U.S. import and export price indexes show declines during the first half

A strong dollar and the worldwide recession took their toll on trade, with petroleum and food leading import dip, as measured by BLS International Price Program; export prices of nonferrous metals and wheat record double-digit decreases

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U.S. import prices declined 2.1 percent during the first half of 1982, led by lower prices for crude petroleum and food products. (See table 1.) The downward movement resulted in part from weakness in both the U.S. economy and the international economy, including such major U.S. trading partners as Japan, Canada, and the United Kingdom.[1] The strength of the dollar *vis-a-vis* other major currencies also helped hold down import prices.[2] Both developments contributed to the slowdown in domestic inflation, as measured by the Consumer Price Index and the Producer Price Index.

The same factors also moderated price rises for U.S. exports, with the strong dollar pushing up the cost of U.S. products in major world markets. Some key indexes fell substantially, such as those for grain and nonferrous metals. Others rose slightly, including indexes for machinery and farm equipment. (See table 2.)

The price changes were measured by the Bureau of Labor Statistics' International Price Program. The quarterly indexes cover imports of all commodities except chemicals and in the near future will cover imports and exports of all commodities. The indexes, which are not seasonally adjusted, account for 96.5 percent of all imported products and 71 percent of all exported products. Indexes are published for detailed and aggregate categories of imports and exports and are based on transaction price information provided by a sample of importers and exporters and their products.[3]

The prices used in all indexes are reported either in U.S. dollars or in another currency and converted to dollar prices, using the prevailing rate of exchange. As a result, exchange rate fluctuations have a direct effect on the indexes each quarter. During the first half, the dollar appreciated 11.7 percent against the Japanese yen and advanced 10.9 percent against all other currencies.[4] (See table 3.)

Foreign trade has become increasingly important to the U.S. economy in recent years. In 1960, U.S. imports and exports accounted for 11.9 percent of U.S. final-goods production. By 1970, the proportion had increased to 15.2 percent and by 1981, to 28.6 percent.[5] During the first half of 1982, the figure stood at 26.2 percent on a seasonally adjusted basis.

In recent years, the United States has incurred large trade deficits. In 1981, the deficit was $27.9 billion but fell to $22.4 billion at a seasonally adjusted annual rate in the first half of 1982.[6] Contributing significantly to the improvement was the decline in imports of crude oil, which were $22.2 billion in the first half, compared with $33.6 billion in the corresponding period of 1981.[7]

Imports: oil in surplus; food prices plunge

Petroleum. Crude petroleum imports fell 2.8 percent in price during the first half of 1982, a major factor in

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Table 1. Change in selected import price indexes and proportion of trade value

[In percent]

Commodity	Share of total 1980 trade value	First half, 1982	First quarter, 1982	Second quarter, 1982
All commodities, except chemicals	96.524	−2.1	−1.1	−1.0
Mineral fuels and related materials	32.776	—	—	—
Crude petroleum	25.779	−2.8	−1.9	−0.9
Food	6.554	−5.1	0.0	−5.1
Fruits and vegetables	0.838	−10.6	0.6	−11.2
Edible nuts	0.094	−16.0	0.2	−16.2
Sugar and honey	0.925	—	—	−17.3
Coffee, tea, and cocoa	2.241	−1.8	3.9	−5.5
Fish	1.088	2.0	2.1	−0.1
Intermediate manufactured products	13.520	−3.6	−0.8	−2.7
Iron and steel	3.127	−4.7	−1.3	−3.4
Nonferrous metals	3.123	−12.6	−3.4	−9.5
Paper and paperboard products	1.475	1.9	1.8	0.1
Machinery and transport equipment	25.442	0.0	−0.2	0.2
Automobiles	7.201	−0.3	−0.3	0.0
Electrical machinery and equipment	3.392	−1.9	−1.3	−0.6
Machinery specialized for particular industries	1.998	2.8	2.3	0.5
Metalworking machinery	0.775	0.1	−1.6	1.7
Other manufactured articles	9.794	−1.0	−1.1	0.1
Measuring and controlling instruments and apparatus	0.628	0.3	0.2	0.1
Clothing	2.666	1.2	0.6	0.6
Footwear	1.232	−0.4	−0.7	0.2
Photographic apparatus and optical goods	1.162	−5.1	−3.2	−1.9

