

Analysis of retail price inflation rate of some commercially important Indian Fishes over the years using Paasche Price Index

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ABSTRACT

Fish has a very high food and nutritive value in the Indian cuisine. The increasing prices of commercially important fishes decades after decades has really brought about its disappearance from the common mans platter. Through present research and analysis which is of a foremost type with very less quantity of reference material available it was estimated that the paasche price index of the commercially important Indian fishes for the year 1983 was 446.03, 968.96 and 2506.89 for 1993 and 2003 respectively. The percentage inflation of retail prices from 1973 to 1983 was 346.03 %, while the percentage inflation rate has increased from 1983 to 1993 by 522.93 % and from 1993 to 2003 by 1537.93 %. The inflation rate is tremendous in every decades and it is very fast from 1993 to 2003. Some constructive measures should be taken in respect to reduce the price inflation of commercially important fishes and bring them within the reach of common man.

Key words: Paasche price index, Sharks, Catfishes, Pomfrets, Mackerels, Seer fishes.

INTRODUCTION

Fish enjoys a very special position and place in human civilization from time immemorial. Its food, gastronomic, culinary and nutritional value, brings it to the fore; many species of fish rank in the category of, "gourmet par excellence". Today fish has become the staple food not only of the people residing in the coastal states of the India but also of those people residing in the various interior parts of the country (Lad *et al.*, 2013; Srivastava, 1999).

In India marine fishes are supplied from 2244 fish landing centers located along 8085 km of coastline. There is a continuous increase in demand and price of fish both in domestic and international market. The increase in fish prices is comparatively higher than the increase in prices of foodgrains and other livestock products. In domestic market there has been 2 to 5 fold increase in wholesale prices of commercially important fishes thus contributing to the increment of prices in the retail market (R. Sathiadhas *et al.*, 2000).

The retail price increment of fishes after every decade is contributed to various factors such as the demand always surpasses the supply as

there is decrement in catches year after year leading to the increment of prices. Also in India till date traditional system of fish marketing is being implemented rather than modern type. In traditional system the fishes passes the market through the stages viz; Fisherman, Auctioneer, Wholesaler, Retailers, Consumers. Through every stage as the fish passes the market there is a 2 fold increase in the fish price. Thus the consumer has to pay heavy prices decade after decade for the same quantity of fish commodity. The increment of the fish prices has really brought about its disappearance from the common mans platter (Sathiadhas *et al.*, 1994).

In the present research work an attempt has been made to deduce the inflation of retail prices of commercially important fishes decade wise from 1973 to 2003 using Paasche price index. Paasche price index is a well known statistical index to deduce the inflation rate of a particular commodity year after year using any particular year as a base year for comparison. Through the following research work some measures have also being tried to discover so as to control the growing inflation of the retail prices of the fishes.

MATERIALS AND METHODS

The following data is being obtained (R. Sathiadhas 2006).

Table 1: Retail price behavior of commercially important Indian marine fishes in different years.

Marine Fishes	Years							
	1973		1983		1993		2003	
	Quantity in Kg	Price in Rs	Quantity in Kg	Price in Rs	Quantity in Kg	Price in Rs	Quantity in Kg	Price in Rs
Sharks	1	2.50	1	17.00	1	31.00	1	88.00
Rays	1	2.00	1	10.00	1	15.00	1	31.00
Catfishes	1	2.50	1	11.00	1	30.00	1	40.00
Oil Sardines	1	2.00	1	6.70	1	16.00	1	48.00
Ribbon fishes	1	2.50	1	8.50	1	19.00	1	33.00
Pomfrets	1	2.50	1	22.80	1	40.00	1	205.00
Mackerels	1	3.00	1	9.85	1	25.00	1	48.00
Seer fishes	1	9.00	1	27.00	1	66.00	1	195.00
Tuna	1	3.00	1	16.50	1	39.00	1	39.00

The Paasche price index formula is as follows

$$I_p = \frac{\sum P_n Q_n}{\sum P_o Q_n} \times 100$$

P = Price of the Commodity, Q = Quantity of the Commodity, o = Base year and n = Current year under study (Santhanam *et al.*, 2010). The above depicted formula is being implemented on the data obtained from the reference.

RESULTS AND DISCUSSION

The paasche price index for the year 1983 was 446.03, 968.96 and 2506.89 for 1993 and 2003 respectively. The findings of the present research

exhibits that the percentage inflation of retail prices from 1973 to 1983 was 346.03 %, while the percentage inflation rate has increased from 1983 to 1993 by 522.93 % and from 1993 to 2003 by 1537.93 %. The inflation rate is tremendous in every decades and it is very fast from 1993 to 2003. The present research work is a foremost research work and must be considered as a baseline research with a scope for future addition and analysis of data.

Table 2: Paasche price index for the year 1973 – 1983.

