Adding Imports to Producer Price Measures for Food
By
Alberto Jerardo

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Food prices at the wholesale level reflect prices of both domestic and imported products. The price of domestically produced food as measured by the Producer Price Index (PPI) is determined by prices received by farmers and food processors or manufacturers. The PPI, however, does not account for imported food prices. This paper estimates a composite price index from domestic producer prices and import prices of food commodities and processed foods and beverages consumed in the United States. The Bureau of Labor Statistics' (BLS) producer prices for farm products and for processed foods are combined with corresponding food import unit values in estimating a composite price index at the wholesale or pre-retail level. The index tracks the annual change in prices paid by food retailers and food services for domestic and imported products. The composite price index is a weighted average of domestic and import prices using domestic and import shares of the volume of U.S. food consumption as weights.

For the food retail and food service industries, tracking their food supply prices over time entails looking at the PPI and import prices for food separately. There is no single number that measures both of these prices together to obtain an overall picture for all foods or for each food group. While purchase managers may monitor domestic and imported food prices as tools to minimize acquisition costs, a composite index provides a national overview of what prices they are actually paying. A composite price accounting for domestic and imported food prices at the wholesale level is also a useful indicator of future behavior of the cost of food for consumers as measured by the Consumer Price Index (CPI). Since composite prices are calculated for each food group, more detailed monitoring of food supply costs is provided.

Overview

Double-digit inflation of agricultural commodity prices in global markets in 2007 and 2008 has been correlated and linked with the sharp rise in energy prices, prominently petroleum, starting in 2003. Coincidentally, but not accidentally, the dollar was losing

exchange value during this period, starting in 2002, as the U.S. current account and government budget deficits widened. Since crude oil is priced in dollars, its lower cost boosted oil import demand. Moreover, the dollar's loss of purchasing power caused petroleum exporters, particularly OPEC producers, to raise the price of crude oil. Higher gasoline prices made alternative fuels such as ethanol and biodiesel competitive, which induced greater demand to process corn and soybeans for fuel and reduced their supply for feed and food use. As grain and oilseed prices increased along with energy prices, food production and transport costs were pushed up. Eventually, effects of these higher costs were seen in the domestic food retail and food service industries, as well as in consumer prices. Thus, in broad terms, the run-up in food prices in 2007 and 2008 was initiated by external events and exacerbated by domestic policies such as ethanol subsidies and import tariffs.

The cost of food in the United States usually refers to prices paid for food at the retail level as represented by the consumer price index. The CPI for food, however, reflects the whole range of input costs incurred from the farm to food store shelves, of which food costs are only about a fifth of the total (Martinez 2009, pp. 34-35). The PPI for food represents the cost of food produced in the United States before delivery to domestic outlets or shipment to export markets. For food produced in foreign countries and consumed in the U.S., import prices represent the wholesale or pre-retail costs. These domestic and import prices measure the total cost of food supplied to retailers and food service outlets. Since the PPI does not explicitly account for import prices, it does not reflect the total cost of food supply at the wholesale level. This paper provides a single measure of both domestic and import prices for all food groups.

A domestic/import composite wholesale price index for food represents the aggregate acquisition cost of domestic and imported products purchased by the food retail and food service industries. Underlying this cost are farm commodity prices, food processing and manufacturing prices, and prices of imported foods and beverages. Estimating a weighted average of these prices in aggregate and by food group is expedited by differentiating between processed and unprocessed foods, as BLS does. Processed foods are generally characterized as ready for human consumption, while unprocessed

foods can be described as consumer-ready or as processing inputs. Many fresh fruits and vegetables are unprocessed and ready for consumption, whereas live farm animals, grains, and oilseeds need processing into meat, flour/cereals, and oil. Similarly, imported foods are either consumer-oriented or are intended for food manufacturing.

