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Perspective Report

On Sectoral Shifts Shaping India's Next Decade

- Consumption
- Security
- Sustainability

May 2025

Executive Summary

Over the past 15 years, nearly two-thirds of the Nifty 50 has changed. Names like RCom, DLF, and Cairn India have given way to HDFC Bank, Titan, and Adani Enterprises. This churn underlines a fundamental truth: market leadership is not permanent. Tomorrow's market champions are often born small and overlooked.

Enter India's 63 million SMEs, contributing 30% to GDP, 45% of exports, and employing over 110 million people. Yet, their representation in public markets is minimal. That's changing. Platforms like BSE SME and NSE Emerge have enabled over 750 SMEs to list, raising more than INR 10,000 crore cumulatively since inception. Many have delivered multibagger returns — cases like Vasa Denticity or Raghav Productivity Enhancers showcase what's possible.

With formalization via GST, rising digital adoption, and improved access to capital, SMEs are poised for disproportionate growth. They operate in sunrise sectors — EV components, specialty chemicals, agritech — often ignored by large-caps. As the Nifty 50 continues to evolve, tomorrow's index stalwarts may be emerging from today's SME boards. India stands at the cusp of a multi-sectoral transformation driven by shifting consumer preferences, national security imperatives, and a green energy transition. This report highlights three sectors that are central to shaping the country's economic and strategic future: **Consumer, Defence & Shipbuilding, and Renewable Energy.**

The **Indian consumer economy** continues to be one of the most resilient and fastest-growing globally. With rising disposable incomes, a young and aspirational demographic, and accelerating digital adoption, consumption-led growth is expanding beyond metros into Tier 2 and 3 towns. Premiumization, D2C channels, and category innovation (across beauty, personal care, athleisure, etc.) are redefining demand patterns. While global macro conditions remain volatile, domestic consumption is expected to drive long-term growth, aided by formalization, credit access, and rapid infrastructure development.

India's Defence & Shipbuilding sector is undergoing a structural overhaul under the "Make in India" and "Atmanirbhar Bharat" missions. Defence production is being indigenized at scale, with exports rising nearly 34-fold over the past decade. Policies like DAP 2020, defence corridors, corporatization of ordnance factories, and MSME/startup involvement through iDEX are enabling private and public sector synergies. In naval shipbuilding, India has developed the capability to build advanced warships, including nuclear submarines and aircraft carriers. However, commercial shipbuilding remains underpenetrated. Structural challenges in financing, infrastructure, and global competitiveness persist, but recent incentives and a ₹25,000 crore maritime development fund signal a strategic push to revive the sector.

In **Renewable Energy**, India has emerged as the third-largest market globally, with 203 GW installed capacity and an ambitious target of 500 GW non-fossil fuel capacity by 2030. Programs like the PLI scheme for solar and batteries, the Green Hydrogen Mission, and viability gap funding for offshore wind are accelerating this shift. However, coal still accounts for ~72% of actual generation, raising questions about whether the transition is truly green or merely compensating for rising demand. A stronger storage infrastructure, transmission buildout, and regulatory support are key to enabling renewables to displace fossil fuels at scale.

Together, these sectors reflect India's pivot towards self-reliance, climate action, and consumption-led growth. For investors and policymakers, they represent not just opportunity, but also the evolving strategic priorities that will shape India's economic trajectory over the coming decade.

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India's Consumer Economy

India's Defence and Shipbuilding Sectors: Strategic Pillars of Power

Introduction

India's consumer sector has expanded significantly between 2014 and 2024, driven by robust economic growth, rapid digitization, and favorable demographics. This report provides a cross-country perspective on India's consumer evolution, benchmarking it against China, Japan, and South Korea across key sub-sectors: retail, e-commerce, FMCG, luxury, and financial services.

We begin by outlining macroeconomic and demographic drivers of consumer demand — urbanization, income growth, digital penetration, and population dynamics — before comparing sector-specific developments. Data from credible sources is cited throughout, with charts and benchmarks used to highlight India's positioning relative to its peers.

Macroeconomic and demographic context

India was the fastest-growing major economy in this period, with real GDP growth averaging ~6–7% annually. Nominal GDP per capita rose from about **$1,674 in 2014 to $2,341 in 2022** – roughly a 40% increase. In comparison, China's per capita GDP is much higher and grew about 66% over the decade. Japan, in contrast, saw **stagnant or declining nominal incomes** – GDP per head fell from ~$38,500 in 2014 to ~$34,000 in 2022 (partly due to currency depreciation)[1] – reflecting its slow-growth, deflationary environment. South Korea's per capita GDP increased from roughly $26k to $33k (2014–2024) as it sustained moderate growth in a already-developed economy. Importantly, **household consumption makes up a much larger share of GDP in India (~60%) and Japan (~55%) than in investment-heavy China (~38–40%)**[2] , with South Korea in between (~49%)[3] . India's growth has been consumption-led, supported by rising incomes and access to consumer credit.

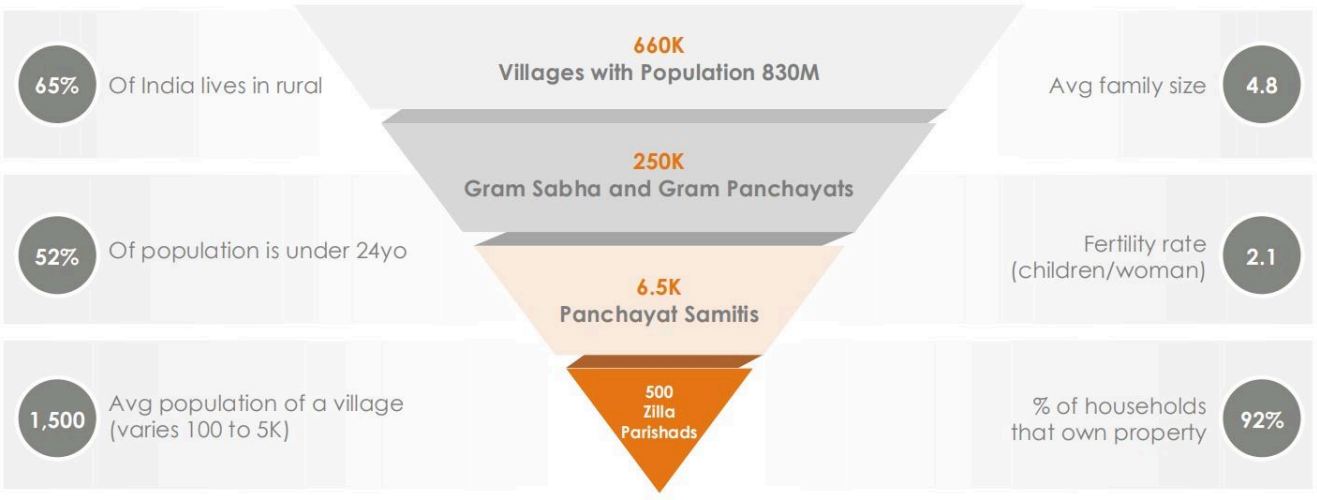


Figure 1: Who lives in a rural household? Young people, Families, Communities..

Source: India Quotient

Demographically, India has overtaken China as the world's most populous country (~1.4 billion), with a median age of ~28–29 years — significantly younger than China (late 30s), South Korea (~40s), or Japan (~48). These aging trends in Japan and South Korea mean a higher share of spending goes to health care and services for seniors, and overall consumer demand is relatively stagnant. India, by contrast, is seeing **a growing middle class of young consumers,** which bolsters spending on housing, transport, apparel, electronics, and other goods.

[1] macrotrends.net [2] theglobaleconomy.comceicdata.com [3] theglobaleconomy.com

Urbanization has also progressed, with India's urban share increasing from 32% to ~36% between 2014 and 2024. While still predominantly rural, smaller cities and towns are emerging as new consumption hubs. In contrast, China is ~65% urban, South Korea ~83%, and Japan ~92%, so these countries have long had concentrated consumer markets in cities. India's ongoing urbanization (along with development of smaller Tier-2 and Tier-3 cities) is expected to accelerate consumption, as city dwellers typically have higher incomes and greater access to retail and services. However, India's urbanization pace is slower than China's was at a comparable stage, due in part to agricultural employment and infrastructure constraints.

All four countries experienced some ups and downs – e.g. the COVID-19 shock in 2020 – but India's overall economic environment was conducive to consumer growth. Inflation in India was moderate on average (with episodes of higher food inflation), and interest rates remained reasonably supportive of credit growth. In China, economic growth slowed from ~7% in 2014 to below 5% by the early 2020s, partly due to structural rebalancing and recent real estate troubles, but absolute consumer spending still rose substantially. Japan and South Korea had low growth rates (Japan ~1% or less, S.Korea ~2–3% annually), and Japan struggled with deflation until recent years. In summary, **India and China enjoyed the strongest income and consumption growth over 2014–2024, whereas Japan's consumer market was flat and South Korea's grew modestly from an already high base.** These macro trends set the stage for the sectoral developments discussed next.

Market size and retail landscape

India's retail sector has grown into one of the world's largest consumer markets, reaching over $1 trillion in 2024. This expansion reflects nearly a decade of 9% annual growth, doubling the market from about ₹35 trillion in 2014 to ₹82 trillion ($1.0 trillion) by 2024. Despite this scale, the landscape remains dominated by traditional formats – local kirana stores and independent vendors, which still account for over 80% of retail sales[4] . Industry projections suggest organized retailers will capture over 35% of the market by 2030 (up from under 20% today), indicating a gradual shift toward formal and online channels.

Fragmentation and Opportunity

India's retail market is highly fragmented with no single player holding dominant share. There are only around 350 retail brands in India with annual revenue above $100 million, compared to roughly 2,800 such brands in China. This fragmentation creates a $600+ billion opportunity for consolidation, brand-building, and formalization[5] .

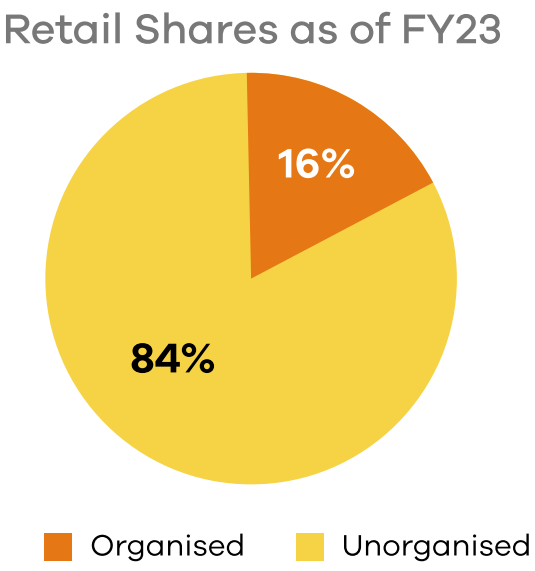


Figure 2: Retail share contrasting unorganized vs. organized retail share (~84% vs ~16% in FY2023[6]) illustrates how traditional trade still overwhelmingly dominates, highlighting the headroom for modern retail and e-commerce growth.

Digital revolution and E-commerce opportunity

India has undergone a digital revolution over the past decade, laying the foundation for rapid e-commerce growth. The country now has the world's second-largest internet user base – over 750 million internet users as of early 2024, representing about 52% of the population[7] . Affordable smartphones and ultra-cheap data (thanks in part to telecom disruptors like Jio) have brought hundreds of millions of Indians online, including in smaller cities and rural areas. This digital infrastructure has expanded the online shopper base to an estimated 270 million individuals by 2024, enabling India to "leapfrog" traditional retail models in some areas through direct online commerce.

Transformation of the Indian consumers

India beyond Roti, Kapda and Makaan

India's consumer economy has evolved dramatically over the past two decades. Once defined by basic needs — food, clothing, and shelter — household spending is now shaped by aspirations, convenience, and quality. Indian consumers are increasingly purchasing smartphones, cosmetics, two-wheelers, streaming subscriptions, and services, reflecting rising incomes and shifting priorities.

This transformation challenges two persistent myths:

1. That India is a purely price-sensitive market

2. That consumption is confined to Tier-1 cities

In reality, Indian shoppers increasingly seek value for money, and that smaller Tier-2 and Tier-3 cities (often called "Bharat") are emerging as powerful engines of consumer demand. Investors and policymakers can use these insights to understand the scale and direction of India's consumer boom and the opportunities it presents. This report explores these shifts, using category-level insights to highlight how Indian consumption is moving from subsistence to discretionary.

From Basics to Aspirations: Changing Household Spending Patterns

India's household consumption has expanded rapidly in the last 20 years, with spending growing faster in discretionary categories than on essentials. In 2005, the average Indian household spent the majority of its budget on food, basic clothing, and housing. By 2025, that picture looks very different.

[4] statista.com [5] business-standard.com [6] statista.com [7] datareportal.com

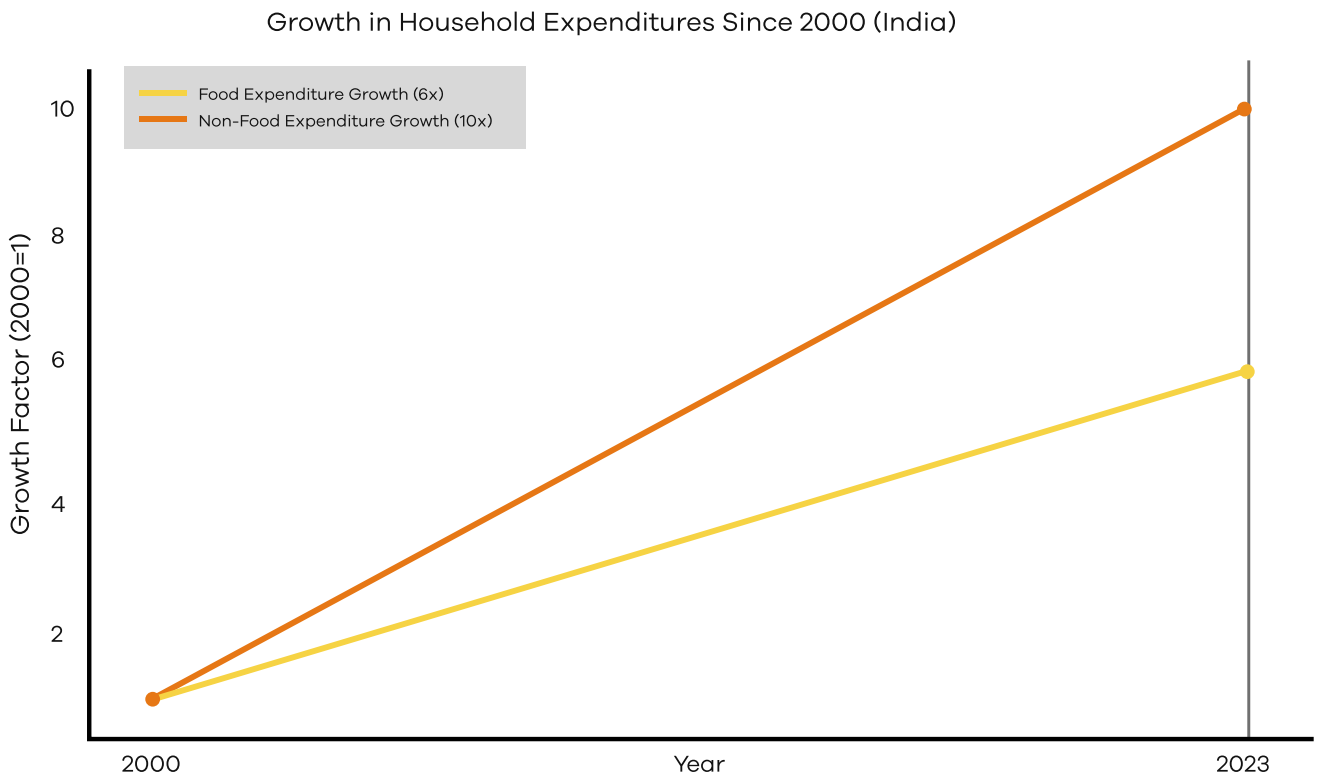
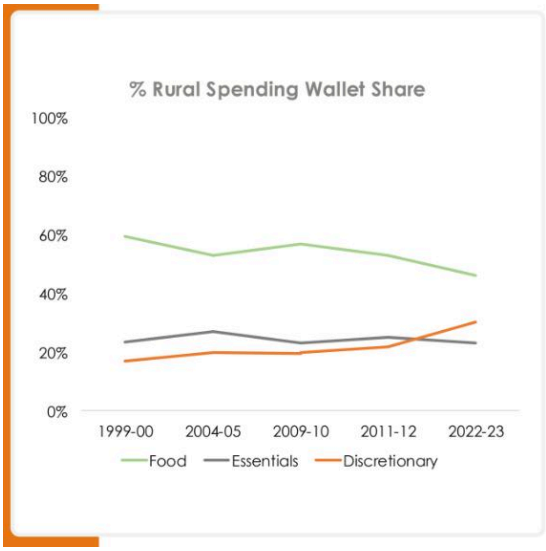


Figure 3: Contrasting Food expense v/s non-food expense over a period of 20 years

In 1999–2000, Indian households spent well over half their budget on food. By 2022–23, food expenses accounted for about **46% of rural and 39% of urban household spending.** This sharp decline in food budget share indicates that families are able to allocate more to other needs and wants. Within food spending, there's been a shift from staples to more processed and premium foods[8] . Packaged foods, bottled drinks, and ready-to-eat meals now form a much larger part of diets, especially in urban areas, reflecting convenience and aspirational tastes. In fact, as of 2023 roughly **10% of the average person's spending is on processed foods and beverages,** a significant jump from the early 2000s.



SO IT'S A GDP PER HOUSEHOLD STORY which means plenty of disposable income!

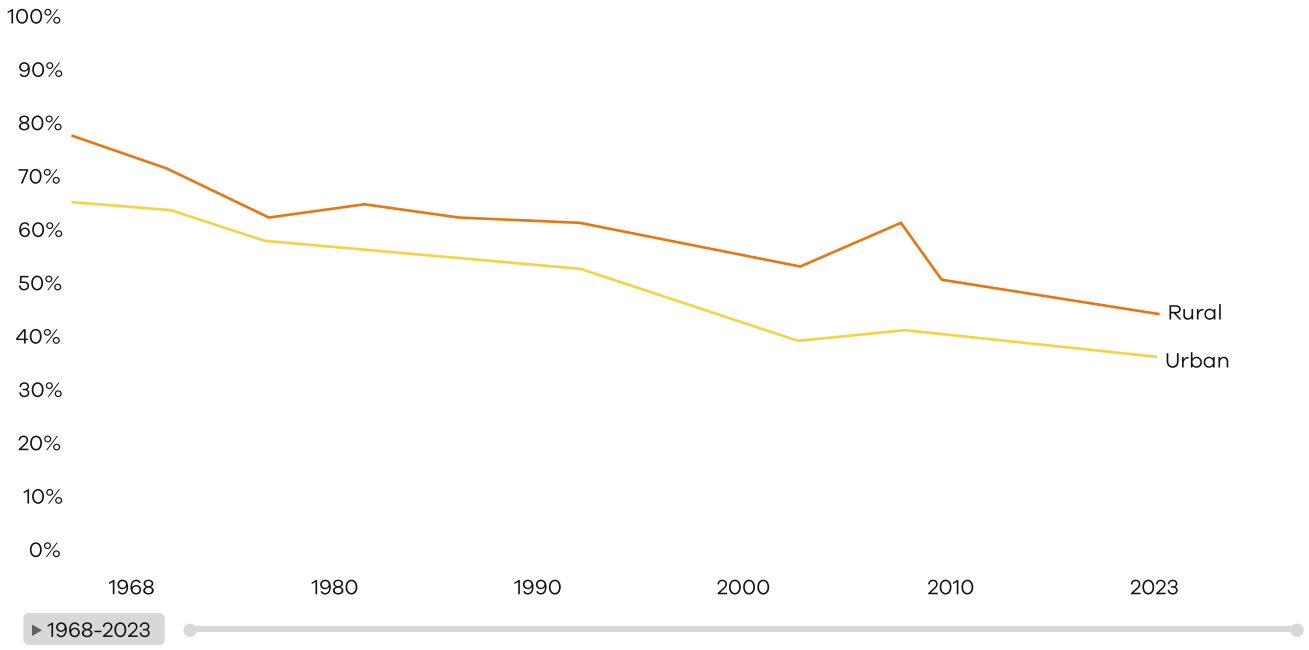
- $490 rural GDP per capita x family of 5 = $2,500 GDP per household
- Families still live together which means lower food and rent costs
- This means they have more money than an entry level IT worker to spend on discretionary things!
- Discretionary spending is now 30% of the budget
- Women also contribute to income, more than in urban areas

Figure 4:

[8] dataforindia.com

Share of food in India's average monthly per capita expenditure over time

Relative spending on food has nearly halved in the last 50 years

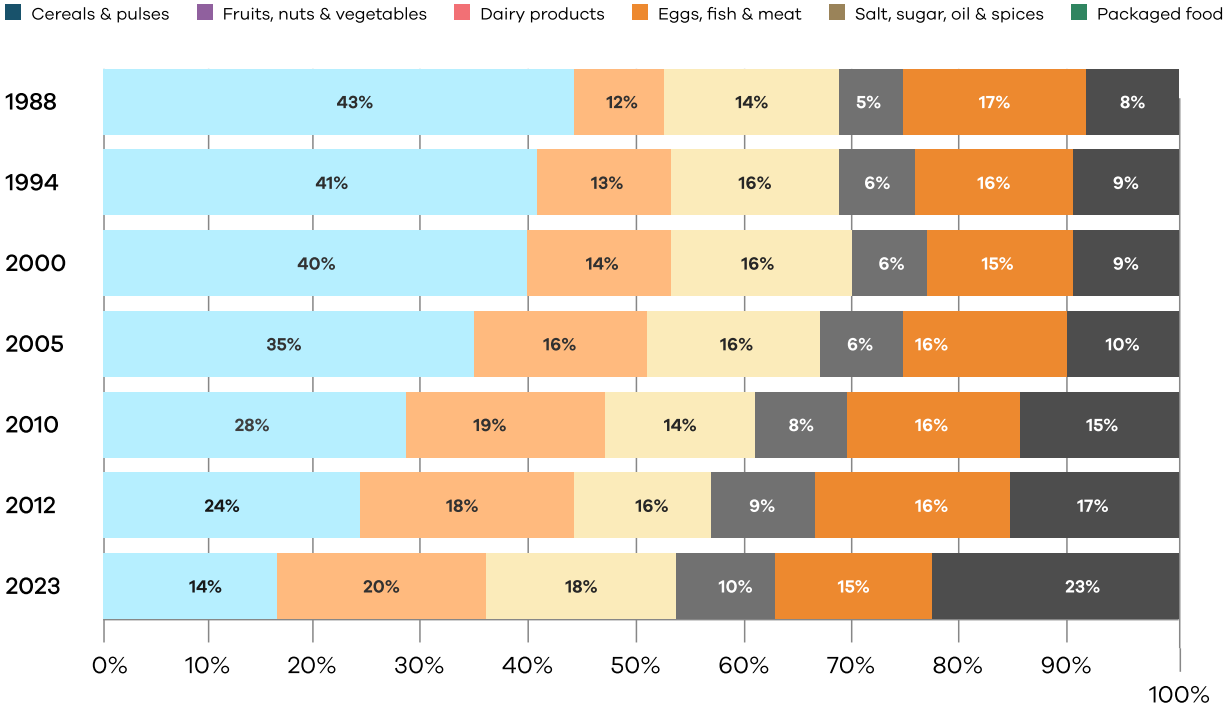


Source: NSS Rounds 22 to 79, Household Consumption Expenditure Surveys, National Sample Survey Office

Figure 5: Engel's law is visibly at work: as incomes have risen, the share of expenditure on food has fallen, while spending on non-food items has surged.

