

GROWTH AND INSTABILITY OF MARINE PRODUCT EXPORTS OF INDIA

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ABSTRACT

India's exports of marine products had their beginning as early as 1938-39. Before 1960, when our exports were dominated by dried items the markets of Indian marine products were largely confined to neighboring countries like Sri Lanka, Myanmar, Singapore etc. This situation changed with the development of technology/modernization; dried products gave way to canned and frozen items. During 2010-11, European Union (EU) continued as the largest market with a percentage share of 26.78% in dollar realization followed by South East Asia 16.43%, China 15.41%, USA 15.35%, Japan 13.06%, Middle East 5.19% and Other Countries 7.79%. (MPEDA 2011)

During the total study period i.e. 1995-96 to 20014-15, the quantum of marine product exports of India to European Union registered a highest CAGR of 18 per cent followed by South East Asia with 13 per cent. During the same period, marine product exports to China recorded a CAGR of -1 per cent. The value of marine product of exports of India to South East Countries and Middle East Countries have shown an increasing CAGR per cent over four quinquennial sub-periods(i.e. 1995-96 to 2000-01, 2000-01 to 2005-06, 2005-06 to 2010-11 & 2009-10 to 2014-15). During the overall period i.e. 1995-96 to 20014-15, both in terms of quantity and value of exports, India registered CAGR of 7 and 13 per cent respectively. During the total study period the coefficient of variation is highest in marine product exports to South East Asia, Middle East Asia followed by U.S.A.

The direction of trade statistics revealed that 38 per cent of total quantum exports were made to China and South East Asia during the trienniums ending 1997-98 and 2014-15 respectively (fig 1&2). During the same periods, in terms of value Japan occupied first place with 47 per cent and 25 per cent each of USA and South East Asia

In composition of India's marine product exports by quantum, frozen fin fish exports occupied first place with a share of 43 and 33 per cent of total during the trienniums ending 1997-98 and 2014-15 respectively. But in terms of value of marine product exports frozen shrimp took a major share of 66 and 63 per cent during the same periods.

In India, quality control measures and increase in infrastructure facilities for production of value added items help in achieving the superior market, insurance coverage for the fish/ shrimp farming should be strengthened and packaging of seafood is to be upgraded so as to catch up with the rest of the world.

KEYWORDS: CAGR, India, Marine Exports, Trade Direction

INTRODUCTION

India's exports of marine products had their beginning as early as 1938-39. Before 1960, when our exports were

dominated by dried items the markets of Indian marine products were largely confined to neighboring countries like Sri Lanka, Myanmar, Singapore etc. This situation changed with the development of technology/modernization; dried products gave way to canned and frozen items. The product shift also resulted in market shift. Several seafood processing units with modern machinery for freezing and production of value added products were set up at all important centers in the country for export processing.

Marine products industry has a share of at least 5-6 % in world exports. India is projected to become one among the top five seafood exporting countries in the world. Export of marine product plays a pivot role in developing aquaculture and fishing sector.

In India, over 3.00 million people are employed in fishing and processing of fish sectors and this makes the fishery sector a key player in poverty alleviation and employment. Export of marine products plays a vital role in fisheries development in India by providing employment and income to millions engaged in fishing, aquaculture, processing and allied activities.

The potential market for marine exports is in value added products (cooked, ready to eat and ready for table), freeze dried shrimps and canned fish. Regarding canned fish, India lacks canning technology as per global standards. Growth in the international market would also require an understanding of the competitive and regulatory scenario.

In the year 2011, the share of marine product exports in total agricultural exports was 14.1 per cent (Source: CMIE's publication on Foreign Trade and Balance of Payments).