Food Producer Prices

The BLS Producer Price Index measures the revenue (net of taxes and delivery charges) received by domestic producers of edible products from their first commercial transaction. Prices paid by retailers or food services for imported foods and beverages are excluded from the PPI. Nevertheless, domestic and imported products comprise the total basket of foods consumed in the United States. Their cost of production (cost of materials and value added by labor and capital) is reflected in the PPI and in import prices. However, prior to consumption as food, domestic farm and imported products can either be unprocessed or processed. An overall price index for food at the pre-retail level cannot be constructed from all unprocessed and processed products because some unprocessed farm products undergo processing before consumption. Thus, to avoid double-counting in estimating a composite price for all foods and beverages, only prices of unprocessed products that are consumed directly are included. In BLS' PPI for all foods and beverages, only prices of fresh fruits and vegetables, nuts, milk, and eggs are included among unprocessed products. The rest—grains, livestock and poultry (for meat), and oilseeds—are largely sold as inputs in food manufacturing before delivery to retailers and food service outlets.

The PPI for food covers unprocessed farm products (BLS code 01) and processed foods and feeds (BLS code 02). Using relative weights based on value of shipments, these aggregate PPIs are adjusted to exclude animal feeds. Import unit values are then grouped according to the 3 or 4-digit PPI codes for farm products, processed foods, and beverages. The following food groups represent selected unprocessed edible farm products that are either sold directly to retailers and food services for consumption, or to food manufacturers for processing before consumption:

Fresh fruits (0111)

Fresh vegetables (0113)

Tree nuts (0119)

Grains (012)

Livestock for meat (013)

Poultry for meat (014)

Fluid milk (016)

Chicken eggs (017)

Oilseeds (0183)

For processed food products (aggregate BLS code 02), the following selected groups receive either domestic or imported unprocessed inputs:

Cereal and bakery products (021)

Meats (0221)

Poultry (0222)

Fish (0223)

Dairy (023)

Processed fruit and vegetables (024)

Sugar and confectionery (025)

Fats and oils (027)

Miscellaneous processed foods (028)

Beverages and beverage materials (026)

The PPIs for these food groups are not seasonally adjusted and correspond to calendar year prices, which are averages of monthly prices from January to December.   BLS also provides a price index for all unprocessed foods, for all processed foods, and for all foods. The aggregate PPI for unprocessed foods use relative weights for each food group based on value of shipments as estimated by the USDA's Census of Agriculture, whereas relative weights for processed foods are based on value of shipments as compiled from economic censuses by the U.S. Census Bureau.

Producer prices for food	2002	2004	2006	2007	2008	2009Q1
			2000=100			
Food commodities	99.3	126.7	119.1	146.4	163.2	133.2
Fruits, fresh	100.1	114.8	121.4	135.0	134.6	116.7
Vegetables, fresh	107.7	102.1	121.0	130.6	136.5	132.5
Tree nuts	98.1	142.7	240.1	197.3	200.4	677.6
Grains	116.9	126.9	129.5	189.3	265.8	191.3
Livestock (for meat)	92.3	120.9	117.7	125.6	128.0	114.2
Poultry (for meat)	96.2	138.4	120.9	150.8	159.6	152.8
Fluid milk	98.7	130.5	105.1	155.8	149.5	99.9
Chicken eggs	98.0	125.3	101.9	164.3	193.5	149.7
Oilseeds	105.3	150.1	113.9	160.9	235.7	187.7
Processed foods + bev.	102.1	112.9	115.6	123.0	132.7	129.4
Cereal / bakery products	103.9	110.2	116.3	124.7	144.0	142.6
Meats	99.2	118.0	118.4	121.5	126.8	116.3
Poultry	98.6	115.3	104.6	118.0	122.5	124.9
Fish	96.5	104.1	119.8	122.6	128.8	131.7
Dairy products	101.9	116.6	110.3	131.4	136.7	117.3
Processed fruit & veg.	103.1	105.1	115.8	122.4	129.9	136.1
Sugar and confectionery	107.2	114.1	126.3	127.6	136.4	144.8
Fats and oils	107.7	168.3	160.1	188.0	266.8	208.7
Misc. processed foods	103.4	107.3	111.2	114.4	124.8	127.5
Beverages	103.4	107.3	113.2	115.3	120.8	125.6
All foods and beverages	102.2	112.8	116.0	123.9	133.2	129.1

Data source: US Bureau of Labor Statistics, www.bls.gov/ppi/.