the 2.1-percent drop in the all-import price index.[8] The OPEC nations were unable to reach agreement on production limits in the first half, and the surplus on world oil markets persisted.[9] Domestic crude oil production, which increased after deregulation, experienced a further, but slight, rise during the first half; thus, imports bore the brunt of reduced demand for petroleum products. As a result, non-OPEC nations such as Britain and Mexico discounted their petroleum prices to maintain production levels, as did some OPEC-member nations. U.S. crude oil import volume, measured in barrels, was off 27.8 percent in the first half from the corresponding period in 1981. (See table 4.)[10] Domestic consumption of such important petroleum products as home heating oil, residual fuels, and gasoline fell during the first half of 1982. A major reason for the decline in residual fuel demand was "fuel switching," as utilities and industrial users turned from petroleum-based fuels to lower-priced coal and natural gas. This shift was also important in the decline in demand for home heating oil. During the first half, gasoline consumption was down 1.5 percent from the year-earlier level. The weaker domestic economy, the increasing fuel efficiency of the U.S. automobile fleet, and further diesel penetration, together with weaker overall demand for fuel, contributed to the continued decline in gasoline consumption.[11]

Food. Imported food fell in price by 5.1 percent during the second quarter after holding constant in the first quarter. Prices of many foods are historically volatile, reflecting the fluctuations in weather conditions, the perishable nature of many foods, and the problems inherent in transportation, distribution, and marketing.

Fruit and vegetable prices, which fell by 10.6 percent during the first half, led the decline in food prices. These prices have a pattern of rapid change, because of the seasonal nature of planting and harvesting. During the first quarter, prices of fruits and vegetables rose 0.6 percent but dropped 11.2 percent during the second quarter. Plummeting prices of imported tomatoes and edible nuts paced the fall in fruit and vegetable prices. Tomato prices plunged 56.9 percent during the first half. They had risen 9.8 percent during the first quarter as winter freezes and lower planted acreage in Florida cut domestic supplies. But large supplies from Mexico and Western Europe slashed prices by 60.8 percent in the second quarter. Import prices for edible nuts fell 16.0 percent in the first half, rising 0.2 percent in the first quarter and falling 16.2 percent in the second quarter. The net fall in prices was primarily the result of sharply increased supplies from abroad, as foreign nations filled the growing U.S. demand for these products.

Table 2. Change in selected export price indexes and proportion of trade value

Commodity	Share of total 1980 trade value	First half, 1982	First quarter, 1982	Second quarter, 1982
Crude materials	10.948	—	—	—
Cork and wood	1.417	−4.0	4.9	−8.4
Textile fibers	1.813	6.2	0.3	5.9
Cotton	1.341	8.4	−0.1	8.6
Oilseeds	3.024	−2.2	−2.5	0.4
Soybeans	2.716	−2.8	−3.3	0.4
Grain and grain preparations	8.34	−4.2	−3.4	−0.8
Wheat	2.94	−12.9	−7.2	−6.1
Hard winter ordinary wheat	1.24	−16.0	−8.1	−8.8
Yellow corn	3.956	2.6	0.5	2.0
Grain, other	0.522	—	—	—
Yellow sorghum	0.498	1.5	−2.0	3.4
Barley	0.094	3.4	5.7	−2.3
Intermediate manufactured products	10.544	−2.5	−0.1	−2.4
Nonferrous metals	2.280	−12.0	−2.7	−9.6
Silver and metals of the platinum group	0.772	−24.4	−5.9	−19.7
Paper and paperboard products	1.300	−2.8	0.2	−3.0
Machinery and transport equipment	35.261	2.9	1.5	1.4
Parts and accessories for road vehicles	3.499	5.2	2.6	2.4
Aircraft and spacecraft parts	1.641	8.9	3.9	4.7
General industrial machines and parts	4.939	3.3	1.9	1.3
Office machines and automatic data processing equipment	3.990	−1.7	−0.8	−0.8
Other manufactured articles	7.397	—	—	—
Measuring and controlling instruments and apparatus	2.437	7.0	5.4	1.6
Photographic supplies	1.187	3.4	3.6	−0.2

