Viksit Bharat by 2047 – Blueprint

Viksit Bharat – A Land of Abundance, Opportunity, Spirituality, and Technology with Happy Citizens

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Reflections & Introspection – A Moment of Truth & Reckoning

World Rankings & Viksit Bharat

When I wrote the book '*Tough Choices & Hard Decisions- Making India a Developed Country in the next 25 years*', I suggested **20 Big Shifts** on page 83(One of them was moving from GDP to GDP per capita.) Also, I also analyzed a lot of data from India and abroad to make a case for increasing the productivity of Indians. This book led to creating Viksit Bharat & Self-Reliant India. So, I reflect the India's march to Viksit Bharat from that lens, which appears more realistic.

India's rise to the 4th-largest economy by nominal GDP (~ $4 trillion as per IMF/WEO) is undoubtedly a milestone. But this aggregate figure gives us one more goal to chase: India's per capita GDP remains very low — around $2,900 nominal and approximately $12,100 PPP.

Metric (2025 est.)	Value	India's world rank[1]	Total economies in IMF table
Nominal GDP per capita (current US $)	≈ $2,880	≈ 140th	194
GDP per capita at PPP (current international $)	≈ $12,130	≈ 125th	194

[1] *Ranking is calculated from the IMF's raw country list; StatisticsTimes, which reproduces the same WEO dataset, places India 143th in nominal terms and 125th on a PPP basis. The 2-to-3-place swing is normal because some tables include small dependencies and very small economies.*

What the Numbers Mean

- Nominal ($2.9 k) – this is India's output per person converted at market exchange rates. It leaves India in the lower-middle-income band, at roughly 20 % of the 2025 world average (~$14 k).
- PPP ($12.1 k) – by correcting for cost-of-living differences, India's income looks more than four times higher than the nominal figure. Yet even at PPP India sits only in the middle of the global distribution (about the 125th slot), highlighting the distance that remains to upper-middle-income status.

Quick Regional Context (Same IMF Database)

Country (2025 est.)	Nominal GDP pc	Nominal rank	PPP GDP pc	PPP rank
India	$2.9 k	~140th	$12.1 k	~125th
Bangladesh	$2.8 k	~142th	$9.8 k	~131th
Sri Lanka	$3.7 k	~126th	$13.9 k	~114th
China	$13.9 k	~108th	$27.2 k	~78th

(Data pulled from the April 2025 WEO country pages.)

Key Take-aways for India

1. *Scale vs. Prosperity*: India is already the world's 4th largest economy in absolute size, but its per-capita income still lags behind most emerging-market peers.
2. *Exchange-rate sensitivity*: Because the rupee has been relatively stable, India's nominal per-capita rank has crept up only slowly despite brisk real growth.
3. *Cost-of-living advantage*: On a PPP basis Indians command about 45 % of the global average purchasing power—far higher than the nominal 20 %—yet still well below the upper-middle-income threshold (~$20 k PPP).
4. *Policy implication*: Sustained productivity gains, formal-sector job creation, and human-capital upgrades remain essential if India is to climb meaningfully in the global per-capita league tables.

What the Gap Means

- India's aggregate GDP is large due to its sheer population size — 1.4 billion people.
- But on an individual basis, Indians are still much poorer compared to peers:
  - Approx. $2.9k vs. $45k in Japan, $70k+ in Western Europe, and $65k in the U.S.
  - That gap is why experts warn that "India beating Japan as world's 4th biggest economy (is) no cause for celebration" — what truly matters is per-person income and quality of life.

Reality check on the "Top 4" club (United States, China, Japan & India)

1. Productivity: GDP per capita growth, 2014 → 2024

Rank	Country	2014 (US $)	2024 (US $)	Δ 10 yrs	Take-away
#1	United States	≈ 55900	82 800 (2023)	+48 % nominal / ≈ +20 % real	Tech-led productivity surge but gains uneven across workforce.

#2	China	≈ 7 600	12 614	+66 %	Still only 15 % of US level; growth pace now plateauing.
#3	Japan	≈ 39 300	33 767	-14 % (yen slide > income growth)	Stagnation intensified by demographics & weak currency.
#4	India	≈ 1 600	2 481	+55 % but < 3 % of US level	Rise is real, yet absolute productivity gap is cavernous.

All figures refer to calendar year 2024 unless stated. Ten-year comparisons use 2014 ↔ 2024 (or latest 2023 data where 2024 not yet final).

2. Sectoral engines of growth

Country	Dominant sectors & 10-yr trend	What it means
United States	Services > 75 % of GDP; manufacturing ≈ 10 % and shrinking in share, though niches (semiconductors, EVs) being reshored via CHIPS & IRA.	Productivity gains concentrated in knowledge & digital services; hollowing-out of mid-skill industrial jobs persists.
China	Tertiary sector rose from < 48 % to ≈ 56 % of output (53 trn ¥ of 95 trn ¥ 3Q 2024 GDP). Secondary industry still ~38 %.	Services now the main driver, but property correction and weak consumption curb momentum; manufacturing relies heavily on exports & state support.
Japan	Services ≈ 70 %, advanced manufacturing ~19 %; auto & chip-equipment exports still bright spots. Trade-linked manufacturing cushioned by overseas income.	Ageing workforce, tepid domestic demand; productivity growth mainly from overseas earnings, not local output.
India	Services ≈ 55 % of GDP and fastest-growing; manufacturing stuck near 17 %, agriculture still ~15 %. Construction & digital platforms buoy near-term growth.	"Make-in-India" yet to shift the structure; productivity locked in low-skill services and informal sector.

3. Trade balance reality

Country	2024 Exports	2024 Imports	Balance & trend
United States	$3.3 tn	$4.4 tn	Deficit $1.13 tn (3.9 % of GDP) – widened 25 % vs 2023.
China	$3.58 tn	$2.59 tn	Surplus $0.99 tn – biggest in history.
Japan	¥101 tn exports, ¥106 tn imports → Deficit ¥5.3 tn (fourth year running), yet current-account still surplus thanks to overseas investment income.		
India	Goods + services exports $825 bn (record); merchandise deficit $261 bn (widening).		

Implication for India: moving up the GDP table while running one of the world's largest trade gaps is a red flag—outsized import dependence on energy, electronics & gold saps domestic value-addition.

4. Investment patterns & capital flows

Country	Where the money goes
United States	Outward FDI stock $6.68 tn (2023) – 59 % parked in Europe, dominated by tech-intensive holding-company structures. Inward FDI still led by manufacturing (41 %).
China	Non-financial ODI $143.9 bn (+10 %) – energy, mining, EV supply chains, Belt-&-Road logistics hubs.
Japan	Net external assets ¥533 tn ($3.7 tn) – highest ever; firms buy overseas infrastructure & financial assets as domestic returns sag.

India	Net inward FDI slowing; outbound capital small. Domestic investment tilted toward services & construction, with timid high-tech spend (no recent big-ticket semiconductor fabs). Data gap vs peers highlight structural weakness.

5. Missed-often-asked questions (and answers)

Issue	Snapshot
Labour productivity	US real GDP / worker rose ≈ 15 % in 10 yrs; China's manufacturing productivity plateaued; Japan flat; India's rises from low base but still < 20 % of global frontier.
Innovation capacity	US & Japan lead in triadic patents; China dominates clean-tech patents but lags in fundamental science; India's patent intensity remains < 1 % of global total.
Demographics	China & Japan now shrinking; US workforce still grows slowly via immigration; India enjoys a Demographic Opportunity—but skills & jobs mismatch threatens to waste it.
Carbon footprint vs growth	US and Japan decarbonizing relative to GDP; China's emissions peaked but absolute level tops the world; India's absolute emissions now third but intensity still lower, giving policy space for green catch-up.

Globalization is masking the systemic and structural lapses

Globalization has repeatedly handed bureaucracy a convenient storyline: whenever growth slips, an external shock appears and the blame is exported abroad, allowing deep-seated domestic problems to fester.

2007-09 | "Lehman did it"

Quarterly data show India's momentum was already cracking before the Wall-Street meltdown: investment peaked at 38 % of GDP in FY 2007-08 and then turned negative in late-2008. Growth, which had flirted with 10 %, slid well below 8 % even before Lehman Brothers collapsed. Yet once the global crisis erupted the narrative focused on vanishing Western demand, masking India's

own structural bottlenecks—middle class with weak demand, systemic inefficiency power shortages, land-acquisition hurdles and a stalled reform agenda—which had begun choking capital formation months earlier.

2018-20 | "It was the virus"

History repeated itself a decade later. Between 2016 and 2019 India's headline GDP growth more than halved—from 8.3 % to 4.0 %, hobbled by demonetization, GST rollout and a festering NBFC credit crunch. When COVID-19 struck, policymakers framed the recession as a purely pandemic-induced shock, deflecting attention from the pre-existing slide in consumption, private investment and bank balance-sheets that had already driven growth to an eleven-year low.

2024-25 | "Blame Trump's tariffs"

The same playbook is visible today. Even before President Trump's sweeping 10–26 % "reciprocal" duties on Indian exports were announced in April 2025, domestic warning lights were flashing: the urban-plus-rural unemployment rate breached 8 % in mid-2024 while credit growth and merchandise exports were sputtering. Nevertheless, the IMF's small downgrade of India's FY 2025-26 outlook to 6.3 % is being held up as evidence that external tariffs—not structural rigidities in bureaucratic bottlenecks, low labour productivity, low female workforce participation or chronically weak private capex—are the chief culprits.

The pattern is clear: each global shock—Lehman, COVID-19, or Trump's tariff war—provides a ready-made alibi that obscures India's own policy missteps and capacity deficits. Until the country confronts its lagging human-capital investment, anaemic job creation and regulatory frictions head-on, the next external crisis will again be invited to shoulder the blame. Time to have a moment of truth. Given the boldest Prime-Minister, we can take any challenge heads on, and we must.

I am of the firm opinion that India has a "demographic opportunity," not a "demographic dividend". Also, we are at demographic crossroads – where the future of the youth and seniors, both are uncertain! While we have poured billions into highways, airports, and digital networks, yet underinvested in the very people who must turn that infrastructure into growth. Unless we rapidly scale up innovation, education, skilling, and health spending, today's youthful population could become tomorrow's liability.

I am of the firm opinion, that given the current economic and social situation, India's net reproduction rate (NRR) & Total Fertility Rate (TFR) will drop drastically with time passing, the dependency ratio will become our biggest challenge within the next decade. Once that happens, our dependency ratio will deteriorate quickly; we could reach the age-dependency pressures Japan needed half a century to hit in barely twenty years.

While everyone talks of the new births every year, rarely there is a talk of how many die eery year. If we relate both the numbers with the drop in TFR, we will hit a demographic shock!

No one is talking about the fiscal and social shock this early ageing curve could unleash. If we are serious about a Viksit Bharat by 2047, we need to return to the drawing board now, re-prioritizing human-capital investment and productivity-boosting reforms. Otherwise, the demographic "dividend" we count on may never materialize, and the cost of inaction will be a slow-moving economic crisis.

What Indian Policymakers Should Read from This

1. Accept and confront the challenges.
2. Per-capita productivity, not aggregate size, drives living standards. India's $2.5 k per head is 30× lower than the US and 5× lower than China.
3. Export complexity matters. China climbed the value chain; India still ships raw materials, low-tech manufactured goods and out-sourced services while importing capital-intensive goods.
4. Persistent twin deficits (trade & technology) are unsustainable; they expose the rupee, inflate borrowing costs and import others' inflation.
5. Investment quality beats quantity. The US channels capital into high-productivity digital & green sectors; China into strategic supply chains; Japan into global assets. India's cap-ex is skewed toward construction and consumption, not future-ready manufacturing or R&D.
6. Demography is not destiny. Without drastic skilling and formal-sector job creation, India risks a "youth bulge" without productivity.

Bottom line: celebrating the #4 spot solely on aggregate GDP masks fragile fundamentals. A per-capita, sector-deep and trade-competitiveness lens reveals that India is still closer to lower-middle-income peers than to the top three economies—and the policy playbook must shift from headline growth to productivity-led, export-oriented, innovation-powered development.

What India needs to Become a "Developed Economy"

Becoming a developed nation requires lifting per-capita GDP to at least the mid-$20k–$40k range — meaning doubling or tripling the current figure while ensuring broad-based growth. I had outlined the structural shifts in the primer I wrote when I ideated Viksit Bharat. The document is available on www.viksitbharat.org.

1. Structural Reforms

- Judiciary and Bureaucracy have been the biggest drag on India's growth. Unless and until we transform this, not much will change.
- Ease of doing business: Despite recent progress (GST, IBC), India still ranks only ~63rd globally. Streamlining bureaucracy could boost private and foreign investment.
- More start-ups will close in the coming years. This will be the biggest set-back. I speak this from my experience of running a start-up and working with the founders.
- Our economic model is against 'distributed growth' we need and so, unless we change that, we are not going to make a difference in real sense. 6-7 % growth will continue due to inflation, population growth and other associated factors.
- We will have to re-orient our approach towards agriculture and MSMEs

2. Institutional Investment and Credit Flow

- RBI recently cut rates to boost lending to MSMEs (6.5% growth target), but credit demand and bank willingness remain constrained .
- Government programs look good in planning but the real situation on ground remains the opposite when it comes to innovative schemes like Mudra and MSME lending. We need to Deepen financial inclusion and improve access to long-term funding for startups and infrastructure.
- We need to set up the Bharat Sovereign Fund that I proposed on 01st January, 2021.

