

## **Fish purchase and consumption: New trends and determinants**

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Indian fishery has established as one of the fastest growing enterprising sectors in India and contributes 1.1% to national GDP and 5.15% to agricultural GDP of the country. With more than 14 fold increase in national fish production in just six decades i.e. from 0.75 million tonnes in 1950-51 to 13.7 million tonnes during 2018-19; India registers an unparalleled average annual growth rate in fishery that establishes its position as second largest in global fish production, next to China. In fact, the fish production in India has been doubled during last two decades (between 1995-96 and 2014-15) that engages more than 14.5 million people in fisheries activities for their livelihood giving a boost to foreign exchange earnings to the tune of US \$7.08 billion (2017–18) through export of 13.77 lakh MT fish and fisheries products, which amply justifies the importance of the sector on the country's economy and in livelihood security.

Seafood is considered as an important part of a healthy and balanced diet by most consumers. It's been estimated that around 60 per cent of the Indian population consumes fish and the consumption pattern varies widely and across the different social fabric (Shyam, et al. 2013). The annual per capita consumption of fish for the entire Indian population is estimated at 5-6 kg whereas for the fish eating population it is found to be 8-9 kg. Average annual per capita fish consumption is highest in Kerala state at 30 kg which is very high compared to that of other states of India (Shyam, et al. 2015).

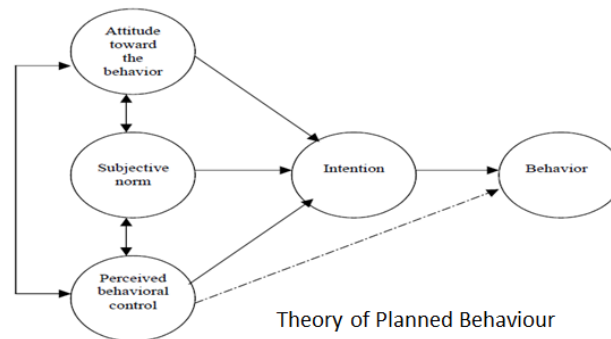
However, Indian consumers are forced to buy fish from unhygienic markets and vendors. In general, the fish supply chain follows a four-day cycle, wherein all parties don't necessarily conform to scientific food safety norms. Without a proper cold chain, bacterial contamination typically starts within 30 minutes. Poor quality ice and preservatives like sodium benzoate and formalin are used to keep the fish from deteriorating, which are potentially harmful and carcinogenic for humans (Ranganna, 2017). In recent times, the wide scale media highlight on fish adulteration has created an increased health concern and consciousness about safety and quality standards among consumers (Sajeev, 2018a). These issues have created new drivers and barriers to fish consumption with fish consumers changing their fish purchase behaviour and market choice. Fish vendors air concerns about urban consumers' inhibition to purchase from traditional markets due to increased safety and quality awareness. In this context, online fish marketing has emerged in a big way and is assumed to be disrupting traditional fish vending business (Sajeev, et al. 2018). Online fish marketing claims to provide fresh and chemical/pesticide free fishes, which gives them an edge over other fish retail sources. There is a

steady rise of e-commerce fish marketplace that has gained momentum with the rise of e-grocery and advent of new cost-effective freezing technology (Vishal, 2015).

Issues of fish adulteration have been widely discussed by media and have created an increased health, safety and quality consciousness among consumers. These issues have created new drivers and barriers to fish consumption with fish consumers changing their fish purchase behaviour and market choice. The article studies the emerging drivers and barriers to fish consumption using 'Theory of Planned Behaviour' (TPB) as a theoretical base. Later, the factors identified were consolidated into a framework of fish consumption.

### Theory of Planned Behaviour

The theory of planned behavior (TPB) was introduced as an extension of Theory of Reasoned Action (TRA). The underlying concept of TPB says that person's intention to perform certain behaviour, which is defined as people's motivation, including the willingness to perform; is a latent variable and this variable is dependent on attitude and subjective norms (Ajzen, 1991; Petrovici, et al, 2004; Saba & Vassallo, 2002, Bonne et al., 2007).



The perceived behavioural control (PBC) as the third construct is the extension of the TRA model to develop the TPB model. The unique nature of TPB model is that it considers the non-economic factors, which are overlooked in traditional economic models (Petrovici, et al, 2004).

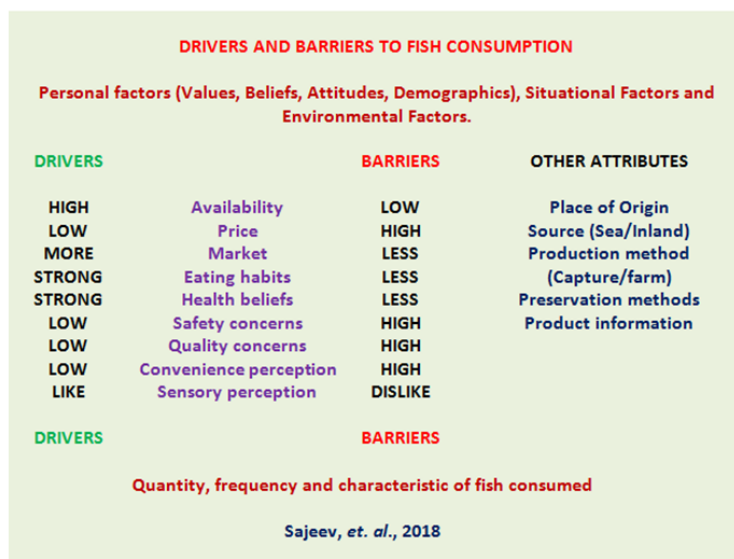
### Determinants of fish consumption

Empirical evidence shows differences in the use of information sources by consumers depending on the food product, the communicated information and the potential health or safety risk (Gutteling and Wiegman, 1996; Jungermann et al., 1996). With respect to fish, consumers mostly use personal sources of information, such as fishmongers and family and friends (Pieniak et al., 2007).