Table 3. Effective exchange rate of the U.S. dollar, by quarter

[1975=100]

Quarter	Rate [1]
1979–I	92.8
1979–II	94.7
1979–III	92.8
1979–IV	94.3
1980–I	94.5
1980–II	94.5
1980–III	92.0
1980–IV	94.5
1981–I	98.6
1981–II	105.5
1981–III	111.2
1981–IV	107.4
1982–I	111.7
1982–II	115.8

[1] Multilateral Exchange Rate Model, based on 1977 trade weights.

SOURCE: *International Financial Statistics*, November 1982, pp. 426–27.

In particular, an overabundance of imported cashews exerted downward pressure on the edible nuts index.

Sugar and honey prices dropped by 17.3 percent during the second quarter, the first time this index was published. A worldwide sugar surplus and declining demand combined to pull down prices. Demand fell sharply for sugar used in beverages and processed food, for which high fructose corn syrup has both cost and marketing advantages.

The coffee, tea, and cocoa price index declined 1.8 percent in the first half, although coffee prices rose 3.3 percent during that period. In the first quarter, coffee prices rose 5.3 percent, as a high level of demand and the loosening of price controls by the International Coffee Organization placed upward pressure on prices. Coffee prices fell 2.3 percent during the second quarter, after producing nations placed abundant supplies on world markets.

Imported tea prices remained unchanged during the first quarter; abundant stocks in U.S. warehouses lessened demand. Cocoa prices fell by 26.3 percent during the first half, as U.S. inventories remained high. The last two world cocoa crops set new records, reflecting the increased plantings spurred by the high prices of the late 1970's.

Moderating the fall in food prices were fish prices, which rose 2.0 percent during the first half. Prices for shellfish surged 9.9 percent. Demand for such delicacies as lobster and shrimp continued to increase. The supply of imported tuna rose during the first half, contributing to the 6.7-percent decline in the price index for canned fish.

Steel imports trigger U.S. probe

Intermediate manufactures. Intermediate manufactured products fell 3.6 percent in price. This category was particularly affected by the slowdown in U.S. economic activity. Demand for these products softened in basic industries as capital and other spending fell.[12] Intermediate manufactured goods include leather, paper, textiles, nonferrous metals, steel and iron, and rubber.

Prices of nonferrous metals led the decline, falling 12.6 percent. The 4.7-percent decline in iron and steel prices resulted principally from removal of the "trigger price mechanism" in January 1982. The program had set minimum prices on imported steel based on production costs in Japan. Steel sold below this "trigger price" was presumed to be sold at less than cost, thereby triggering a formal investigation by the Department of Commerce. If the investigation determined that steel was being sold below cost, countervailing duties could be imposed.

In January, seven U.S. steelmakers filed charges that steel manufacturers in 11 foreign countries were selling steel to U.S. importers at less than the cost of production. This action effectively ended the monitoring program, except on stainless steel wire products. With the mechanism withdrawn, the price floor for steel imports was removed, and steelmakers in other countries sold their products in the United States at prices below the discounted prices offered by domestic producers. In January, imported steel accounted for a record 26 percent share of the U.S. market. The continued strength of the dollar made the imports more attractive.

