New weight structure being used in Producer Price Index

The universe of weights has been updated from 1972 to 1982; inclusion of interplant transfers led to increases in relative importance for several crude goods while declines for motor vehicles and other durable goods were due to the recession in 1982

ANDREW G. CLEM AND WILLIAM D. THOMAS

For the first time in more than 10 years, the universe of weights used to construct the Producer Price Index (PPI) has been comprehensively updated. Between January 1976 and December 1986, the values used to aggregate individual products into higher level groupings in the PPI were taken from 1972 shipment values. Since January 1987, the PPI has been constructed using 1982 shipment values for weighting purposes. This article explains how the weight change was accomplished and analyzes some of the major shifts in the relative importance of product groupings.

Among the most significant shifts:

• The weight accounted for by energy within the crude materials category increased from 23 percent on the 1972 basis to 41 percent on the 1982 basis. The largest gain was for crude petroleum, the importance of which soared 151 percent.

• Wheat registered a 37-percent drop in relative importance.

• Construction materials dropped 17.3 percent, because of the 1981-82 recession.

• Steel decreased 32.7 percent, also largely due to the 1981-82 recession.

• The relative importance of passenger cars declined 27

percent, with automobiles now representing 6.4 percent of the finished goods category, compared with 8.8 percent under the previous weight structure.

The new weight structure has not caused any revisions of historical indexes, or a break in continuity of the indexes. Thus, users may freely compare newly published indexes with indexes calculated before 1987.

The weight revision affects all PPI series derived from traditional commodity indexes, including stage-ofprocessing indexes, durability-of-product indexes, and special commodity groupings. The proportional allocations of commodities to the various stage-of-processing categories continue to be based on 1972 input-output data. The weight structure changes do not affect any of the industry-classified indexes in the PPI Revision system itself. These indexes continue to be based on 1977 net output weights; at the present time, however, relative importance data for industry-classified indexes from the PPI are not published.¹

The PPI universe consists of the domestic goodsproducing sectors of the economy, including goods intended for household consumption as well as capital equipment and a wide range of intermediate and crude materials purchased by businesses. Although the PPI universe includes goods destined for export or government purchase and a limited number of services, the weights for such sales are excluded from the stage-of-processing system.

The authors are economists in the Office of Prices and Living Conditions, Bureau of Labor Statistics.

Derivation of indexes and weights

Chart 1 displays the sectoral composition of the PPI weight universe, following the weight revision, as of December 1986. The great majority of the value weights of commodities in the PPI was derived from the Bureau of the Census. The 1982 Census of Manufactures provided the data for approximately 84 percent of the weight of all commodities. Next in importance was the Census of Mineral Industries, which includes oil and gas production, and the Census of Agriculture. The other weight sources used were the Edison Electric Institute, the National Marine Fisheries Service, and the Census of Wholesale Trade, which compiles data on recycled scrap transactions.

To understand the causes of shifts in importance among components of the PPI, it is useful to examine the basic Laspeyres fixed-weight formula. Under this formula, the physical quantities of all individual items are held constant, regardless of price change.² Although this assumption is suitable for medium-term spans, the dynamic nature of the U.S. economy requires that periodic updates be made to the PPI weight structure to ensure its relevance. In practice, the PPI is computed using total values of shipments as weights, rather than physical (or unit) quantities. An implicit fixed quantity is associated with each specific commodity in the PPI (bushels, tons, gallons, and so on), but it is never computed.³

The alternative to the Laspeyres formula is the Paasche formula, which uses current quantity weights instead of base quantity weights. However, this method has its own biases, and in any case would be impractical in any price index combining movements for literally thousands of items every month.

The formulas below describe the conceptual basis for the PPI weight update procedure, followed by the definitions of the notations and an explanation.

(1)
$$I_{A,t} = \frac{\sum_{i=1}^{N} P_{i,t} Q_{i,b}}{\sum_{i=1}^{N} P_{i,b} Q_{i,b}}$$

⁽²⁾
$$I_{A,t} = \frac{\sum_{i=1}^{N} (P_{i,t}/P_{i,67}) (P_{i,67} Q_{i,82})}{\sum_{i=1}^{N} P_{i,67} Q_{i,82}}$$

(3)

$$R_{i,86(72)} = \frac{V_{i,72} \left(P_{i,86} / P_{i,72} \right)}{V_{A,72} \left(P_{A,86} / P_{A,72} \right)}$$

$$= \frac{P_{i,72} Q_{i,72} (P_{i,86} / P_{i,72})}{\sum_{i=1}^{N} P_{i,72} Q_{i,72} \left(\sum_{i=1}^{N} P_{i,86} Q_{i,72} / \sum_{i=1}^{N} P_{i,72} Q_{i,72}\right)}$$
$$= \frac{P_{i,86} Q_{i,72}}{\sum_{i=1}^{N} P_{i,86} Q_{i,72}}$$

(4)

$$R_{i,86 (82)} = \frac{V_{i,82} (P_{i,86}/P_{i,82})}{V_{A,82} (P_{A,86}/P_{A,82})}$$

=
$$\frac{P_{i,82} Q_{i,82} (P_{i,86}/P_{i,82})}{\sum_{i=1}^{N} P_{i,82} Q_{i,82} \left(\sum_{i=1}^{N} P_{i,86} Q_{i,82} / \sum_{i=1}^{N} P_{i,82} Q_{i,82}\right)}$$

