KEN RESEARCH
YOUR SEARCH ENDS WITH OUR RESEARCH

February 2026

India Shrimp & Red Chilies Export Potential Outlook to 2030

TABLE OF CONTENTS

List of Figures

List of Tables

INDUSTRY OVERVIEW

Unless noted otherwise, the information in this section is derived from "Shrimps: India and Export Market & Red Chilies: Export Market Outlook to 2030" (Ken Research Reports, February 2026) as well as other publications and industry sources. Neither we nor any other person connected with the Issue have independently verified this information. The data may have been re-classified by us for the purposes of presentation. Industry sources and publications generally state that the information contained therein has been obtained from sources generally believed to be reliable, but that their accuracy, completeness and underlying assumptions are not guaranteed and their reliability cannot be assured. Industry sources and publications are also prepared based on information as of specific dates and may no longer be current or reflect current trends. Industry sources and publications may also base their information on estimates, projections, forecasts and assumptions that may prove to be incorrect.

The Ken Research Reports, February 2026 have been prepared by Ken Research Private Limited at the specific request of our Company. The market research process for the reports has been undertaken through thorough secondary / desktop research as well as primary research, which involves discussing the status of the shrimp and red chilies markets with leading participants and industry experts.

The research methodology used is the Expert Opinion Methodology. Quantitative market information was sourced from interviews by way of primary research as well as from trusted portals, and therefore, the information is subject to fluctuations due to possible changes in the business and market climate. Ken Research's estimates and assumptions are based on varying levels of quantitative and qualitative analyses, including industry journals, company reports and information in the public domain.

Forecasts, estimates, predictions, and other forward-looking statements contained in these reports are inherently uncertain because of changes in factors underlying their assumptions, or events or combinations of events that cannot be reasonably foreseen. Actual results and future events could differ materially from such forecasts, estimates, predictions, or such statements.

Ken Research has prepared these studies in an independent and objective manner, and it has taken adequate care to ensure their accuracy and completeness. Ken Research believes that the studies present a true and fair view of the Indian shrimp industry and the export-oriented red chilies market, including key segments such as variety types, export destinations, market demand, regulatory developments, and competitive landscape, within the limitations of, among others, secondary statistics and primary research. These reports do not purport to be exhaustive. Research has been conducted with an "overall industry" perspective, and it will not necessarily reflect the performance of individual companies in the industry. Ken Research shall not be liable for any loss suffered because of reliance on the information contained in these studies. These studies should also not be considered as recommendations to buy or not to buy the shares of any company or companies as mentioned in them or otherwise.

1. Macroeconomic Overview

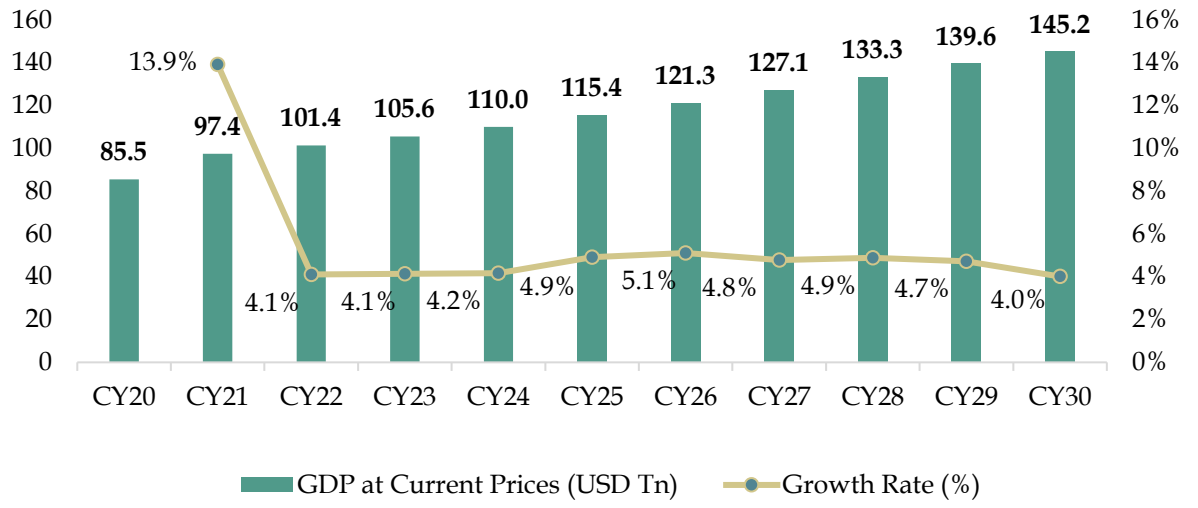
1.1. Global Macroeconomic Scenario

The nominal global GDP growth rate was 5.1% in 2025; expected to sustain growth at a CAGR of 4.7% from 2025 to 2030.

The global economy has shown resilience in a complex environment shaped by moderating inflation, tight monetary policies, and geopolitical shifts. **From CY20 to CY25, it grew at a steady CAGR of 6.2%,** driven by post-pandemic recovery, supply chain realignments, and policy adjustments.

While short-term uncertainties—such as high interest rates, global conflicts, and shifting trade policies—posed temporary challenges, the long-term outlook remains strong. From CY25 to CY30, **global GDP is projected to grow at a stable rate of 4.7%**, fueled by digital transformation, infrastructure spending, green technologies, and rising demand across emerging markets.

Figure 1-1: Global GDP (Current Prices) in USD Tn & Growth Rate (%) Outlook, CY20-30F



Source: Ken Research Analysis and Word Economic Outlook, 2025 (IMF)
Note: F represents Forecasted figures

Between CY23 and CY24, global GDP trends varied significantly across major economies due to a mix of domestic challenges and international factors.

- **USA and China** remain the two largest economies globally. **The USA's GDP is forecast to grow to USD 35.9 Tn by CY30F**, while **China's GDP is expected to rise to USD 26.2 Tn by CY30F**. Despite a lower growth rate post-2024, both countries are set to maintain their dominant global positions.

- **India** is projected to be among the fastest-growing economies, with its GDP rising from **USD 3.9 Tn in 2024 to USD 6.8 Tn by CY30F**, driven by an expanding labor force, rising domestic consumption, and increased digital and industrial infrastructure. It shows a robust CAGR of 9.7% during 2024-30.

- In **Europe**, economic recovery is expected to continue, supported by stronger household consumption amid easing energy price pressures and declining inflation. The EU's GDP is forecast to grow from **USD 27.1 Tn in 2024 to USD 33.7 Tn by CY30F**.

- **Vietnam** is emerging as a high-growth economy in Southeast Asia, with GDP expected to increase from **USD 0.5 Tn in CY24 to USD 0.7 Tn by CY30F**, backed by strong exports and a rising manufacturing base.

- **Bangladesh, Singapore and Malaysia** are also on solid growth paths, with Bangladesh's GDP forecast to rise from **USD 0.5 Tn in 2024 to USD 0.7 Tn in CY30**, Singapore's GDP forecast to rise from **USD 0.5 Tn in 2024 to USD 0.7 Tn in CY30** and Malaysia's GDP from **USD 0.4 Tn to USD 0.6 Tn** during the same period.

Table 1-1: GDP at Current Prices of Target Economies (USD Tn), 2020-2030F

Countries	CY20	CY21	CY22	CY23	CY24	CY25	CY28F	CY30F	CAGR (CY20-25)	CAGR (CY25-30)
USA	21.3	23.6	25.7	27.4	29.2	29.8	33.6	35.9	6.9%	3.8%
China	14.8	17.8	17.9	17.7	18.3	19.8	23.6	26.2	6.0%	5.8%
Japan	5.1	5.1	4.3	4.2	4.1	4.3	4.8	5.1	-3.4%	3.5%
India	**2.4**	**2.8**	**3.2**	**3.5**	**3.9**	**4.3**	**5.8**	**6.8**	**12.4%**	**9.6%**
Vietnam	0.3	0.4	0.4	0.4	0.5	0.5	0.6	0.7	10.8%	7.0%
EU	21.1	24.2	24.2	25.9	27.1	27.9	31.3	33.7	5.7%	3.8%
Bangladesh	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.7	4.6%	7.0%
Sri Lanka	0.08	0.09	0.07	0.08	0.1	NA	NA	NA	NA	NA
Thailand	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.0%	3.7%
Singapore	0.3	0.4	0.5	0.5	0.5	0.6	0.6	0.7	10.1%	4.3%
Malaysia	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.6	5.9%	8.4%

Source: World Economic Outlook, 2024, IMF, Ken Research Analysis
Note 1: F represents Forecasted figures, all figures are reported for calendar year, starting from January 1st to December 31st.
Note 2: NA Represents Not Available

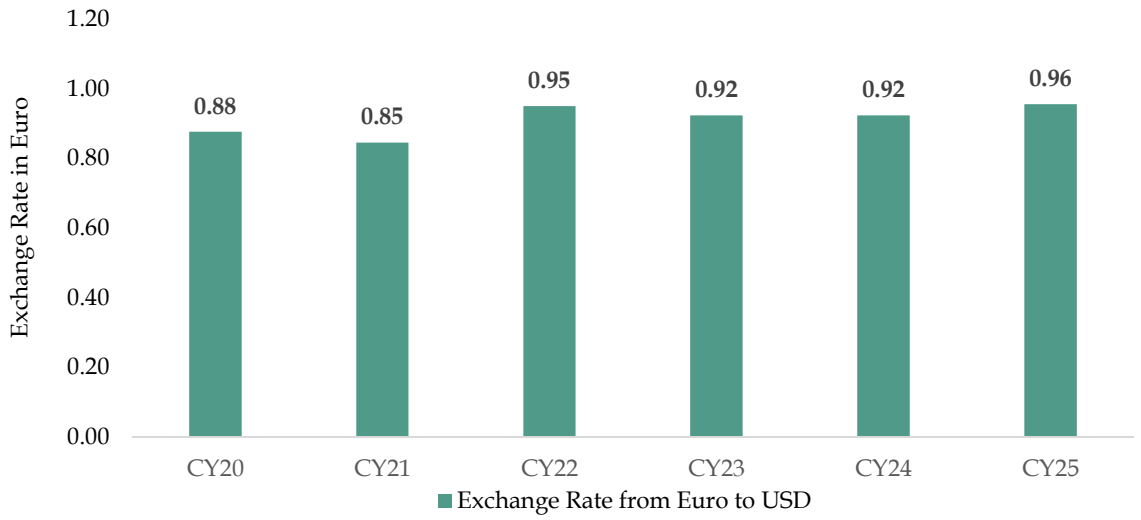
1.2. Currency Dynamics Linked to US Dollar and Euro

In CY20, the USD vs Euro exchange rate fell to 0.81, averaging 0.87, due to the COVID-19 pandemic. Initially, the USD strengthened as investors sought safety, but later depreciated due to US fiscal stimuli. This depreciation reduced the cost of imported components for Indian transformer OEMs.

In CY22, the exchange rate averaged 0.95. The Federal Reserve's interest rate hikes strengthened the USD, while the Euro faced pressures from the Russia-Ukraine conflict. This stronger USD increased import costs for Indian transformer OEMs.

Movements in major currencies like the Euro and USD directly affect transformer and component pricing in India. **A stronger USD or Euro increases import costs, raising production expenses and squeezing OEM profit margins.** This leads to higher end-product prices, potentially affecting competitiveness in domestic and international markets.

Figure 1-2: Currency Exchange Rate from Euro to USD, CY21-CY25



Source: Ken Research Analysis, Internal Revenue Service – Government of the USA
Note: Data of 2025 Extrapolated as of May 2025

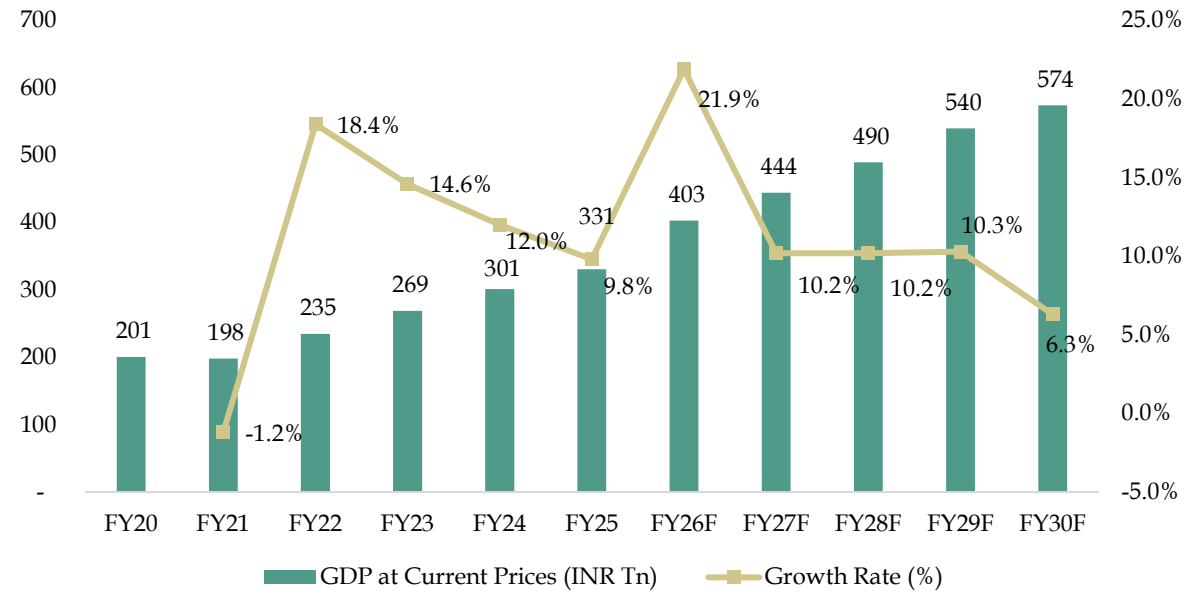
2. Indian Economic Outlook

2.1. GDP Growth and Outlook

"India continues to assert its position as the fastest-growing major economy in the world, with a nominal GDP growth rate of 9.8% projected for FY25, driven by its resilient democratic framework and deepening global partnerships."

Following its post-pandemic recovery and ascent to the position of the fourth-largest global economy, India has sustained momentum through FY25. The surge in capital inflows, coupled with a favorable demographic dividend and policy-led reforms, has enhanced India's investment attractiveness. The global macroeconomic volatility has only reinforced investor confidence in the 'Invest in India' story, evidenced by the record-breaking funds raised by India-focused investment vehicles in recent years.

Figure 2-1: India's GDP (at Current Prices) Outlook, in INR Tn, FY20-FY30F



Source: Ministry of Statistics and Programme Implementation (MoSPI), Word Economic Outlook, 2024 (International Monetary Fund), Ken Research Analysis

Note: F represents Forecasted figures, FY represents the Financial Year ending on March 31

India's economy rebounded strongly post-COVID, with nominal **GDP growing 18.4% in FY22** as restrictions eased. In **FY23, GDP rose by 14.6%,** led by robust investment and a rebound in private consumption—reaching an 11-year high of 34% and an 18-year high of 58.5%, respectively.

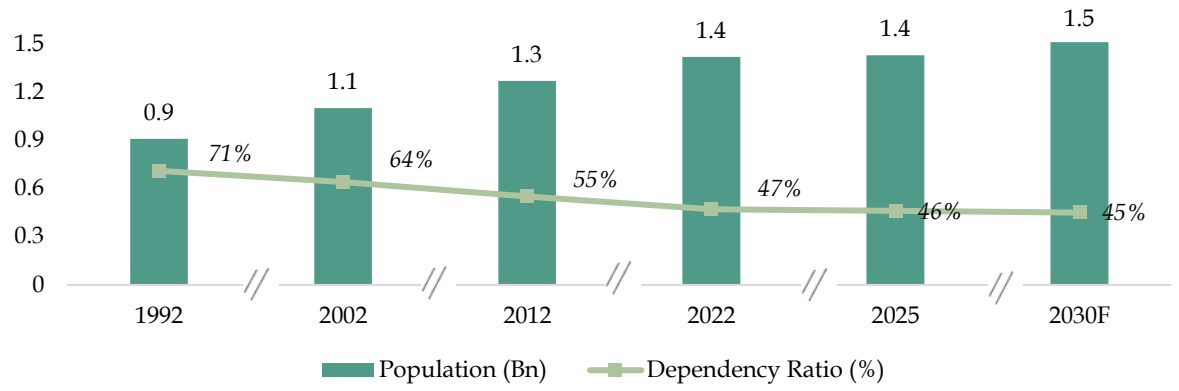
In FY24, nominal GDP grew at 12.0% and was estimated at INR 301 Tn - driven by continued strong investment and subdued private consumption growth. Additionally, India is expected to grow faster than China as well as the global average in FY2024.

In FY25, India's GDP at current prices reached INR 331 billion, marking a robust year-over-year growth rate of **9.8%**. The strong growth rate in FY25 indicates improving macroeconomic conditions, a resurgence in domestic demand, and likely policy support aimed at sustaining economic expansion. It sets a positive trajectory for the years ahead, contributing to a continued rise in GDP through FY30.

2.2. Overview on Key Demographic Parameters

India's economic growth and private consumption are fueled by favorable demographics and rising urbanization. **"India's GDP growth is driven by its rapidly expanding working-age population, with the Age Dependency Ratio expected to fall to 45% by FY30F".**
As of FY22, India became the world's most populous country, surpassing China with over 1.42 billion people, according to the World Bank.

Figure 2-2: Trend of Indian Population (in Bn) and vis-à-vis Dependency Ratio (%)



Source: World Bank Database & Ken Research Analysis
Note: E stands for Estimated; F stands for Forecasted

The Age Dependency Ratio measures the number of dependents (individuals younger than 15 and older than 64) relative to the working-age population (ages 15 to 64). **This ratio has been on a downward trend, dropping from a high of 76% in 1982 to 47% in FY22**. This decline signifies an increasing share of the working-age population generating income, a positive indicator for economic growth.

"India has entered a 37-year period of demographic dividend in 2018 due to lowering dependency ratio. Till 2055, India's working-age population will be larger than the dependent population. During this period, countries experience a major growth rate. Japan, China and Singapore have already benefited from this."

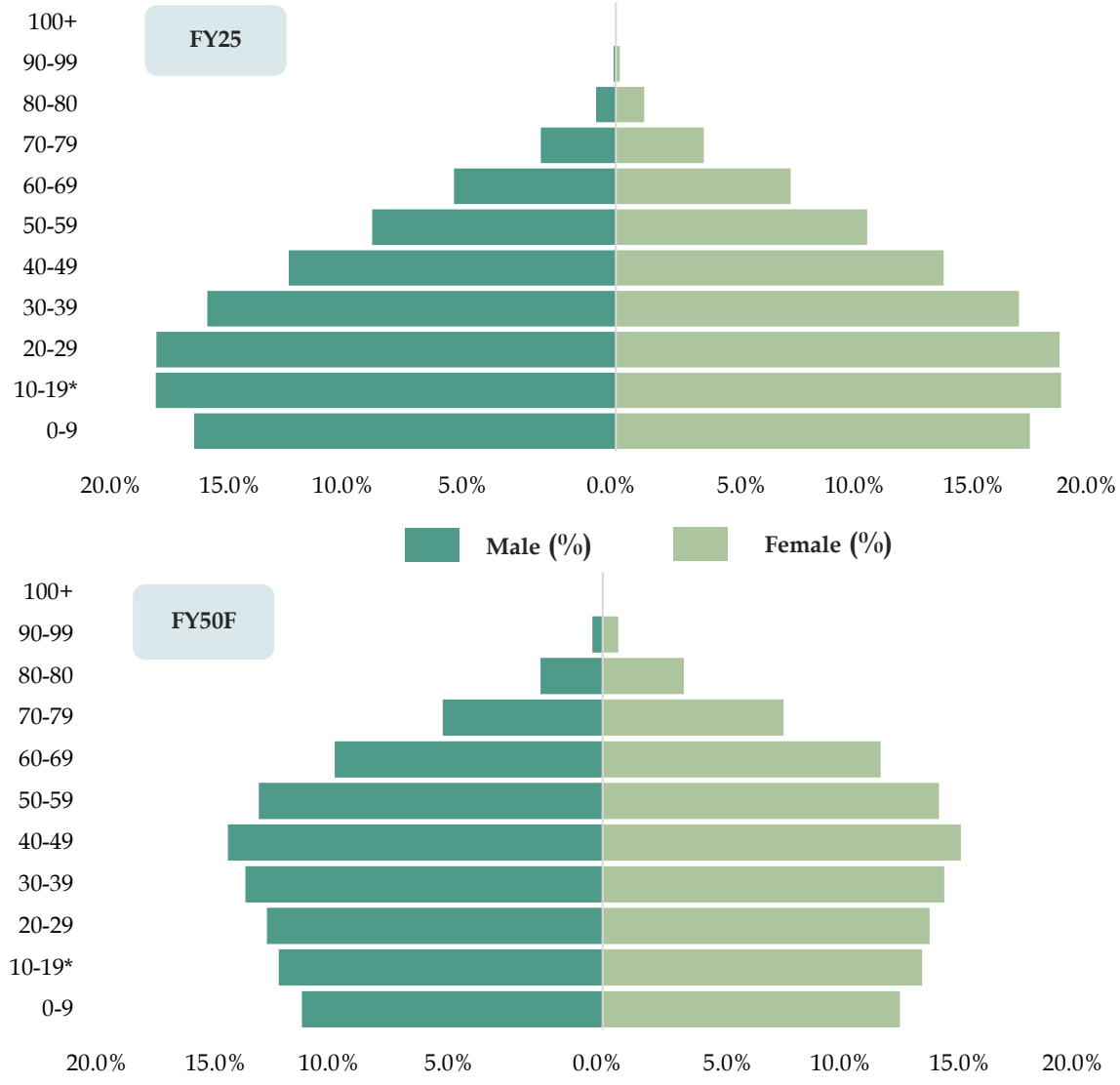
With a median age of 29, India boasts one of the youngest populations globally. Each year, a substantial number of young citizens enter the workforce, contributing to the potential for a significant 'demographic dividend'. This term refers to the economic growth potential that arises when the working-age population is healthy, educated, and gainfully employed, accompanied by a low proportion of young dependents.

A large working population also brings enhanced discretionary spending power and a greater inclination to travel, which could benefit the mid-scale hotel sector. Business and downtown hotels, as well as leisure hotels, can be expected to grow by offering a balance of quality services and value that aligns with this demographic's travel needs and preferences.

India's population pyramid reveals that over two-thirds of the population is of working age, with the elderly comprising less than 7%. By 2050, the population

distribution is expected to show a broad base extending into middle age (30-59 years). This age group typically represents the core of the labor force, driving sustained economic productivity and growth.

Figure 2-3: Population Pyramid Trend of India, FY25 & FY50F



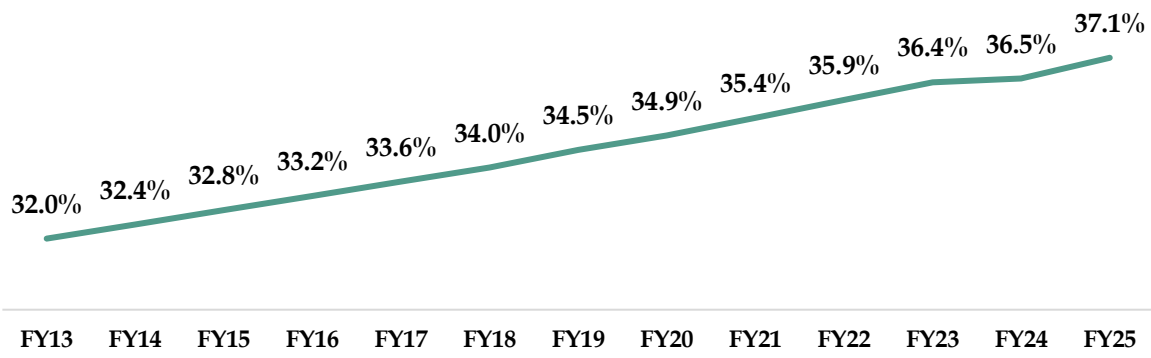
Source: United Nations Population Fund & Ken Research Analysis;
Note: F refers to Forecasted figures

"By 2036, India's towns and cities will be home to 600 million people, or 40% of the population, up from 31% in 2011, with urban areas contributing almost 70% to GDP." (Source: World Bank).

The urban population is significantly growing in India. By 2036, India's towns and cities will be home to 600 million people, or 40% of the population, up from 31% in 2011, with urban areas contributing almost 70% to GDP. (Source: World Bank)

This rapid urbanization is driving a shift in consumption patterns, boosting demand for higher-value food products like seafood and spices both domestically and through export channels.

Figure 2-4: Urbanization Trend (%) in India, FY13-FY25

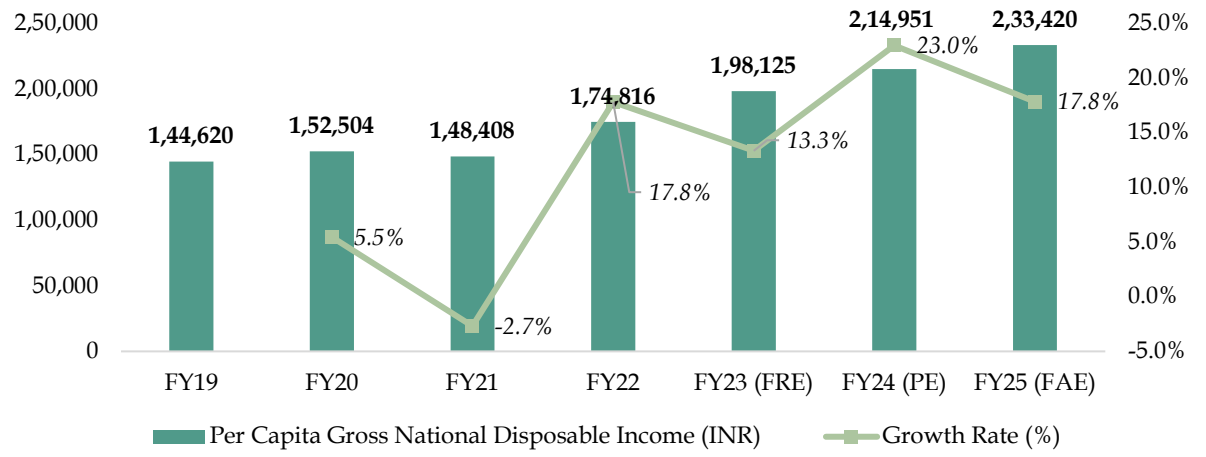


Source: World Bank Database & Ken Research Analysis

"Consumer demand in India expected to remain high with surge in per capita disposable income"

Gross National Disposable Income (GNDI) continues to reflect rising living standards in India. Between FY24 and FY25, per capita GNDI at current prices increased from INR 214,951 to INR 233,420, reflecting a growth rate of **8.6**%. This uptick is nearly at par with the previous year and indicates sustained income expansion driven by strong macroeconomic fundamentals and job market stability. As a result, higher disposable incomes are expected to further stimulate household consumption and support domestic demand in FY25.