The drop in nonferrous metal prices continued a decline which began in January 1981. By mid-1982, prices of these imports had fallen 31.4 percent. The category includes copper, zinc, lead, tin, molybdenum, aluminum, and silver. Slowdowns in the domestic steel, auto, and construction industries diminished demand for non-

Table 4. Crude petroleum imports, 1970–82

Year	Barrels (millions)	Value (millions of dollars)	Total U.S. imports (millions of dollars)	Percentage of total U.S. imports
1970	545	1,281	39,963	3.2
1971	676	1,704	45,602	3.7
1972	901	2,383	55,555	4.3
1973	1,294	4,231	69,121	6.1
1974	1,367	15,335	100,218	15.3
1975	1,585	18,374	96,140	19.1
1976	2,050	25,480	120,677	21.1
1977	2,520	33,583	146,817	22.9
1978	2,392	32,140	172,025	18.7
1979	2,467	46,100	206,327	22.3
1980	1,977	62,014	240,834	25.7
1981 [1]	934	33,618	131,815	25.5
1981 [2]	829	28,322	129,490	21.9
1982 [3]	674	22,205	122,191	18.2

[1] First half.
[2] Second half.
[3] First half.

SOURCE: *Highlights of U.S. Export and Import Trade*, Publication No. FT-990, U.S. Department of Commerce, June 1982, p. 88.

ferrous metals in the first half. A worldwide surplus also drove prices steadily downward.

Paper and paperboard prices advanced 1.9 percent in the first half, exerting a moderating influence on the decline of prices for intermediate manufactured products.

Foreign car sales bump into recession, quotas

Machinery and transport equipment. The price level of machinery and transport equipment remained unchanged during the first half. Most indexes which make up this category registered only slight negative or positive price movements. The automobile index, representing 7.2 percent of the dollar value of all imports, slipped 0.3 percent. The electrical machinery and equipment index registered a decline of 1.9 percent. Partly offsetting this trend were the indexes for machinery specialized for particular industries, which rose 2.8 percent, and the metalworking machinery index, which edged up 0.1 percent.

The dip in imported car prices stemmed largely from the continued decline in new car purchases and the strength of the dollar.[13] Auto sales remained sluggish during the first half as a result of the recession, with consumers' disposable income down in the first quarter and interest rates high.[14] Under these conditions, most foreign car makers held prices constant in order to maintain market share.

Supplies of Japanese cars were restricted by the 3-year, "self-restraint" quotas imposed by the Japanese government in June 1981 on auto exports to the United States. Japan is the largest foreign supplier of autos to the U.S. market. The quotas contributed to a drop of 127,000 cars during the first half of 1982, compared with the same period in 1981.[15] The number of cars imported from all foreign nations in the first half was 13.5 percent below the year-earlier period.[16] However, the market share of imported autos remained virtually the same, at 28.6 percent (table 5.)[17]

Electrical machinery prices fell in response to the recession, outweighing increased demand in high-technology industries. The slowdown in the housing construction industry contributed to a reduced demand for domestic appliances, while the downturn in commercial construction activity weakened demand for transformers. Decreases in U.S. automobile production slowed sales of automotive electric equipment. Stable or lower prices for such important raw materials as steel, copper, aluminum, precious metals, tantalum, and lead also held down price rises for imported electrical products.

Partly offsetting these factors were the increased prices of semiconductor components and electrical parts for video games, personal computers, and defense equipment. In addition, electric motor prices rose as high-efficiency electric motors were heavily sought by energy-conscious producers.

Table 5. Imports of new cars, 1972 through mid-1982

Year	Total registrations	Import registrations	Percentage of import registrations
1972	10,487,794	1,529,402	14.6
1973	11,350,995	1,719,913	15.2
1974	8,701,094	1,369,148	15.7
1975	8,261,840	1,500,928	18.2
1976	9,751,485	1,446,637	14.8
1977	10,826,234	1,976,512	18.3
1978	10,946,104	1,946,094	17.8
1979	10,356,695	2,351,053	22.7
1980	8,760,937	2,469,180	28.2
1981[1]	4,390,708	1,274,171	29.0
1981[2]	4,053,211	1,157,509	28.6
1982[3]	3,778,109	1,080,030	28.6

[1] First half.
[2] Second half.
[3] First half.