=
$$\frac{P_{i,86} Q_{i,82}}{\sum_{i=1}^{N} P_{i,86} Q_{i,82}}$$

where

- V = Value (of shipments); or P times Q;
- P = Price (dollars per unit for commodities; can only be defined for groupings as the ratio of the total values between two time periods);
- Q = Quantity (number of physical units):
- R = Relative importance (the ratio of the aggregate value of an item or mid-level grouping to the total, for example, all commodities, value): I = Index;
- 67 = Total or average for the year 1967: 72 = Total or average for the year 1972;
- 82 = Total or average for the year 1982;
- 86 = December 1986 (the weight-link month);
- b = Base year (in general);
- t = Current month (in general);
- i = Individual commodity;
- A = Aggregate-level index (for example, all commodities):
- N = Number of commodities within the aggregate

The pure Laspeyres formula is shown in equation 1. However, a number of complicating factors necessitate modifications of the pure fixed-base-weight Laspeyres formula. The most simple is that the arithmetic base year has generally been different than the weight base period in the PPI. Also, as mentioned previously, in practice the aggregate values of commodities (rather than their physical quantities) are used to calculate commodity grouping indexes. Aggregate values are the prices multiplied by quantities summed for each



commodity in the grouping, updated for price change from the weight base year to the index calculation month (that is, the current price times the base quantity). The modified Laspeyres formula, which approximates the calculation of the PPI, is shown in equation 2.

A more significant qualification is that for the last several years there have been a number of sample expansions and reclassifications every 6 months resulting from the PPI Revision system, which have required minor adjustments to the weight structure. Relatively minor changes will continue, as industry samples are "recycled" to account for structural changes in the U.S. economy. To facilitate the explanation of the weight revision procedures, we will make two simplifying abstractions: that no sample changes have occurred (and hence all indexes are calculated on the same reference base), and that the PPI base year price measurements coincide perfectly with the real market.

Equations 3 and 4 show how the relative importances are derived for each individual item, taking base year quantities and adjusting them by PPI movements between the weight base year (1972 or 1982) and December 1986. The relative importance of an item will be higher (or lower) than its share of the actual census total value of shipments if its price rose more (or less) during that interval than did the price level of the aggregate category to which it is being compared. For example, petroleum products show a much lower relative importance than they would have if their prices had not fallen between 1982 and 1986.

Because both the old and revised relative importances have been adjusted for price change through December 1986, any shifts observed must derive from changes in quantities. The following section discusses the major reasons why weight shifts among indexes occur.

Causes of shifts in weights

The relative importance figures cited throughout this article represent the revised and former weight structures as of December 1986. This was the "link month," the month for which aggregate index values were recalculated under 1982 weights after first having been calculated under the 1972 weights. Table 1 displays the relative importances of commodity groupings to the respective stage-of-processing category, under the revised and former weight structures. For example, the farm products index shows a decline of 28 percent in importance relative to crude materials. The differences between those two columns reflect primarily the 1972 to 1982 weight update and, to a much smaller extent, the routine sample changes that went into effect when the January 1987 indexes were calculated.

The new weight universe of the commodity-oriented PPI was changed to conform to the scope of the industryoriented PPI in that military sales and shipments among establishments of the same company are now included. The inclusion of "interplant" transfers did not have a significant effect on most categories of manufactured goods; however, there was a decisive impact on some extractive industries, particularly energy and metal ores.

Interplant transfers were previously excluded because the traditional PPI was a measure of price changes in primary markets, at the first commercial transaction for each commodity. For example, a steel manufacturer might own a coal mine that supplies a blast furnace it operates at a different location. The shipment of coal from the mine to the blast furnace would not be a market transaction, because the respective establishments are part of the same corporate enterprise. Under the industry-oriented concept of the revised PPI methodology, the universe of transactions includes all shipments outside the industry where a product originates. In the above example, the coal mine and the blast furnace are classified in different industries, even though they are owned by the same enterprise. Thus, transactions between such commonly owned establishments are included in the new PPI universe.

Aside from changes in the definition of the weight universe, shifts in relative index weights reflect cyclical and trend series components. (We assume that the annual value of shipments totals will not contain measurable irregularity or seasonality.) This article focuses on a comparison of 1982 and 1972, the years from which the revised and former index weights were taken. The unique business cycle aspects and macroeconomic context of those 2 years must therefore be considered.

The economy of 1972 was strongly bolstered by stimulative monetary policies, while prices for most goods were frozen by Administration order. Construction activity and durable goods consumption reached new highs, foreshadowing mounting shortages of numerous commodities. The next year witnessed the sharpest acceleration of inflation in modern U.S. history, as external events such as the Arab oil embargo caused the system of price controls to collapse. Inflation remained a problem throughout the 1970's, eventually leading to monetary policy restraints that brought on a period of severe recession during the early 1980's.

As a result, during 1982, when the most recent economic censuses were taken, the economy displayed unusual weakness in many sectors, particularly in such industries as housing and motor vehicles. Because of the sharp business cycle contrast between 1972 and 1982, a number of categories in the PPI related to these sectors showed substantial declines in relative importance, unrelated to any long-term structural change in the economy.

We will now analyze the more significant weighting shifts that occurred. In most cases, the figures cited are shown in table 1, which exhibits the relative importances of commodity groupings to the respective stage-of-processing category before and after the weight revision. Commodity groupings are displayed within each major stage-ofprocessing category in code number sequence.

Crude materials

The change in the scope of transactions included in the PPI universe was felt most dramatically within the Crude Materials for Further Processing Index. The proportion of the total weight accounted for by energy rose from 23 percent on the 1972 basis to 41 percent on the revised 1982 basis. (See chart 2.) All three types of crude energy materials rose sharply in importance because of the inclusion of interplant transfers. The largest gain was for crude petroleum, whose importance rose 151 percent. This increase represented the output of crude oil wells owned by vertically integrated petroleum refining companies. The relative weight of coal jumped 78 percent, while natural gas rose about 24 percent.

This unusually sharp increase for energy commodities lessened the importance of most other goods; nonenergy crude goods overall showed a 23.2-percent drop in relative importance. Thus, many items showed large apparent decreases in market size when in fact there were no major corresponding structural changes in the market. At the same time, this phenomenon enhanced the significance of the few increases that did occur for nonenergy items within the crude materials category.