Food Import Prices

Food imported into the United States consists of unprocessed and processed commodities. Like domestic farm products, imports are sold directly to retailers and food services, or to food manufacturers for further processing. Although a sizable share of imported food products is already processed or semi-processed, many of these are not consumer-ready and are intended for additional processing or as inputs into processed products. Examples include crude vegetable oils, raw sugar, unroasted coffee beans, flour, and fruit juice concentrates. Some bulk imports such as nuts and milled rice are simply packaged into consumer-size bags. Others are food ingredients such as spices, confectionery materials, essential oils, and beverage materials.

When these intermediate imports become consumer-ready products, they are sold and reported as part of domestic processed food production. That is, they impact overall food

costs through domestic producer prices, not via import prices. Thus, in estimating the composite producer price index for all foods (domestic and imported), only import unit values of fresh fruits and vegetables, nuts, milk, and eggs are accounted for among unprocessed imports. The same crude foods (except milk) are accounted for among unprocessed domestic farm products. The impact of PPIs for live farm animals, bulk grains, and oilseeds, whether domestic or imported, is embodied in the PPI for processed foods.

The BLS Harmonized System (HS) or End Use import price indexes are not used in this study because they are not compatible with the PPI food groupings.   The BLS import prices are not disaggregated enough to match the PPI indexes, which have distinct codes for crude and processed foods.   Import unit values, however, can be calculated from USDA trade groupings or by HS codes to correspond closely with the PPI food groupings. Import prices differ from import unit values in that the former are based on BLS surveys of actual transaction prices. Average import unit value indexes for aggregated unprocessed and processed food imports are estimated by using respective import values as weights. The weighted average price for all imported foods and beverages measures the overall cost of food imports without regard to their stage of production or readiness for consumption.

Import unit values for food	2002	2004	2006	2007	2008	2009Q1
			2000=100			
Food commodities	102.5	112.9	127.4	134.5	161.5	160.0
Fruits, fresh	108.5	117.8	140.1	147.3	155.4	188.8
Vegetables, fresh	100.6	123.0	132.6	127.8	132.8	123.6
Tree nuts	80.5	108.7	114.7	115.6	137.8	118.7
Grains	113.7	127.6	141.6	178.2	271.5	227.7
Livestock, live	95.8	49.1	87.3	92.1	88.1	97.7
Poultry, live	88.1	95.6	114.9	128.7	133.8	145.8
Fluid milk	70.4	75.9	90.4	101.5	133.3	134.9
Chicken eggs	102.7	106.0	186.2	200.7	196.8	162.6
Oilseeds	114.7	152.8	135.7	182.5	261.9	195.2
Processed foods and bev.	96.2	113.4	122.6	133.5	149.2	134.6
Cereal / bakery products	106.5	120.7	130.2	141.1	170.6	163.8
Red meats and products	103.5	127.6	133.4	136.5	149.4	131.9
Poultry meat	103.2	120.2	93.7	102.2	99.5	100.3
Fish and shellfish	82.0	79.8	85.5	92.2	97.2	105.3
Dairy products	100.8	129.4	162.1	172.7	193.8	209.9
Processed fruit & veg.	93.2	101.8	115.7	133.8	146.8	75.9
Sugar and confectionery	123.9	125.6	112.1	127.2	116.1	118.3
Fats and oils	95.5	136.1	135.7	151.1	193.6	148.6
Misc. processed foods	95.5	128.5	144.6	157.8	179.0	166.7
Beverages	103.8	121.9	131.6	139.2	143.4	134.2
All imported foods+beverages	97.5	113.3	123.5	133.7	151.7	143.6

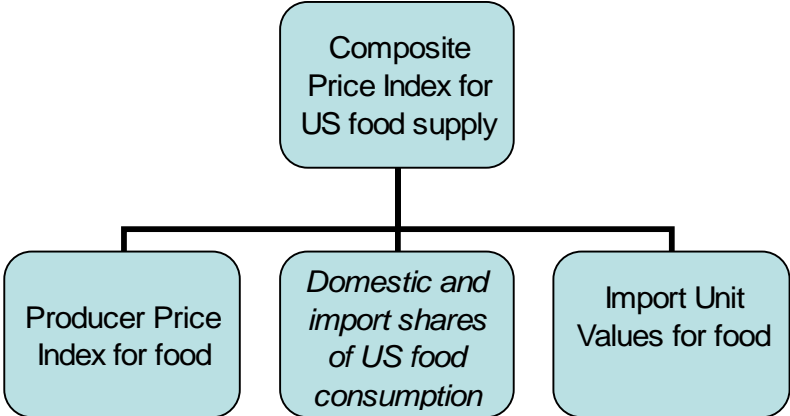Source: Calculated from fas.usda.gov/ustrade data.

