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Fish marketing and price discovery of fish

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Fish is a highly demanded commodity at both national and international levels. It is also a potential export earner among the agricultural and allied sector. Marketing plays a crucial role in addressing the problems of developing countries viz., food security, poverty and sustainable agriculture. A fish value chain is the full range of activities that are required to bring a product or service from its conception to the final consumers. The actors of the value chain include producers, wholesalers, retailers and consumers. Fish wholesalers and retailers are the active market functionaries and the basis of operation and product transaction is based on mutual trust even today.

The key activities in a fish value chain comprises of fishing/aquaculture production, processing, transport, wholesale and retail marketing. Marketing is the bridging link between producers and consumers. A value chain concentrates at local, regional and global markets in ideal or combination. Marketing is the activity that linked the producers and consumers through various distributional channels or direct or indirect routes. Efficient fish marketing system is the indicator that representing the overall growth and development of fisheries sector. The spatial and temporal variation in fish availability, prices and extend of value addition are similarly altering the performance of value chain actors and fish markets.



Fig. 1. Components of fish value chain (based on Porter value chain framework)

The Common fish marketing channels in practice in India are given below.

- (i) Producer – Retailer – consumer,
- (ii) Producer - wholesaler – Retailer - consumer
- (iii) Producer - commission agent - wholesaler – retailer- consumer
- (iv) Producer – wholesaler - commission agent - retailer consumer
- (v) Producer – commission agent – wholesaler-commission agent – retailer- consumer.
- (vi) Producer to consumer

It comprised of channels of direct and indirect routes with or without the involvement of intermediaries/ commission agents. The best channel which scholars highlighting are the direct (online) marketing. The online markets are picking up well in urban and working population who is capable of dealing with digital platform and familiar with financial transaction through online platform. Marketing is a value addition process through which the utility for particular goods and services are created. In economic way, utility is the process of creating utility. The various kinds of utilities and their explanation is given below.

Table 1. Kinds of utility in relation to marketing

Types of utility	Explanation
Form utility	Physical transformation of goods from one form to other form
Place utility	Spatial movement of goods from one place to other place
Time utility	Storage and preservation towards extending the shelf life
Possession utility	Ownership possession of goods
Quality utility	Safety and health of the product
Information Utility	Knowledge sharing related aspects

Marketing mix

Fish marketing is the activity of distributing goods and services from producer to consumer. The basis for the marketing of any product depended components of the marketing mix. Marketing is a set of marketing tool used to promote and sell a product or services in the market. It included positioning and deciding the product to sell at the right place, at right price and right time. The four P' concept was developed by Neil Bordan (1950) that includes Product, Price, Place and Promotion. The market research and its strategy depended on the components of marketing mix. In the modern era, the four P's concept was extended into seven P's by including process, promotion and physical environment. Performance is the recent addition to the components of marketing mix.

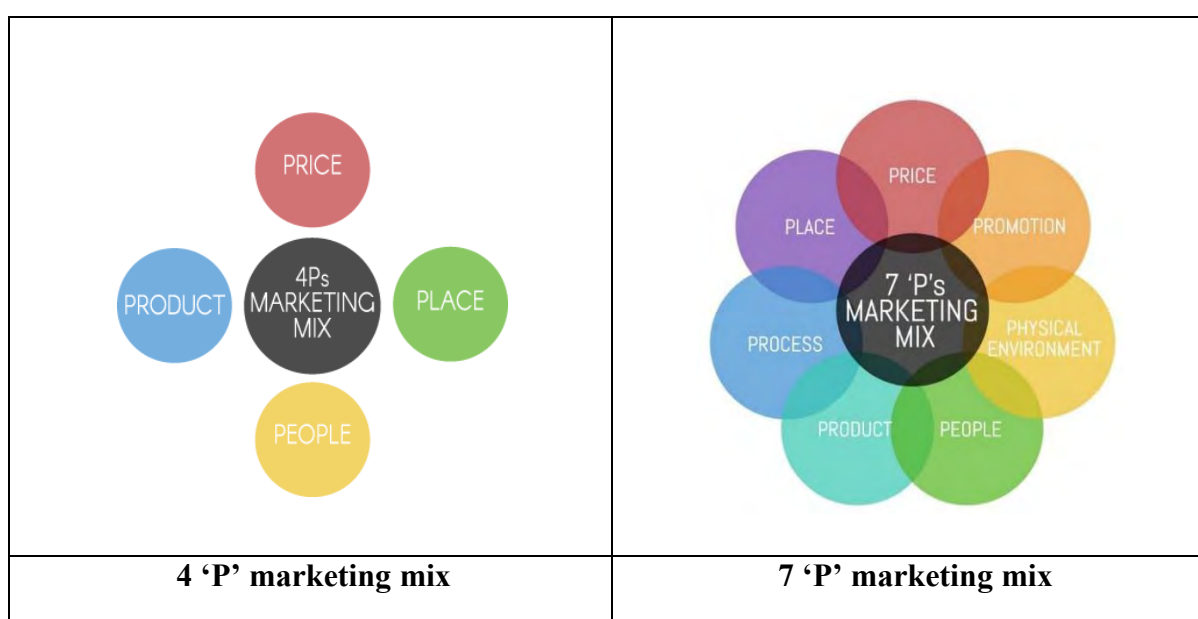


Fig. 2. Components of marketing mix using 4P's and 7 P's

Product: A product is a commodity produced by producer (fishermen) and sell in the market. This is important to stimulate demand for the product and useful to build brand value.

Price: A crucial component in deciding the survival of the market. It is normally the price which consumer pays to enjoy the fish.