Among crude foodstuffs and feedstuffs, the largest decline in relative weight was for manufacturing-grade raw milk, which fell 59 percent. (Raw milk eligible for fluid use declined about 30 percent, in comparison.) Raw cane sugar's share of the total weight of the crude materials category dropped 55 percent. The worldwide shortage of cane sugar that led to an explosion in prices during 1980 prompted many confectionery and beverage producers to seek alternative ingredients. New artificial sweeteners and increased popularity of diet beverages thereby further cut into sugar's traditional markets.

Wheat registered a 37-percent drop in relative importance, mainly due to the large decrease in export demand in the wake of the appreciation of the dollar during the early 1980's. Soybeans showed a smaller decline, as this crop is less dependent on export markets. The relative weights of both cattle and hogs fell 32 percent, reflecting decreased consumer preference for red meats in favor of poultry and fish; these latter categories showed moderate increases.

Among crude nonfood materials other than energy, the weak construction market in 1982 resulted in sizable drops for construction sand, gravel, and crushed stone and for miscellaneous nonmetallic minerals such as clay and mica. However, logs and timber showed a 20-percent increase, mainly because of the inclusion of the values of shipments of timber to sawmills owned by the same company; this was paradoxical because, as noted below, 1982 was a bad year for construction-related industries, such as logging and sawmills. Wastepaper's importance more than doubled, as environmental and economic considerations encouraged paperboard manufacturers to make greater use of recycling as an alternative to reliance on woodpulp.
 Table 1. Changes in relative importance of Producer Price Index commodity groupings by stage of processing, resulting from update of weight base year from 1972 to 1982

.