The rise in the import price index for specialized machinery resulted from strong demand for replacement parts. The index consists of prices for such products as textile and leather machinery, civil engineering machinery and parts, contractors' plant and equipment and parts, and a large miscellaneous machinery grouping. During the first half, parts prices remained firmer than equipment prices, because parts are more in demand during economic downturns as firms concentrate on maintenance rather than capital expansion.

The small rise in import prices of metalworking machinery during the first half was the net result of a 1.6-percent price decline in the first quarter and a 1.7-percent price increase in the second quarter. Imports of products in this subgroup account for a substantial share of the domestic market, and the imports' share grew during the first half. Major foreign suppliers were Japan, West Germany, the United Kingdom, and Taiwan. The strong dollar moderated price increases, making Japanese and British imports especially attractive. Prices of numerically controlled lathes, milling machines, and metal forming machines increased, while prices of chucks, sawing-off machines, and turret lathes declined.

Imported cameras cheaper, clothing costlier

Other manufactured goods. The index for other manufactured articles fell 1.0 percent. The category includes clothing, footwear, optical goods, and medical appliances. Clothing registered a small increase (1.2 percent), as did scientific instruments and apparatus. The photographic apparatus and optical goods index dropped by 5.1 percent.

The small rise in clothing prices was the result of two counterbalancing factors. The nations of the Far East, which account for most apparel imports, incurred large increases in costs during 1981, particularly for energy. Most of the contracts for delivery in the first half had been negotiated in 1981. Offsetting the rising costs was

the strong dollar, which made imports from the Far East and Western Europe relatively less expensive. In addition, U.S. consumers were less willing to buy clothing, as a result of the U.S. economic downturn. Leading the rise in clothing prices was men's and boys' outerwear, up 2.4 percent. Leather apparel prices fell 0.6 percent, primarily because of reduced leather prices.

Footwear prices fell 0.4 percent in the first half, reflecting the removal of import quotas in the third quarter of 1981. This resulted in an increase in supply and lower prices. The strength of the dollar *vis-a-vis* the currencies of the major footwear-producing nations also acted as a brake on prices. In addition, prices of petrochemicals and leather, two important materials used in shoe production, trended downward.

Prices for scientific and controlling instruments and apparatus rose 0.3 percent during the first half. Spurring demand for these products, which control and monitor industrial processes, were efforts to increase efficiency and productivity. However, the downturn in capital spending tended to restrain prices.

Prices of cameras and other photographic equipment, optical goods, watches and clocks declined 5.1 percent. The continued weakness in consumer spending exerted downward pressure on prices of photographic goods, along with the expected introduction of electronic imaging technology in the near future. Import prices for watches and clocks declined as a result of continuing economies of production stemming from quartz timepiece technology.

Exports: textile fibers buck trend

Crude materials. The major export indexes for crude materials fell, with the exception of the index for textile fibers. Cork and wood prices decreased by 4.0 percent. Textile fiber prices rose 6.2 percent, led by an increase in cotton prices.

Cork and wood prices fell steeply in the second quarter because of an oversupply in world markets. With domestic demand weak, logs and saw timber were sold on Japanese markets, where housing construction hit historical lows, and to European furniture makers, who faced a reduced demand for their finished products.

Cotton export prices rose 8.4 percent. For all of 1981, prices had fallen 33.5 percent. The decreases had brought prices to the level of support payments under the Cotton Loan Program, which guarantees farmers a minimum price for their product. In addition, many cotton-producing nations cut production.

Soybean prices fell 2.8 percent in the first half. However, this result represented a firming of price levels after a price drop of 24.1 percent during all of 1981. Prices strengthened in response to the marketing of this year's drought-reduced South American crop, and tight farm holdings in the United States.

Grain and grain preparations. U.S. export prices for grain and grain preparations declined 4.2 percent during the first half as a result of two distinct, separate price movements for wheat and feed grains, which include corn.