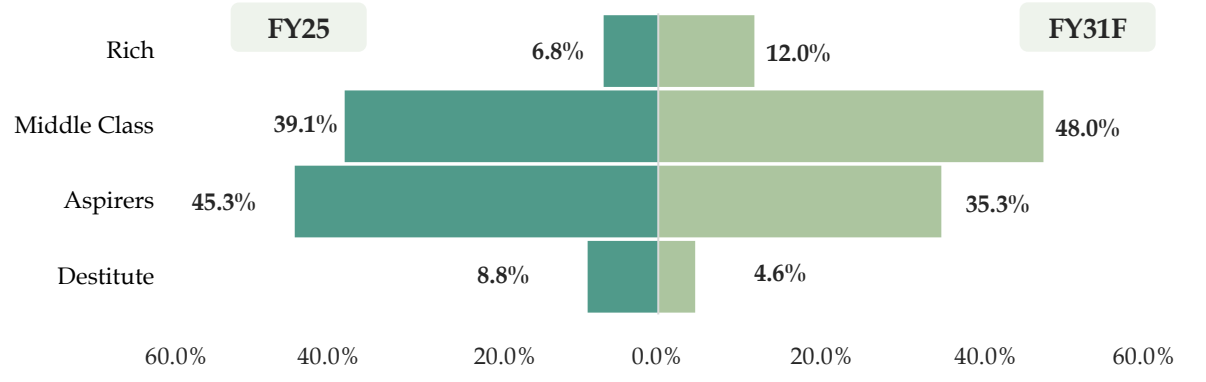
Figure 2-5: Per Capita Gross National Disposable Income (Current Price) in INR, FY19-FY25



Source: MOSPI & Ken Research Analysis; Note: FRE: First Revised Estimates; PE: Provisional Estimates; FAE: First Advance Estimates
Note: FY represents the Financial Year ending on March 31

Rising incomes are driving upward mobility, with many moving from middle to upper class, boosting demand for premium services and products like shrimp and red chilies in domestic and export markets. The rich-income group is expected to grow fastest at 11.0%, followed by the middle class at 48% in FY31F.

Figure 2-6: Indian Population - Segmented by Income Levels, FY25 and FY31F

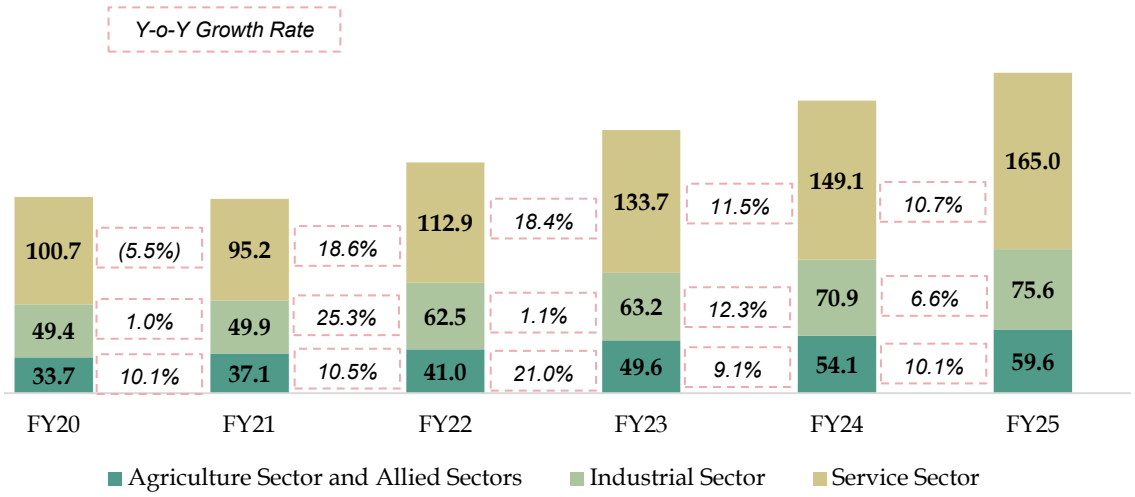


Source: ICE 360° Survey and Ken Research Analysis
Note: F refers to Forecasted; FY represents the Financial Year ending on March 31
Income groups in India are categorized as: Destitutes (earning <INR 1.25L/year), Aspirers (INR 1.25–5L), Middle Class (INR 5–30L), and Rich Class (earning >INR 30L annually)

2.3. Sectoral Gross Value Addition Composition

"Of the three major sectors, the service sector has been the fastest-growing sector in the last 5 years registering a CAGR of 10.4%."

Figure 2-7: Sectoral Gross Value Addition to Indian Economy in INR Tn and Growth Scenario, FY20-FY25



Source: Ministry of Statistics and Programme Implementation (MoSPI) & Ken Research Analysis
Note: FY represents the Financial Year ending on March 31

The agriculture sector was holding growth momentum till FY18. In FY19, the acreage for the rabi crop was marginally lower than the previous year, which affected agricultural performance. FY20 witnessed growth on account of improved production. During the pandemic-impacted period of FY21, the agriculture sector was largely insulated as timely and proactive exemptions from COVID-induced lockdowns facilitated uninterrupted harvesting of rabi crops and sowing of kharif crops. However, supply chain disruptions impacted the flow of agricultural goods, leading to high food inflation and an adverse initial impact on some major agricultural exports. Performance remained steady in FY22.

In FY23, the agriculture (including livestock, forestry & fishing) sector performed well despite weather-related

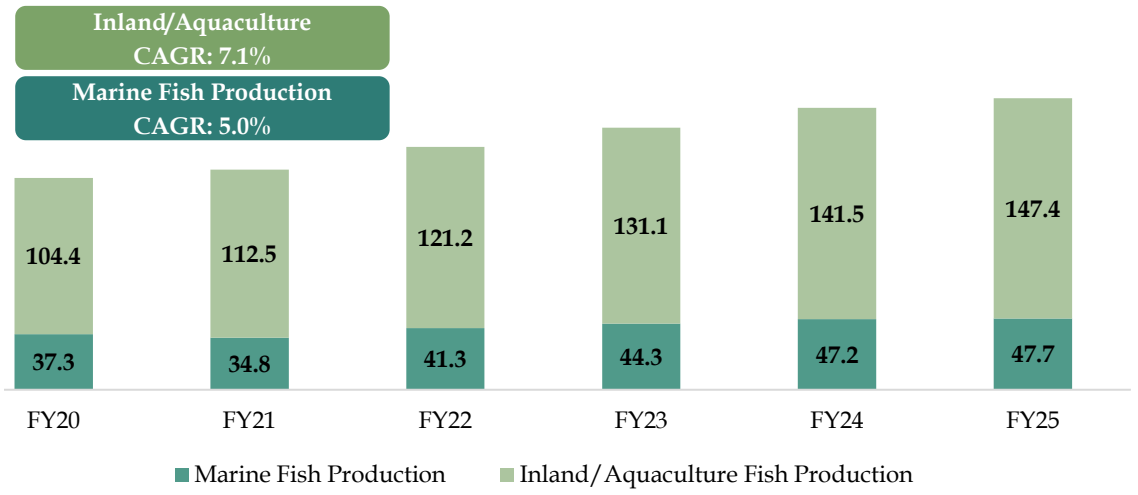
disruptions, such as uneven monsoon and unseasonal rainfall, impacting yields of some major crops. It clocked a growth of 9.3% y-o-y, garnering INR 49.6 trillion. In FY24, this sector expanded at a slower pace of 5.6%, with the weakest monsoon experience caused by El Nino conditions. In FY25, the agriculture sector will grow by **10.1% y-o-y**, with recovery by **favourable monsoon forecasts**, which have **recorded high wheat and rice production**, and continued **government interventions** such as higher MSPs and improved irrigation support.

In the Interim Budget 2024-25, the government plans to boost private and public investment in post-harvest activities and expand the application of Nano-DAP across agro-climatic zones. Strategies for self-reliance in oilseeds and dairy development are to be formulated, alongside ramping up the Pradhan Mantri Matsaya Sampada Yojana and establishing Integrated Aquaparks. Allocation for the PM-Formalisation of Micro Food Processing Enterprises scheme has increased from INR 639 crores in FY24 to INR 880 crores in FY25.

Aquaculture Scenario in India

Further, **aquaculture is one of the fastest growing segments**, driven by rising protein demand, export potential, and government support. **Growing at a CAGR of 7.1%, it surged from 104.4 lakh tonnes in FY20 to 147.4 lakh tonnes in FY25.** This follows the **exponential rise which took place from the 61.4 lakh tonnes production in FY14**. Alongside marine fish production, aquaculture now dominates India's fish market, reflecting robust sectoral expansion.

Figure 2-8: Fish Production in India in terms of Volume (in lakh tonnes) by Aquaculture/Inland and Marine Fish Production, FY20-FY25



Source: Department of Fisheries, Ken Research Analysis
Note: FY represents the Financial Year ending on March 31; Note:

The industrial sector witnessed a CAGR of 9.8% for the period FY16 to FY19. From March 2020 onwards, the nationwide lockdown due to the pandemic significantly impacted industrial activities. In FY20 and FY21, this sector experienced turbulence due to the pandemic, recording growth rates of -1.0% and 1.0% respectively, on a y-o-y basis. With the opening up of the economy and resumption of industrial activities, it registered y-o-y growth of 25.3% in FY22.

The industrial output in FY23 grew by 1.1%, with an estimated value of INR 63.2 trillion, owing to a rebound in manufacturing activities and healthy growth in the construction sector. The industrial sector grew by 12.3% in FY24 owing to positive business optimism and strong growth in new orders that supported manufacturing output. In FY25, the industrial sector will expected to grow by **6.6%**, reaching **INR 75.6 trillion**. This growth is likely to be driven by **continued momentum in infrastructure spending**, and **supportive government policies under the Production Linked Incentive (PLI) scheme.** The industrial growth was mainly supported by sustained momentum in the manufacturing and construction sectors. Within

manufacturing, industries such as pharma, motor vehicles, metals, and petroleum witnessed higher production growth during the quarter.

India's industrial sector is experiencing strong growth, driven by significant expansion in manufacturing, mining, and construction. This growth is supported by positive business sentiment, declining commodity prices, beneficial government policies like production-linked incentive schemes, and efforts to boost infrastructure development. These factors collectively contribute to the sustained buoyancy in industrial growth.

The Services sector recorded a CAGR of 11.2% for the period FY16 to FY20, led by trade, hotels, transport, communication, services related to broadcasting, finance, real estate, and professional services. This sector was the hardest hit by the pandemic and registered an -5.5% y-o-y decline in FY21. The easing of restrictions aided a fast rebound in this sector, with y-o-y growth of 18.6% and 18.4% witnessed in FY22 and FY23 respectively.

Overall, in FY24, benefiting from pent-up demand, the service sector was valued at INR 149.1 trillion and registered growth of 11.5% y-o-y. In FY25, the services sector will grow by 10.7%, reaching INR 165.0 trillion, driven by strong performance in Financial Services, real estate, digital platforms, along with transport and hospitality. Within services, there was a broad-based improvement in growth across different sub-sectors. However, the sharpest jump was seen in financial, real estate, and professional services. Trade, hotels, and transport sub-sectors expanded at a healthy pace, gaining from strength in discretionary demand.

Growth Trend in Investment and Consumption Demand

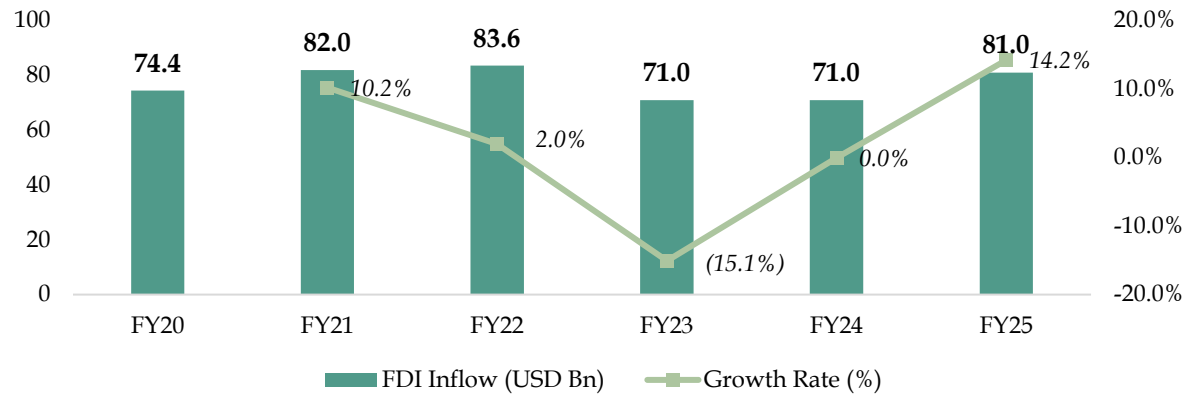
India is one of the most attractive FDI destinations in the world today with a total FDI inflow of USD 81.0 Bn in FY25.

India continues to witness sustained investor interest, driven by country's macroeconomic resilience and ongoing reforms. The Government has put in place an investor friendly Foreign Direct Investment (FDI) policy under which most sectors except certain strategically important sectors are open for 100% FDI under the automatic route.

Measures taken by the Government on FDI Policy reforms have resulted in increased FDI inflow in the country over the years. FDI inflow in India stood at USD 36 billion in 2013-14 and registered its highest ever annual FDI inflow of USD 84 billion in FY22.

In FY24, total FDI inflows stood at USD 70.95 billion, and FDI equity inflows amounted to USD 44.42 billion, before 81.0. billion in FY25 amid global capital market uncertainties. Top 3 States receiving highest FDI Equity Inflow during FY 2024-25 are Maharashtra (39%), Karnataka (13%) and Delhi (12%). (Source: Press Information Bureau)

Figure 2-9: Foreign Direct Investment in USD Billion and Y-o-Y Growth Rates, FY20-FY25



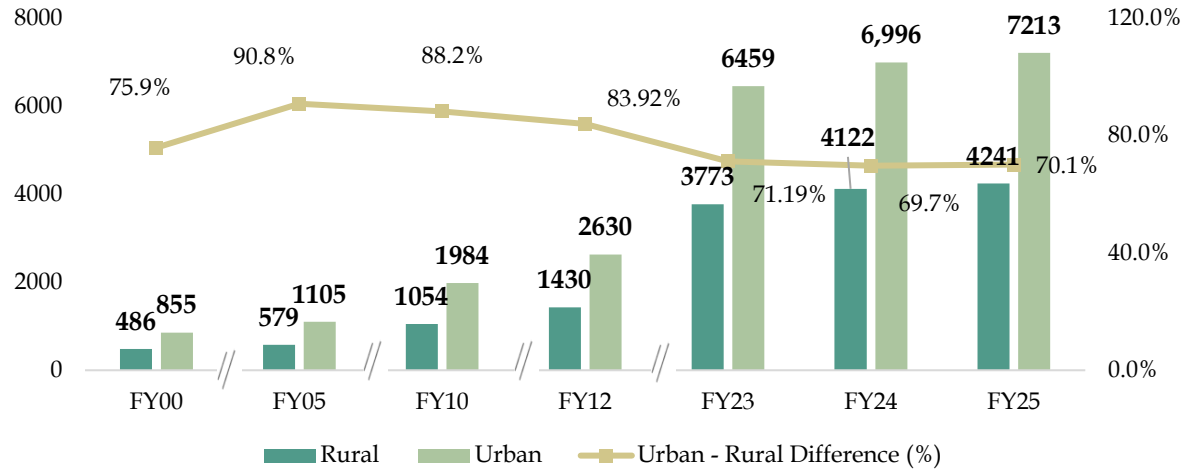
Source: Invest India, Make in India, Press Information Bureau & Ken Research Analysis
Note: FY represents the Financial Year ending on March 31

Monthly Per Capita Consumption Expenditure (MPCE) implies summary of level of household consumption expenditure. Average estimated MPCE in FY24 has been INR 4,122 in rural India and INR 6,996 in urban India. In

rural India, food items account for 46% of the total MPCE, while in urban India, this share is 39%.
The bottom 5% of India's rural population, ranked by MPCE, has an average MPCE of INR 1,373 while it is INR 2,001 for the same category of population in the urban areas. In FY25, despite the continued rise in absolute consumption, the urban–rural gap narrowed slightly to 70.1%, indicating marginal improvement in rural consumption capacity.

Among the states, MPCE is the highest in Sikkim for both rural and urban areas (Rural – INR 9,377 and Urban – INR 13,927). It is the lowest in Chhattisgarh (Rural – INR 2,739 and Urban – INR 4,927). The rural-urban difference in average MPCE among the states is the highest in Meghalaya (104%) followed by Jharkhand (83%) and Chhattisgarh (80%). Among the UTs, MPCE is the highest in Chandigarh (Rural – INR 8,857 and Urban – INR 13,425), whereas it is the lowest in Dadra and Nagar Haveli and Daman and Diu (INR 4,311) and Jammu and Kashmir (INR 6,327) for rural and urban areas respectively. (Source: Ministry of Statistics and Programme Implementation (MoSPI))

Figure 2-10: Average Monthly Per Capita Consumption Expenditure (MPCE) in INR, Current Prices



Source: Ministry of Statistics and Programme Implementation (MoSPI) & Ken Research Analysis
Note: FY represents the Financial Year ending on March 31

Inflation scenario & interest rate movement

"India's Consumer Price Index (CPI), which tracks retail price inflation, stood at an average of 3.3% in FY25, marking a notable moderation from 5.4% in FY24.

This represents the lowest annual CPI growth recorded in the last five years, supported by easing food and energy prices and a favorable base.

CPI stood at 5.5% in FY22, remaining within the RBI's tolerance band of 6%. However, consumer inflation surged in the second half of FY22, reaching 6.9% in March 2022. FY23 recorded an average CPI of 6.7%, well above the RBI's upper threshold, driven largely by food and fuel price shocks.

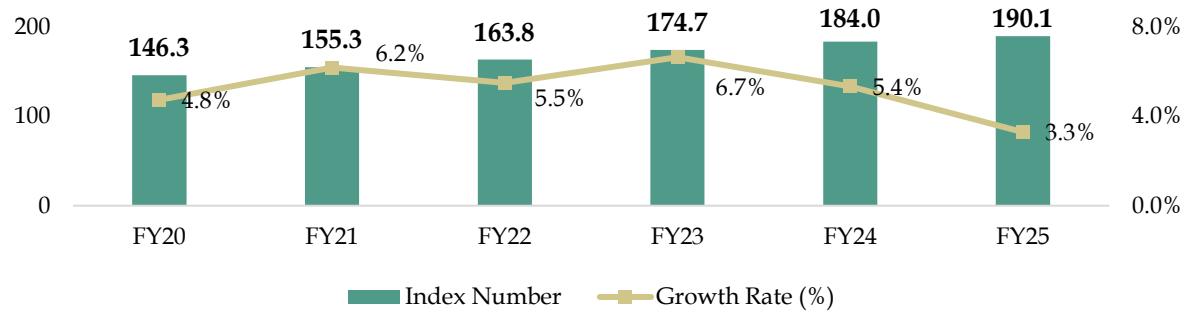
In FY24, inflation began to ease, averaging 5.4% for the year. The moderation was attributed to the government's timely interventions in food supply and falling global commodity prices. Monthly inflation readings had spiked mid-year due to supply-side shocks but eventually declined by March 2024.

In FY25, the inflation trajectory remained relatively benign. CPI growth fell sharply to 3.6% in July 2024 and 3.7% in August 2024, reflecting subdued food inflation. Although

September and October 2024 saw a temporary uptick to 5.5% and 6.2% respectively, inflation eased again in subsequent months, touching a low of 2.7% by March 2025. The moderation was aided by high base effects, softening global crude prices, and improved domestic supply conditions, particularly in perishables and cereals.

While inflationary pressures appear to be easing, the RBI remains cautious due to underlying volatility in food prices and potential weather-related disruptions that could impact future price trends.

Figure 2-11: Retail Price Inflation in terms of index and Growth Rate (%) (Base: 2011-12=100)



Source: Ministry of Statistics and Programme Implementation (MoSPI) & Ken Research Analysis
Note: FY represents the Financial Year ending on March 31

In August 2024, food inflation showed early signs of cooling, recording a rate of **3.7%**, following a sharper dip to **3.6%** in July. This decline reflected easing prices in perishables and subdued energy costs. However, the trend reversed in September 2024 with the **Consumer Price Index (CPI)** rising to **5.5%**, primarily driven by base effects and a rebound in fuel and light prices. In October 2024, inflation surged further to **6.2%**, marking a five-month high, before stabilizing somewhat in November at **5.5%** due to government supply-side interventions.

By December 2024, inflation eased to **5.2%** amid a moderation in food and fuel prices. This downtrend continued into January 2025, when inflation dropped to **4.3%**, its lowest in nearly two years. In February and March 2025, CPI further softened to **3.6%** and **2.7%** respectively,

aided by a broad-based decline in food inflation and sustained correction in fuel prices.

While the moderation in core inflation due to falling input costs and weak demand is reassuring, risks persist. A potentially poor Rabi output and continued volatility in global commodity prices could pose upward pressure on retail inflation in the coming months.

Table 2-1: Consumer Price Index Rate in Percentage, FY22-FY25

Year	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
FY22	4.3%	6.3%	6.3%	5.6%	5.3%	4.4%	4.5%	4.9%	5.6%	6.0%	6.1%	7.0%
FY23	7.8%	7.0%	7.0%	6.7%	7.0%	7.4%	6.8%	5.9%	5.7%	6.5%	6.4%	5.7%
FY24	4.7%	4.3%	4.8%	7.4%	6.8%	5.0%	4.9%	5.6%	5.7%	5.1%	5.1%	4.9%
FY25	4.8%	4.8%	5.1%	3.6%	3.7%	5.5%	6.2%	5.5%	5.2%	4.3%	3.6%	2.7%

Source: Ministry of Finance, Ministry of Statistics and Program Implementation and Ken Research Analysis
Note: FY represents the Financial Year ending on March 31

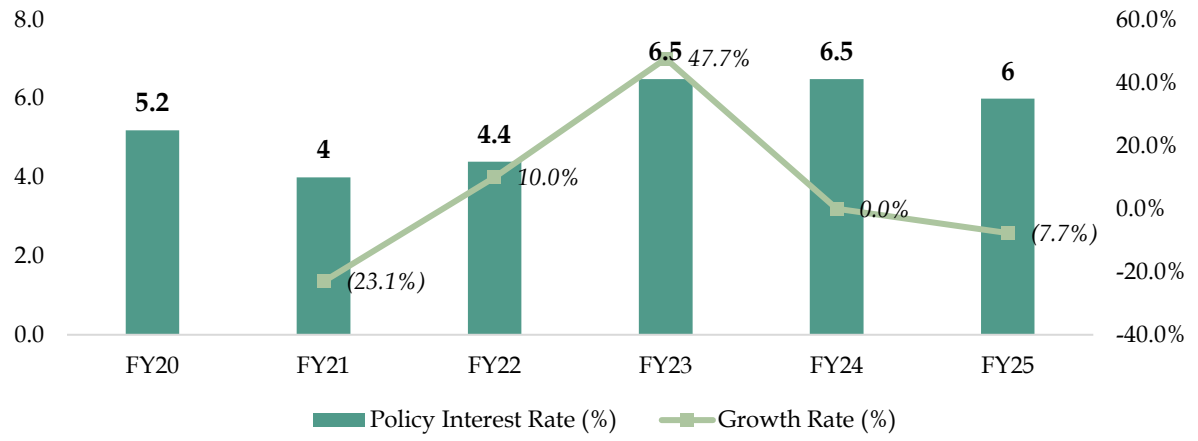
At the beginning of FY22, the Reserve Bank of India (RBI) maintained a relatively stable repo rate of 4%. This was part of the accommodative stance taken since the onset of the COVID-19 pandemic to support economic recovery. In FY23, as inflation began to rise more significantly, particularly due to supply chain disruptions and increased global commodity prices, the RBI faced pressure to address inflationary concerns. In response, the RBI started increasing the repo rate. The first hike occurred in May 2022, moving the rate from 4% to 4.4%. Subsequent hikes followed as inflation continued to remain above the RBI's tolerance band.

In 2022, the RBI announced an increase in repo rate by 35 basis points. This was the fifth increase in 2022 post a 40 bps hike on May 4, 2022, and three consecutive 50 bps hikes each on June 8, 2022, August 5, 2022, and September 30, 2022. The revision took the repo rate to 6.25%.

In February 2023, The RBI increased the repo rate for the sixth time. The 25 bps hike took the repo rate to 6.5%. The RBI kept the repo rate unchanged during the first Monetary Policy Committee (MPC) meeting of FY23-24. The repo rate

stands at 6.5%. In view of global inflation, the repo rate remains unchanged post several MPC meetings at 6.5%.
In FY25, the repo rate was lowered to 6.0% from 6.5%, indicating a small rate cut by the RBI. The adjustment was aimed at supporting economic activity while ensuring inflation remains within manageable levels.