3. Innovation & Skill Development

- We need to relook at our education-upskilling model
- India must boost R&D spending, foster tech startups, and close the skill gap for manufacturing and services sectors.

4. Closing Rural–Urban Disparity

- With ~65% of the population rural (half GDP contribution), raising rural productivity is essential.
- We have to relook at the programs to boost growth in farmers income. I have mentioned the details about the programs in the book – 'Tough Choices & Hard Decisions- Making India a Developed Country in the next 25 years'. Invest in farmland zones-tech, irrigation, rural roads, credit, and agri-value chains to uplift a billion people in not just rural India but beyond.

5. Inclusive growth & social infrastructure

- While poverty dropped from ~29% to ~11% (2013–2023), challenges remain:

- Innovation, Healthcare, education, and women's participation require stronger policies.
- We have to redo all the policies and programs tha matter for human capital and productivity.

6. Fiscal Discipline and Global Integration

- Maintain inflation and debt under control; recent rate cuts exemplify accommodative monetary policy.
- Expand exports and global supply-chain integration — India is already the world's 8th-largest exporter but needs to move up the value chain.
- Freebies will have negative long term socio-economic implications.

7. Nutritional Security

a. Organic Food Production in India

- FY 2023–24 certified organic output: ~3.6 million MT across oilseeds, cereals, pulses, tea, fruits, cotton & more.
- Certified organic area: As of March 31, 2023, India reported 10.17 million ha under national certification—5.4 M ha cropland + 4.7 M ha wild-harvest.
- Organic producers: ~1.6 million certified producers (MY 2021/22); India leads globally in organic farmer numbers.
- Top states: Maharashtra, Madhya Pradesh, Rajasthan, Karnataka, Gujarat.

b. When Nutrition Declined in India

- Calorie consumption drop: In rural areas fell from ~2,240 kcal (1983) to ~2,047 kcal (2004–05), an 8.6% decline; urban areas saw a slight dip (~2.4%) over the same period.
- Protein intake: Also dropped by ~12% in rural and ~4.6% in urban areas from 1983 to 2004–05.
- Undernourished population: ~195 million Indians are undernourished; 43% of children chronically undernourished.
- This indicates a clear and sustained nutritional decline across two decades (1983–2005).

c. Climate Risks & Crop Nutrition

- Rising temperatures & erratic weather harm both crop yield and nutritional quality. Staple crops grown in higher-CO_2 environments show 3–17% less protein, iron, zinc.
- Food access vulnerability: Especially among low-income households; climate shocks damage availability, affordability, and utilization.

d. Structural Challenges

- Groundwater stress: Heavy reliance on irrigation depletes groundwater—rain no longer restores reserves.
- Forest productivity: Even "greening" is offset by warming, with Indian forests registering 6% drop in net primary productivity over 2001–19.
- Climate projections: Anticipated increased droughts, extreme heat, and floods threaten staple yields (rice, wheat, maize), reducing them 2–25% by mid to late century.
- Climate change needs a major focus.

Make 'Systemic Reforms & Innovation' an independent sector by itself and the most important one.

India's sector-by-sector approach to policy is like tuning individual instruments while the orchestra plays out of sync. Power, health, manufacturing, even digital payments—each stall at the same chokepoints: sluggish courts, overlapping regulations, opaque data rules, weak local capacity, and a chronically under-skilled workforce. These are systemic failings, not sectoral ones; until they are tackled holistically, every "mission-mode" programme will run into the same walls of red tape and institutional drag. India could set a global precedent by creating a Ministry of Systemic Reforms & Innovation reporting directly to the Prime Minister, armed with the mandate to streamline governance processes, audit regulatory overlaps, fast-track judicial digitization, and embed evidence-based policy across departments. Making systemic reform & Innovation a sector in its own right would treat the root cause, not the symptoms—unlocking productivity gains across all ministries and placing India at the forefront of 21st-century governance innovation. Systemic Reforms and Innovation should be treated as important as Science and Technology and infrastructure.

India can feed 1.6 + billion people by 2047—but it requires urgent action across multiple fronts:

1. Boosting nutrition-secure production: Scaling climate-resilient practices, improving protein-rich crop yields.
2. Climate-smart agriculture: Adopting low-GHG, drought/flood-resilient methods.
3. Water management reforms: Addressing groundwater depletion and improving rainwater harvest.
4. Enhancing diet quality & access: Expanding pulses, animal-protein availability, strengthening PDS, nutrition programs.
5. Reducing nutrient loss: Leveraging crop biofortification to counter CO_2-driven nutrient dilution.

Future: Challenges Lie Ahead Before 2047

Though, I quote here 1.6 billion, as that is what the multi-lateral bodies, global institutions and the Indian Government and academicians have been stating, but I personally believe, that we are now going to move towards a period of drastic population de-growth, and we may slide fast to see a population that is expected with a NRR of around 1. So, we must be prepared for the dependency ratio that will hit us in that scenario, and plan accordingly. I see no reason why people will have more kids when the income and jobs fall for the middle class. Also, our major systemic lapses get hidden due to globalization. We have to consider revamping NITI Aayog. In the current form, it has failed to deliver the vision I had when I drafted the Election Manifesto of the BJP in 2014.

1. Energy Self -sufficiency

a. Projected Demand by 2047

Parameter	Projected Value (2047)
Population	~1.68 billion
Annual electricity demand	~6,500 TWh/year (~5× 2024 levels)
Peak electricity demand	~708 GW
Installed capacity needed	~2,100 GW (today ~400–450 GW)
Renewables potential by 2047	~4,100 TWh/year (~42% of total demand)
AI/data center demand share	~10–15% of total by 2047
Industrial & manufacturing share	~40–50% of total demand

b. Key Growth Drivers:

- Growing middle-class (1B by 2047) driving industrialization, EVs, cooling, and AI/data centers.
- Urbanization: 900M+ people in cities by 2047.
- AI/data centers: up to 15% of total demand.
- Green hydrogen, electric mobility, and digitalization.

c. Potential Energy Deficit

Item	Deficit Projection (if no action)
Dispatchable generation gap	~300 GW needed (beyond renewables)
Annual unmet energy gap	~2,400 TWh (if renewables maxed at 4,100 TWh)

Peak supply risk	Shortages could hit 15–20% without new flexibility and storage

- Even with 1,800 GW of solar/wind by 2047, massive gaps remain unless storage, nuclear, flexible gas/hydrogen, and AI-optimized grid balancing are added.
- AI adoption will raise demand, add grid volatility, and strain peak capacity.

d. Is Energy Sufficiency Realistic by 2047?

Technically Possible — but Challenging. Conditions for success:

- ✓ Rapid scaling to 1,800+ GW renewables
- ✓ 1+ TWh grid storage (batteries, pumped hydro, hydrogen)
- ✓ 50–75 GW nuclear, flexible gas/hydrogen turbines
- ✓ Full AI/smart grid optimization
- ✓ Major tariff, market, and efficiency reforms
- ✓ Electrification of transport and industry
- ✓ Creates resilient - innovative financing models for states/utilities

e. Is India Taking Enough Steps?

Progress to date:

- Ambitious targets: 500 GW non-fossil by 2030 → good.
- Policy reforms: Green hydrogen, storage incentives → started.
- Manufacturing ecosystem (solar, battery): early stage, more needed.
- Smart grids & AI in power sector: nascent.
- Tariff/market structure reforms: too slow.

f. What Must Be Done

Bottom line:

- India's current steps are too slow and fragmented.
- Without radical acceleration in investment, policy reforms, and grid modernization, energy sufficiency by 2047 is unlikely.

With coordinated national effort, strong leadership, and public–private partnership, a secure, sustainable energy future is achievable.

Current risk:

→ Pace of implementation, financing, and policy clarity is lagging relative to demand growth and 2047 needs.

g. Falling TFR, NRR Imbalance, and India's Outlook to 2047

India has entered a phase of below-replacement fertility. The Sample Registration System (SRS) shows a Crude Birth Rate (CBR) of 18.4 per 1,000 and a Crude Death Rate (CDR) of 6.4 in 2023, while the Total Fertility Rate (TFR) has fallen to about 1.9—below the classic replacement benchmark of ~2.1. In demographic terms, a Net Reproduction Rate (NRR) below 1 implies that, after accounting for mortality and the sex ratio at birth, each cohort of daughters is smaller than the one before it; if sustained, this eventually produces population ageing and decline.

Why is fertility falling? Evidence points to later marriage and first birth, higher female education and labour-force participation, wider access to modern contraception, rising urbanization and housing/child-rearing costs, and improved child survival that reduces the perceived need for large families. These drivers have gradually pushed India from high toward low fertility over the last two decades.

Macro-economic implications (to 2047). Sub-replacement fertility alters India's age structure. Population momentum keeps total numbers high through the 2030s, but the share of seniors rises, dependency ratios worsen after the demographic dividend peaks, and growth must come more from productivity than from labour-force expansion. Fiscal pressures tilt toward health, long-term care and pensions; meanwhile, sectors reliant on entry-level labour may face shortages unless offset by automation, up-skilling, and higher female labour-force participation. Conversely, fewer dependents per household can raise savings and human-capital investment per child.

Annual births and deaths (2023 baseline). Applying SRS 2023 rates to the World Bank's 2023 population estimate (1.438 billion) yields ≈ 26.5 million live births/year and ≈ 9.2 million deaths/year. The implied natural increase remains positive for now.

What if TFR falls below 1 and stays there? To illustrate, assume TFR declines to ≈0.98 by the early 2030s and remains sub-replacement; natural increase slows from today's levels to around zero by the mid-2030s and turns slightly negative thereafter. In a simple two-step projection that

reflects momentum (+0.6% per year in 2025–2035) followed by mild decline (−0.1% per year in 2036–2047), India's total population in 2047 would be on the order of ≈ 1.536 billion.

Given the current job, the overall economic scenario, and the current generations' outlook. The institution of marriage is under threat, raring offsprings will be out of consideration for a section of Gen Beta. I believe that India's population in 2047 cannot be a linear projection, but it can drop to somewhere around 1.30 -1.40 bn. This is what we must keep in mind while planning for 2047 in all aspects.

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Developed Country Status by 2047

1. What Qualifies as a "Developed Country" by GDP per capita?

- The World Bank defines high-income economies as having GNI per capita ≥ $14,005 (FY 2024).
- Some economists suggest $12,000–15,000 GDP per capita marks developed status, while others prefer $25,000+.

Takeaway: After formally initiating the Viksit Bharat in 2021-22, I have seen that while the Government adopted the program, but it became more of a political program without understanding of the idea and the plan behind. Given the current pace of growth, we will have to now scale down our ambitions and aim for the lower threshold—US$14,000 nominal per capita.

In my calculations, we have now moved the target date from 2047 to 2052 at the current pace of growth, and it could be delayed much further if we continued at the current pace and ideas. But as I mentioned in the book, if we miss the 2047 timeline, we may remain a lower-middle income country forever and I have a reason to believe as I have been watching affluent Indians settling abroad. So, the wealthier Indians would move abroad and help the world GDP grow but not India's GDP per capita. The divide would grow under the current economic model.

2. India's current GDP per capita & Growth

- Nominal GDP per capita is ≈ $2,900 (IMF est. for 2025).
- Real GDP growth has averaged around 6–7% in recent years; some forecasts project 6.5% annually through late 2020s.

3. Population Growth Affecting Per Capita Gains

India's population impacts per capita GDP. According to UN breaks and national statistics:

- 2024 population ≈ 1.43 billion.
- Population growth is slowing—1.0% now, projected to decline to 0.5% by 2047, roughly averaging 0.75% per year over 23 years.

4. Projecting GDP per capita to 2047

Assumptions:

- Nominal GDP growth: 6.5% annually
- Population growth: declines linearly from 1.0% to 0.5%, averaging 0.75%
- ⇒ Nominal GDP per capita growth ≈ 6.5% – 0.75% = 5.75% per year

Compound projection from $2,900:

Corrected back-of-the-envelope projection for India's nominal GDP per capita to 2047

Item	Assumed value
Nominal GDP growth	6.5 % p.a.
Population growth	Falls linearly from 1.0 % to 0.5 % ⇒ average ≈ 0.75 % p.a.
Implied nominal GDP-per-capita growth	6.5 % – 0.75 % ≈ 5.75 % p.a.

a. How many compounding periods?

- Base year: 2025 (latest IMF WEO vintage).
- Target year: 2047.
- Number of full years: 22 (2025 → 2046 inclusive).

  If we include 2047's full growth as well, use 23 years; shown in italics below.

b. Compound-growth calculation

{Future GDP pc} = 2{,}900 \times (1+0.0575)^{n}

n (years)	Growth factor	Projected GDP pc
22	3.42	≈ US $9,920
23	3.62	≈ US $10,490

c. Where we would reach?

