

Drivers and barriers to online purchase of fish and seafood: A conceptual model

Sajeev M.V.^{1*}, Joshy C.G.¹, Jesmi Debbarma² and Abhay Kumar³

¹ICAR-Central Institute of Fisheries Technology, Cochin -29

²Visakhapatnam Research Centre of ICAR-CIFT, Visakhapatnam-03

³Mumbai Research Centre of ICAR-CIFT, Navi Mumbai-03

*sajeev.mv@icar.gov.in

Most Indians have a positive perception regarding the consumption of fish and seafood. The annual per capita fish consumption for India's fish-eating population is estimated between 8 to 9 kg. Tripura (25.53kg), Chhattisgarh (19.7kg), Manipur (18.25kg), Kerala (17.93kg) and Odisha (16.34kg) are the bigger states reporting the highest average annual per capita fish consumption while the Union Territory of Andaman and Nicobar Islands reports the highest per capita fish consumption of 77.84kg/year in 2020-21 (DoF, 2022). In India, most fish sale happens through unhygienic local markets, small shops, roadside makeshift stalls and door-to-door vendors. Rampant cases of fish adulteration and quality issues have created a shift in the purchase behaviour of consumers and have helped the emergence and growth of online fish marketing in urban India. Leveraging the possibilities of ICTs and social media, vendors have made online fish retailing possible. This article tries to delineate the drivers and barriers of online fish purchase from consumer angle. The factors identified were consolidated into a conceptual framework of online fish purchase.

Drivers and barriers to fish purchase and consumption

Personal factors like values, beliefs, attitudes and demographics had a huge influence on fish consumption. Factors like availability, price, market, eating habits, health beliefs, safety and quality concerns and sensory and convenience perception acted as both drivers as well as barriers in varying degrees (Can et al., 2015). An earlier review of the drivers and barriers to fish consumption using 'Theory of Planned Behaviour' as a base provided a framework for quantity, frequency and characteristics of fish consumed (Sajeev et al., 2019).

Studies revealed various factors influencing the purchase and consumption of fish among different communities of India. 'Price of fish' is found emerging as a barrier to fish purchase (Sajeev et al., 2021a) while an often-overlooked factor: 'sensory perception', emerged as an important determinant of fish purchase. The combined effect of 'sensory perception' along with 'availability of dressing facility' and 'convenience perception' has a major contribution to fish purchase and consumption. 'Source of fish (Marine/

Freshwater)' emerged as another important factor followed by 'availability of favourite fish' (Sajeev et al., 2022).

Drivers and barriers to online fish purchase

Sajeev et al., (2021b) found large urban families recording higher fish purchase and consumption. These urban families were found to spend higher amounts on online fish purchase while attractive monthly incomes among the urban population were found to sustain good expenditure over online fish portals every month. Consumers found online purchase of high-value fish profitable while small pelagic fishes were purchased online mostly for convenience and saving time rather than for any price advantage (Sajeev et al., 2021b).

A specific study attempting to capture the trends in online fish purchase and to delineate the contribution of major drivers and barriers affecting online fish purchase using Conjoint analysis among urban consumers revealed that factors like 'place of origin of fish', '24x7 accessibility'

and 'sensory perception' were the most contributing drivers while 'price of fish' and 'availability of favourite fish' were the most important barriers to online fish purchase (Sajeev et al., 2021b).

Fish consumers are exposed to positive information on the nutritional benefits of eating fish while on the other hand they are exposed to negative news of health risks due to adulteration of fish and unscientific post-harvest management. Online portals came up with the guarantee of fresh catch every day from local waters which explains the factor 'place of origin of fish' emerging as an important driver for online fish purchase. Another major driver of online shopping was the option to carry out transactions at any time of the day. Consumers found immense value in online fish shopping due to the provision of dynamic websites and mobile apps, which helped achieve 24x7 accessibility. Hence, '24x7 market accessibility' has emerged as another important factor driving online fish purchase.