Figure 2-12: Repurchase Rate (REPO Rate) Trend and Y-o-Y Growth Rate (%), FY20-FY25



Source: Ministry of Statistics and Programme Implementation (MoSPI) & Ken Research Analysis
Note: FY represents the Financial Year ending on March 31

Way Forward

The long-term outlook for the Indian economy is supported by a number of key growth drivers. An important positive factor for India is its large and fast-growing middle class, which is helping to drive consumer spending. The rapidly growing Indian domestic consumer market as well as its large industrial sector have made India an increasingly important investment destination for a wide range of multinationals in many sectors, including manufacturing, infrastructure and services. The digital transformation of India that is currently underway is expected to accelerate the growth of e-commerce, changing the retail consumer market landscape over the next decade. This is attracting leading global multinationals in technology and ecommerce to the Indian market. By 2030, 1.1 billion people in India will have internet access, more than doubling from the estimated 500 million internet

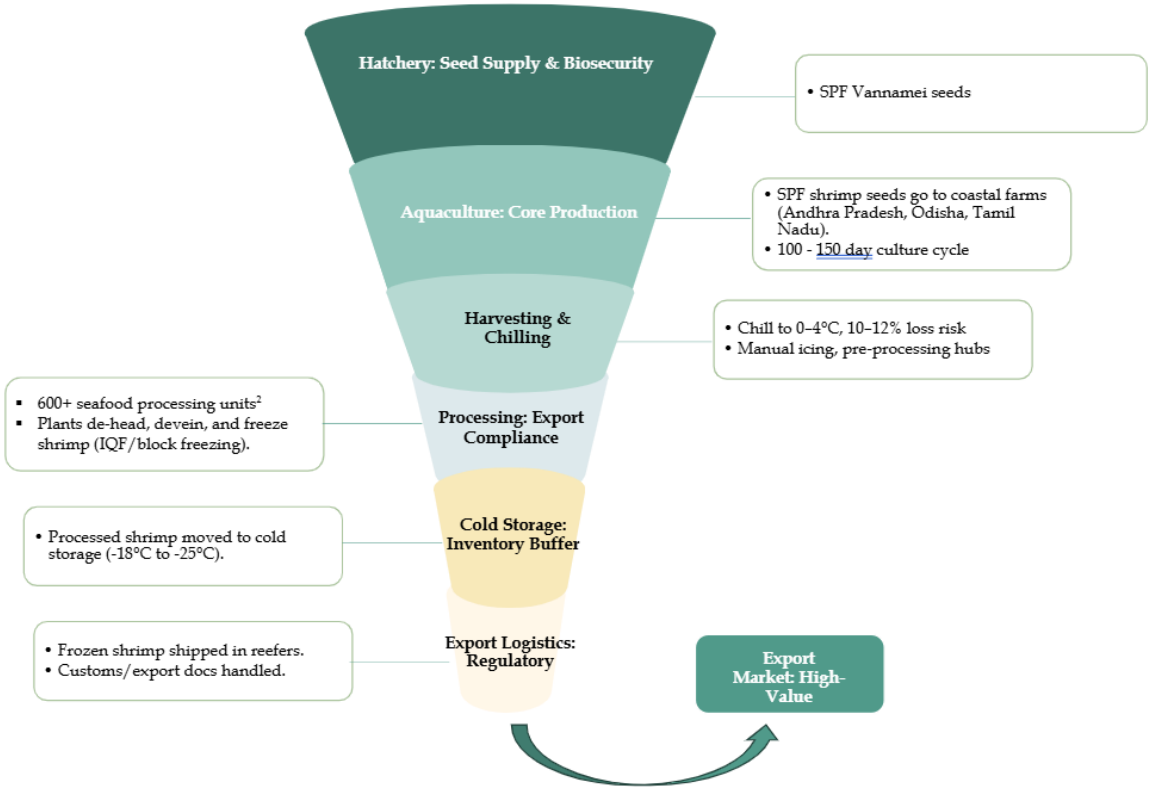
users in 2020. The rapid growth of e-commerce and the shift to 4G and 5G smartphone technology will boost home-grown unicorns like online e-commerce platform Mensa Brands, logistics startup Delhi very and the fast-growing online grocer Big-Basket, whose e-sales have surged during the pandemic. The large increase in FDI inflows to India that has been evident over the past five years is also continuing with strong momentum evident even during the pandemic years of 2020-2022. India's strong FDI inflows have been boosted by large inflows of investments from global technology MNCs such as Google and Facebook that are attracted to India's large, fast-growing domestic consumer market, as well as a strong upturn in foreign direct investment inflows from manufacturing firms. Overall, India is expected to continue to be one of the world's fastest growing economies over the next decade. This will make India one of the most important long-term growth markets for multinationals in a wide range of industries, including manufacturing industries such as autos, electronics and chemicals to services industries such as banking, insurance, asset management, health care and information technology.

3. Overview of the Supply Chain in India: Shrimps and Red Chilies

3.1. Shrimp Supply Chain in India

India is the world's second-largest farmed shrimp producer, with a 2023 production of approx. 930,000 MT, of which 90% is exported—mainly to the USA, China, Japan, Vietnam, and the EU. Andhra Pradesh dominates production (~65% share), with high dependence on Vannamei shrimp (Source: TradeMap). Ensuring biosecurity, cold chain integrity, and regulatory compliance are critical throughout the chain.

Figure 3-1: Overview of Supply Chain of Farmed Shrimps in India



Source: Issuu, Press Information Bureau, TradeMap, Ken Research Analysis

1. **Hatchery Seed Production:** The supply chain begins with hatcheries that produce Specific Pathogen Free (SPF) seeds, primarily of the Vannamei shrimp species, which accounts for over 90% of the shrimp cultivated in India. India's hatcheries are mainly concentrated in Tamil Nadu and Andhra Pradesh. **Sourcing margins are generally below 3%, given the commoditized nature of hatchery operations.**

2. **Aquaculture Farming**: The SPF seeds are supplied to aquaculture farms spread across coastal states like Andhra Pradesh, Odisha, and Tamil Nadu. The culture cycle ranges between 100 to 150 days, during which shrimp are reared in controlled environments to optimize size and survival rates.

3. **Harvesting & Chilling**: After the culture cycle, shrimp are harvested and immediately chilled using ice at temperatures ranging between 0°C and 4°C to preserve freshness. Rapid icing is essential to reduce bacterial growth and enzymatic activity, preventing quality degradation.

4. **Processing Plants:** India boasts approximately 646 seafood processing plants, with about 75% concentrated along the East Coast (Source: MPEDA). These facilities perform crucial tasks such as de-heading, deveining, and freezing shrimp. Common freezing methods include Individual Quick Freezing (IQF) and block freezing. Many companies adhere to global food safety standards, set by the US FDA and the European Union. **Processing margins typically range between 5–15%, reflecting the highest value addition in the supply chain.**

5. **Cold Storage**: The processed shrimp are transferred to cold storage facilities, where they are maintained at temperatures between -18°C and -25°C. This step

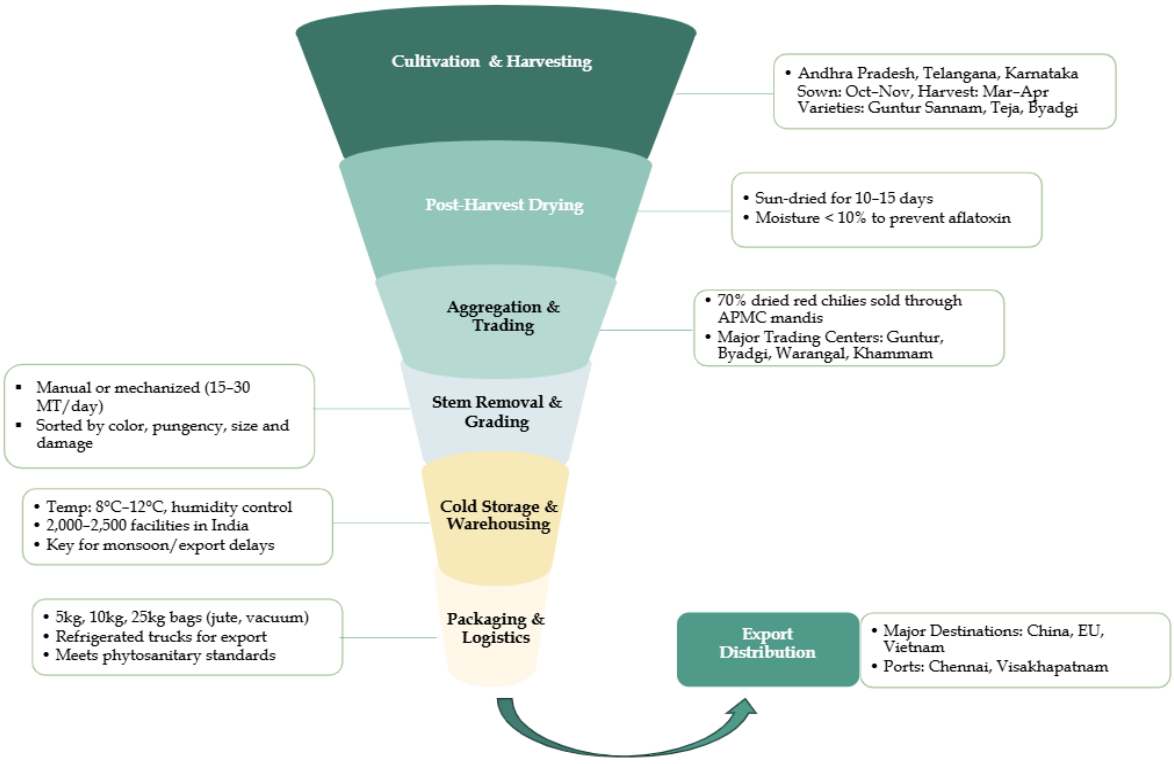
ensures product stability and extended shelf life until the shrimp are dispatched for export.

6. **Export Logistics**: The frozen shrimp are then moved via containerized refrigerated reefers that maintain a constant cold chain until they reach international markets. This stage includes customs clearance and adherence to export documentation and certifications in line with global standards. Export: India exports' reach their key destinations including the USA EU, China, Japan and Vietnam. **Distribution margins range between 3–7%, depending on logistics efficiency and export destination.**

3.2. Red Chilies Supply Chain in India

The supply chain of red chilies involves highly is explained as follows:

Figure 3-2: Overview of End-to-End Supply Chain Flow of Red Chilies in India



Source: Ken Research Analysis

- **Cultivation And Harvesting:** Red chili cultivation is concentrated in states like Andhra Pradesh, Telangana, Karnataka, Maharashtra, and Tamil Nadu, with Guntur and Khammam being particularly prominent hubs. The crop is typically sown in the Rabi season (October–November) and harvested around March–April. Popular varieties such as Guntur Sannam, Teja, and Byadgi are chosen for their heat and vibrant color. The productivity ranges from 10 to 20 quintals per acre, depending on soil, irrigation, and seed quality. Farming is mostly done on small to medium plots, with limited mechanization.

- **Post-Harvest Drying:** Once harvested, the chilies are spread out in open drying yards or on tarpaulins to dry under the sun for 10–15 days, depending on weather and variety. The target is to reduce moisture content to below 10%, ensuring the product's shelf life and preventing fungal infections. Inadequate drying can lead to aflatoxin contamination, making this a critical phase. Many farmers or aggregators invest in semi-mechanized drying or solar dryers, but large-scale mechanization is still in early stages. This stage determines color quality and is essential for export readiness.

- **Aggregation and Trading:** Dried red chilies are sold through APMC mandis, local traders, or directly to private aggregators. Major trading centers include Guntur (Andhra Pradesh), Byadgi (Karnataka), Warangal and Khammam (Telangana). In these markets, chilies are graded based on length, SHU (Scoville Heat Units), skin thickness, and appearance. Prices fluctuate based on quality and demand, and electronic platforms like e-NAM are increasingly being used for transparent pricing. On average, 70–80% of red chili movement happens through physical mandi networks.

- **Stem Removal and Grading (Processing):** Once procured, the chilies undergo stem removal, which is either manual or mechanical. Mechanized stem-cutting units with capacities of 15–30 metric tons/day are increasingly being adopted by exporters. This step ensures uniformity and compliance with international standards. After stem removal, chilies are cleaned, graded, and sorted based on quality parameters such as color, pungency, size, and damage. This graded product is then packaged for storage or direct export. Higher-grade chilies fetch premium prices in international markets.

- **Cold Storage and Warehousing:** To preserve color, pungency, and prevent spoilage, red chilies are stored in temperature-controlled cold storage facilities. The ideal storage temperature ranges from 8°C to 12°C, with humidity control to prevent mold. India has an estimated 2,000–2,500 cold storage facilities that handle agri-products, though only a fraction cater specifically to chilies. Proper storage is especially important during monsoon seasons and for delayed export shipments. Storage units are typically located close to processing clusters and port cities.

- **Packaging and Logistics:** After grading and storage, the chilies are packed into 5kg, 10kg, or 25kg bags, using jute sacks, laminated gunny bags, or vacuum-sealed pouches, based on customer preference. Packaging standards are aligned with importing country requirements, ensuring compliance with safety and phytosanitary guidelines. The produce is transported using refrigerated or insulated trucks, especially for exports, to maintain product quality during transit.

- **Export Distribution:** India exports red chilies to more than 30 countries, with China, EU, Vietnam, being major destinations. Ports like Chennai, Tuticorin,

Visakhapatnam, and Mumbai serve as key gateways. India's competitive advantage lies in the availability of high-pungency, naturally colored, and cost-effective red chilies, meeting various global food and spice industry needs.

3.3. Shrimps' and Red Chilies Consumption Pattern Across Key Geographies

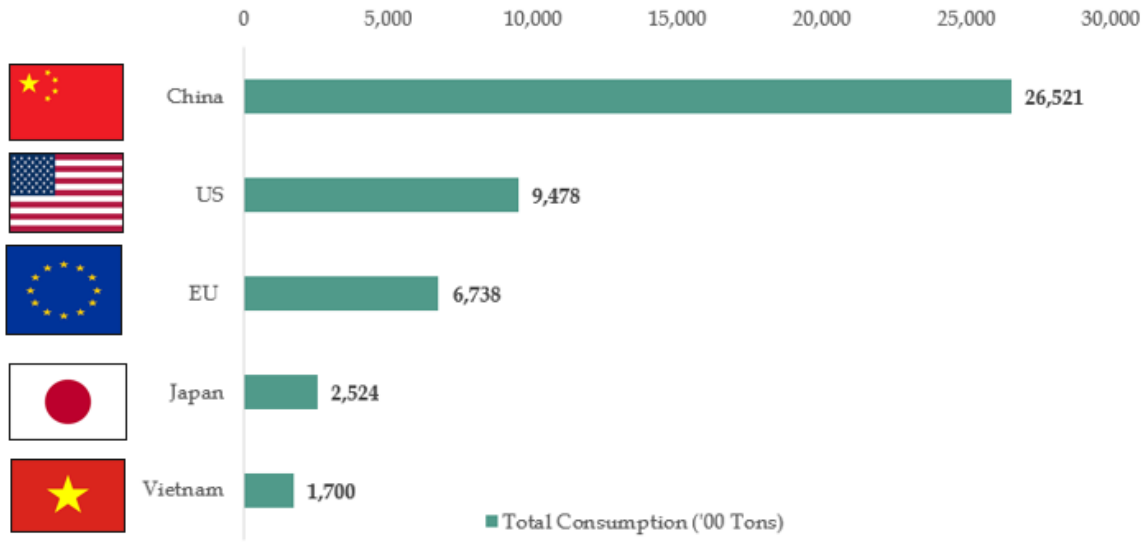
Shrimp Consumption Pattern

Historically, shrimp consumption across key geographies has been driven by rising incomes, dietary shifts toward high-protein seafood, and expanding urban markets.

China has emerged as the largest consumer due to its massive population and cultural preference for seafood, while the U.S. and EU have shown strong demand through retail and food service sectors, especially for frozen and processed shrimp. Currently, **China consumes 2,652 thousand tons, followed by the U.S. with 947.8 thousand tons, the EU with 673.8 thousand tons, Japan with 252.4 thousand tons, and Vietnam with 170 thousand tons.** In CY20 and CY21, with COVID-19's impact on global supply chains and challenges tempered demand in global markets. However, CY22 onwards as supply chain opened shrimp trade grew by over 44% however, U.S. market saw a dip of 6% **in shrimp imports in 2022** as they face inflationary challenges leading to higher prices of shrimps, which resulted into reduced consumption (Source: FAO Globefish Report). Towards CY24, trade has improved in US however challenges such as inflation, trade uncertainties, and currency fluctuations can disrupt consumption patterns.

Looking ahead, global shrimp consumption is expected to recover in 2025, supported by economic stabilization, rising health consciousness, and growing demand for sustainable and traceable seafood—especially in high-volume markets like China, the U.S., and Japan.

Figure 3-3: Shrimp Consumption in terms of Volume ('00 Tons) by Key Markets in CY24



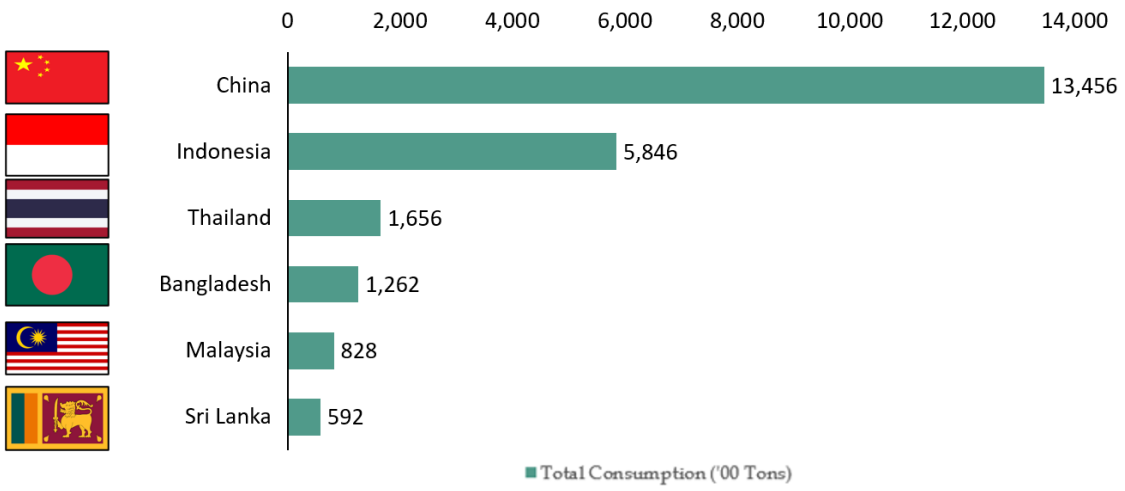
Source: News Articles, TradeMap, Ken Research Analysis

RED CHILIE CONSUMPTION PATTERN

Chilies demand is concentrated in regions where spicy food is a cultural staple which includes countries like China, Indonesia, and Thailand. As of CY24, consumption is led by China with **1,345.6 thousand tons**, followed by Indonesia with **584.6 thousand tons** and Thailand with **165.6 thousand tons**, with other notable markets including Bangladesh with **126.2 thousand tons**, Malaysia with **82.8 thousand tons**, and Sri Lanka with **59.2 thousand tons**. Looking forward, consumption is expected to continue rising, particularly in Southeast Asia, driven by the growth of the food services industry, increasing exports of processed foods, and adoption of high-yield chili varieties. Enhanced cold storage and logistics infrastructure will also

play a key role in supporting year-round supply and meeting the growing demand

Figure 3-4: Red Chili Consumption in terms of Volume ('00 Tons) by Key Markets in CY24



Source: News Articles, TradeMap, Ken Research Analysis

4. India's Shrimps and Red Chilies Trade Scenario

4.1. India's Strategic Role in Global Trade of Shrimps

Major exporting countries for shrimps Globally

India ranks as the second-largest shrimp exporter in CY'25, with export values estimated at USD 5,000.0 million, representing 13.9% of the global market. (Source: MPEDA).

Competitive pricing, facilities to offer processed shrimps, strong aquaculture production, and low labour coast have supported India's export growth, particularly to key markets such as the USA, EU, and China. (Source: Ministry Fisheries, Animal Husbandry and Dairying).

Table 4-1: Top 5 Shrimp Exporting Countries by Export Values (in USD Mn) and Global Share (in %), CY'25

Rank	Countries	Values (in USD Mn), CY'25	Share (in %)
1	Ecuador	19,212.3	53.4%
2	India	5,000.0	13.9%
3	Vietnam	2,471.3	6.9%
4	Argentina	2,259.2	6.3%
5	Indonesia	1,512.2	4.2%
	World	**35,985.2**	100%

Source: Volza Database & Ken Research Analysis
Note 1: E indicates Estimated Values
Note 2: CY indicates Calendar Year ending by 31st December

Global Processed Shrimp Production Hubs

The top global processed shrimp hubs include India, China, Vietnam, Indonesia, and Thailand. India is a major player with around 350 processing and exporting plants, primarily located along its East Coast, and ranks as one of the top 5 shrimp exporters globally (Source: Intra Fish).

India offers integrated capabilities from hatchery to export. China and Vietnam also have robust processing systems, India's scale, compliance, and processing depth position it as a strategic leader in the global shrimp value chain, especially amid rising demand and shifting trade dynamics.

Figure 4-1: Top Processes Shrimp Hubs Across the Globe

Source: Industry Articles & Ken Research Analysis

Competitive Advantage of India Over Other Shrimp Exporting Countries

India holds a competitive edge in processed shrimp exports due to **low labour costs and well-established processing infrastructure**. Unlike China, which primarily exports **raw or minimally processed shrimp** due to high domestic labour costs, and Ecuador, which focuses on **frozen seawater vannamei shrimp** but lacks significant processing capacity, India efficiently serves global demand with both **vannamei** and **black tiger shrimp**.

While the US and China remain the largest demand centers for shrimp globally, tariffs imposed by the US significantly influence future growth prospects for suppliers. High tariffs on exporters like Vietnam (46%) and Indonesia (32%) are inflating global prices, indirectly benefiting,

India, despite having high tariff (58%) stands out as integrated processing hub capable of exporting value-added shrimp products positions it as a significant player in the market compared to Ecuador, which, despite its lower tariff, exports largely unprocessed shrimp due to limited domestic infrastructure.

Table 4-2: Top 98% Suppliers of Shrimps to USA (as of December 2025)

Transport	Tariff on Imports (%)
India	58%
Ecuador	18%
China	30%
Indonesia	22%
Vietnam	22%
Thailand	19%
Argentina	10%

Source: Shrimp Alliance, Ken Research Analysis

In India, shrimp production is highly region-centric, with distinct states emerging as key contributors due to their unique environmental, infrastructural, and operational strengths.

Andhra Pradesh dominates India's shrimp production, contributing **around 70%** due to its advanced aquaculture practices and favorable coastal conditions. (Source: The South First) **Gujarat** leverages robust infrastructure to support large-scale, modern shrimp farming, while **West Bengal** is recognized for its traditional methods and significant role in sustaining regional shrimp supply. This geographic concentration highlights Andhra Pradesh's critical influence on national output and the importance of regional diversification for industry resilience.

The FY24 export data underscores the United States as a key high-value market for Indian shrimps, driven by strong demand and premium pricing. Meanwhile, China

and the European Union remain important destinations with distinct market dynamics, and emerging regions like Russia, Canada, and the Middle East present new opportunities for expanding India's shrimp export footprint.

Table 4-3: Top Importing Countries from India by Popular Variety for Shrimps

Countries	Variety Imported
United States	Vannamei, Pink Shrimp, Brown Shrimp
EU	Vannamei, Muelleri, Monodon, Northern prawn, Deep water rose, Common shrimp, Kiddi shrimp
China	Penaeus Vannamei, Penaeus Monodon, Macrobrachium Rosenbergii
Vietnam	Penaeus Monodon, Penaeus Vannamei, Macrobrachium Rosenbergii, Metapenaeus Ensis
Japan	Vannamei Shrimp, Tiger Prawn, Kuruma Ebi (Japanese Tiger Prawn), Botan Ebi (Peony Shrimp), Ama Ebi (Sweet Shrimp), Kaki Ebi (Kaki Shrimp), Sakura Ebi (Cherry Blossom Shrimp)
Canada	Vannamei (frozen, peeled, pre-packaged)
Russia	Vannamei, Black Tiger, Pink Brown Shrimp
UAE	Vannamei, Black Tiger Shrimp
UK	Vannamei, Black tiger Shrimp
Kuwait	Vannamei, Black Tiger Shrimp

Source: Ken Research Analysis

INDIA SHRIMP TRADE OVERVIEW

India is the leading producer and exporter of shrimp, globally. In 2025, India exported approximately **824.8 thousand tons** of shrimp, generating a total export value of **INR 42,500 crore**.

On the import front, India brought in **2,785 tons** of shrimp, valued at **INR 168.3 crore**, primarily to meet domestic demand in niche segments, including high-end retail and hospitality sectors, and for broodstock used in aquaculture hatcheries.

Table 4-4: India's Shrimp Trade – Total Export and Import Value (INR Cr) & Volume of ('000 Tons), 2025P

Trade Flow	Value (INR Crore)	Volumes ('000 Tons)
Export	42,500.0	824.8
Import	168.3	2.8

Source: TradeMap, Ken Research Analysis
Note: Data for 2025 reflects provisional figures for the period January 1 to December 31, 2025
Exchange rate: 1USD=INR85 has been considered

India's shrimp trade in CY25 highlights its strong position as a **net exporter**, far surpassing imports in the same year. This data underscores India's **cost-efficient and export-oriented shrimp industry**, backed by robust aquaculture infrastructure and rising global demand.