Spending on food over time, by category

As the share of household food budgets that goes to cereals falls, relative spending on other food groups has grown.



Packaged food includes beverages and purchased cooked meals.
Source: NSS Rounds 38 to 79, Household Consumption Expenditure Surveys National Sample Survey Office

Figure 6: This visual reflects the broad shift toward more discretionary spending as incomes and aspirations have risen

Meanwhile non-food expenditures have grown nearly **10 times since 2000, outpacing food expenditure growth (about 6x).** Categories like transportation, education, healthcare, and household utilities have expanded with rising living standards. Notably, spending on **transportation (conveyance) and consumer durables** has surged from 3–5% in 2000 to about 7–8% IN 2023. Likewise, the **share of spending on durable goods** (appliances, electronics, furniture) more than doubled to roughly 7% in 2023[9] . Even in rural India and small towns, consumers are investing in durable assets and upgrading their homes.

An important aspirational expense for Indian families is education. Households are allocating more to schooling, college, and coaching classes than ever before. A recent analysis of small-town consumers found that in Tier-2, Tier-3, and rural markets, families now prioritize expenditures like education and consumer services significantly more, often **spending more on education and services than on basic staples.** This reflects rising aspirations for better quality of life – parents are investing in their children's future, and households are paying for services (from telecom/data plans to financial services and entertainment) that were negligible expenses two decades ago.

WE'RE THE YOUNGEST COUNTRY IN THE WORLD- THAT'S A LOT KIDS TO EDUCATE!

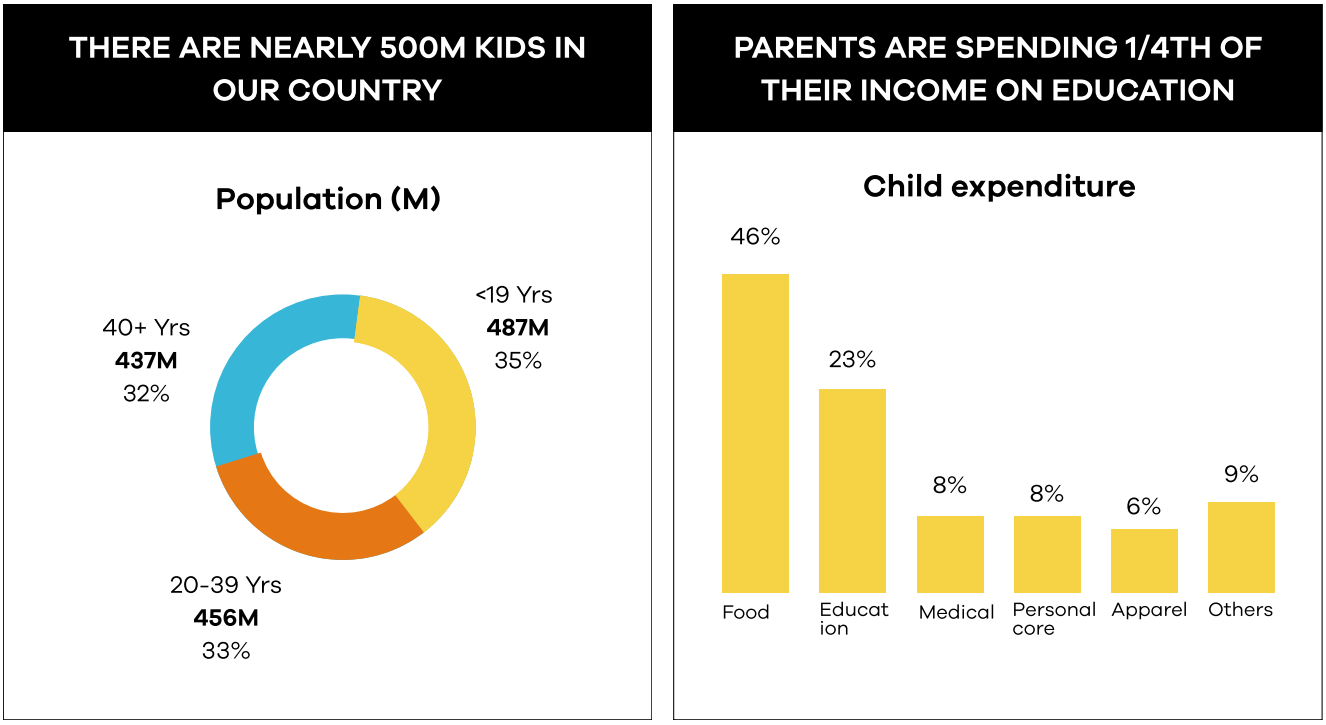


Figure 7: Source: India Insights 2025 Report by IndiaQuotient

Our literacy rates are still only 78% vs 100% for US/China

This is why education is a $2258 opportunity

By 2025, India's consumer basket is far more discretionary than in 2005. Essentials like food have shrunk in share, while spending on electronics, services, and lifestyle products has surged. **Urban per capita consumption has grown ~6% annually over two decades, narrowing the gap with China's ~9%**[10]. With total spending set to reach **$4 trillion by 2030,** India is on track to become the world's third-largest consumer market (Eastspring), driven by rising incomes and an aspirational middle class.

[9] dataforindia.com

[10] kearney.com (accessed as on 26/05/2025)

Value over Price: The New Indian Consumer

A pervasive myth long held by companies is that "Indians only care about price." Today's Indian consumers are increasingly value-conscious rather than solely price-conscious. They seek quality, durability, brand trust, and features, at a price point they consider fair.

Several trends underscore this shift in consumer mindset:

- **Premiumization Across Categories:** From smartphones to shampoos, Indians are trading up. **Homegrown brands like Forest Essentials (luxury Ayurveda), Mokobara (premium travel accessories), Jaipur Rugs (artisandriven home décor), and The Whole Truth (clean-label snacks)** exemplify this shift. A 2023 Bain report noted that **premium segments in India are growing 2–3x faster** than mass segments, including in skincare, electronics, and home décor. These brands succeed not by being the cheapest, but by offering authenticity, quality, and design — even in Tier-2 and Tier-3 cities.

- **Quality and Brand Loyalty:** Many Indians now prioritize **experience over cost.** The popularity of Apple, Samsung, and OnePlus in smartphones, or SUVs in the auto sector, illustrates this trend. In fashion, labels like **Rare Rabbit, Nappa Dori,** and **Nicobar** have built followings through premium positioning. A 2023 Deloitte study showed **55% of Indian consumers are willing to wait longer** for their preferred car model rather than settle for cheaper options.

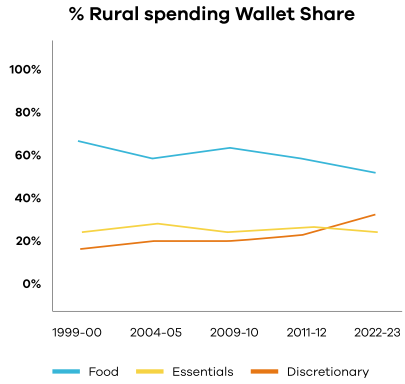
- **Emergence of "Affordable Luxury":** Middle-class Indians are embracing **affordable luxury,** evident in categories like skincare, dining, and travel. Brands such as **Bombay Shaving Company, Kama Ayurveda,** and **Perfora** offer lifestyle upgrades with emotional resonance — focusing on experience, not just functionality.

- **Sensitivity vs. Sacrifice:** Indians still love deals, but **will pay a premium when justified.** From feature-loaded bikes to branded groceries and organic foods, consumers show **brand loyalty** and value perception. Even rural buyers stick with trusted brands once convinced of their quality. India's luxury market is expected to **grow 3.5x to $85–90 billion by 2030** (Retail ET), while mass-premium brands like **Xiaomi** thrive by offering quality at accessible prices.

In essence, Indian consumers today are **savvy, aspirational, and quality-driven.** "Price-sensitive" increasingly means "value-sensitive," opening the door for brands that balance affordability with excellence. For example, Xiaomi became a top smartphone brand in India by offering feature-rich phones at mid-tier prices, catering to this value-sensitive crowd. India's luxury market is projected to grow over 3.5x from around $25 billion in 2023 to $85– 90 billion by 2030[11]. All these patterns debunk the old stereotype of India as a penny-pinching market and highlight a mature outlook where **"price-sensitive" really means "quality-and-value-sensitive."**

[11] retail.economictimes.indiatimes.com
(accessed as on 26/05/2025)

Beyond Metros: The Rise of Tier-2 and Tier-3 Cities Entry into “BHARAT”



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- Women also contribute to income, more that urban areas

Figure 8: Source: India Insights 2025 Report by IndiaQuotient

India’s consumption story is no longer confined to metros like Delhi, Mumbai, or Bengaluru. Over the past decade, **Tier-2 and Tier-3 cities** — including Jaipur, Lucknow, Indore, Bhubaneswar, and Coimbatore — have emerged as powerful engines of consumer growth. These cities, along with rural markets, now contribute significantly to demand across categories.

Key evidence of this shift includes:

- **Consumption Growth in Smaller Cities:** A consumer insights report by The Bharat Lab (2024) highlights that in India’s smaller towns, spending patterns now mirror urban preferences in many ways. Households in Tier-2, Tier-3, and rural areas are **investing significantly more in consumer durables, education, and services compared to staples.** Over a 20-year span, **spending on consumer durables in these markets jumped ~170%,** and expenditure on beverages & processed foods more than doubled[12] – indicating adoption of modern consumption goods.

- **Affluence is Not Confined to Metros:** The distribution of India’s middle class and wealthy is far wider than just the big cities. While Delhi and Mumbai have high concentrations of high-income households, a substantial share of what some analysts call “India One” (the top 10–30 million households) lives in Tier-2 cities and smaller towns. Anecdotal evidence and venture capital research (Indus Valley Report 2024) suggest that perhaps **40–60% of India’s consuming class resides outside the major metros.**

- **E-Commerce and Digital Penetration in Tier-3:** Nothing illustrates the spread of consumer demand better than India’s e-commerce boom. **Three out of five new online shoppers since 2020 have come from Tier-3 cities or smaller towns[13].** E-commerce giants report that smaller cities account for the majority of customer additions; for instance, Amazon and Flipkart’s festive sales often see **over 60–65% of orders coming from non-metro locations** (a stark contrast to a decade ago when metros dominated online sales). **Social media and smartphones have also diffused trends** quickly to smaller towns – a teenager in a Tier-3 city follows the same fashion influencers or watches the same web series as one in Delhi, spurring similar aspirational purchases.

- **Retail Expansion into “Bharat”:** Sensing the opportunity, companies are aggressively expanding distribution and retail presence in Bharat. According to Eastspring Investments, **retailers have been rapidly expanding in Tier-2 and 3 cities, driven by strong demand for premium products from smaller town consumers[14].** This is backed by data such as the apparel and liquor sales growth figures in non-metros.

[12] m.economictimes.com (accessed as on 26/05/2025)

[13] bain.com (accessed as on 26/05/2025)

[14] eastspring.com (accessed as on 26/05/2025)

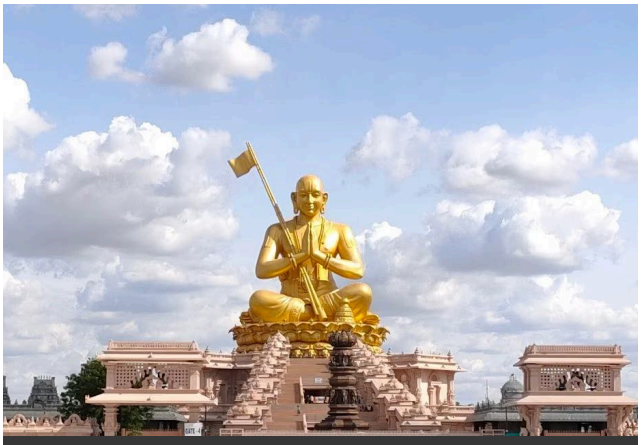
Does This Look Rural ?

Villages Want to Stay “Rural” As Long As Possible

- Peripheries of India’s bursting cities want to be classified as rural.
- Rural means more government SOPs
- De facto “urban” areas are being organized Municipal bodies

Narasapura - Industrial development, proximity to Bangalore

Neemrana - part of Delhi-Mumbai Industrial Corridor



Kelambakkam-along IT Corridor, near Chennai

Shamshabad-near Rajiv Gandhi Inteernational Airport

In summary, the myth that demand is only in Mumbai or Bangalore is bust – a consumer in a Tier-3 town might be buying a new 4G phone, subscribing to Netflix, and shopping online for Nike sneakers all in the same month, just like a consumer in a metro. As one analysis succinctly put it, “there is a clear need for businesses to prioritise sub-regionality over regionality” – meaning strategies must get granular, targeting pockets of affluence and aspiration across the map rather than treating “rural India” as one monolithic segment. The **modern Indian market is deep and dispersed, with small-town India (“Bharat”) emerging as a significant demand driver.**

The 180 degree change

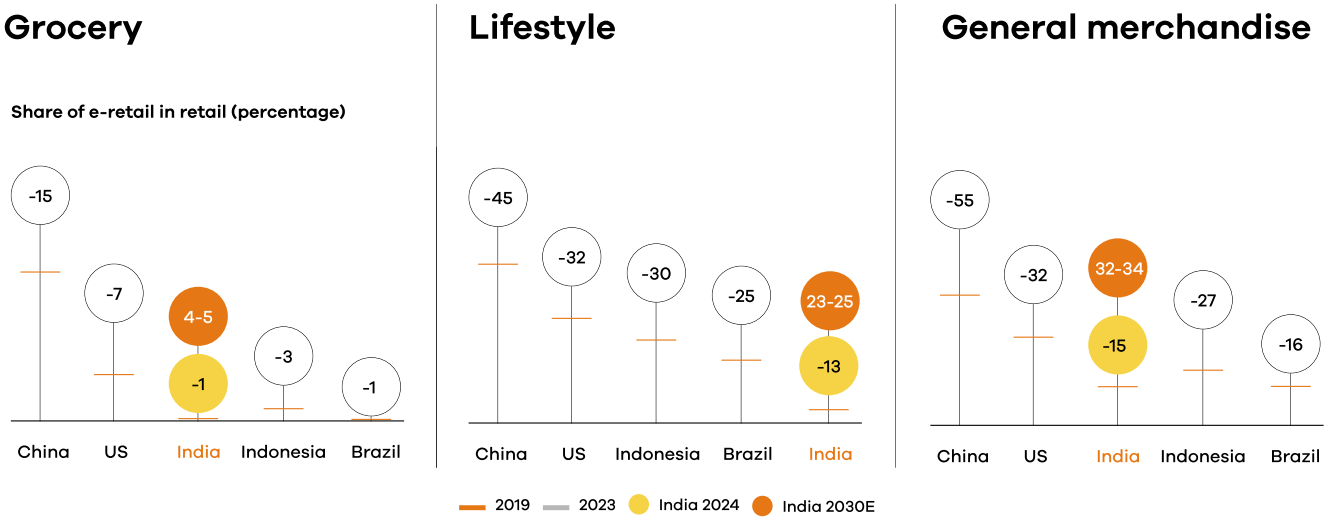
The E-Commerce Boom and Digital Consumption

India's e-commerce market has seen a radical transformation. In 2014, online retail accounted for less than 1% of total retail. By 2024, it had reached ~$60 billion in GMV, representing ~6% of retail spend (Indian Express). The number of online shoppers in India surpassed **270 million in 2024,** which gives India the **second-largest online shopper base in the world, overtaking the US** (the US has around 210–230 million digital shoppers).

Two homegrown unicorns, Flipkart and Snapdeal, along with Amazon India, led the early growth. By the late 2010s, Flipkart (now part of Walmart) and Amazon were entrenched as the top e-commerce platforms, with others like Myntra (fashion, owned by Flipkart), Nykaa (beauty), and BigBasket (groceries) also prominent. During 2020–21, the pandemic gave a big boost to online grocery and essentials delivery, bringing many first-time users online. Though annual growth moderated to **~10–12% in 2024 (down from 20%+ pre-2020),** This slowdown is attributed to short-term factors like high inflation and stagnant real wages squeezing discretionary spending. Nonetheless long-term projections remain strong — India's online retail is expected to reach **$170–190 billion by 2030,** with a 10% share of total retail (Bain & Flipkart)[15] .

Additionally, innovations like "quick commerce" (15–30minute delivery) have emerged in India for groceries and essentials – by 2024, quick commerce platforms (e.g. Blinkit, Zepto) account for over two-thirds of online grocery orders in India. Social commerce and trend-driven fashion (inspired by influencers) are also picking up. All these point to an e-commerce market that is not only growing in size but also evolving in form.

Despite the rapid growth, India's e-commerce in 2024 still faces challenges: logistics and last-mile delivery to remote areas, relatively low average order values (Indian online shoppers tend to be very price-conscious, seeking deals and value), and the need to turn profitability corner (most big e-comm firms focused on growth over profits in the past decade). The regulatory environment has also been a factor – India has imposed rules to protect small offline retailers (e.g. restricting how online marketplaces can offer deep discounts or hold inventory), which has shaped the strategies of Amazon and Flipkart.



Sources: Forrester, GlobalData, EMarketer, Market participant interviews; Bain analysis

Figure 9: A two-to-four times penetration uptick is expected in these high-frequency categories

[15] indianexpress.com
accessed as on 26/05/2025

India's global rank (2024)

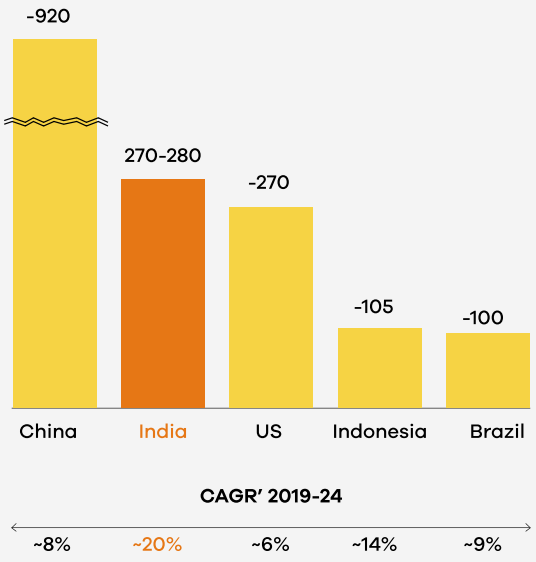
Retail sales
USD billion

#3
#6 in 2014

E-retail shoppers
millions

#2
#6 in 2014

E-retail shoppers (2024, in millions)



Note: 1) Compound annual growth rate

Sources: Forrester, GlobalData, Market participant interviews; Bain analysis

Figure 10: India e-retail surges ahead, claiming the title of the second-largest shopper base globally

Financial Services and Digital Finance – The Consumer Payments Revolution

India has witnessed a remarkable shift from cash to digital finance between 2014 and 2024. In 2014, a large portion of the population was unbanked. Today, **over 80% of Indian adults have a bank account**[16]**,** thanks to schemes like Jan Dhan Yojana. This created the foundation for India's digital payments boom.

In 2016, the government's demonetization (invalidating large currency notes) inadvertently gave a push to digital wallets and electronic payments as cash temporarily became scarce. Around the same time, the Unified Payments Interface (UPI) was introduced (2016) by NPCI, enabling instant bank-to-bank transfers via mobile phones with just a virtual address. From just 100 million UPI transactions in 2017, usage skyrocketed to **over 10 billion per month in 2024** [17]**,** and **some months crossed 15 billion transactions**[18] — making UPI one of the most successful real-time payment systems globally (BIS, NPCI). UPI now processes transactions worth **80.8 lakh crore ($965B)**[19] in just four months of FY2024, nearly rivaling India's annual GDP.

Alongside payments, **credit access has expanded.** While credit card penetration remains modest (~5% of adults), the total number of cards grew from 20 million in 2014 to over 78 million by 2023. Fintech-led innovations like **Buy-NowPay-Later (BNPL),** personal loans, and microfinance have improved access to credit for middle- and lower-income groups. Still, India's **household debt-to-GDP remains low at ~37%,** implying scope for responsible credit growth.

[16] hindustantimes.com (accessed as on 26/05/2025)
[17] electroiq.com (accessed as on 26/05/2025)
[18] bis.org (accessed as on 26/05/2025)
[19] npstx.com (accessed as on 26/05/2025)

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Insurance penetration has also improved (life insurance premiums ~3.2% of GDP), and lending rates have largely moderated. As a result, **loans for homes, vehicles, and education are more accessible than ever before.** Digital finance has not only accelerated spending but also empowered new consumer cohorts — especially in rural and semi-urban India.

Fast-Moving Consumer Goods (FMCG) and Consumption Patterns

India's FMCG sector — spanning food and beverages, personal and home care products — has expanded significantly from **~$50 billion in 2014 to ~$167 billion in 2023,** with some estimates placing it above $240 billion in 202[20]. Growth has come from both **volume expansion** and **premiumization,** supported by rising incomes, deeper rural penetration, and a shift from unbranded to branded products. For instance, millions of rural households that once used, say, unbranded soap or hair oil now buy packaged branded versions. Rural India now contributes around 36–37% of FMCG sales (Nielsen data), and rural consumption growth has at times outpaced urban in the past decade due to government programs raising rural incomes and improving distribution networks. Simultaneously, urban consumers have been shifting to higher-quality or more diverse products – e.g., from basic toothpaste to gels and mouthwashes, from loose tea to packaged specialty teas, etc.

