modern technology with time-honoured values. A focus on creativity, critical thinking, and ethical responsibility will help build a knowledge society capable of addressing global challenges while staying rooted in the spirit of *Vidya*. Through this balanced approach, Bharat can lead the world in forming both progress and human well-being.

Yoga: Physical and Mental Health

Yoga, harmonises the body, mind, and spirit, has evolved into a global phenomenon, transcending its cultural origins. Originating from the Vedas and

expounded in the *Yoga Sutras* of *Patanjali*, yoga contains *asanas* (physical postures), *pranayama* (breath control), *dhyana* (meditation), and *yamas* and *niyam* (ethical principles). It aims for self-realisation and union with the universal consciousness, forming a spiritual path alongside its numerous health benefits. In today's world, yoga holds exceptional relevance as a remedy for the challenges posed by stress, sedentary lifestyles, mental health crises, and environmental disconnection. Its integration into healthcare, education, and wellness routines globally highlights its adaptability and efficacy in addressing modern concerns.

Yoga's benefits for mental and physical health are well-documented. Research shows that regular practice reduces stress, anxiety, and depression by regulating the nervous system and enhancing the release of endorphins. Mindfulness meditation, an essential part of yoga, improves focus and emotional resilience, helping individuals navigate the pressures of contemporary life. Physically, yoga enhances flexibility, strength, and balance while addressing chronic conditions such as hypertension, diabetes, and musculoskeletal disorders. With non-communicable diseases on the rise due to sedentary lifestyles, yoga provides a preventive and therapeutic approach that complements conventional medicine.

The global celebration of International Yoga Day, recognized by the United Nations, highlights yoga's role in promoting global unity. Its integration into schools, colleges, and workplaces has proven effective in enhancing focus, productivity and mental health. By helping students and professionals manage stress and promote creativity, yoga addresses critical issues like burn-out and mental fatigue in a highly competitive world.

In an age dominated by materialism, yoga offers a spiritual refuge, enabling individuals to reconnect with their inner selves. Practices like meditation and self-inquiry help people find meaning and purpose beyond material achievements. This spiritual dimension has grown particularly significant in the West, where yoga has evolved from a fitness trend into a deeper practice that fulfils emotional and spiritual needs. Yoga's universal principles of unity and harmony transcend cultural and religious boundaries, making it a unifying force in a fragmented world. In a rapidly changing world yearning for balance, yoga stands as a beacon of resilience, mindfulness, and unity, offering timeless solutions to modern complexities.

Sustainable Living and Environmental Ethics

In traditional Bhartiya thought, nature is not seen as separate from humanity but as an interconnected system where all living beings have inherent value. Texts like the *Atharva Veda* celebrate the earth as a living entity, urging humanity to treat it with reverence and responsibility. Pollution, deforestation, and climate change are serious issues for every country these days, dharma can provide a moral imperative to adopt sustainable practices. It would focus on the protection of natural resources, advocating for policies that support renewable energy, sustainable agriculture and the preservation of biodiversity.

Bhartiya philosophical and spiritual traditions have highlighted the very important connection between humans and the natural world. It offers timeless insights into the importance of living in harmony with nature. Ancient scriptures such as the *Bhagavad Gita* and the *Upanishads* emphasise this interdependence, advocating for a lifestyle that respects the balance of ecosystems. Central to these teachings are values like *ahimsa* (non-violence) and *aparigraha* (non-possession), which reflect a deep-rooted ecological consciousness, encouraging restraint in consumption and a reverence for all forms of life.

The *Yajur Veda* provides a powerful directive,

Mā vṛkṣān rodhasīs tṛṇāni reṇum cikṣiṣann vanāni ca,

This verse focuses on the preservation of the natural world, including trees, plants, and the overall environment, reflecting an ancient ecological consciousness in Vedic thought. It conveys a plea to avoid damaging nature and to respect and protect the environment. Moreover there is a more precise verse from the *Shukla Yajur Veda* (Yajur Veda 13.42) which says,

Vanaspate śatavalśa sahasravalśa, tvam hiraṇyam bahuśo dadāti.

This verse speaks to the reverence for trees and their value as life-givers and sustainers of wealth.

The integration of these principles into the national vision can lead to a model of development that balances economic growth with ecological responsibility. By embracing renewable energy, promoting conservation, and advancing sustainable agricultural practices, Bharat has the potential not only to meet its development goals but also to lead the world toward a greener, more sustainable future. This approach ensures that progress is not achieved

at the expense of the environment but rather in harmony with it, honouring the wisdom of the past while forging a path forward.

Linking the Bhartiya Value System with Bharat@2047 Goals

The vision for Bharat@2047 includes ambitious goals like becoming a \$10 trillion economy, a global technology leader, a clean energy champion, and a society rooted in equality and inclusiveness. While these objectives are bold, they are grounded in Bharat's timeless value system, which can serve as a moral compass to guide progress.

Economic Growth with Ethical Foundations: Rapid economic development, when pursued without ethical grounding, risks deepening inequality and environmental harm. Bhartiya values, particularly the principle of *Dharma* (righteousness), provide a structure for achieving growth that is both equitable and sustainable. *Dharma* calls for justice and fairness, ensuring that economic gains uplift all sections of society and protect the environment, aligning prosperity with responsibility.

Technological Innovation with a Humanity: As Bharat advances in artificial intelligence, biotechnology, and digital platforms, these innovations must serve the greater good. Without ethical guidance, technological progress can widen the gap between the privileged and the marginalised. The Bhartiya value of *Lokasamgraha* which talks about the welfare of all, offers a guiding principle for ensuring that technology empowers and uplifts humanity. By integrating compassion and inclusiveness into the development and deployment of technology, Bharat can ensure that its innovations address real human needs and reduce inequality.

