meat and poultry, makes it clear that there is not perfect substitution among the flesh foods. Nevertheless, data bases on food consumption are equally clear at showing that as people have increased their consumption of various seafood products, they have reduced their consumption of meat and poultry.

There are other nonprice factors in the consumption decision. A consumer survey found that taste, quality, and freshness were rated above price (''moderately important'') in decisions to order seafood in a restaurant or to purchase for preparation at home. In a survey of retailers' experiences, consumers ranked quality ahead of price in making seafood selections and rated the need for information on cooking as a concern equal to price (Refs. 244 and 225).

Another relevant consideration is the fact that a disproportionate percentage of seafood is consumed in restaurants as a luxury item where the cost of the raw material is not as important a factor in the purchasing decisions made by these consumers.

All of this information is consistent with other data in this analysis that suggests that a 1 percent change in price results in less than one-half of one percent change in seafood consumption.

Another major factor that lessens any competitive cost advantage meat and poultry products might experience from an increase in seafood cost is that USDA is proposing similar HACCP regulations for meat and poultry. USDA's proposal, if finalized for meat and poultry products, suggests that all segments of the flesh food market may face cost increases in the near future. It is entirely possible that the price of seafood relative to meat and poultry will not change. The agency agrees that some seafood imports have a cost advantage over domestically produced seafood, primarily due to lower labor and capital costs of production. However, because the regulation applies to imports as well as domestic products and because importers from EU member nations will soon be under HACCP requirements and experiencing increased costs, it is reasonable to assume that the price of imported seafood relative to domestic seafood will not change.

In the short run, the ability of producers to pass on cost increases is largely determined by the elasticity of demand (the degree to which consumers reduce their consumption of a good in response to a given increase in price) and the elasticity of supply (the degree to which producers increase their production of a good in response to a given increase in price). The elasticity of demand is determined in turn by, among other things, the presence or absence of close substitutes. Thus, for example, if there are close substitutes and the price of a good goes up, consumers will not continue to consume the higher priced good but switch to one of the substitutes.

If manufacturers know that consumers will not switch to a substitute when there is a price increase, then they are free to pass along all of the increased costs (from complying with the regulation) in the form of price increases. However, where there are close substitutes for seafood, such as other flesh foods, consumers respond to price increases by reducing their consumption of the high priced good. Rather than attempting to pass on all of the costs of the regulation in the form of higher prices, producers must accept reduced profits and bear some, if not all, of the burden of the cost increase.

In very competitive markets, such as the market for flesh food, where meat, fish, and poultry are considered substitutes, producers bear the entire burden of any increases in fixed costs. Fixed costs are costs that do not change, despite the size of the firm and changes in the level of output. Examples of fixed costs are costs of plant, equipment, and management; much of these costs are expected to be borne by processors. Because large firms spread fixed costs over larger output, they may be able to pass on these costs when smaller firms cannot.

In addition, also in the short run, producers may bear some portion of the variable costs that cannot be profitably passed on to consumers. Variable costs are costs that vary with changes in the amount of output. Examples of variable costs are costs of raw materials and hourly labor. However, it is likely that much of the variable costs will be passed on to consumers.

When firms in a competitive market cannot pass on all of a cost increase in the short run, profits decline. Beyond some point profits become either so low or negative that the firm is forced to close (discussed more fully in the Regulatory Flexibility Analysis below). In the long run, the exit of these marginal firms reduces the industry supply (of seafood) and permits the remaining firms to raise prices to cover the full costs of production, both variable and fixed costs. Thus, in the long run, seafood prices will rise by the full cost of the regulation.

A few comments requested a better analysis of price changes. These commenters criticized the approach used to estimate price increases in the Executive Summary of the PRIA. Rather than dividing the estimated domestic cost of the regulation by the total domestic production, the commenters suggested estimating price changes for each market segment. The advantages of this approach are that different types of seafood are treated separately (the change in the price of raw tuna might be very different from the change in the price of ready-to-eat shrimp cocktail) and that different sized firms are treated separately (small firms may be forced to raise prices more than large firms).

FDA agrees that this method of determining price changes is more legitimate than the method employed in the PRIA. However, FDA did not receive any information from commenters that would enable the agency to calculate prices in this manner. It is worth noting, however, that the contractor that performed the study upon which many of the estimated costs in this RIA are based did take product type into account when estimating cost increases. That contractor estimated a range of cost increases from negligible to 1.3 percent, depending on the product. Again, it is important to note that that study included costs for the control of types of hazards not covered by this final regulation.

Finally, while the methodology used in the PRIA might not produce accurate price changes, it suggests that overall price increases due to this regulation could well have a negligible effect on demand.

C. Benefits

In the PRIA, FDA estimated that the proposed option, which is being adopted in this final rule, would: (1) Reduce the amount of foodborne illness that results from consumption of seafood and; (2) generate significant nutrition benefits as a result of the increased consumption of seafood (brought about by a decrease in consumer anxiety) with a concomitant decrease in the consumption of meat and poultry; (3) reduce the amount of rent seeking (rent seeking is a term economists have applied to activities which do not contribute to societal welfare but only seek to transfer resources from one party to another); and (4) generate export benefits by allowing U.S. exporters to continue to export to countries requiring HACCP.

The last benefit, the export benefit, is characterized as the benefit to firms exporting to countries that require federal oversight and certification of HACCP programs. In addition to the benefits cited in the PRIA, the agency is addressing benefits derived from reduced enforcement costs, and is discussing other unquantified benefits of adopting the seafood HACCP