A significant development is distribution reach: by 2024, most large FMCG companies have deep rural distribution (leveraging technology and hubs to reach tens of thousands of villages). E-commerce has also become a channel for FMCG sales, especially in urban areas – online FMCG grocery is a fast-growing segment (though still a small share of total FMCG). Industry projections by IBEF and others suggest the FMCG market could reach $200 billion by the mid-2020s and as much as $500–600 billion by 2030 if high growth continues[21]. Such growth would be supported by a young population, increasing women's workforce participation, and continued urbanization.

[20] imarcgroup.com (accessed as on 26/05/2025)

[21] statista.com

Rise of Direct-to-Consumer (D2C) Brands

One of the most defining shifts in India's consumer economy over the past decade has been the rise of **direct-to-consumer (D2C) brands** — digital-first companies that bypass traditional retail to sell directly to consumers online. As of 2024, India is home to **800+ funded D2C brands**, with thousands more emerging across sectors like personal care, fashion, electronics, food, and home goods.

The Indian D2C market, valued at **~$12 billion in 2022,** is projected to grow at **25–40% CAGR,** crossing **$60 billion by 2027**, with some estimates putting it at **$100 billion by 2025.** Initially accelerated by the pandemic, the momentum is now sustained by deepening internet penetration, digital payments, and evolving consumer preferences for **niche, personalized, and socially driven products.**

Several factors are powering India's D2C wave: **(1) Digital penetration** – hundreds of millions of Indians are now online, allowing even niche brands to find sizable audiences nationwide, including in Tier-2 and Tier-3 cities. **(2) E-commerce infrastructure** – marketplaces like Amazon, Flipkart, and Myntra, as well as Shopify-like platforms, make it easier for small brands to launch and reach customers without heavy upfront investment. **(3) Changing consumer behavior** – India's youthful, internet-savvy demographic is more open to trying new brands, values direct engagement with brands, and often buys based on social media trends or influencer recommendations. **(4) New business models** – D2C brands leverage agile manufacturing, online-only product launches, and data-driven marketing.

Notable D2C Brands: A number of homegrown D2C brands have risen to national prominence, attracting both consumers and investors. For example, brands like **Sugar Cosmetics** and **MyGlamm** (The Good Glamm Group) have built huge customer bases via Instagram and YouTube engagement, offering products tailored to Indian skin tones and trends. **Licious,** an online meat and gourmet foods brand, pioneered the fresh food D2C space and attained unicorn status by 2021, highlighting demand for quality and convenience in food retail. Other examples include **Wakefit** (mattresses and home furniture sold direct with online-only models), **Wow Skin Science** and **Plum** (personal care), **Bombay Shaving Company** (men's grooming), **Urban Ladder** and **Pepperfry** (online-first furniture retailers), among many others. By integrating online and offline touchpoints, they aim to increase visibility and trust – recognizing that in India a hybrid model can be more effective than pure-play online. This convergence of channels is blurring the definition of "D2C," as digital-native brands evolve into mainstream players.

Outlook: Investments, M&A, and IPOs

India's consumer sector enters FY25 with strong fundamentals and a shift toward **sustainable growth and consolidation.** While the pace of venture funding has moderated since 2021, **capital continues to flow into highpotential segments** such as grocery, fashion, and beauty, where market penetration remains low. Global players — including Walmart, Amazon, Reliance, and Tata — are deepening their investments in infrastructure and market share, reinforcing long-term confidence.

Forward-looking insights: Investors should anticipate a more **value-conscious consumer** in the short term (due to inflation and economic moderation), but the medium-term outlook is robust as GDP per capita approaches the critical ~$4,000 level that spurs discretionary spending[22]. We also foresee **continued consolidation:** the plethora of D2C brands will likely shrink to a cohort of leaders in each category (via a "survival of the fittest" where either the strongest brands scale or others get acquired). Strategic M&A deals and acqui-hires will be a mode of expansion, as exemplified by The Good Glamm Group's spree of acquiring beauty and personal care startups to build a digital FMCG empire. From an investor perspective, this means potential **exit opportunities** not only via IPOs but also through trade sales to larger companies. The next few years could also see the lines between **technology and retail blurring further** (a trend already visible in China's retail tech ecosystem).

India's consumer sector is transitioning from **hyper-growth to a more mature phase,** where scale, profitability, and differentiation will define winners. The next few years will be marked by **strategic M&A, category leadership battles, and tech-enabled innovation.** For investors, this is a phase of **disciplined optimism** — one that rewards well-informed bets on resilient brands and platforms with strong consumer pull, omnichannel execution, and operational excellence.

In short, **India's consumption story is far from over — it's evolving into its most investable phase yet.**

[22] livemint.com
(accessed as on 26/05/2025)

Company Deep-Dives: Mapping the Consumer Landscape

Annapurna Swadisht Ltd

1. Company Overview

Incorporation & Evolution:
Annapurna Swadisht Ltd. (ASL), headquartered in Kolkata, began as a modest pellet manufacturing plant in Asansol, West Bengal. Initially operating in B2B mode, the company pivoted into branded retail in June 2020 amid the COVID-19 pandemic. This transformation was spearheaded by founder Mr. Bagla and investor Mr. Ritesh Shaw (a US-based investment banker), who envisioned a value-driven FMCG platform tailored for India's Tier 3 and Tier 4 markets. Annapurna has established its stronghold primarily in **West Bengal and Jharkhand, with a decent presence in Bihar and Odisha.** The company has strategically expanded its reach to Uttar Pradesh, a market of immense potential due to its large population. What distinguishes Annapurna as a success story is its unique focus on catering to **tier 3 and tier 4 areas, predominantly rural and price-sensitive regions.**

Core Proposition:
ASL specializes in value-packaged foods priced predominantly at ₹5, creating high-volume, affordable indulgences for lower-income households. With a portfolio now spanning 10 categories and 77 SKUs, the brand focuses on creating mass-market, emotionally resonant products.

Promoters & Management:
Managing Director: Mr. Shreeram Bagla Joint MD (recently appointed): Mr. G.P. Shah
(ex-Global CEO, Chaudhary Group)

2. Product Portfolio & Differentiators

Category	% of Revenue	Price Point	Differentiator
Fryums	45–50%	₹5	Toy inside (e.g. pencil, torch, coin)
Namkeen	10%	₹5	Regional taste (e.g. pencil, torch, coin)
Biscuits, Rusk, Noodles	20-25%	₹5-₹10	Daily consumption staples
Other Snacks & Sweet	10-15%	₹5-₹10	Cakes, candies, confectionery, RTDs

With ~6 lakh+ retail touchpoints across Eastern and Northern India, ASL sells ~30 lakh packets/day, primarily in Tier 3/4 markets.

Unique Hooks:

- Surprise gifts in packets enhance emotional connection with children
- High repeat rate due to affordability and quality consistency
- Minimal modern trade dependence; strong general trade moat

3. Financial Performance Snapshot

Metric	FY2024	YoY Growth	H1FY25
Revenue	₹265 Cr	+65.43%	Toy inside (e.g. pencil, torch, coin)
Consolidates Net profit	₹14 Cr	+99.15%	Regional taste (e.g. pencil, torch, coin)
EBITDA	₹28.13 Cr	+108%	Daily consumption staples
EBITDA Margin	₹10.62%	+216 bps	Cakes, candies, confectionery, RTDs

Key Drivers

- Better raw material pricing (palm oil, maida, masala)
- Higher volume throughput
- Entry into higher-margin segments (biscuits,noodles, oil)

4. Manufacturing & Distribution

Owned Facilities:

Location	Status	Utilisation	Comments
Asansol	Operational	100%	Legacy Unit
Siliguri (2 plants)	Operational	100%	Key Easternn Cluster
Gurap	Operational	75%	Supplies Bihar/UP
Dhulagarh	Operational	65%	First Metro facing facility

Leased/Contractual Units:

- Tezpur (Assam): Operational since April 2024, adds ₹3 Cr/month in sales potential
- Mathura (UP), Siliguri (WB): Additional scale capacity

Distribution Strength:

- 550+ snack distributors
- Presence across WB, Jharkhand, Bihar, Odisha, UP, Assam
- Fast-growing rural footprint with 8–10 day credit cycles

5. Game Changing Acquisition: Madhur Confectioners Pvt Ltd (MCPL) & ₹150 Cr QIP

Acquisition Summary ASL has acquired 100% of MCPL, a leading value-confectionery player offering 31 SKUs across candies, toy lollipops, and chocolates.

MCPL FY24 Snapshot

- Revenue - ₹107 Cr
- EBITDA margin – 17.6%
- Order book (Monthly) - ₹7–10 Cr
- Working Capital – Negative (90% advance collection)

Strategic Upside:

- 300 distributors added to ASL's network = 850 total
- Combined 106 SKUs = better ROI per distributor
- Higher margin profile will uplift consolidated EBITDA 15
- Capacity to scale 3.5–4x; targets ₹400 Cr revenue by FY27

"The MCPL acquisition isn't just synergy – it's a strategic multiplier. This builds our next phase of growth." – ASL Management

6. Expansion Plans & Market Outlook

Capacity Expansion Goals:

- Increase owned capacity from 76 MTPD ➔ 100 MTPD by Sep 2024
- New 6-acre greenfield site leased in Assam
- Expect Assam to lead future growth, especially in NE markets (Meghalaya, Tripura, Mizoram, etc.)

SKU Expansion:

- Plans to double down on biscuits, noodles, chips, and RTD beverages
- Focus on SKU velocity and relevance in rural kirana stores

Macro Tailwinds:

- Rural consumption rebound (post Interim Budget, infrastructure push)
- Increasing farm income and low-ticket discretionary spends
- Tier 2/3 cities showing uptick in per-capita snack consumption

7. Our View

Annapurna Swadisht is uniquely positioned at the intersection of India's rising Bharat consumption story and Tier 3/4 formalisation. With its tight cost controls, innovative product design, grassroots distribution engine, and new category expansion via MCPL, ASL is no longer a fringe snack brand — it is building a ₹700–800 Cr platform with national ambitions.

Why It Stands Out:

- Frugal operating model with supply-chain edge
- Emotional branding through toys + surprise gifting
- High-velocity snacks + margin-accretive confectionery
- Professionalised team + SAP/DMS rollout
- 6 lakh+ outlets & 106 SKUs

"This isn't just a ₹5 snack company. It's a ₹500 Cr+ growth engine scaling into a ₹1000 Cr FMCG challenger. One bite at a time."

Aditya Vision Limited

1. Company Overview

Incorporation & Evolution:

Aditya Vision Ltd (AVL) was incorporated in 1999, and is headquartered in Patna, Bihar. It is a leading retailer of consumer electronics and home appliances in India. The company's core business involves offering a wide range of products including mobile phones, laptops, refrigerators, air conditioners, and kitchen appliances of various brands from domestic and international brands such as LG, Samsung, Sony, Videocon, Panasonic, Nikon, Godrej, Voltas, Whirlpool, Bajaj, Havells, Hp, Lenovo, JBL, VIVO, OPPO etc.

The company started with a single store in Patna and has since expanded its footprint significantly. Between 2018 and 2022, the company achieved a same-store sales growth (SSG) of 17%, reflecting steady operational efficiency. In May 2022, Aditya Vision accelerated its expansion, adding 19 new stores - 9 in Bihar and 10 in Jharkhand, bringing its total store count to 98.

It is the largest electronics retailer in Jharkhand and holds 50 %+ market share in Bihar. It is also the 1st Consumer Electronics Retailer to be listed.

Core Proposition:

Aditya Vision Limited is a multi-brand, multi-product retail chain specializing in consumer durables such as air conditioners, televisions, washing machines, refrigerators, microwaves, home theatre systems, and more. The company directly serves individual customers through its 98 retail outlets across Bihar and Jharkhand and its official website ensuring seamless accessibility across online and offline platforms.

To enhance customer experience, Aditya Vision offers

- Aditya Seva, a first-of-its-kind helpdesk service that assists customers with after-sales support and grievance resolution through a structured three-step process, and
- Aditya Suraksha, the company's extended warranty program, provides customers with pickup and drop services at no extra cost, ensuring long-term product reliability

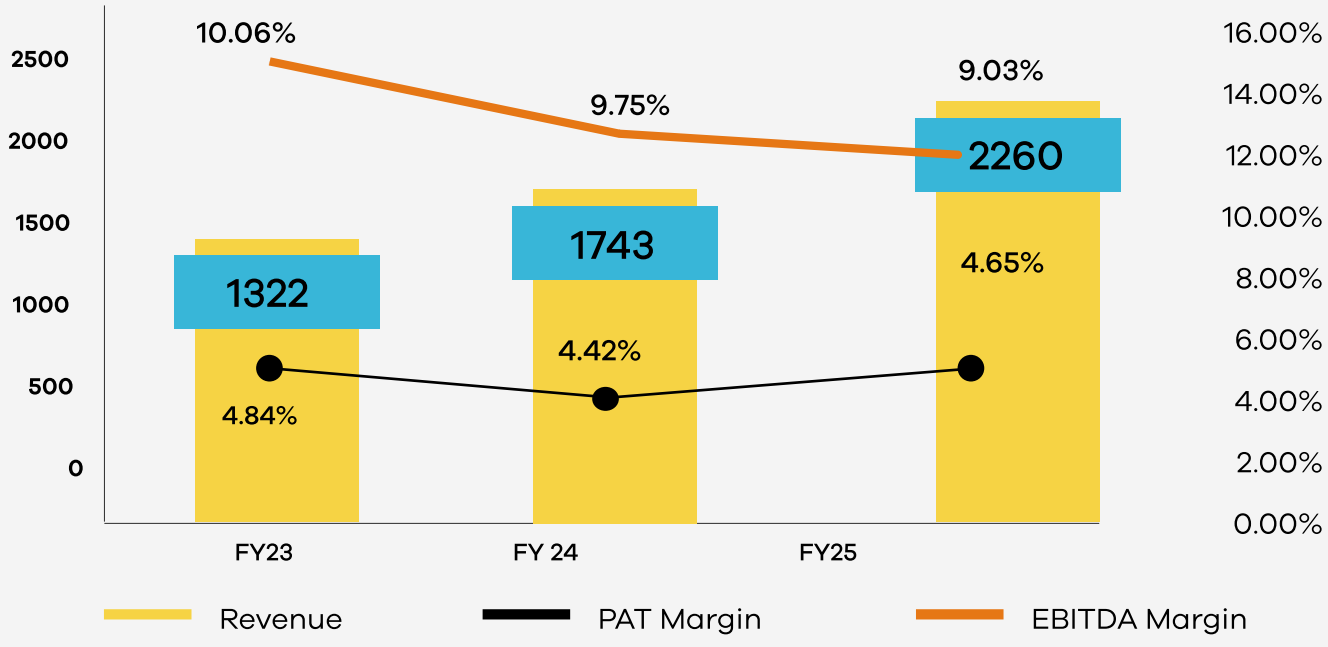
Promoters and Key Management:

- Managing Director - Yashovardhan Sinha
- Non-Executive Director - Sunita Sinha
- Whole Time Director - Nishant Prabhakar

2. Product Portfolio and Key Suppliers

Items	Suppliers
Air Conditioners	Samsung, LG, Hitachi, Voltas
Refrigerators	LG, Samsung, Whirlpool, Godrej
Washing Machines	Samsung, LG, Whirlpool, IFB
LED TVs	Samsung, Sony, LG, Panasonic
Mobile Phones	Samsung, Apple, Sony
Microwaves	Samsung, LG, IFB
Home Theatre Systems	Sony, Samsung, JBL, Bose
Laptops & Computers	HP, Dell, Lenovo, Asus
Personal Care Products	Philips, Havells, Panasonic
Wearables & Accessories	Apple, Samsung, Fitbit, Boat

3. Financial Performance Snapshot



Key Drivers:

- **Aggressive Store Expansion** – The company continues to expand its retail footprint, operating more than 161 stores by FY25, strengthening its market presence with an average store size of over 4,000 sq ft.
- **Strong Brand Partnerships** – Exclusive tie-ups with leading consumer electronics brands ensure first-mover advantages and a diverse product portfolio.
- **Growing Market Demand –** Increasing penetration of consumer durables like air conditioners (24%) and refrigerators (38%) in Indian households presents significant growth opportunities.
- **Robust Customer Service & Warranty Programs –** Initiatives like Aditya Seva (after-sales support) and Aditya Suraksha (extended warranty) enhance customer satisfaction and retention.
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4. Product wise Revenue breakdown as of FY2025

Category	Share in Revenue (in %)
Home Appliances and Entertainment Solutions	66%
Refrigerators	21%
Others	13%

5. Key Collaborations and Acquisitions:

Partnerships

- **Samsung Partnership** – Aditya Vision hosted the Samsung Flip & Fold 6 launch event at its store, attended by Samsung India's senior executives.
- **Premium Segment Recognition –** The company was honored with the Key Accounts Excellence Award for 2023 for its highest contribution to premium segment sales.

Recent Acquisitions & Expansion

- **Store Expansion –** The company continues its aggressive expansion strategy, adding new stores in Sultanpur, Kareli, Latehaar, Chatra, and Motihari.
- Market Entry into Uttar Pradesh.

6. Expansion Plan and Market Outlook

Expansion Strategy & Geographic Growth of AVL:

Aditya Vision Limited has embarked on an aggressive expansion strategy, targeting 150 stores by FY25, up from the current 98 stores (84 in Bihar and 14 in Jharkhand). The company is also entering new states including Madhya Pradesh, Uttar Pradesh, Chhattisgarh, and West Bengal, which exhibit lower penetration of consumer durables like air conditioners (24%) and refrigerators (38%). This presents significant untapped potential for market growth.

7. Our View:

Aditya Vision Limited presents a strong investment case driven by its dominant market position in Bihar, Jharkhand and Uttar Pradesh, rapid expansion strategy, and solid financial fundamentals.

The company has demonstrated:

- 29.6% YoY revenue growth and 36.9% PAT growth in FY25, reflecting robust financial health.
- Its return on equity (ROE) stands at 22.7%.
- EBITDA margin of 9.0%, ensuring sustainable profitability.
- The company maintains self-funded expansion through internal accruals, reducing reliance on external financing.
- Aditya Vision's stock has seen a 201% CAGR over the last five years, reflecting strong investor confidence.
- EPS has grown at 27.6% per annum.
- The company has approved a final dividend of 90% on face value share for FY24, along with an interim dividend of 51%, reinforcing its commitment to shareholder returns.

The company's targeted expansion into underpenetrated states, including Uttar Pradesh, West Bengal, Madhya Pradesh, and Chhattisgarh, aligns with India's growing consumer durables sector, projected to be the 5th largest globally by 2025. Aditya Vision Limited presents a strong investment case, backed by consistent revenue growth, solid profitability, and efficient store economics.

Additionally, customer loyalty, and innovative service offerings like Aditya Seva and Aditya Suraksha enhance its competitive edge.

Campus Activewear Ltd.

1. Company Overview

Incorporation & Evolution:

Campus Activewear Limited ("Campus") was incorporated on September 24, 2008, and is one of India's largest sports and athleisure footwear brands in terms of value and volume. The company manufactures and distributes a variety of footwear like Running Shoes, Walking Shoes, Casual Shoes, Floaters, Slippers, Flip Flops, and Sandals, available in multiple colors, styles, and at affordable prices.

By FY21, it overtook Puma to become India's top S&A footwear brand, selling 24 million pairs in FY23. Roughly half of the 7.6 million pairs sold in Q3 FY'25 were priced below Rs 1,500 (US$18). Its 2022 IPO saw its market cap soar to Rs 18,300 crore (US$2.2 billion) within five months, fueled by investor optimism.

Core Proposition:

- Campus boasts an extensive product portfolio with over 3,000 active styles catering to men, women, and children across all age groups, usage occasions, and price points, ensuring affordability and accessibility while maintaining brand trust.
- The company's design capabilities are robust, driven by an in-house team of 40 experienced designers based in India, complemented by a global design consultancy network and strategic design sourcing tie-ups.
- Additionally, Campus operates a dedicated design and product development lab that facilitates 2D footwear design and accurate cost predictions for production, enhancing efficiency and innovation.

Promoters and Key Management:

- Mr. H.K. Agarwal – Chairman & MD
- Mr. Nikhil Aggarwal – CEO & Whole-time Director

2. Product Portfolio and Diversification

In Q2 FY'25, it launched 87 new styles, with sneakers comprising 30% of launches, and increased focus on women's and kids' segments (women's contribution rose to 22%). The company signed Bollywood actors Vicky Kaushal and Vikrant Massey as brand ambassadors to target youth. It expanded its retail presence to 23,000 touchpoints and added 9 exclusive brand outlets (EBOs), totaling 288 by Q2 FY'25. Geographically, Western India's share grew to 24.4%, though Southern India saw a seasonal dip to 3.3%. Campus also invested Rs 35 crore to expand sneaker production capacity at Gannaur and Haridwar.

3. Financial Performance Snapshot

Metric	9MFY2025	YoY Growth	9MFY2024	FY2024
Revenue	₹1187.3 Cr	9.5%	₹1084.4 Cr	₹1448.3 Cr
EBITDA	₹181.5 Cr	21.8%	₹148.9 Cr	₹215.3 Cr
EBITDA %	15.2%		13.7%	14.8%
PAT	₹86.1 Cr	51.8%	₹56.7 Cr	₹89.4 Cr
PAT %	7.2%		5.2%	6.2%

Key Drivers:

- Recent earnings indicate a turnaround. In Q2 FY'25, Campus reported a 28.8% YoY revenue growth to Rs 333 crore, driven by a 36% volume increase (5.4 million pairs sold), though the average selling price (ASP) dropped to Rs 622 due to promotional efforts.
- In Q3 FY'25, revenue grew 9.1% YoY to Rs 514.9 crore, with 7.6 million pairs sold—a 10% YoY increase.
- Direct-to-consumer (D2C) channels contributed 48.2% to revenue in Q3 FY'25, up from 47.6% the previous year.

4. Manufacturing & Distribution

The company's manufacturing footprint is vertically integrated, with 5 operational facilities that have a combined annual assembly capacity of 35.7 million pairs. All final assembly is 100% in-house, ensuring quality control, while backward integration covers 18.6% of uppers and 36.1% of shoe soles produced internally, reducing dependency on external suppliers. Campus emphasizes innovation through exclusive product technologies such as NitroFly, Air Capsule Pro, Shock Absorption, and Reeflect, which enhance product performance and appeal.

Campus has a strong PAN-India presence, operating in over 650 cities across 28 states. Its omni-channel distribution network includes more than 25,000 retail touchpoints, 290+ exclusive brand outlets (EBOs), and 1,700+ large format store (LFS) counters, supported by a network of 300+ distributors. Over 50% of its sales come through direct-to-consumer (D2C) channels.

