

# Systematic SWOT Analysis of Indian Shrimp Industry – Perspective Review

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**Abstract:** -Aqua products constitute one of the major protein sources for humans around the world. Shrimp is the largest contribution to aqua products. Production from capture fisheries at a global level is in the decline phase, whereas the potential contributions from aquaculture to local food security, livelihoods, and nutrition can be highly significant. Shrimp is considered the most value-added protein resource among all aqua products. The technological advances of Indian shrimp farming systems have not only contributed to a rapid expansion of shrimp culture, contributed to the major volume of production, and also created greater opportunities for foreign exchange earnings. The Indian Shrimp Industry is one of the fastest-growing industries in the global seafood trade with supplies of shrimp in the raw and value-added form in the international markets. India has become the largest shrimp producer in the world and exports to major shrimp consuming countries like the USA, China, Japan & EU. India has a competitive advantage in terms of geographical area and tropical climate conditions in addition to biomass within the load-bearing capacity of the environment results in very high-quality shrimp and is internationally accepted. The brand perception for Indian shrimp in the minds of international buyers is high and also consistent for the last many years. The well-established seafood processing units in India are certified by BAP and EU standards. The industry is well organized with a supply chain, good storage, and processing and transport infrastructure. The major concerns for the Indian shrimp Industry are high volatility in price structure, high establishment cost, increased labor cost, insufficient infrastructure like EIA & MPEDA approved labs for testing samples for disease diagnosis, high dependence on single species namely Vannamei shrimp for production, the oversupply of white shrimp from aquaculture throughout the world and high cost of compliance with quality standards of importing countries. This paper studies key strengths, weaknesses, opportunities, and threats of the Indian shrimp industry and provide a perspective review based on the systematic SWOT analysis.

**Key Words:** Shrimp Industry, Global Seafood, Strong Demand & SWOT analysis.

## 1. INTRODUCTION

India has been exporting seafood since 1972 and has registered remarkable progress in these 5 decades by exporting seafood to more than 100 countries. India is the second-largest producer of shrimp after China. The United States of America is the largest importer of Indian shrimps and India shares 32% of all shrimp products exported to the United States. About 9% of the world shrimp output is exported from India. The vast coastline of India and its tropical climatic conditions help the industry to register exponential growth. Indian companies over the years had to build world-class infrastructure, sophisticated supply chain systems, and advanced logistics mechanisms to sustain global competitors. The hatcheries, farming lands, primary centers, storage, and processing units in India have excellent amenities to retain the quality and standards of the shrimp.

The Indian shrimp industry has undergone several environmental, diseases, and survival issues in the initial years. When the Indian shrimp industry is based on black tiger shrimp, pacific white shrimp species, the farming was unsustainable as these species were disease-prone. But with the introduction of Vannamei shrimp which has a better yield and high disease resistance, has given a competitive advantage to the Indian shrimp industry. The Indian shrimp industry is satisfying the global appetite for shrimp consumption by establishing 120 billion post larvae per year from an estimated 550 to 600 hatcheries.

The Indian shrimp industry has withstood all the climatic and environmental issues from both external and internal factors. It has also withstood the changing stringent international standards, global quality measures, foreign trade norms, and emerged as the global leader in shrimp production. The global appetite for diet diversification had

given a cutting-edge opportunity to the Indian shrimp industry to expand its business to new horizons. With the business opportunities in the Middle-East and EU countries, India had a better chance to explore its business to further new horizons.

## 2. Research Methodology

### 2.1 Methodology

This study selected 35 companies, using the Random Sampling method from Southern parts of India. A well-structured questionnaire is designed to carry out the SWOT analysis considering all the constraints. These 35 companies are graded as small scale, medium scale, and large scale based on the size of their business. The size of its exports is also taken into consideration. These companies represent different geographical locations and deal with a wide range of shrimp products. The questionnaires were answered by the industry experts to keep the results valid and reliable. Many informal meetings were held with many stake holders in the shrimp industry before designing the questionnaire. The initial draft is cross-checked many times to keep it intact. Primary and secondary data are gathered for this study. The secondary data are collected from books, research journals, research articles, etc. The primary data is collected using the survey method, questionnaire.

### 2.2 Design Sampling

The Simple Random Method is used to collect the data of the respondents in the Indian Shrimp Industry. The Random Sample consists of respondents from Tamil Nadu, Andhra Pradesh, Orissa, Kerala, Maharashtra, and Gujarat and the size constitutes 1% of the universal size.

### 2.3 Area of the Study

The Indian Shrimp Industry has registered a balanced growth in Tamil Nadu, Andhra Pradesh, Orissa, Kerala, Maharashtra, and Gujarat. As these states being coastal states, they have a wide range of resources for production, revenue, and exports. These states are also well connected by land, sea, and air that give an additional advantage. The seaports are well established and well connected with international ports which give a large scope for exports. Taking these factors into consideration, these States are selected for the research.