Place: The place selected for marketing needs to be accessible by the consumers easily and also connected with transportation facilities.

People: Consumer are the king in the marketing mix. The consumer satisfaction levels ultimately determine the success of the fish marketing. As the fish is perishable commodity, it needs immediate disposable wo the consumers without losing the fish quality.

Process: The appropriate selection of process towards value addition of fish needs to be done to avoid mistakes and minimize costs.

Promotion: It is the action of publicise the product about the product and its features to the consumers. This is very significant in direct marketing and sales promotion.

Physical environment: The infrastructure facilities and the market area facilitate the good marketing system. The cold storage facilities and physical amenities of fish markets needs to be improved.

Components	Aim/ target	Features
Product	What to sell?	Quantity, quality, species, size grades, packaging
Place	Where to sell?	Channels, location and transport
Price	How much to sell?	Market price Margins
Promotion	Product visibility	Promotional agencies
People	Consumers	Consumer satisfaction
Process	Which product to sell?	Value addition
Physical environment	Infrastructure	Icing and cold chain facilities

Table 2. Components and features of the marketing mix

Marketing research should be concentrating on improving the components of marketing mix based on the requirement. But, in future, it is mandatory to strictly follow the sustainability concept on marketing by incorporating the triple bottom line of people (social), planet (environment) and profit (economical) concepts. There should be a balance in satisfying the present market needs without reducing the future values of the same.



Integrating the sustainability concept
Sustainable (green) marketing

Fig. 3 Concept of sustainable marketing

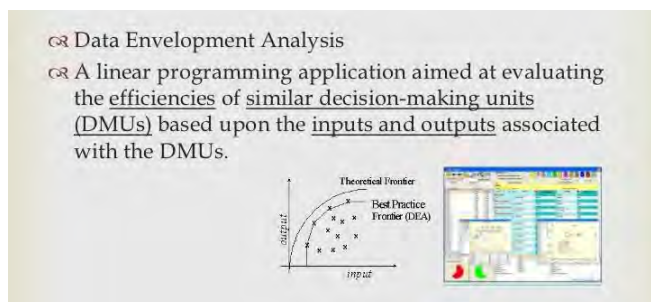
In this fish marketing, the performance is the major decisive tool to concentrate on in this consumerism world. Hence, the methods/ technique used to assess the performance in the marketing mix will be discussed.

Methods to assess the performance of fish marketing

There are several traditional methods used for assessing the performance of fish markets. There are presented in Table 3.

Table 3. Methods of assessment of marketing efficiency

Methods of analysis	Description	Remarks
Price spread (Gross marketing margin)	Net price received by the fishermen from consumer's price	Traditional method of calculation using producers' price and consumers price
Marketing Efficiency Index (MEI)	Sherpherd marketing efficiency index and Acharyas efficiency index	Tradition method of calculation using value added price, purchasing and selling price
Data Envelopment Analysis (DEA)	Non-parametric mathematical method	Modern method of calculation using inputs and output variables of marketing



DEA is an opensource software and it can be downloaded.

Price discovery

Price is the value of the product expressed in monetary terms. Price is determined through interaction of demand and supply of the fish. The perishable nature of the fish is the major challenge for the price variation at intra and inter-regional levels. The price determined by demand and supply is an equilibrium price which is not practical. The factors at both supply and demand side need to be considered for determining the fish prices.

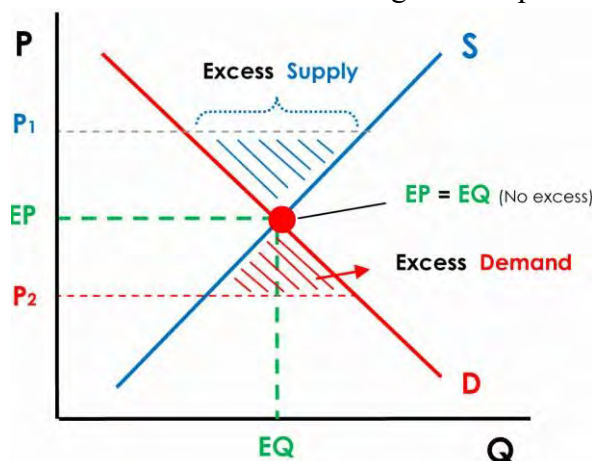


Fig. 3 Price determination using S-D curve

Price is most attractive and decisive factor of consumer purchase of particular commodity. Their linkages between markets are the important areas of marketing research towards deciding their competitiveness. The fundamental law of the one price policy implies that price differential does not exceed the transport and transaction cost. The price differentials are due to marketing cost, profit-margin, competitors' pricing and Government's policy of price-control.

Market integration is still an important issue for price differentials induced by supply shocks. The one method used popularly to assess the integration of markets is price transmission analysis or co-integration analysis. A cointegration test is used to establish if there is a correlation between several time series in the long term. The concept was first introduced by Nobel laureates Robert Engle and Clive Granger, in 1987, after British economist Paul Newbold and Granger.

There are certain issues that affects the efficient functioning of the marketing are cost minimization and yield maximization, food loss and food waste (FLW) occurs at all levels of the fisheries and aquaculture value chain i.e., waste management, physical loss and quality loss, standardized approaches are needed to accurately quantify loss in its various actors and activities levels in the fish value chain. The improvement of fish value chain to be focused on holistic, inclusive, participatory and sustainable way for effective marketing system for the benefit of both producers and consumers. The fish marketing sector improvement is considered incomplete if the ideas towards fish market modernization, cold chain facilities, enhancing productivity and production, developing infrastructure for processing, value addition and quality standards are not focused.

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