Unit values are likely to be biased when estimated for more aggregate food groups. If an item in a food group is significantly more expensive than the other items, the unit value for the group will be biased upward. For example, the import unit value for fish and shellfish is biased toward shellfish since they are much more expensive per unit weight than fish. For beverages, the import unit value is biased toward wines and liquors. Thus, the more disaggregated a food group, the more likely that the unit value closely approximates the actual price. In the import unit value index table above, the weighted average prices for aggregate food commodities, processed foods, and all foods are likely biased since import values are used as weights.

Composite Food Prices

The change over time of the total cost of food sold by the food retail and food service industries is not fully measured by the Producer Price Index because of consumer-ready

imported foods and beverages that do not need further processing by domestic food manufacturers. To account for all pre-retail food costs, the PPI has to be combined with import prices into a composite index which reflects both domestic and foreign food production costs. Combining two price indexes into a composite weighted average entails the use of appropriate and consistent weights. While the cost of food produced by farms is estimated by USDA (as prices received by farmers) and the value of shipments by food manufacturers is measured by the Census Bureau, their correspondence with PPI codes is not precise (since the Survey of Food Manufactures is by industry, not by commodity). Furthermore, using values as weights for price indexes compounds the effect of prices on the weighted average. Thus, choosing a set of weights which are independent of prices and consistent with domestic food consumption is more appropriate.

The chart below illustrates how the domestic and import prices in the tables above are combined into a composite price index, or weighted average, by using the domestic and import shares of food consumption as weights.

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                    ┌─────────────────┐
                    │   Composite     │
                    │ Price Index for │
                    │  US food supply │
                    └─────────────────┘
          ┌──────────────────┼──────────────────┐
┌─────────────────┐ ┌─────────────────┐ ┌─────────────────┐
│ Producer Price  │ │  Domestic and   │ │  Import Unit    │
│ Index for food  │ │  import shares  │ │ Values for food │
│                 │ │   of US food    │ │                 │
│                 │ │   consumption   │ │                 │
└─────────────────┘ └─────────────────┘ └─────────────────┘
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Since the volume or quantity of food consumed in the United States is estimated by USDA's Economic Research Service, the import share of consumption can be estimated for each food group and in aggregate. The shares have to correspond with the individual food groups under both unprocessed and processed food products. Estimating the import share of total U.S. food consumption also entails accounting for unprocessed farm products that are inputs into or become processed foods.

The following equation summarizes the procedure in calculating a composite price for each food group:

Composite price = Producer price * (100 – M) + Import price * M

M is the import share of U.S. food consumption, in percent. Since import share is estimated from annual data, M does not change within the year even as monthly producer and import prices fluctuate.

The composite price is able to detect shifts in prices as well as in preference between domestic and foreign foods. A shift in relative prices is reflected in the composite price according to the domestic and import shares during that year. The shift in preference is detected when the domestic share of food consumption changes relative to the import share. Thus, if import prices fall relative to (unchanged) domestic prices, for example, the partial effect is when the composite price declines as a result. The full effect of lower import prices on the composite price occurs only after the shift in preference towards imports increases the import share and lowers the domestic share. Since the shift in preference occurs after the shift in prices, the import share may not change until the year after the prices have changed. The more disaggregated the food group, the more distinct the partial and full effects of changes in relative prices are on the composite price. For example, lower prices for imported pecans may cause domestic and/or import prices for walnuts to fall as well due to competition, blurring the effect of pecan prices on tree nuts as a group.