code Looping Prome (resc) (resc) Code Looping Press (resc) (resc) <	Commodity		Relative importance December 19861		Percent	Commodity	Grouning	Relative importance December 1986 ¹		Percent
Code matcheft brufter 10 00	code	Grouping	Revised (1982)	Former (1972)	cnange (1982/1972)	code	Grouping	Revised (1982)	Former (1972)	(1982/1972)
Upposenting C00.000 C00.000 Cols Extension Extension Cols Cols <thcols< th=""> <th< td=""><td></td><td>Crudo motoriale for further</td><td></td><td></td><td></td><td>042</td><td>Leather</td><td>0.213</td><td>0 254</td><td>-16 1</td></th<></thcols<>		Crudo motoriale for further				042	Leather	0.213	0 254	-16 1
011 Fairs produits -45.92 0.519 -28.0 Offer latter and related 0.058 0.091 -38.3 012 Gam 5.431 6.799 -18.6 6.5 Fiels and related produits 0.058 0.091 -38.3 012 Gam 5.431 6.799 -18.6 0.52 Cuprised particles 21.19 11.40 5.2 11.40 5.2 12.19 1.40 -3.6 3.15 5.2 Cuprised particles 22.19 1.40 -3.6 3.15 5.2 Cuprised particles 7.205 6.204 1.4.3 5.2 Cuprised particles 1.414 -13.2 2.2 1.4.7		processing	100.000	100.000	_	043	Footwear	0.004	0.007	-42.9
101 First ad def bits 148 200 -263 podde 0000 0.000	01	Farm products	43.602	60.519	-28.0	044	Other leather and related			
013 Livescot 533 6.79 -186 05 Pate and instance products 11.140 5.3 013 Live posity 3202 327 833 052 Open comparison rate 7208 633 037 13.5 014 Live posity 7208 6.234 4.5 654 4.5	011	Fresh and dried fruits	1 400	2 0 20	_26.3		products	0.058	0.091	-36.3
bit Luesdot. 19462 22 78 -32 1 cols and power. 100 200	012	Grains	5.531	6.799	-18.6	05	Fuels and related products			
Bits Line pools Bits	013	Livestock	19.492	28.708	-32.1	050	and power	12.128	11.450	5.9
010 017 017 018 018 018 018 018 019 019 019 019 019 019 019 019 019 019	014	Live poultry	3.602	3.327	8.3	052	Liquified petroleum gas	0.366	0.095	15.5
bit Eggt 0.286 0.400 -28.5 0.67 Percelum product, refer and total 4.319 4.64 -6.2 018 159, hyperodi, and objects 1.289 2.24 -58.4 Percelum product, refer and total 0.110 -13.6 020 Unprocessed holds and feets 0.533 0.350 1.46 -40.8 06 Chemical as and leig products 1.114 9.71 1.47 3.47 2.47 3.47 2.47 3.47 2.47 3.47 2.47 3.47 2.47 3.47 2.47 3.47 2.47 3.47 2.47 3.47 2.43 3.47 2.43 3.47 2.33 3.39 051 Fuels and relistic products 0.63 0.53 -22.1 064 Percelor and relistic and and and and percelor and relistic and and and percelor and relistic and and and percelor and relistic and and percelor and relistic and and and percelor and relistic and and percelor and and percelor and and	015		7.267	11.349	-36.0	054	Electric power	7.205	6.294	14.5
Bits Hey, hayeset, and obserts 1.28 2.244 -9.84 USB Products and load 0.121 0.140 -13.6 019 Direct term pock.th 0.833 1.46 -40.7 0.6 Direct.th 11.16 9.71 14.7 025 House status 0.833 1.66 -40.7 0.6 Direct.th 11.16 9.71 14.7 04 House status 0.833 0.653 -28.1 0.65 Direct term status 0.934 0.844 4.6.7 05 Fusk and misked products 0.63 0.67 1.78 1.77	017	Eggs	0.286	0.400	-28.5	057	Petroleum products, refined	4.319	4.604	-6.2
Other Lass Lass <thlass< th=""> Lass Lass <th< td=""><td>018</td><td>Hay, hayseeds, and oilseeds</td><td>3.743</td><td>4.528</td><td>-17.3</td><td>058</td><td>products n.e.c.</td><td>0.121</td><td>0.140</td><td>-13.6</td></th<></thlass<>	018	Hay, hayseeds, and oilseeds	3.743	4.528	-17.3	058	products n.e.c.	0.121	0.140	-13.6
C2:2011 Processed Notes and Heds 0.533 1.488 -40.7 08 Commutation of allow products 1.148 9.21 1.42 1.42 1.42	019		1.239	2.044		1				
025 Sugar and contentionery 0.500 1.108 54.9 062 Partial and allel products 1.279 1.401 67 04 Holes, and xims 0.613 0.833 -22.1 064 Paits and cline, modules 0.035 0.024 44, 477 041 Holes, and xims 0.613 0.833 -22.1 066 Paits and cline, modules 0.075 0.121 -38.0 051 Faults and milated products 0.633 0.221 2.02 78.0 067 Paisto relates and ximic duality channels and 1.731 1.464 5.0 0531 Color metrics and ximic duality channels 1.731 1.646 5.0 77.4 Paisto products 1.441 1.820 -20.8 0531 Color metrics and ximic duality channels 0.027 -65.1 061 1.028 -61.0 071 Paisto and allel products 1.028 -64.1 0651 1.033 -64.0 0.044 0.058 1.431 -64.0 0.044 0.056 1.133 -64.0 0.044	02	Processed foods and feeds	0.833	1.406	-40.8 11.7	06	Chemicals and allied products	11.149	9.721	14./
04 Hess, starter, and Hess, starter, and Hess, starter, and Hess, starter, and GS 053 0.624 <th0< td=""><td>025</td><td>Sugar and confectionery</td><td>0.500</td><td>1.108</td><td>-54.9</td><td>062</td><td>Paints and allied products</td><td>1.279</td><td>1.401</td><td>-8.7</td></th0<>	025	Sugar and confectionery	0.500	1.108	-54.9	062	Paints and allied products	1.279	1.401	-8.7
assigned products 0.013 0.833 -28.1 064 Fails and bit, models 0.075 0.121 -38.0 05 Fuels and sites 0.013 0.833 -28.1 066 Pastic nears and initial Demicinal 0.178 1.339 1.33 -3.0 051 Fuels and sites 0.012 0.013 6.018 7.33 6.01 7.33 6.018 7.33 6.01 7.33 6.018 7.33 6.018 7.33 6.01 7.012 Pastic nears and pastic products 1.441 1.820 -28.1 7.01 7.012 Pastic products 1.441 1.820 -28.1 7.02 7.022 Pastic products 1.441 1.820 -28.0 7.022 Pastic products 0.333	04	Hidos skips leather and				063	Drugs and pharmaceuticals	0.934	0.624	49.7