- Even with a healthy 5.75 % nominal per-capita clip, India reaches roughly $10 k by 2047—still short of $14 k, the threshold, the lowest goal we are now aiming for.
- Bridging the gap would require either
  - higher sustained nominal GDP growth (> 7.5 % p.a.),
  - a faster decline in population growth, or
  - significant real-exchange-rate appreciation.

Bottom line: With the stated assumptions the $10 k figure is the best-fit outcome; our earlier $10,200 estimate is reasonable only if you compound for 23 years, but $9.9–10.0 k is the mathematically precise result for 22 years.

5. Can India reach "developed" by 2047?

At current trends, NO —the projection is only ~$10K per capita.

What about later?

To hit $14,000, India would need either:

1. Faster economic growth—e.g. nominal growth ~7.75% annually, or
2. Lower population growth (drastically lower)

Alternative scenarios:

- If nominal GDP grows consistently at 7.5% and population grows at 0.5%, per capita grows ~7.0%. The multiplier over 23 years is $(1.07)^{23} \approx 4.75$, pushing per capita to ~$13,800—still slightly under $14k, though close.
- To actually hit $14k, nominal growth would need to increase further or population growth slow even more.

6. Estimated timeline to reach $14,000

Using 5.75% per capita growth compounding from $2,900:

- Time needed ≈ ln(14,000/2,900)/ln(1.0575) ≈ 28 years.
- From 2024 start, India would reach $14k around 2052.

7. Conclusion

Metric	Value/Estimate
Current GDP per capita (nominal)	≈ $2,900 (2025)
GDP per capita growth rate (assumed)	~5.75% per year
Projected GDP per capita by 2047	≈ $10,200
Threshold for developed status	≥ $14,000
Estimated time to reach $14k per capita	~28 years → around 2052

- If India continues on its current path—6.5% GDP growth, slowing population growth—it will not become "developed" by 2047 based solely on GDP per capita.
- At this pace, the $14k mark arrives around 2052.
- With slightly stronger growth (7.5%), better population control and retaining the affluent Indians back home, India could be close to joining high-income status in the early 2050s.

Path to Developed-Economy Status by 2047 Goals

- Sustain ~7–8% real GDP growth — RBI projects ~6.5% to 8% with supportive reforms.
- Doubling per-capita GDP requires faster growth plus demographic dividends.
- Boost rural transformation and middle-class, raising productivity, tech-driven education and healthcare are essential ingredients.
- Develop a new economic growth model (improve distribution, productivity, infrastructure, innovation).
- Slow population growth further (through education, healthcare, family planning).
- Improve human development metrics (literacy, health), as GDP alone is an illusion.

India's economic scenario is of highest global GDP growth rate on a low base, but average person remains far behind developed-world standards. To close the gap, the nation must cement reforms, broaden credit, invest in rural and human infrastructure, and foster innovation. Only then will the 4th-largest economy truly evolve into a developed economy.

Looking at other countries that turned around their fortunes:

I start with Singapore, as Singapore's dramatic break with Kuala Lumpur on 9 August 1965 was less a "mutual divorce" than a one-sided expulsion and poor economy was one of the reasons.

Freed to chart its own course, a resource-bare island whose GDP per capita was barely US $500 in 1965 built world-class ports, universal English-language schooling and an aggressively pro-investment regime; by 1990 output per head had already topped US $13 000, and by 2023 it reached roughly US $84 700, putting Singapore among the world's richest economies. From a poor and resource-bare island it becomes a 1st world country. This story is important for India to take note.

1. Singapore: Climb from "Third World" in 1965 to the world's GDP-per-capita elite in 2024

Indicator	At independence (1965)	1980	2000	2024*	Change & meaning
GDP per capita (current US$)	$517	$4 916	$23 523	$92 930 (IMF WEO est.)	180-fold increase; now ~37× India's level
Trade-to-GDP ratio	176 %	285 %	309 %	311 % (highest globally)	Hyper-openness turned domestic constraints into opportunity
Net inward FDI stock	< US$0.1 bn	US$4 bn	US$149 bn	US$2.84 trillion (S$2 843 bn)	Deep pool of foreign capital & know-how
Unemployment	~9 %	3.3 %	3.1 %	1.9 % (Dec-2024)	Near-full employment for decades
Adult literacy	52 % (1957)	86 % (1980)	94 %	98 % (2021)	High-skill workforce fuels productivity

Home-ownership (HDB flats)	n/a	72 %	87 %	~90 %	Broad middle-class stake in growth
Human Development Index	0.721 (1990)	0.909 (2010)	0.946 (2023)	From "high" to "very-high" development	
Port throughput (TEUs)	first container berth opened 1972	5.2 m (1992)	20.3 m (2000)	39 m (2023)	Global #1 trans-shipment hub

**2024 or latest 2023-data where 2024 still provisional.*

Five engine-rooms of the miracle — and the key policy enablers

Phase & policy toolkit	What Singapore actually did
1. "Jobs first" industrialization (1961-1975) • Economic Development Board (EDB, 1961) – single window with tax "pioneer" status • Jurong Industrial Estate – turned mangrove swamp into 9000-ha factory zone by 1974	Pulled jobless rate from 9 % to <4 % by 1975; manufacturing share of GDP leapt from 10 % to 24 %
2. World-class connectivity (1972-1990) • First container terminal (1972); Changi Airport (1981) • Promoted entrepôt & oil-refining to exploit location	Trade/GDP ratio >250 % by 1980; port volumes grew >1 000 % in 20 yrs
3. Social & human-capital compact • Housing Development Board (HDB, 1960): massive public-housing ownership financed by Central Provident Fund (CPF) • Bilingual universal education; Technical Institutes (ITE) & Polytechnics	90 % home-ownership, near-universal literacy & STEM-oriented labour pool
4. Clean, competent government & sovereign investors • Corrupt Practices Investigation Bureau (CPIB), high civil service pay • Temasek (1974) & GIC (1981) recycle reserves into global assets	Singapore ranks world top 5 in Transparency International; Temasek + GIC generate S$23.5 bn budget dividend in FY 2024

5. Continuous upgrading to a knowledge & digital hub (2000-2025) • RIE-plans (US$18 bn 2011-20; S$25 bn RIE2025) • Smart Nation agenda (2014) – digital ID, e-payments, AI governance	Manufacturing shifts to chips, biopharma & advanced chemicals; services (finance, ICT, logistics) >75 % of GDP; GDP per capita now >US$90 k

Other success ingredients often missed

1. Strategic immigration & skills levy – kept workforce young while protecting citizen wages.
2. Macroeconomic prudence – MAS uses exchange-rate band, runs chronic fiscal surpluses and accumulates FX reserves ≈ 100 % of GDP.
3. Pro-competition but activist industrial policy – rapid exit from sunset sectors (textiles, HDDs) and early bets on semiconductors, biotech, green tech.
4. Legal predictability & English-law courts – critical to attracting 4 000+ regional HQs of multinationals.
5. Regional & global FTAs – founding ASEAN (1967), first Asian signatory of CPTPP, bilateral FTAs covering >80 % of world GDP.

Take-aways for any fast-growing but still-poor economy (India included)

- Productivity, not population, drives prosperity. Singapore reached first-world income with <6 million people by relentlessly raising value-added per worker.
- Execution trumps strategy slogans. The mix of a single implementation agency (EDB), transparent incentives and KPIs ensured plans translated to factories, labs and jobs.
- Social cohesion as economic infrastructure. Universal housing, compulsory savings and low corruption created trust — the invisible capital behind FDI inflows.
- Upgrade continuously or stagnate. Each 10-year plan pushed the frontier: low-cost assembly → electronics → petrochemicals → finance → biotech & deep-tech.
- Open markets amplify—not replace—domestic reforms. Hyper-trade openness worked only because domestic fundamentals (skills, logistics, governance) were world-class.

Bottom line: Singapore's rise was deliberate, data-driven and institutional. It married export-orientation with uncompromising investment in human capital and clean governance, turning a resource-poor island into the world's third-richest country per capita. Headlines about aggregate GDP rankings miss this deeper playbook — the real celebration is sustained productivity growth built on effective institutions.

Development Playbook

Five "from-developing-to-developed" playbooks—data and drivers

Country	GDP pc at take-off*	GDP pc 2023	× Increase	What the numbers say
South Korea	US $79 (1960)	US $33 121	× 420	War-shattered agrarian economy to G-20 tech powerhouse in one lifetime.
Ireland	US $14 031 (1990)	US $103 888	× 7.4	Fastest-growing rich economy since 2015; now #2 GDP pc in OECD.
Israel	US $1 450 (1960)	US $52 642	× 36	From austerity & hyper-inflation to "Start-up Nation" and OECD member.
Finland	US $1 187 (1960)	US $52 926	× 45	Post-war timber exporter to digital welfare state ranked top for human capital.
Hong Kong	US $424 (1960)	US $50 697	× 120	A refugee entrepôt that became a global financial centre despite no natural resources.

*"Take-off" = first post-colonial or post-war year with full data (varies by country).

2. South Korea – The export-industrialisation archetype

- 1962–79 Five-Year Plans: single-window Economic Planning Board aligned credit, tax breaks and cheap FX for export manufacturers; chaebol conglomerates (Samsung, Hyundai, LG) received scale loans conditional on hitting export targets.
- Human-capital shock: secondary-school enrolment jumped from 38 % (1965) to 88 % (1985); today 70 % of 25-34-year-olds hold tertiary degrees, highest in OECD.
- Heavy-&-Chemical Drive (1973-79): steel, shipbuilding, autos; by 1980 manufacturing exceeded 25 % of GDP.
- R&D surge: GERD > 4 % GDP since 2013, focused on semiconductors and batteries.
- Outcome – goods-trade surplus every year since 1998; outward FDI stock US$700 bn finances national pension needs.

3. Ireland – Tax-and-talent magnet in the EU

- EU accession (1973): structural-funds build roads, telecom and water; full Single-Market access from 1993.
- 12.5 % corporation tax (from 1998) + "knowledge-box" IP regime pulled in Apple, Pfizer, Intel; foreign firms now create > 50 % of value added.
- Human-capital pact: 1987-2009 Social-Partnership deals traded wage moderation for public-investment in universities—STEM graduations tripled.

- Trade intensity: exports equal 130 % of GDP; pharma and ICT devices are >60 % of goods exports.
- Resilience lesson – after 2009 crash Dublin tightened bank supervision but kept FDI model intact; by 2023 GNI* (which strips "laptop GDP") is still 80 % of EU-15 average.

4. Israel – Defence tech to civilian high-tech flywheel

- Mass immigration: labour force trebled 1948-73; human-capital inflows (ex-Soviet engineers, US post-docs) kept average schooling > 13 years.
- R&D-first budget: since 1997 civilian R&D > 5 % GDP (world #1 share); military-spin-offs (radar, cyber, UAVs) seeded 9 000 start-ups.
- Yozma VC programme (1993) matched private capital 1:2 and offered state-exit options—template for modern seed-fund policy.
- Macro reset (1985): heterodox stab-programme crushed 500 % inflation to < 20 % in 24 months, restored investor confidence.
- Export pivot: goods+services exports leapt from 27 % GDP (1980) to 34 % (2023); chips (Intel, Tower), med-tech and SaaS now lead.

5. Finland – Education-innovation-welfare triad

- Comprehensive-School Act 1972 created the world-famous egalitarian school system; PISA-top performer since 2000.
- Industrial shift: 1950s timber → 1980s metal & engineering → 1990s ICT; Nokia alone peaked at 4 % of global GDP in 2000.
- Crisis-as-catalyst: the 1991 Soviet-trade collapse slashed GDP -11 %, but forced liberalization (banking, FX, competition) and EU entry 1995.
- Innovation institutions: Tekes (Business Finland) and SITRA fund clean-tech & health-tech; R&D > 2.9 % GDP.
- Social floor: universal health + pensions sustain high labor-force participation—key when ageing accelerated (median age 45).

6. Hong Kong – Laissez-faire entrepôt to finance hub

- Unilateral free-port since 1842; tariffs still near-zero, so trade/GDP tops 300 %—world's most open economy.
- Textiles-to-electronics ladder (1955-85) powered by migrant entrepreneurship and minimal bureaucracy.
- Rule-of-law & simple taxes: max 15 % profits tax, independent common-law courts—drew 1 800 multinationals' Asia HQs.
- Infrastructure bets: world-scale container port (1972) and Chek Lap Kok airport (1998) lock in logistics advantage.

- Post-1997 services leap: finance & professional services now 89 % of GDP; the HKMA currency board holds reserves > 120 % of base-money to defend the US-dollar peg.

What unites the success stories?

1. Early, compounding productivity gains—each country raised output per worker long before the demographic dividend faded.
2. Exports as discipline—competing abroad forced quality and scale; domestic market size was irrelevant.
3. Human-capital obsession—from Korea's cram-schools to Finland's egalitarian classrooms and Israel's defence labs.
4. Institutional credibility—sound macro policy, low corruption and predictable courts reassured both citizens and foreign investors.
5. Adaptive industrial policy—all five pivoted sectors every 15-20 years: textiles → chips (HK), shipbuilding → EV batteries (KR), cattle → cloud software (IE), pulp → 5G (FI), weapons → cyber-security (IL).