Top 10 Export Destinations of Shrimps:

As India stands as a major player in the global shrimp export market, with its products reaching diverse international destinations. In the latest reporting period, The **United States** leads as the largest importer, accounting for nearly **half of the total export value and volume**, followed by **China**, the **European Union (via Belgium)**, **Japan**, and **Vietnam**. Other significant destinations include the **UAE**, **Russia**, **Canada**, the **UK**, and **Kuwait**. This broad export footprint highlights **India's critical role** in meeting the global demand for shrimps.

Table 4-5: Top 10 Export Destinations – Countries Importing Indian Shrimps by Total Value (INR '00 Cr) and Volume ('000 Tons), 2025P

Countries	Value (INR'00 Crores)	Volume ('000 Tons)
US	211.0	308.6
China	69.3	145.6
Japan	23.8	37.8
Vietnam	25.4	43.0
EU	77.3	112.3
UAE	11.6	27.2
Russia	12.0	22.6
Canada	13.4	22.1
UK	8.4	15.1

Kuwait	2.5	6.1
World	**425.0**	**824.8**

Source: TradeMap, Ken Research Analysis
Note: Data for 2025 reflects provisional figures for the period January 1 to December 31, 2025

Top 5 Import Origins of Shrimps:

India sources its shrimp imports from a diverse range of countries, reflecting both the global nature of the seafood trade and the country's growing demand for high-quality shrimp. In the most recent period, India imported a total of **2.8 thousand tons** of shrimps, valued at **INR 168.3 crores**. The United States, China, the United Kingdom, Argentina, and Canada emerged as the leading origins, collectively accounting for the majority of India's shrimp imports. Each of these countries contributes a significant share, both in terms of volume and value, underscoring their importance in India's seafood supply chain

Table 4-6: Top Import Origins- Countries Exporting Shrimps to India by Value (INR Cr) and Volume (Tons), 2025P

Countries	Value (INR Crores)	Volume (Tons)
World	168.3	2,785.0
USA	42.3	515.0
China	25.1	452.0
UK	17.0	725.0
Argentina	10.8	444.0
Canada	7.7	69.0

Source: TradeMap, Ken Research Analysis

India imported a total of **2,785 tons** of shrimps, valued at **INR 168.3 crores**, from various international sources. The **United States** stood out as the top import origin by value, supplying **515 tons** worth **INR 42 crores**. The **United Kingdom** led in volume, exporting **725 tons** valued at **INR 17 crores**. Imports from **China** and **Argentina** were also significant, at **452 tons** and **444 tons** respectively, while **Canada** contributed **69 tons**.

Overall, India's shrimp imports are well diversified across key global suppliers, with a clear emphasis on balancing quality and cost.

4.2. India's Strategic Role in Global Trade of Red Chilies

Major Exporting Countries for Red Chillies Globally

Among the global chilies exporting nations, India stands out as the leading country holding ~80% share with exports valued at USD 1,652.5 million.

Table 4-7: Top 5 Red Chilies Exporting Countries by Export Values (in USD Mn) and Global Share (in %), CY'25

Rank	Countries	Values (in USD Mn), CY'25	Share (in %)
1	India	1,314.1	79.5%
2	Peru	138.3	8.4%
3	China	76.5	4.6%
4	Germany	25.4	1.5%
5	Vietnam	21.4	1.3%
	World	**1,652.5**	100%

Source: Volza Database & Ken Research Analysis
Note 1: E indicates Estimated Values
Note 2: CY indicates Calendar Year ending by 31st December

Key Clusters for Red Chilli Cultivation in India (As of June 2025)

Competitive advantage for India as red chillies' export hub

India's advantages include diverse chili varieties, low production costs, favorable agro-climatic zones, and robust post-harvest and export infrastructure, enabling consistent global supply and quality.

India's red chili cultivation is geographically concentrated in select states known for their favorable agro-climatic conditions including **Andhra Pradesh** is the leading producer, with **Guntur** globally recognized for its premium quality chilies and robust export volumes. Other major producing states include **Telangana**, **Karnataka**, **Tamil Nadu**, and **Maharashtra** which collectively

contribute significantly to domestic supply and export potential. These states form the backbone of India's chili supply chain, making them vital to the country's spice export ecosystem.

India cultivates a diverse range of red chili varieties, each with distinct characteristics catering to global culinary preferences and the versatility and regional specialization of these varieties significantly contribute to India's stronghold in the global chili export market:

Table 4-8: Varieties of Red Chilies Exported by India and their Favored Markets / Regions and Features (As of June 2025)

Names	Favored Markets/ Regions	Characteristics
Guntur Sannam	Bangladesh, Sri Lanka, USA, Middle East	Known for medium pungency, bright red color, and high capsaicin content
Byadgi	Europe (especially Germany), Japan, South Korea	Valued for its deep red hue, mild heat, and rich aroma
Teja	Thailand, Malaysia, Indonesia, Vietnam	A highly pungent variety, it enjoys strong demand across Southeast Asian markets
334	UAE, Saudi Arabia, Oman, Kuwait	Offers a balanced heat and color profile, making it popular in Middle Eastern countries
Mundu	Domestic South India, Sri Lanka	Small and round with a smoky flavor, this variety is favored in South Indian and Sri Lankan cuisines

Source: Spices Board of India & Ken Research Analysis

INDIA'S RED CHILIES TRADE OVERVIEW

India plays a pivotal role in the global red chili export market, with a recent export volume of approximately **5.36 lakh tons** valued at **INR 11,170 crores**, highlighting its dominance as one of the largest producers and exporters of chilies worldwide. This robust performance is underpinned by India's vast agro-climatic diversity, which supports the cultivation of various chili varieties, and its strong presence in markets across Asia, the Middle East, and North America.

Table 4-9: India's Red Chilies Trade – Total Export and Import Value (in INR '000 Cr) & Volume (in '000 Tons) of Chilies in India, CY25P

Trade Flow	Volume ('000 Tons)	Value (INR '000 Crore)
Exports	536.05	11.17
Imports	24.25	0.12

Source: TradeMap, Ken Research Analysis
Note: 2025P indicates the provisional numbers
Exchange rate: 1USD=INR85 has been considered

In CY25, India's red chili trade exhibited a significant imbalance in volume, with **imports totaling 24,247.2 metric ton**—much lower than **exports at 536.05 thousand tons**. However, the trade value showed only a modest gap, with **imports valued at INR 126.4 crore** and **exports close behind at INR 11.17 thousand crores**. These figures highlight that while India is a net export in terms of volume, it retains a competitive edge in exporting premium or value-added red chili products.

Top 10 Export Destinations of Red Chilies:

India is one of the leading exporters of red chilies globally, with a diversified export portfolio across several key international markets. As per recent export data, China stands as the largest destination, accounting for approximately 35.4% of the total export value and 186.56 thousand tons in volume. Other prominent export destinations include Thailand (10.6%), the United States of America (10.2%), Bangladesh (9.7%), and Sri Lanka (6.1%), collectively representing a significant share of India's total chili exports. This widespread geographical distribution highlights the robust demand for Indian red chilies and underscores the country's strategic position in the global spice trade.

Table 4-10: Top 10 Export Destinations – Countries Importing Indian Red Chili in Total Value (INR '000 Cr) and Volume ('000 Tons), CY25P

Top 10 Destinations	Total Value (INR '000 Crores)	Volume ('000 Tons)
China	3.48	186.56
Thailand	1.21	55.08
USA	1.13	38.69
Bangladesh	0.91	60.26
Sri Lanka	0.77	42.75
Indonesia	0.64	36.53
Malaysia	0.52	22.68
Vietnam	0.14	8.13
UAE	0.26	13.46
Canada	0.09	2.66
World	11.17	536.05

Source: TradeMap, Ken Research Analysis

Top 5 Import Origins of Red Chilies:

India's red chili imports are predominantly sourced from a diverse set of global partners, with **China** and **Croatia** emerging as the leading exporters. Other notable contributors include **Vietnam**, the **United States of America**, and **Zimbabwe**.

Table 4-11: Top 5 Import Origins – Countries Exporting Red Chilies to India by Total Value (INR Cr) and Volume (Tons), CY25P

Countries	Value (INR Crores)	Volume (Tons)
China	59.7	3331.8
Croatia	58.4	3175.3
Vietnam	17.2	466.7
United States of America	12.7	293.5
Zimbabwe	11.7	330.0

Source: TradeMap, Ken Research Analysis

India’s red chili import landscape is heavily dominated by **China** and **Croatia**, which together account for imports worth **INR 59.7 crores** and **INR 58.4 crores** respectively, reflecting a significant reliance on these two countries. In terms of volume, **China** leads with **3,331.8 tons**, followed closely by **Croatia** at **3,175.3 tons**, indicating cost-efficient, large-scale sourcing. The total global chili imports into India stand at **INR 126.4 crores**, with a volume of **24,247.2 tons**, highlighting a strong and diverse import network for red chilies.

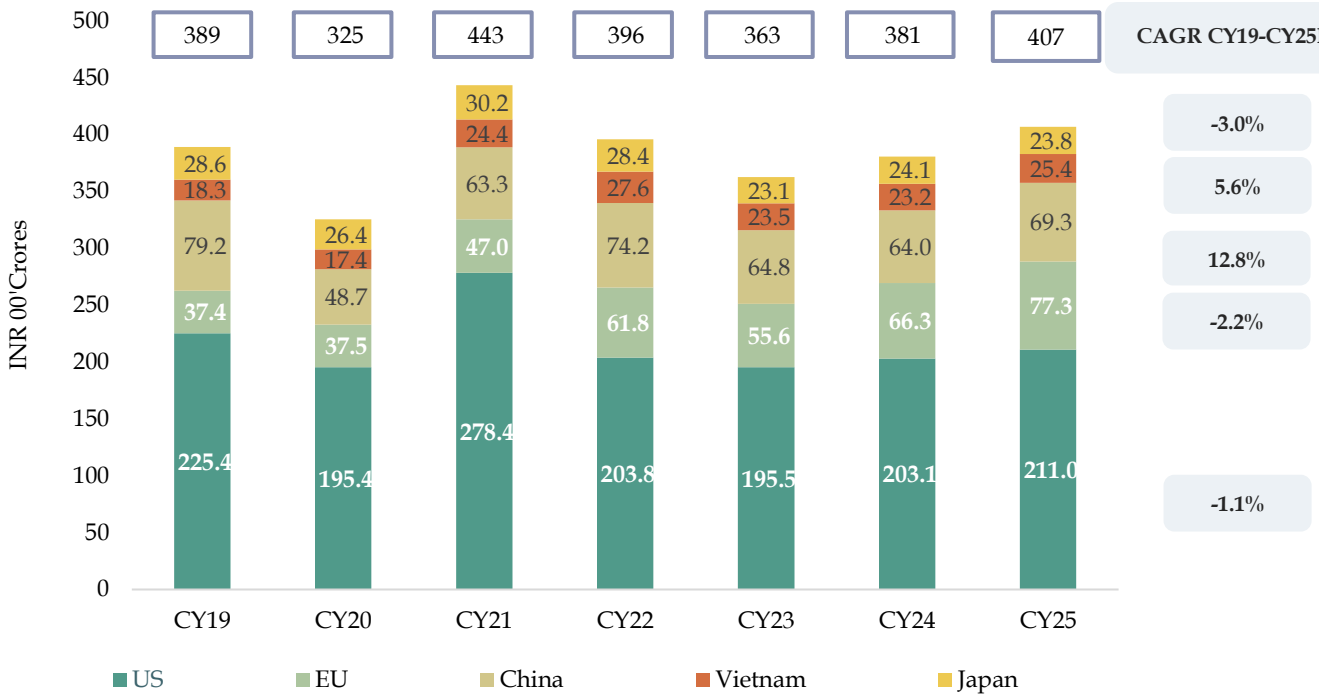
5. Market Analysis of Shrimps and Red Chilies

5.1. Total Addressable Market Size for Shrimps, CY19-CY30F

Total targeted shrimp export market outside India has experienced a period of moderate volatility and slow growth between CY19 and CY25. **The total market value showed marginal growth, increasing from INR 38,890 crore in 2019 to INR 40,674 crore in CY25, resulting in a CAGR of approximately 0.7%.**

This period is marked by supply chain disruptions, shifting consumer demand, and trade challenges. While markets like the US and China saw declines, regions such as the EU and Vietnam showed resilience and growth.

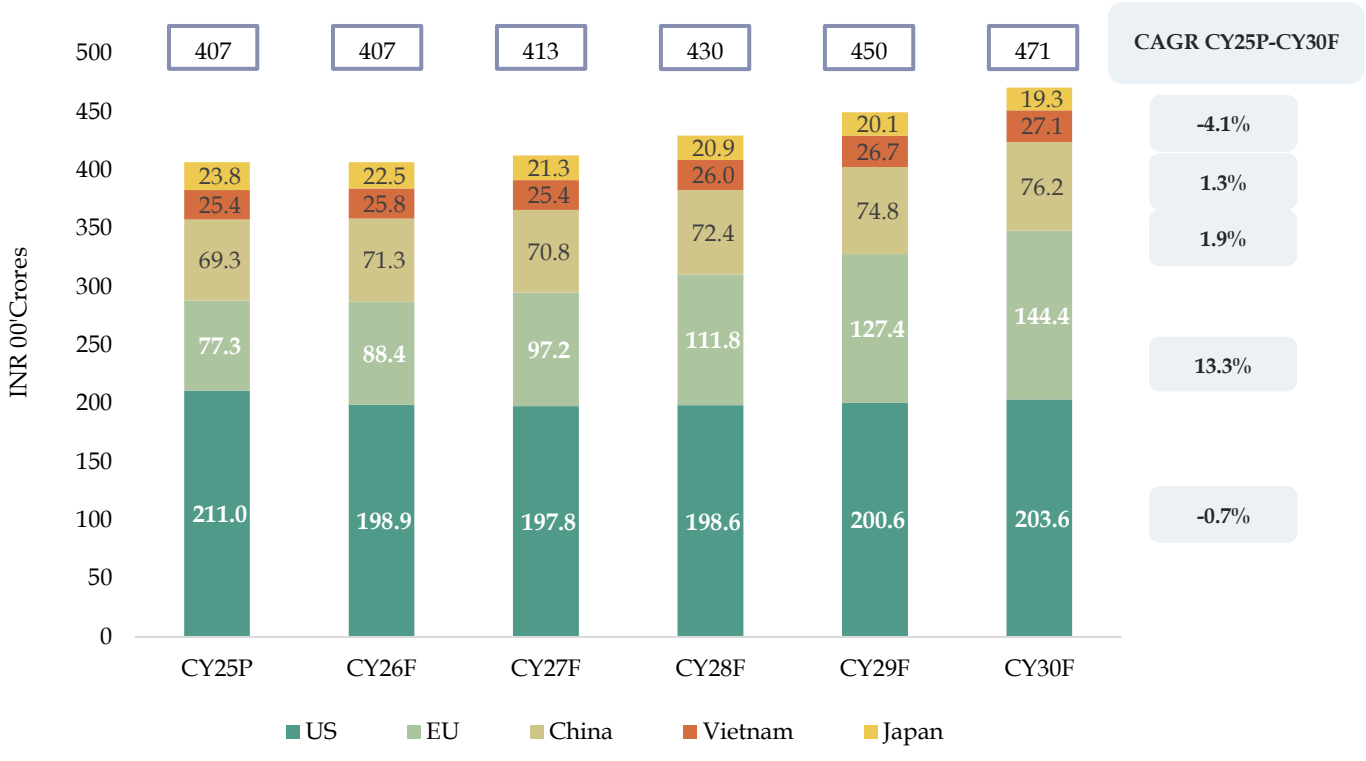
Figure 5-1: Targeted Export Market for Shrimps on the basis of Revenue (in INR 00'Cr), CY19-CY25P



Source: Interviews with Industry Experts, Industry Articles & Ken Research Analysis, Trade Map
Note: FY refers to financial year ending March

- **United States:** The largest import market is witnessing rising competition from other shrimp-producing countries, import tariff fluctuations.
- **China:** China's shrimp import market is influenced by trade tensions, and import restrictions aimed at food safety.
- **Vietnam:** In contrast, Vietnam recorded a healthy CAGR of 5.6%. Its domestic shrimps market was driven by rising middle-class income, increasing urbanization, and growing demand for processed and ready-to-eat seafood products.
- **European Union:** The EU market is exhibiting strong growth include rising consumer awareness of nutritional benefits of seafood, sustainable sourcing policies, and the expansion of retail and foodservice channels offering shrimp products.

Figure 5-2: Targeted Export Markets for Shrimps on the basis of Revenue (in INR 00'Cr,) CY25P-CY30F



Source: Interviews with Industry Experts, Industry Articles & Ken Research Analysis, Trade Map
Note: FY refers to financial year ending March 31

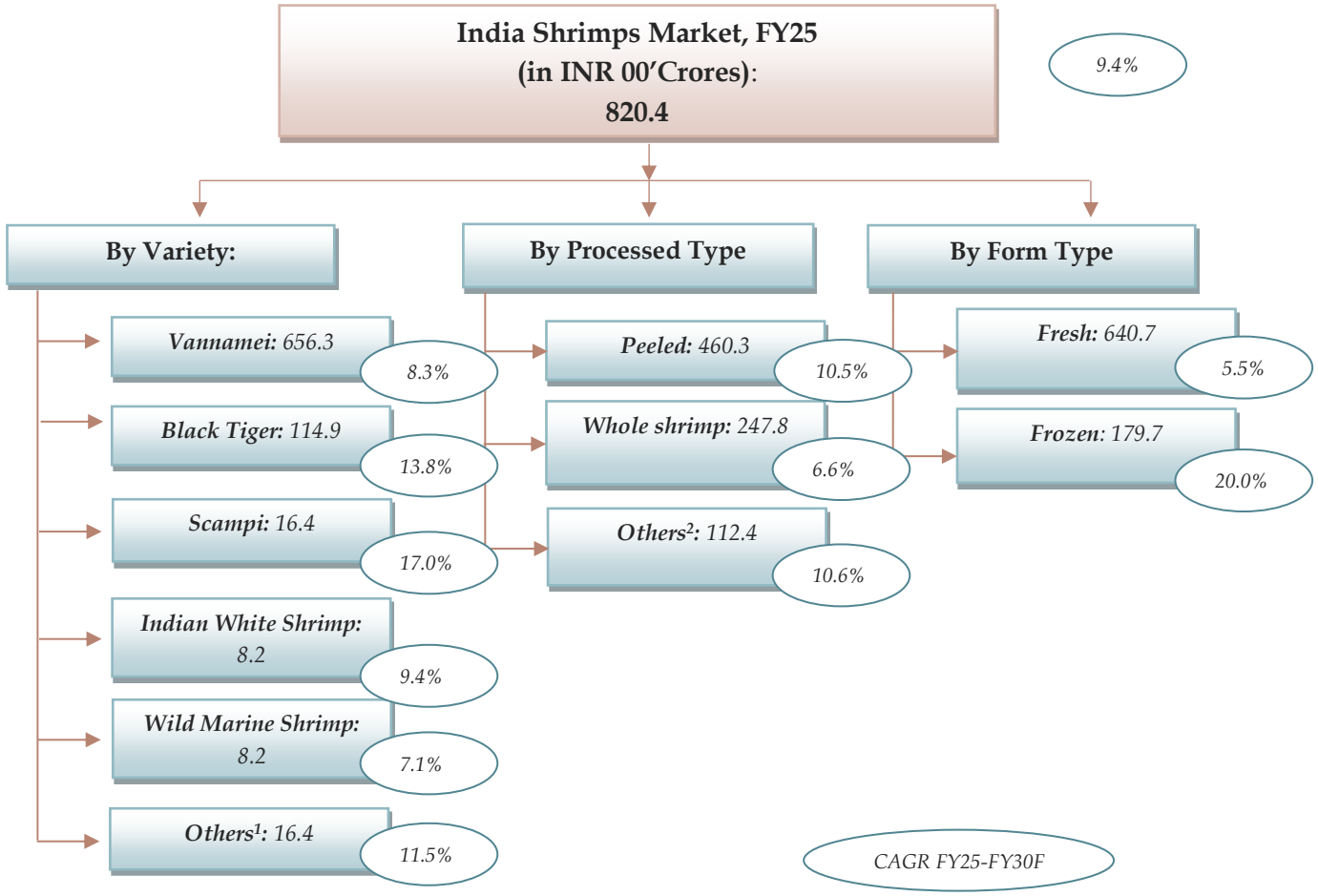
Looking ahead from CY25 to CY30, the shrimps market is expected to enter a phase of gradual recovery and steady expansion. Market size forecasts indicate an increase from INR 40,674 crore in 2025 to around INR 47,050 crore by 2030, translating to a healthier CAGR of 3.0% during this forecast period. The forecast analysis highlights differentiated growth trajectories across regions:

- **European Union:** Expected to sustain the strongest growth with an impressive CAGR of 13.3%, supported by robust consumer demand for nutritious and sustainably sourced seafood, coupled with favorable regulatory frameworks encouraging imports.
- **Vietnam:** Forecasted to continue moderate growth at a CAGR of 1.3%, reflecting steady domestic consumption and expanding processing capacities catering to both local and export markets.
- **China:** Projected to rebound as easing of import restrictions, rising disposable incomes, and urbanization spur demand for shrimp and other seafood.
- **United States:** The US market is anticipated to stabilize as demand for premium shrimp products remains steady within certain consumer segments.

This forecast period indicates lucrative opportunity for exporters aiming to capitalize on the growth potential in dynamic regions like Europe and Asia.

5.2. INDIAN SHRIMPS MARKET SIZE, FY19-FY30F

Figure 5-3: Taxonomy & Market Size of India Shrimps Market, FY25



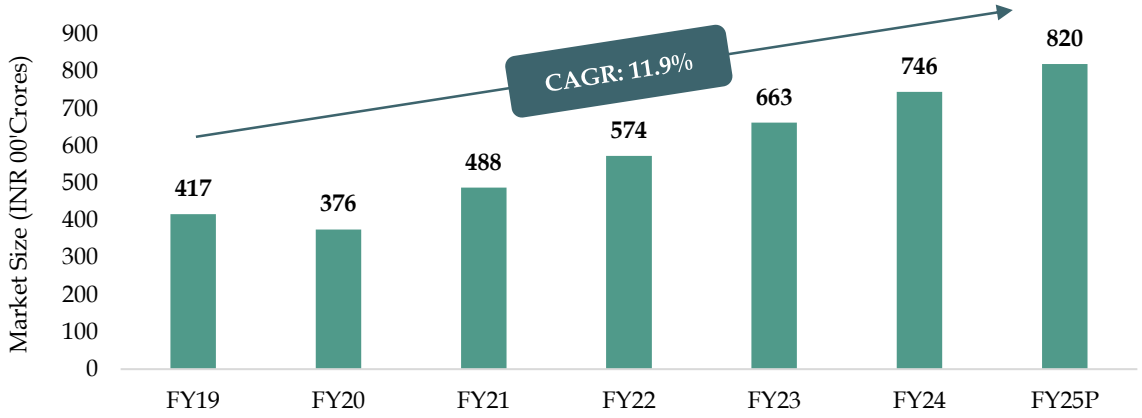
Source: Ken Research Analysis
Notes: Others1 for brown shrimps, pink shrimps
Others2 for headless shrimp, easy peel shrimps

The Indian Shrimps Market has witnessed steady and robust growth over the past six years, expanding from INR 41,700 crore in FY19 to an estimated INR 82,041 crore by FY25, reflecting a CAGR of 11.9%.

This upward trajectory underscores the rising domestic consumption of shrimp, driven by increased health consciousness, growing preference for high-protein diets, and expanding urban middle-class income.

Export-oriented varieties such as Vannamei continue to dominate production, but domestic consumption has increased for peeled and deveined shrimp types due to rising adoption in retail and convenience food segments.

Figure 5-4: India Shrimps Market Size on the Basis of Revenue in INR 00'Crore, FY19-FY25

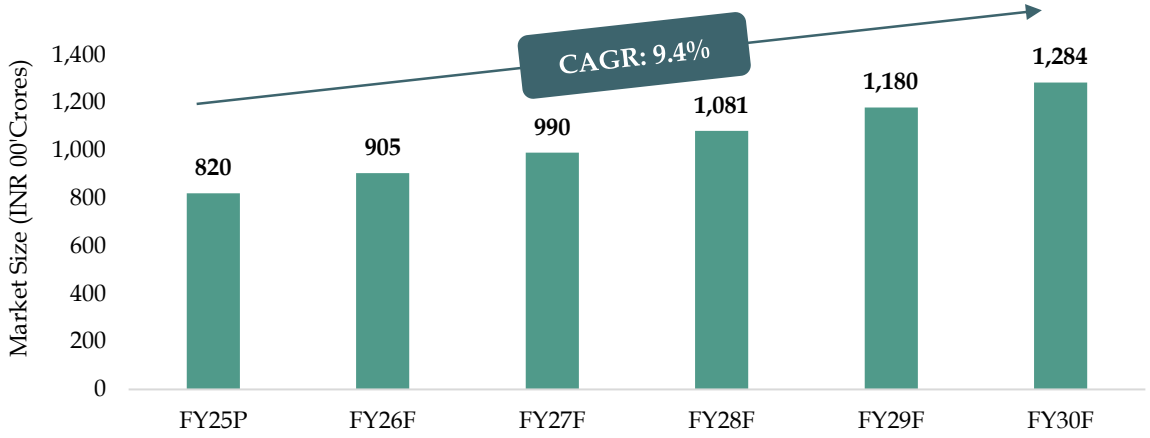


Source: Interviews with Industry Experts, Industry Articles & Ken Research Analysis
Note: FY refers to financial year ending March, P refers to Projected values

Looking ahead, the Indian Shrimps Market is forecasted to maintain significant momentum, growing from INR 82,040 crore in 2025 to approximately INR 1,28,400 crore by 2030, at a CAGR of 9.4%.