Wheat prices fell 12.9 percent, paced by a 16.0-percent decline in prices for hard winter ordinary wheat, the major type of wheat. Contributing to the declines was a record harvest, including the largest crop ever of hard winter ordinary wheat. Huge inventories of spring wheat weighed heavily on the market despite a record export pace. (See table 6.)

Prices for feed grains leveled off and then strengthened during the first half. Yellow corn prices edged up 2.3 percent, influenced by very heavy farm holdings and reserve program participation, heavy rains which damaged and delayed spring planting, and the poor Soviet feed grain harvest. However, price gains were limited by the effect of the strong dollar and by the competition of abundant wheat supplies. Many nations have tight import budgets which favor wheat for human consumption over corn for animal feed, a tendency bolstered by the drop in wheat prices during the first half.

Silver off sharply; aluminum sells below cost

Intermediate manufactures. Export prices for intermediate manufactured products fell 2.5 percent during the first half, led by declines in nonferrous metals and paper products.

Silver prices dropped 24.4 percent, the sharpest decline in nonferrous prices. Silver fell as speculation waned and industrial demand eased. The weak world economy reduced the consumption of silver by such major customers as manufacturers of photographic equipment and sterling ware. Export prices of other nonferrous metals also dropped substantially. Aluminum prices declined 10.4 percent and copper prices, 4.7 percent. World stocks of nonferrous metals were at high levels, as producers in many nations sold nonferrous metals at reduced prices, in lieu of cutting production. For aluminum and copper, world prices during the first half were less than the costs of production for a number of producers.[18] The strong dollar further contributed to the decline in prices of nonferrous metals.

Export prices of paper and paperboard products fell, largely as a result of reduced demand for paper for packaging applications in Western Europe. The European nations have traditionally provided the chief market for printing and writing papers and kraft products. Again, the recession was the cause. As a result, U.S. producers concentrated on markets in Latin America, the Middle East, and Asia.

Machinery and Transport Equipment. The export price index for machinery and transport equipment rose by

Table 6. Total grain and soybeans inspected for export

[In thousands of bushels]

Year	All grain	Wheat	Corn	Barley	Sorghum	Soybeans
1972	2,318,823	783,693	858,837	57,283	146,307	440,136
1973	3,511,882	1,377,432	1,269,694	88,202	217,549	478,551
1974	2,880,129	925,160	1,152,580	47,057	214,561	504,905
1975	3,159,448	1,142,541	1,292,252	24,961	229,635	456,342
1976	3,560,470	969,363	1,733,519	56,471	230,408	560,953
1977	3,367,393	891,404	1,576,824	70,015	227,008	592,839
1978	4,197,165	1,245,762	1,955,788	24,982	190,058	770,040
1979	4,564,202	1,210,016	2,336,945	32,379	223,039	758,183
1980	4,951,687	1,309,583	2,460,570	64,888	294,972	801,493
1981[1]	2,439,747	714,234	1,176,540	28,817	126,177	389,129
1981[2]	2,499,693	898,640	980,208	62,660	167,498	386,403
1982[3]	2,545,736	852,567	1,067,513	37,843	98,275	489,538

[1] First half.
[2] Second half.
[3] First half.

SOURCE: *Grain and Feed Market News*, various issues.

2.9 percent during the first half, paced by an 8.9-percent rise in the index for aircraft and spacecraft parts. A moderating influence was prices of office machines and automatic data processing (ADP) equipment, which fell by 1.7 percent. Throughout all major subgroups of the index, prices of replacement parts advanced sharply. Many products are in high-technology markets, where U.S. manufacturers have few competitors. As a result, prices in this category were less vulnerable to exchange rate changes than were other export prices.

The increase in the index for aircraft and spacecraft parts continued a trend that began in mid-1981; for the year, the index moved up 16.0 percent, a reflection of the strong market for U.S. aerospace parts.