Composite prices for food	2002	2004	2006	2007	2008	2009Q1
			2000=100			
Food commodities	100.0	123.8	121.2	143.2	162.7	140.5
Fruits, fresh	103.4	116.0	129.4	140.6	144.0	149.4
Vegetables, fresh	106.8	104.8	122.7	130.2	135.9	131.2
Tree nuts	91.6	129.1	192.7	161.8	173.2	435.3
Grains	116.6	127.0	130.9	187.9	266.5	195.9
Livestock, live	92.5	115.8	115.3	122.7	124.5	112.8
Poultry, live	96.1	138.3	120.9	150.7	159.5	152.8
Fluid milk	98.7	130.5	105.1	155.8	149.5	99.9
Chicken eggs	98.0	125.2	102.1	164.4	193.5	149.7
Oilseeds	105.4	150.1	114.2	161.3	236.3	187.9
Processed foods and bev.	101.4	112.9	116.6	124.5	135.1	130.2
Cereal / bakery products	104.0	110.7	117.1	125.8	145.8	144.0
Red meats and products	99.6	119.0	119.7	122.8	128.8	117.7
Poultry meat	98.6	115.3	104.6	117.9	122.4	124.8
Fish and shellfish	85.3	83.6	90.3	96.6	101.8	109.1
Dairy products	101.8	117.0	111.7	132.5	138.2	119.6
Processed fruit & veg.	101.3	104.4	115.8	125.2	134.0	121.5
Sugar and confectionery	108.8	115.4	123.7	127.5	133.6	141.2
Fats and oils	105.6	161.9	153.9	178.3	247.6	192.9
Misc. processed foods	103.0	108.6	113.1	116.8	127.8	129.6
Beverages	103.6	115.4	122.5	129.5	134.3	130.7
All imported foods+bev.	101.5	113.0	117.5	125.7	136.0	131.0

Source: Estimated from U.S. Bureau of Labor Statistics and USDA Foreign Agricultural Service data.

Analysis of Results

The share of imports in total U.S. food consumption was estimated at 18 percent in 2008. Given that a large portion of imports is processed domestically before final sale, it is expected that the overall impact of imported food prices will not be pronounced. However, since the various food groups have different import shares, the impact of import prices is expected to be more apparent for some food groups. The composite price for fish and shellfish, for example, will be significantly influenced by import prices for fish and shellfish.

In addition, the impact of a depreciating dollar exchange rate is expected to be more evident in the composite prices of food groups with higher import shares. A weaker dollar is anticipated to raise import prices (relative to domestic U.S. food prices) since more dollars are needed to equal a particular price in the foreign currency. Thus, if import prices increase faster than domestic prices, composite prices will outpace the PPIs. The

extent to which exchange rate changes are transmitted from import prices to domestic prices is captured in the composite index from either import unit values or from the PPIs.

Starting at year 2000 as the base year, the PPI for unprocessed food commodities increased from 100 to 163.2 in 2008, a 63-percent rise. For processed foods, the PPI climbed to 132.7 in 2008. The overall PPI for all foods and beverages was 133.2 in 2008. This indicates that the PPI for all foods is highly influenced by and largely consists of processed foods, which was expected because many crude farm products are processed before consumption. Also, the global commodity price hikes in 2007 and 2008 affected domestic farm prices to a greater degree than processed food prices, which have value added from labor and capital on top of the input cost of raw farm products. For example, farm prices of domestic grains and oilseeds rose significantly in 2007 and especially 2008 in part due to strong demand for feedstocks to produce biofuels.

Import prices of unprocessed and bulk farm commodities increased at about the same pace as their domestic counterparts from 2000 to 2008. However, unit values of imported processed foods and beverages in 2008 grew at a faster pace (from year 2000) than domestic processed foods. The price index for imported processed foods in 2008 was 149.2 compared to 132.7 for domestic processed foods. This is in part due to the lower exchange rate of the dollar which started depreciating in 2002 as the U.S. current account and government budget deficits rose. Thus, the cost of imported foods and beverages was higher in 2008 (relative to 2000) than the cost of domestic produced foods. The price index for all imported foods was 151.7 in 2008 compared to 133.2 for the aggregate food PPI. Like domestic-produced foods, prices of imported processed foods largely influenced the overall imported food price index because the total import value of processed foods was almost 4 times as large as unprocessed food imports (import values are used as weights for averaging).