O41 Hetes and sites 0.013 0.083 -28.1 000 Pathemating products 1.176 1.233 -9.0 05 Fuels and related products 40.650 22.952 78.0 067 067 068 Pathemating products 1.373 1.389 1.373 1.389 1.373 1.389 1.373 1.368 5.05 1.011 1.	04	related products	0.613	0.853	-28.1	064	Fats and oils, inedible	0.075	0.121	-38.0
05 Fuels and initiated products 066 Plastic realis and maintails 1.539 1.373 3.39 051 Coal 10.733 6.018 78.3 07 Other chemicals and alled products 1.731 1.648 5.00 051 Cuide products 1.80.00 7.191 150.7 071 Plastice realis and real products 1.441 1.820 -2.0.8 052 Chemicals and alled products 0.322 0.356 -1.8.7 061 Lumber and wood products 2.290 3.744 -2.2.8 052 Phister and plastic products 0.226 0.226 -6.2.5 062 Vietwood lumber 0.0333 0.333 1.038 -1.4.1 068 Lumber and wood products 2.290 2.425 19.5 066 Prefabrical wood orbit 0.333 1.038 -1.43 0.333 1.038 -1.43 0.328 6.4.4 091 Palip, paper, and alled products 1.148 0.466 131.5 067 Palip, paper, and alled products 1.148 0.464 10	041	Hides and skins	0.613	0.853	-28.1	005	chemical products	1.176	1.293	-9.0
Tand power 40.859 22.952 78.0 067 Other demissiand and products 1.731 1.648 5.0 051 Call 17.33 6.018 78.3 071 Rubber and poticits 1.731 1.649 1.800 -20.8 053 Cube perfetem (connects products 1.800 -20.8 1.810 -20.8 3.744 -22.8 3.744 -22.8 3.744 -22.8 3.744 -22.8 3.744 -22.8 3.744 -22.8 3.744 -22.8 3.744 -22.8 3.744 -22.8 3.744 -22.8 3.744 -22.8 3.744 -22.8 3.744 -22.8 3.744 -22.8 3.744 -22.8 3.744 -22.8 3.744 -22.8 3.754 -22.8 3.754 -22.8 3.754 -22.8 3.754 -22.8 3.754 -22.8 3.754 -22.8 3.754 -22.8 3.754 -22.8 3.754 -22.8 3.754 -22.8 3.754 -22.8 3.754 -22.8	05	Fuels and related products				066	Plastic resins and materials	1.839	1.373	33.9
OS1 Call 10.733 6.018 78.3 ameci products 1.73 1.098 2.03 OS3 Chude products 10.73 2.046 7.74 2.42 07 Products 4.141 1.80 -20.3 OS3 Chude and plastic products 0.322 0.386 -18.7 08 -20.3 07.7 Products 0.055 1.441 1.803 -20.3 07.7 Products 0.055 1.33 -46.5 081 Lumber and wood products 0.236 0.324 -3.1 -3.47 -3.47 O7 Relation ondo products 0.289 2.425 19.5 081 Lumber and wood products 0.334 6.4 081 Lumber and wood products 0.289 2.425 19.5 084 Offer wood products 0.344 0.337 6.4 081 Lumber and wood products 0.348 5.4 084 Offer wood products 0.344 5.4 081 Lumber and wood products 6.453 5.80 17.5 0		and power	40.859	22.952	78.0	067	Other chemicals and	1 701	1 6 40	50
Obs Description Long 3/15 Labor 0/16 Pubber and pastic products 4/22 4/028 11.1 056 Chemicals and alled products 0.322 0.356 -16.7 071 Pubber and void products 1.441 1.802 -20.8 062 Paints and alled products 0.026 0.29 -45.5 061 Lumber and void products 2.298 3.794 -22.8 065002 Paints and alled products 0.027 0.072 -82.5 0811 Softwood lumber 0.0353 0.334 5.7 077 Pubber and pastic products 0.027 0.072 -82.5 0812 Hardwood lumber 0.333 0.334 5.7 076 Rubber and modi products 2.899 2.425 19.5 084 0.744 0.448 0.326 6.4 0912 Pubp, paper, and alled products 1.148 0.496 131.5 097 Pubber and pastic products 0.44 0.292 -42.9 101 Merata and metal products 6.833	051	Coal	10.733	6.018	78.3			1.731	1.040	5.0
Commercial constraint and allied products 11.41 11.620 -20.5 06 Chemicals and allied products 0.322 0.386 -18.7 06 30.37 2.206 37.4 06 Chemicals and allied products 0.324 0.386 -49.5 081 Lumber and wood products 0.326 1.47 -34.7 050202 Phosphalles 0.027 0.027 -62.5 081 Lumber and wood products 0.383 0.036 1.41 1.52.0 -42.9 071 Rickstrand allied products 0.027 0.027 -62.5 083 Phytom od under 0.038 0.036 1.41 0.564 -42.9 085 Lops, tolt, imber, and 2.899 2.425 19.5 086 antimotion dilation of the od and contract 0.144 0.252 -42.9 091 Pulp, paper, and allied products 648 131.5 091 Pulp, paper, and allied products 0.144 0.252 -42.9 101 Iron and steel scrap 2.783 2.583 0913 Pulp, p	0531	Crude petroleum	12.090	9.743	24.2	07	Rubber and plastic products	4.472	4.026	11.1
ope Chemicals and alled products 0.322 0.38 -18.7 0.4 Items and wood products 0.38 1.4 -2.28 05202 Phosphates 0.266 0.294 -9.5 081 Lumber and wood products 0.385 1.44 7.45 0.81		(domestic production)	18.030	7.191	150.7	071	Hubber and rubber products Plastic products	1.441	1.820	-20.8
bits Constraint Constraint <td>06</td> <td>Chemicals and allied products</td> <td>0.322</td> <td>0.396</td> <td>-18.7</td> <td>0/2</td> <td></td> <td>0.001</td> <td>2.200</td> <td>07.4</td>	06	Chemicals and allied products	0.322	0.396	-18.7	0/2		0.001	2.200	07.4
0652/2 Phosphates 0.269 0.294 -9.5 0611 Composition 0.905 1133 -46.6 07 Rubber and plastic products 0.027 0.072 -62.5 062 Milwood 0.033 0.033 0.033 1.086 -14.1 08 Lumber and vacio products 2.899 2.425 19.5 064 Other wood products 0.349 0.324 6.4 09 Puip, paper and alled products 1.148 0.496 131.5 07 wood products 0.144 0.222 -42.9 091 Puip, paper and alled products 6.853 5.830 17.5 091 Puip, paper, and alled products 11.669 11.279 3.5 101 Iron and stell scrap 2.392 -5.6 0913 Paper and products 1.148 0.499 2.427 12.8 0915 Puip, paper and alled products 1.142 1.011 0.777 2.216 1.842 41.0 1.017 779 2.217 2.268 0915 Comoret and paper and products an	062	Paints and allied products	0.056	0.102	-45.1	08	Lumber and wood products	2.929	3.794	-22.8