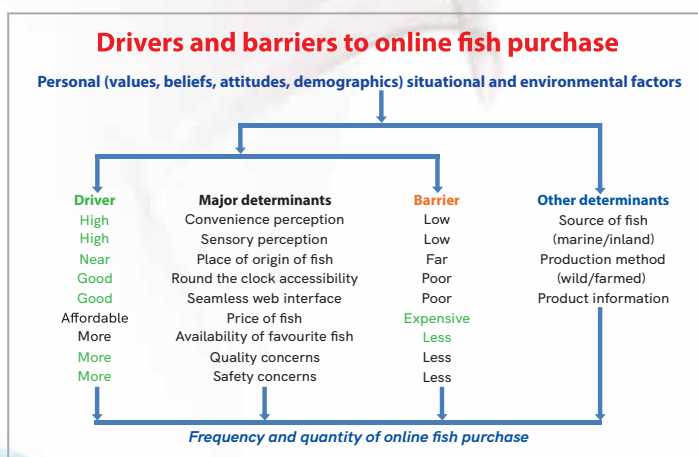


Fig. 1 Conceptual model of drivers and barriers to online fish purchase

The present generation of urban consumers being averse towards handling and cleaning of fish, 'Sensory perception' has emerged as an important driver for online fish purchase. The process of purchasing, cleaning and cooking of fish and disposing of fish waste has become a highly time-consuming and cumbersome job for urban families thus making the factors sensory perception, convenience perception, availability of dressing facility and availability of home delivery together act as most important drivers of online fish purchase.

The price of fish online was always found to be 40 to 50% higher than traditional markets and vendors thus not favourable for most of the families for sustained online purchases. The price of fish was found to act both as a driver and barrier according to fluctuations in fish price. Affordable price was found to increase fish purchase and consumption in several Indian locations. The majority of consumers were species-specific while buying fish. Availability and affordability of the most common and favourite fishes; sardine, mackerel, anchovies and pink perch; were poor on major online fish selling portals thus making the factor 'Availability of favourite fish' act as a barrier to online fish purchase.

Seamless web interface along with the increased consumer concerns regarding the safety and quality of fish were other important drivers and barriers to online fish purchase. The source of fish, production method and product information were

the other minor determinants recorded. The findings were consolidated into a conceptual model (Fig:1) which can facilitate a better understanding of factors influencing online fish purchases. The model is expected to help refine online fish retailing and assist consumers in making better purchase decisions.

Reference

Can, M. F., Günlü, A., and Can, H. Y. (2015). *Fish consumption preferences and factors influencing it. Food Science and Technology*, 35, 339-346.

Department of Fisheries, Government of India (2022) *Handbook on Fisheries Statistics 2022*. p. 218.

Sajeev, M. V., Mohanty, A. K., Sajesh, V. K., and Rejula, K. (2019). *A review of drivers and barriers to fish consumption based on theory of planned behaviour. FishTech Reporter*, 5(2), 18.

Sajeev, M. V., Aparna Radhakrishnan, Mohanty, A. K., Joshy, C. G., Akber Ali, V. P., Gopika, R. Suseela Mathew and Ravishankar, C. N. (2021) *Factors influencing fish consumption preferences: Understandings from the tribes of Wayanad, Kerala. Indian Journal of Extension Education*. 57(4), 23-27.

Sajeev, M. V., Joshy, C.G., Rejula, K., Sajesh, V.K., Suresh, A., Mohanty, A. K. and Ravishankar, C.N. (2021) *Drivers and Barriers to Online Fish Purchase in Kerala, India. Fishery Technology*, 58(4), 246-256.

Sajeev, M. V., Mohanty, A. K., Joshy, C. G., Gopika, R., Jabbar, P. A., Mathew, S., and Ravishankar, C. N. (2022). *Fresh and dried fish consumption and its contributory factors: A study of Malappuram, Kerala. Indian Journal of Extension Education*, 58(4), 86-90.