Campus is also present on all major online platforms (Flipkart, Myntra, Amazon, Ajio etc.). E-commerce is growing rapidly: online channel revenues have been rising, with ~5.7 million pairs sold through online marketplaces in 9M FY25. Campus also recently launched on quick-commerce (Zepto) to tap instant-delivery demand.

5. Recent Acquisitions & Subsidiaries

- Campus AI Merger (2022): Merged its wholly-owned subsidiary Campus AI Pvt. Ltd. (formerly Ankit International) into the parent entity in Aug'22 for structural simplification; no impact on revenue or EBITDA.

- Group Affiliations: Part of the Action Group; affiliated with Action Shoes, Kabeer Textiles, and M.G. Udyog – legacy players in footwear/apparel.

- M&A Strategy: No major acquisitions or JVs in the last 3–5 years. Since IPO (Jul'22), focus has remained on organic growth and supply chain integration.

6. Expansion Plan and Market Outlook

- Manufacturing: Campus commissioned a new sole production line at Ganaur in Q3 FY25 and plans to launch an uppers unit in Haridwar by Mar'25 to strengthen backward integration.

- Retail & Channel: Operates 290+ EBOs as of Dec'24; aims to add 80–100 new stores annually, focused on franchise model. Expanding rural reach and omni-channel presence, including tie-ups with platforms like Zepto.

- Product Portfolio: Launched 234 new designs in 9M FY25; sneakers and premium lines are growing fast (+116% YoY in sneaker sales in Q3). Focus for FY25 is on a balanced pricing mix to address softer rural demand.

- Performance Outlook: Reported 9.5% YoY revenue growth and ~15.2% EBITDA margin in Q3 FY25. Targeting 17–19% margins for FY25. Management confident in sustaining growth via fast supply chain and brand strength.

- Sector View: The sports/athleisure market is projected to grow at 20–22% CAGR. Campus expects volume growth to pick up as macro pressures ease and import norms stabilize by mid-2025.

7. Our View

The Indian S&A footwear market, valued at US$11.7 billion (Rs 882 billion) in FY'25, is underpenetrated, offering significant growth potential. Campus addresses 85%+ of this market with a diverse portfolio across price segments. Key drivers include rising fitness consciousness, increasing disposable income, and a shift toward branded products. India's per capita footwear consumption lags behind global averages, signaling growth potential akin to China's S&A market, which grew 15x from US$3 billion in 2005 to US$48 billion.

Campus aims to deepen its presence in Western and Southern India, focus on premiumization (Rs 1,500-3,000 range), and enhance its omni-channel strategy. With a 22.1% return on capital employed and a net- work of 25,000+ retailers across 650+ cities, Campus is well-positioned. However, short- term margin pressures from inventory liquidation and competition remain risks. Long- term, Campus targets sustainable double digit growth and EBITDA margins of 17-19%.

India's Defence and Shipbuilding Sectors: Strategic Pillars of Power

Introduction

Defence and shipbuilding industries have long underpinned great powers' strategic and economic clout by providing military might and industrial-technological capacity. They remain pivotal: roughly 90% of global trade travels by sea[23] , so maritime dominance yields economic influence, while a strong defence sector secures national interests. The United States and China illustrate this link – the US leads in advanced defence technology, while China dominates shipbuilding with about 46% of global output and has rapidly expanded its navy.

As India nears third-largest economy status, it recognises that its rise must be underpinned by self-reliance in defence and maritime capabilities[24]. Long an arms importer and minor maritime player, India is now pivoting via "Make in India" and DPEPP 2020 to build domestic capacity. Defence and shipbuilding are emerging as twin pillars of India's growth and strategic autonomy. This investor-oriented analysis examines these sectors with global benchmarks to gauge progress and highlight opportunities.

SIP returns of the Index for an invested amount of INR 10,000

Nifty India Defence TRI	1 year	3 year	5 year
Returns	206.16%	108.47%	81.15%
Amount Invested	1,20,000	3,60,000	6,00,000
Market Value	2,29,047	13,48,625	38,13,093

Data as of close of June 30, 2024 For SIP returns, monthly investment of INR 10,000/- invested on the first business day of every month has been considered. Performance is calculated using Total Return Index, with zero cost/expenses. Past performance may or may not be sustained in the future.

Figure 11:
Source: Motilal oswal

Macroeconomic and Geopolitical Context

India's defence and shipbuilding push is backed by strong tailwinds. Economically, India is growing steadily and is poised to become the world's third-largest economy by the 2030s[25]. Its expanding GDP and domestic demand offer a solid foundation for heavy industries. Demographically, India holds an edge over aging East Asian nations, with a young, skilled workforce vital for shipbuilding and manufacturing. Already, India contributes 10–12% of the global seafaring workforce[26].

Geopolitically, India faces pressure from China's expanding navy—now three times the size of India's—regularly active in the Indian Ocean[27]. Coupled with northern border tensions, this highlights the urgency for indigenized defence production. Recent conflicts, such as Russia–Ukraine, have underscored the dangers of external dependency.

Strategically, 95% of India's trade by volume moves by sea, yet 95% of that is carried on foreign ships, costing ~$75 billion in annual freight payments. This heavy reliance is both costly and risky, prompting India to double down on developing its own shipping and shipbuilding base, supported by initiatives like Sagarmala and the Blue Economy framework.

Together, India's economic momentum, youthful talent, and strategic imperatives make a compelling case for domestic defence and shipbuilding growth.

[23] eurasiareview.com.com (accessed as on 26/05/2025)
[24] policycircle.org (accessed as on 26/05/2025)
[25] muckrack.com
[26] financialexpress.com (accessed as on 26/05/2025)
[27] asiapacificdefencereporter.com (accessed as on 26/05/2025)

Fund Raise:

QIP Fund Raise Successfully Completed – ₹150 Cr Secured

On September 12, 2024, Annapurna Swadisht Ltd. (NSE Emerge: ASL) successfully completed a Qualified Institutional Placement (QIP), raising ₹149.99 Cr through the allotment of 36.3 lakh equity shares at an issue price of ₹413.21 per share.

The QIP witnessed strong participation from marquee institutional investors including:

- BofA Securities Europe SA (ODI)
- Leading Light Fund VCC – The Triumph Fund
- Navi Finserv Ltd
- Pine Oak Global Fund

This capital infusion significantly strengthens ASL's balance sheet and will support its ongoing expansion, capacity ramp-up, and strategic acquisitions like Madhur Confectioners Pvt Ltd.

Size and Global Standing

India has one of the world's largest defence establishments. With military expenditures of **$83.6 billion in 2023**, it ranks as the **fourth-largest defence spender** globally, behind only the US, China, and Russia[28]. The **FY2024–25 defence budget** is **₹6.8 lakh crore (~$81 billion)**, or around **1.9–2% of GDP,** reflecting the scale of India's security and modernization needs. India also fields the **second-largest standing force** globally, with **1.44 million active personnel** and over **5 million including paramilitary and reserves.**

Reduction in Imports

Arms imports 11% (2013-22)

Russia's share from 64% t 45%

India remains world's top importer, but dependency easing

Despite its large spending, India historically derived limited economic benefit from it due to heavy import dependency. India remained the world's top arms importer, but its imports declined by 11 per cent between 2013-17 and 2018-22, according to a report released on Monday by Stockholm-based defence think-tank . For instance, Russia – which supplied 64% of India's imported arms in 2013–17 – saw its share drop to 45% in 2018–22 as India diversified suppliers and boosted local manufacturing[29]. According to India's Defence Ministry, **70–75% of defence equipment by volume (including simpler items) used by India is now produced domestically**, with imports filling the rest.

Crucially, the scale of India's defence industrial base is expanding. The Ministry of Defence set a target to achieve **₹1.75 lakh crore ($25 billion) in defence manufacturing output by 2025, including ₹35,000 crore ($5 billion) in exports**[30]. India's domestic defence market is also one of the world's largest, if even a majority of this demand is met by Indian industry, it will place India among the leading defence manufacturing nations.

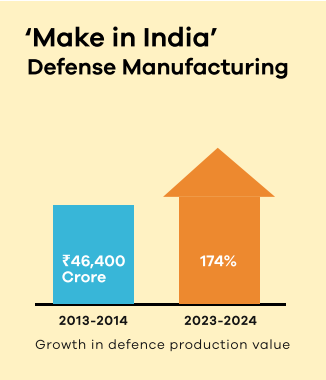
MAKE IN INDIA taking a LEAP

Over the past decade, India has aggressively pursued indigenization of defense production under the *"Make in India"* and *"Atmanirbhar Bharat"* initiatives. This policy push was born from strategic necessity as India has historically been one of the world's largest arms importers, which raised concerns about security and forex outflows. Reforms since 2014 have aimed to reverse this, and the data shows considerable success in scaling up domestic defense manufacturing.

[28] indianexpress.com (accessed as on 26/05/2025)

[29] sipri.org (accessed as on 26/05/2025)

[30] m.economictimes.com (accessed as on 26/05/2025)



Annual defence production value hit a record ₹1.27 lakh crore (≈$15.5 bn) in FY2023-24

India is now designing and producing fighter jets, tanks, warships, artillery, and more domestically, backed by rising budgets and greater private sector involvement. The **defence budget has nearly tripled**, from **₹2.53 lakh crore in 2013–14 to ₹6.81 lakh crore in 2025–26**, underscoring the shift toward indigenous capability[31]. This momentum accelerated amid heightened regional tensions — notably the India–Pakistan escalation — which highlighted India's growing self-reliance in air and missile systems.

Crucially, **defence exports have surged over 34-fold in a decade**, from **₹686 crore in 2013–14 to an all-time high of ₹23,622** crore in **2024–25.** Today, India exports to over 80 countries and is targeting ₹50,000 crore in annual defence exports by 2029, signaling its emergence as not just a defence consumer — but a serious global player. The government has set an ambitious target of **₹50,000 cr in annual defence exports by 2029**[32], aiming to join the league of major arms exporters.

INS Vikrant, Tejas, Dhruv, Akash, BrahMos, Ins Arihant, Arjun, Vijayanta, Ajeya, Advance Towed Artillery Gun System

Figure 12: India's investment in indigenous defence is not just strategic — it's showing results on the ground

India is now designing and building fighter jets, tanks, warships, artillery, and more domestically, enabled by rising budgets and growing private sector involvement. The **defence budget nearly tripled** from **₹2.53 lakh crore in 2013– 14 to ₹6.81 lakh crore in 2025–26**, marking a decisive shift toward indigenous capability. This was further reinforced by regional tensions — notably the India–Pakistan escalation — which highlighted India's growing self-reliance in air and missile systems and countered skepticism around its fighter jet capabilities.

A more striking transformation lies in exports. The **value of Indian defence exports surged over 34-fold** in a decade, from ₹686 crore in 2013–14 to a record ₹23,622 crore in 2024–25.

Today, India exports to **over 80 countries** and is targeting **₹50,000 crore in annual exports by 2029**, signaling its emergence as a credible global defence manufacturer and exporter.

ET The Economic Times

Chinese defence stocks tumble up to 9% as India-Pakistan ceasefire douses war bets

moneycontrol

Defence stocks hit bull's eye as market cap soars to a record, sector surges 50% from February's low

TIMES NOW

BrahMos More Popular Than Ever After Operation Sindoor! Many Countries Interested In Buying It

Defence Production and Export Growth

One of the clearest indicators of India's defence-industrial progress is the **meteoric rise in defence exports** in recent years. India was once virtually absent from the global arms export market – a mere ₹686 crore ($90 million) of defence exports in 2013–14[33] By 2022–23, however, exports reached nearly **₹16,000 crore,** and in **2024–25 they hit a record ₹23,622 crore (≈ $2.8 billion)**[34]**.** This **34-fold increase over a decade** signals a structural shift in India's manufacturing capabilities and reflects a concerted push to integrate with global supply chains.

[31] pib.gov.in [32] manufacturing.economictimes.indiatimes.com (accessed as on 26/05/2025) [33] angelone.in accessed as on 26/05/2025 [34] ndtv.com accessed as on 26/05/2025

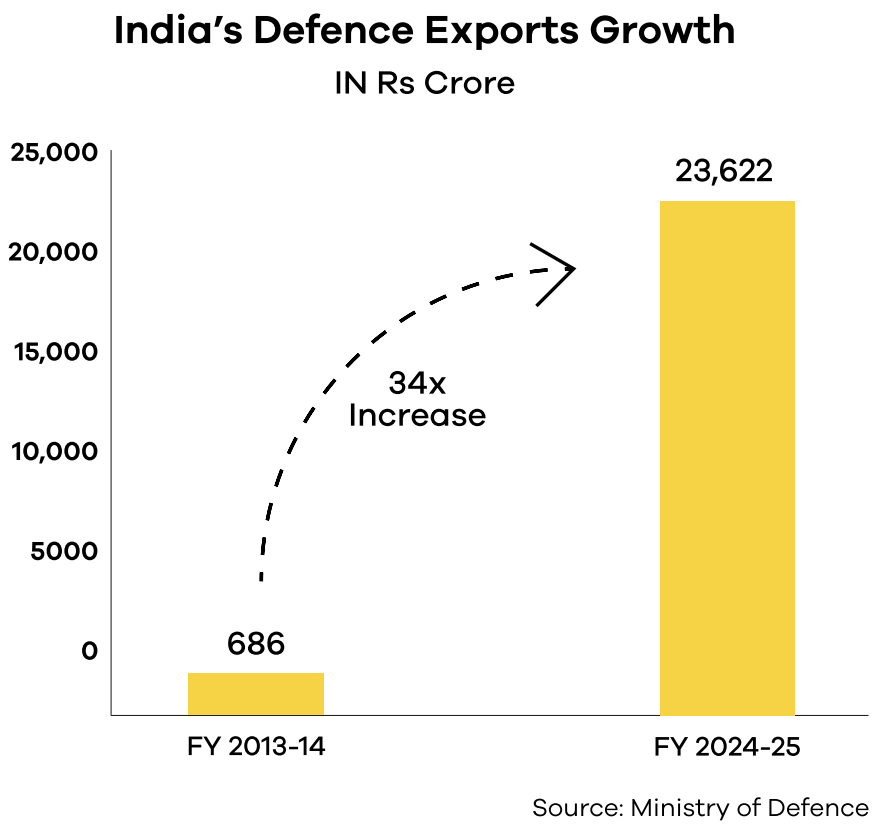


Figure 13: India's defence exports have surged from under ₹1,000 crore in 2013–14 to over ₹23,000 crore in 2024–25, a 34× increase in 11 years. The trend stalled during 2019–21 (global downturn and pandemic) but rebounded strongly thereafter.

India now exports a broad range of defence items — from **missile systems**(like the **BrahMos supersonic cruise missile**, exported to the Philippines for $375 million[35]) to **artillery guns, patrol vessels, radars, sensors, avionics, ammunition,** and components supplied into global OEM supply chains. These exports reach **75–80 countries** across Southeast Asia, the Middle East, Africa, and Latin America. Notably, exports now include **high-value platforms**, not just low-tech items. For example, BEL's coastal surveillance radars have been sold to countries from Mauritius to the Philippines, **HAL has exported Dhruv helicopters** to Ecuador and radar systems to Malaysia, and India is in talks to export the **Tejas fighter jet and Akash air defence systems.**

According to the Ministry of Defence, India has transitioned "from a largest importer to an emerging exporter", with defence exports reaching 100 countries and counting. While India's share of the global arms export market (dominated by the US and Russia) is still small, the country has entered the top 25 arms exporters for the first time[36], and the government has set an ambitious target of **₹50,000 crore (~$6 billion) in annual defence exports by 2029.**

This export boom is driven by **policy reforms** — including **simplified licensing, removal of restricted items**, faster approvals, and diplomatic support. Indian firms, both **DPSUs and private players,** have improved quality and competitiveness. In FY2024–25, of the ₹23,622 crore exported, the **private sector contributed ₹15,233 crore (64%) and DPSUs ₹8,389 crore**, with DPSU exports growing **42.9%** YoY. Even the **US is now sourcing Indian-made subsystems**, such as alloys and components.

[35] timesofindia.indiatimes.com
accessed as on 26/05/2025

[36] m.economictimes.com
accessed as on 26/05/2025

Our nation is investing in Defence

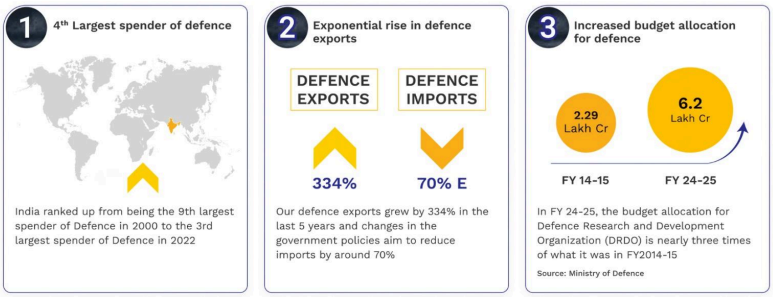


Figure 14:

Source: Motilal Oswal

Industry Structure: Public vs Private

India's defence industry is transitioning from a state-dominated ecosystem to one with increasing private sector participation. Traditionally led by the Ministry of **Defence through Defence Public Sector Undertakings (DPSUs),** the **DRDO**, and the former **Ordnance Factory Board**, the sector now includes **12 DPSUs** post-corporatization — spanning aerospace, electronics, land systems, and shipbuilding. Key DPSUs include **HAL** (aircraft), **BEL** (radars), **Bharat Dynamics** (missiles), **BEML** (vehicles), **Midhani** (materials), and shipbuilders like **Mazagon Dock, GRSE, Goa Shipyard, Hindustan Shipyard, and Cochin Shipyard**. These public entities contribute **about 60%** of India's defence production by value.

The **private sector** has emerged as a credible force, breaking the long-standing monopoly. Leading players include **Larsen & Toubro, Tata Group, Mahindra Defence, Adani Defence, Bharat Forge,** and **Ashok Leyland**, alongside a growing base of MSMEs and startups. Private firms now contribute ~21% of India's total defence production, up from 13% five years ago[37].

Government policy has played a key enabling role. **Strategic Partnership models** allow Indian firms to partner with global OEMs on major platforms like **fighter jets, submarines, and armored vehicles. FDI limits were raised to 74% automatic**, and up to **100% with approval**, encouraging joint ventures and tech transfers. As a result, global giants like **Airbus, Boeing, and Lockheed Martin** are sourcing more from India. A flagship example is the **Airbus–Tata C-295 aircraft assembly line**, India's first private-sector aircraft manufacturing facility.

Key Government Initiatives and Policy Reforms

The transformation of India's defence sector has been underpinned by a series of major government initiatives over the past decade. Some of the most impactful ones include:

- **Make in India (2014)** – Defence was identified as a key sector, with procedures simplified to boost local manufacturing and attract FDI. Industrial licensing was eased, and the **FDI cap was raised from 26% to 74% automatic in 2020**[38] .
- **Defence Procurement Policy 2016 and DAP 2020 –** These frameworks prioritized domestic sourcing, introduced the **Buy Indian – IDDM** category at the top of the acquisition hierarchy, and mandated higher indigenous content. Over **300 capital proposals worth several lakh crores** have been approved under this route[39] .
- **Defence Production and Export Promotion Policy (DPEPP 2020) –** This draft policy set a target of **₹1.75 lakh crore in defence production by 2025**, including **₹35,000 crore from exports**, and outlined segment-wise roadmaps for self-reliance and export promotion[40] .

[37] fortuneindia.com accessed as on 26/05/2025

[38] electronicsforyou.biz accessed as on 26/05/2025

[39] hindustantimes.com accessed as on 26/05/2025

[40] m.economictimes.com accessed as on 26/05/2025

- **Corporatization of Ordnance Factories (2021) –** Over 40 factories were restructured into **7 DPSU-like entities,** allowing greater operational freedom and JV formation. Early signs show better order books and export potential (e.g., **Munitions India Ltd).**

- **Defence Innovation and MSME Support –** The **Innovations for Defence Excellence** program has supported 100+ startups in areas like AI and drones. The **Defence Testing Infrastructure Scheme** is also helping MSMEs access quality testing facilities.

- **Defence Corridors (2018) –** Corridors in **Uttar Pradesh and Tamil Nadu** aim to create integrated hubs for manufacturing and supply chains. Several firms have begun operations, though full impact will emerge over time.

- **Export Promotion and Global Outreach –** A dedicated export cell, an online clearance portal, and simplified norms like **OGEL (Open General Export License)** have streamlined processes. High-level diplomacy has increasingly included defence deals, and DPSUs like HAL and BEL now maintain overseas marketing offices.

These initiatives address long-standing issues such as scale limitations, technological gaps, and export inertia. For investors, the key takeaway is clear: India's defence manufacturing enjoys strong, bipartisan policy backing. While challenges in R&D and capacity scaling remain, the foundation is now firmly laid for long-term industrial growth.

India's Shipbuilding Sector: Overview and Global Position

India's shipbuilding sector presents a story of unrealized potential – historically limited in scale, but now identified as a critical area for growth. **India's share in global shipbuilding is only 0.07% by gross tonnage,** virtually a rounding error in a market dominated by East Asia. In 2023, China alone accounted for **46.6% of worldwide shipbuilding (GT),** South Korea 29.2%, and Japan 17.2% – together these three made up ~93% of new ship tonnage. **Figure 11** illustrates just how small India's current presence is relative to these leaders. Other countries like the Philippines, Vietnam, and even Bangladesh also each exceed India's output. India is estimated to rank around **21st in the world in shipbuilding capacity**[41], despite having the world's fifth-largest economy and a coastline of 7,500 km.

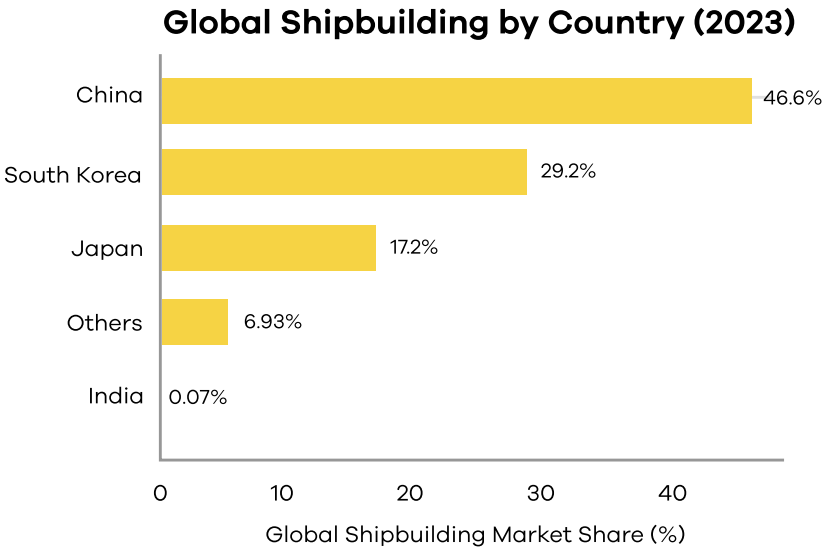


Figure 15: Global shipbuilding market share by country (2023). India's share (~0.07%) is negligible compared to leading nations like China (~46.6%), South Korea (~29.2%), and Japan (~17.2%). "Others" (including Europe, Vietnam, etc.) make up the rest.