Comparison and Growth of Fisheries Sector

Percent Contribution			
Period	Agriculture to Total GDP	Fisheries to Total GDP	Fisheries to Agriculture GDP
1980-81	34.69	0.75	2.17
1990-91	28.42	0.96	3.37
2000-01	22.26	1.18	5.32
2010-11	14.20	1.10	5.37

Source: Ganesh Kumar and Datta, 2008 & National Account Statistics, CSO, GOI

OBJECTIVES OF THE STUDY

- To study the growth and instability in marine product exports of India
- To study the direction of marine product exports of India.
- To study the composition of marine product exports of India

METHODOLOGY

The secondary data pertaining to marine product exports of India during the period 1995-96 to 2014-15 were obtained from the Marine Product Export Development Authority (MPEDA) website. To analyze the trend in exports of marine products of India Compound Annual Growth Rates and Coefficient of Variation were calculated for a total of 18 year period i.e. 1995-96 to 2014-15 along with four quinquennial sub-periods (i.e. 1995-96 to 2000-01, 2000-01 to 2005-06, 2005-06 to 2010-11 & 2009-10 to 2014-15). The composition and direction of marine product exports of India are studied with the help of data obtained from MPEDA website for trienniums ending 1997-1998 and 2014-15 by

calculating the percentage share.

$$\text{Compound Annual Growth Rate} = \left(\frac{\text{Ending Value}}{\text{Beginning Value}} \right)^{\left(\frac{1}{\text{no. of Years}} \right)} - 1$$

$$\text{Coefficient of Variation (CV)} = \frac{\text{Standard Deviation}}{\text{Mean}}$$

RESULTS AND DISCUSSIONS

Growth and Instability in Marine Product Exports of India

Table 1 indicates that during the total study period i.e. 1995-96 to 20014-15, the quantum of marine product exports of India to European Union registered a highest CAGR of 18 per cent followed by South East Asia with 13 per cent. During the same period, marine product exports to China recorded a CAGR of -1 per cent. The value of marine product of exports of India to South East Countries and Middle East Countries have shown an increasing CAGR per cent over four quinquennial sub –periods. During the overall period i.e. 1995-96 to 20014-15, both in terms of quantity and value of exports, India registered CAGR of 7 and 13 per cent respectively.

Parashar Kulkarni (2005) had found that India registered a compound growth rate of 7.58 in quantity and 14.11 in value of marine product exports during the decennium of 1991-2001.

Table 1: Compound Annual Growth Rates of Marine Product Exports of India to different Countries

Period	CAGR % in Quantity							
	Japan	USA	European Union	China	South East Asia	Middle East	Others	Total
1995-96 to 2000-01	6	10	-4	21	-1	14	10	8
2000-01 to 2005-06	-3	6	15	-6	8	5	15	3
2005-06 to 2010-11	3	-2	5	3	31	15	16	10
2009-10 to 2014-15	5	31	3	-16	22	13	6	9
1995-96 to 2014-15	2	8	18	-1	13	11	13	7
CAGR % in Value								
1995-96 to 2000-01	10	26	3	29	12	19	21	13
2000-01 to 2005-06	-15	7	16	1	5	10	22	2
2005-06 to 2010-11	8	4	10	18	29	17	12	12
2009-10 to 2014-15	19	54	17	-6	42	30	26	27
1995-96 to 2014-15	4	11	11	10	20	19	20	13

Table 2: Coefficient of Variation in Marine Product Exports of India to different Countries

Period	CV % in quantity							
	Japan	USA	European Union	China	South East Asia	Middle East	Others	Total
1995-96 to 2000-01	0.11	0.16	0.28	0.38	0.19	0.29	0.18	0.15
2000-01 to 2005-06	0.11	0.13	0.25	0.17	0.17	0.15	0.30	0.08
2005-06 to 2010-11	0.08	0.21	0.08	0.16	0.62	0.28	0.30	0.17
2009-10 to 2014-15	0.11	0.46	0.07	0.39	0.32	0.28	0.19	0.15
1995-96 to 2014-15	0.14	0.52	0.39	0.32	1.03	0.59	0.76	0.41
CV % in Value								
1995-96 to 2000-01	0.17	0.44	0.28	0.39	0.23	0.39	0.34	0.21
2000-01 to 2005-06	0.35	0.19	0.28	0.13	0.12	0.22	0.39	0.07

2005-06 to 2010-11	0.14	0.30	0.15	0.33	0.60	0.29	0.19	0.23
2009-10 to 2014-15	0.29	0.72	0.33	0.18	0.62	0.50	0.47	0.46
1995-96 to 2014-15	0.31	1.08	0.73	0.48	1.42	1.07	1.02	0.80

The instability in quantum and value of marine product exports of India presented in table 2 indicated that during the total study period the coefficient of variation is highest in exports to South East Asia, Middle East Asia followed by U.S.A. Shyam S.S. et.al. (2004) studied the marketwise export instability of Indian marine products and observed that the post-liberalization period (1991-2002) recorded a higher degree of instability when compared to the pre-liberalization period (1979-1990). They also observed that the South East Asia and Middle East markets even though had generated a significant growth in export; there existed an alarming rate of volatility.