The projected growth during 2025–2030 is expected to be driven by ongoing expansion in international markets, increased focus on sustainability and traceability in shrimp production, and innovations in farming practices. The market is anticipated to benefit from the diversification of export destinations and strengthened domestic consumption patterns. Continued government support, coupled with technological advancements, will play a crucial role in maintaining growth momentum while addressing environmental and regulatory challenges.

Figure 5-5: India Shrimps Market Size on the Basis of Revenue in INR 00'Crore, FY25-FY30F



Source: Interviews with Industry Experts, Industry Articles & Ken Research Analysis
Note: FY refers to financial year ending March

5.3. Market Segmentation of India Shrimps Market, FY25 & FY30F

BY VARIETY (FY25 & FY30F):

India's shrimp industry continues to be dominated by Vannamei shrimp, which accounted for 80% of the total market value in FY25, translating to INR 656.3 hundred crore. Despite a slight decline in its share to 76% by FY30, Vannamei will remain the dominating variety, reaching a projected sales value of INR 975.8 hundred crore. The variety is expected to grow at a CAGR of 8.3% during FY25–30, backed by its high yield, disease resistance, and global preference.

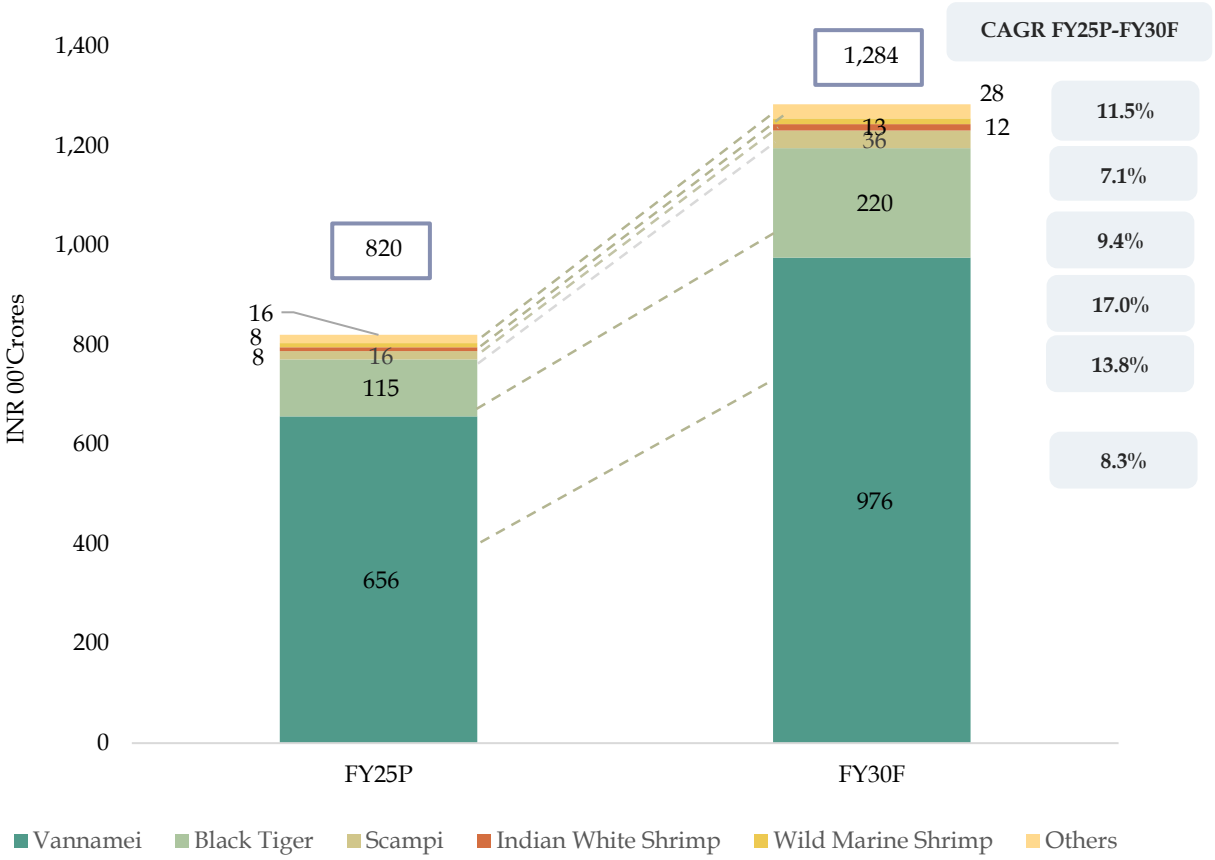
Notably, Black Tiger shrimp category is anticipated grow from **14% in FY25 (INR 114.9 hundred crore) to 17.1% in FY30 (INR 219.6 hundred crore).** With a CAGR of 13.8%, this growth reflects renewed market demand for premium varieties, especially in Japan and parts of the EU, coupled with higher farm-gate prices.

Scampi, while holding a smaller share, is projected to exhibit the fastest growth among all segments, with a

CAGR of 17.0%, driven by its niche appeal and premium positioning in select markets.

Indian White Shrimp and Wild Marine Shrimp are expected to grow at 9.4% and 7.1% CAGR, respectively, maintaining a relatively stable market presence. Their growth is likely to be shaped by demand for indigenous and naturally sourced varieties.

Figure 5-6: India Shrimps Market Segmentation by Variety on the basis of Revenue in INR 00'Cr, FY25 & FY30F



Source: Interviews with Industry Experts, Industry Articles & Ken Research Analysis
Notes: Others include brown shrimps, pink shrimps; FY refers to financial year ending March

Table 5-1: Cross-Comparison of Shrimp Varieties in India on the basis of Qualitative KPIs

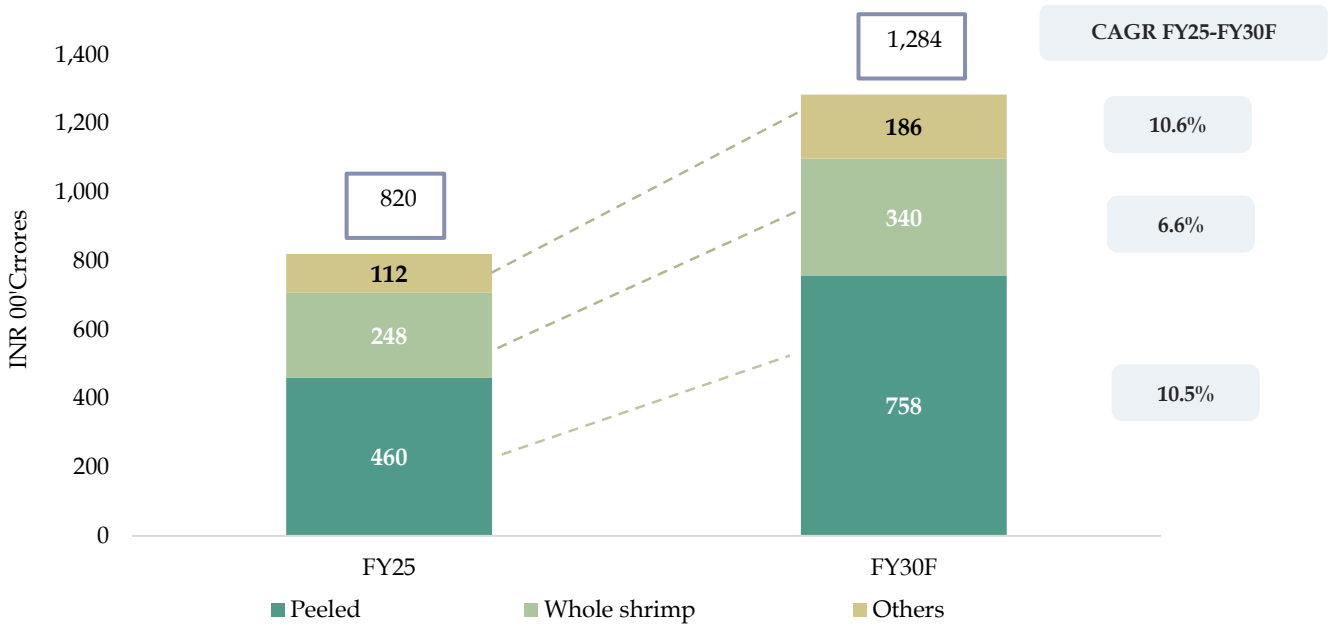
KPI	Vannamei	Black Tiger	Scampi	Indian White Shrimp	Wild Marine Shrimp
Primary Cultivation Region	Andhra Pradesh, Gujarat, Odisha	West Bengal, Kerala	Andhra Pradesh, Bihar	Coastal Tamil Nadu, Andhra Pradesh	Kerala, Gujarat, Maharashtra
Harvesting Seasonality	Year-round (multi-cycle)	Mostly seasonal (longer grow-out cycle)	Seasonal with peak between May–October	Seasonal; tied to regional water conditions	Seasonal (monsoon-linked trawling bans apply)
Market Positioning	Commodity-grade, high-volume	Premium, gourmet	Niche premium + domestic institutional buyers	Heritage/local positioning	Gourmet/niche retail (traceable origin)
Processing & Supply Chain	Highly optimized; robust cold chain	Growing semi-intensive infrastructure	Basic to mid-level processing	Basic – often sold fresh or locally consumed	Catch-based; less scalable
Buyer Preference Shift	Steady but price-sensitive buyers	Growing interest due to taste and size	Rising interest from chefs, HORECA	Regional consumption with traditional appeal	High-end chefs, conscious consumers

Source: Interviews with industry Experts, Ken Research Analysis

BY PROCESSED TYPE (FY25 & FY30F):

The processed shrimps market in India is witnessing a gradual shift towards more value-added and consumer-friendly formats, with **peeled shrimp** emerging as the dominant product category. Holding a largest share of **56.1% in FY25**, peeled shrimp is expected to further consolidate its position, reaching 59.0% by FY30, backed by a robust CAGR of 10.5%. The category's value is projected to rise significantly from INR 460.3 hundred Cr in FY25 to INR 757.6 hundred Cr by FY30, primarily driven by growing international demand, particularly from the US, Japan, and European markets.

Figure 5-7: India Shrimps Market Segmentation by Processed Type on the Basis of Revenue in INR 00'Cr, FY25 & FY30F



Source: Interviews with Industry Experts, Industry Articles & Ken Research Analysis
Notes: Others include headless shrimp, easy peel shrimps; FY refers to financial year ending March

The rise in modern processing infrastructure, such as Individual Quick Freezing (IQF) and auto-grading facilities in Andhra Pradesh, Odisha, and Gujarat, has further bolstered the appeal of peeled shrimps.

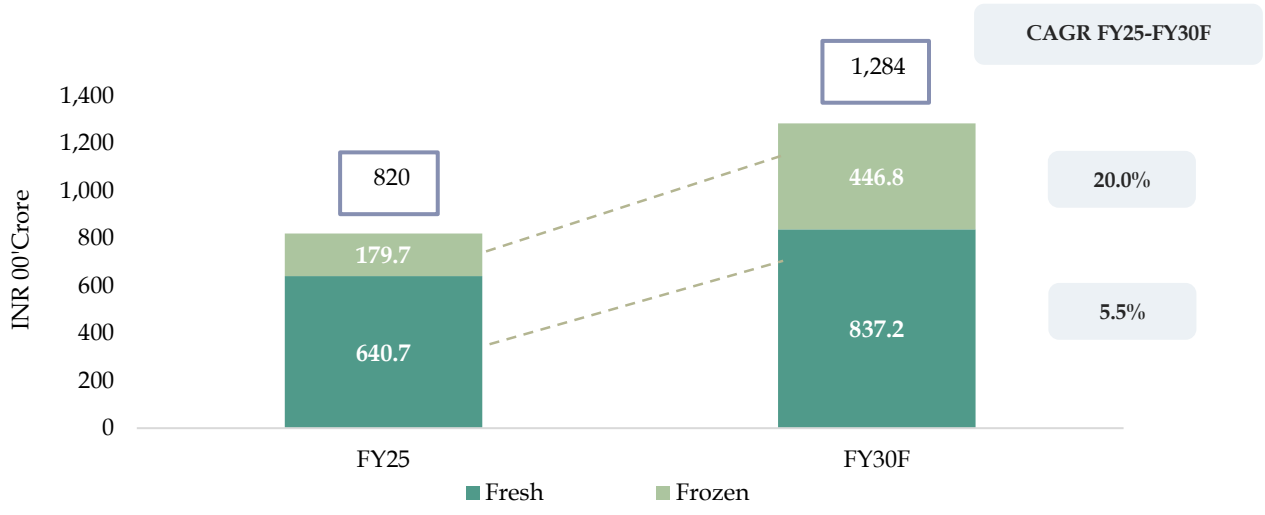
Overall, the processed shrimp segment is shifting towards more consumer-ready and premium product types, with peeled and value-added shrimp leading the charge. Stakeholders looking to enter or expand in the Indian shrimp ecosystem should focus on scaling peeled shrimp exports, investing in processing innovation, and tapping into premium urban demand.

BY FORM (FY25 & FY30F):

The Indian Shrimps Market is witnessing a sharp shift in consumer and export demand toward frozen shrimp, which is projected to grow at a CAGR of 20.0% from FY25 to FY30.

The rising demand for frozen shrimp is being driven by increasing penetration of cold chain logistics in Tier 2 and Tier 3 cities, expansion of modern retail formats, and the growing export of individually quick frozen (IQF) and block frozen shrimp to key markets such as the U.S., EU, and Japan. Moreover, frozen shrimp allows for higher shelf life and better-quality preservation, aligning well with both B2B and B2C export requirements.

Figure 5-8: India Shrimps Market Segmentation by Form on the Basis of Value in INR 00'Cr, FY25 & FY30F

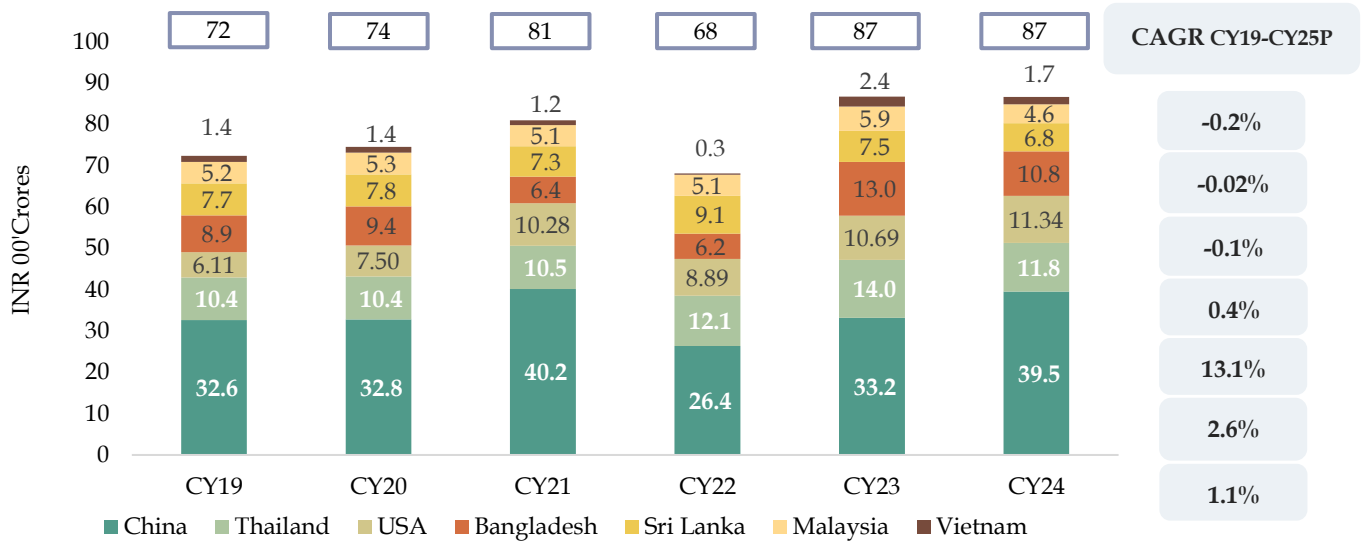


Source: Interviews with Industry Experts, Industry Articles & Ken Research Analysis
Notes: FY refers to financial year ending March

5.4. Total Addressable Market for Red Chilies, CY19-CY30F

Between CY19 and CY25, red chilies exports to key geographies showed limited growth, with total export revenues hovering between INR 7,200–8,700 crore. China remained the largest importer but posted only a modest CAGR of 1.1%, while other major destinations like Thailand and Malaysia saw either marginal growth or slight declines. USA being the third largest export destination, has posed the highest growth at 13.1% CAGR. Export volumes dropped significantly in CY24—by over 42,000 tons—due to reduced demand from core markets including China, Bangladesh, and Malaysia. Adding to this, export prices fell sharply by 35% between January CY24 and January CY25, dragging down overall values. The market was further pressured by factors such as stockpiling in China, Bangladesh shifting sourcing to Myanmar, and inconsistent crop quality caused by erratic weather conditions.

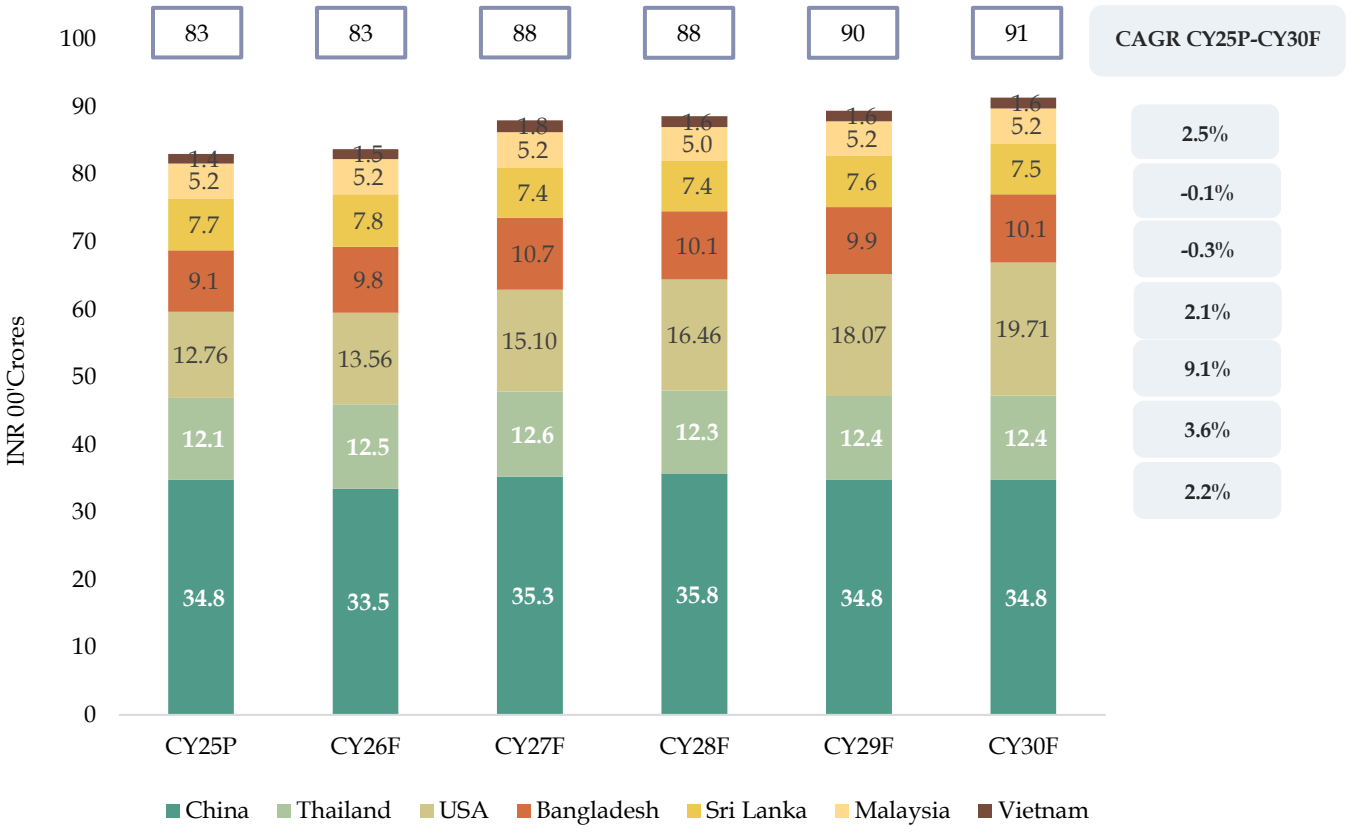
Figure 5-9: Targeted Export Markets for Red Chilies from India on the basis of Revenue (in INR 00'Cr), CY19- CY25P



Source: Interviews with Industry Experts, Industry Articles & Ken Research Analysis, Trade Map
Note: FY refers to financial year ending March

The forecast period to CY30 indicates moderate growth with most major export destinations showing flat or marginally declining revenue growth. China's market is expected to remain stable, and other markets like Bangladesh and Vietnam show only modest positive growth rates. While US is expected to show largest growth rate for consumption.

Figure 5-10: Targeted Export Markets for Red Chilies from India on the basis of Revenue (in INR 00'Cr), CY25P-CY30F



Source: Interviews with Industry Experts, Industry Articles & Ken Research Analysis, Trade Map
Note: FY refers to financial year ending March 31, P refers to Projected numbers

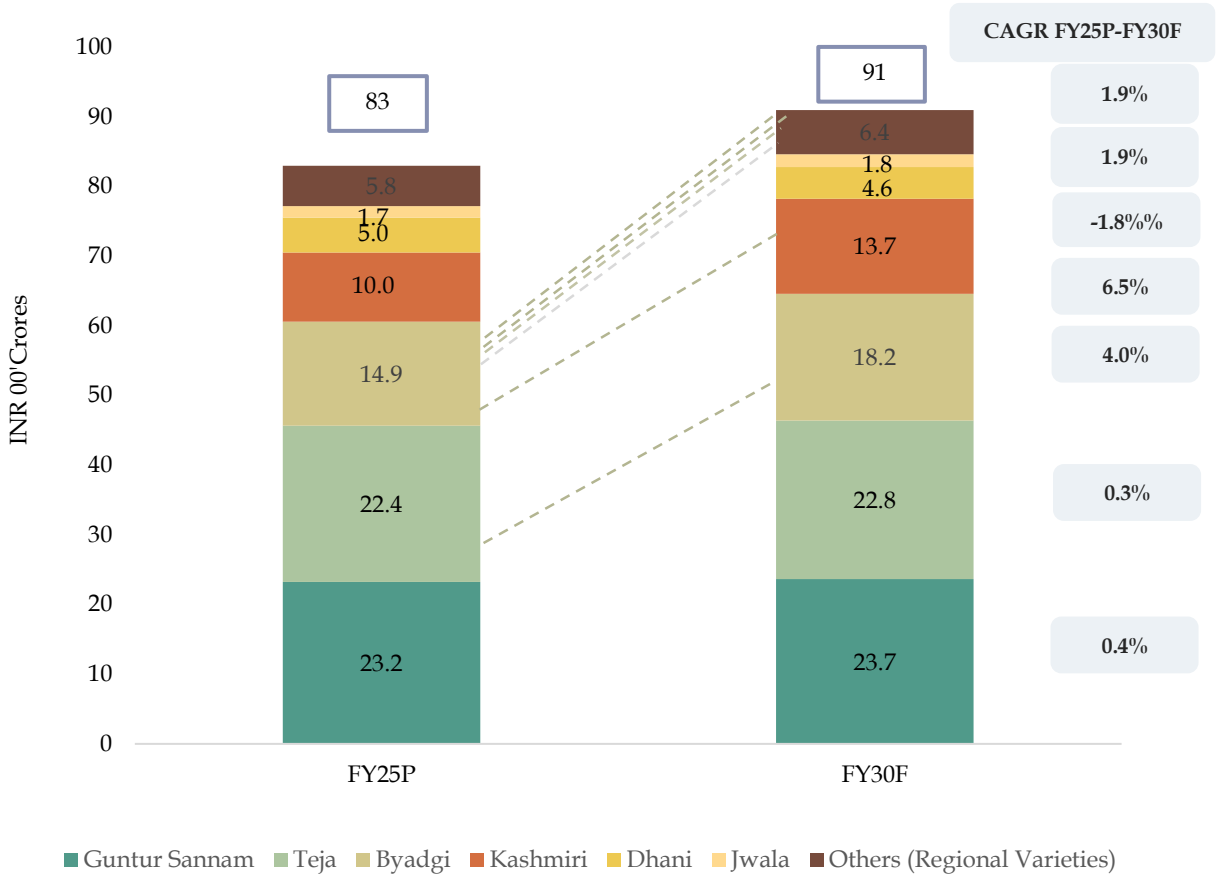
5.1. Market Segmentation of India's Chilies Exports, FY25 & FY30F

BY VARIETY (FY25 & FY30F):

India's chili export market is expected to grow from INR 83 crore in FY25P to INR 91 crore in FY30F, with a CAGR of 1.9%. Despite this moderate growth, Guntur Sannam and Teja remain the dominant varieties in the export market.

- Guntur Sannam continues to hold the largest share, accounting for INR 23.2 hundred crore in FY25P, and it's projected to maintain a strong market share with a slight increase to INR 23.7 hundred crore in FY30F. This variety is expected to grow at a steady pace, with a CAGR of 0.4%.
- Teja is the second-largest segment, contributing INR 22.4 hundred crore in FY25P. Its share is expected to remain stable, reaching INR 22.8 hundred crores in FY30F, growing at a CAGR of 0.3%.
- The other varieties such as Byadgi, Kashmiri, Dhani, and Jwala have a comparatively smaller share, but Jwala is poised for a strong growth rate of 6.5% CAGR, which reflects increasing demand in niche markets.
- Kashmiri and Byadgi varieties are also likely to maintain their positions with slight growth, contributing INR 14.9 hundred crore and INR 10 hundred crore, respectively, in FY25P, with minimal change projected by FY30F.