Why this matters for India's "#4 GDP" euphoria

These cases show that headline GDP rank means little without rapid, broad-based gains in GDP per capita, export complexity and innovation intensity. India's per-capita income (US $2481) is still < 5 % of Korea's and < 3 % of Ireland's; celebrating size without fixing productivity, skills and trade composition risks complacency—and voters eventually punish stagnating living standards. Global best-practice playbook for turning low-income countries into advanced, high-productivity economies

(Derived from the experience of the 30-odd states that have jumped to "high-income" status since 1960; key sources marked.)

1. Put productivity first, not population size

- Export-oriented manufacturing is the common launchpad. South Korea pushed exports from < 3 % of GDP in 1962 to 56 % by 2012, turning a US $79-per-capita agrarian economy into a G-20 tech hub with US $33 000 per-capita income today.
- Hyper-integration into trade lanes is scalable even for city-states: Singapore's trade-to-GDP ratio exceeds 300 %, and per-capita GDP rose from US $517 (1965) to > US $90 000.

Lesson for India: Seek double-digit annual export-volume growth—especially in labour-intensive and mid-tech goods—until exports top at least 25 % of GDP (vs c. 13 % now).

2. Invest massively—and early—in human capital

- Finland's 1972 Comprehensive-School Act unified schooling, cut inequality and ultimately put the country at the top of the first three PISA rounds.
- Israel's tertiary-education surge and world-leading 5 % of GDP spent on civilian R&D underpins a start-up density of one tech firm per 1 400 residents.

Lesson for India: The "demographic Opportunity" converts to growth (Demographic Opportunity) only if secondary-school completion and STEM degrees jump sharply; raise public R&D from 0.7 % to ≥2 % of GDP.

3. Build clean, capable institutions before crises strike

- Singapore's Economic Development Board (1961) offered a single, corruption-free window for investors; CPIB enforcement kept trust high.
- Ireland's low, stable 12.5 % corporate tax, backed by rule-of-law courts, drew the multinationals whose profits now generate 29 % of tax revenue.

Lesson for India: Simplify fiscal incentives, curb retrospective taxation, pay globally competitive civil-service wages, and empower independent anti-corruption bodies and free India from bureaucracy.

4. Maintain macro-financial credibility

- All successful convergers combined high domestic savings with cautious external borrowing.
- Currency-board Hong Kong holds reserves > 100 % of base money; Singapore sterilizes inflows via sovereign funds; Korea built a US $410 bn FX war-chest before the 2008 shock.

Lesson for India: Keep the fiscal deficit credible (< 5 % of GDP), protect the rupee with larger reserves, and insure against balance-of-payments shocks as the import bill (energy, electronics, fertilizer) grows.

5. Use targeted, sunset-clause industrial policies

- Korea's "heavy-and-chemical" drive and Israel's Yozma VC programme had clear export or innovation KPIs and automatic weaning from subsidies.
- Singapore's sector pivots—textiles → electronics → biopharma → deep-tech—followed 15-year review cycles.

Lesson for India: Link PLI and FAME incentives to explicit export, localization and R&D milestones, and publish an exit timetable.

6. Formalize land, labor and capital markets

- Ireland and Finland entered the EU, binding themselves to competition law, free capital mobility and labour-mobility rules—forcing domestic reforms.
- Korea's 1990s financial liberalization allowed chaebol to access global bond markets while imposing IFRS transparency.

Lesson for India – the suggestions here need a careful assessment again:

1. Fully digitalize governance. Free India from bureaucracy
2. Transform judiciary and Public Safety.
3. New Corporate model
4. Completely remove the 'not-for-profit' model from the scene
5. Set up a mega Bharat Sovereign Wealth Fund to factor capitalization for India's growth and invest in strategic assets globally.
6. Agriculture reforms needed with a renewed focus
7. Develop a pension scheme for tax payers – I have put a separate section in the book 'Tough Choices & Hard Decisions – Making India a Developed Country in the Next 25 years' (Page 226).

7. "Social contract" investments that spread gains

- Nearly 90 % of Singaporeans own subsidized HDB flats, anchoring a broad middle class.
- Finland and Korea run universal pension and health systems that cushion structural shifts and keep political support for openness.

Lesson for India: Universalize high-quality primary health and a portable, contributory pension so workers can shift from low-productivity farms to factories without catastrophic-risk fears.

8. Govern by data, iterate fast

- The best performers track granular KPIs (export baskets, school-quality scorecards, patent counts) and course-correct in real time.
- World Bank's 2024 World Development Report stresses diffusion of modern technology across all firms as the single strongest predictor of escaping the "middle-income trap."

Lesson for India: Equip GST, Aadhaar and UPI data lakes with open-API dashboards for policymakers and researchers; publish quarterly productivity and learning-outcome maps, not just GDP flashes.

Checklist India can Adopt Immediately

Priority	Concrete action in FY 2025-27	Expected gain
Exports	Join Comprehensive & Progressive TPP and conclude FTA with EU; set up 5 coastal "plug-and-play" export cities	+2 ppt GDP growth via scale manufacturing
Skills	Double ITI & polytechnic intake; fund outcome-based skilling vouchers	Raise manufacturing value-add / employee
R&D	Triple public research grants; 150 % "patent-box" deduction for private labs	Lift patent filings toward 100 k/yr
Institutions	Merge 20+ investment windows into one empowered India Development Board with CEO-level autonomy	Cut greenfield approval time from 18 mo to < 3 mo
Social floor	Portable health insurance + contributory pension for gig & farm workers	Boost labour-force mobility, female LFPR

Bottom line

Moving from "number 4" in total GDP to "developed country" status means raising every worker's productivity, not just counting rupees. The eight practices above—rooted in trade discipline, human-capital obsession and institution-first governance—explain virtually every successful leap from poverty to prosperity. India already has the scale and the demographic window; applying these lessons with steadfast execution will determine whether it replicates the Korean miracle or stalls in the middle-income trap.

India's real task is to compress in two decades what these economies achieved in four:

- upgrade human capital at scale.
- build institutions that crowd-in long-horizon private R&D.
- shift exports from raw materials & outsourcing to sophisticated manufactures and services.
- keep macro fundamentals credible (low inflation, stable rupee, predictable taxation).

Only then will "developed nation" status move from slogan to statistical reality.

India's internal economic complexity

1. India's macro picture, 2014 → 2024

Metric	2014	2024 (prov.)	Comment

Real GDP (₹ lakh cr, 2011-12 prices)	113.6	173.8	Compound real growth ≈ 5.8 % p.a. despite two Covid contractions
Sector share in GVA	Agri 15 % → 14 %Industry 29 % → 27 %Services 56 % → 59 %	Services' dominance has widened, while manufacturing is stuck near 14 % of GDP	
National export mix	Merchandise share of GDP 12 % → 13 %; high-tech share < 9 %	"Make-in-India" lifted volume but not complexity; value add still low	
Employment stress	Open unemployment 5.2 % → 7.8 %; 80 % of jobs informal	Growth not translating into secure work—top public grievance in 2024 election	

Take-away: India moved up the size ladder, but its growth is increasingly region- and sector-concentrated and still thin on manufacturing jobs.

2. Which states do the heavy lifting?

Rank 2023-24	State	Share of national GDP	10-yr real CAGR*	Lead sectors	Drag sectors
1	Maharashtra	13.5 %	5.6 %	Finance, auto, media	Rural infra, agri productivity
2	Tamil Nadu	9.0 %	6.4 %	Diversified manufacturing (EVs, textiles) & IT-services	Water-stressed agriculture
3	Uttar Pradesh	8.5 %	5.4 %	Food processing, labour-intensive manufacturing, expressways	Low per-capita income; skill gap
4	Karnataka	8.5 %	7.7 %	IT & deep-tech exports, electronics	Agrarian distress, urban congestion
5	Gujarat	8.0 %	8.3 % (2nd best)	Petro-chem, pharma, ports-led trade	Low female LFPR, services depth

6-10	WB, Rajasthan, Telangana, AP, MP	25 % (combined)	5-7 %	WB—services & MSME; Rajasthan—mining & renewables; Telangana—pharma & IT; AP—ports & aquaculture; MP—agro & minerals	Common pain-points: private capex & human-capital gaps

*Average annual growth at constant prices, FY 2014-25; MOSPI series.

3. How the rest of the map looks (two-line score per state)

Zone	States	What's working	What's lagging
Industrial heartland	Punjab, Haryana	Agro-processing, autos	Diversification beyond wheat-rice cycle
Mineral East	Odisha, Chhattisgarh, Jharkhand	Mining & metals; Odisha now India's #2 growth state 2023-24	Down-stream manufacturing, health & schooling
BIMARU belt	Bihar, MP, Rajasthan, UP	Expressways, digital payments uptake	Per-capita GDP < $1 000 in Bihar; low female jobs, manufacturing depth
Southern service hubs	Kerala, Telangana, Karnataka	IT, remittances, health & education	Ageing (Kerala) and shrinking farmland
Western ports	Gujarat, Maharashtra, Goa	Export logistics, chemicals, tourism (Goa)	Coastal climate risk, services skilling
North-East	Assam, Mizoram, Nagaland, etc.	Fastest GSDP growth (Mizoram 10 %) on small base	Connectivity, private investment
Hill & UT economies	Uttarakhand, HP, J&K, Sikkim, Delhi	Hydro-power, tourism, high per-capita (Delhi, Sikkim)	Disaster resilience, industrial land

4. Policy, capacity & infrastructure priorities for 10 %+ real growth

Pillar	Concrete actions	Why it matters
A. Manufacturing catch-up in the heartland	Extend Production-Linked Incentives plus freight equalization to UP-Bihar-MP-Rajasthan corridor; complete Eastern Dedicated Freight Corridor	Shifts jobs to labour-surplus states; exploits cheaper land

B. Skills & human capital	Double ITI/polytechnic intake; outcome-funded skilling vouchers for women & NE youth	Turns demographic bulge into productive labour
C. Urban & logistics infrastructure	Tier-2 smart-city fund (focus: Lucknow, Indore, Bhubaneswar, Guwahati); port-rail multimodal parks in Odisha & TN + move beyond metros	Cuts logistics cost from 14 % to < 7 % of GDP
D. Digital & power grid	National 5G-fibre backhaul to last-mile GramNet; 50 GW renewables in low-income states via Viability-Gap Funding	Enables MSME e-commerce; de-risks coal-heavy grids
E. State-level ease-of-doing-business	Single-window statute with time-bound approvals; digitized land titles; contract-enforcement courts	Reduces project gestation by 35 % (global best practice)
F. Fiscal & governance capacity	GST revenue-sharing floor for poorer states; performance-linked capital grants for health & education outcomes	Aligns incentives, cushions reform pain
G. Innovation & R-D spread	200 "District Mini-Tech Parks" co-funded by Centre & state; 150 % super-deduction for R-D outside Top 6 metros	Prevents tech clustering, builds regional value chains

5. States that most urgently need investment

Priority tier	States	What to invest in
Top-priority (per-capita < ₹1.5 lakh & growth < 5 %)	Bihar, Jharkhand, Chhattisgarh, Assam, Meghalaya	Rural roads, agro-processing clusters, technical literacy, health centres
Catch-up tier (large population, mid growth)	Uttar Pradesh (eastern districts), Madhya Pradesh, Rajasthan, Odisha, West Bengal	Industrial parks along Dedicated Freight Corridors (DFCs), skilling hubs, urban housing & metro rail
Strategic tier (border & hill)	North-East 8, J&K, Uttarakhand, Himachal	All-weather highways, eco-tourism, horticulture cold-chains, disaster-resilient power

Wealth Concentration – The Accumulated Growth Model

(Revenue ≠ GDP: the figures below use the latest full-year consolidated revenue as a proxy for their economic heft because true group-level gross value-added (GVA) is not disclosed. Value-added is typically 20-40 % of revenue, varying by sector. Still, the numbers give a clear sense of scale and concentration.)

Rank	Business house (holding entity)	Latest full-year consolidated revenue	Converted to ₹ lakh crore	Share of India's FY 2024-25 nominal GDP†	Key operating verticals
1	Tata Group (Tata Sons + 29 listed cos.)	US $165 bn, FY 2023-24	≈ 14.0	4.2 %	IT services (TCS), auto & EVs, steel, airlines, consumer & retail
2	Reliance Industries	₹ 10,71,174 cr, FY 2024-25	10.7	3.2 %	Oil-to-chemicals, telecom (Jio), organized retail, new energy
3	Aditya Birla Group	US $65 bn, CY 2024	≈ 5.5	1.7 %	Cement (UltraTech), aluminium & copper (Hindalco/Novelis), fashion retail, financial services
4	Adani Group	₹ 3.09 lakh cr, FY 2023-24	3.09	0.9 %	Ports & logistics, power (thermal/renewable), airports, cement, transmission
5	Larsen & Toubro	₹ 2,55,734 cr, FY 2024-25	2.56	0.8 %	EPC & defence engineering, IT (LTIMindtree), infrastructure concessions
6	Mahindra Group	US $23 bn, FY 2023-24	≈ 1.96	0.6 %	SUVs & tractors, farm services, IT (Tech M), finance, logistics
7	JSW Group (Steel + Energy + Infra)	~₹ 1.9 lakh cr, FY 2024-25	1.9	0.6 %	Steel, renewable & thermal power, ports, cement
8	Vedanta Group	₹ 1,50,725 cr, FY 2024-25	1.51	0.5 %	Aluminium, zinc, oil & gas, power, semiconductors (in pipeline)
9	Bharti Enterprises (Airtel)	₹ 47,876 cr, FY 2024-25	0.48	0.1 %	Mobile & fixed telecom, data centres, payments bank, Africa ops

† Government of India provisional estimate of FY 2024-25 nominal GDP: ₹ 330.7 lakh crore

What the numbers reveal

1. Extreme concentration: Tata and Reliance alone funnel roughly 7.5 % of India's entire output on a revenue basis.
2. Sector diversity matters: Tata's spread across cyclical (steel, auto) and high-margin (IT) lines and Reliance's pivot from refining to digital/retail help explain their outsized economic footprint.
3. Infrastructure vs. consumption: Adani, L&T and JSW are infrastructure-heavy; their revenue converts into high fixed investment but lower consumer-facing multiplier effects than, say, Tata's or Birla's consumer businesses.
4. Policy sensitivity: A single policy shock—e.g., telecom pricing for Reliance/Jio or emission norms for JSW/Vedanta—can sway more than 3-4 % of national output.
5. Missing middle: Outside the top nine, no other business house currently tops the 0.1 %-of-GDP threshold—signaling limited scale among mid-tier corporates.