Since the PPI for all foods and beverages already incorporates import prices of intermediate imports that are inputs in U.S. food manufacturing, the direct impact of imported unprocessed foods is effectively reduced when combined in a composite price index for all foods consumed in the U.S. Thus, only imported fresh fruits, vegetables,

nuts, and consumer-ready processed foods and beverages have a direct impact on the composite price index. For other food groups whose imports are largely channeled into food processing before consumption, the impact of their import prices is represented in the respective PPIs. This effect is larger when the import share is higher. A scenario in which this impact may be magnified is when import prices are influenced to a significant extent by the dollar's exchange rate vis-à-vis supplier countries' currencies.

Prices of food commodities, both domestic and imported, changed at a more rapid pace since 2000 than processed foods. Since oilseeds and grains posted the biggest price gains as seen in their composite price indexes, it is expected that processed foods containing grains and oilseed products would likewise exhibit relatively high inflation rates. Indeed, the composite prices of cereal and bakery products and vegetable oils accelerated by 16 and 39 percent in 2008. Much of the price run-up for vegetable oils was due to imported tropical oils (palm, coconut, and palm kernel). The composite prices for food commodities increased by 18 and 14 percent in 2007 and 2008 respectively, whereas the corresponding indexes for processed foods moved up by 6.7 and 8.5 percent. Since processed food prices bear a larger weight than food commodity prices (based on relative shares of the value of all consumer-ready foods, domestic or imported), the composite price index for all foods showed inflation rates of 7 and 8.2 percent in 2007 and 2008 compared to corresponding PPI changes of 6.8 and 7.5 percent.

Import Price Effect on Domestic Price
The impact of import unit values on domestic prices of food groups depends on relative inflation rates and weights of the two price indexes. Since import shares are greater than zero, if the index value for import prices is higher than the PPI, then the composite price for the food group will exceed the PPI, and vice versa. For 2008, these food groups show the most significant impacts from import prices:

Prices in Year 2008	PPI	Import Price	Composite Price	Import Share
		2000=100		percent
Unprocessed food				
Fruits, fresh	134.6	155.4	144.0	45.4
Tree nuts	200.4	137.8	173.2	43.3
Livestock (for meat)	128.0	88.1	124.5	8.7
Processed food				
Fish and shellfish	128.8	97.2	101.8	85.4
Processed fruit & veg.	129.9	146.8	134.0	24.3
Fats and vegetable oils	266.8	193.6	247.6	26.3
Beverages	120.8	143.4	134.3	59.6
All foods and beverages	133.2	151.7	136.0	17.9

Sources: U.S. Bureau of Labor Statistics; USDA FAS, ERS.

For some food groups, when import price inflation has risen less than the PPI since 2000, the composite price will be lower than the PPI, such as for tree nuts, livestock, fish, and vegetable oils. In these cases, while domestic food prices appear less competitive against imports, the import unit values do not reveal the quality or homogeneity of the imported foods. If the food groupings were more disaggregated (e.g., wine and beer separately under beverages), the difference between the domestic and import price indexes will be more indicative of the relative competitiveness between U.S. and foreign products. For food groups whose import prices exceed the PPI (relative to 2000), such as fresh fruits, processed fruits and vegetables, and beverages, the price difference may reflect more about imports that do not directly compete with domestic products, such as tropical fruits and premium wines. Also, half of imported vegetable oils consists of tropical and olive oils, which are not domestically produced.

As anticipated, food groups with relatively higher import shares, such as fresh fruits, tree nuts, fish and shellfish, processed fruits and vegetables, vegetable oils, and beverages, were affected to a greater extent by import prices. However, despite double-digit import price inflation for aggregate food commodities and processed foods, the impact on domestic prices as indicated by the composite prices was not highly significant. The PPI for all domestic foods rose by 6.8 and 7.5 percent in 2007 and 2008, and import prices for all foods grew by 8.2 and 13.5 percent. The respective composite prices for all foods

increased by 7 and 8.2 percent, which, as expected, largely reflect the change in processed food composite prices of 6.7 and 8.5 percent. The global price inflation of agricultural commodities in 2007/08, accompanied by the dollar's depreciated value relative to 2001, played a major role in pushing up prices of domestic and imported foods in the U.S. since 2003 and especially over the past two years.