Direction of Marine Product Exports of India

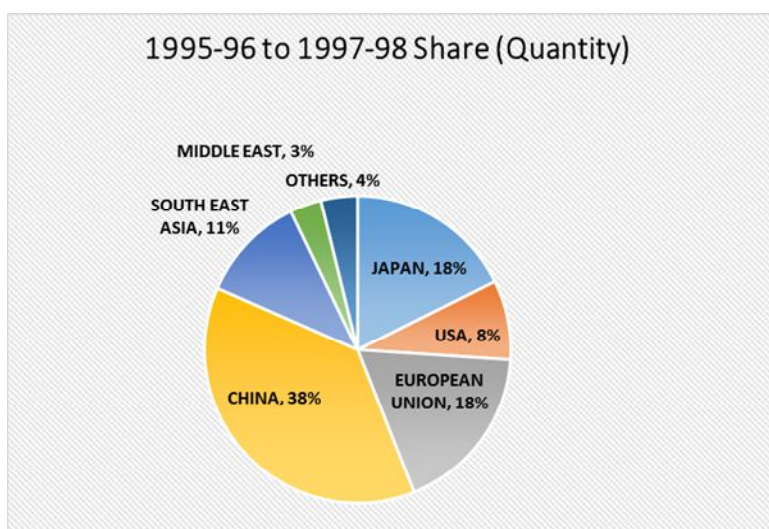


Figure 1

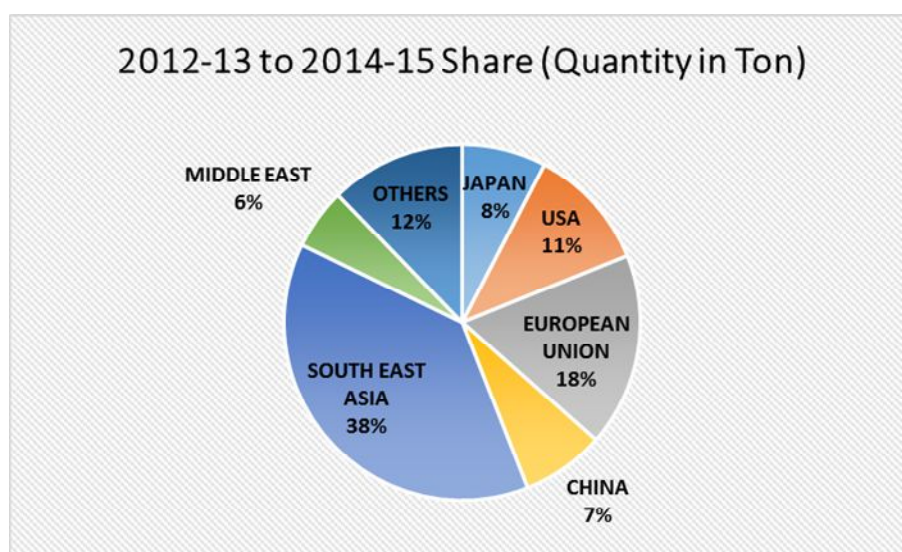


Figure 2

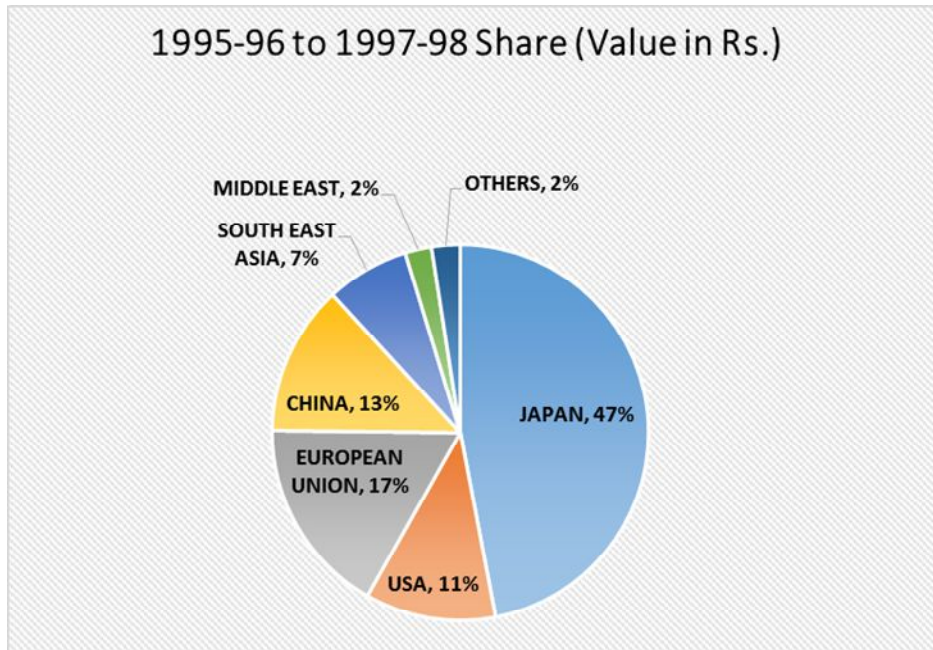


Figure 3

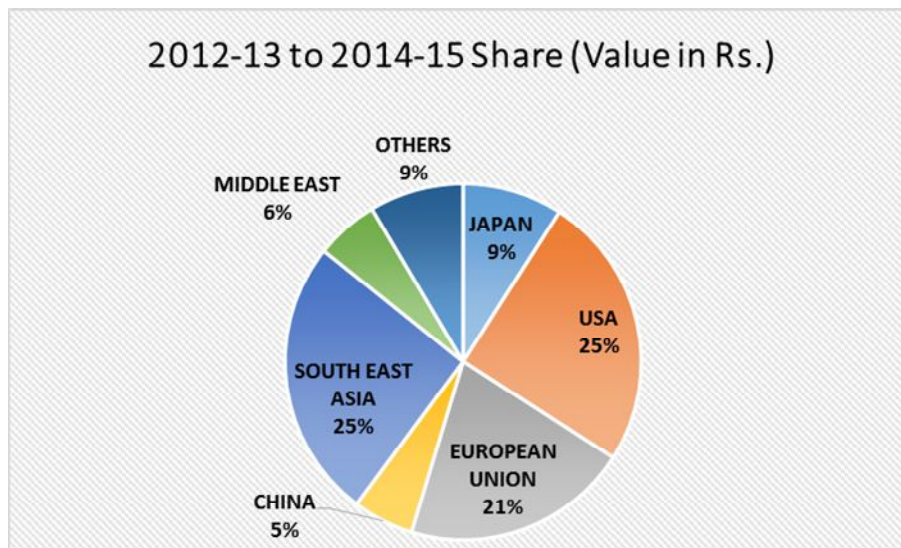


Figure 4

The direction of trade statistics revealed that 38 per cent of total quantum exports were made to China and South East Asia during the trienniums ending 1997-98 and 2014-15 respectively (figure 1&2). During the same periods, in terms of value Japan occupied first place with 47 per cent and 25 per cent each of USA and South East Asia (fig 3& 4). Sricharan Y. K. and Venkataiah. Ch (2012) in their study revealed that during 2010-11 European Union (EU) emerged as the largest market with a percentage share of 26.78% in \$ realization followed by South East Asia 16.43%, China 15.41%, USA 15.35%, Japan 13.06%, Middle East 5.19% and Other Countries 7.79%. Anjana V.M and Rosa K.D. (2015) have also found that during 2013-14 the South East Asia was the largest buyer of Indian marine products in terms of quantity.