Pieniak et al. (2010 a,b) identified knowledge as a relevant determinant of fish consumption. Consumers with a higher level of knowledge about fish were found to eat fish more frequently. Knowledge studies focused mainly on production aspects, whereas consumer information and education campaigns have mainly been focused on the health and nutritional benefits of fish, as well as on convenience issues acting as barriers to consumption (Olsen, 2003; Verbeke and Vackier, 2005).

Olsen in 2004 found four salient beliefs reasonable in forming seafood / food consumption attitude as: taste, distaste (negative affect), nutrition (Stephoe et al., 1995) and quality / freshness (Olsen, 2004). After the taste issues the nutritional aspects are the second prominent factor that affect consumer's food attitude, it is directly related to health and healthy eating behaviour (Olsen, 2001). The quality of the fish/seafood freshness is another prime determinate. In this regards, frozen fish are treated as “non-fresh” “bad quality” “tasteless” “watery” “boring” (Olsen, 1998). Olsen in 2004, found price, value for money and household income are not barrier in seafood consumption, while Verbeke & Vackier, in 2005, reported that price negatively affect the fish consumption attitude.

The review of the drivers and barriers to fish consumption using 'Theory of Planned Behaviour' as a theoretical base (Sajeev et. al., 2018) provided the following framework of determinants for quantity, frequency and characteristics of fish consumed.



### New trends: Online fish marketing

Fish vendors doing business online sounds crazy in India where vendors have a virtual monopoly over door sales of both sea and inland fish. Moreover, fish being a highly perishable product, the

idea was found too difficult to implement unlike other consumables where online marketing rules the roost. However, things changed drastically over the last couple of years particularly in urban areas.

Often referred to as 'online marketing', 'internet marketing' or 'web marketing', digital marketing/E-marketing has gained popularity over the past decade. With the arrival of social networks, e-marketing now also boasts of a new branch of social media marketing. Even though the term 'digital marketing' was coined in the 1990s, its complete usage and importance has risen only in the recent past. As technology advanced rapidly over the past two decades, digital media became so widespread that anybody could access information anytime, from anywhere.

E-Marketing stands for electronic marketing, is also known as Internet marketing. In contrast to traditional marketing, E-Marketing takes marketing techniques and concepts, and applies them through the electronic medium of the internet. Essentially, E-marketing threads the technical and graphical aspects of online tools together, allowing for design, advertising, brand development, promotion and sales. Internet marketing offer the possibility to tracking almost every action a visitor or potential customer takes in response to marketing messages and how they navigate through their buying cycle. One of the most desirable aspects of Internet marketing is low barrier to entry. "Digital marketing/e-marketing as the name specifies is marketing over the internet through various digital devices".

Online marketing giants such as Amazon and Flipkart have been showing tremendous growth over the years in Indian e-retail market space. Hence, idea of e-markets is not new for Indian customers and they have become used to it. But fish being a highly perishable commodity, adhering to quality standards makes its sales, marketing and promotion a risky affair. Sustainance of online fish marketing depends on providing fresh and affordable fish to the consumers on time. This distinguishing factor makes online fish marketing an interesting topic of study.

With an increased knowledge, attitude and better perception about health, quality and safety issues related to fish consumption, customers are fast switching to online fish markets. Orders are just a touch away on android mobile apps, websites, facebook page, Whatsapp message, an SMS or a call. More than a dozen e-commerce sites; [www.freshtohome.com](http://www.freshtohome.com), [www.dailyfish.in](http://www.dailyfish.in), [www.mathafreshfish.com](http://www.mathafreshfish.com), [www.suvichar.in](http://www.suvichar.in), [www.onedaycart.com](http://www.onedaycart.com), [www.freshandhealthy.in](http://www.freshandhealthy.in), [www.wildfish.in](http://www.wildfish.in), [www.biggro.com](http://www.biggro.com), [www.healthyfishonline.com](http://www.healthyfishonline.com), [www.onedaycart.com](http://www.onedaycart.com), [www.onlinekochi.com](http://www.onlinekochi.com), [www.nallameen.com](http://www.nallameen.com), [www.bigbasket.com](http://www.bigbasket.com) etc are into business and is expanding their market base day by day (Cynthia, 2016). These fish E-commerce sites offer a rich array, mostly the variety available on local coast. Pre-ordered fresh fish reaches consumers' doorstep in curry cut, steak, fully cleaned or even as whole fish at prices affordable to the discerning homemaker. More than price, the focus in e-marketing of fish is on quality and safety

(Sajeev, 2018b). Some online sites charge for delivery while others do it for free. However they are still far away from disrupting traditional fish vending systems.

## Conclusion

Fish purchase and consumption is a dynamic process that is constantly evolving and changing. Consumer focus is shifting to quality and convenience rather than price. Online fish marketing is far away from disrupting traditional vending and sustainability of online fish marketing counts mostly on consumer satisfaction and continued patronage. Maintaining the choice of products, better price range, quality and safety guarantees, delivery systems and improved consumer accessibility over mobile and social media platforms are found to drive growth in online fish vending sector.

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