Conclusion

Annual domestic producer prices for food commodities were more volatile than for processed foods over the past two decades. The average price of inputs into processed foods is less variable than farm commodity prices. Similarly, the import price index for food commodities appeared to be more volatile than for processed imports, although the inflation rates for the aggregates fluctuated less. Import prices for processed foods inflated at a more rapid pace than their domestic prices from 2000 to 2008, most likely due to the almost continuous depreciation of the dollar during this period. Since processed foods have higher relative weights (by at least 2 to 1) than food commodities in calculating aggregate values for both domestic and import price indexes, the price index for all foods and beverages largely reflected processed food prices. Although about half of the food groups have double-digit import shares of consumption and thus induce significant import price effects on composite prices, the overall impact of domestic producer prices was more dominant than import prices. Hence, the composite price inflation rates for all foods and beverages still largely reflect the corresponding changes in domestic producer prices.

Appendix:

PPI Background

Prior to 1978, the PPI was known as the Wholesale Price Index (WPI). The WPI measured average prices received at the wholesale, or pre-retail, level, including imports. The 1978 change from WPI to PPI was intended to reflect prices received by domestic producers from buyers who make the first purchase, but excludes prices paid for imports. Thus, the PPI captures prices paid to domestic producers by all buyers, which include retailers, food services, food manufacturers, packers, exporters, foreign importers, as well as wholesalers. The WPI and PPI are based on actual transaction prices paid by first buyers, excluding delivery charges and taxes on products such as sales taxes and value-added taxes which the producers do not receive.

Import share of U.S. food consumption

In calculating the composite price index for all foods and beverages, the weighted average of PPI and import unit value index used the domestic and import shares of U.S. food consumption as weights, respectively. That is, the sum of domestic and import shares equals 100 percent of U.S. food consumption. Annual domestic share, which equals 100 minus the import share, is the weight used for PPIs (by food group), and import share is the weight for import unit values. The table below showcases the general upward trend in import shares of most food groups as well as for all foods and beverages over time. Import share estimates are based on annual food import and consumption volumes.

Import share of U.S. food consumption

	1990	1995	2000	2005	2008
			Percent		1/
Food commodities	14.1	19.2	21.7	21.9	27.2
Fruits, fresh	30.5	33.7	38.2	41.3	45.4
Vegetables, fresh or dry	7.8	9.5	10.5	13.7	15.2
Tree nuts	22.8	38.7	47.2	37.1	43.3
Grains	6.0	9.5	9.8	8.2	12.6
Livestock (meat)	2.5	3.4	4.8	7.3	8.7
Poultry (meat)	0.1	0.1	0.1	0.2	0.1
Fluid milk	0.0	0.0	0.0	0.0	0.0
Chicken eggs	0.2	0.1	0.1	0.2	0.2
Oilseeds	0.5	0.9	1.4	1.0	2.1
Processed foods	10.4	9.1	11.3	13.0	14.4
Cereal / bakery products	2.2	3.1	4.0	5.4	6.6
Meats	8.1	6.4	8.9	10.2	8.7
Poultry	0.0	0.0	0.0	0.1	0.2
Fish (unprocessed)	56.3	55.3	68.3	84.3	85.4
Dairy products	1.9	1.9	2.7	2.9	2.5
Processed fruit & veget.	15.7	12.6	17.0	19.3	24.3
Sugar and confectionery	12.5	9.7	10.0	12.6	13.6
Fats and vegetable oils	17.7	20.1	17.9	20.4	26.3
Misc. processed foods 1/	5.3	5.1	5.7	6.1	5.5
Beverages	44.6	45.1	52.3	54.6	59.6
All foods and beverages	11.5	11.9	14.1	15.4	17.9

1/ Import shares are from 2007 since food consumption estimates in 2008
  are not yet available.
Source: USDA FAS and ERS.

The BLS codes for aggregate food PPIs are:

WPUSOP1100 for crude foodstuffs and feedstuffs

WPUSI095011 for processed foods

WPUSIO13011 for all foods

These codes exclude alcoholic, nonalcoholic beverages, and prepared animal feeds. The individual food groups with 3 or 4-digit BLS commodity data codes are organized by similarity of end-use or commodity composition, without regard to stage of processing or manufacturing industry. The estimated price indexes for processed foods and for all foods in the producer, import, and composite price tables incorporate beverage prices.

The composite price index for all foods and beverages excludes intermediate food imports that are inputs in domestic food manufacturing (grains, livestock and poultry for meat, and oilseeds).

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