

Price Transmission In Seafood Value Chain

Case Study In Spain Shows Retailers Favor Farmed Products



Retailers focus interest on species whose prices decrease, allowing larger margins even with decreases in retail prices.

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stages of the seafood supply chain can have important implications for fishermen and fish farmers.

The consequences of imperfect price transmission not only affect the profits of farmers and fishermen, but also the demand of final consumers.

FAO/NORAD Project

Between 2010 and 2012, the Fishery Market Division of the Food and Agriculture Organization (FAO) of the United Nations led a research project with support from the Norwegian Agency of Development (NORAD) focused on the study of value chains of different wild and farmed seafood species in developed and developing countries. The main goal of the project was to test market competitive conditions along the different stages of the value chains and analyze the impacts of the varied market conditions on the transmission of prices from farms to final consumers.

Two alternative methodologies were used to study price transmission based on the availability of data. Structural data were used to test competitive equilibrium in a three-equation model measuring variations in the marketing margins, retail prices and ex-vessel/ex-farm prices. The independent variables used in these models were the supply quantities in origin, a retail demand shifter and marketing costs.

Data for all variables were not available in all the participating countries. Alternative reduced-form models based on cointegration analysis across the prices at the different levels of the chain allowed price transmission testing in those cases with no additional data.

Seafood Value Chain In Spain

The results for the Spanish case suggested that different species operated under different market conditions. Structural models differed from one species to another in terms of overall and parameter significances.

Price transmission was less effective in wild species dominated

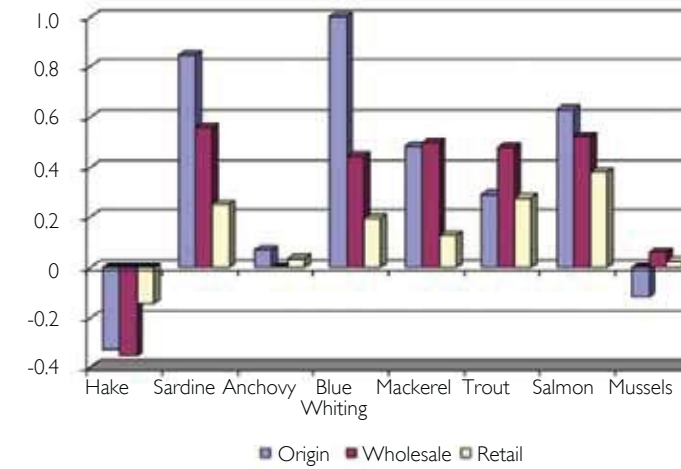


Figure 1. Price changes at different levels of the value chain, 2004-2011.

by local landings of fish like sardines, mackerel or blue whiting. In contrast, species with significant shares of imports like hake or anchovies were more competitive, and the inclusion of import prices in the analysis improved cointegration across all the prices. During the 2004 to 2011 period, the prices of wild species with significant shares of imports decreased or moderately increased even in periods of shortage in local supply. Prices for farmed species were more integrated than those for the wild fish.

Whether locally raised or imported, price transmission could not be ignored – even in the less-diversified models – excluding competition between local and imported products. Changes in retail prices were less pronounced than for producers or wholesalers. Retailers were flattening the variations of prices in the previous stages of the chain. But changes in farmed fish species were better linked with the evolution of prices in origin (Figure 1).

Value added by wholesalers was higher for wild species with low levels of imports. All the species showed a decrease in retailers' contributions to final value. Wholesalers' contributions to final product value were lower for farmed species than wild fish, with the exception of mussels. This level of value change lost importance when the market of the species was dominated by farmed fish. As wholesalers reduced their contributions in the value chain, retailers improved their profits (Figure 2).

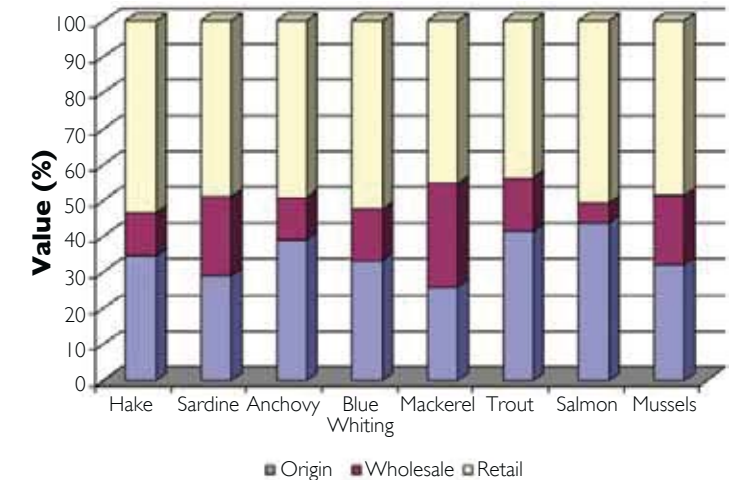


Figure 2. Contributions to final product value, 2004-2011.

Consumers' demand elasticity prevents significant rises in retail prices, making trade of species with large contributions from wholesalers less interesting for retailers. Although salmon and trout prices increased in the observed period, the impacts on retailers' profits were lower than for wild species. Even in periods with low stability in aquaculture prices, farmed products were more profitable for traders than wild species, especially if the former were dominated by local production.

Considerations For Farmed Species

Retailers focus interest on species whose prices decrease, allowing larger margins even with decreases in retail prices. Some farmed species increased their prices in the observed period, resulting in reduced profits for retailers. However, the decrease in retailers' margins was, in all cases, lower than the average decrease observed with wild species.

Retailers' decisions affect volumes of trade and consumption. In the observed period, species with decreasing prices and farmed fish were preferred over other wild species. But trends in prices are changing for some species, making them more or less attractive. In a perfect price transmission framework, farmed fish benefit from decreases in price, as this impacts retail prices and helps increase demand.

Summary:

An FAO research project that studied value chains for wild and farmed seafood analyzed the impacts of varied market conditions on the transmission of prices from farms to consumers. Changes in retail prices were less pronounced than in producer or wholesaler prices, as retailers tended to flatten price variations. Value added by wholesalers was higher for wild species with limited imports. Retail farmed fish prices were more closely linked with the evolution of pricing across the value chain.

The profits and welfare of farmers and their communities are dependent on the ex-farm prices of their products. These prices are ultimately set by the retail demand for seafood. Under perfect competitive conditions along the different agents in the value chain, a shock in the prices at origin results in change in retail prices in the same direction and intensity. When this happens, it is said that perfect price transmission operates along the value chain of the commodity.

The assumption of perfect competition may be appropriate when applied to setting the prices of fish at the ends of the chain (origin/retail), but may be inappropriate for setting prices among agents participating in different stages and levels of the seafood value chain. In many industrialized countries, a few supermarket chains account for a very large share of retail sales of seafood products. Therefore, non-competitive pricing at the different

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