07 071103 Pabber and plastic products 0.027 0.027 -e.2.5 0.027 0612 0.027 Helwork 0.027 0.027 0.027 0.027 e.2.5 063 0.033 Helwork Professional Profesional Professional Professional Professional Professional	065202	Phosphates	0.266	0.294	-9.5	0811	Softwood lumber	0.605	1.133	-46.6
071103 Reclamed rubber 0.027 0.072 -62.5 082 Milliont 0.834 1.086 -1.1. 08 Lumber and vecod products 2.899 2.425 19.5 083 084 0.844 0.254 -28.4 6.4 0.544 0.254 -28.4 6.4 0.524 -28.4 6.4 0.544 0.252 -42.9 08 Pulp, paper, and alled products 1.148 0.466 131.5 097 Treated vecod and contract 0.141 0.097 45.4 10 Meals and metal products 6.853 5.830 17.5 09 Pulp, paper, and alled products 11.669 11.279 3.5 101 Inon and steel crap 2.793 2.826 0414 92.9 2.927 12.6 1.011 0.77 2.251 1.011 0.77 2.251 1.011 0.77 2.251 1.011 0.77 2.251 1.011 0.77 2.251 1.011 0.77 2.251 1.011 0.77 2.251 1.011 <td>07</td> <td>Rubber and plastic products</td> <td>0.027</td> <td>0.072</td> <td>-62.5</td> <td>0812</td> <td>Hardwood lumber</td> <td>0.353</td> <td>0.334</td> <td>5.7</td>	07	Rubber and plastic products	0.027	0.072	-62.5	0812	Hardwood lumber	0.353	0.334	5.7
08 Lumber and wood products 2.899 2.425 19.5 094 094 0346 0328 6.4 09 Putp, paper, and alled products 1.14.8 0.496 131.5 097 Treated wood and contract 1.044 0.252 -42.9 09 Putp, paper, and alled products 1.14.8 0.496 131.5 097 Treated wood and contract 1.669 11.279 3.5 101 tion and steel scrap 0.388 0.145 306.2 0912 Paper and alled products 1.669 11.279 3.5 101 tion and steel scrap 2.783 2.286 -4.5 0814 Paper and all poducts 1.669 11.279 3.5 102 Nonferrous metal ores 3.471 2.789 2.58 0814 Conserved paper and 1.011 0.767 2.83 1.622 1.02 Conserved paper and 1.011 0.767 2.83 1.624 4.133 1021 Nonferrous metal ores 0.631 1.227 2.66 -1.05 0.92	071103	Reclaimed rubber	0.027	0.072	-62.5	082	Nillwork	0.933	1.086	-14.1 -28.4
065 Logs, toils, timber, and pulywood 2.89 2.425 19.5 086 Preferences wood and contract and components 0.144 0.252 -42.9 08 Pulp, paper, and alled products 1.148 0.496 131.5 087 Treated wood and contract wood preserving 0.144 0.097 45.4 0 Metals and metal products 6.853 5.80 17.5 091 Pulp, paper, and alled products 11.660 11.279 3.5 101 Iron and steel 0.588 0.145 306.2 0913 Paper and products 1642 41.0 102 Iron ereas metals 0.444 0.433 192.9 Paper 7010 6.227 12.6 102 Nonferous metals 0.444 0.433 192.9 0915 Converted paper and paperboard products 3.188 3.367 -5.3 102 Nonferous metals 0.631 1.229 -4.6.7 0 add priming materials 4.477 4.794 -6.8 132 Nonferous mand gravel, and consybrotics with products	08	Lumber and wood products	2.899	2.425	19.5	084	Other wood products	0.349	0.328	6.4
pulpwood 2.459 2.425 13.5 07 Table Components 0.144 0.222 -4.2.9 0912 Pulp, paper, and alled products 1.146 0.496 131.5 07 Treased wood and contract. 0.141 0.097 45.4 10 Metals and metal products 6.683 5.830 17.5 091 Pulp, paper, and alled products. 11.669 11.279 3.5 101 Iron and steel scrap 2.793 2.265 -4.5 0914 Paper card alled products 3.188 3.367 -5.3 1021 Iron and steel scrap 2.267 -4.5 0915 Converted paper and paper card products 3.188 3.367 -5.3 1021 Nonferrous snetal products 2.847 5.051 -43.6 0915 Converted paper and products 0.182 0.228 -23.5 1321 Nonferrous snetal products 2.847 5.051 -43.6 033 Publications, printed matter, and pintring materials 4.477 4.794 -6.5 138 Other nonmetallic minerals <td>085</td> <td>Logs, bolts, timber, and</td> <td>0.000</td> <td>0.405</td> <td>10.5</td> <td>086</td> <td>Prefabricated wood buildings</td> <td></td> <td>0.050</td> <td></td>	085	Logs, bolts, timber, and	0.000	0.405	10.5	086	Prefabricated wood buildings		0.050	
09 0912 Pub, paper, and alled products. 11.48 0.496 13.15. Pub, paper, and alled products. 0.141 0.097 45.4 01 Metals and metal products 6.853 5.830 17.5 09 Pub, paper, and alled products. 11.689 11.279 3.5 101 iron and steel		pulpwood	2.899	2.425	19.0	087	Treated wood and contract	0.144	0.252	-42.9
0912 Watels and metal poducts 1.146 0.490 13.13 09 Pulp, paper, and allied poducts 11.669 11.279 3.5 101 Iron and steel 3.382 3.071 10.1 091 Pulp, paper, and allied poducts 7.010 6.227 12.6 1011 Iron and steel crap 2.2783 2.926 -4.5 0913 Paper 2.316 1.424 41.0 1021 Nonferrous metals 3.471 2.276 2.266 0915 Days paper and 3.188 3.367 -5.3 1021 Nonferrous metals 3.471 2.286 -45.6 092 Building paper and building and building paper and building paper and building and building building paper and building paper and build	09	Pulp, paper, and allied products	1.148	0.496	131.5		wood preserving	0.141	0.097	45.4