Composition of Marine Product Exports of India

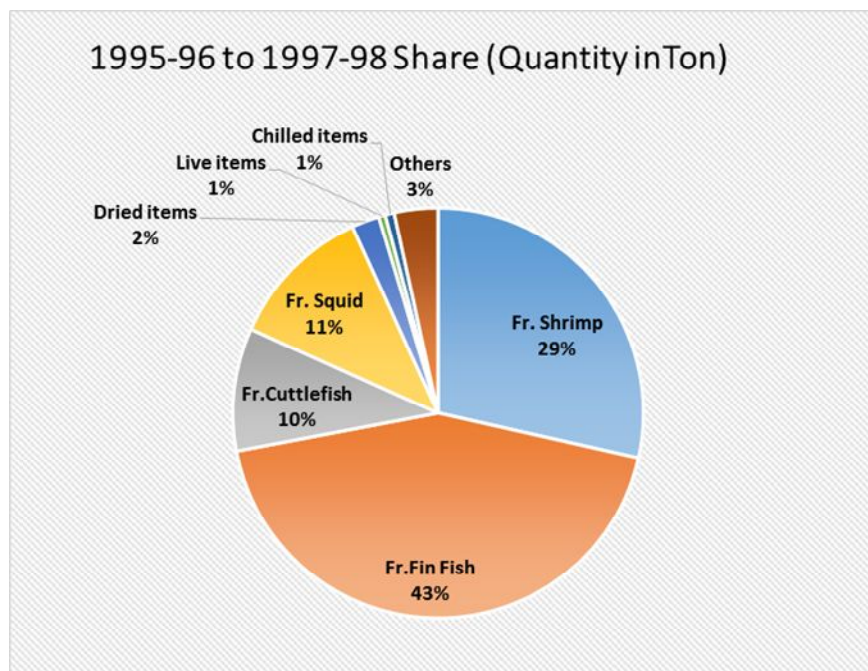


Figure 5

In composition of India's marine product exports by quantum, frozen fin fish exports occupied first place with a share of 43 and 33 per cent of total during the trienniums ending 1997-98 and 2014-15 respectively. But in terms of value of marine product exports frozen shrimp took a major share of 66 and 63 per cent during the same periods. Anjana V.M and Rosa K.D. (2015) have also observed that during 2013-14 in terms of quantity, the export of frozen fish items was placed at the first position followed by frozen shrimp.