Marine Fishes	1973		1983		$P_n Q_n$	$P_o Q_n$
	Q_o	P_o	Q_n	P_n		
Sharks	1	2.50	1	17.00	17.00	2.50
Rays	1	2.00	1	10.00	10.00	2.00
Catfishes	1	2.50	1	11.00	11.00	2.50
Oil Sardines	1	2.00	1	6.70	6.70	2.00
Ribbon fishes	1	2.50	1	8.50	8.50	2.50
Pomfrets	1	2.50	1	22.80	22.80	2.50
Mackerels	1	3.00	1	9.85	9.85	3.00
Seer fishes	1	9.00	1	27.00	27.00	9.00
Tuna	1	3.00	1	16.50	16.50	3.00
Total					129.35	29

For the year 1983 the $I_p = 446.03$.

Table 3: Paasche price index for the year 1973 – 1993.

Marine Fishes	1973		1993		P _n Q _n	P _o Q _n
	Q _o	P _o	Q _n	P _n		
Sharks	1	2.50	1	31.00	31.00	2.50
Rays	1	2.00	1	15.00	15.00	2.00
Catfishes	1	2.50	1	30.00	30.00	2.50
Oil Sardines	1	2.00	1	16.00	16.00	2.00
Ribbon fishes	1	2.50	1	19.00	19.00	2.50
Pomfrets	1	2.50	1	40.00	40.00	2.50
Mackerels	1	3.00	1	25.00	25.00	3.00
Seer fishes	1	9.00	1	66.00	66.00	9.00
Tuna	1	3.00	1	39.00	39.00	3.00
Total					281	29

For the year 1993 the $I_p = 968.96$.

Table 4: Paasche price index for the year 1973 – 2003.

Marine Fishes	1973		2003		P _n Q _n	P _o Q _n
	Q _o	P _o	Q _n	P _n		
Sharks	1	2.50	1	88.00	88.00	2.50
Rays	1	2.00	1	31.00	31.00	2.00
Catfishes	1	2.50	1	40.00	40.00	2.50
Oil Sardines	1	2.00	1	48.00	48.00	2.00
Ribbon fishes	1	2.50	1	33.00	33.00	2.50
Pomfrets	1	2.50	1	205.00	205.00	2.50
Mackerels	1	3.00	1	48.00	48.00	3.00
Seer fishes	1	9.00	1	195.00	195.00	9.00
Tuna	1	3.00	1	39.00	39.00	3.00
Total					727	29

For the year 2003 the $I_p = 2506.89$.

Table 5: Percentage of inflation over the years.

Year	Paasche Price Index	Percentage Inflation Rate	Percentage Inflation Rate increase from 1983 to 1993 is 522.93, while from 1993 to 2003 is 1537.93.
1973	100	-----	
1983	446.03	346.03	
1993	968.96	868.96	
2003	2506.89	2406.89	

Some constructive measure should be taken in respect to reduce the price inflation of commercially important fishes and bring them within the reach of common man. This can be achieved by reducing the gap between the demand and supply. The demand of the commercially important fishes in the market is more and the supply is less leading to the increment of the prices. This gap can be reduced by experimenting and promoting cage culture like technologies through which the production and supply of the

commercially important fishes can be increased (Bhat *et al.*, 2008).The government agencies must intervene and exterminate the middle man in the traditional system of fish market thus it will help in reducing the cost of the fishes which increases at every stage of the traditional system of fish marketing and will surely help in transformation towards the modern method of fish marketing. Through the above implementations the fishermen and also the consumer who buys the fishes at retail price will be at benefit

LITERATURE CITED

Bhat BV and Vinod PN, 2008. *Development of sea farming in India – an export perspective.* FAO/NACA Regional Workshop on the Future of Mariculture: a Regional Approach for Responsible Development in the Asia-Pacific Region. Guangzhou, China, 7–11 March 2006. *FAO Fisheries Proceedings.* No. 11. Rome, FAO. 2008. 301–306.

Devdatta Gopal Lad and Shashikant M Patil, 2013. *Analysis of exported Indian mariculture products price inflation rate for some years using Paasche price index.* *Biosci. Disc.*, 4(1):43-46.

R Sathiadhas and R Narayanakumar, 1994. *Price Policy and Fish Marketing System in India,* Biology Education, Pp. 230.

R Sathiadhas, 2006. *Socio-economic scenario of marine fisheries in India - an overview,* Proceedings of the International symposium on "Improved sustainability of fish production systems and appropriate technologies for utilization", *CUSAT*, Pp. 94.

R Sathiadhas, R Narayanakumar, A Bastion, Fernandoand A Kanakkan, 2000. *Marine Fish Marketing in India,* SEETT Division, CMFRI–Newsletter.

Santhanam S., Rudramurthy Sharada, Pal Subhabaha, 2010. *Statistics for Management,* Sikkim Manipal University of Health, Medical and Technological Sciences, Gangtok, Sikkim, Pg. No. 360 – 369.

Srivastava CBL, 1999. *A textbook of Fishery Science and Indian Fisheries.,* Kitab Mahal, 43 – 59.

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