[41] wwwcdn.imo.org

Several metrics underscore India's underperformance in maritime industry. The country's **merchant shipping fleet** comprises only 1,526 ships (13.75 million gross tonnage) as of end-2023, representing a mere **1.2% of global shipping capacity by tonnage**. By contrast, tiny Greece owns nearly 18% of global tonnage, and China and Japan own 12.8% and 10.8% respectively. Moreover, **only 0.77% of the world's ships are registered under the Indian flag** – most Indian ship owners choose to register their vessels in foreign "open registries" like Panama or Liberia for tax and regulatory reasons.

One bright spot historically has been **naval shipbuilding** for the Indian Navy. But in commercial shipbuilding – building merchant ships such as bulk carriers, tankers, container ships, LNG carriers, etc. – India has had **almost no presence in the global market**. For example, even Turkey and Vietnam each had ~1% share of new ship orders in recent years – over ten times India's share. The Maritime India Vision 2030 report starkly admitted that India is not among the top shipbuilding nations currently, but set a goal to **place India in the top 10 by 2030 and top 5 by 2047**[42]. Achieving this would require a quantum leap in capacity and output.

Public and Private Shipyards in India

India's shipbuilding ecosystem comprises a mix of public-sector yards and a smaller, more volatile private sector. On the public side, four major defence shipyards operate under the Ministry of Defence: Mazagon Dock Shipbuilders (Mumbai), GRSE (Kolkata), Goa Shipyard, and Hindustan Shipyard (Visakhapatnam). In addition, Cochin Shipyard Ltd (CSL), under the Shipping Ministry, is India's largest by capacity and has built major vessels, including aircraft carriers. These public yards primarily serve the Indian Navy and Coast Guard, occasionally delivering auxiliary or commercial vessels. Their strength lies in domestic naval design and execution, but they historically haven't competed in global commercial shipbuilding.

The private sector's journey has been turbulent. Riding the mid-2000s global shipping boom, companies like **L&T, Reliance Naval (formerly Pipavav)**, **ABG Shipyard**, and **Bharati Shipyard** entered the market with ambitions to serve both defence and commercial clients. Between 2007–2010, they secured export orders for bulk carriers and offshore vessels using licensed foreign designs. However, the **2008–09 global financial crisis** triggered order cancellations, delays, and cash flow crises. By the early 2010s, India's commercial ship output peaked and then declined sharply. ABG and Bharati went bankrupt by 2015, and Reliance Naval's yard is now mostly inactive. Only **L&T** has sustained operations by pivoting to defence production — building components for nuclear submarines, landing craft, and survey vessels. Its Kattupalli yard remains one of the few modern, private-sector shipyards with active defence contracts and operational resilience.

Naval vs. Commercial Shipbuilding

India's naval shipbuilding has been a relative success, while commercial shipbuilding continues to lag. The country has indigenously built dozens of warships — from patrol vessels to guided missile destroyers, frigates, and even an aircraft carrier. As Sanjeev Sanyal notes, "India is one of the few countries capable of designing and building both nuclear submarines and aircraft carriers" — showcasing its high-end naval capabilities. Currently, over 50 warships and submarines are under construction across Indian shipyards, with the Navy targeting a fully indigenous fleet by 2047[43].

In contrast, **commercial shipbuilding** has struggled. The global commercial sector demands standardized, cost-efficient production — a space dominated by **East Asian giants**. After a brief uptick from 2005–2010, India's output collapsed. For context: in **2022**, Indian yards delivered just **six small ships (<10,000 DWT),** while **Japan delivered 236** and **China over 1,000,** including large merchant vessels and LNG carriers.

[42] lloydslist.comindiasworld.in [43] asiapacificdefencereporter.com

There are, however, signs of nascent revival. Industry reports note that in **2023–24, some European shipowners placed orders for a few smaller general cargo ships in Indian yards**, sensing an opportunity as top Chinese yards move to bigger, more complex vessel types. Indian yards like Cochin and a revived ABG (under new management) have reportedly secured a handful of these orders, marking India's re-entry into commercial exports on a limited scale[44].

Key Challenges and Constraints to shipbuilding

Why has India lagged so much in shipbuilding, and what hurdles must be overcome for it to catch up? Analysts and industry stakeholders point to several key challenges:

- **Financing and Cost of Capital:** Shipbuilding is highly capital-intensive – setting up modern docks, cranes, and fabrication infrastructure costs hundreds of millions of dollars, and building large ships ties up capital for long durations. Indian shipbuilders face a substantial cost disadvantage in financing. Interest rates in India have been higher than in East Asia, and crucially, **ships do not qualify as "infrastructure"** assets for loans. As Sanjeev Sanyal highlights, ships are not included in India's Harmonized List of Infrastructure, meaning shipbuilding projects cannot access the long-term, low-interest financing available to other infrastructure sectors. This exclusion also means **banks cannot easily accept ships as collateral**, because under India's SARFAESI Act (Section 31(d)), vessels are not covered – banks can't seize and auction a ship as security if a loan defaults. Without reform (adding ships to infra category and amending laws), this will continue to hinder growth.

- **Lack of Scale and Infrastructure:** Most Indian shipyards are small with limited dock capacity and outdated infrastructure. In contrast, Chinese and Korean yards boast dozens of docks and a robust local supplier ecosystem. Indian yards often **import key components**, which inflates costs, and lack the automation (e.g. welding robots) needed for competitive efficiency.

- **High Operating Costs:** While labor is inexpensive, **productivity is hampered by skill gaps** and outdated processes. Indian yards have also struggled with **cost overruns and delivery delays**, especially on first-time projects.

- **Global Competition and Cyclicality:** Shipbuilding demand is tied to global trade cycles. Indian yards were hit hard by the post-2008 downturn. Though India introduced a **20% shipbuilding subsidy in 2016,** slow implementation limited its impact — though recent extensions may help.

- **Policy and Regulatory Delays:** The absence of a central shipbuilding authority — with roles split across ministries — led to **intermittent policy support**. For example, a key subsidy was withdrawn in 2007 just before the global crash, and calls to grant ships **infrastructure status** remain unimplemented despite repeated committee recommendations.

In essence, India's shipbuilding sector has been held back by a combination of financial, structural, and policy challenges. However, awareness of these hurdles is high, and recent measures are targeted at addressing them. The next section discusses how the government is directly tackling many of these pain points to turn shipbuilding into a growth industry.

Government Initiatives and Future Prospects

The Indian government has in recent years launched a comprehensive effort to revive and expand shipbuilding, recognizing it as both an economic multiplier and a strategic necessity. Key initiatives and developments include:

[44] lloydslist.com

- **Infrastructure Status and Financing Reforms:** While ships are still excluded from India's Harmonized Infra List, shipyards were granted infrastructure status in 2016 — a first step toward unlocking long-term capital. Efforts are ongoing to amend banking laws to allow vessels as collateral, enabling better access to credit.
- **Shipbuilding Financial Assistance Policy (SFAP):** Launched in 2016, this **20% subsidy** on each commercial vessel built in India has helped domestic yards compete with subsidized global rivals. Initially set to run till 2026, it has now been **extended to 2030 or beyond,** with possible enhanced support for green vessels.
- **Maritime Development Fund:** In the Union Budget of 2025, a massive **₹25,000 crore ($3 billion) Maritime Development Fund** was announced to support the maritime sector. The government will contribute 49% of this fund and the rest by major port authorities and private players.
- **Fleet Expansion and Flagging Incentives:** To reduce forex outflow and build a national fleet, the Ministry of Ports, Shipping & Waterways has set a goal to **increase the share of Indian-flagged ships in India's trade to 20% by 2047** (from <7% currently).
- **Public-Private Collaboration & Naval Orders:** The Navy has been a steady customer for Indian yards, and this will continue. But now, there is an emphasis on using defence shipbuilding to catalyze commercial shipbuilding. For instance, Cochin Shipyard after delivering the carrier is seeking commercial export orders; GRSE is looking at building export frigates in collaboration with friendly nations' navies.
- **Training and Skill Development:** Investments are being made in maritime universities, Sagarmala-linked training, and coastal workforce upskilling to improve labor productivity and support shipyard growth.

This renewed policy push — featuring infrastructure support, capital access, export facilitation, and talent development — marks a more credible shipbuilding effort than past attempts. As **Lloyd's List notes,** "India's latest attempt to become a shipbuilding powerhouse appears more convincing" due to its **multi-billion dollar backing and unified vision.**

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Importantly, shipbuilding is not viewed in isolation but as part of a **maritime strategy** encompassing shipping, ports, and naval power — critical to India's ambition of becoming a **net security provider in the Indian Ocean** and a **$30 trillion economy by 2047.**

Economically, a thriving shipbuilding sector has multiplier effects: it can create tens of thousands of jobs in coastal areas (which often lack industrial employment), reduce the $75+ billion freight bill over time by enabling a larger national fleet, and contribute to exports. In fact, shipbuilding can become a significant export earner if even a few highvalue ships are sold annually. Countries like South Korea in the 1970s or China in the 2000s demonstrated how investing in shipyards can drive heavy industrialization and exports. India appears to be attempting a similar trajectory now, albeit decades later.

The good news is that momentum is building – both major national parties and state governments (where shipyards are located) are on board with the maritime push. As the Shipping Minister stated, "This strategic push is crucial in realising India's vision of becoming a $30 trillion economy by 2047... it will enhance India's global competitiveness... and solidify its position as a leading maritime hub.". India could see substantial growth in this sector over the next decade, gradually closing the gap with mid-tier shipbuilding nations and carving out its share of the global market.

Company Deep-Dives: Mapping the Defence Landscape

Krishna Defence & Allied Industries Ltd

1. Company Overview

Incorporation & Evolution:
Krishna Defenceand Allied Industries Ltd (KDAIL) was incorporated in 1997, it designs, develops,and manufactures a wide range of equipment for defence, security, and dairy segments.
In 2006, KDAIL attempted to develop Ship Building Steel Sections (Bulb Bars), a critical component for the Indian Navy's indigenization program. This attempt successfully yielded the result in the trial batch exactly as per the requirement of the Indian Navy. KDAIL develops indigenous solutions for import substitution in defense sector. It provides critical components to Indian Navy for its warships and develops special products for Indian Army. Company has in-house capabilities of designing, developing, and manufacturing a wide range of equipment for the Defence and Dairy.

Core Proposition:
KDAIL specializes in Ship Building Steel Sections, Improved Space Heating Device, Weld Consumables, Special Steel Alloy Ballast Bricks, Heavy Vehicle Factory Steel Profile, Special Steel Alloy Welding Wire, Welding Electrodes, Modular Vehicle Barrier, IED Containment Vessel. Its latest additions are Electronic Warfare Communication, Data Transmission, COMNIT & SIGNIT with a manufacturing unit in Halol of 60,000 sq. ft. Company has received various Transfer of Technology agreements from DRDO under the Defence sector for production & supply of specialized component for defence applications.

Promoters & Management:
Managing Director: Mr. Ankur Shah
Director of Operations: Mr. Sandeep Kadam

2. Product Portfolio & Differentiators

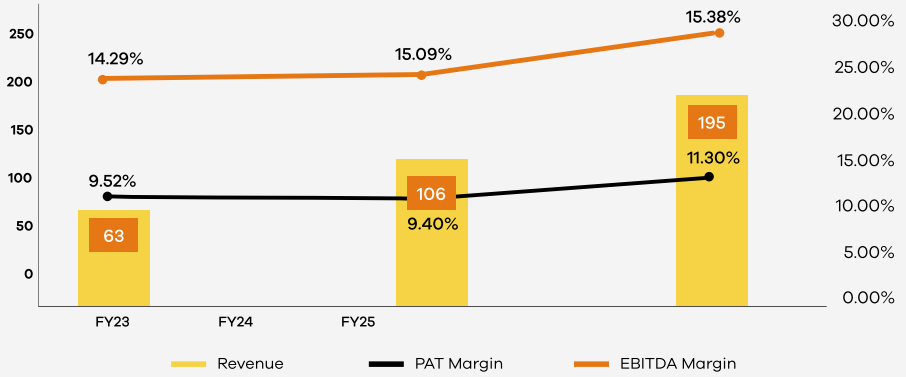
Category	Differentiator
Bulb Bars	Structural components for naval vessels
Welding Consumables	Used in defence manufacturing and maintenance
Balasvik	Low Magnetic Signature Product
Armoured Steel Profiles	T-90 tank chassis
Bukhari	Space heaters for high altitude areas, developed with DRDO's Deepa Space Lab

With doubled capacity at Baroda plant from Feb 2025 which is currently at 60% of utilization, company is targeting 80% capacity utilization with roughly 400cr peak potential.

Unique Hooks:

- Near Duopoly in bulb bars
- Continuous traction from Indian defence and repeat orders
- Pursuing approvals to supply bulb bars for non naval ships

3. Financial Performance Snapshot



Key Drivers

- Higher capacity utilization and demand in Indian Naval sector.
- Improvement in margins because of increased capacity utlization reducing the effect of fixed cost on overall margins.
- CAPEX has been utilized which has reduced the financing costs and improved the net profitability of the company.
- Exports of non Naval bulb bars and composite doors to Southeast Asia and Middle East.

4. Manufacturing and R&D

Location	Status	Size	Utilisation	Comments
Kalol	Operational	40,000 sq. ft	100%	Manufacturing of Dairy Equipment
Bengaluru	Operational	2,000 sq. ft	100%	Electronics Manufacturing & Testing Lab
Halol	Operational	60,000 sq. ft	60%	Manufacturing of Defence Application Products

Clientele:

- Defence - Indian Army, Indian Navy, Boarder Security Forces, Defence Research & Development Organisation, Armoured Vehicles Nigam, Mazagon Dock, Hindustan Shipyard, Larsen and Toubro, Garden Reach Shipbuilders & Engineering, Goa Shipyard.
- Dairy - The Panchmahal District Co.operative Milk Producers' Union Ltd, Hatsun Agro Products Limited, Delicia Foods India Pvt Ltd, Thanjavur Dist Co-Op Milk Prod. Un. Ltd (Aavin Federation), Amritsar Dist CoOp Milk Prod Union Ltd (Verka Federation), Pune Zillha Sahakari Dudh Utpadak Sangh Limited (Katraj), Bihar State Milk Co-Operative Federation Ltd, etc.

5. Acquisitions & Collaborations

- Vabo Composites JV: Developing lightweight, fire-resistant composite doors with a Dutch company. Trials successful, production unit setup in progress.
- Marine Services: Partnering with IIT Madras startup (Blaes) on underwater remotely operated vehicles for hull cleaning and cavitation, expecting revenue growth in FY26-27.
- Inceptia Software Technologies: Acquired 20% stake in a Bangalore-based ship and submarine design company.
- Wave Optics Defence Solutions: Increased stake from 25% to 40%. Focuses on radio frequency and optical fiber converters, closing FY25 at ~9.9cr revenue with 90 lakh EBITDA. Potential to reach 100cr in 3-4 years.

6. Expansion Plans & Market Outlook

Capacity expansions and JV

- Increased capacity by 100% and having a capacity utilization of 60% post expansion.
- New collaboration and product development within defence space via JV.

Market outlook:

- The Indian government's focus on indigenization and self-reliance in defence manufacturing presents significant opportunities. The defence budget allocation and initiatives like "Make in India" and "Aatmanirbhar Bharat" are driving growth.
- In last five years, defence exports grew by 334% & India is now exporting to 75+ countries due to collaborative efforts.
- The Indian Navy aims to have a force of 175 warships by 2035, with 68 warships and vessels currently on order.

7. Our View

Krishna Defence is well-positioned to capitalize on India's defense sector growth, particularly in shipbuilding and import substitution. The company's focus on niche, high-demand products and its nearly debt-free status provide a strong foundation for sustained growth. The defense sector's long-term potential, driven by government initiatives, supports a bullish outlook through FY28.

This is not just a defence equipment supplier company, it stands itself out as a company looking for constant expansion into innovation and fulfilling demands towards national needs in defence.

Atmastco Ltd

1. Company Overview

Incorporation & Evolution:

Campus Activewear Limited ("Campus") was incorporated on September 24, 2008, and is one of India's largest sports and athleisure footwear brands in terms of value and volume. The company manufactures and distributes a variety of footwear like Running Shoes, Walking Shoes, Casual Shoes, Floaters, Slippers, Flip Flops, and Sandals, available in multiple colors, styles, and at affordable prices.

Atmastco today has 2 state of the art facilities manufacturing facilities situated in Bhilai, Chhattisgarh, one of the biggest facilities in India with over 54 acre of land bank and 1 mega wt of power approval sufficient for future expansions. Atmastco is a approved vendor for top MNC co like Vedanta, Adani, TATA, L&T, BHEL and many more. Atamstco Defence has endorsements with DRDO and collaborations with various IIT colleges have designed and manufactured level 6 bullet proof jackets.

Co has recently increased its authorized share capital from 21cr to 25cr for future fund raising and meeting working capital requirements.

Promoters & Management:

- Managing Director: Mr. S. Swaminathan Chief Executive Officer: Mr. Arun Sowrirajan
- Chief Executive Officer: Mr. Arun Sowrirajan

2. Product Portfolio and Differentiators

Product	Use Case
Special Steel	Used for fabrication structures
Level 6 bullet proof jackets	Supply to Indian Army and export to other countries in future
Safety Products	Firefighting equipments, helmets and boots.

Unique Hooks

- Situated in Bhilai, Co has location advantage for quick access to raw material suppliers.
- One among the few vendors approved for manufacturing bullet proof jackets for Indian Army.
- With 3-5 years of replacement cycle for bullet proof jackets, it can become a recurring order from the govt.

3. Financial Performance Snapshot

Metric	H1FY2025	YoY Growth	H1FY2024	FY2024
Revenue	₹139 Cr	82.89%	₹76 Cr	₹224 Cr
EBITDA	₹25 Cr	87.50%	₹16 Cr	₹38 Cr
EBITDA %	17.98%	-	21.05%	16.96%
PAT	₹14 Cr	133.33%	₹6 Cr	₹16 Cr
PAT %	10.07%	-	7.89%	7.14%

Key Drivers

- Manufacturing and steel fabrication contributes 65% of the revenue. EPC segment contributes around 35%.
- Co has seen 80% of revenue growth but a drop of 300 bps in the EBITDA margins due to expansions and fluctuations in the raw material costs.

4. Manufacturing and R&D:

- Manufacturing & Steel fabrication: Atmastco has its manufacturing facilities in Bhilai with over 54 acre of land and 1 mega wt of power approved for future expansions. With current capacity of around 3000-3200 metric tonn per month co is at 65% utilization.
- Defence Segment: Co aims to setup its manufacturing facilities in 2 phases with first phase to have a capacity of manufacturing 35000 jackets and 35000 helmets to get operational by 1st quarter of FY 26.
- They also aim to obtain Schedule A category license under the IDR Act 1958, a high level license that allows for manufacturing of a broad range of defence items, including small arms and ammunition.

5. Acquisitions & Subsidiaries:

- Concord Helmets & Safety Products pvt ltd was acquired in the year 2008 to venture into manufacturing of firefighting safety gears and helmets for Indian Army.
- Apex Steel and technology based in Tiruchirapalli, Tamil Nadu focused on manufacturing critical steel equipement and components of steel plants.
- Atmastco Defence Lts incorporated in 2020 for manufacturing of bulletproof jackets and other defence products for future expansions.

6. Expansion Plans, Order Book and Future Outlook:

Expansion Plans:

- Atmastco under the fabrication segments is currently at 65% utilization and aims to expand the capacity with new technologies and machinery every year to reduce the execution timelines and higher precision.
- Under the defence segment co aims to increase the production capacity from 35000 units to 1 lakh bullet proof jackets and 1 lakh helmets in the next 12-18 months.

Order Book:

- Current Order book for fabrication is at 12000 metric tones and another 15000 metric tones of orders in pipelines and bidding stage.
- Co recently have won order from Vedanta for its Aluminium plant and new order from Hindustan Zinc worth 128cr has been awarded.
- Atmastco is one few of the approved vendors for major clients like TATA, BHEL, Vedanta etc and have been invited for various projects bidding process. It has a 25% of winning chances for all the tendors they have participated.

Future Outlook:

- Atmastco aims to achieve INR 350-400 cr of revenue from the fabrication & EPC segments by FY26.
- Defence segment alone can add INR 100-120cr of revenue to the topline.
- Defence products having higher margins and 20% EBITDA can help the overall PAT margin improvements from 9% to 11%.

7. Our View

- Atmastco ltd today has positioned found its niche in the mid range project segment of 100-500cr orders with limited competition and fast turnaround of projects. With vast experience for more than 3 decades management has gone through all the cycles of business and are well adverse to executing high level complex projects and that brings an edge over the other competitors.

- The new segment of defence can be a game changer to the co, Mr. Arun the current CEO of the co has a past experience of working with the DRDO on projects which will help the co to build relations and get approvals for products from the govt authorities faster.

- India today being the fourth largest economy in the world aims to strengthen its military and invest more towards technology advancement for forces, this brings bigger opportunities of research and developments of existing products in the segment.

- Few points which are important is the increase of borrowings and interest cost on the balance sheet. EPC being an inventory driven business requires a big amount of funds for working capital and now with the new defence manufacturing might require more of funds which might increase more of debt or equity dillusion of promoters.

- Promoters have already tried to raise funds via pref issue which was later cancelled by the management. We have also seen a decrease in the shareholding of the promoter by 2.28%.

- With all the data points and future outlook of the management we can conclude that the growth of the company looks bright and the aggressive expansion plans into fabrication and defence segments can bring in good improvements in revenue and profitability over long term.

Zen Technologies

1. Company Overview

Incorporation & Evolution:

Zen Technologies Limited was incorporated in 1996. The company designs develop and manufacture combat training solutions and Counter-drone solutions for defence and security forces. It is actively involved in the indigenization of technologies, which are beneficial to Indian armed forces, state police forces, and paramilitary forces. Zen Technologies is headquartered in Hyderabad, India with offices in India, UAE, and the USA. The company is the largest supplier of simulation training equipment and anti-drone systems in India. It has shipped 1,000+ training systems around the world.