## 3. Research Findings

### 3.1 SWOT Analysis

The top management in the organization gives prime importance to the SWOT analysis to know the standard of their organization and to analyze the results of their strategic

plan. Based on the SWOT analysis, new strategies will be designed to gain a business advantage from competitors. The internal analysis of strengths and weaknesses, environmental analysis of opportunities and threats should match with the company's strategies for better results. The SWOT analysis is a planning tool that assesses the company's overall performance and keeps it above the competitors.

### 3.2 Results

This SWOT analysis plans to recognize the unfavorable and favorable conditions in the industry. Strengths and Weaknesses are the internal factors whereas the opportunities and threats are external factors. The internal factors can be controlled or modified by closely monitoring whereas the external factors can't be controlled or modified in the similar fashion. There should be a perfect strategy fit to match both these internal and external factors.

### 3.3 Strength of Indian Shrimp Industry

S. No	Answer Choice	Number of Respondents	Response
1.	Well-Established Shrimp Industry	27	77%
2.	Global demand for Indian Quality	33	94%
3.	International Acceptance for Indian Quality	35	100%
4.	Well-Established supply chain structure	24	69%
5.	Sufficient storage and processing units	25	71%
6.	Processing Units up to global standards	22	63%
7.	Better connectivity through road, rail, water, and air	31	89%
8.	Banking Support through term-loan, credit facilities	35	100%
9.	Government Subsidiaries and Schemes	33	94%

**Total Number of Respondents 35**

**Table 1 shows the key strengths of the Indian seafood industry**

Based on the responses, the highest key strengths of the Indian Shrimp industry is the international acceptance of Indian quality as all the respondents believe that there is acceptance of Indian quality of shrimp in global markets. All the respondents accept that the banking sector in India is

supporting the industry by providing term-loans and credit facilities. On the other hand, 94% of the respondents accept that there is a global demand for Indian quality and 89% of the respondents accept that India has the better road, rail, water, and air connectivity which is benefitting their business. In addition, 69% of the respondents accept that India has a well-established supply chain system that doesn't degrade the quality of the shrimp and 63% of the respondents believe that our processing units are up to global standards.

### 3.4 The weakness of the Indian Shrimp Industry

S.No	Answer Choice	Number of Respondents	Response
1.	Lack of hygienic processing	22	63%
2.	High rate of production cost	17	49%
3.	Insufficient testing labs	19	54%
4.	Low-quality testing labs	30	86%
5.	Increase in labor cost	32	91%
6.	Poor safety standards	9	26%
7.	Too much dependent on bank loans	22	63%
8.	Low-quality primary centers	16	46%

**Total Number of 35 Respondents**

**Table 2 shows the weakness of the Indian seafood industry**

Out of 35 respondents, 91% of the respondents accept that there is a shortage in labor and due to pandemic crisis in India and due to migration of labor to their native villages increased the labor cost in the industry which affects the production cost of the product. 86% of the respondents accept that India has a very low-quality testing labs. 63% of respondents accept that India has lack of hygienic processing and too much dependent on bank loans. 54% of the respondents accept insufficient testing labs in the industry which is affecting the export of the shrimp to international acceptable standards.

### 3.5 Opportunities of Indian Shrimp Industry

S.No	Answer Choice	Number of Respondents	Response
1.	Market opportunities in the Middle-East	26	74%
2.	Market opportunities in EU countries	33	94%
3.	Global investments from international companies	28	80%

4.	Anti-China mindset in International Market	31	88%
5.	Russians ban on western seafood	18	51%
6.	Connectivity to new locations	25	71%
7.	New market opportunities	29	83%

**Total Number of 35 Respondents**

**Table 3 shows the opportunities of the Indian seafood industry**

94% of the respondents believe that India has market opportunities in the EU whereas 74% of the respondents believe that India has market opportunities in the Middle-East. If these new market horizons are explored, the Indian shrimp industry will register exponential growth additionally. The COVID crisis had triggered the Anti-China mindset in the international market and 88% of the respondents believe that this Anti-China mindset will also help to empower the Indian shrimp industry. 51% of the respondents believe that the ban on western food by Russia will also boost the Indian shrimp industry. 80% of the respondents opinioned that: India needs more foreign investments from international companies to emerge as a global leader.