Caveats & context

- Value-added vs. turnover: Actual GDP contribution (GVA) would be lower because intermediate inputs are netted out. Manufacturing-heavy groups (JSW, Vedanta) may realize 20-25 % value-added margins; services-heavy groups (Tata-TCS) can reach 45 %.
- Double counting: Some inter-group trade (e.g., JSW Energy selling power to JSW Steel) slightly overstates aggregate weight.
- Public sector giants not shown: Indian Railways, ONGC, Coal India, etc., are government-owned and together account for ~6 % of GDP on a revenue basis, separate from the private groups above

Bottom line: Nine private conglomerates now turn over the equivalent of 12 % of India's GDP. Their capex plans, regulatory treatment and corporate governance therefore have macro-level implications—not just shareholder consequences.

This will lead to India falling on the influence of these corporate's interests, and push India behind the other LMICs- I would like to remind;

The directive principles enunciated in articles 36-51of the constitution make it clear that for the attainment of these ends, ownership and control of the material resources of the country should be so distributed as best to subserve the common good, and that the operation of the economic system should not result in the concentration of wealth and economic

power in the hands of a. Few. It is in this larger perspective that the task of planning must be envisaged'. So, the government of the day must ensure that the economic model is a one that leads to distributed growth and not the accumulated growth model that we have at present. This can only be achieved only by building an economic model that is localized at the district level, with a strong and a foundational base of agriculture and MSMEs. So, we need to go back to the drawing board, now!

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6. Way forward

India's headline GDP climb to #4 masks a stark intra-national story—five states create almost half the value added while per-capita income in Bihar is one-tenth of Goa.

Sectorally the country is a service-heavy outlier; manufacturing's 14 % share is far below the East-Asian norm.

Getting to double-digit growth demands shifting the next wave of factories and high-productivity services into the northern-central heartland and the mineral east, while plugging human-capital and logistics gaps and most importantly, redoing the economic model.

If these regional and sectoral imbalances are not addressed, and we do not redo the economic model, India risks achieving size without prosperity—exactly the cautionary tale the top-state data already hints at.

Defining 'Developed Economy' Status and Key National Metrics

To qualify as a developed economy by 2047, India must achieve benchmarks comparable to OECD countries in income, human development, and innovation. Key national metrics to target include:

1. High Per-Capita Income: Attain High-Income Country status (World Bank classification) by reaching a GDP per capita well above the threshold (currently around $13,000). India's GDP per capita in 2023 is about $2,485. The government's Viksit Bharat 2047 vision aspires to ~$18,000 per capita by 2047 (with a $30 trillion GDP) , which would put India in the ranks of upper OECD economies. For comparison, OECD economies today average around $40,000+ per capita.
2. Human Development Index (HDI): Raise HDI from the medium category (India's HDI ≈ 0.64–0.68, rank 130 in 2023) to 0.80+ (High/Very High). OECD nations typically have HDI >0.88. This implies major improvements in life expectancy, literacy, and income.

India has improved its HDI ~48% since 1990; by 2047 the aim is to join the top 50 nations on HDI.

3. Innovation & Technology: Achieve top-tier global innovation status. India currently ranks 40th in the Global Innovation Index, a big leap from 81st in 2015. The target is to break into the top 20, reflecting a robust R&D ecosystem. Gross R&D expenditure should rise from ~0.65% of GDP (current) to 2–3% of GDP (OECD average ≈2.6%) . This includes boosting patents, scientific publications, and high-tech exports.
4. Education Outcomes: Achieve universal high-quality education. Key goals: 100% literacy (current ~77%), increase mean years of schooling (from ~6.5 years to >10 years), and dramatically improve learning outcomes. India must move from parity in school access toward parity in learning. For instance, fewer than 43% of grade 5 children can currently read a grade 2 text – a figure that must approach 100% with strong foundational learning programs. Participation in international assessments (like PISA) by 2047 should show Indian students on par with OECD averages. Gross Enrollment Ratios in higher education (currently ~28%) should rise toward 50%+ as envisioned by the National Education Policy.
5. Infrastructure & Urbanization: Although not explicitly listed in the query, achieving developed-nation status will also require modern infrastructure (transport, power, digital) and a higher urbanization rate. For example, to support a $30+ trillion economy, India's infrastructure investment must remain ~7-8% of GDP annually, continuing the current push (Capex spending hit a record ₹11 lakh crore in 2024–25) . Urban share of population could rise from ~34% to ~50% by 2047, accompanying the shift to an advanced economy.

6. State-wise GDP per capita (USD, 2023) and HDI

State	GDP per capita (USD, 2023)	HDI (latest UNDP)
Goa	7,764	0.760 – High
Kerala	3,637	0.758 – High
Tamil Nadu	4,068	0.692 – Medium
Maharashtra	3,677	0.695 – Medium
Punjab	2,627	0.698 – Medium
West Bengal	1,913	0.635 – Medium
Madhya Pradesh	1,787	0.611 – Medium
Uttar Pradesh	1,244	0.609 – Medium
Jharkhand	1,334	0.600 – Medium
Bihar	767	0.577 – Low/Med

7. Sources (consulted June 2025):
8. Per-capita GDP: statisticstimes.com (State GDP per capita table, 2023 values)
9. HDI: UNDP / Wikipedia compilation of latest sub-national HDI (2019 update)

The above table summarizes where India stands and where it aims to be by 2047. In short, India needs to nearly quadruple its HDI, quintuple per-capita income, and make qualitative leaps in innovation and social development. Achieving an average 7–8% GDP growth over the next 22 years (as the World Bank notes) is critical. The World Bank's India Country Economic Memorandum 2025 finds that 7.8% annual growth to 2047 is possible, given India's past 6.3%

growth (2000–2024). Reforms must be "as ambitious as the target itself". Key levers identified include boosting investments, jobs, productivity, and inclusive growth across all states.

Comparison of NDA 1 & NDA 2

1. Economic Growth

- NDA 1 (1998–2004, Vajpayee)
  - Real GDP grew at an average of ~6% p.a.
- NDA 2 (2014–2024, Modi)
  - Real GDP averaged around ~7% p.a., with early years (2014–17) closer to 7.3% p.a.

Economic Verdict: NDA 2 outperformed NDA 1 in GDP growth.

2. Inflation & Markets

- Wholesale Price Index (WPI)
  - NDA 1: ~4.8% average inflation
  - NDA 2: ~0.4% by 2017
- Sensex Performance
  - NDA 1: +18%
  - NDA 2 (2014–2017): +35%
- Foreign Portfolio Investment (FPI)
  - NDA 2 saw $65 bn inflows (2014–17)

3. Structural & Policy Shifts

Domain	NDA 1 (1998–2004)	NDA 2 (2014–Present)
Reforms & Foundations	Telecom liberalization, Golden Quadrilateral highways, Fiscal Responsibility Act, PSA, Delhi Metro	Continued infrastructure boost (roads, rail, airports), major push in solar, digitalization, Atmanirbhar Bharat
Foreign Policy	Pokhran-II weapons tests, Kargil War, "Look East" policy, Gujral Doctrine, rejuvenated US ties	Rebranded as "Act East", "Neighborhood First", deeper global outreach—significant diplomatic reorientation
Governance Mode	Coalition-building across 23+ parties; fiscal prudence amid limited parliamentary majority	Single-party majority led by BJP; centralized, rapid decision-making;

		orchestrated by strong organizational base

4. Fundamental Shifts:

- NDA 1 laid crucial groundwork:
  - Major infrastructure build-out
  - Telecom revolution (mobile boom, internet access)
  - Fiscal discipline through the Fiscal Responsibility Act
  - Emergence of India as a nuclear power (Pokhran)
- NDA 2 deepened and broadened reforms:
  - Emphasis on digitalization, renewable energy, and resilient infrastructure
  - Foreign policy shift with Act East and strategic, economic diplomacy
  - Strengthened project implementation capacity, backed by parliamentary stability

Conclusion:

- NDA 1 catalyzed foundational transformations in infrastructure, telecom, and fiscal policy.
- NDA 2 capitalized on these foundations—deepening reforms, centralizing governance, and reconfiguring India's strategic and global economic posture.

So, both governments made fundamental shifts, but in different domains: NDA 1 built the platform; NDA 2 shifted gears to scale and modernize governance, economy, and global strategy.

Agriculture in pre-colonial, Colonial and Post-colonial times

1. Pre-Colonial Era (Before British Rule)

- Crop diversity & cultivation techniques: Indian regions under the Mughals had high output per capita with double harvests in fertile locations. Bengal grain prices were about one-third of those in Britain, highlighting strong productivity.
- Regional strengths: The fertile Indo-Gangetic plains supported rice and wheat; Madras region excelled in rice, millet (ragi, cholam), and pulses.

2. British Colonial Period (1858–1947)

- Crop output growth: All-crop output grew only ~0.4% p.a. overall; food-grain output was nearly stagnant from 1891–1946.
- Regional trends:

  - Bengal: Food output declined by ~0.7% annually (1921–1946).
  - Punjab & Madras: Exhibited less stagnation, supported by canal irrigation expansions.
- Irrigation infrastructure: Irrigated area expanded from ~0.8 M ha (1800) to ~22 M ha by 1947, driven largely to support cash crops like opium.

3. Post-Independence Era (1947–Present)

By Crop (1980s to Today)

- Rice: 1,130 kg/ha (1970–71) → ~2,240 kg/ha (2010–11) → ~4,058 kg/ha (2019).
- Wheat: 1,307 → ~2,938 → ~3,533 kg/ha.
- Pulses: 524 → ~689 → ~441 (decline recent but higher than pre-Green Revolution).
- Oilseeds: 579 → ~1,325 → ~1,593 kg/ha.
- Sugarcane: 48,322 → ~68,596 → ~80,104 kg/ha.
- Cotton: 106 → 510 → 1,157 kg/ha.

By Region/State

- Punjab/Haryana (Indo-Gangetic Plains): Wheat and rice yields around 3.8–4.2 t/ha; dairy output high.
- Tamil Nadu: Rice ~4.1 M tonnes, sugarcane ~16 M tonnes annually.
- Bihar: Rice ~5 M t; wheat 6–6.5 M t; maize ~4–4.5 M t; pulses, vegetables, fruits also strong.
- West Bengal, Odisha, Andhra, MP, Chhattisgarh: Have shown notable yield increases post-2000—tapping irrigation, modern seeds, outreach.

Per-Hectare & Per-Capita Productivity Trends

Period	Yield Trend	Population Growth	Per-Capita Output
Pre-Colonial	High, stable	Moderate	Strong
Colonial	Flat/slight growth	High (~0.7% p.a.)	Declined
Post-1950s–Present	Rapid rise (~2–3% p.a.)	Moderate (~2% p.a.)	Increased Significantly

Post-independence policies, Green Revolution, irrigation, and better access to inputs reversed colonial era stagnation—substantially raising per-hectare and per-capita crop output—but modern yields still trail leading nations, and regional disparities persist.

Summary

- Pre-British India: High productivity, local innovation, diverse cropping.
- Colonial Era: Stagnation in food crop productivity; irrigation largely served extractive cash crops; regional disparity accentuated.
- Post-independence: Yields multiplied 2–4× across major crops; per-capita output improved markedly; Western and central Indian regions are catching up, but overall productivity lags world leaders.

India's agricultural mechanization, seed adoption, fertilizer usage, and productivity gaps between regions:

1. Tractor Adoption & Farm Mechanization

- Tractor ownership surged: In Uttar Pradesh, tractors rose by 62% from 88,000 (2016–17) to 142,200 (2024–25); nationwide, FY 2024–25 is expected to see record sales of 1 million units.
- Farm power availability: Currently ~3.0 kW/ha; mechanization covers just ~32% of weeding and related activities.
- Impact: Tractors now facilitate land leveling, seeding, spraying, and harvesting—cutting labor costs and boosting efficiency.