Figure 5-11: India Chilies Export Market Segmentation by Variety on the basis of Revenue in INR 00'Cr, FY25 & FY30F



Source: Interviews with Industry Experts, Industry Articles & Ken Research Analysis
Notes: Others include brown shrimps, pink shrimps; FY refers to financial year ending March

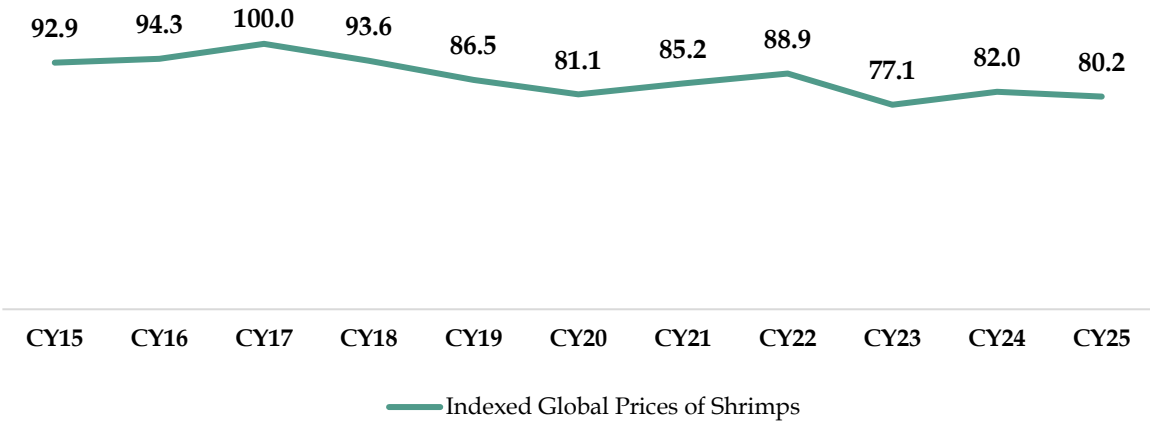
6. Industry Analysis

6.1. Trends and Developments in Shrimps Market

Variation in Global Shrimp Pricing:

Over the past decade, global shrimp import prices have shown a declining trend due to oversupply, improved farming efficiencies, and intensified competition among exporting nations. Prices fell steadily between 2015 and 2020, driven by increased production and streamlined aquaculture practices. However, with rising tariffs on key exporters and tightening trade policies, inflationary pressures are expected to reverse this trend. The two major shrimp varieties—vannamei and black tiger—dominate global trade and follow similar price trajectories. As demand remains strong and cost structures shift, these varieties are likely to see upward price adjustments in the near future.

Figure 6-1: Indexed Global Shrimp Price Trends (Base Value: 2017), CY15-CY25



Source: Federal Reserve Bank of St.Louis, Ken Research Analysis

Technological Advancements and Sustainability:

Indian shrimp farms are steadily embracing advanced technologies like IoT-based environmental control systems and machine learning tools.

These systems help farmers monitor water quality in real time, adjust feeding schedules more efficiently, and detect potential issues at an early stage. By using these technologies, farmers can improve shrimp growth, reduce losses, and make their operations more sustainable and productive over time.

In addition to general farm improvements, focused efforts are being made to apply edge machine learning technologies for real-time disease detection. These tools are being used to monitor common shrimp diseases such as White Spot Syndrome Virus (WSSV), which has historically caused major losses.

Early detection through smart systems allows for faster response and better disease control, helping reduce the risk of outbreaks and improving overall farm health and production.

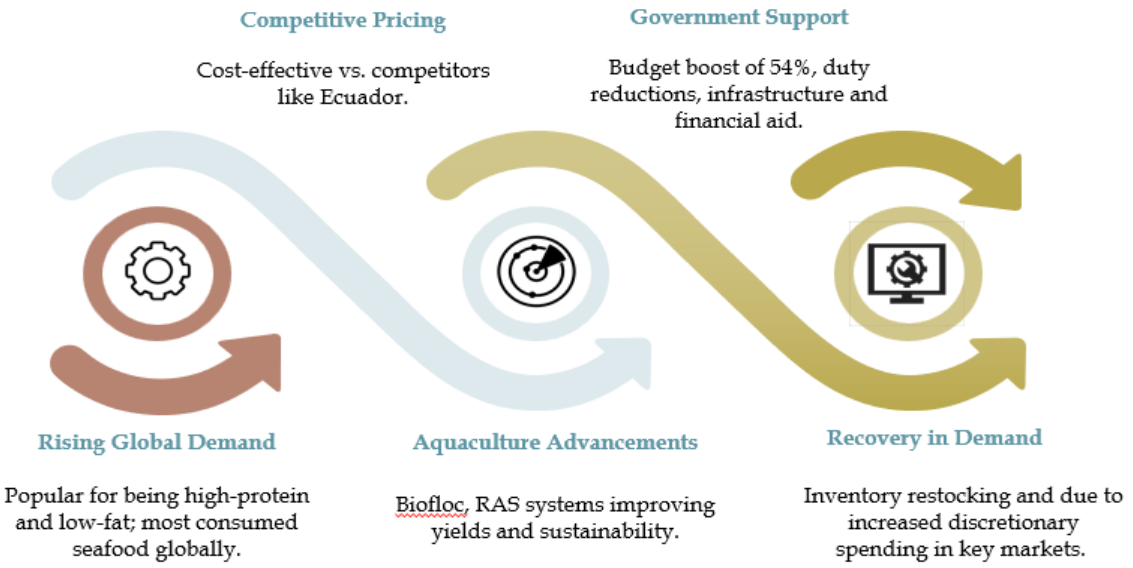
Expansion of Export-Oriented Aquaculture Zones:
Indian shrimp farming hubs are increasing in number due to government push in major regions converting wastelands into productive farming hubs.

A major push to convert inland saline soils often considered wastelands into productive shrimp farming hubs marks a pivotal shift in India's export strategy. Around 58,000 hectares of saline land have been mapped across states like Haryana, Punjab, Rajasthan, and Uttar Pradesh, although only a small portion is currently under aquaculture. With increased support through government schemes and state-level initiatives, production in non-coastal regions is steadily rising. By expanding cultivation to new inland clusters and scaling up investment in lined ponds, cold storage, and technical support, India can significantly boost shrimp output, diversify production beyond coastal zones, and increase export volumes. This inland expansion directly enhances capacity and resilience in meeting global demand.

6.2. Key Growth Drivers for Shrimps Market

India's shrimp industry is gaining momentum, propelled by a confluence of global demand trends, technological innovation, supportive policies, and competitive advantages.

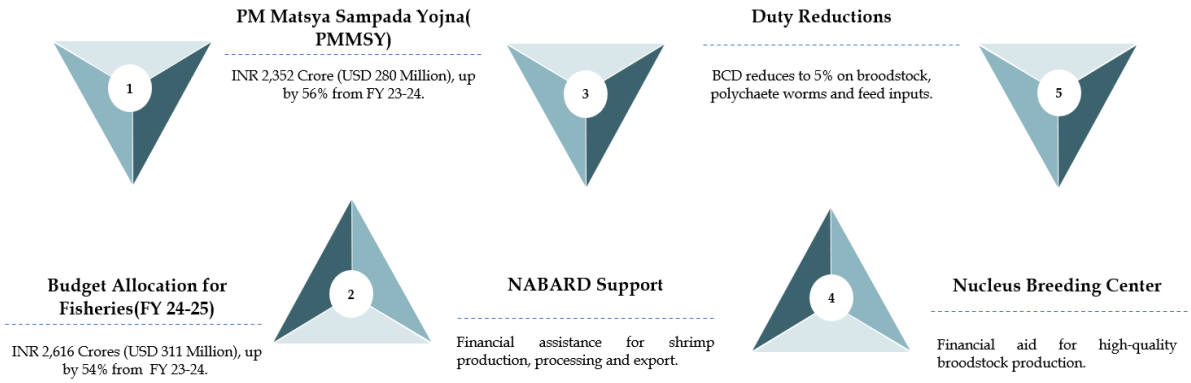
Figure 6-2: Key Growth Drivers of Shrimp Demand across the World



Source: Ken Research Analysis

India's shrimp sector is being propelled by rising global demand, cost competitiveness, and advances in sustainable aquaculture like biofloc and RAS. Supportive government policies—including increased budgets, duty cuts, and production-linked incentives—combined with post-pandemic consumption recovery, are driving robust market growth.

Figure 6-3: Key Government Initiatives Supporting Growth of Shimp Market (As of June 2025)



Source: Department of Fisheries, Sampada - Ministry of Food Processing Industry, NABARD, Ken Research Analysis

Robust government initiatives—including increased budget allocations, targeted funding under PMMSY, duty reductions on key inputs, support for nucleus breeding centers, and NABARD-backed financial assistance—are strengthening the Indian shrimps market's competitiveness, production efficiency, and export potential. Some of the other key drivers for India shrimps exports across the world are:

Trade Dynamics and Diversification Efforts:

Indian shrimp exporters are increasingly broadening their focus to reduce dependence on a single market

They are actively exploring and expanding into alternative destinations such as Southeast Asia including Vietnam, Thailand etc. and Middle Eastern countries to diversify their export portfolio and ensure long-term stability.

This diversification is partly due to factors like the potential for increased duties and tariffs in the US market, making it crucial for Indian exporters to find new and lucrative destinations.

The UK and Southeast Asian nations impose zero tariffs under the UK-India Free Trade Agreement and ASEAN-India trade deals, respectively. These zero-tariff regimes present India with substantial opportunities to diversify export destinations and reduce dependency on the U.S. market.

Table 6-1: Latest Tariff Rates Imposed by Key Importing Countries on Indian Shrimp (As of December 2025)

Countries / Regions	Tariff on Indian Shrimp (As of December 2025)
US	**58%** (The U.S. announced an increase in tariffs on Indian shrimp from 26%)
China	**2.5%** (Under Asia-Pacific Trade Agreement)
UK	**0%** (Tariff eliminated under new UK-India Free Trade Agreement)
Southeast Asia	**0%** (Under ASEAN-India trade agreements)

Source: Economic Times, Trade agreements, India UK Foreign Trade Agreement News & Ken Research Analysis

Technological Advancements and Sustainability:

Indian shrimp farms are steadily embracing advanced technologies like IoT-based environmental control systems and machine learning tools.

These systems help farmers monitor water quality in real time, adjust feeding schedules more efficiently, and detect potential issues at an early stage. By using these technologies, farmers can improve shrimp growth, reduce losses, and make their operations more sustainable and productive over time.

In addition to general farm improvements, focused efforts are being made to apply edge machine learning technologies for real-time disease detection. These tools are being used to monitor common shrimp diseases such as White Spot Syndrome Virus (WSSV), which has historically caused major losses.

Early detection through smart systems allows for faster response and better disease control, helping reduce the risk of outbreaks and improving overall farm health and production.

6.3. Trends and Developments in Red Chilies Market

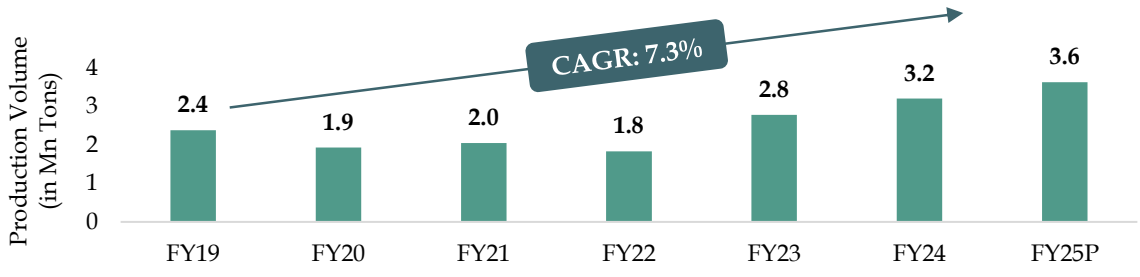
Higher Production and Supply:

India continues to dominate the global red chili market, producing 3.2 million tons in FY24 a significant increase from 2.8 million tons in FY23 (Source: Spice Board of India).

This strong year-on-year growth reinforces India's position as the world's largest producer of red chilies, far surpassing countries like Bangladesh and China. The surge in production has been driven by favorable climatic conditions, expanded cultivation areas, and improved farming practices in key chili-growing regions.

The bulk of India's red chili supply comes from states like Andhra Pradesh, Telangana, Karnataka and Madhya Pradesh. Among these, Andhra Pradesh alone accounts for more than 44% of total national production, making it the chili hub of the country.

Figure 6-4: Production of Red Chilies in India in terms of Volume (in Mn Tons), FY19-FY25



Source: Ken Research Analysis & Spice Board of India
Note: FY refers to financial year ending March

Price Trends & Market Dynamics:

In FY24, the red chili market in India faced a major price drop, going down by about 35%. Prices fell from INR 1,90,000 per tons in January 2024 to around INR 1,20,000–1,30,000 by January 2025. (Source: Igrain India)

This has created difficulties for farmers, especially in major producing states like Telangana, who were expecting better returns. The main reasons for this drop are weak demand from big importing countries like China, Bangladesh, and Malaysia, and an increase in overall supply, including both the new harvest and stock stored from earlier.

Many farmers had kept their chilies in cold storage hoping prices would rise, but they are now under pressure to sell at much lower rates, which is affecting their earnings.

6.4. KEY GROWTH DRIVERS OF RED CHILIES MARKET

High Global Utilization of Red Chilies Across Industries:

Red chili has established demand across multiple industries, which supports its position as a high-volume export commodity. In food processing, it is a primary ingredient in sauces, spice blends, and ready-to-eat meals. Apart from this, the pharmaceutical industry also uses extracts from chilies in formulations for topical pain relief, metabolic stimulants, and anti-inflammatory creams.

Additionally, chili extracts are incorporated into cosmetic products such as lip balms and hair treatments. In agriculture, it is used in the production of organic pesticides. These diverse end-use applications maintain steady demand in export markets across Asia, North America, and the Middle East.

Production Capacity & Regional Output:

The primary cultivation areas include Andhra Pradesh, Telangana, Karnataka, Tamil Nadu, and Maharashtra. Guntur district in Andhra Pradesh is one of the largest chili-producing regions and a major supply hub for export-quality varieties.

These states have established supply chains, supporting large-scale farming, post-harvest handling, and storage infrastructure. This ensures year-round availability and helps meet the requirements of export buyers. High production volumes and established aggregation systems allow Indian suppliers to fulfill bulk export orders consistently, even during seasonal fluctuations.

Varietal Range for Different Markets:

India grows several distinct red chili varieties that cater to different international markets based on factors such as

heat level, color, and oil content. Teja and Guntur Sannam are high-pungency varieties favored in Southeast Asian countries, where strong heat is preferred.

Byadgi and 334 varieties are less pungent but rich in color, making them suitable for coloring agents and masala mixes in the Middle East and North Africa. Mundu is another variety used in specific regional cuisines. The availability of these varieties allows exporters to serve multiple market segments, including food processors, spice blenders, and oleoresin manufacturers, based on their exact specifications.

India's diverse range of red chili varieties meets the varying demands of international markets for a broad range of applications. This ability to cater to different preferences—whether for heat, color, or oil content—enhances India's competitiveness in global spice trade.

Diversified Buyer Base:

Indian red chili exports are distributed across a broad and diverse set of countries, reducing reliance on any single market. Major importers include the United States, China, Vietnam, Bangladesh, the United Arab Emirates, and Canada. Some countries, such as Vietnam and UAE, serve as re-export hubs, redistributing Indian chili to other regions in Southeast Asia, Africa, and Europe.

This geographic diversification provides trade resilience against regional disruptions, regulatory changes, or demand slowdowns. It also reflects the established role of Indian red chili in global commodity flows and its integration into both direct consumption and intermediate processing supply chains.

7. Market Challenges and Threats

7.1. Challenges In Shrimps Market

Risks of Diseases:

Shrimp farming in India faces serious risks from diseases like White Spot Syndrome Virus (WSSV), Early Mortality Syndrome (EMS), and the EHP parasite (Enterocytozoon hepatopenaei). These diseases can cause major losses, especially in high-density farms where proper biosecurity is not always followed.

In Andhra Pradesh, the largest shrimp-producing state, EHP parasite has become a major concern. It is often called a "silent profit killer" and is estimated to cause losses of over INR 4,000 crore every year, badly affecting farmers' incomes. (Source: Times of India)

Environmental issues like pollution and habitat damage are also adding to the challenge of keeping shrimp farming sustainable.

Limited Domestic Consumption:

Despite being one of the largest shrimp producers globally, India's domestic consumption of shrimp remains low, offering limited support to the industry during export slowdowns.

The sector is heavily reliant on exports, making it highly vulnerable to global price fluctuations, trade restrictions, and tariff changes.

Moreover, a significant portion of shrimp feed ingredients are imported, exposing producers to international price volatility and supply disruptions, which further adds to operational risk.

7.2. Challenges In Red Chilies Market

Pest Disease Attack:

Pest and disease attacks remain a major constraint for red chili cultivation in India.

In FY24, there was a 25–30% drop in red chili cultivation compared to last year, due to growing challenges like pest outbreaks, weather-related stress, and lower price realization. (Source: cmbroker, pjtau report)

However, according to the Agriculture Ministry, the area under red chili cultivation increased from 8.52 million hectares in 2022–23 to 9.9 million hectares in 2023–24, and production rose from 2.78 million tons to 3.21 million tons.

Despite the growth in area and output, profitability remains under pressure due to pest-related crop loss and rising input costs. Unseasonal rains and pest outbreaks continue to threaten crop quality and yields, adding uncertainty to production.

Increasing Labor Cost:

One of the critical challenges facing the India red chilies market is the rising labor cost, which significantly impacts production and processing economics. Labour-intensive activities such as harvesting, sorting, and drying constitute a major portion of the overall cost structure.

According to the ANGRAU Chilli Outlook Report, labor costs account for approximately 34% of the total cost of chili cultivation, with the average per hectare cost of cultivation reaching nearly INR 2,95,718, of which about INR 1,00,000 is spent solely on labor.

Detailed farm-level analyses reveal that chili production requires intensive manual work, with operations such as harvesting alone consuming over 50% of total labor input.

This high labor dependency not only raises production costs but also exposes farmers to risks from labor shortages and wage fluctuations, ultimately impacting the competitiveness of Indian red chilies in both domestic and export markets.

8. Regulatory Framework

8.1. Domestic and International Regulations and Quality Standards

Regulations for Shrimps

India's shrimp industry is governed by a comprehensive regulatory framework to ensure food safety, quality, traceability, and environmental sustainability. Several key agencies oversee different aspects of the market, each with specific mandates and standards.

Figure 8-1: Overview of Regulatory Bodies Governing India Shrimps Market (As of June 25)

Regulation	Details
Food Safety and Standards Authority of India (FSSAI)	• Has a set rigorous hygiene standards for seafood, including shrimp. • Covering aspects like storage temperatures, sanitation protocols, and traceability measures throughout the supply chain
Marine Products Export Development Authority(MPEDA)	• It registers aquaculture farms and processing units • Ensuring they adhere to national and international standards. • Provides guidance on best management practices for shrimp farming
Export Inspection Council (EIC)	• EIC approves seafood processing units, ensuring they meet the required standards for export.
Coastal Aquaculture Authority (CAA)	• Regulates coastal aquaculture activities, including shrimp farming. • Ensuring sustainable practices and environmental protection.

Source: Website of Food safety and Standards Authority of India (FSSAI), Marine Products Export development Authority, Export Inspection Council & Coastal Aquaculture Authority

India's shrimp export sector is regulated by multiple agencies to ensure compliance with both domestic and international standards:

Table 8-1: Overview of Regulatory Bodies for Governing Shrimp Exports from India (As of February 2026)

Regulatory Body	Functions
Marine Products Export Development Authority (MPEDA)	Apex body responsible for the promotion and regulation of marine product exports. It mandates the registration of seafood processing units and aquaculture farms, ensuring adherence to quality and traceability standards. Collaborates with international bodies to align with global requirements
Food Safety and Standards Authority of India (FSSAI)	FSSAI sets safety and hygiene standards. Processing units must comply with FSSAI regulations
Export Inspection Council (EIC)	The EIC is responsible for the inspection and certification of export commodities. Seafood processing units require EIC approval, which involves regular audits and compliance with Hazard Analysis and Critical Control Points (HACCP) protocols
Coastal Aquaculture Authority (CAA)	Regulated aquaculture activities in coastal areas. It mandates the registration of shrimp hatcheries and farms, ensuring sustainable practices and adherence to environmental norms

Sources: Official Website of Marine Products Export Development Authority, Food safety and Standards Authority of India, Export Inspection Council, and Coastal Aquaculture Authority

The international regulatory environment for Indian shrimp exports is becoming increasingly stringent to ensure food safety and traceability. Key markets like the European Union, United States, and Japan enforce strict standards—such as the EU's increased inspection rates targeting antibiotic residues, the US Seafood Import Monitoring Program (SIMP) requiring detailed harvest documentation, and Japan's limits on antibiotic contamination under its Food Sanitation Act. Compliance with these regulations is essential for Indian exporters to

maintain market access and meet global quality expectations.

Figure 8-2: Overview of Different Regulations for Shrimps by Key Export Markets (As of June 2025)

Country	Details
European Union	• The EU strictly monitors shrimp imports for **banned antibiotics.** • EU has increased inspection rates for Indian shrimp exports of at least 50% of every consignment undergoes detailed verification.
United States	• Enforces **SIMP (Seafood Import Monitoring Program)** to prevent illegal, unreported, and unregulated (IUU) fishing. • Indian shrimp exporters must provide detailed documentation on the harvest and chain of custody to comply with these regulations.
Japan	• Mandates that imported shrimp meet its Food Sanitation Act standards. • Includes limits on antibiotic residues and other contaminants, due to ongoing concerns about contamination.

Source: Official websites of Southern Shrimp alliance, International Collective in Support of Fishworkers

Impact of US Tariffs on Shrimp Exports from India to US:

Recently in **April 25**, the U.S. announced a **26% additional tariff** on Indian shrimp, raising the total duty (including existing anti-dumping and countervailing duties) to **45%**. The move disrupted exports worth **INR 3,000 crore** (USD360 million), with around **2,000 containers** affected. Because of which the **Farm-gate prices** of shrimp in India fell by **INR 70/kg**, hurting thousands of farmers, especially those cultivating **Vannamei shrimp**. As for the Indian exporters, they faced an estimated loss of **USD 1 billion**, with major U.S. buyers delaying or canceling shipments. **Ecuador**, with a lower 10% duty, gained competitive advantage, threatening India's market share in the U.S., which is its **largest shrimp export market. (Source: Reuter)** Although the **U.S. paused the tariff hike temporarily**, maintaining the existing 10% rate, offering short-term relief and allowing pending consignments to move.

Exporters are now looking to **diversify in markets** like China, Russia, and Canada to mitigate dependency on the U.S.

Country Specific Certifications for Shrimps:

Each importing country has its own set of specialized certifications for shrimp imports, addressing environmental sustainability, sanitary compliance, and origin-specific documentation.

Table 8-2: Country Specific Certifications for Shrimps across the Counties

Countries	Certificates
US	Sanitation Certificate Turtle Excluder Device (TED) Compliance
EU	Health Certificate (Issued by Export Inspection Council and regional EIAs) Residue Monitoring Plan (RMP) Catch Certificate (for Wild-Caught Shrimp)
China	Marine Products Export Development Authority (MPEDA) Registration
Japan	Marine Products Export Development Authority (MPEDA) Registration (specific to Japan) Registration-Cum-Membership Certificate (RCMC) Catch Certificate Export Inspection Council (EIC) Health Certificate Sustainability Certifications (Aquaculture Stewardship Council (ASC), Best Aquaculture Practices (BAP)
Vietnam	Processing Facility Approvals Registration with Vietnam's Department of Animal Health (DAH) Animal Quarantine Certificate Customs Documentation specific to Vietnam (Bill of Lading/Airway Bill, etc.) Labeling Requirements as per Vietnamese regulations
Singapore	Singapore Food Agency (SFA) Import/Export License Cargo Clearance Permit (CCP) via Trade Net Free Sale Certificate (issued by SFA) Export Health Certificate (issued by SFA)

Sources: Official Website of Marine Products Export Development Authority, Export Inspection Council of India , National Oceanic and Atmospheric Administration, Sales Force Automation, Vietnam DAH, Trade Net

Incentives for Shrimps:

The **Marine Products Export Development Authority (MPEDA)** and the **Pradhan Mantri Matsya Sampada Yojana (PMMSY)** provide comprehensive support to shrimp exporters:

Table 8-3: MPEDA and PMMSY Support for Shrimps Industry in terms of Capital Subsidies and Quality Control

Capital Subsidies	
Support In	**Support Value**
New Farm Development	**25**% subsidy on capital cost for developing new shrimp farms, up to INR 30,000 per hectare
Hatchery Setup	Subsidies ranging from 15% to 50% for establishing shrimp hatcheries, depending on the sector
Effluent Treatment Systems	25% subsidy for setting up effluent treatment systems in shrimp farms, promoting sustainable practices
Chill Room Facilities	25% subsidy for establishing chill rooms in shrimp farming areas to maintain product quality post-harvest
Quality Control	
Support In	**Support Value**
Water Testing Kits	25% subsidy for purchasing water quality testing equipment, up to INR 30,000 per beneficiary
Antibiotic Residue Testing Kits	33.3% subsidy for procuring quick testing kits to ensure compliance with international residue standard

Source: Website of Agricultural and Processed Food Products Export Development Authority & Pradhan Mantri Matsya Sampada Yojana

Table 8-4: MPEDA and PMMSY Support for Shrimp in Market Development

Support Through	Support In
Export Promotion	Financial assistance for participating in international seafood fairs and organizing promotional events to expand market reach
Insurance Coverage	Group insurance schemes for workers in seafood processing units, covering health, accident, and calamity-related risk

Source: Website of Agricultural and Processed Food Products Export Development Authority & Pradhan Mantri Matsya Sampada Yojana

Certifications for Export of Shrimps and Red Chilies to Key Export Markets:

Common Certifications for Chilies Segment:

For chili exports, exporters must adhere to certifications that cover food safety, origin verification, and pest control, aligning with phytosanitary and spice-specific regulations.