### 3.6 Threats of Indian Shrimp Industry

S.No	Answer Choice	Number of Respondents	Response
1.	The decline in sea catch	22	63%
2.	Over-fishing	21	60%
3.	Unsustainable fishing practices	25	71%
4.	Too much Dependency of Vannamei shrimp	31	89%
5.	Lack of transparency in business	19	54%
6.	Unhealthy business practices	27	77%
7.	Unscientific approach	34	97%

**Total Number of 35 Respondents**

**Table 4 shows the threats to the Indian seafood industry**

97% of the respondents accept that there is an unscientific approach in the Indian shrimp industry while farming which is affecting the business. 89% of the respondents accept that India is too much dependent on Vannamei shrimp and needs to be diversified. 77% of the respondents believe that there are unhealthy practices in the industry like renegotiating the product price once the shipment has arrived. 71% of the respondents accept that there are unsustainable fishing

practices in India like over-fishing which is affecting the industry. 63% of the respondents accept that there is a decline in sea catch due to unsustainable fishing practices in India. 54% of respondents believe that a lack of transparency in business is also affecting the Indian shrimp market.

#### **4. Discussion on Findings**

##### **4.1 Strengths of Indian Shrimp Industry**

Based on this study and analyses, the key strengths of the Indian Shrimp industry are

1. India is the second-largest shrimp producer after China producing 9% of the world output and the demand for Indian quality is increasing day by day.
2. India has a strong demand for its shrimp products in the international market which is making it the top exporter of shrimp. India has exported 1,289,651 MT of seafood worth the US \$ 6.68 billion to more than 100 countries in the financial year 2019 as per Marine Product Export Development Authority.
3. Though there is strong competition from Thailand and Vietnam, Indian shrimp withstand the diseases whereas the Thailand and Vietnam species struggle with a disease outbreak. Due to this reason, India is exporting 231,388 tonnes to the United States of America alone as per National Oceanic and Atmospheric Administration.
4. There is a climatic advantage for India as the tropical climate is more suitable for shrimp production. According to the study by Aquaculture Research, the survival and feed consumption was high and the species were more tolerant in 38°C to 41°C degrees centigrade.
5. India has a vast coastline which benefits the production of shrimps at the industrial level. The west coast contributed 62% whereas the east coast contributed 38% of the output.
6. The geographical setup of the country is also an added advantage for the shrimp industry. As per the Central Marine Fisheries Research Institute India has 3.56 million tonnes of marine fish landing in the year 2019 which is a great advantage.
7. We have vast storage and processing units which helps to retain the quality of the product.
8. The sophisticated supply chain system in India gives the required competitive edge for the producers.
9. The advanced infrastructure and logistics system in India helps the producer to market his product with ease to a distant geographical location.

##### **4.2 Weakness of Indian Shrimp Industry**

Based on the meta-data analyses, the key weakness of the Indian Shrimp industry is

1. The volatile pricing for the products is not only

eating away the profits of the producer but in some instances incurring a loss.

2. The establishment and compliance cost is high which is keeping small and medium investors away from the business.
3. India is extremely dependent on single species Vannamei shrimp and requires diversification in production of another species.
4. The middlemen and commission agents manage 40% of the business making it lack of traceability of the products.
5. India has very limited value-added processing capabilities.

##### **4.3 Opportunities of Indian Shrimp Industry**

Based on the study and analysis, the key opportunities of the Indian Shrimp industry are

1. Transparency and healthy business practices will help the industry to sustain itself in long term.
2. Indian markets need to add-on value-added products to boost profits.
3. The Indian shrimp industry is completely dependent on exports as there is no local demand for shrimp production. An increase in domestic consumption will boost sales in the industry.
4. The growing global appetite for the shrimps will provide a good opportunity for the Indian shrimp industry.
5. The support from the government of India by providing subsidies and schemes to build hatcheries, farms, processing, and storage plants will boost the industry.

##### **4.4 Threats of Indian Shrimp Industry**

Based on the study and analysis, the key threats to the Indian Shrimp industry are

1. India has a very low survival rate of shrimps as they are prone to diseases.
2. The bio-security standards are very low in India affecting the quality of the shrimp.
3. The environmental pressure is escalating towards paramount making the industry unsustainable.
4. Lack of stringent systems to trace the business and eliminate the middlemen is a greater threat.
5. MPEDA and EIA approved labs were insufficient to diagnose diseases.

#### **5. Conclusion**

Indian shrimp industry has a very good scope to reach great heights and emerge as a global leader. The COVID crisis has triggered an Anti-China mindset throughout the world and it's a great opportunity for the Indian shrimp industry benefits. India needs to explore new business

opportunities in the Middle-East and the EU to equate the demand and supply. India needs to attract global investors to expand and extend its business. The government of India should boost the industry by providing subsidies and schemes. The banking sector should support the industry by providing term-loans and credit facilities. Transparency in business and healthy practices have to be implemented for the future growth of the industry. The traceability of the product has to be improved. The middle-men and commission who are eating the profits have to be eliminated for the betterment of the industry.

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