Core Proposition:

- Combat Training Solutions: Zen provides a comprehensive suite of training systems, including live fire ranges, live instrumented simulations, virtual simulations, and integrated Combat Training Centres (CTCs). These solutions cater to individual and collective training needs, aiming to develop and assess combat readiness effectively.
- Counter-Drone Systems (CUAS): The company offers advanced anti-drone solutions that detect, classify, track, and neutralize drone threats using passive surveillance, camera sensors, and communication jamming technologies.
- Remote-Controlled Weapon Systems (RCWS): Zen manufactures various RCWS platforms, such as the Parashu, Fanish, and Sharur, designed for deployment on land and naval platforms to enhance operational capabilities.

Promoters and Key Management:

- Mr. Kishore Dutt Atluri – Founder, President & Joint Managing Director
- Mr. Nikhil Aggarwal – Chairman & Managing Director

2. Product Portfolio & Differentiators

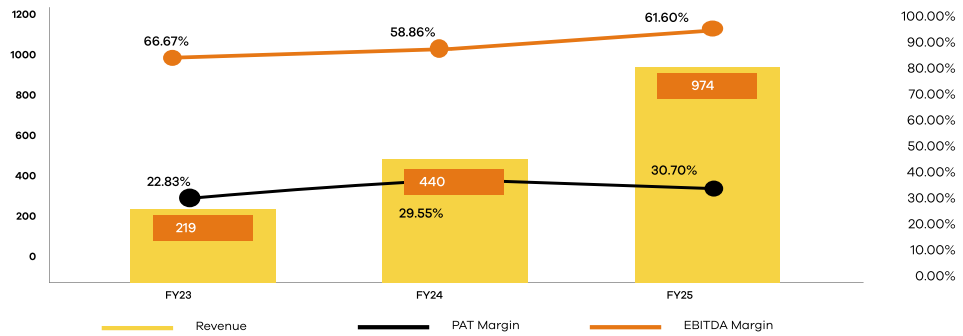
Products	Use Case	Product Names
Combat Training Solutions for Live Fire Training Ranges	Indoor and outdoor ranges for small arms, infantry weapons, and heavy weapons.	Zen Smart Target Systems, Zen Indoor Shooting Range (Zen ISR), etc
Combat Training Solutions for Force-on-Force Training Systems	Tactical engagement simulation systems using laser-based or GPS technology.	Zen Tactical Engagement Simulator (Zen TacSim)

Products	Use Case	Product Names
Combat Training Solutions for Live Fire Training Ranges	Integrated live training infrastructure for military forces using real-time data and tracking	
Driving & Vehicle Simulators for Trucks, tanks, mining vehicles, and other heavy-duty vehicles	Used for both defence and civilian training	Zen Truck Driving Simulator, Zen Advanced Combat Vehicle Simulator
Aviation Simulators for UAV (drone) operator	Rotary and fixed-wing flight training systems	Zen UAV Mission Simulator, Zen Helicopter Simulator
Anti-Drone Systems	Combines detection (radar, RF), tracking, jamming, and kinetic neutralization	Zen Counter Drone System (Zen CDS)
Software-Driven Training Aids	VR/AR-based learning and combat drills. AI-enabled analytics to monitor trainee performance.	
Target Systems for Smart targets for precision training.	Programmable to simulate various enemy behaviors or conditions.	

Unique hooks:

- 100% Indian-developed technologies, aligning with the "Atmanirbhar Bharat" initiative. Strong IP portfolio.
- High customization for Indian Army, Air Force, paramilitary, and international clients.
- Collaborates with DRDO, private players, and international defence bodies to enhance capability.

3. Financial Performance Snapshot



Key Drivers:

- Government of India's increased defence budget allocation and focus on indigenous procurement (under DAP, iDEX, and Atmanirbhar Bharat).
- Bulk orders from MoD, CAPFs (CRPF, BSF), and state police for simulators and anti-drone systems.
- Scale-up of manufacturing and training facilities (like the Hyderabad plant).
- Higher-margin products like anti-drone systems, UAV simulators, and data-driven AI/AR simulators drive profitability.

4. Manufacturing and R&D

- **Facilities:** The company has a 15,000 sq. ft. Demo Centre near Shamshabad Airport to showcase products and offer clients an immersive experience. Additionally, it has an AI Development Centre in Kondapur, Hyderabad, that partners with the University of Hyderabad to drive innovation and maintain leadership in AI technology.
- **R&D:** The company has an R&D centre in Hyderabad recognised by the DSIR, Ministry of Science and Technology, GOI.
- **New Facility:** In November 2023, the company signed an MoU with the Government of Goa to set up a new R&D and manufacturing facility at the Electronic Manufacturing Cluster (EMC) in Tuem, Goa, for Rs. 50 Cr. Construction was scheduled to begin by February 15, 2025, but was delayed due to pending government permissions. The company aims to make the facility operational by the end of 2025.
- **Clientele:** Ministry of Defence, police and paramilitary forces, government departments, and private players. It generates 90% of its revenue from repeat customers.

5. Game Changing Acquisition: Applied Research International

The company has expanded its capabilities in UAV propulsion, autonomous robotics, and defence simulation through strategic investments and acquisitions, including a Rs. 127.5 Cr investment for 100% ownership of Applied Research International (ARI) and Rs. 2.5 Cr for 100% ownership of ARI Labs in February 2025. It has also invested in 45.33% of Bhairav Robotics and 51% of Vector Technics.

Strategic upside:

- Entry into adjacent verticals like Cybersecurity for defence, Electronic warfare simulation, Drone manufacturing.
- Reduces dependency on a single product line and opens up cross-selling opportunities.
- It also enables Zen to address not just military but homeland security, paramilitary, and even large private industrial security clients.

6. Expansion plans & Market Outlook

- **Product expansion:**

  In early 2025, Zen Technologies acquired Vector Technics, Bhairav Robotics, and Applied Research International (ARI Labs). These acquisitions aim to bolster Zen's capabilities in robotics, naval simulation, and advanced defence technologies, enhancing their product offerings and market reach.

- **International Market Penetration:**

  Zen is actively expanding its global footprint, particularly in the U.S. market. A strategic partnership with AVT Simulation is facilitating this expansion, enabling Zen to tap into the U.S. defence sector and leverage AVT's established presence.

- **Domestic Manufacturing Expansion:**

  - Site: Electronic Manufacturing Cluster (EMC) in Tuem, Goa.
  - Investment: Up to ₹50 crore.
  - Product Focus: Development and manufacturing of cutting-edge simulators and drone-related technologies.
  - The new facility will augment Zen's manufacturing capabilities, enabling the company to meet increasing demand for its defense products both domestically and internationally.

7. Our View

Zen tech is well-positioned to capitalize on India's defense sector growth, particularly in simulation-based training systems, anti-drone solutions, and advanced defense electronics. The company's growth trajectory aligns closely with India's strategic emphasis on indigenous defense manufacturing and modernization.

- Simulation & Training Systems: Zen develops advanced simulators for firearms, armored vehicles, and UAVs, catering to the Indian Armed Forces, paramilitary units, and police forces.

- Counter-Drone Solutions: The company offers integrated anti-drone systems, addressing the rising threat of unmanned aerial vehicles in modern warfare.

- Research & Development: With a strong focus on innovation, Zen invests significantly in R&D to develop cutting-edge defense technologies.

- Zen anticipates receiving orders worth ₹800 crore by the end of H1 FY2025–26, indicating strong future revenue visibility.

- Atmanirbhar Bharat: The initiative promotes self-reliance in defense production, encouraging domestic companies to develop and manufacture advanced defense equipment.

- Defense Production Growth: India's domestic defense production reached ₹1.27 trillion in FY2023–24, with projections to hit ₹3 trillion by 2029.

The company's focus on indigenous development, coupled with its robust R&D capabilities, aligns with national priorities. Additionally, Zen's expansion into international markets and its diversified product portfolio enhance its growth prospects.

India's Renewable Energy Sector

Introduction

India, the world's third-largest energy consumer, is at a pivotal point in its energy journey. With rising demand, growing climate risks, and a net-zero target by 2070, renewable energy has moved from the margins to the center of India's policy agenda. The government aims to install 500 GW of non-fossil fuel capacity by 2030, positioning India as a key player in the global clean energy transition.

Yet, the picture is mixed. While solar and wind capacity have grown rapidly, coal still accounts for about threequarters of India's power generation[45], and coal use hit record highs even in 2024. This contrast has sparked debate: is India's energy transition real, or is it selective greenwashing?

This report examines that question through a data-driven lens. It begins with a look at India's energy mix evolution, followed by a critical assessment of the green transition versus greenwashing. It then explores the EPC boom, equity market activity including recent IPOs, and trends in startup investments – offering investors and policymakers a comprehensive view of India's renewable energy landscape.

Macroeconomic and Policy Context

India is rapidly scaling up renewable energy as part of its economic and climate strategy. It has committed to installing 500 GW of non-fossil electricity capacity by 2030, including solar, wind, hydro, and nuclear — a goal announced at COP26 and aligned with India's target of sourcing 50% of electricity from non-fossil sources by 2030. Achieving this requires ~50 GW of new additions annually through 2030 — nearly double the ~27.9 GW added in 2024. As of late 2024, India has crossed 203 GW of renewable capacity, accounting for about 46% of total power capacity[46].

This clean energy push is driven by energy security, climate leadership, and domestic development. As the thirdlargest energy consumer and emitter, India relies heavily on fossil fuel imports — 85% for oil and ~50% for gas. Notably, India has set a net-zero emissions target for 2070 and its Nationally Determined Contribution (NDC) aims to cut GDP emissions intensity by 45% by 2030 (from 2005 levels)[47].

The government has launched major programs to support renewables. The Jawaharlal Nehru National Solar Mission (2010) kick-started the solar industry, initially targeting 20 GW solar by 2022 (later raised to 100 GW). While the 175 GW target was nearly met when including large hydro, the shortfall in solar/wind (about 120–130 GW achieved) underscored challenges in execution.

Policy incentives and schemes have since multiplied:

- **Production-Linked Incentive (PLI) schemes** for manufacturing solar equipment and batteries. The solar PLI program (Tranche I in 2021 and Tranche II in 2022) provides ₹24,000 crore (~$3.2 billion) to domestic manufacturers. In April 2023, 11 firms were awarded incentives to set up 39.6 GW of integrated solar module factories[48], aiming to cut reliance on Chinese imports.

[45] jkempenergy.com accessed as on 26/05/2025
[46] indianexpress.compib.gov.in accessed as on 26/05/2025
[47] climateactiontracker.org accessed as on 26/05/2025
[48] mnre.gov.in accessed as on 26/05/2025

- **National Green Hydrogen Mission (2023)** with a budget of ₹19,744 crore (~$2.4 billion) to spur green hydrogen production using renewable power, which will indirectly drive new solar/wind installations.
- **Budgetary support and tax incentives:** : In 2023, the union budget earmarked **$8+ billion for clean energy projects** (solar, wind, green hydrogen) as part of a "green growth" priority. At the same time, import duties (40% on solar modules and 25% on cells) were imposed to protect nascent domestic manufacturers.
- **Flagship initiatives:** Programs like PM-KUSUM provide subsidies for farmers to deploy solar pumps and small plants.

These policy efforts reflect the high priority of renewables in India's development agenda. Besides mitigating climate change, renewables are seen as engines for **green jobs, industrial growth, and rural empowerment.** The **energy transition is also intertwined with India's geopolitics:** by investing in renewables, India bolsters its energy independence and fulfills a leadership role in advocating for climate equity (e.g. demanding climate finance and technology transfer from developed nations).

Energy Mix Evolution

India's energy mix has undergone a significant shift in the last 10–15 years, though the dominance of coal in power generation persists. In 2010, coal accounted for roughly 70% of generation and the balance was mostly conventional hydro and gas. By 2022, coal's share in generation was about 72%, with renewables (wind, solar, hydro, bio) contributing most of the remaining 28%. In fact, coal generation hit record highs – **coal output jumped 14.7% in 2023,** growing faster than renewable output for the first time in years[49] . For comparison, China sourced about 61.7% of its electricity from coal in 2022, whereas the U.S. and EU have much lower coal dependence (around 20% in the U.S.[50] and ~16% in the EU[51] in 2022).

72%
coal share in electricity(2024)

14.7%
Coal output faster than renewable energy(2023)

13.9 GW
New coal power approved in 2024 biggest annual increase in 6 yrs

Installed capacity trends illustrate the transition in partial terms. India's total power capacity grew from ~180 GW in 2010 to about 452 GW in Oct 2024. Over that period, renewable capacity (including large hydro) expanded more than five-fold. Wind power was India's early renewable mainstay – from ~13 GW in 2010 it grew to over 42 GW by 2023. Solar was virtually nil in 2010; today solar alone is 92 GW (operational) as of Oct 2024, surpassing wind. Large hydro has inched up from ~40 GW to ~52 GW. Meanwhile, coal capacity roughly doubled (from ~90 GW in 2010 to ~210+ GW now), and gas/nuclear saw only modest additions. Renewables now form 46% of installed capacity, up from ~15% a decade ago, which is a remarkable change. However, because coal plants have much higher capacity utilization than solar/wind, the generation mix is lagging the capacity mix – coal still generated ~three times as much electricity as all renewables combined in 2022[52].

[48] mnre.gov.in
accessed as on 26/05/2025

[49] reuters.com

[50] pbs.org
accessed as on 26/05/2025

[51] ember-energy.org
accessed as on 26/05/2025

[52] iea.org
accessed as on 26/05/2025

98% of global coal development is in just 15 countries

Coal-fired power capacity in pre-construction and construction status by country, GW

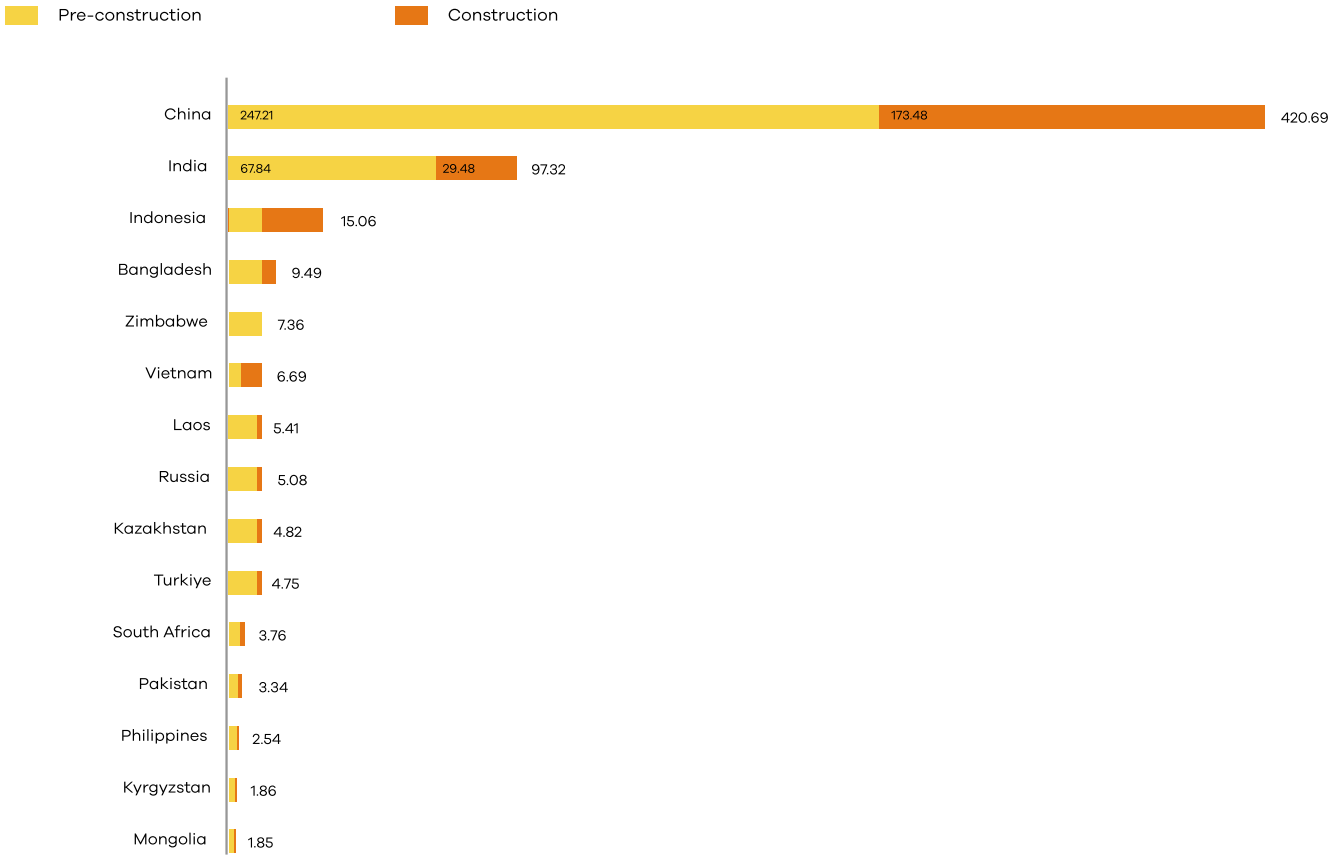


Figure 16:

Source: Global Coal Plant Tracker, July 2024, Global Energy Monitor

98% of global coal-fired power capacity (GW) in pre-construction is in 15 countries. Credit: Carbon Brief, based on Global Coal Plant Tracker, GEM.

The key question is whether India's rising renewable share represents a genuine transition or just incremental growth atop a coal-heavy system. On the one hand, renewable output is eating into what would have otherwise been coal or gas generation. Renewables' share of generation has climbed from ~5% in 2015 to around ~20-25% in 2023 (including large hydro). India also now has days where renewables plus nuclear meet over 40% of daily demand, a scenario unthinkable a decade ago.

However, overall electricity demand has grown so rapidly (India's demand jumped ~45% from 2010 to 2020) that coal generation actually hit record highs in absolute terms. In 2023, India burned more coal for power than ever before. Thus, the rise of renewables has been largely to meet new demand and reduce power deficits, rather than phase out existing fossil generation.

Going forward, the trajectory of India's energy mix will depend on whether renewables start outpacing demand growth and displacing fossil output. The government's target of 500 GW non-fossil by 2030 implies roughly 50% of electricity generation could come from clean sources by then. If achieved, that would mark a definitive transition. Already, the Central Electricity Authority (CEA) projects that by 2030, renewables (including hydro) could contribute ~50% of generation and coal's share could drop to ~50-55%. Achieving this will require not just capacity addition but also complementary infrastructure (like storage and transmission) to ensure high renewable utilization.

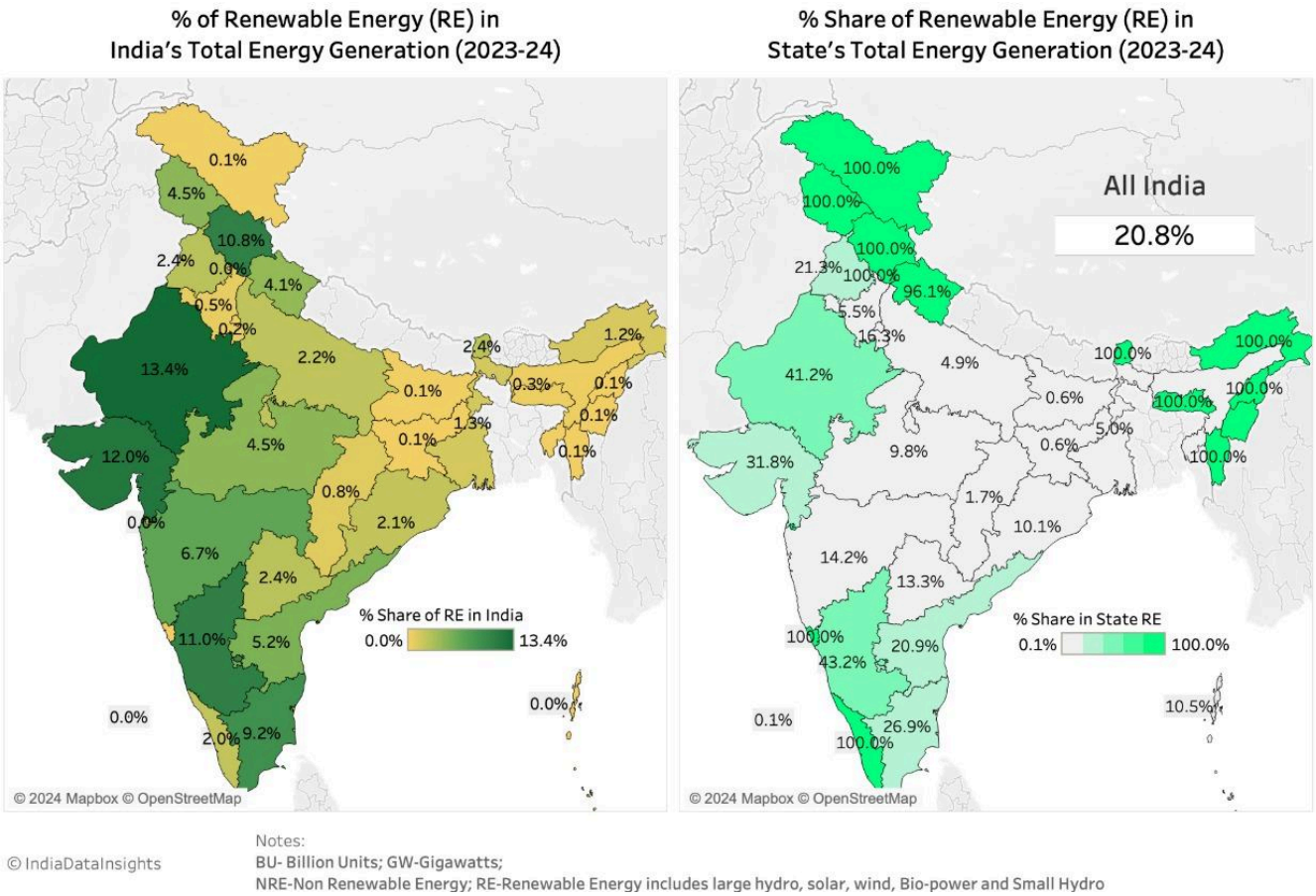


Figure 17:
Source: IndiaDataInsights

Green Transition or Greenwashing?

The mixed signals in India's energy policy beg the question: is India undergoing a true green transition or engaging in greenwashing? **On paper, India's commitments are bold,** and renewable capacity is expanding at a record pace. Yet simultaneously, India is expanding coal mining and considering new coal power plants.

