

## PRICE INCREMENT ANALYSIS OF INDIAN FRESH WATER FISHES IN SOME YEARS USING LASPEYRES PRICE INDEX

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### ABSTRACT

In the present research work some important Indian freshwater fishes and their price increment analysis is being done using Laspeyres price index. The laspeyres price index for the year 2006 is 153.57 % and for 2014 is 232.14 %. The year 1998 is considered as base year. The findings of the present research exhibits that the percentage inflation of retail prices of fresh water fishes from 1998 to 2006 were 53.57 %, while the percentage inflation rate has increased from 2006 to 2014 by 78.57 %. The inflation rate is tremendous year after year. 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.

**KEYWORDS:** Laspeyres price index, Rohu, Catla, Mrigal, Tilapia, Catfishes.

### 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 of Indian people. (Devdatta Gopal Lad *et. al.* 2013) The demand for fishes in India is mainly fulfilled by the marine fishes but in past couple of decades the prices of Indian marine fishes has increased many folds due to various reasons such as excessive demand, less supply and traditional marketing practices adding to increment of heavy cost till it reaches the consumer (Devdatta Gopal Lad *et. al.* 2014).

The marine fishes have disappeared from the platter of common Indian people because of extensive price increment. The place of marine fishes is today taken up by fresh water fishes. The prices of freshwater fishes are also

increasing slowly periodically. The retail price increment of fishes 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. (R. Sathiadhas *et. al.* 1994)

In the present research work some important Indian freshwater fishes and their price increment analysis is being done using Laspeyres price index and an analysis is being

done to estimate the percentage of increment. This a baseline study and there is a scope of further analysis.

The data of Table-1 is being obtained from the FAO, 2014 and Ganesh Chandra 2010).

The formula of Laspeyres price index is as follows:

## MATERIAL AND METHODS

**Table 1 Indian fresh water fishes price in different years.**

Fresh water fishes	Fishes					
	1998		2006		2014	
	Quantity In Kg	Price In Rs	Quantity In Kg	Price In Rs	Quantity In Kg	Price In Rs
Rohu	1	60	1	120	1	150
Catla	1	52	1	80	1	160
Mrigal	1	53	1	80	1	120
Tilapia	1	45	1	60	1	100
Catfishes	1	70	1	90	1	120

Source: (FAO, 2014 and Ganesh Chandra ,2010)

**Table 2: Laspeyres price index for the year 1998 – 2006.**

Fresh water fishes	1998		2006		$P_n Q_o$	$P_o Q_o$
	$Q_o$	$P_o$	$Q_n$	$P_n$		
Rohu	1	60	1	120	120	60
Catla	1	52	1	80	80	52
Mrigal	1	53	1	80	80	53
Tilapia	1	45	1	60	60	45
Catfishes	1	70	1	90	90	70
Total					430	280

For the year 2006 the  $I_L = 153.57$

**Table 3: Laspeyres price index for the year 1998 – 2014.**

Fresh water fishes	1998		2014		$P_n Q_o$	$P_o Q_o$
	$Q_o$	$P_o$	$Q_n$	$P_n$		
Rohu	1	60	1	150	150	60
Catla	1	52	1	160	160	52
Mrigal	1	53	1	120	120	53
Tilapia	1	45	1	100	100	45
Catfishes	1	70	1	120	120	70
Total					650	280

For the year 2014 the  $I_L = 232.14$

**Table 4: Percentage of inflation over the years.**

Years	Laspeyres Price Index	Percentage Inflation Rate	Percentage Inflation Rate increase from 2006 to 2014 is
1998	100	-----	
2006	153.57	53.57	
2014	232.14	132.14	78.57

The Laspeyres price index formula is as follows:

$$I = \frac{\sum p_n q_o}{\sum p_o q_o} \times 100$$

P = Price of the Commodity, Q = Quantity of the Commodity, o = Base year and n = Current year under study. (Santhanam S. et. al. 2010)

The above depicted formula is being implemented on the data obtained from the reference.

### DISCUSSION AND CONCLUSION

The laspeyres price index for the year 2006 is 153.57 % and for 2014 is 232.14 %. The year 1998 is considered as base year. The findings of the present research exhibits that the percentage inflation of retail prices from 1998 to 2006 were 53.57 %, while the percentage inflation rate has increased from 2006 to 2014 by 78.57 %. The inflation rate is tremendous year after year. 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.

The price inflation percentage of freshwater fishes is less as compared to marine fishes because the supply of freshwater fishes today are matching up with their demand through higher aquaculture production which is not happening in marine fishes. So the prices of freshwater fishes are under control but still the increment is higher because of various reasons such increase in transportation cost, traditional marketing system in India and also increase in feed cost in freshwater aquaculture.

Some constructive measure should be taken in respect to reduce the price inflation of commercially important fresh water fishes and keep them within the reach of common man. 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.

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DOI: <https://dx.doi.org/10.5281/zenodo.7234129>

Received: 7 October 2014;

Accepted; 21 November 2014;

Available online : 9 December 2014

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