2. HYV Seeds & Technology Adoption

- Green Revolution success: HYV seed uptake was faster in areas with robust irrigation and good soil—all leading to strong productivity gains.
- Regional variation: Language barriers and low extension reach limited HYV seed absorption in some areas.
- Education's role: Farmer schooling and outreach via KVKs & call centers significantly boosted tech adoption.

3. Fertilizer Use Trends

- Nutrient consumption up slightly: In 2022–23, total fertilizer use was ~63.9 million tonnes, with per hectare usage at ~141 kg—up marginally from 141.0 to 141.2 kg.
- NPK imbalance: The N:P_2O_5:K_2O ratio widened, indicating overutilization of nitrogen relative to phosphorus and potassium.
- State dynamics:
    - East/West India saw nutrient use rise by 1–1.2%, while North/South declined by up to 1.2%.
    - In West Bengal, fertilizer use increased 4.6% to 1.615 million tonnes, even as per-hectare rates dipped slightly.

4. Agricultural Productivity & Regional Gaps

- Mechanization losses: Reliance on manual tools costs farmers ~10–15% in crop productivity.
- Total Factor Productivity (TFP): Driven by improved irrigation, HYV seeds, fertilizers, and mechanization—but growth is slowing and unsustainable in parts.
- Climate-smart tech adoption: In Vidarbha, districts like Nagpur and Akola benefit from drought-tolerant seeds, precision farming, and improved infrastructure; others lag due to poor access.

5. Agri-Tech & Satellite Farming

- Data-driven gains: Andhra Pradesh farmers using satellite-guided services (e.g., Cropin/Syngenta) saw yields jump ~30% and net income rise ~37%.
- Nationwide digital boost: India now hosts 2,743 agritech startups; major funding ($1.3 billion in 2021) is rapidly expanding agri-tech access.

Summary of Key Drivers & Gaps

Driver	Regions Making Progress	Bottlenecks Remaining
Tractor & Mechanization	UP, Punjab, Haryana	Fragmented landholdings, Bihar, Odisha
HYV Seed Adoption	Irrigated zones, Indo-Gangetic Plains	Rainfed, tribal areas, language-diverse zones
Fertilizer Use	Eastern and Western India sees growth	N:P:K imbalance, declining use in South/North
Agri-Tech Adoption	Innovative farmers across AP, Maharashtra	Literacy, fragmented land, remote regions

Final Takeaway

India has witnessed sharp progress in mechanization, seed quality, fertilizer use, and agri-tech adoption—especially in regions like Punjab, Haryana, UP, and parts of Maharashtra & Andhra Pradesh. However, productivity gains are uneven, with rainfed, tribal, and language-diverse areas lagging due to poor education, access, and institutional support. To bridge gaps, tailored extension services, digital inclusion, balanced nutrient use, and climate-resilient investments are essential.

Making India a Developed Country: Sector & State Prioritization and Roadmap

Objective:

To outline the critical sectors, priority states, and policy actions required to accelerate India's journey to developed-country status (GDP per capita ≥ $14,000), with a target horizon of 2050.

1. Priority Sectors for Development

Sector	Rationale
Information Technology, AI & Digital Services	Key growth driver, global competitiveness
Electronics, Semiconductors, Capital Goods	Import substitution, national self-reliance
Pharmaceuticals, Biotechnology, Healthcare	Healthcare access and life sciences leadership
Renewable Energy & Green Transition	Decarbonization, global leadership in renewables
Advanced Manufacturing & Industry 4.0	Export growth, productivity improvement
Fintech and Financial Services	Financial inclusion, capital deepening
Infrastructure & Logistics	Backbone for competitiveness and inclusion
Construction, Urbanization & Transport	Urban growth, quality of life
Textiles (Circular Economy)	Employment-intensive modernization
EVs & Supply-Chain Resilience	Future mobility leadership, clean energy tech

2. States Requiring the Most Heavy Lifting

State Category	States
Low-performing states needing transformation	Bihar, Uttar Pradesh, Odisha, North-East States (Assam, Manipur, Mizoram, etc.)
Mid-performers needing acceleration	Rajasthan, Madhya Pradesh, West Bengal, Punjab
High-performing states to act as growth catalysts	Maharashtra, Karnataka, Tamil Nadu, Gujarat, Telangana, Andhra Pradesh

3. Sector-State Mapping & Targeted Actions

Sector	Focus States	Key Actions
IT, AI, Digital	UP, Bihar, NE	Develop Tech Cities, AI hubs, digital skills centers
Electronics, Semiconductors	UP, Bihar, MP, Odisha, WB	Semiconductor parks, PLI-driven FDI, cluster-based development
Pharma, Biotech, Healthcare	WB, Bihar, Odisha, NE	Expand biotech parks, boost manufacturing, strengthen healthcare infrastructure
Renewable Energy	Rajasthan, MP, Gujarat, TN	Solar and wind farms, grid modernization, HVDC lines
Advanced Manufacturing	Maharashtra, TN, Karnataka, Bihar, MP, Odisha	Smart manufacturing zones, MSME 4.0 upgrade programs
Fintech & Financial Inclusion	All states, especially low-income regions	Expand rural banking, fintech access, mobile platforms
Infrastructure & Logistics	NE, Bihar, Odisha	Roads, rail, air, ports, logistics hubs
Urbanization & Transport	MP, Rajasthan, Bihar	Smart cities, metro systems, affordable housing
Textiles (Circular Economy)	WB, TN, Karnataka	Eco-processing, modern textile clusters
EV Supply Chain	Gujarat, TN, Maharashtra	Rare earth processing, battery parks, EV component hubs

4. Key National-Level Policy Steps

1. Cluster Development: Establish innovation clusters in lagging states for each priority sector.
2. Skills & Human Capital: Scale vocational and digital skills programs tailored to sector-state needs.
3. Infrastructure Modernization: Focused build-out of transport, digital, and energy infrastructure in backward regions.
4. Incentives & Fiscal Reforms: Offer PLI, tax holidays, and targeted subsidies for backward regions and new clusters.
5. R&D and Innovation: Drive national investment in frontier technologies—AI, robotics, Industry 4.0, green tech.
6. Ease of Doing Business: Simplify regulatory environment, fast-track clearances, emulate reform champions.
7. Financial Deepening: Ensure last-mile financial inclusion through fintech and rural credit penetration.

5. Time-Phased Roadmap

Phase	Timeline	Goals
Foundation Building	2025–2030	Establish clusters, skills programs, infra upgrades
Scaling & Maturity	2030–2040	Develop robust domestic supply chains, technology leadership
Convergence & Inclusivity	2040–2050	Achieve regional convergence, human development parity, developed-country per capita income

Conclusion

India's pathway to becoming a developed nation requires sector-led, state-targeted, and policy-coordinated action. The combined focus on economic modernization, regional balance, and human development will accelerate progress and enable India to achieve developed-country status by early 2050s, if executed with urgency.

Roadmap for India to Become a Developed Economy by 2047

India's centenary of independence in 2047 has been set as the target date for achieving developed economy status. In global terms, a "developed" nation typically implies high-income status (as defined by the World Bank/OECD) along with advanced social development indicators. This roadmap outlines key national targets and reforms across critical sectors, drawing on OECD benchmarks and best practices. It also provides a state-level analysis to address regional disparities. The goal is an inclusive, innovation-driven, and sustainable economy by 2047.

> *In defining "developed" status, it's not just GDP that matters. India's vision emphasizes inclusive and sustainable growth – lifting all socio-economic groups, empowering women and youth, and pursuing green development.*

The subsequent sections detail sector-specific strategies and reforms needed to hit these national targets.

Sectoral Focus Areas and Strategic Reforms

To transform into a developed, knowledge-driven economy, India must accelerate progress in key sectors. We focus on five pivotal domains – Agriculture, Education, Scientific Research,

Artificial Intelligence, and MSMEs – outlining current challenges, historical trends, and future-oriented policy recommendations for each. These sectors cover the backbone of the economy (agriculture and MSMEs), the foundations of human capital (education and research), and frontier technologies (AI). Each sector's roadmap is crafted with data-driven insights and global comparisons.

Agriculture: Productivity, Sustainability and Farmer Incomes

Agriculture remains vital to India but needs a paradigm shift. Historical & current context: Agriculture's share in GDP has declined to ~15% in FY2022-23 (from 35% in 1990) , yet it still employs 45% of the workforce. This imbalance indicates low productivity – a hallmark of a developing economy. Average farm sizes are small and yields per hectare for many crops lag global averages. Nonetheless, the sector has sustained around 4% annual growth recently and was a backbone during the pandemic. Moving forward, India must replicate the productivity revolution seen in developed countries (where agriculture is <4% of GDP and only a few percent of employment) , while ensuring farmer livelihoods improve.

Challenges: A large portion of farmers are smallholders with poor access to technology, irrigation, formal credit and markets. Climate change is exacerbating risks (e.g. higher frequency of droughts on a landmass "the size of Italy" is threatened by climate-related drought). Post-harvest value addition is limited – India has 30-40% post-harvest losses in some supply chains. These issues keep rural incomes low and poverty high in many agrarian communities.

Key Strategies for Agricultural Transformation (2025–2047):

- Boost Productivity via Innovation: Launch a "Ever Green Revolution" focused on technology adoption – from high-yield seeds and precision farming to AI-driven advisory services. Pilot programs show massive potential: in Telangana, an AI-based initiative (Saagu Baagu) using drone/sensor data and advisory bots doubled chili farmers' income, raised yields by 21%, and cut pesticide use by 9%. Scaling such innovations nationwide (through public-private partnerships and agri-tech startups) can significantly increase output per hectare while reducing input costs.
- Diversify Cropping & Value Addition: Encourage a shift from over-reliance on grains to high-value crops (horticulture, pulses, oilseeds), allied activities (dairy, poultry, fisheries), and agro-processing. This will raise farm incomes and reduce volatility. For example, promoting food processing parks and export-oriented clusters can help India capture value across the chain. Processed agro-exports and branding of Indian produce (tea, spices, organic foods) should be expanded with support for SMEs in food processing.
- Irrigation and Infrastructure: Expand irrigation coverage (currently ~50% of gross cropped area) through efficient means (micro-irrigation, drip systems) and complete pending river linking or canal projects in an environmentally sound manner. Improved

rural infrastructure – all-weather roads connecting farms to markets, modern warehouses and cold storage – is critical to reduce the ~40% wastage in some supply chains. The PM Gram Sadak Yojana and agri-logistics programs should continue at scale.

- Market Reforms and Farmer Income Support: Build on recent market reforms to give farmers more choices in selling produce (e-NAM, Farmer Producer Organizations, etc.). Remove structural distortions. The PM-KISAN income support (₹6,000/year to farmers) has disbursed over ₹2.8 trillion to 110 million farmers – but this is not a solution, and in fact, over time, this will a drag on India's productivity in the long run. We have to implement price stabilization funds and crop insurance expansion to mitigate risks from price crashes or crop failures.
- Sustainable Practices: Encourage climate-resilient agriculture – drought resistant varieties, improved crop scheduling, and renewable energy (e.g. solar pumps) to make farming sustainable. India is already the world's 3rd largest renewable power producer, getting 40% of electricity from renewables. By 2047, 70% of energy for agriculture (e.g. for irrigation pumps, cold chains) should be from renewables. Promote organic farming and natural farming methods where suitable to maintain soil health.
- I have detailed out innovative agricultural reforms needed to boost profitability by 20x. We need to have a multi-pronged approach in addressing the 'most-important sector' for the economic model a country like India with 1.4 billion people needs to become a developed country and farmers and farm sector holds the key.

By executing these reforms, India aims to raise agricultural productivity (e.g. cereal yields closer to China's levels), multiply real farm incomes, and enhance the population's participation in agriculture and related sectors. This will also reduce the urban-slum-rural inequality.

Education: World-Class Human Capital Development

A developed India in 2047 will be built on the foundation of a well-educated, skilled populace. Current status: India has made huge strides in education access – near-universal enrollment at primary level and improving secondary enrollment. Literacy has risen from 52% (1991) to ~77% today. However, quality and outcomes are lagging. Mean years of schooling (6.5 years) are barely half the OECD average. India's 2018 National Achievement Survey and multiple ASER reports highlight a learning crisis: e.g., only 42.8% of grade 5 children could read a grade 2 text in 2022 (down from 50% in 2018 due to pandemic disruptions). In global skills assessments, India is underrepresented – a gap that must be filled.

Recent initiatives: I was a member of National Education Policy committee (NEP 2020), and brought in fundamental changes through the NEP, which charts a comprehensive reform path, moving from rote learning to experiential learning, and targeting a Gross Enrolment Ratio (GER) in higher education of 50% by 2035. NEP also mandates 6% of GDP for public education spending (up from ~4% currently) and introduces early childhood education, a new 5+3+3+4 curricular structure, and vocational training integration.

Strategies for an Educated India (2025–2047): I have detailed in the book 'You Degree is No Enough- Education For GenNext'. We have to relook at our education model given the new models evolving and this book details the roadmap for education for a developed India.

If these strategies are realized, India's vast demographic opportunity will be fully harnessed. By 2030 India will have the world's largest working-age population – educating and skilling this cohort is the surest way to sustained prosperity. A new education system will fuel innovation, productivity, and enlightened citizenship, crucial for a developed India.

