

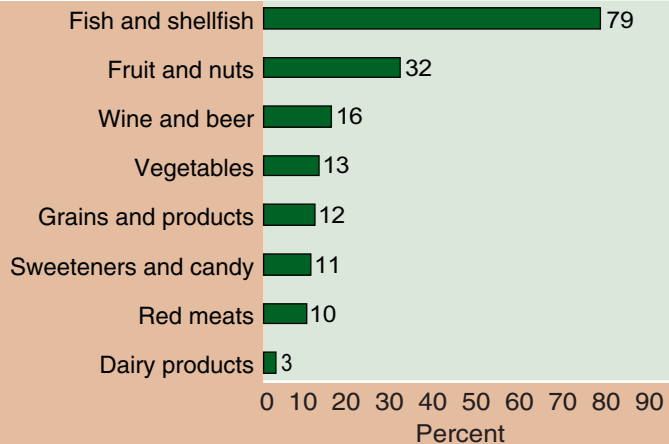
# What Share of U.S. Consumed Food Is Imported?

Increasingly, the foods Americans eat are imported because bananas, coffee, chocolate, fish and shellfish, apple juice, cashew nuts, spices, and other imported foods are produced in greater quantity or less expensively abroad or, in some cases, cannot be produced in the U.S. Since 1980, there has been a general upward trend in average import shares for both crops and animal products. Some foods, such as fish, shellfish, coffee, cocoa, and spices, help boost overall import shares due to their relatively low domestic production volumes. Other food groups have lower import shares that reflect their greater domestic production volumes, such as dairy products, red meats, grains, vegetables, and sweeteners, all of which have import shares 15 percent or lower.

The share of imports consumed of each food or their combined amounts can be measured using two different approaches. The first calculates the imported food share of the total cost of foods and beverages consumed in the United States. The second, a volume-based approach, considers imported foods as a share of the total weight of all U.S.-consumed food.

Each measure has advantages and disadvantages. Each provides significantly different estimates from the other. The aggregate import share of U.S. food consumption in 2005 was 7 percent when based on value, but 15 percent based on volume.

## Import shares by volume are highest for fish and shellfish, 2000-05

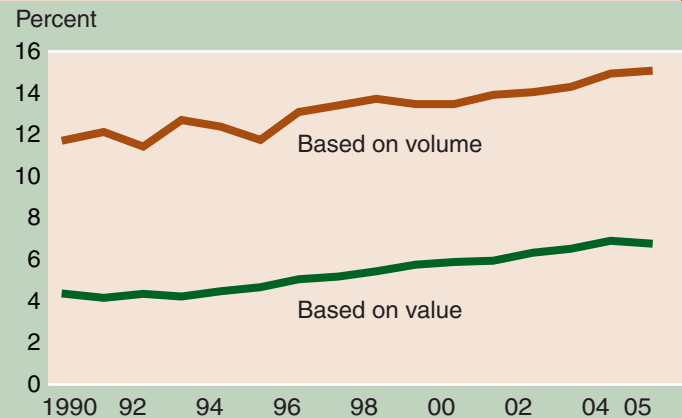


Source: USDA, Economic Research Service.

## Using the Value-based Approach

In the dollar-values approach, the wholesale cost of foods and beverages consumed in the U.S. is estimated by adding up domestic production values and the total import bill. The U.S. Bureau of the Census reports food imports in customs value—the closest equivalent to wholesale prices available. The value of domestically produced foods and beverages is estimated from their farm or wholesale values, depending on the food.

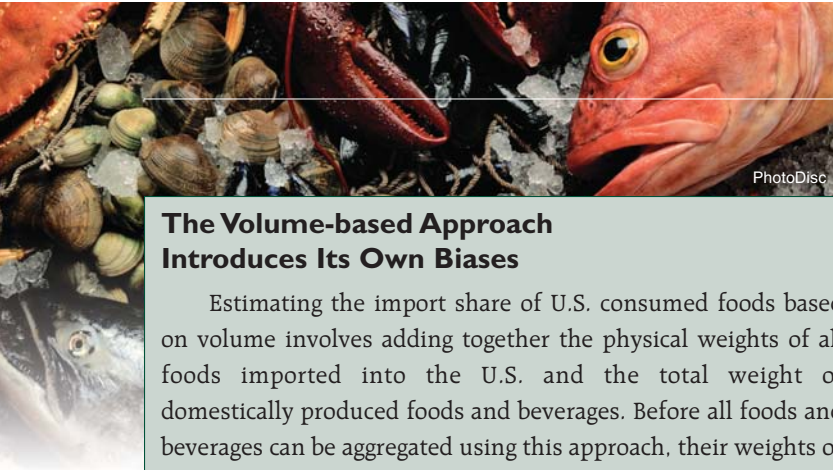
## Import shares of U.S. consumed food are much higher when based on volume



Source: USDA, Economic Research Service.