The 5.2-percent increase in export prices of motor vehicle parts and accessories was also a result of continued strong worldwide demand for these products. As a result of the large share of U.S. vehicles in the worldwide auto fleet, parts exporters have a readily available market. In addition, the worldwide lag in first-half new car sales meant increased demand for replacement parts. When new car sales levels fall, consumers generally buy more parts because they hold onto their vehicles for longer periods. However, the strength of the dollar and increased worldwide competition in the replacement parts business acted to restrain price increases.

The subgroup general industrial machinery and parts includes heating and cooling equipment, air pumps and compressors, and pumps and valves for liquids. The 3.3-percent increase in prices resulted from stronger demand for replacement parts and accessories to extend the life or expand the capabilities of existing industrial machinery. Helping to moderate prices was a reduction in demand for complete new units. The weak world economy during the first half made the purchase of new equipment less attractive than prolonging the service life of existing equipment. Mexico and Canada, the two leading markets for exports of general industrial machinery and parts, were particularly hard hit by the drop in world oil, gas, and coal prices. And Saudi Arabia, a major market for cooling equipment, reduced its imports of these products.

Because of strong competition from both domestic and foreign producers, U.S. manufacturers of office machines and automatic data processing equipment lowered export prices in the first half. The group includes mainframe computers, terminals, optical scanners, and printers. Technological improvements and economies of scale have enabled domestic producers to lower prices on international markets. Manufacturers of computer and related items partially offset price decreases in new units with price increases in exported replacement parts, for which the demand is relatively price inelastic. The strong dollar moderated export prices of office machines and automatic data processing equipment, as domestic manufacturers strove to remain competitive with Japanese and European manufacturers on international markets.

Measuring instruments in demand

Other manufactured goods. The major subgroups of other manufactured articles showed strong price increases. The index for measuring and controlling instruments and apparatus increased 7.0 percent; the index for photographic apparatus and supplies, optical goods, watches, and clocks rose 3.4 percent.

The increase in export prices for measuring and controlling instruments and apparatus reflected increased world demand, again because of recession-induced efforts to improve production efficiency and reduce costs. Also, breakthroughs in chemistry and physics involving the investigation and manipulation of basic chemical, biological, and physical elements spurred demand for advanced analysis instruments. Finally, part of the 7.0-percent price increase stemmed from the annual first-quarter price boosts by many exporters.

Film, cameras, and related photographic equipment account for the bulk of the weight in the export index for photographic apparatus and supplies, optical goods, watches, and clocks. Most producers of photographic supplies adjust their prices in the beginning of the year. Viewed in this light, the 3.6-percent rise in the index in the first quarter was marginal. It was followed by a slight decrease in the second quarter, reflecting slack worldwide demand, the strong dollar and anticipation of electronic imaging. □

FOOTNOTES

[1] The indexes of industrial production of Canada, Japan, the United States and the United Kingdom for the first half of 1982 and all of 1981 indicate sluggish levels. This trend was especially pronounced in the first half of 1982, as the following figures on industrial production indicate. All indexes use 1975 as the base year, and are seasonally adjusted.

	Japan	*Canada*	*United Kingdom*	*United States*
1981 I	144.0	117.8	99.8	128.8
II . . .	144.7	121.1	99.4	129.5
III . . .	147.8	117.5	100.3	129.9
IV . . .	150.7	112.3	100.6	124.2
1982 I	149.2	109.0	100.2	120.3
II . . .	146.8	106.5	100.9	118.3

See *International Financial Statistics*, Vol. 35, Number 10, October 1982, pp. 111, 243, 423, 429.

[2] The dollar exchange rate into other major currencies is a key factor in international trade. It measures how many dollars are needed to purchase a unit of another currency. If the dollar appreciates (strengthens) *vis-a-vis* another currency, it takes fewer dollars to purchase a unit of that currency; at the same time, it takes more units of the other currency to buy a dollar. In this case, U.S. importers may have to pay fewer dollars to purchase goods from other countries and purchasers in other countries may find they must pay more of their own currency to buy U.S. goods. The opposite occurs when the dollar depreciates (weakens) against another currency. From late 1980, the dollar rose steadily against the currencies of major U.S. trading partners through the period covered by this report.