Global Leadership through Moral Authority: Seeing the current situation of the world it can be inferred that Bharat's path to global leadership can be shaped by its moral philosophy rather than by dominance or power. The values of *Ahimsa* (non-violence) and dialogue, are at the core of Bhartiya thought. By promoting peaceful cooperation and ethical diplomacy, Bharat can form a more stable, just, and harmonious global order. Through its commitment to peace, dialogue, and respect for all nations, Bharat can emerge as a leader whose authority rests on moral conviction rather than sheer power.

Furthermore, by anchoring its ambitions in its rich value system which

includes the traditional family system, concept of vidya, respect for the nature, Bharat@2047 can achieve progress that is not only economically robust but also ethically sound, creating a future where growth, innovation, and global leadership are aligned with human dignity and collective well-being. In this sense, Bharat@2047 is not just a vision of the future but a realisation of the timeless truths embedded in the Bhartiya way of life.



Book in Essence

1. **Bharatiya Economic Renaissance:** Bharat aims to reclaim its historical economic dominance through innovation, inclusivity, decentralization, Swadeshi and sustainability.
2. **Vision of Prosperous Bharat 2047:** A self-reliant, technologically advanced, and spiritually grounded nation leading the world with Bhartiya values.
3. **Demographic Dividend:** Leveraging Bharat's youthful population until 2047 is critical for sustainable economic growth.
4. **Zero Unemployment Model:** Shift from job-seeking to entrepreneurship and skill-based employment with support systems.
5. **Indigenous Economic Wisdom:** Revival of ancient models like Kautilya's Arthashastra, emphasizing dharma-driven wealth and ethical governance.
6. **Science & Technology Leadership:** Focus on R&D, AI, quantum computing, green tech, and building global research universities.
7. **Creative Economy:** Foster SEZs, regional hubs, and IP laws for sectors like AI, design, and media to drive soft power.
8. **Green Growth and Energy Transition:** Targeting 500 GW renewable energy by 2030, green hydrogen production, and circular economy practices.
9. **Inclusive Education and Employment:** The GROW (Guaranteed Resources for Work) strategy aims to offer livelihood paths to every youth.
10. **Agricultural Leadership:** With the largest arable land globally, Bharat aims to become a \$100 billion agricultural export power.
11. **Make in Bharat:** Enhance domestic manufacturing with PLI schemes and global competitiveness to raise manufacturing's share to 25% of GDP by 2047.
12. **Digital Bharat Revolution:** UPI and digital governance have transformed rural and urban connectivity.

13. **IT and BPM as Growth Drivers:** Bharat aims for \$1 trillion in IT/tech exports in the next decade, with strong global positioning.
14. **Cultural and Ethical Economic Model:** The economic framework must integrate spiritual, ethical, and family-oriented values.
15. **Women Empowerment:** Increase female labor force participation through flexible jobs, crèches, and safe work environments.
16. **Urban-Rural Integration:** Smart villages with urban amenities and agro-industrial hubs to boost rural economies.
17. **Global Diplomacy and VasudhaivaKutumbakam:** Promoting peace, humanitarianism, and global cooperation through Bhartiya philosophy.
18. **Transparent and Efficient Governance:** Administrative reforms, digitization of courts, and performance-based bureaucracy to enhance ease of doing business.
19. **Climate-Resilient Development:** Carbon pricing, emission metrics, and sustainability-linked policies to support green industrialization.
20. **Holistic Growth Model:** Bharat must adopt a balanced approach—economic prosperity with cultural preservation, sustainability, and moral leadership enshrined in Bhartiya Economic Thought.



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About the Book

Vision 2047: Prosperous and Great Bharat

“Vision 2047: A Prosperous and Great Bharat,” by Prof. Pradeep S. Chauhan and Dr. Sarabjeet Kaur, offers a compelling roadmap for transforming Bharat into a globally respected, prosperous, and ethically grounded nation by 2047. Drawing from its ancient wisdom and integrating modern technology and policy innovation, the book advocates for a uniquely Bharatiya model of development that moves beyond the Western paradigm.

Bharat, once a dominant economic force contributing nearly a third of global GDP, saw its wealth drained during colonial rule. The authors emphasize reviving Bharat’s civilizational strengths through principles of dharma, decentralization, self-reliance, and ecological harmony. The book critiques the Western development model for creating environmental degradation, inequality, and societal distress, and proposes Bharat’s values-based alternative as a sustainable solution.

Central to the vision are eight pillars: a dynamic youth population, zero unemployment through entrepreneurship and skill development, rising economic power, national security, leadership in science and technology, environmental sustainability, global cooperation based on “VasudhaivaKutumbakam,” and values-based economic development. The authors argue that Bharat’s demographic dividend, if harnessed with supportive policies, can be a major growth engine.

The book highlights key strategies for sectoral transformation. The book also emphasizes robust institutional reforms for governance, judiciary, and labor markets to ensure transparency, efficiency, and accountability.

In global trade, Bharat must use strategic policies to strengthen exports, and assert its role in shaping a fairer international economic order. The Swadeshi approach and revival of indigenous industries are proposed as solutions to reclaim economic sovereignty.

Ultimately, the book argues for an economic renaissance rooted in Bharat’s timeless values. By embracing its civilizational ethos and aligning development with dharma and sustainability, Bharat can become not just a \$40 trillion economy, but a moral and cultural leader. The authors call for innovation anchored in identity, making Bharat a Vishva Guru—a beacon of harmony, prosperity, and global well-being by 2047.



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