Table 8-5: Common Certifications for Chilies Across the Counties

Certification	Types
Common Certification Across Countries	Importer Exporter Co de (IEC)
	HACCP Certification
	Phytosanitary Certificate
	Spices Board Registration (CRES)
	FSSAI License
	Certificate of Origin

Sources: Official Website of Directorate General of Foreign Trade, Spices Board, Food safety and Standards Authority of India, Directorate of Plant Protection, Quarantine and Storage, Export Promotion Councils

Common Certifications for Shrimp Segment:

Shrimp exports from India must fulfill baseline regulatory requirements to ensure traceability, hygiene, and quality standards as mandated by global trade authorities.

Table 8-6: Common Certifications for Shrimp Across Countries

Countries	Certificates
Common Certifications Across Countries	Importer Exporter Co de (IEC)
	HACCP Certification
	FSSAI License
	Health Certificate / Export Health Certificate
	Certificate of Origin

Sources: Official Website of Directorate General of Foreign Trade, Marine Products Export Development Authority, Food safety and Standards Authority of India, Export Inspection Council of India

REGULATIONS FOR RED CHILIES

India is the world's largest producer, consumer, and exporter of chili, making the regulation of its quality and safety critical for both domestic and international markets. The domestic regulatory framework for the Indian chili market is shaped by three key institutions: the Food Safety and Standards Authority of India (FSSAI), the Bureau of Indian Standards (BIS), and the Spices Board of India.

Figure 8-3: Overview of Regulatory Bodies Governing Indian Red Chilies Market (As of June 2025)

Regulation	Details
Food Safety and Standards Authority of India (FSSAI)	• Established comprehensive standards for spices under the Food Safety and Standards Regulations, 2011. • Covers aspects like permissible extraneous matter, moisture content, and contamination levels. • All entities involved in the manufacture, storage, distribution, sale, or import of spices are required to obtain an FSSAI license, ensuring adherence to safety and quality norms.
Bureau of Indian Standards (BIS)	• Prescribed a quality standards for spices, including chilies IS 2322:2010. • Outlines specifications for whole and ground chilies. • Detailing parameters like color value, capsaicin content, and permissible limits for foreign matter development lifecycle
Spices Board of India	• Works for the quality control by collaborating with BIS to finalize and upgrade standards for spices. • Provides guidelines for quality improvement and ensures that exported spices meet international standards

Source: Website of Food Safety and Standards Authority of India (FSSAI), Bureau of Indian Standards & Spice Board of India

The export of red chilies from India is governed by several key regulations and authorities:

Table 8-7: Overview of Regulatory Bodies for Red Chilies Exports from India (As of February 2026)

Regulatory Body	Function
Spices Board of India	Operates under Ministry of Commerce and Industry, it is the primary regulatory body for spice exports. Exporters must

	obtain a Certificate of Registration as an **Exporter of Spices (CRES)** from the Board. The Board also oversees quality control, provides testing facilities, and implements various schemes to promote spice exports
Food Safety and Standards Authority of India (FSSAI)	FSSAI ensures that spice products meet food safety standards Exporters are required to obtain an FSSAI license, which involves compliance with regulations
Agricultural and Processed Food Products Export Development Authority (APEDA)	APEDA facilitates the export of agricultural products, including spices. Supports export promotion, quality improvement, and market development.
Plant Quarantine (Regulation of Import into India) Order, 2003	Mandates a Phytosanitary Certificate for the export of plant products, including red chilies. Ensuring that the consignment is free from pests and diseases

Source: Official websites of Spice Board of India, FSSAI, APEDA & Ministry of Agriculture and Farmers Welfare

India is a leading exporter of chili, supplying key markets like the EU, US, and Japan. To access these markets, Indian exporters must comply with strict international regulations focused on food safety, pesticide residues, and contaminants. The EU enforces stringent Maximum Residue Limits (MRLs) and requires certification against ethylene oxide contamination. The US, under the Food Safety Modernization Act (FSMA), emphasizes preventive controls and traceability, while Japan mandates compliance with its Food Sanitation Act and detailed labeling standards. Adhering to these regulations is essential for maintaining market access and ensuring the global competitiveness of Indian chili products.

Figure 8-4: Overview of Different Regulations for Chilies by Key Export Markets (As of June 25)

Country	Details
European Union	• Has a stringent **MRL (Maximum Residue Limits)** for pesticides and contaminants in spices. • These limits are crucial to ensure consumer safety and are enforced through regular inspections. • Detections of **EtO(Ethylene Oxide)**, the EU mandates that exporters provide official certification verifying the absence of EtO in their products.
United States	• Under **Food Safety Modernization Act (FSMA), the US Food and Drug Administration (FDA)** requires that imported spices meet specific safety standards, including preventive controls and hazard analysis. • Emphasizes importance of contamination prevention and traceability.
Japan	• **Japan's Food Sanitation Act** sets standards for food safety, including permissible levels of pesticide residues and contaminants in spices. • Importers must comply with these standards to gain market access and adhere to Japan's labeling regulations.

Source: Official websites of European union, US Food and Drug Administration & Ministry of Health, Labor and Welfare

Government Incentives & Subsidies for Red Chilies and Shrimps:

Incentives for Red Chilies:

The **Agricultural and Processed Food Products Export Development Authority (APEDA)**, under the Ministry of Commerce & Industry, offers various schemes to support red chili exporters:

Table 8-8: APEDA Supports in Indian Export of Red Chilies

Support Schemes	Description
Infrastructure Development Assistance	Financial support for establishing pack houses, cold storage, and processing units to enhance export quality.
Market Promotion Scheme	Assistance for participation in international trade fairs by organizing buyer-seller meets and developing packaging standards
Financial Assistance Scheme	Support for quality development through laboratory testing and certification
Transport Assistance	Subsidies to reduce the cost of transporting related to exports

Source: Website of Agricultural and Processed Food Products Export Development Authority

To recover the slumps in market prices, the **Market Intervention Scheme (MIS)** was approved in February 2025 to support red chilies farmers in Andhra Pradesh, aiming to stabilize prices and prevent distress sales.

Country-Specific Certifications for Chilies:

Exporting chilies from India requires country-specific certifications that cater to residue limits, food safety standards, and phytosanitary norms as mandated by the destination countries.

Table 8-9: Country Specific Certifications for Red Chilies Across Counties

Countries	Certificates
US	Spices Board of India Registration (if considered specific) Phytosanitary Certificate
EU	Phytosanitary Certificate Pesticide Residue Analysis Report Aflatoxin Analysis Report
China	Spices Board Registration (CRES) APEDA Registration FSSAI License Phytosanitary Certificate Certificate of Origin
Japan	Spices Board Registration (Certificate of Registration as Exporter of Spices - CRES) Agricultural and Processed Food Products Export Development Authority (APEDA) Registration Food Safety and Standards Authority of India (FSSAI) Certificate of Origin
Vietnam	Phytosanitary Certificate Pesticide Residue Analysis Report Aflatoxin Analysis Report Electronic Customs Declaration HS Code Compliance
Singapore	Pesticide Residue and Aflatoxin Analysis Reports

Sources: Official Website of Spices Board, Agricultural and Processed Food Products Export Development Authority, Food safety and Standards Authority of India, Directorate of Plant Protection, Quarantine and Storage, NABL-accredited Labs, Indian Customs

OVERVIEW OF COLD CHAIN INFRASTRUCTURE FOR DISTRIBUTION OF SHRIMPS AND RED CHILIES

India's cold chain infrastructure is pivotal for preserving perishable commodities like shrimps and red chilies. As of 2021, the country had approximately 7,645 cold storage facilities with a combined capacity of 37–39 million tons. However, a significant portion (68%) of this capacity is dedicated to potatoes, leaving only 30% for multi-commodity storage, which includes seafood and spices. The refrigerated transport fleet comprises over 10,000 vehicles, which is insufficient to meet the vast geographical demands of India. (Source: Directorate of Economics and Statistics India)

Cold Chain Infrastructure for Shrimp Distribution:

India is a leading exporter of shrimp, necessitating a robust cold chain to maintain product quality. The Marine Products Export Development Authority (MPEDA) plays a crucial role in registering infrastructure facilities for seafood export, promoting the use of insulated fish boxes, and modernizing industry components like plate freezers and IQF machinery. The Ministry of Food Processing Industries (MoFPI) supports the development of integrated cold chain projects, including pre-cooling, cold storage, and refrigerated transport, under schemes like the Pradhan Mantri Kisan Sampada Yojana.

Cold Chain Infrastructure for Red Chilies Distribution

Red chilies, being a significant export commodity, require proper drying and storage to maintain quality. The cold chain for red chilies involves pre-cooling, sorting, grading, and storage facilities. However, the infrastructure is less developed compared to other commodities. Government initiatives under the Mission for Integrated Development of Horticulture (MIDH) aim to develop cold storages,

ripening chambers, and pack houses to support the spice industry.

Technological Advancements and Innovations

The Indian cold chain sector is embracing technological innovations to enhance efficiency. Adoption of IoT, RFID, and real-time temperature monitoring systems are becoming prevalent. Startups like Cloudtrack have developed software for real-time monitoring of product temperatures during transit. Additionally, advanced freezing techniques like cryogenic freezing are being explored to preserve the quality of perishable goods

Challenges in Cold Chain Infrastructure

Despite advancements, several challenges persist:

- **Infrastructure Gaps**: A significant portion of cold storage facilities is concentrated in certain regions, leading to uneven distribution and accessibility issues.
- **Energy and Operational Costs**: High energy consumption and operational costs deter investment in cold chain facilities**.**
- **Skilled Manpower**: There is a shortage of trained personnel to manage and operate cold chain logistics effectively.
- **Regulatory Compliance**: Ensuring compliance with international standards for exports, especially in the seafood sector, remains a challenge.

Government Initiatives and Support

The Indian government has launched several schemes to bolster cold chain infrastructure:

- **Integrated Cold Chain and Value Addition Infrastructure Scheme**: Provides financial assistance for setting up cold chain facilities,

including pre-cooling, cold storage, and refrigerated transport.

- **Pradhan Mantri Kisan Sampada Yojana**: Aims to create modern infrastructure for the storage, processing, and distribution of agricultural products, including seafood and spices.
- **Mission for Integrated Development of Horticulture (MIDH)**: Supports the development of cold storages, ripening chambers, and pack houses for horticultural produce, including red chilies.

India's cold chain infrastructure is evolving to meet the demands of perishable commodity distribution, including shrimps and red chilies. While significant strides have been made through government initiatives and technological adoption, challenges such as infrastructure gaps, high operational costs, and regulatory compliance need to be addressed to ensure the efficiency and reliability of the cold chain system.

9. Competition Landscape - India Red Chilies and Shrimps Market

9.1. Overview of Indian Shrimps Competition Landscape

The competition landscape within Indian shrimp industry is shaped by both scale and integration, with **major players such as Devi Sea Foods Ltd., Apex Frozen Foods Ltd., Jagadeesh Marine Exports, And Kings Infra Ventures Ltd**. These companies compete on parameters such as operational efficiency, backward integration (especially in feed and hatchery operations), export market penetration (notably to the US, EU, and China), and adherence to international quality standards. With this backdrop, a comparison of these firms on operational and financial metrics will help understand strategic positioning and performance within the sector.

Figure 9-1: Ecosystem of Key Players & Regulatory Agencies in Indian Shrimp Market

Source: Ken Research Analysis, Companies & Regulatory Agency Websites

9.2. Cross Comparison of Peers in Indian Shrimps Market

Table 9-1: Cross-Comparison of Peers in India Shrimps Market on basis of Operational Parameters, as on February 2026 (1/4)

Players	HQ	Founded Year	Key Product Offerings	Certifications
Devi Sea Food Ltd.	Visakhapatnam, India	1992	• Pre-cleaned, Deveined, Ready-to-cook as well as cooked, Ready-to-eat shrimp • Shrimp Feed Products	• International Featured Standards Food • BRCGS (Brand Reputation through Compliance Global Standards) • Best Aquaculture Practices, ASC Certification
Apex Frozen Food Ltd.	Kakinada, India	1995	• Black Tiger, Vannamei	• Social Accountability 8000 • NSF , BAP
Jagadeesh Marine Exports	Bhimavaram, India	1998	• Shrimps: Raw White Shrimp, Skewers, Cooked White Shrimp, Black Tiger Shrimp	• ASC, BAP, BRC, IFS, HACCP, and HALAL, ISO9001, ISO/IEC17025
Kings Infra Ventures Ltd.	Kerela,India	1958	• Farm Infrastructure • Vannamei, Cuttlefish, squid, octopus. • Ready to cook, ready to heat variety. • SISTA360- one-stop-solution to aquafarmers • Sustainable aquaculture solutions	• ISO 9001:2015, ISO 22000-2018, GMP and FSSAI certifications, • CAA Approved
Essex Marine Limited	Kokata, India	2009	• shrimps: aquaculture vannamei shrimp and frozen shrimp products.	• HACCP • BRC Global Standard FSSC V5.1

Source: Ken Research Analysis, Companies' Websites, Annual Reports

Table 9-2: Cross-Comparison of Peers in India Shrimps Market on basis of Strengths and Weaknesses, as on February 2026 (2/4)

Players	Strengths	Weaknesses
Devi Sea Food Ltd.	• Direct U.S. Market Presence: Owns a U.S. subsidiary, enabling direct access to buyers, better margins, and real-time market feedback. • Among few Indian exporters specializing in premium Black Tiger shrimp, targeting high-end markets. • Operational Clustering in Andhra: All facilities are concentrated in Andhra Pradesh, reducing logistics cost and boosting QC efficiency	• Export Market Dependence: Heavy focus on U.S. with little visibility in other regions limits market diversification
Apex Frozen Food Ltd.	• Integrated Operations and In-House Farming Capacity: End-to-end control from hatchery to export enables cost efficiency, quality control, and supply reliability • Long-term relationships with top global clients in USA and EU markets • Strategic Location: Facilities near coastal Andhra Pradesh ensure quick farm-to-processing transitions and easy access to major ports (Kakinada & Visakhapatnam)	• Export Market Dependence: Highly exposed to international market volatility, trade policies, and currency fluctuations
Jagadeesh Marine Exports	• Strategic Location: Proximity to the prawn procurement region ensures efficiency in sourcing and processing • Advanced Processing Infrastructure: Equipped with updated freezing, storage, and processing technologies • Diversified Portfolio and Export Reach: Wide range of products including Vannamei prawns (HOSO, HLSO, PD, PDTO, etc.) with exports to key global markets (USA, Europe, Middle East, and Asia)	• Family-Centric Structure: Limited external leadership may restrict scalability • Regional Dependency: Operations concentrated in Andhra Pradesh pose geographic risk
Kings Infra Ventures Ltd.	• Players in sustainable shrimp farming since 1987, using proprietary antibiotic-free protocols. • Offers a full farm-to-fork solution, including infrastructure, inputs, processing, and retail brands like Kings Bento and Kings Frigo.	• Small-Scale Operations in a Fragmented Industry: It remains a micro-cap player in a highly fragmented aquaculture sector, limiting scale and reach.

Players	Strengths	Weaknesses
Essex Marine Limited	• Strong export orientation, diversified shrimp processing formats, compliance with global food safety standards, established presence in EU markets	• High dependence on shrimp raw material availability, exposure to disease risk and seasonal catch volatility, limited product diversification beyond seafood

Source: Ken Research Analysis, Companies' Websites, Annual Reports, News Articles, Companies Announcement

Table 9-3: Cross-Comparison of Peers in India Shrimps Market on basis of Financial Parameters, FY22 – FY26 H1 (3/4)

Company	Financial Year	Revenue From Operations (INR Lakhs)	Growth in Revenue from Operations (Y-o-Y)	EBITDA (INR Lakhs)	EBIDTA Margin	PAT (INR Lakhs)	PAT Margins
Green Asia Impex Limited	FY26 (H1)	17,956.94	N/A	1,488.01	8.21%	755.85	4.21%
	FY25	33,762.61	6.38%	2,340.00	6.89%	1,035.20	3.07%
	FY24	31,738.66	73.39%	1,942.11	6.10%	665.99	2.10%
	FY23	18,304.81	67.21%	689.66	3.73%	22.43	0.12%
Devi Sea Food LTD.	FY25	N/A	N/A	N/A	N/A	N/A	N/A
	FY24	323,972.00	3.30%	52,310.00	16.15%	35,137.00	10.85%
	FY23	313,620.00	1.60%	46,283.00	14.76%	30,933.00	9.86%
	FY22	308,675.00	N/A	44,289.00	14.35%	29,893.00	9.68%
Apex Frozen Food Ltd.	FY26 (H1)	45,547.25	N/A	2,349.92	5.16%	1,106.31	2.43%
	FY25	81,355.00	1.18%	2,973.00	3.65%	388.00	0.48%
	FY24	80,410.00	(24.87%)	4,444.00	5.53%	1,460.00	1.82%
	FY23	107,030.00	17.08%	8,477.00	7.92%	3,588.00	3.35%
	FY22	91,420.00	N/A	9,210.00	10.07%	4,108.00	4.49%
Jagadeesh Marine Exports	FY25	N/A	N/A	N/A	N/A	N/A	N/A
	FY24	24,152.00	(21.76%)	718.00	2.97%	132.00	0.55%
	FY23	30,868.00	(5.49%)	893.00	2.89%	347.00	1.12%
	FY22	32,661.00	N/A	783.00	2.40%	152.00	0.47%
Kings Infra	FY26 (H1)	7,725.00	N/A	1,109.00	14.36%	773.00	10.00%
	FY25	12,380.00	(37.61%)	2,340.00	18.9%	1,380.00	10.50%
	FY24	9,040.00	36.95%	1,440.00	16.0%	780.00	8.60%

Ventures Ltd.	FY23	6,090.00	48.48%	980.00	16.2%	580.00	9.50%
	FY22	3,980.00	N/A	500.00	12.5%	300.00	7.40%
Essex Marine Limited	FY25	3,722.47	94.38%	402.16	10.80%	469.03	12.60%
	FY24	1,915.02	(12.55%)	63.71	3.33%	203.27	10.61%
	FY23	2,189.76	N/A	97.25	4.44%	245.40	11.21%
	FY22	N/A	N/A	N/A	N/A	N/A	N/A

Source: Ken Research Analysis, Companies' Websites, Annual Reports, Proprietary Databases
**Note 1: For the working capital cycle (in days), only inventory, debtors, and creditors have been considered; no other liabilities have been included.*
Note 2: FY24 indicates financial year which starts from 1st April 2023 and ends on 31st March 2024
Note 3: FY25 indicates financial year starting from 1st April 2024 and ends on 31st March, 2025
Note 4: N/A indicates information Not Available
Note 5: FY26 (H1) indicates half yearly figures for FY26

Table 9-4: Cross-Comparison of Peers in India Shrimps Market on basis of Financial Parameters, FY22 – H1 FY26 (4/4)

Company	Financial Year	Net Worth	Return on Equity (%)	ROCE (%)	Debt-Equity Ratio	Net Working Capital Ratio
Green Asia Impex Limited	FY26 (H1)	3,169.32	25.54%	12.70%	2.25	1.16
	FY25	2,413.48	50.16%	20.62%	2.90	1.13
	FY24	1,378.28	51.34%	20.53%	4.12	1.08
	FY23	1,048.29	2.16%	7.39%	3.73	1.06
Devi Sea Food LTD.	FY25	N/A	N/A	N/A	N/A	0.92
	FY24	211,632.00	16.60%	20.12%	0.10	10.20
	FY23	176,651.00	17.51%	20.98%	0.12	8.42
	FY22	144,505.00	20.69%	22.86%	0.23	4.41
Apex Frozen Food Ltd.	FY26 (H1)	50,184.19	2.20%	0.35%	1.24	3.40
	FY25	49,899.50	0.78%	2.87%	N/A	3.39
	FY24	49,351.00	2.96%	4.90%	0.27	3.01
	FY23	48,269.50	7.43%	11.26%	0.25	8.42
	FY22	45,762.50	8.98%	11.49%	0.43	2.39
Kings Infra Ventures Ltd.	FY26 (H1)	7,469.00	10.35%	7.17%	2.10	1.66
	FY25	N/A	20.0%	17.4%	1.0	1.44
	FY24	N/A	16.5%	14.5%	0.7	1.99
	FY23	N/A	16.1%	14.7%	1.0	3.01
	FY22	N/A	9.4%	9.7%	1.0	N/A
Essex Marine Limited	FY25	314.85	30.56%	18.24%	1.78	2.19
	FY24	114.72	16.80%	10.35%	1.63	1.22
	FY23	15.06	11.88%	10.30%	2.66	2.99
	FY22	N/A	N/A	N/A	N/A	N/A

	N/A	N/A	N/A	N/A	N/A

Source: Ken Research Analysis, Companies' Websites, Annual Reports, Proprietary Databases
Note 1: FY24 indicates financial year which starts from 1st April 2023 and ends on 31st March 2024
Note 2: FY25 indicates financial year starting from 1st April 2024 and ends on 31st March, 2025
Note 3: N/A indicates information Not Available
Note 4: FY26 (H1) indicates half yearly figures for FY26

9.3. Overview of Indian Red Chilies Competition Landscape

The Indian red chilies market is highly competitive and fragmented, characterized by a mix of large-scale exporters and numerous regional players. Demand is driven both by domestic consumption and international exports, particularly to countries in Asia, the Middle East, Europe and the US. The sector is influenced by factors such as climatic conditions, price volatility, global demand-supply dynamics, and stringent quality standards. In this competitive landscape, companies like NK Agro Exports (India) Pvt Ltd, Vijaya Krishna Spices Private Limited, and Siddhartha Corporation Private Limited have carved out significant positions, leveraging operational efficiency, strong sourcing networks, and compliance with export-grade quality benchmarks.

Figure 9-2: Ecosystem of Key Players & Regulatory Agencies in Indian Red Chilies Market

Source: Ken Research Analysis, Companies' & Regulatory Agency Websites

The Indian Red Chilies Market operates within a well-defined ecosystem comprising a diverse set of manufacturers and traders, alongside a robust regulatory framework. The market is characterized by the presence of established players commanding significant market share, coexisting with numerous 'Other Players,' indicating a competitive and fragmented landscape. This entire value chain is governed by stringent regulatory oversight from key governmental bodies. Agencies such as the FSSAI ensure food safety standards, while the APEDA and Spices Board India actively promote and regulate exports. Furthermore, the Directorate General of Foreign Trade (DGFT) under the Ministry of Commerce and Industry manages foreign trade policies. This comprehensive ecosystem ensures product quality, adherence to international standards, and facilitates both domestic trade and global market access for Indian red chilies.

9.4. Cross-Comparison of Peers in India Red Chilies Market

Some of the key competitors competing in the country's red chilies space are benchmarked on the basis of operational and financial parameters as follows:

Table 9-5: Cross-Comparison of Peers in India Red Chilies Market on basis of Operational Parameters, as on February 2026 (1/4)

Players	HQ	Founded Year	Key Product Offerings	Certifications
NK Agro Exports (India) Pvt Ltd	Tadepalligdem, India	2010	• Chilies: Teja stem, Teja stem cut, Teja stemless • Other spices • Oil seeds • Pulses	• ISO 9001:2008, GAP (Good Agricultural Practices), FSSAI (Food Safety and Standards Authority of India)
Vijaya Krishna Spices Private Limited	Ballari, India	2014	• Chilli: Ground, Crushed, Whole, • Turmeric • Ginger • Cumin • Coriander	• BRC, DNV GL
Siddhartha Corporation Private Limited	Thane India	1990	• Chilies: S17 Teja, S18 Armour, S4 Sannam, Wonder hot, Super-hot, Byadagi, S15 Mahi • Other seeds and spices	• N/A

Source: Ken Research Analysis, Companies' Websites, Annual Reports

Table 9-6: Cross-Comparison of Peers in India Red Chilies Market on basis of Strengths and Weaknesses, as on February 2026 (2/4)

Companies	Strengths	Weaknesses
NK Agro Exports (India) Pvt Ltd	• **Wide Product Range:** Diverse offerings reduce risk and serve multiple markets. • **Leading Exporter:** Strong global reach and export infrastructure. • **Advanced Cold Storage:** Facilities in Madhya Pradesh and Andhra Pradesh ensure product freshness and consistent quality.	**Limited Facility Spread:** With storage only in two states, distribution to other regions may face inefficiencies
Vijaya Krishna Spices Private Limited	• **Long-Term Client Relationships:** Strong partnerships with farmers, suppliers, and clients help ensure supply reliability and customer retention • **Efficient Logistics and On-Time Delivery:** Automated processes and logistics coordination ensures timely global shipments • **Market Intelligence–Driven Pricing:** Competitive prices without compromising quality	**Limited Product Portfolio:** Heavy focus on chilli and turmeric; lacks diversification into high-value or niche spices (e.g., saffron, cardamom, spice blends
Siddhartha Corporation Private Limited	• **Diverse Product Portfolio:** Wide range of agricultural products including groundnuts, sesame seeds, and many spices • **Efficient Supply Chain Management:** Well-established sourcing and logistics infrastructure enables timely delivery and product consistency across South Asian and global markets	limited plug-and-play IP offerings for non-defense clients

Source: Ken Research Analysis, Companies' Websites, Annual Reports, News Articles, Companies Announcement

Table 9-7: Cross-Comparison of Peers in India Red Chilies Market on basis of Financial Parameters, FY22 – FY26 (3/4)

Company	Financial Year	Revenue From Operations (INR Lakhs)	Growth in Revenue from Operations Y-o-Y	EBITDA (INR Lakhs)	EBIDTA Margin	PAT (INR Lakhs)	PAT Margins
Green Asia Impex Limited	FY26 (H1)	17,956.94	N/A	1,488.01	8.21%	755.85	4.21%
	FY25	33,762.21	6.38%	2,340.00	6.89%	1,035.20	3.07%
	FY24	31,738.66	73.39%	1,942.11	6.10%	665.99	2.10%
	FY23	18,304.81	67.21%	689.66	3.73%	22.43	0.12%
NK Agro Exports (India) Pvt Ltd	FY25	79,812.00	(10.55%)	1,726.00	2.16%	410.00	0.51%
	FY24	89,227.36	13.53%	1,249.00	1.40%	449.58	0.50%
	FY23	78,591.00	(4.25%)	643.00	0.82%	344.00	0.44%
	FY22	82,082.00	N/A	615.00	0.73%	374.00	0.46%
Sidhhartha Corporation Private Limited	FY25	114,206.00	(7.35%)	1,953.78	1.71%	(1,425.00)	(1.25%)
	FY24	123,265.00	5.28%	3,192.00	2.59%	1,269.00	1.03%
	FY23	117,080.00	7.43%	2,083.00	1.78%	1,454.00	1.24%
	FY22	108,985.00	N/A	2,262.00	2.07%	1,585.00	1.45%
Vijayakrishna Spices Private Limited	FY25	106,390.00	19.99%	4,914.00	4.62%	2,775.00	2.61%
	FY24	88,665.00	172.97%	3,886.00	4.38%	2,295.00	2.59%
	FY23	32,482.00	16.97%	1,941.00	5.97%	1,283.00	3.95%
	FY22	27,769.00	N/A	1,449.00	5.16%	762.00	2.74%

Source: Ken Research Analysis, Companies' Websites, Annual Reports, Proprietary Databases
Note 1: FY24 indicates financial year which starts from 1st April 2023 and ends on 31st March 2024
Note 5: FY26 (H1) indicates half yearly figures for FY26
Note 3: N/A indicates not available; annual filling not reported to MCA.