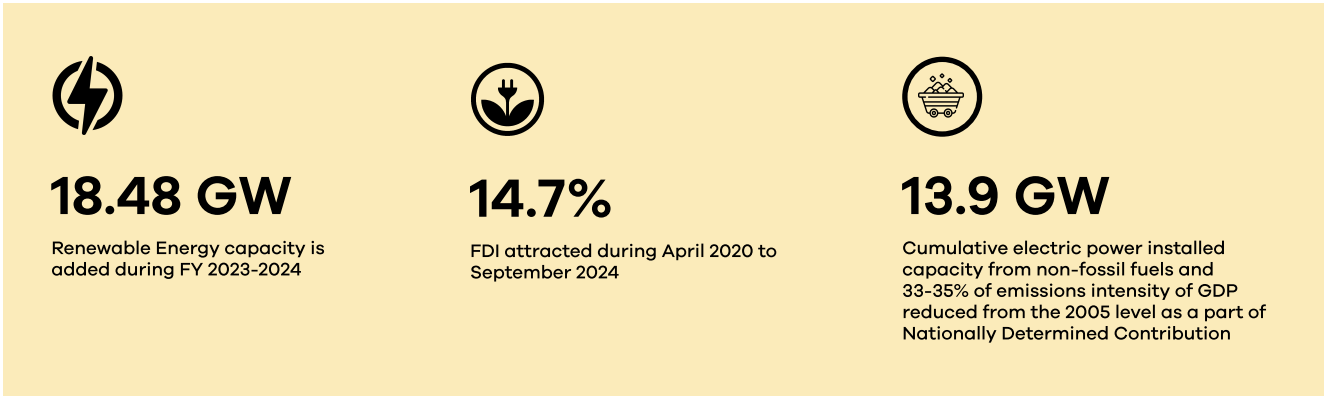
Continued coal investments: Despite official statements about not requiring new coal beyond projects already under construction, recent developments indicate a revival of coal expansion. In 2023, India went on a coal plant permitting spree, approving or moving forward nearly **11.5 GW of new coal power projects** (3.9 GW permitted and 7.6 GW given early-stage clearances in just the first half of 2023)[53]. Moreover, the government is planning to ramp up coal production to **1 billion tonnes** by opening new mines to avoid future supply shortages. In total, around 50 GW of new coal plants could come online by 2030, even as renewables surge.

The rationale given by Indian authorities is energy security and reliability. In the face of soaring power demand (India saw record peak demand in 2022 and 2023) and renewable project delays, officials turned to coal as a "quick fix" for avoiding blackouts[54]. For example, the Power Ministry in 2023 directed utilities to operate old coal plants at full capacity during summer and even import coal as needed. This **short-term pivot to coal** reflects legitimate concerns – renewables, being intermittent, cannot yet single-handedly meet peaks without adequate storage and grid upgrades. However, it also reveals that the green transition is not (yet) displacing coal – instead, coal usage is increasing in absolute terms alongside renewables.

Stranded asset risk: Expanding coal capacity now carries significant financial risk over the plant lifetime. Analyses by Carbon Tracker and others warn that a large portion of India's coal fleet could become **stranded (unprofitable) by the 2030s**, as renewables + storage costs decline. In China, for instance, 43% of coal plants were already more expensive than building new renewables by 2020. A similar trend is expected in India. Agencies like IEEFA argue it's more prudent for NTPC and others to **acquire existing stranded plants at low cost** (and use those to meet interim needs) rather than build new coal capacity.

Storage and grid readiness: A genuine green transition requires firming up renewable power through storage and grid management. Here India faces challenges. The country's grid, while improving, needs massive expansion and upgrades to handle the targeted 500 GW of non-fossil capacity. The government has approved a ₹2.44 lakh crore (~$30 bn) transmission plan for integrating 500 GW by 2030, including new high-voltage corridors and grid-scale battery stations. **Energy storage** is still nascent – India has just a few hundred MW of battery storage commissioned, though **tenders for 4,000 MWh** of battery storage were floated in 2022-23 and plans are afoot for pump hydro storage projects. Without adequate storage, renewable energy can lead to curtailment (unused excess power) or instability when penetration gets high. Already, states like Rajasthan and Gujarat (with lots of solar/wind) at times curtail renewable output due to grid constraints.

Climate finance gaps: Transforming India's energy mix requires enormous investment – far beyond current levels. The **Economic Survey and independent studies estimate ~$2.5 trillion is needed by 2030** for India's climate goals (across sectors). That's roughly $170–200 billion per year through 2030, whereas actual green investment in 2022 was around $44 billion. The **gap between needed and actual financing** is a major concern. India consistently highlights in international forums that developed nations have not delivered the promised $100 billion per year of climate finance. Without sufficient financing, India may have to slow its transition or continue relying on cheaper-butdirtier coal. This creates a dilemma: India's green push is sincere in intent, but it might falter without greater support, leading to accusations of under-delivery.



Renewable EPC Boom

The push for renewables has fueled an **engineering, procurement, and construction (EPC) boom** in India's energy sector. Over the past decade, a new ecosystem of renewable EPC and project development companies has emerged to build out solar and wind farms at scale. **Homegrown firms now lead large renewable projects end-to-end,** from design and procurement to commissioning, a domain that was once dominated by a few public sector players or foreign contractors.

[53] globalenergymonitor.org
accessed as on 26/05/2025

[54] ieefa.org

28.64 GW
in renewable capacity added in 2024

27.9%
increase in solar energy YoY.

Some of the large players in the renewable EPC space include:

Sterling & Wilson Renewable Energy Ltd. – One of India's largest solar EPC contractors (part of the Shapoorji Pallonji Group). It has executed gigawatt-scale solar parks in India and abroad and was ranked the #1 solar EPC in India (and among top globally) in 2020[55]. The company went public in 2019, reflecting the maturation of the sector.

Larsen & Toubro (L&T) – The infrastructure giant has a dedicated renewable division that has constructed many of India's biggest solar projects (e.g. the 750 MW Rewa solar park's units). L&T's EPC capability and balance sheet have made it a preferred contractor for complex projects, including hybrid (solar+wind+storage) installations.

Tata Power Solar – A pioneer in solar manufacturing and EPC, it is a subsidiary of Tata Power. Tata Power Solar has delivered 9+ GW of ground-mount utility projects and is also active in rooftop solar deployment. Its integration (manufacturing modules + executing projects) gives it an edge in quality and cost control.

Adani Renewable Energy – Part of Adani Green Energy Ltd (AGEL), it not only develops and owns solar/wind plants but also effectively self-EPCs many projects via group companies. Adani's rapid build-out of a ~8 GW portfolio in just a few years was enabled by strong in-house project execution teams and supply chain control (including its own module manufacturing).

Mahindra Susten – The Mahindra Group's solar EPC arm, which by 2022 had built over 4 GW of solar projects. It was recently partially acquired by Ontario Teachers' Pension Plan, injecting capital to grow further. Mahindra Susten is known for innovative floating solar and private solar park solutions.

Vikram Solar and Waaree Energies – These started as solar panel manufacturers and expanded into EPC. Both have delivered numerous mid-to-large solar projects. Waaree, for instance, has an EPC portfolio across 250+ sites and leverages its module sales with EPC services (it listed publicly in 2024, indicating its scale).

[55] blackridgeresearch.com
accessed as on 26/05/2025

A major component of the EPC boom is the **domestic manufacturing push** for key inputs like solar panels, cells, inverters, and wind turbines. India historically imported the majority of solar equipment (especially from China), but policies are changing that. With the PLI scheme and customs duties in place, **local manufacturing capacity is ramping up:** as of 2024, India's module manufacturing nameplate capacity is around 25–30 GW/year and expected to reach ~50 GW by 2026 with new PLI-backed factories. Companies like Reliance, Adani, Tata, Premier Energies, Renew, and JSW are setting up integrated facilities for polysilicon-to-module production. Waaree and Premier Energies – now India's two largest module makers – each expanded to ~12 GW of annual module capacity in 2024[56]. Wind turbine manufacturing in India also has a strong base: Suzlon (an Indian firm) and Siemens Gamesa India produce turbines locally, and new models up to 3 MW are being made for the domestic market. In fact, India has around 20 wind turbine manufacturers (though Suzlon historically dominated) and is exporting some turbine components to the U.S. and Europe.

Project pipelines are robust. Leading renewable IPPs (Independent Power Producers) like Adani Green, ReNew Power, Tata Power Renewables, ACME, Azure Power etc. have multi-gigawatt project pipelines under development. Adani Green, for example, announced a target of 45 GW by 2030 and had 20 GW operational or in construction by 2024. NTPC's renewable arm (NGEL) aims for 60 GW by 2032. Dozens of solar parks of 1–3 GW size are in various stages across sunny states (Rajasthan, Gujarat, Karnataka, Uttar Pradesh). Wind projects are seeing a revival too, with 8 GW of bids awarded in 2022–24 after a lull, and new hybrid (solar+wind) park tenders that bundle storage are attracting interest.

Challenges persist, however, in executing projects on the ground. Land acquisition is one of the thorniest issues – large solar and wind farms need vast tracts of land, and securing contiguous land with clear titles is difficult in India. Delays and local opposition sometimes slow projects (e.g. wind projects in Gujarat faced land allotment issues). Grid connectivity is another hurdle; any lag in grid readiness can strand completed plants. Financing costs, while generally available for creditworthy sponsors, have risen with global interest rates – this can squeeze smaller developers/EPC firms that rely on debt.

The government has stepped in with incentives to mitigate some challenges. **Subsidized green finance** (lines of credit via IREDA, SBI, etc.), **must-run dispatch status** for renewables, and **solar park infrastructure** (where government agencies acquire land and set up basic infrastructure) have smoothed execution. In 2023, India also initiated **"Projet Development Cells"** in ministries to fast-track clearances for large renewable projects, and set up dispute resolution committees for contract issues. Some states like Gujarat are creating **land pools for renewable energy parks,** simplifying acquisition.

Crucially, the **Manufacturing-Driven Advantage** has become evident. Government support is now skewed towards domestic manufacturing, which in turn benefits certain EPC firms. The Indian Express noted that solar module makers enjoyed strong profits and investor interest in 2024. Meanwhile, pure-play renewable IPPs/EPCs without manufacturing saw thinner margins due to fierce competition in auctions and less policy support. The **Union Budget 2025's National Manufacturing Mission** will further support local production of solar cells, batteries, wind turbines, etc., reinforcing a trend where the supply chain side of renewables is as much a focus as deployment.

[56] groww.in
accessed as on 26/05/2025

Equity Markets and IPOs

The rapid growth in India's clean energy sector has spilled over into the equity markets. After years of being dominated by unlisted players and private equity, the renewables and climate-tech space is now witnessing a flurry of **initial public offerings (IPOs)** and listings. Particularly from 2022 onward, several companies in solar, wind, EV, and related segments have tapped the stock markets, reflecting investor appetite for green economy themes. The table below highlights some notable IPOs in the Indian renewable/climate-tech space from 2022 to 2025:

Company	Year Sector	IPO Size	Listing Performance
Inox Green Energy Svcs	2022 Wind O&M (services)	₹740 Cr	~Flat (Listed around issue price)
Premier Energies	2024 Solar PV Manufacturing	₹2,830 Cr[57]	+120% debut premium
Waaree Energies	2024 Solar PV Manufacturing	₹4,321 Cr[58]	+66% debut premium
NTPC Green Energy	2024 Renewable Power Generation	~₹10,000 Cr	+3% on listing[59]
ACME Solar Holdings	2024 Solar IPP (Developer)	₹2,900 Cr[60]	–13% listing loss
Alpex Solar (SME)	2024 Solar Module Mfg (SME)	₹30 Cr (approx)	+231% (SME IPO premium)

Several trends emerge from these listings:

- **Manufacturing companies have garnered high valuations.** Both Premier Energies and Waaree Energies – India's top solar module manufacturers – had blockbuster IPO debuts in late 2024, with stocks doubling or nearly so on listing.

- **Small and mid-sized renewable companies are rushing to list,** In 2023–24, a bullish environment for energy/ manufacturing stocks enabled even SME IPOs (on secondary exchanges) like Alpex Solar and Ganesh Green to see oversubscription and massive listing gains. The fact that **over 298 IPOs in India raised ₹1.4 lakh crore in 2024, led by energy and manufacturing,** shows how hot the sector became.

- **IPPs/EPC pure-plays have had mixed success.** When the tide was high (early-to-mid 2024), most green IPOs did well. But by late 2024, some fatigue set in. Notably, NTPC Green Energy Ltd., the renewable arm of staterun NTPC, raised a hefty ₹10,000 Cr but listed with only a 3% pop – a lukewarm outcome given its massive size. ACME Solar, a leading private solar developer, even saw its stock list at a 13% discount to the IPO price.

[57] ipoji.com accessed as on 26/05/2025

[58] chittorgarh.com accessed as on 26/05/2025

[59] moneycontrol.com accessed as on 26/05/2025

[60] ipoplatform.com accessed as on 26/05/2025

- **Market performance post-listing** has varied. Some stocks sustained their momentum (Waaree and Premier remained well above IPO price months later), whereas some tapered. The Nifty Energy Index saw a big rally till late 2024 driven by green stocks, before a correction of ~30% by early 2025. The correction was due to concerns of over-valuation and interest rate hikes. Still, most green IPO stocks trade above their issue price, reflecting longer-term optimism.

- **Robust pipeline of upcoming IPOs:** As of early 2025, many more renewable companies have filed draft prospectuses. These include other solar manufacturers (e.g. **Vikram Solar, Saatvik Green Energy)**, EPC firms (Solar91 Cleantech, PMEA Solar), and wind/solar IPPs like **Continuum Green Energy.** The pipeline signifies depth in the sector – a range of players are reaching maturity and seeking public capital.

A decade ago, renewable energy was funded mostly by development banks or private equity, and public markets were skeptical. Today, renewable companies are among the most sought-after listings in India. This bodes well for the sector's ability to raise large sums for expansion. However, investor discernment has also increased – companies need solid financials.

Startup Investment Trends

In parallel with public market activity, India's **startup and venture capital ecosystem in climate-tech** has flourished. Over the past few years, climate-tech has become one of the fastest-growing domains for early-stage investment in India. Key trends in venture funding include a surge in deal volume around 2021–2022, followed by a slight dip in 2023 in line with global VC cooldown, but overall a strong uptrend.

Dominant segments: The lion's share of climate startup investment has gone into **clean mobility (electric vehicles)** and related areas. By one estimate, ~55–60% of climate VC funding in India (2018–2023) was in **EV OEMs and enablement (battery tech, charging infra)**[61]**.** This is evident from the big-ticket deals: **Ola Electric** (electric scooters) has been the poster child, becoming India's only climate-tech "unicorn" (valuation > $1B). Battery swapping and mobility startups like **Yulu** (electric bike sharing) and **Battery Smart** (swapping service) also raised from prominent players. These deals underscore that **electric mobility has been the hottest area,** aligning with India's goal to electrify transport (30% of private vehicles by 2030).

The next major area is **renewable energy and energy storage** startups. These include both tech-driven ventures and new IPPs. For instance, **Avaada Energy** – a solar developer focusing on C&I and green hydrogen – raised **$326M from global investors in 2023** (including Brookfield)[62], making it one of the five $100M+ deals that year. Battery technology startups like **Log9 Materials** (advanced batteries) also came into the pivture. Meanwhile, **Climate-focused fintech and solar financing** startups emerged: e.g. SolarSquare (rooftop solar solutions), Ecofy (a green-focused NBFC). In energy storage integration, startups like ION Energy and Exponent Energy got funding for their battery management and fast-charging solutions.

Emerging niches: Carbon accounting platforms (e.g. Climes, Sentra.world), **recycling and circular economy** (e.g. Attero Recycling for batteries, Lohum for Li-ion recycling), and **agri-tech with climate angles** (resilience and sustainability in farming). India had over **865 climate-tech startups that had received funding**[63]**,** with ~388 new startups funded just since 2018. This indicates a healthy pipeline of innovation beyond just big EV plays.

[61] b.capital
accessed as on 26/05/2025

[62] yourstory.com
accessed as on 26/05/2025

[63] entrepreneur.com
accessed as on 26/05/2025

Key investors: Traditional VCs like **Sequoia Capital (now Peak XV), Lightspeed, Accel, Blume Ventures, Tiger Global** have all made multiple climate investments (Sequoia was in SolarSquare and Ion Energy; Lightspeed in Exponent; Accel in Yulu, etc.). Impact and sustainability-focused funds have grown – **Avaana Capital** launched a $135M climate fund in 2022[64] and has invested in startups like Fermbox, Prakriti (waste), and others. **Transition-focused PE funds** like **TPG Rise, Actis, Brookfield** are writing bigger checks (as seen in Ohmium, Avaada). Corporate venture arms are active too: **Shell Ventures, BP Ventures** in mobility; automakers like **Hero MotoCorp and Bajaj** investing in EV startups; **Amara Raja** and **Exide** (battery makers) backing battery startups to stay ahead. Even India's sovereign fund NIIF and large banks have begun investing (e.g. in Ather's round). By 2024, an estimated **$2B+ of dedicated "dry powder" was available for climate-tech in India** – meaning many funds have earmarked capital waiting to invest in the right opportunities. This is a positive sign that despite a 2023 dip, there is ample capacity to fund good climate ventures.

Finally, **early-stage trends** indicate new areas coming up: climate fintech, carbon credit platforms, climate-risk analytics, alternative proteins (for sustainability), etc. For example, **Climatetech funds** like Climate Angels and Energy transition accelerators are seeding a wave of very earlystage startups in these fields. The ecosystem is being supported by climate-focused incubators and government innovation challenges (e.g., the India Climate Startup Hub launched in 2023).

Conclusion and Outlook

India stands at a crossroads in its energy transition. The past 15 years have shown undeniable progress: renewables have moved from the periphery to the center of India's power sector strategy. Ambitious targets (500 GW by 2030) and massive deployment indicate that a **green transformation is underway.** The supporting ecosystem – policy, industry, investors – has aligned to a degree, as seen in the boom of EPC companies, manufacturing, and climate-tech startups. India has also demonstrated global leadership through initiatives like the International Solar Alliance and by setting an example of pursuing development via cleaner pathways.

Yet, as this report has detailed, India's transition is **not yet a full-fledged replacement of fossil fuels but an augmentation.** Coal remains deeply entrenched, and near-term energy security needs have even led to expanded coal use. The litmus test of a true transition will be if India can, in the coming decade, **bend the curve:** i.e., meet incremental demand with renewables and start retiring or converting a significant portion of its coal fleet. Achieving this requires surmounting key challenges and accelerating supportive measures:

Grid Infrastructure Upgrade: India must urgently build the transmission superhighways and smart grids to integrate 500+ GW of renewables. This means executing on the planned Green Corridors and new HVDC lines, strengthening regional grids, and enhancing grid flexibility (through better forecasting, scheduling, and grid digitalization).

Energy Storage and Balancing: To address renewables' intermittency and ensure 24x7 reliable power, **energy storage needs to be deployed at scale.** This includes battery storage systems (lithium-ion today, potentially alternative chemistries tomorrow), pumped hydro storage (several projects are in planning), and other emerging tech like thermal storage or green hydrogen for power. The government's recent bids for 1000s of MWh of battery storage are a start, but much more is needed. Additionally, **gas-based power or other flexible generation** could play a bridging role for peaking power.

[64] m.economictimes.com
accessed as on 26/05/2025

Financial Mobilization: : Meeting the investment requirements will require innovative financing. India will need to **tap global green capital** through mechanisms like green bonds (Indian companies and banks have started issuing green bonds internationally with good uptake), sovereign green bonds (already initiated in 2023), and climate funds. Blended finance models can reduce risks for private investors – e.g., first-loss capital from philanthropic sources to catalyze commercial investments in new technologies. Strengthening domestic financial institutions like IREDA (which is also planning an IPO[65]) will help channel more funds to projects.

Policy and Regulatory Reform: India might consider more reforms to catalyze the transition. For instance, implementing carbon pricing or a carbon market (even if starting modestly) could gradually make coal less financially attractive relative to clean power. Strengthening Renewable Purchase Obligations (RPOs) and enforcing penalties for non-compliance would push state utilities to procure more green power. Power sector reforms to improve DISCOM finances (as being attempted through the Revamped Distribution Scheme) are critical – solvent, well-run DISCOMs are more likely to sign new renewable PPAs and invest in integration.

Technology and Manufacturing Push: Continued focus on domestic manufacturing of solar, wind, batteries, and electrolysers will make the transition more self-reliant and create jobs. By 2030, India could not only fulfill its own equipment needs but also export to other emerging markets, making it a global clean tech hub.. **Innovation** should be encouraged: from advanced photovoltaics to grid-scale storage to carbon capture for unavoidable coal use.

In conclusion, **India's renewable energy journey is at an inflection point.** The foundations for a major clean energy transition have been laid through targets, policies, and market creation. The next 5–10 years must translate these into real, on-ground decarbonization. If India hits its 500 GW non-fossil target by 2030 and concurrently tempers coal expansion, it would unequivocally demonstrate a successful green transition at an unprecedented scale – proving that a large developing country can leapfrog to a cleaner future while powering economic growth. The stakes are high not just for India but for the world: India's energy trajectory will significantly impact global efforts to limit warming. The progress so far gives reason for optimism, but the road ahead will require continued resolve, innovation, and support. **With sustained policy momentum, financial support, and technological breakthroughs, India can indeed transform its power sector from one fueled by coal to one empowered by the sun, wind, and water – making its green ambitions a reality.**

[65] samco.in

Company Deep-Dives: Mapping the Energy Landscape

Advait Energy Transitions Ltd.

1. Company Overview

Incorporation & Evolution:
Advait Energy (formerly known as Advait Infratech Limited) is a leading provider of robust products and solutions for power transmission, substations, and telecommunication infrastructure. With over a decade of experience, the Company specializes in turnkey telecommunication projects, installation of power transmission equipment, and marketing of a wide range of products including stringing tools, OPGW cables, OFC cables, ACS wires, and ERS systems. Committed to clean energy solutions, Advait Infratech has also ventured into green energy to support the long-term development of a cost-efficient and sustainable power delivery system.

Core Proposition:
Advait delivers turnkey EPC, live-line transmission, ACS/OPGW manufacturing, and is now an early mover in India's green hydrogen and grid digitalization wave.