The wholesale cost of fresh produce and other unprocessed food, for example, is based on their farm production value or farm cash receipts. The wholesale value of processed food and beverages is best approximated by the value of shipments of U.S. food manufacturers (minus exports), reported in the Annual Survey of Manufactures by the U.S. Bureau of the Census.

There are some disadvantages to this approach, however. Annual changes in the dollar's exchange rate can shift value-based import shares even if the actual composition or volume of imported food is unchanged. Another disadvantage stems from the value added in food processing by the cost of labor, capital, inputs, and



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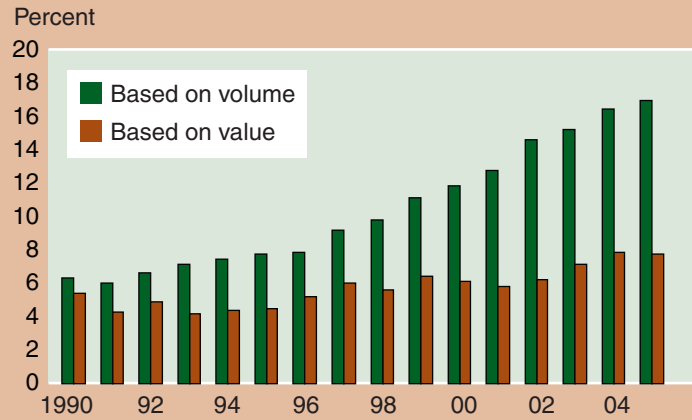
### The Volume-based Approach Introduces Its Own Biases

Estimating the import share of U.S. consumed foods based on volume involves adding together the physical weights of all foods imported into the U.S. and the total weight of domestically produced foods and beverages. Before all foods and beverages can be aggregated using this approach, their weights or weight-equivalent units have to be compatible. When combining measures of processed food with unprocessed foods, use of a base unit, or primary weight, ensures that computed ratios use common measures.

In agriculture, the base unit is the physical measure for production, which is usually in terms of weight. To prevent bias, processed foods have to be converted back to their farm weights before they can be aggregated with unprocessed or fresh foods. Frozen french fries, for example, weigh less than their fresh counterpart. Also, when converting beverages with added water into their weight-equivalent unit, only their farm-based ingredients are measured.

The farm production volume (weight) of all foods consumed by Americans can be obtained from the food disappearance estimates in the ERS Food Availability (Per Capita) Data System ([www.ers.usda.gov/data/food](http://www.ers.usda.gov/data/food) consumption). The ERS food supply and disappearance tables contain corresponding import volumes for many food groups. However, the database does not account for imports of processed fruit mixtures, such as canned fruit cocktail, canned and frozen fruit salads, fruit in confections, bakery, cereal, and dairy products. Nor does it report vegetables in imported condiments, sauces, soups, and other prepared or preserved foods. Since the fruit, vegetable, or grain composition in these highly processed products are either unknown or not recorded at the port of entry, their volumes are not included in import estimates by ERS. These myriad processed products cannot be

### Import shares of processed fruit and vegetable consumption are higher when based on volume



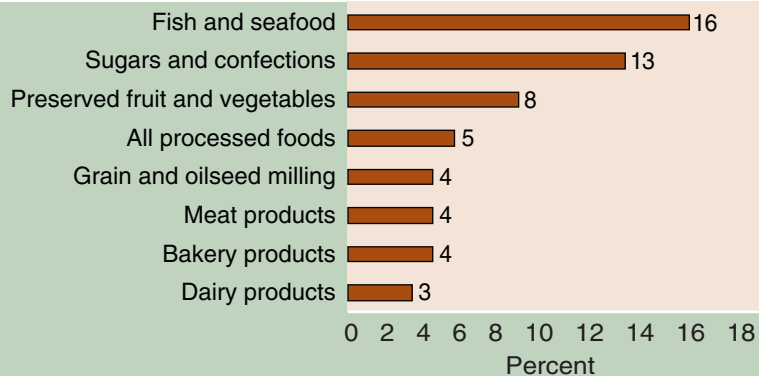
Source: USDA, Economic Research Service.

completely converted into their original farm or fresh weights since accounting for each ingredient separately is not feasible.

The water content of foods is a major source of bias in import share measures based on volume. Fruit and vegetables generally have higher water content than grains or nuts, for example. If imports include a large amount of fresh produce and fruit juices, import shares based on volumes will be higher than their dollar-value shares. Despite the high import cost of tree nuts and many grain and bakery products, their physical weight will be relatively light in import shares estimated from volumes. Thus, imported dried or dehydrated foods must be converted into fresh weight before being aggregated with their fresh counterparts.

But the drawbacks of using volume measures to estimate import shares of food consumption are relatively minor, in part because close to half of the value and volume of U.S. agricultural imports is for horticultural crops and products.

### Import shares based on value are highest for fish, seafood, sugar, and confections in 2005



Source: U.S. Bureau of Census, Annual Survey of Manufactures.

technology. Those value-added amounts can raise the wholesale value of processed food relative to unprocessed farm commodities. A pound of french fries, for example, will cost many times more than the 2 pounds of fresh potatoes from which they were processed.

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