10 Metal and metal products 6.853 5.830 17.5 091 Pulp paper and products 7010 6.227 12.6 1011 Iron and steel scrap 0.588 0.145 3062. 0913 Paper 2.316 1.642 41.0 102 Nonferrous metal 3.471 2.759 25.8 0915 Paper and products 2.318 3.188 3.367 -5.3 1021 Nonferrous metal ores and, gravel, and constand,	0912	wastepaper	1.140	0.490	131.5	09	Pulp, paper, and allied products	11.669	11.279	3.5
101 Irromand steel 3.322 3.01 10.1 except building paper 7.010 6.227 12.6 1011 Iron and steel scrap 2.733 2.926 -4.5 0913 Paperboard 1.011 0.787 28.5 102 Nonferrous metals 3.471 2.793 2.926 -4.5 0913 Paperboard 1.011 0.787 28.5 1021 Nonferrous metal ores 1.444 0.493 192.9 0915 Converted paper and paperboard 1.011 0.787 28.5 1021 Nonferrous scrap 2.027 2.266 -4.5 092 Building paper and builing paper and paperboard 0.182 0.258 -29.5 1321 Construction sand gravel, and crusphoats 0.031 1.229 -42.0 0 Metals and metal products 0.182 0.258 -29.5 1331 Other nonmetallic minerals 0.031 1.229 -42.0 Metals and metal products 19.179 23.212 -17.4 104 Interemediate materials 0.4314	10	Metals and metal products	6.853	5.830	17.5	091	Puip, paper, and products,			
1012 Itom and size strap 2.733 2.2926 -4.4 0914 Paperband 2.316 1.024 1.077 2.255 102 Nonferrous metal ores 1.444 0.493 192.9 0915 Converted paper and 1.011 0.767 22.55 1021 Nonferrous metal ores 1.444 0.493 192.9 0915 Converted paper and building 1.011 0.767 22.55 1021 Nonferrous metal ores 1.444 0.493 192.9 0915 Dard mit products 0.182 0.259 -23.5 1321 Construction sand, gravel, and crimponents 0.631 1.229 -42.0 92 Building paper and building 0.4477 4.774 -6.6 139 Other nonmetallic minerals 0.631 1.229 -48.7 10 Metals and metal products 19.179 23.212 -17.4 021 Processed fruits and teeds 5.139 5.091 0.9 103 Metals and metal products 19.179 23.21 -3.73 28.6 -1.7 <	101		0.589	0.145	306.2		except building paper	7.010	6.227	12.6
102 Nonterrous metals 3.471 2.759 25.8 0915 Converted paper and minimal products 3.481 3.367 -5.3 1021 Nonferrous metal ores 1.444 0.483 192.9 papetoard products 3.188 3.367 -5.3 133 Normetallic mineral products 2.027 2.266 -10.5 092 papetoard products 0.182 0.258 -29.5 133 Normetallic mineral products 2.216 3.822 -42.0 and printig materials 4.477 4.794 -6.6 139 Other normetallic minerals 0.631 1.229 -48.7 10 nor and site!	1012	Iron and steel scrap	2.793	2.926	-4.5	0913	Paperboard	1.011	0.787	28.5
1021 Notifiertous interal products 1.444 0.435 162.5 paperboard products 3.188 3.367 -5.3 132 Nonmetallic mineral products 2.247 5.051 -43.6 092 Building paper and building 0.182 0.258 -28.5 133 Construction sand, gravel, and contentiats 0.631 1.229 -48.7 10 Metais and metal products 19.179 22.212 -17.4 139 Other nonmetallic minerals 0.631 1.229 -48.7 10 Metais and metal products 19.179 22.212 -17.4 101 Intermediate materials, supplies, and components 100.000 -0 102 Metais and metal products 12.47 1.268 -1.1 02 Processed foots and feeds 5.139 5.091 0.9 103 Metai containers 1.247 1.268 -1.7 021 Coreatiand bakery products 0.371 0.366 1.4 104 Hardware 0.373 0.381 -25.5 022 Meeats poultry, and fish 0.977 5.01 0.66 1.03 Metais ontainers 0.252	102	Nonferrous metals	3.471	2.759	25.8	0915	Converted paper and			
13 Nonmetalic mineral products 2.847 5.051 -43.6 092 Dealing page and builting 0.182 0.258 -29.5 1321 Construction sand, gravel, and crushed stone 2.216 3.822 -42.0 993 Publications, printed matter, and printing materials 0.182 0.258 -29.5 139 Other nonmetallic minerals 0.631 1.229 -48.7 10 Metais and metal products 19.179 23.212 -17.4 02 Processed foods and feeds 5.138 5.091 0.9 103 Metais and metal products 19.179 23.212 -17.4 021 Cereal and bakery products 0.371 0.366 1.4 104 Heating equipment 0.333 0.981 -25.3 021 Cereal and bakery products 0.371 0.366 1.4 104 Heating equipment 0.323 0.981 -25.3 022 Dairy products 0.513 0.465 10.3 106 Heating equipment 0.323 0.454 -25.6 0255	1021	Nonferrous scrap	2.027	2.266	-10.5	000	paperboard products	3.188	3.367	-5.3
13.2 The Initiatian Chine and Products 2.001 40.0 093 Publications, printed mater, and printing materials 4.477 4.794 -6.6 139 Other nometallic minerals 0.631 1.229 -42.0 10 Metals and metal products 19.179 23.212 -17.4 139 Intermediate materials, supplies, and components 100.000 - 101 Metals and metal products 19.179 23.212 -17.4 021 Cereal and bakery products 0.371 0.366 1.4 104 Metals containers 0.733 0.991 -25.8 022 Meats, poultry, and fish 0.978 1.060 -77 105 Purposes and brows a	10	Nonmetallia minaral products	2 947	5.051	-43.6	092	board mill products	0.182	0.258	-29.5
orushed store 2216 3.822 -42.0 and printing materials 4.477 4.794 -6.6 139 Other nonmetallic minerals 0.631 1.229 -48.7 10 Metals and metal products 19.179 23.212 -17.4 and components intermediate materials, supplies, and components 100.000 - 102 Metals and metal products 19.179 23.212 -17.4 02 Processed loods and feeds 5.139 5.091 0.9 103 Metal containers 1.247 1.268 -1.1 021 Cereal and bakery products 0.378 1.060 -7.7 105 Plumbing instures and brais 0.232 0.386 -25.3 023 Dairy products 0.513 0.465 10.3 106 Heating equipment 0.323 0.434 -25.6 0253 Sugar and confectionery 0.644 0.899 -28.4 107 Fabricated structural metal 3.231 3.573 -9.6 0254 Confectionery materials 0.256 0.172	1321	Construction sand, gravel, and	2.047	3.001	40.0	093	Publications, printed matter,			