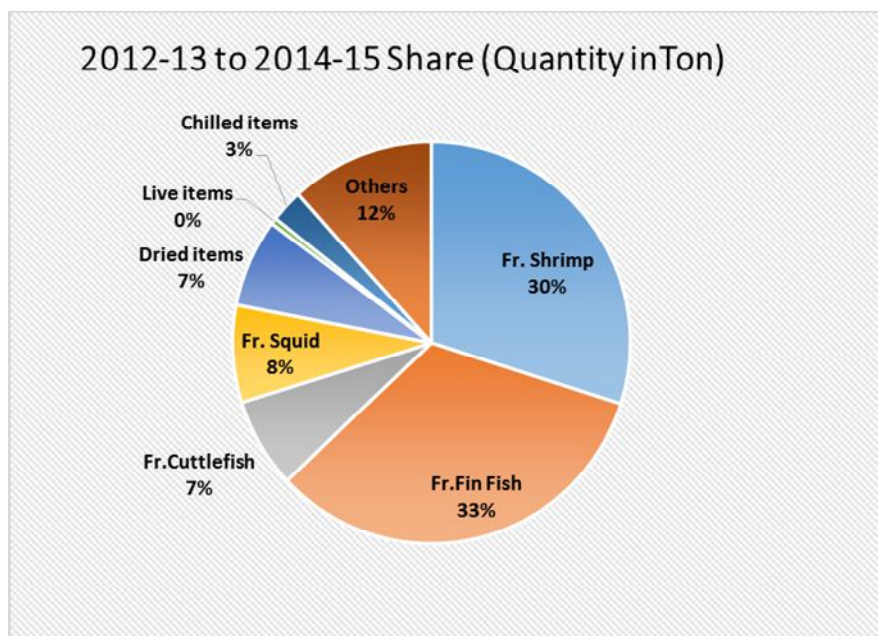


Figure 6

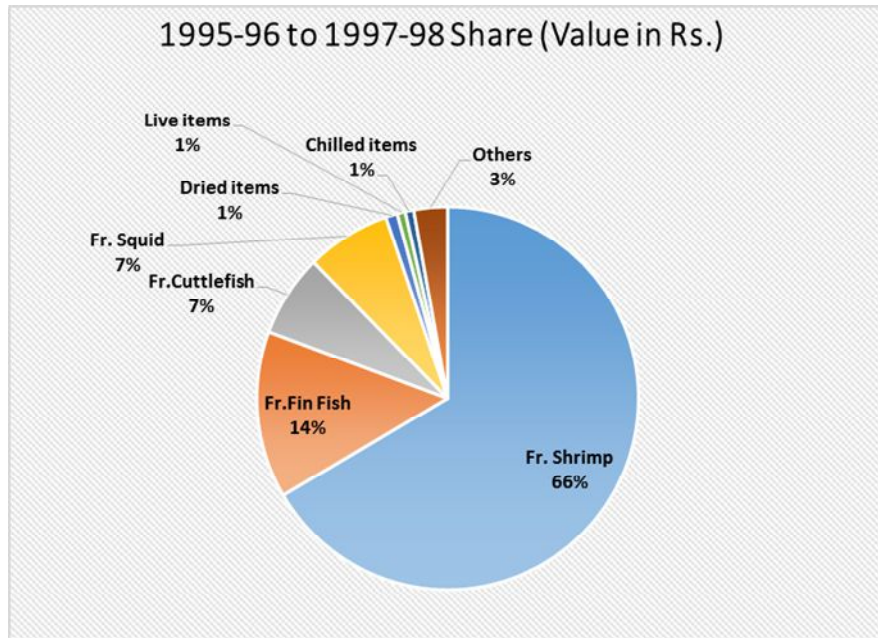


Figure 7

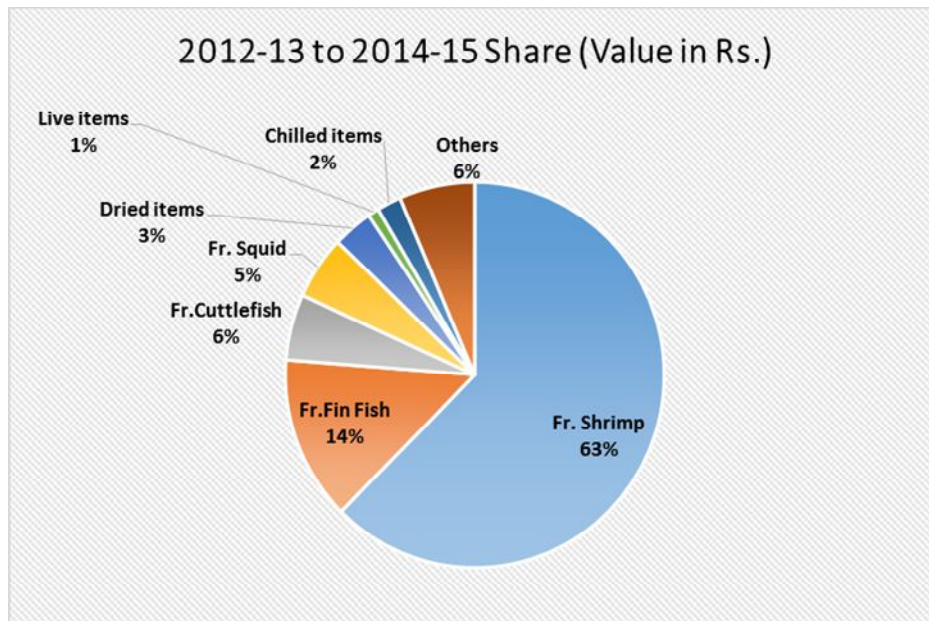


Figure 8

SUMMARY & CONCLUSIONS

During the period under study, both in terms of quantity and value of marine product exports, India registered an encouraging CAGR of 7 and 13 per cent respectively. This study also concluded that, the frozen fish and frozen shrimp (in terms of quantity and value) are the main marine products exported. Product diversification and value addition of marine products along with the adoption of the appropriate marketing strategy will help to improve Indian marine exports. The direction of trade indicated that the Japan, South East Asia and USA were found to be the largest buyers of Indian

marine products in terms of value.

SUGGESTIONS

- Quality control measures and increase in infrastructure facilities for production of value added items help in achieving the superior market.
- Insurance coverage for the fish/ shrimp farming should be strengthened.
- Packaging of seafood is to be upgraded so as to catch up with the rest of the world.

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