Scientific Research & Innovation: Powering an R&D-Led Economy

For India to transition from factor-driven growth to innovation-driven growth, a quantum leap in scientific research output is needed. Developed economies typically owe much of their high productivity to strong R&D ecosystems (universities, labs, corporate research). Current scenario: India spends about 0.65% of GDP on R&D, which is low compared to the global average ~1.8% and far below countries like South Korea (~4.5%). Indian science has notable strengths – for example, a robust space program (ISRO's missions), pharmaceutical research (large generic drug industry), and frugal engineering innovations. India also produces a huge number of STEM graduates. Yet, outcomes in terms of global patents, cutting-edge innovation and Nobel Prizes are not commensurate with its size.

The Global Innovation Index reflects both progress and gaps: India is 40th worldwide in innovation, having improved from 81st in 2015, and ranks 1st among lower-middle-income countries. It excels in areas like ICT services exports and scientific talent pool. However, India still has only 4 of the top 100 global S&T clusters (cities like Bengaluru, Delhi) compared to 24 in China. Key weaknesses include research infrastructure, low private R&D, and translating research into commercial innovation.

Strategies to foster a Scientific Superpower by 2047:

- Increase R&D Investment to ~2.5% of GDP: Following examples of South Korea or Israel, India must quadruple its R&D spending as a share of the economy. This requires not only greater government funding (for labs, universities, defense and space research) but also incentivizing private R&D. Currently, government contributes ~55% of R&D spending in India – we need policies (tax incentives, industry-academia collaboration programs) to encourage industries to invest in research (e.g. pharmaceuticals, automotive, electronics companies setting up large labs). The Deloitte R&D blueprint notes India's GERD is much lower than other BRICS and needs a big boost.
- Strengthen Research Institutions & Universities: Create a network of world-class research institutions. Existing institutes (IITs, IISc, national labs) should be expanded and new centers of excellence established in emerging fields (quantum computing, nanotechnology, genomics, clean energy, etc.). By 2047, India should have multiple

Nobel-caliber research hubs. Reform governance of universities to give more autonomy and attract top global faculty and researchers (including expat Indian scientists coming back, which requires competitive funding and facilities).

- Mission-Mode Programs: Launch large-scale National Missions on key technologies – similar to the successful space (ISRO) and nuclear programs of earlier decades. Current examples include the National Supercomputing Mission, Quantum Mission, etc. These should be adequately funded and monitored for time-bound results (for instance, achieving leadership in areas like green hydrogen where India targets $80 billion revenues). Public-Private partnerships in mission mode can also yield results (e.g. a mission for semiconductor self-reliance, bringing together government, academia, and industry).
- Innovation Ecosystem & Startups: Encourage translation of research to market by supporting startups and industry innovation. India is already a top startup hub, including in deep-tech. Strengthen incubators at universities, provide seed funding schemes, and simplify IP commercialization. Also, improve the business sophistication and institutional support for innovation – e.g. stronger IP protection, faster patent approvals, research parks where companies and research labs co-locate (as seen in Silicon Valley or around Cambridge, MA). By 2047, R&D-intensive sectors (biotech, electronics, aerospace, AI) should be significant contributors to GDP.
- Global Collaboration: Science is global; India should integrate with international research networks. This means participating in big global science projects (like CERN, ITER fusion project), attracting R&D centers of MNCs, and facilitating exchange programs for Indian researchers. It also involves leveraging the Indian diaspora scientists – creating mechanisms for them to mentor or return to India for projects. Collaboration can help Indian science leapfrog by accessing cutting-edge equipment and expertise.
- Remove bureaucracy from education, and take a cue from how ISRO operates to redo the structure of education

If these measures are executed, by 2047 India can emerge as a true scientific powerhouse – perhaps contributing 8-10% of global research output (up from ~3-4% today) and leading in areas like space exploration (e.g. manned missions, Mars base contributions), healthcare innovations (new vaccines, biotech), and sustainable technologies. A strong innovation engine will also ensure India's economy is driven by productivity gains, necessary for reaching the high-income club.

Artificial Intelligence: Leading the Tech Revolution

India is training with AI, and the US is training AI- This makes USA the leader. India will have to remove the 'free access' of its markets to the west, which is STEALING the data of Indians and creating robust AI

Artificial Intelligence (AI) is singled out as a focus area given its transformative potential across all sectors. By 2047, AI could add trillions to global GDP, and India aims to be at the forefront of this revolution. Prime Minister Modi has advocated "AI for All," and NITI Aayog released a National AI Strategy in 2018 focusing on social impact applications.

Current position: India is a rising AI hub – it ranks 4th in the world on a global AI Vibrancy index (Stanford HAI) and second in AI skill penetration. It has a large pool of engineers and a thriving IT services sector which is rapidly upskilling in AI. Private AI investment, however, was about $1.16 billion in 2022, making India only 12th globally in AI funding. There are roughly 338 AI startups (7th highest count) in India – significant, but behind the US and China by an order of magnitude. In summary, India has immense AI talent but lags in R&D and high-end AI product development (most AI breakthroughs still come from OECD countries or China).

Despite my writing in the BJPs Election Manifesto of 2014 about data analytics etc. The implementation has lagged behind and at this point, India is falling way short of making the best of the AI era with the highest talent available. We have no global level product of our own and we are helping the developed world build AI products based on our data and talent. This will cost us dearly and we need to change the team that is leading the IT and AI in particular to redo our AI plans with a new approach.

Strategies for an AI-Supercharged Economy:

- National AI Mission & Investment: Treat AI as critical infrastructure. The government should spearhead a National AI Mission with substantial funding (similar to how ISRO was nurtured). This includes investing in AI research labs, computing infrastructure (GPUs, supercomputers – e.g. build on initiatives like AIRAWAT, the AI supercomputing facility), and datasets. By 2047, India should target a 10-fold increase in AI investment, both public and private. The Economic Times/Bain report suggests that AI-driven advances in manufacturing could double India's export share in certain sectors – to realize this, AI needs integration across industries.
- Skilling the AI Workforce: Launch a nationwide AI talent program. India plans to upskill millions of youth in digital skills ; within that, create specialized AI training modules in universities (e.g. AI degrees, online certifications) to ensure a steady pipeline of AI researchers and practitioners. Encourage top global AI experts of Indian origin to

collaborate with Indian institutions (through adjunct professorships, etc.). The goal is to have not just coders, but world-class AI researchers originating from India.

- AI in Governance and Social Sectors: Leverage AI for public good at scale – a true developed economy trait. This means deploying AI in agriculture (as mentioned, AI-based crop advisories), healthcare (AI diagnostics in rural clinics), education (personalized learning), and governance (smart cities, traffic management, crime prevention). India's unique strength is its massive digital public infrastructure (AADHAAR, UPI, etc.); integrating AI into these can improve service delivery. For example, AI-based language translation could break literacy barriers, and machine learning can help target welfare schemes more effectively.
- Foster AI Startups and Innovation Hubs: Build dedicated AI innovation hubs/parks in cities like Bengaluru, Hyderabad, Pune, etc., where startups, academia, and venture capital coalesce. Simplify regulations for AI startups (e.g. sandboxes for testing AI in fintech, health-tech under lighter norms). The aim is to produce homegrown AI products for global markets. By 2047, India should house several AI unicorns that are global names. Public-private collaboration is crucial: as noted in a NASSCOM-Bain study, collaboration in AI and enhancing R&D investment can reduce import dependencies.
- Ethical and Regulatory Framework: Being a developed nation also means robust governance of technology. India should proactively craft policies on Responsible AI – addressing data privacy, algorithmic bias, and job displacement concerns. The 2018 AI strategy emphasized ethics ("AI for All"). By setting up regulations in line with global standards (perhaps even leading in areas like an AI Ethics Board or participating in global AI governance forums), India can ensure AI is deployed for societal benefit and with minimal harm.

If implemented, these strategies will make AI a general-purpose technology powering India's economy. Estimates suggest AI could contribute $500+ billion to India's GDP by 2030 alone. By 2047, AI and related frontier tech (robotics, IoT, Industry 4.0) could underpin India's high-value manufacturing and services – from self-driving electric vehicles to AI-discovered drugs – establishing India as a tech leader. The country's large data sets and diverse population give it an edge in training robust AI solutions for the world. Achieving developed status will be much easier with AI-driven productivity gains across the board.

We should take a leaf from Project CREATE (www.projectcreate.tech) on ensuring 'AI for all. Jobs for All'.

Micro, Small & Medium Enterprises (MSMEs): Engines of Inclusive Growth

MSMEs are the lifeblood of the Indian economy – critical for employment, regional development, and social equity. Any roadmap to a developed India must uplift and transform the MSME sector.

Current role and challenges: India has over 63 million MSMEs, providing employment to about 111 million people (second only to agriculture in jobs) . MSMEs contribute roughly 30% of GDP and 45% of exports. This is significant, but in advanced economies, small businesses often contribute even more to innovation and job creation. In India, MSMEs face numerous challenges: limited access to formal credit (many rely on informal finance), technology gaps, regulatory compliance burdens, and infrastructure bottlenecks. The sector is also heavily skewed towards micro enterprises – a "missing middle" problem where very few grow to medium size. The COVID-19 pandemic hit MSMEs hard, but emergency measures like the ECLGS credit guarantee helped avert mass bankruptcies.

Policy thrust in recent years: The government has taken steps – e.g., redefining MSME criteria (based on investment & turnover) to enable growth, launching the Udyam portal for easy registration (bringing more units into the formal fold) , and schemes like MSME Champions for digital mentorship. Still, more is needed to make Indian MSMEs competitive globally by 2047.

Strategies to Empower MSMEs:

- Access to Finance: Ensure adequate and timely credit for MSMEs. Even by 2047, many MSMEs will lack collateral, so credit guarantee schemes must continue and expand. Leverage fintech and digital lending to use alternate data for credit scoring small businesses (for example, GST data or e-commerce transaction data). Also, deepen capital markets for MSMEs: encourage SME IPOs, venture capital, and SME-focused debt instruments. By 2047, the goal is that no viable MSME fails for lack of financing. The formal credit flow to MSMEs (which has already been improving post-initiatives like ECLGS) should be strengthened further.
- Technology & Digital Adoption: Initiate a massive MSME digitization drive – bringing tools like cloud computing, digital marketing, and automation to small units. Programs to provide subsidized or open-source tech solutions for inventory management, payments (leveraging UPI and digital payment boom), and online market access will raise productivity. The government can set up MSME Technology Centers in clusters to provide training on advanced manufacturing (CAD/CAM, 3D printing, etc.) and Industry 4.0 techniques. By upgrading technology, MSMEs can become part of global supply chains. (Notably, the Production-Linked Incentive (PLI) schemes in electronics, automotive, etc., encourage even smaller suppliers to upgrade and benefit from larger manufacturers' integration.)
- Market Access and Export Promotion: Developed countries' SMEs often tap global markets. India's MSME exports (45% of total exports) can grow further with the right support. Simplify export documentation for MSMEs, enhance awareness of trade agreements, and provide export credit insurance. Create online "Global MSME Portals" where Indian small businesses can showcase products to international buyers. Domestically, continue reserve certain government procurement for MSMEs and ensure prompt payments from large buyers (a perennial issue).

- Ease of Doing Business at MSME level: While India's overall Ease of Doing Business had improved (until the World Bank index was paused), on-the-ground compliance for a small business is still complex. By 2047, aim to eliminate the 'inspector raj' and have digital, faceless compliance for most regulations. Merging and reducing the number of forms, making all interactions with government (from license to GST to inspections) online and time-bound will save MSMEs time and money. The recent repeal of >1,500 obsolete laws and use of single-window systems need to go further to specifically benefit small entrepreneurs.
- Skill Development and Formalization: Many micro enterprises suffer from lack of skilled labor and managerial capabilities. Strengthen programs like Skill India with modules tailored for MSME needs (e.g., training workers in new machinery operation, or basic accounting for proprietors). Encourage cluster-based approach – industrial clusters where common facilities (testing labs, training centers) are provided, benefiting all. Also, bring more enterprises into the formal sector (currently, a large chunk of MSMEs are unregistered). The Udyam Registration initiative, which has already formalized millions of businesses, should be incentivized (for instance, by linking certain benefits or priority lending to registration).
- We must do a district wise MSME mapping as written in my book on 'Distributed Growth Model' and create a mission mode program for sectoral and geographic success of MSMEs. Learn from the German Mittelstand model. I wrote about it more than a decade ago. https://swarajyamag.com/economy/make-in-bharat-is-the-need-of-the-hour

With these measures, MSMEs can increase their contribution significantly by 2047 – perhaps to 50% of GDP and 60%+ of exports, as India's economy shifts towards high-value manufacturing and services. More importantly, vibrant MSMEs will ensure inclusive growth by creating jobs in rural and semi-urban areas and fostering entrepreneurship at the grassroots. A developed India should see its small businesses thrive alongside large corporates, in a symbiotic ecosystem.

