

Commodity Diversification and Geographic Concentration of Indian Seafood Exports

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Indian fisheries sector plays an important role in the socio-economic development of the country, in view of its potential contribution to national income, nutritional security, employment opportunities, social objectives and export earnings. Fisheries sector contributes 4.3 per cent to the agricultural GDP and export earnings are presently valued at over Rs.6,790 crores from a volume of 4.3 lakh tonnes. Marine products form an important group of primary commodity exported from India accounting for about four per cent of the total export earnings. The important marine products exported from India are frozen shrimp, frozen lobster, frozen fish, frozen squid and frozen cuttlefish.

The five major markets contributing to the Indian exports include Japan, USA, European Union, South East Asia and Middle East. Internationally traded fisheries products are characterised by a high degree of heterogeneity, reflecting the wide range of species and processing techniques. Products from quite distinct species can nevertheless be in direct competition at market. Conversely, similar fish products from the same family can command quite different prices. The sea food industry in many countries are undergoing a rapid change to process more and more ready to cook and ready to eat in convenient packs.

Indian seafood industry, by and large, still remains as a supplier of raw materials to the preprocessors in foreign countries and 90 per cent goes in bulk packs, which is the prime reason for the drastic reduction in the

unit value realisation. India depends heavily on the product (shrimp) and one market (Japan) for its marine products export and thus there is a need for product and market diversification. It is in this backdrop that the commodity

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concentration and geographic concentration of Indian marine exports is being studied.

The overall objectives of the proposed investigation is to study the commodity diversification and geographic concentration of Indian marine products exports during the two time periods of pre liberalisation (1979-1990) and post liberalisation (1991-2002).

Data and Methodology

The study was based on the secondary data collected from various published Governmental and Non-Governmental sources. The data pertaining to total quantity exported, their value in rupees and US dollars and their unit value realisation to the different market destinations were collected from the FAO year book of *Fishery Statistics, Statistics of Marine Export* from India published by the Marine Products Export Development

Authority (MPEDA-Cochin). Ministry of Commerce, Government of India and Marine Exports Review. The degree of commodity concentration and geographic concentration are measured using the Gini-Hirschmann index which defines the degree of concentrations in a country's export

$$C_{xt} = 100 \sqrt{\sum_{j=1}^n (X_{jt}/X_t)^2}$$

Where X_{jt} is the value of exports of the commodity j in year t and X_t is the total export earnings in that year. The highest possible value of the coefficient is 100 which indicates that the country exports only one product/country.

Results and Discussions

The analysis of the commodity concentration and the geographic concentration of Indian fisheries export using the Gini-Hirschmann index and the results are furnished in the Tables.

The results indicated that the commodity concentration has decreased during the post liberalisation period both in terms of value and quantity, which had results in, reduced the instability and widened the export basket. It is of significant that during the post liberalisation period the commodity concentration has decreased from 65.68 to 57.46 per cent in terms of quantity and 82.70 to 71.04 per cent in terms of value indicating that the number of commodity and its share in total had increased. The increased number and share of commodity had reduced the commodity concentration in generating export earnings.

The widening of the number of destinations/markets during the post liberalisation period as a results of the inclusion of more number of countries into the European Union and high

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Table-1
Commodity Concentration of
Indian Marine Products Export

Year	Quantity (%)	Value(%)
1979	74.50	87.27
1984	66.64	84.25
1990	52.24	75.32
1996	57.87	73.32
2002	58.60	71.56
1979-1990(average)	65.68	82.70
1991-2002(average)	57.46	71.14
1979-2002 (average)	61.57	76.92

Table 2
Geographic Concentration of
Indian Marine Products Export

Year	Quantity (%)	Value(%)
1979	60.93	72.60
1984	54.33	69.66
1990	54.09	47.80
1996	38.88	54.92
2002	45.12	48.93
1979-1990(average)	55.01	66.79
1991-2002(average)	43.35	53.11
1979-2002 (average)	49.18	59.94

demand from South East Asian countries like China, Hong Kong, Thailand etc. and emergence of new markets in Latin American and African countries has reduced the geographic concentration from 55.01 per cent to 43.35 per cent in terms of quantity and 66.76 per cent to 53.11 per cent in terms of value. Thus it could be noticed that there has been reduction in the geographic concentration during the post liberalisation period, which is a welcome sign as the dependency of export earnings from a few countries to a sizable lot.

Conclusion

The analysis of the commodity diversification and the geographic concentration of Indian fisheries export using the Gini-Hirschmann index suggested that there has been dynamism in export in commodities as well as markets from the traditional one commodity (shrimp) — one country (Japan) framework. There has been considerable improvement in the commodity diversification and the geographic concentration on comparing the two different time periods. Modern approaches for diversification through value addition and collaborations with international firms may be explored in the fisheries export.

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FAO Warning on Shrinking Agricultural Biodiversity and Overfishing

Despite its crucial importance for the survival of humanity, agricultural biodiversity is in ever-greater danger, the United Nations Food and Agricultural Organisation (FAO) warned on December 3, 2003.

At the 32nd session of its governing conference in Rome, FAO also reported that illegal, unreported and unregulated (IUU) fishing worldwide appears to be increasing as fishers seek to avoid stricter rules in many places in response to shrinking catches and declining fish stocks, and efforts to combat the practice must be intensified.

The agency stressed that of the estimated 7,000 to 8,000 species that have been used in 10,000 years of agriculture, only 150 are cultivated today and no more

than four — wheat, maize, rice and potato — account for more than half of our food calories from plants.

The International Treaty on Plant Genetic Resources, adopted in 2001, aims to protect the conservation and sustainable use of plant genetic resources for food and agriculture and the fair and equitable benefits from their use. When signature closed on 4th November 2002, 77 countries and the European Union had signed the treaty. Some 33 States have currently ratified, accepted, approved or acceded to the accord. The Treaty will enter into force 90 days after the 40th country ratifies it.

To draw attention to the treaty's importance, FAO organised a side-event to the conference to answer questions about it in

preparation for its entry into force, probably in early 2004.

With regard to IUU, the agency warned in a report presented on 2nd December 2003: "The situation is particularly grave and forbidding given that some 75 per cent of world fisheries are already being fully exploited, overexploited, or depleted."

Some IUU fishers operate in areas where fishing is not permitted while others employ banned technologies outlawed net types, or flaunt fishing regulations in other ways, FAO noted. Yet others under-report how big their catches are — or don't report them at all. In some cases, in fact, catches of commercially valuable fish species may be surpassing permitted levels by over 300 per cent due to IUU fishing, according to reports made to FAO.