Promoters & Management:

- Shalin Sheth (MD)
- Rejal Sheth (CFO)

Promoter Holding: 69.5% (as of March 31, 2025)

2. Product Portfolio & Differentiators

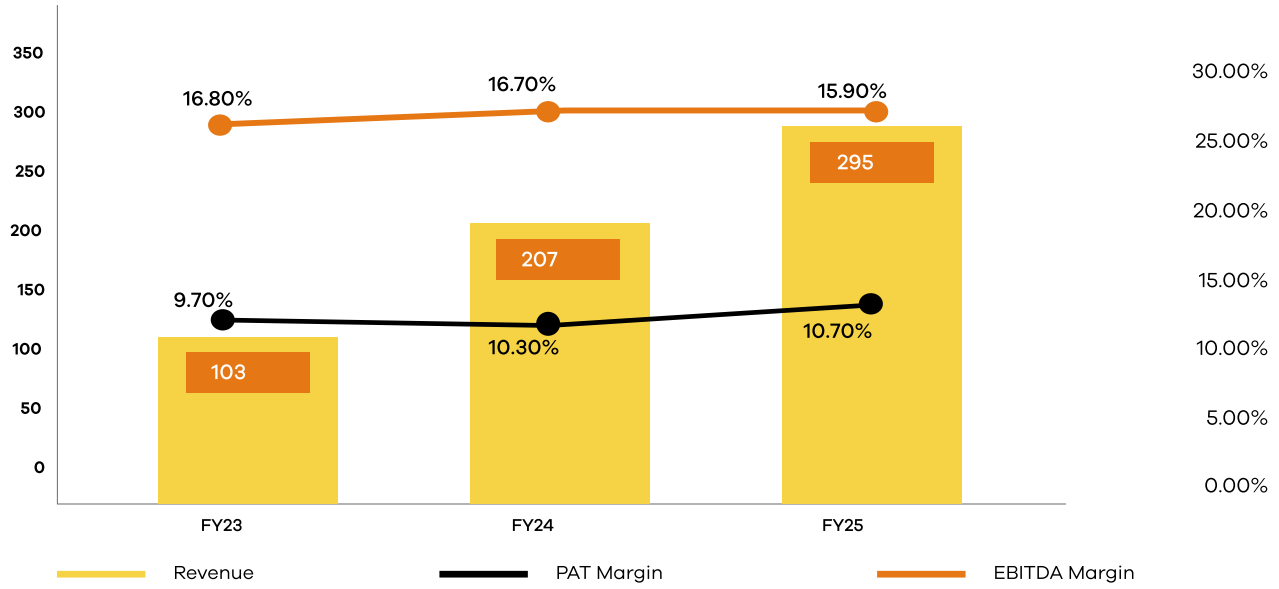
Power Transmission Solutions (PTS)
OPGW (Optical Ground Wires)
ACS Wires (Aluminum Clad Steel)
Optical Fiber Cables (OFC)
Emergency Restoration System (ERS)

New & Renewable Energy (NRE)
Solar – EPC
Battery Energy Storage System (BESS)

Unique Hooks

- The project, part of the Khavda Hybrid Renewable Power Project in Gujarat, involves turnkey solutions including civil works, electrical installations, and module mounting structure, as well as a robotic cleaning system.
- Entered to Power DISCOM EPC business and expanding revenue through taking benefit out of RDSS and SIS scheme.

3. Financial Snapshot (standalone)



4. Manufacturing & Distribution

- **Core Manufacturing:** Advait operates a ~9,000 m^2 facility in Kadi (Gujarat) for ACS wires, ERS systems, and stringing tools, with ~4,900 TPA ACS capacity and plans to scale to ~8,000 TPA. It also manufactures OPGW and OFC cables via a JV with Tongguang, with 10,500 km/year OPGW capacity.

- **Green Energy Buildout:** An electrolyser line (120 MW/year) is under commissioning, with expansion to 200–300 MW targeted by FY27.

- **Distribution & EPC:** Advait serves utilities like PGCIL, GETCO, and DGVCL via in-house EPC services and tool exports to 30+ countries. It holds ~50% market share in stringing tools and ~30% in insulators domestically.

5. Acquisitions & Subsidiaries

- Green Hydrogen & Renewables: Incorporated Advait Greenergy (76.3% owned) for solar and hydrogen EPC; won a 67.5 MW solar project.

- Tech Expansion: Formed Advaiteco and A&G Hydrogen for electrolyser, fuel cell, and hydrogen equipment manufacturing.

- Global JV: Partnered with Norway's TECO 2030 to locally produce PEM fuel cells; launched Advait Energy Holding AS (Norway) to drive international collaborations.

- Tooling Business: Carved out Advait Transmission Tools as a 100% subsidiary to scale stringing tool operations.

6. Expansion Plans & Market Outlook

Expansion Plans:

- Advait is expanding electrolyser capacity from 120 MW to 200–300 MW by FY27 under its green hydrogen initiative.
- Fuel cell manufacturing will commence under a JV with Norway's TECO 2030; new units for stringing tools and hydrogen tech are being developed at its Kadi campus.
- Company is entering new areas like carbon credit consultancy and green hydrogen EPC via Advait Greenergy.

Order Book:

- Recently secured a **67.5 MW solar EPC order** and a large **OPGW package from PowerGrid.**
- Won ~₹140+ cr worth of EPC and HTLS line conversion orders from UGVCL/GETCO.
- Among selected bidders under India's **SIGHT program** for 300 MW electrolyser capacity.

Future Outlook:

- Focused on scaling green energy verticals, expanding manufacturing footprint, and increasing exports.
- Management targets strong revenue growth, driven by new tech segments and government-led energy transition programs.
- Execution risks around supply chains and project timelines remain key watch areas for investors.

7. Our View

Advait Energy Transitions stands at the inflection point of India's clean energy and digital grid revolution. Its rare blend of execution, innovation, and vision spanning hydrogen, BESS, digital infra, and exports positions it as a future ₹5,000 crore+ leader. For investors, Advait isn't just a cable or EPC play; it's the backbone of India's energy transitionand a potential global infra-tech brand.

KPI Green Energy Ltd

1. Company Overview

Introduction:

KPI Green Energy Ltd is part of KP Group incorporated in 2008. They develop, build, own, manage, and maintain renewable power facilities (solar and wind solar hybrid power project) as an Independent Power Producer (IPP) and as a service provider to Captive Power Producers (CPPs) under the 'Solarism' brand. The company develops solar and hybrid power plants under the brand name 'Solarism and offers power solutions.

Core Proposition:

- **Captive Power Producer (CPP):** The company develops grid-connected solar power projects for its CPP customers, including access to shared power evacuation infrastructure and a pool of grid-connected land for solar power generation. It also offers Operation and Maintenance (O&M) services through a separate agreement. Through these projects, the company provides electricity at a lower cost than DISCOMs.
- **Independent Power Producer (IPP):** The company maintains grid-connected renewable energy projects that generate revenue by selling power units to business houses and industries through bilateral power purchase agreements. It is among the market leaders in solar energy through third-party sales in Gujarat.

Promoters & Management:

- Chairman & Managing Director: Dr. Faruk G. Patel
- Group CEO: Dr.Alok Das

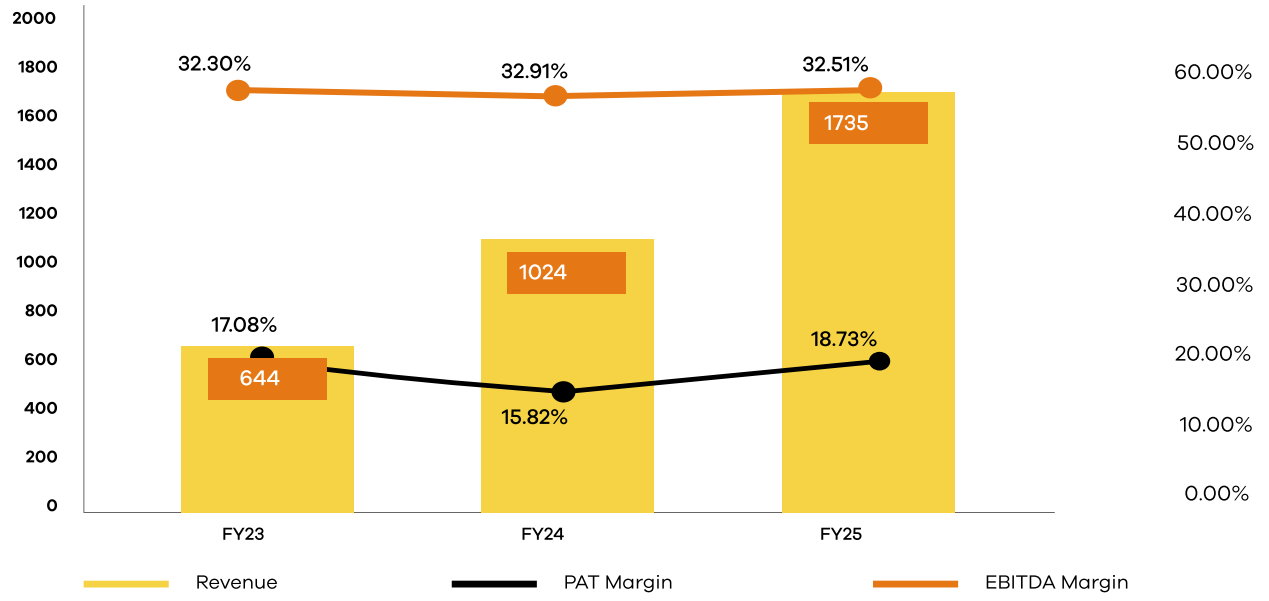
2. Product Portfolio & Differentiators

Product	Revenue Breakup	Use Case
Captive Power Producer (CPP)	82%	Customized solar and hybrid energy systems for industrial clients, helping them reduce electricity costs through self-use generation.
Independent Power Producer (IPP)	18%	The company builds and operates renewable energy projects that sell power to utilities and businesses under long-term contracts.

Unique Hooks:

- Their unique approach of selling industrial plots leased back for long-term solar projects helps unlock land value while securing steady revenue streams.
- They offer end-to-end services—from land acquisition and project development to operations—covering solar, wind, and hybrid power, providing clients with tailored, turnkey clean energy solutions.

3. Financial Perfomnce Snapshot



Key Drivers:

- Increasing awareness and regulations push industries to adopt captive solar and hybrid power, driving high CPP segment growth.
- Effective project execution and use of hybrid solutions optimize capital and operational costs, boosting margins.
- Government incentives and renewable energy targets in India accelerate project approvals and capacity additions.

4. Geographical Presence

The company operates from 70 sites, all concentrated in Gujarat. It has signed 2 MoUs with the Government of Gujarat to invest Rs. 17,690 Cr in the state, for different renewable energy projects including setting up a green hydrogen plant.

The company plans to expand beyond Gujarat and has emerged as a successful bidder in the Maharashtra State Power Generation Co. Ltd. tender to develop a 135 MW Solar Power Project at various locations in Maharashtra. It also exploring business expansion opportunities in Rajasthan and MP. In Dec 2024, it signed an MoU with the Government of Rajasthan to develop Hybrid Projects at Jaisalmer, Rajasthan. The company has a total land bank of 3,071+ acres for potential renewable energy projects.

5. Acquisitions & Collaborations

KPI Green Energy Ltd. made a significant acquisition in December 2023 by acquiring a 99.9% stake in KPark Sunbeat Pvt. Ltd. for ₹1.26 billion. This move was aimed at consolidating its solar power projects under one entity, helping the company target a combined renewable energy capacity of 1,000 MW by 2025. Additionally, in March 2024, KPI Green Energy acquired full ownership of 9.40 MW solar projects awarded by domestic entities to expand its Captive Power Producer (CPP) segment. These acquisitions are part of the company's strategic efforts to scale its renewable energy portfolio and improve operational efficiency.

Strategic upside:

- Portfolio Consolidation: By acquiring KPark Sunbeat Pvt. Ltd., KPI streamlined multiple solar projects under one entity, simplifying management and accelerating growth toward its 1,000 MW capacity goal by 2025.
- Operational Synergies: Consolidating assets allows for cost efficiencies in operations, maintenance, and project execution, improving overall margins and profitability.
- Revenue Diversification: Adding more projects, especially in the CPP segment, broadens revenue streams and reduces dependence on any single client or project.

6. Expansion Plans & Market Outlook:

Expansion:

- The company has adopted a hybrid model integrating solar and wind energy to address the limitations of single-source renewable systems, ensuring a more stable power supply and improved grid stability. As of H1 FY25, it has an installed capacity of 81+ MW and a total order book of 1,108+ MW.
- The company targets to reach a total capacity of 10,000 MW by 2030.
- Strategic Partnerships and Agreements: In February 2025, KPI Green Energy signed a Memorandum of Understanding (MoU) with the Government of Madhya Pradesh to develop 1.8 GW of renewable energy projects. This initiative encompasses solar, wind, hybrid systems, battery energy storage, and biomass-based projects, aligning with national and state-level renewable energy objectives .
- Geographic Diversification: The company has secured Letters of Intent (LoIs) for substantial projects in Odisha and Rajasthan, further diversifying its project base and reducing dependency on any single region.
- Technological Integration: KPI Green Energy is integrating advanced technologies into its projects, including battery energy storage systems (BESS), to enhance grid stability and energy reliability.

Market Outlook:

- India's renewable energy sector is poised for significant growth, supported by favorable policies, increasing industrial demand for clean energy, and advancements in technology. These factors are expected to contribute to a favorable market environment for companies like KPI Green Energy.
- Corporates are increasingly sourcing power via captive solar or hybrid plants to meet ESG goals and reduce long-term costs.

7. Our View

KPI Green Energy Ltd. is strategically expanding its footprint through key partnerships, geographic diversification, and technological integration. Coupled with a favorable market outlook and robust financial performance, the company is well-positioned to capitalize on the growing demand for renewable energy in India.

- **Strong dual business model:** KPI operates in both Captive Power Producer (CPP) and Independent Power Producer (IPP) segments, offering diversified revenue streams.
- **Robust execution capability:** With end-to-end project development, EPC, and O&M services, KPI has carved a niche in turnkey clean energy solutions, especially in Gujarat and Maharashtra.

- **Expansion pipeline:** The 1.8 GW MoU with the Madhya Pradesh government marks a major leap into large-scale renewable development.
- **Captive Power:** Open Access solar policy, waiver of transmission charges, and REC trading reforms benefit KPI's core CPP business.
- **Hybrid Projects:** Central and state government schemes (e.g., RTC tenders, wind-solar hybrid auctions) support KPI's expansion into hybrid energy.
- **PLI Schemes:** Though KPI doesn't manufacture modules, its partnerships (e.g., Emmvee) benefit from government-backed manufacturing incentives.

Rajesh Power Services Ltd. (RPSL)

1. Company Overview

Introduction:

Rajesh Power Services Ltd. (RPSL), established in 1971 and headquartered in Ahmedabad, Gujarat, is a leading turnkey EPC (Engineering, Procurement, and Construction) solutions provider in India's power transmission and distribution (T&D) sector. The company specializes in high-voltage (HV) and extra-high-voltage (EHV) systems, offering comprehensive services that include design, consultancy, procurement, project execution, testing, and commissioning. RPSL also provides operations and maintenance (OEM) services, focusing on solar plants, substations, and distribution systems.

Core Proposition:

RPSL operates a comprehensive business model focused on three core areas:

- Turnkey EPC Solutions: Executes projects up to 220 kV, covering underground cables, overhead transmission lines, substations, and distribution systems. Expertise in Medium Voltage Covered Conductor (MVCC) projects, with over 11,100 km completed and 27,300 km under execution.
- Operations, Engineering & Maintenance (OEM): Provides maintenance services for solar plants, substations, and distribution systems, with 24/7 support for fault rectification.
- Design & Consultancy: Prepares Detailed Project Reports (DPRs) and offers strategic consulting for EHV substations and cable systems.

Additionally, RPSL has invested in technological innovation through its 26% stake in HKRP Innovations Ltd., which provides IoT and SCADA solutions for smart energy management, including smart grid and renewable energy (RE) sectors. HKRP manages over 30,000 nodes and 10,000 MW using industrial IoT and cloud technologies.

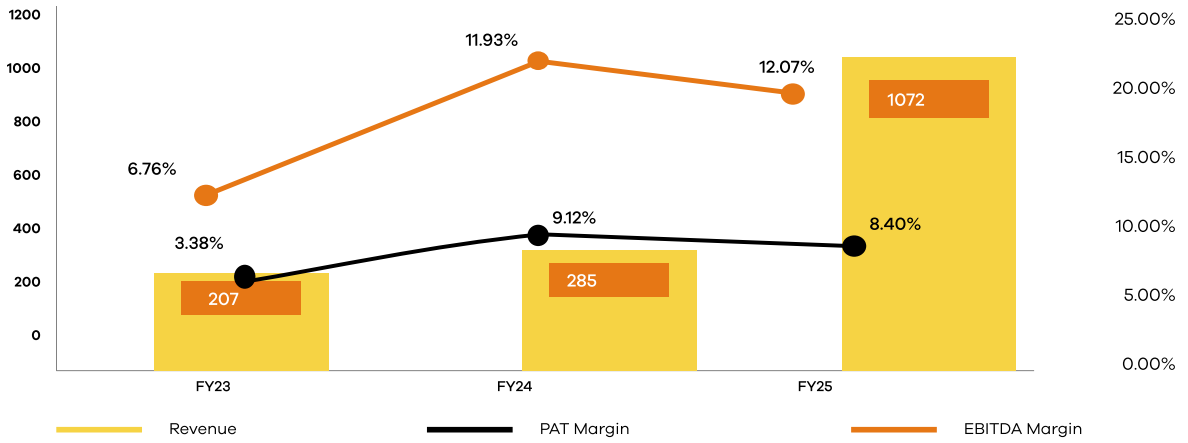
Promoters and Key Management:

- Chief Executive Officer: Utsav Panchal
- Promoter & Director: Kurang Panchal
- Promoter & Director: Rajendra Patel
- Promoter & Director: Kaxil Patel

2. Product Portfolio and Diversification

Products/Services	Use Case
EPC Projects	Designing, procurement, construction, testing, and commissioning of Extra High Voltage (EHV) substations (AIS/GIS), transmission lines, and underground power distribution systems
Solar Division	It focuses on the development and maintenance of solar power plants. While specific revenue figures for this segment are not disclosed, it is noted to be a smaller yet highly profitable part of RPSL's operations
Utility Services	Utility services such as cable fault location and rectification, transformer retrofitting, and maintenance services for power utilities
Consultancy Services	Consultancy services related to the design and engineering of power substations and cable systems, catering to both state utilities and private industries

3. Financial Performance Snapshot



Key Drivers:

- Diversification in its operations by expanding into higher-margin segments such as solar energy. This strategic move has contributed to an improvement in operating margins.
- RPSL has established strong relationships with key clients, including Gujarat Energy Transmission Corporation Ltd and Uttar Gujarat Vij Company Ltd. These relationships have been instrumental in securing repeat business and large-scale projects.
- Financial performance has been bolstered by a combination of strategic expansion, efficient project execution, and strong client relationships.
- Credit Rating: CRISIL upgraded RPSL's rating to 'CRISIL BBB+/Stable/CRISIL A2' from 'CRISIL BBB/ Stable/CRISIL A3+', reflecting improved financial stability.

4. Acquisitions & Collaborations

The Company made a 26% capital investment in HKRP Innovations Limited, focusing on IoT and cloud-based solutions for the energy sector.

- Purchase of cable identification, testing, and fault location equipment;
- Setting up of DC Solar Power Plant having a capacity of 1300 KW;
- Inhouse development of Technical Expertise in the Production of Green Hydrogen:

  a) Working Capital Requirement

  b) General Corporate Purposes.

5. Key Highlights

- Order Book: ₹3,628 crore, with FY25 sales of ₹1107 crore.
- Clientele: Reputed clients such as GETCO, UGVCL, Adani Green, Torrent Power, Indian Oil Corporation, Zydus Lifesciences, and Saint-Gobain.
- Certifications: Registered as a Class "AA" electrical contractor in Gujarat and Class "A" in Rajasthan and Madhya Pradesh.
- IPO Listing: Successfully listed on the BSE SME platform on December 2, 2024, at ₹636.50 per share (90% listing gain from the IPO price of ₹335.00), raising ₹160 crore. Currently the share is trading at ₹1370 per share.

6. Expansion Plans & Market Outlook:

Expansion:

- Expanding in renewable energy sector by increasing capabilities in solar energy and green hydrogen power generation.
- Building expertise in hydrogen electrolysers through partnerships with research organizations like Bhabha Atomic Research Centre (BARC).

Market Outlook:

- The Indian government's emphasis on infrastructure development, renewable energy, and smart grid implementation presents significant growth opportunities for EPC companies.
- Transmission Equipment Market: Valued at USD 11.58 billion in 2024, it's projected to reach USD 21.83 billion by 2033, growing at a CAGR of 6.8%. This growth is fueled by renewable energy integration, grid modernization, and initiatives like the "One Nation, One Grid" policy.
- India aims to achieve 500 GW of non-fossil fuel capacity by 2030, necessitating robust T&D infrastructure to handle intermittent renewable sources.
- Green Energy Corridors: States like Gujarat are investing heavily, with Rs 29,000 crore allocated for GECIII, to transmit 16,500 MW of solar and wind power, enhancing grid stability and renewable integration.

7. Our View

RPSL is well-positioned to ride the T&D boom, especially in high-growth renewable corridors. Its financial turnaround and order momentum are impressive. With surging electricity demand (projected peak demand of 366.4 GW by 2031-32). Government investment in grid expansion and modernization (₹29,000 crore+ in Gujarat's green energy corridor alone) and the need for smart, efficient infrastructure Rajesh Power has great growth opportunities.

- RPSL's core business—EPC services in T&D—is directly aligned with this demand surge.
- Gujarat is India's most aggressive state in green energy investment.
- RPSL benefits from strong client relationships (e.g., GETCO, UGVCL).
- ROE & ROCE have more than doubled YoY.
- Interest coverage of 4.7x signals healthy debt management.
- Solar EPC projects and digital monitoring tools position RPSL for next-gen T&D.
- Growing capabilities in high-voltage and smart grid-related projects.

Disclaimer:

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Contributors

Archit Bhargava

Mehul Jain

Ritika Vashishtha

Devansh Shukla

Vedant Singhania

Nankie Bawa

Ankit Sharma

Harsh Yadav

Kautuk Sheth

Pradyumn Beriwal

Ishaan Godha

Mentors

Dhruf Mehta
Assistant Vice President
Sovrenn

Aditya Joshi
Co-Founder & CEO
Sovrenn

Saksham Kotiya
Associate Director
Outclass PGP TBM

Mansi Khandelwal
Manager
Outclass PGP TBM

masters' union

Access MUIF

Access Sovrenn