State-Level Analysis: Bridging Regional Disparities and Targeted Reforms

India's development story is incomplete without addressing the stark variations among its states. Some states already have socio-economic indicators comparable to middle-income countries, while others lag far behind. To become a developed economy by 2047, each state must progress – especially those currently holding back overall performance. Here we:

- Identify key states (or regions) that need to revisit their development models and accelerate reforms.
- Provide targeted, data-driven suggestions for each, recognizing their unique challenges.

Interstate Disparities: Overview

Disparities are evident in per capita incomes, HDI, poverty rates, and sectoral composition across states. For instance, Goa (India's richest state per capita) has an income ($7,700) over 10 times that of Bihar ($767). Goa and Kerala boast HDI ~0.76 (high human development), whereas Bihar's HDI is only 0.577, the lowest (medium human development) . Such gaps underline the need for differentiated strategies: developed states need to drive innovation and move up the value chain, while poorer states must focus on basics – health, education, infrastructure – as prerequisites for growth.

We see that states like Bihar, Uttar Pradesh, Jharkhand, Madhya Pradesh, Odisha (often referred to as the Hindi heartland or eastern belt) trail in both income and HDI. On the other hand, southern and western states (Kerala, Tamil Nadu, Maharashtra, Gujarat, Karnataka) have relatively higher indicators but need to sustain high growth and pioneer new areas (e.g., high-tech manufacturing, services exports) to meet developed-country benchmarks. There are also special cases like Punjab (high income due to agriculture but stagnant growth) and the Northeast (small states with unique geographical challenges).

The World Bank recommends a differentiated approach: "less developed states focus on strengthening fundamentals (health, education, infrastructure), while more developed states focus on next-generation reforms (business climate, innovation)" . The central government's role includes incentive-driven programs to support lagging regions (e.g., an Urban Challenge Fund for cities in poorer states) .

Targeted Recommendations for Key States/Regions:

1. Bihar and Uttar Pradesh (UP) – Invest in Human Capital and Industrialize: These two populous states (together over 300 million people) are among the poorest. Bihar's per capita GDP is only ~30% of the national average, and UP's is ~50% . Both have struggled with high poverty and low literacy (Bihar's literacy ~61.8% is India's lowest). To break out of this trap, they must massively invest in basics: improve public education and healthcare drastically (learning from Kerala's model), and upgrade infrastructure (electricity, roads, broadband). Governance reforms are critical – these states need to improve ease of doing business at the ground level to attract investment (simplify land acquisition, maintain law and order, expedite clearances). A focused strategy is to develop industrial corridors and manufacturing zones in these states, leveraging their large labor pool. For example, UP is working on a Defense Industrial Corridor; such initiatives should be expedited. Agro-processing and food industries have big potential given the agricultural base – policies to attract food parks or textile parks (UP's cotton and Bihar's maize, for instance) can create jobs. Additionally, promoting out-migration to in-migration: historically, workers left these states for opportunities; by 2047, the goal is to have thriving cities in Bihar and UP that attract talent and capital. Special economic zones around upcoming expressways, and improving urban amenities in cities like Patna, Lucknow, Varanasi, Kanpur will be important. In summary, Bihar

and UP need an intensive push on "mission mode" development of human capital and basic industries to catch up.

2. Jharkhand, Odisha (Resource-Rich Eastern India) – Diversify Beyond Mining: Jharkhand and Odisha are rich in minerals (coal, iron ore, bauxite) and have built some industry around mining (steel plants, aluminum). Yet, Jharkhand's per capita income is only ~$1,300 and its HDI 0.60, indicating that mining wealth hasn't translated into broad prosperity. The strategy here should be twofold: (a) Value addition to resources – instead of just mining and sending raw minerals, attract investment in downstream industries (e.g., steel product manufacturing, aluminum goods, chemicals). Government can offer incentives for metal industries to set up finishing plants locally, creating jobs and higher value output. (b) Economic diversification – these states must reduce over-reliance on mining (which is finite and often mechanized, not creating enough jobs). They should promote sectors like manufacturing (textiles, autos, electronics) in special zones (taking advantage of power availability), forestry products, and tourism (Odisha has coastline and culture; Jharkhand has forests and wildlife). Improving tribal populations' livelihoods via better education and ensuring mining royalties benefit local communities (perhaps through a state wealth fund for education/health) is crucial for inclusive growth. Infrastructure development is still needed – e.g., better rail and road connectivity in tribal hinterlands to integrate them with markets. By 2047, these states should aim to move up from low-middle income to upper-middle income status, emulating how resource-rich regions like Western Australia or Alberta leveraged minerals to build diversified economies.

3. Madhya Pradesh and Rajasthan – Agriculture to Manufacturing Transition: Madhya Pradesh (MP) and Rajasthan, large north-central states, have made progress (their growth rates have risen recently), but their per capita incomes (~$1,700–1,800) remain below average . Both have a heavy reliance on agriculture (MP is India's soyabean bowl, Rajasthan has wheat and mustard, etc.) and face water scarcity in parts. The key for them is to enable a structural transformation: encourage migration of labor from low-productivity agriculture to industry and services. Industrial clusters suited to these states' profiles can be fostered: e.g., food processing and textile parks in MP (leveraging cotton and agri-produce), tourism and handicraft development in Rajasthan (which already has tourism but can expand significantly with better infrastructure and marketing). Rajasthan also has rich solar energy potential – renewable energy investments there (e.g., solar parks in the Thar desert) not only generate power but can create jobs and ancillary industry (solar panel manufacturing). MP, being centrally located, could become a logistics hub – the new Delhi-Mumbai Expressway and other corridors passing through provide a chance to set up logistics parks and small manufacturing along them. Both states need to continue improving the business climate – Rajasthan has eased labor laws to attract industry, MP has a single-window system; these efforts should be sustained and benchmarked to the best states (like Gujarat). Socially, improving literacy (especially female literacy) and skilling in rural areas will prepare the workforce for non-farm jobs. These states can target becoming major contributors to India's manufacturing by 2047 (for example, aiming for 25-30% of GSDP from manufacturing, up from ~15% now).

4. West Bengal – Rejuvenating an Economic Powerhouse: West Bengal (population 100 million) was historically an industrial and intellectual hub but fell behind after decades of industrial stagnation. Its per capita GDP ($1,900) is below the national average , and the state's rank in ease of doing business has room for improvement. West Bengal needs to reform its economic model by reigniting industrial growth and leveraging its strategic advantages. Kolkata, the capital, is a major metro that can drive a services-led growth (IT services, finance, etc., building on educational institutions and talent). The state also has a large port (Kolkata/Haldia) – expanding port capacity and related infrastructure could make Bengal a gateway to East and Northeast India as well as neighboring countries. Policy suggestions: aggressively court investment in manufacturing – e.g., electronics assembly, chemicals, textiles – by offering industrial parks and ensuring stable labor policies (the state had a history of labor unrest, which has eased, but perceptions linger). The government can modernize old industrial areas and repurpose them (for instance, develop a startup hub or a financial tech park in defunct industrial zones of Kolkata). Agriculture in Bengal is relatively productive (rice, fishery, etc.), but farmers would benefit from improved marketing – perhaps a focus on agro-exports (tea from Darjeeling is a great brand; more such branding of products like mangoes, fish, etc., can be done). By addressing infrastructure gaps (improving power reliability, urban transport in Kolkata, etc.) and marketing its huge consumer base, Bengal can attract both domestic and foreign investment. The goal for 2047 is for West Bengal to reclaim a top-five GDP rank among states, with a diversified economy (today services dominate ~57% of its GSDP). Special attention to innovation and education (the state has traditionally strong universities) can also help – perhaps establishing a major science/IT research center in Kolkata to spark a new "Bengal renaissance" in tech.

5. Punjab and Haryana – Diversification from Agriculture, High-Tech Growth: Punjab and Haryana in north India have relatively high incomes (thanks to the Green Revolution, Punjab's per capita ~$2,600, Haryana ~$4,100). But Punjab in particular has seen growth stagnate; its model of heavy reliance on wheat-rice farming with state support is unsustainable (stagnant farm incomes, ecological strain from groundwater depletion). Both states need to reorient to high-value sectors. For Punjab: promote industrialization – e.g., food processing (given its agricultural base), textiles/apparel, light manufacturing – especially in its major cities (Ludhiana, Amritsar) which are industrial centers that can be revitalized with better infrastructure and investment incentives. Also, support farmers to diversify crops (move away from water-guzzling paddy to more fruits, vegetables, pulses, or even services like horticulture and floriculture). The state government's recent efforts to attract investment in electronics and aerospace (through new industrial parks) should continue; by 2047, Punjab should aim to be as known for manufacturing and services as it is for agriculture. Haryana, already benefiting from the Delhi NCR spillover (Gurugram is a tech/BPO hub, Faridabad an industrial city), should continue on that path: invest in urban infrastructure, and expand its IT and automobile industries deeper into the state. Both Punjab and Haryana also need to address social issues that can impact development – for instance, improving skilling and employment opportunities to curb youth unrest (Punjab has faced issues like educated unemployment and drug abuse among youth). A focus on MSMEs (e.g., Punjab's famed medium-scale manufacturing like bicycle industry in Ludhiana) upgrading technology will keep these

economies vibrant. In summary, by 2047 Punjab and Haryana should transform from primarily agrarian economies to balanced economies with robust industrial and service sectors, leveraging their skilled human capital and existing agricultural strength for processed exports.

6. Northeastern States – Connectivity and Sustainable Development: The Northeast (eight states) is a region with unique potential (hydropower, tourism, biodiversity) but historically isolated and economically lagging (except perhaps Assam to an extent). Many NE states have per capita GDP around $1,500–$2,000, and face infrastructure deficits. The priority here is connectivity – physical (roads, rail, air) and digital. The government's Act East Policy and massive infrastructure push (new highways, rail lines to state capitals, airports) must continue so that by 2047 the Northeast is seamlessly connected to the rest of India and to Southeast Asia. This will allow exploitation of its advantages: eco-tourism (pristine landscapes, unique cultures – could draw global tourists akin to how mountainous regions in OECD do), organic agriculture and agro-forestry products (the NE could be a source of organic spices, fruits, etc., commanding premium prices), and small-scale manufacturing like handicrafts. Building local capacity (through education – e.g., more regional technical institutes) is needed to reduce out-migration of talent. Also, since these states are less polluted and still green, pursuing a green growth model – e.g., establishing India's hubs for carbon credits, biodiversity conservation jobs, and sustainable forestry – could provide a development niche aligned with global climate goals. The central government will need to continue targeted packages and incentivize businesses to invest in NE (perhaps tax holidays or subsidies) until the initial developmental gap is bridged.

Role of the Center and Interstate Cooperation: Alongside state-specific actions, the central government plays a facilitator role – through fiscal transfers (ensuring poorer states have resources for health, education), through programs like Aspirational Districts (many are in these lagging states), and by investing in infrastructure linking states (e.g., freight corridors that connect ports to northern hinterland benefit UP, Bihar, etc.). Competitive federalism should be encouraged: ranking states on business reforms, education outcomes (as NITI Aayog has done) creates positive pressure. Moreover, states can learn from each other: e.g., Bihar/UP could emulate Kerala's health model or Tamil Nadu's school meal scheme; Odisha can learn from Gujarat's investment promotion, etc. By 2047, the hope is that no Indian state remains in the "low income, low human development" category – the gaps may not fully vanish, but they should drastically narrow. The slowest-moving states today must grow 1-2% faster than national average for the next two decades to catch up, which is achievable with focused intervention.

In conclusion, focusing on lagging states is not just a matter of equity but also an economic necessity: high national growth (7-8% sustained) is only possible if large states like UP, Bihar accelerate growth (they make up a large share of India's population). An inclusive developed India means a country where Bihar has perhaps the GDP per capita of today's Tamil Nadu, and Tamil Nadu has that of today's Spain – a vision that is bold but within reach if the outlined reforms are pursued earnestly.

Conclusion

Achieving developed economy status by 2047 is an ambitious endeavor, but as outlined in this roadmap, it is underpinned by concrete targets and strategies. India's journey to high-income, high-human-development status will require: a totally new thinking with a dedicated team, sustained economic growth, massive investment in human capital, a relentless focus on innovation and technology, and crucially, inclusive development across all states and sectors.

The global context is favorable in many ways – India is poised to have the largest workforce, and international investors are looking at India as the next growth engine. Yet, challenges from climate change to job creation for a huge population loom. The roadmap emphasizes sustainability and inclusion alongside growth: green energy (aiming for 70% renewable power by 2047) , women's empowerment (raising female labor force participation to 50% or more) , and rural development are integral to the plan.

If India executes on these strategies, by 2047 it could not only be a developed nation in statistical terms but also a model for inclusive, sustainable prosperity – "what a great service it would be to the world if the full might of India's 1.5 billion people were applied to creating a cleaner, greener, tech-smart future for us all". The coming two decades are thus a critical window to implement bold reforms. With commitment from policymakers, industry, and citizens, India@100 can indeed be a Developed India.

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(All data and projections are as of 2024–25. Figures for 2047 are targets or illustrative scenarios based on sources and author's analysis.)

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To read more about making the Idea of Viksit Bharat, you can also refer to my book 'Tough Choices & Hard Decisions – Making India a Developed Country in the Next 25 Years (Published in May 2020 by Notion Press)

Let's work together for Viksit Bharat.

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