Table 9-8: Cross-Comparison of Peers in India Red Chilies Market on basis of Financial Parameters, FY22 – FY26 (4/4)

Company	Financial Year	Net worth	Return on Equity (%)	ROCE (%)	Debt-Equity Ratio	Net Working Capital Ratio
Green Asia Impex Limited	FY26 (H1)	3,169.32	25.54%	12.70%	2.25	1.16
	FY25	2,413.48	50.16%	20.62%	2.90	1.13
	FY24	1,378.28	51.34%	20.53%	4.12	1.08
	FY23	1,048.29	2.16%	7.39%	3.73	1.06
NK Agro Exports (India) Pvt Ltd.	FY25	5,041.00	8.13%	5.52%	4.14	N/A
	FY24	3,986.51	11.28%	2.86%	4.28	N/A
	FY23	2,840.00	12.11%	4.22%	4.69	N/A
	FY22	1,752.50	21.34%	3.49%	6.41	N/A
Sidhhartha Corporation Private Limited	FY25	22,109.00	(6.47%)	4.28%	1.01	N/A
	FY24	22,776.00	5.57%	6.60%	1.24	1.58
	FY23	21,415.00	6.79%	7.09%	0.41	3.16
	FY22	19,895.50	7.97%	5.97%	1.04	1.53
Vijayakrishna Spices Private Limited	FY25	14,287.50	19.42%	10.41%	2.85	N/A
	FY24	8,752.00	26.22%	9.34%	3.02	1.25
	FY23	3,963.00	32.37%	16.83%	1.43	1.60
	FY22	2,940.50	25.91%	11.92%	6.45	1.33

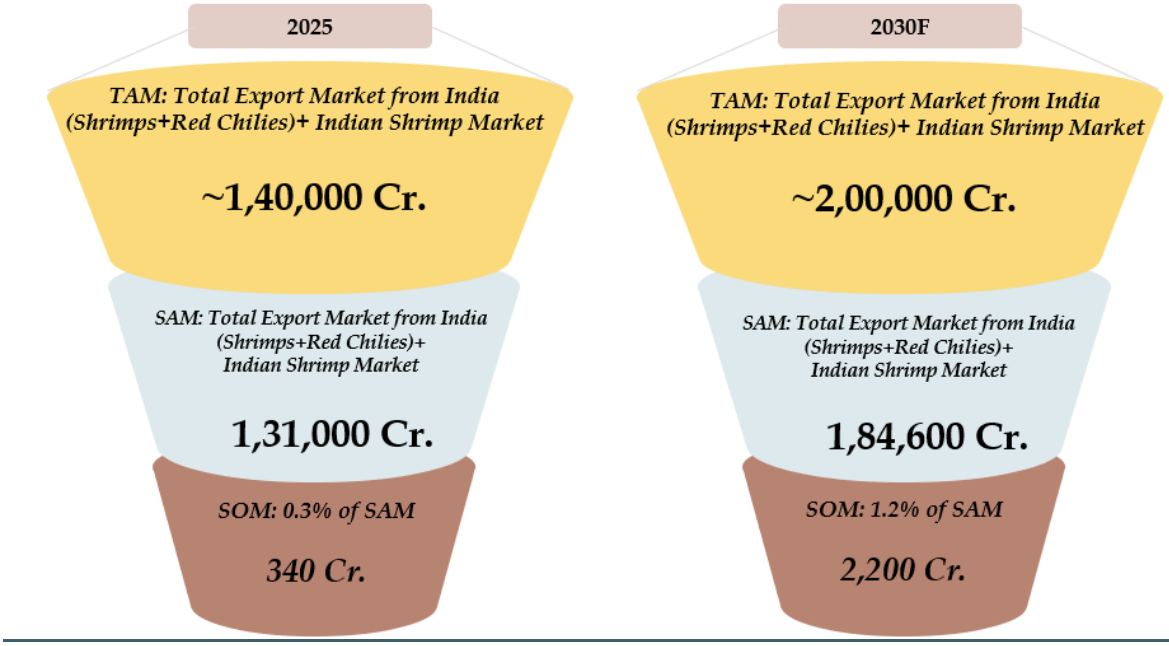
Source: Ken Research Analysis, Companies' Websites, Annual Reports, Proprietary Databases
Note 1: FY24 indicates financial year which starts from 1st April 2023 and ends on 31st March 2024
Note 2: FY26 (H1) indicates half yearly figures for FY26
Note 3: N/A indicates information Not Available

10. Conclusion – Way Forward

The combined market opportunity for red chilies and shrimps—both from India's domestic and export fronts—is poised for significant expansion. With the **total addressable market (TAM)** expected to grow from approximately ₹1,40,000 crore in 2025 **to ₹2,00,000 crore by 2030,** and the **serviceable addressable market (SAM)** rising from ₹1,31,000 crore to **₹1,84,600 crore in the same period,** the sector presents a robust long-term outlook for specialized exporters like Green Asia Impex.

Currently generating annual revenues of ₹320–340 crore, Green Asia Impex is already tapping into a ₹131,000 crore SAM. However, with the **serviceable obtainable market (SOM) projected to surge from ₹340 crore in 2025 to ₹2,200 crore by 2030,** the company is preparing for a transformative scale-up phase. **The present demand pipeline is already 2–3x the existing capacity**, underscoring the need for expansion.

Figure 10-1: Target Market Opportunity for Green Asia Impex Pvt. Ltd., 2025P & 2030F



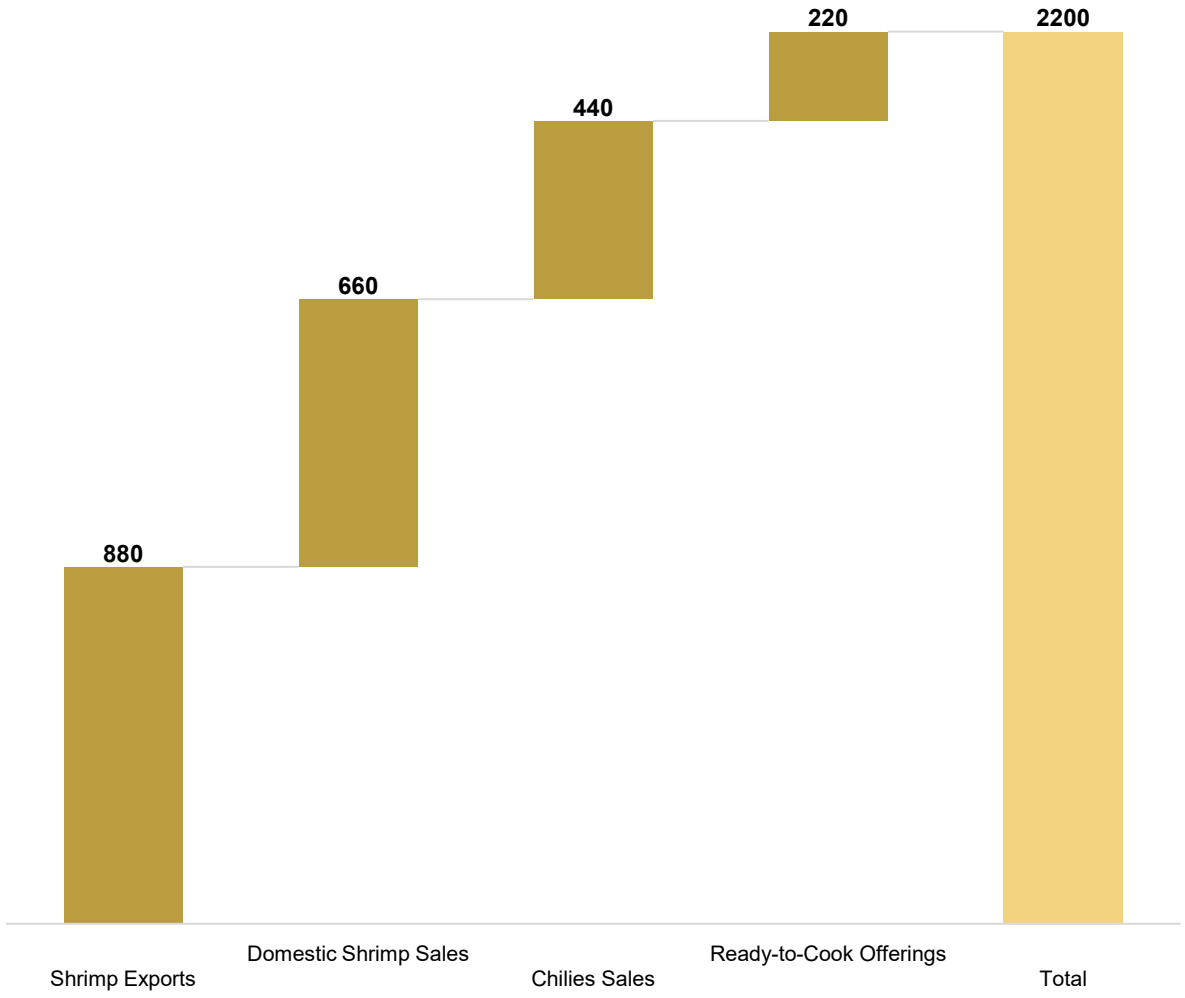
Source: Ken Research Analysis
TAM: Target addressable market; SAM: Serviceable addressable market and SOM: Serviceable obtainable market

In response, Green Asia Impex will continue to scale on exports and domestic sales of shrimps, while holding on to exports of red chilies. However, the company is initiating the development of a new processing facility for Shrimp with a capacity of 45–50 tons per day. This expansion will help to increase throughput and will also facilitate product diversification—including a strategic foray into Ready-to-Cook (RTC) offerings aimed at premium markets in Europe and North America.

The company has laid out ambitious growth targets: reaching ₹1,500 crore in revenues over the next three years and crossing ₹2,200 crore in the next five years. This will be achieved through a **phased and continuous expansion model, with subsequent plants envisioned every few years to match market demand and capitalize on export-driven opportunities.**

With a deep understanding of commodity sourcing, quality-focused processing capabilities, and an eye on global trends, Green Asia Impex is well-positioned to emerge as a leading player in India's high-growth agricultural and aquaculture export ecosystem—bridging farm-level production to international consumer markets with efficiency and scale.

Figure 10-2: Potential Revenue Growth Opportunity for Green Asia Impex (SOM) by FY'30 (in INR Crore)



Source: Ken Research Analysis

11. Research Methodology

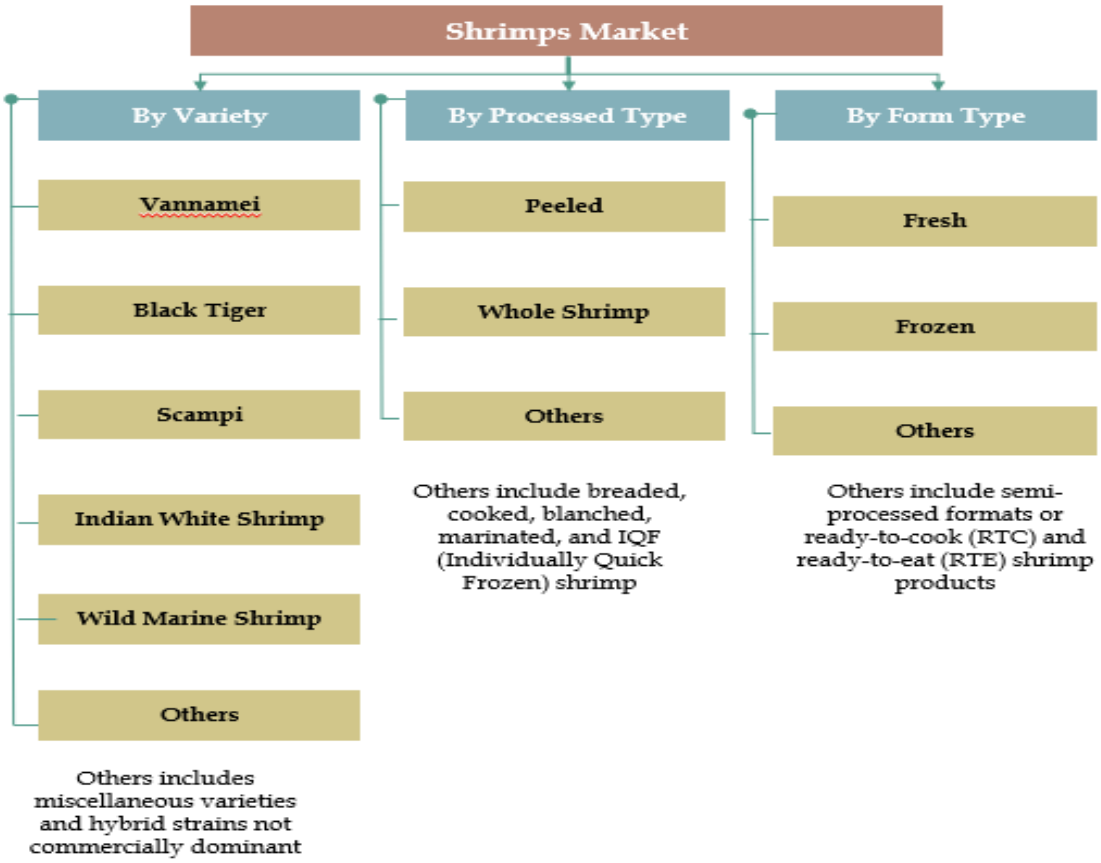
11.1. Market Definitions

SHRIMPS MARKET

The India Shrimps Market is estimated based on the aggregate value of shrimp consumption within India as well as the value of exports from India to key international markets, including United States, China, Japan, Vietnam, European Union.

The market value is calculated in INR Crores and represents the total industry revenue generated from the sale of all major shrimp types and processing formats. These formats include, but are not limited to, Vannamei, Black Tiger, Scampi, Indian White Shrimp, and Wild Marine Shrimp and head-on shell-on (HOSO), peeled and deveined (PD), tail-on, cooked, frozen, and value-added shrimp products.

This market encompasses both domestic consumption and international demand, with export figures representing outbound shipments from India to the above-mentioned geographies. The data sources include trade statistics, government publications, and industry estimates.



CHILIES MARKET

The Red Chilies Market size is calculated based on the total value of red chilies exported from India to key target markets, namely Bangladesh, US, China, Sri Lanka, Thailand, Malaysia, and Vietnam.

The market value is expressed in INR Crores and refers to the revenue generated through the export of various red chilies types, including stemmed chilies, stemless chilies, and powdered red chilies. This analysis covers all major processed and raw formats commonly traded in these regions.

This market sizing exclusively focuses on international demand from the specified countries, with estimates derived from official export data, trade statistics, and validated industry reports.

11.2. ABBREVIATIONS

ANGRAU- Acharya N. G. Ranga Agricultural University
APEDA- Agricultural and Processed Food Products Export Development Authority
ASC - Aquaculture Stewardship Council
ASEAN- Association of South-East Asian Nations
B2B- Business to Business
B2C- Business to Consumer
BAP- Best Aquaculture Practices
BIS- Bureau of Indian Standards
Bn- Billion
Bps- Basis Points
CAA- Coastal Aquaculture Authority
CAGR- Compound Annual Growth Rate
CATI- Computer Assisted Telephone Interview
CCP- Cargo Clearance Permit
CPI- Consumer Price Index
Cr- Crore
CRES- Certificate of Registration as an Exporter of Spices
DAH- Department of Animal Health
DGFT- Directorate General of Foreign Trade
E- Estimated Figures
EBITDA- Earnings Before Income Tax Depreciation and Amortization
EHP parasite- Enterocytozoon hepatopenaei
EIC- Export Inspection Council
EMS- Early Mortality Syndrome
EtO- Ethylene Oxide
EU- European Union
F- Forecasted Figures
FAE- First Advance Estimates
FDA- Food Development Authority
FDI- Foreign Direct Investment
FRE- First Revised Estimates
FSMA- Food Safety Modernization Act
FSSAI- Food Safety and Standards Authority of India
GCC- Global Capability Network
GDP- Gross Domestic Production
GNDI- Gross National Development Income
HACCP- Hazard Analysis and Critical Control Points
HoReCa- Hotel, Restaurant, and Catering
HOSO- Head-on Shell-on

IEC- Importer Exporter Code
IFQ/ IQF- Individual Quick Freezing
IMF- International Monetary Fund
INR- Indian Rupees
Iot- Internet of Things
IUU- Illegal, Unreported and Unregulated
KGs- Kilograms
MIDH- Mission for Integrated Development of Horticulture
MNCs- Multi National Companies
MoFPI- Ministry of Food Processing Industries
MoSPI- Ministry of Statistics and Programme Implementation
MPC- Monetary Policy Committee
MPCE - Monthly Per Capita Consumption Expenditure
MPEDA- Marine Products Export Development Authority
MRLs- Maximum Residue Limits
MSC- Marine Stewardship Council
MT- Modern Trade
N/A- Not Available
NABARD- National Bank for Agriculture and Rural Development
NACER- National Centre for Excellence of RSETIS
OEMs- Original Equipment Manager
FY- Forecasted Year
PAT- Profit After Tax
PD- Peeled and Deveined
PE- Provisional Estimates
PMMSY- Pradhan Mantri Matsya Sampada Yojana
QC- Quality Control
QSRs- Quick Service Restaurants
RAS - Recirculating Aquaculture System
RBI- Reserve Bank of India
RCMC- Registration-Cum-Membership Certificate
RFID- Radio Frequency Identification
RMP- Residue Monitoring Plan
ROCE- Return On Capital Employed
RTC- Ready To Cook
RTE- Ready To Eat
SFA- Singapore Food Agency
SHU -Scoville Heat Units
SIMP- Seafood Import Monitoring Program

SPF - Specific Pathogen Free
TED- Turtle Excluder Device
TN- Trillion
UAE- United Arab Emirates
UK- United Kingdom
US- United States
USA- United States of America
USD- United States Dollar
WSSV- White Spot Syndrome Virus
Y-o-Y- Year on year

11.3. Market Sizing and Modeling

SHRIMPS MARKET

The research team conducted **Computer-Assisted Telephonic Interviews (CATIs)** with key stakeholders across the shrimp value chain, including representatives from exporters, seafood processing units, aquaculture companies, trade associations, and cold chain logistics providers. **The respondents included C-level executives, Export Managers, Procurement Heads, Production Managers, Trade Analysts, and Business Development Managers** from leading companies actively involved in shrimp farming, processing, and international trade.

These interviews were aimed at validating the hypothesis regarding **India's domestic shrimp consumption trends**, the **demand across key export geographies** (such as the **US, China, Japan, Vietnam, and the EU**), and the **market share contribution by various shrimp types and processing formats**. Industry experts provided insights on **volume trends, pricing dynamics, consumption patterns**, and **future outlook**, which were then used to fine-tune the market size estimates.

Figure 11-1: Sample Composition Table by Stakeholders and Respondents in (%) Of Shrimps Market

By Stakeholders	Sample Size: ~40 Respondents	Description
Shrimp Processors & Exporters	50%	Export Managers, Operations Heads, Business Development Managers, Aquaculture Experts
End-Use Buyers & Trade Partners	30%	Import Agents, Procurement Heads (from target markets), Distributors, Logistics Managers
Industry Experts	20%	Marine Product Consultants, Trade Analysts, Ex-Regulatory Officials, Consultants

Source: Ken Research Analysis

RED CHILIES MARKET

For the Red Chilies Market, CATIs were conducted with **spice exporters, agri-processing firms, chili powder manufacturers, and traders** operating within the

Indian spice ecosystem. Respondents included **Export Managers, Operations Heads, Sourcing Specialists, Trade Executives, Production Managers**, and **Market Intelligence Analysts** from prominent organizations and trader networks focused on red chilies.

These interviews were designed to validate the assumptions regarding **export demand** from countries like **Bangladesh, China, Sri Lanka, Thailand, Malaysia**, and **Vietnam**, as well as the **share of stemmed, stemples, and powdered red chilies** in the overall export mix. Insights gathered were instrumental in refining the market segmentation, verifying pricing benchmarks, and substantiating the value-based sizing conducted in INR Crores.

Table 11-2: Sample Composition Table by Stakeholders and Respondents in (%) Of Red Chilies Market

By Stakeholders	Sample Size: ~40 Respondents	Description
Red Chilies Exporters & Processors	55%	Export Managers, Sourcing Heads, Operations Managers, Quality Control Experts
End-Use Importers & Traders	30%	Procurement Managers, Trade Partners, Bulk Buyers from Target Countries
Spices Industry Experts	15%	Agri Export Consultants, Spice Board Contacts, Independent Analysts

Source: Ken Research Analysis

LIMITATIONS

- The operating and financial performance of stakeholders across the shrimps and red chilies value chain has been compiled through telephonic interviews with export managers, operations heads, and program managers from key processing and trading companies. There is a possibility that some respondents may have exhibited optimism or upward bias in reporting market trends or financial outlook. However, to mitigate this limitation, the data points were cross-verified using secondary sources, including trade statistics, regulatory filings, and validated industry reports.
- The future growth rates for both the shrimps and red chilies markets were estimated based on historical export trends and projected demand from the target markets. These projections were validated through interviews with industry experts, traders, and agri-export professionals who may also hold

internal stakeholder roles. As such, their assessments may not be entirely objective and could reflect a bullish bias.

- The sampling methodology involves stratified purposive sampling, and while care was taken to include a diverse range of respondents across exporter categories, processing units, and trade intermediaries, there exists a limitation in generalizing the findings to the entire market. Ken Research has applied sufficient strata and sampling rigor to reduce model bias, ensuring the significance level remains within the 5–10% threshold.

CONCLUSION

Shrimps Market

The expected value of the India Shrimps Market, including domestic consumption and exports to key international markets, has been determined using a weighted average approach. This methodology combines the outcomes of primary research (CATI interviews), secondary data (trade statistics, industry reports), expert insights, and informed judgment. The use of a weighted average enables the research team to filter out anomalies and potential biases from any one source, allowing for a more robust and reliable estimation of current market size and future projections.

Red Chilies Market

The estimated value of the India Red Chilies Market, focused on exports to Bangladesh, China, Sri Lanka, Thailand, Malaysia, and Vietnam, is derived through a weighted average of primary research feedback, validated secondary sources, expert consultation, and analyst judgment. This approach reduces the noise associated with individual estimation methods and ensures that the final market sizing and growth projections reflect the most balanced and accurate outlook available.

DISCLAIMER

The research reports provided by Ken Research are for the personal information of the authorized recipient and is not for public distribution and should not be reproduced or redistributed without prior permission. None of this material may be used for any commercial or public use until unless authorized by Ken Research. The report will only be used as per the license rights authorized by Ken Research.

The information provided in the research documents is from publicly available data and other sources, which are reliable. Efforts are made to try and ensure accuracy of data. With respect to documents available, neither the company nor any of its employees makes any warranty, express or implied, including the warranties of merchantability and fitness for a particular purpose, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use will not infringe privately owned rights.

The report also includes analysis and views expressed by our research team. The research reports are purely for information purposes. The opinions expressed are our current opinions as of the date appearing in the material and may be subject to change from time to time without notice. Investors should not solely rely on the information contained in the research documents and must make investment decisions based on their own investment objectives, risk profile and financial position. The recipients of this material should take their own professional advice before acting on this information.

Ken Research will not accept return of reports once dispatched due to the confidentiality of information provided in our reports. In case, a report qualify for return, we will issue a credit, minus shipping charges, of equal value to the original purchase price, toward a future purchase—no refunds. The decision about whether the product return can be accepted or not is solely at our discretion. Any dispute will be subject to laws of India and exclusive jurisdiction of Indian Courts.

CONTACT US

Email: support@kenresearch.com
Mail: Ken Research Private Limited
27A, Ground Floor, Spaze I Techpark,
Sector 49, Sohna Road Gurgaon – 122001
India
To find latest content or related reports on the sector, please register at
www.kenresearch.com
Follow Ken Research on Linkedin, Facebook and Twitter