[3] Import price indexes are weighted by 1980 import values and are published on an f.o.b. (free-on-board) foreign port or c.i.f. (cost, insurance, and freight) U.S. port basis. Export price indexes are weighted by 1980 U.S. merchandise export trade values and are published on an f.o.b. factory or f.a.s. (free-along-side-ship) U.S. port basis. See "International Price Program," (Washington, Bureau of Labor Statistics.)

[4] As measured by the International Monetary Fund. See *Federal Reserve Bulletin*, July 1982 (Washington Board of Governors of the Federal Reserve System), p. A-68, and *International Financial Statistics*, Vol. 35, No. 10, October 1982, p. 427. For a discussion of the Multilateral Exchange Rate Model, see Rudolph R. Rhomberg, "Indices of Effective Exchange Rates," *International Monetary Fund Staff Papers*, Vol. 23, No. 1, March 1976, pp. 88–112. Also see Jacques R. Artus and Anne Kenny McGuirk, "A Revised Version of the Multilateral Exchange Rate Model, *International Monetary Fund Staff Papers*, Vol. 28, No. 2, June 1981, pp. 275–309.

[5] The share of final goods production that is accounted for by imports and exports is calculated as follows:

$$\frac{\text{Merchandise Exports} + \text{Merchandise Imports}}{\text{Finished Goods} + \text{Merchandise Imports} + \text{Merchandise Exports}} \times 100$$

Computed from *Survey of Current Business*, various issues, Washington, U.S. Department of Commerce, Bureau of Economic Analysis.

[6] *United States Department of Commerce News*, August 5, 1982, Washington, U.S. Department of Commerce, Bureau of Economic Analysis, No. 82–40, p. 2.

[7] For 1982 data see *Highlights of U.S. Export and Import Trade*, Census publication No. FT-990, June 1982, table I–10, p. 88. For 1981 data, see the same publication for June 1981, table I–12, p. 110.

[8] For a discussion of the oil import index, see Edward E. Murphy and Mark McEnearney, "Import price indexes for crude petroleum," *Monthly Labor Review*, November 1982, pp. 27–30.

[9] See Robert J. Beck, "U.S. Oil Demand to Fall Again by 4.2 Percent; Imports Also Slide, But Production Up," *Oil and Gas Journal*, July 1982, pp. 184 and 189.

[10] *Ibid.*, pp. 180 and 184.

[11] *Ibid*, p. 191.

[12] Business fixed investment fell during the first half of 1982 from its level in the last half of 1981, and ended the half at a lower level than at the end of the first half in 1981. The following figures, in billions of 1972 dollars, are seasonally adjusted annual rates of U.S. business fixed investment.

1981 I	169.7
II	170.1
III	173.9
IV	174.2
1982 I	172.0
II	168.2

See *Survey of Current Business*, Vol. 62, No. 7, July 1982, p. 23.

[13] "New Car Sales Fell 9.9 percent during June; Analysts Scrap Forecasts of Early Upturn," *The Wall Street Journal*, July 7, 1982, p. 4.

[14] U.S. consumers' disposable income fell during the first quarter of 1982. Data are seasonally adjusted at annual rates. Figures are in billions, and represent constant 1972 dollars.

1981 I	1,035.0
II	1,036.6
III	1,048.8
IV	1,051.9
1982 I	1,046.9
II	1,054.8

See *Survey of Current Business*, July 1982, p. 38.

[15] Automotive News, Sept. 6, 1982, p. 36B.

[16] *Ibid.*

[17] *Ibid.*

[18] "The Crisis That Endangers Phelps Dodge," *Business Week*, July 26, 1982, p. 59; and Thomas F. Boyle, "Aluminum Makers Reel from Metal's Glut, Steep Price Discounting, Sagging Profits," *The Wall Street Journal*, May 12, 1982, p. 39.