139 Other nonmetalic minerals 0.631 1.229 -48.7 10 Metals and metal products 19.179 23.212 -17.4 intermediate materials supponents 100.000 - 102 Nonferous metals 5.473 8209 -33.3 02 Processed foods and feeds 5.133 5.091 0.9 103 Metals and metal products 1.247 1.268 -1.7 021 Cereal and bakery products 0.371 0.366 1.4 104 Hadrware 0.252 0.370 -31.9 023 Dairy products 0.513 0.465 10.3 0.667 -2.6 106 Heating equipment 0.252 0.370 -31.9 025 Sugar and conflectionery 0.644 0.899 -28.4 107 Fabricated structural metal 0.221 0.252 0.323 0.434 -25.6 0254 Conflectionery materials 0.336 0.677 -50.1 moderlaneous metal products 3.622 4.030 -10.1 026 Bevera		crushed stone	2.216	3.822	-42.0		and printing materials	4.477	4.794	-6.6
Intermediate materials, supplies, and components 100,000	139	Other nonmetallic minerals	0.631	1.229	-48.7	10	Metals and metal products	19.179	23.212	-17.4
and components 100.000 100.000		Intermediate materials, supplies,				101	Iron and steel	5.473	8.209	-33.3
02 Processed routes and backers 0.105 0.105 0.331 0.331 0.331 0.4 Hardware 0.733 0.981 -25.3 021 Meats, poultry, and fish 0.976 1.060 -7.7 105 Plumbing fixtures and brass fittings 0.252 0.370 -31.9 023 Dairy products 0.513 0.464 0.899 -28.4 106 Heating equipment 0.323 0.434 -25.6 025 Sugar and confectionery 0.644 0.899 -28.4 107 Fabricated structural metal 3.231 3.573 -9.6 0254 Correctionery materials 0.256 0.172 48.8 108 Miscellaneous metal products 3.622 4.030 -10.1 026 Beverages and beverage 0.307 0.274 12.0 11 Machinery and equipment 15.779 12.415 27.1 027 Fats and oils 0.385 0.335 14.9 111 Machinery and equipment 0.239 0.223 7.2 028 <td>02</td> <td>Broossort foods and feeds</td> <td>100.000</td> <td>100.000</td> <td></td> <td>103</td> <td>Metal containers</td> <td>1.247</td> <td>1.268</td> <td>-1.7</td>	02	Broossort foods and feeds	100.000	100.000		103	Metal containers	1.247	1.268	-1.7
022 Meats, poultry, and fish 0.978 1.060 -7.7 105 Plumbing intures and brass fittings 0.252 0.370 -31.9 023 Dairy products 0.513 0.465 10.3 106 Prass fittings 0.323 0.434 -25.6 025 Sugar and confectionery 0.644 0.899 -28.4 107 Patricated structural metal products 3.231 3.573 -9.6 0253 Refined sugar 0.338 0.677 48.8 108 Miscellaneous metal products 3.622 4.030 -10.1 0254 Confectionery materials 0.307 0.274 12.0 11 Machinery and equipment 15.779 12.415 27.1 026 Beverages and beverage 0.307 0.274 12.0 111 Machinery and equipment 0.285 0.249 14.5 027 Fats and oils 0.385 0.335 14.9 requipment 0.239 0.223 7.2 03 Textile products and apaprel 4.700 5.042	021	Cereal and bakery products	0.371	0.366	1.4	104	Hardware	0.733	0.981	-25.3
023 Dary products 0.513 0.465 10.3 10.6 Heating equipment 0.323 0.434 -25.6 024 Processed fuits and vegetables 0.113 0.116 -2.6 107 Fabricated structural metal 0.323 0.434 -25.6 025 Sugar and confectionery 0.644 0.899 -28.4 107 Fabricated structural metal 0.323 0.573 -9.6 0254 Confectionery materials 0.256 0.172 48.8 108 Miscellaneous metal products 3.622 4.030 -10.1 026 Beverages and beverage 0.307 0.274 12.0 111 Machinery and equipment 15.779 12.415 27.1 027 Fats and oils 0.385 0.335 14.9 112 Construction machinery and equipment 0.285 0.249 14.5 029 Prepared animal feeds 1.589 1.380 15.1 12 Construction machinery and equipment 0.239 0.223 7.2 03 Textile products and appare	022	Meats, poultry, and fish	0.978	1.060	-7.7	105	Plumbing fixtures and brass fittings	0.252	0.370	-31.9
021 11023500 Holds and objectures 0.164 0.169 -26.4 107 Fabricated structural metal products 3.231 3.573 -9.6 0253 Refined sugar 0.338 0.677 -50.1 products	023	Dairy products	0.513	0.465	-26	106	Heating equipment	0.323	0.434	-25.6
0253 Řefined sugar 0.338 0.677 -50.1 products 3.231 3.573 -9.0 0254 Confectionery materials 0.256 0.172 48.8 108 Miscellaneous metal products 3.622 4.030 -10.1 026 Beverages and beverage 0.307 0.274 12.0 11 Machinery and equipment 15.779 12.415 27.1 027 Fats and oils 0.385 0.335 14.9 11 Agricultural machinery and equipment 0.285 0.249 14.5 029 Prepared animal feeds 1.589 1.380 15.1 112 Construction machinery and equipment 0.239 0.223 7.2 03 Textile products and apparel 4.700 5.042 -6.8 113 Metaworking machinery and equipment 1.150 1.286 -10.6 031 Synthetic fibers 0.975 0.945 3.2 1143 Fluid power equipment 0.219 12.86 -10.6 034 Finished fabrics 0.757 -3.3 <td>025</td> <td>Sugar and confectionery</td> <td>0.644</td> <td>0.899</td> <td>-28.4</td> <td>107</td> <td>Fabricated structural metal</td> <td>0.001</td> <td>0.570</td> <td>0.0</td>	025	Sugar and confectionery	0.644	0.899	-28.4	107	Fabricated structural metal	0.001	0.570	0.0
0254 Contentionery materials 0.256 0.172 48.8 1.00 Machinery and equipment 0.111 Machinery and equipment 15.779 12.415 27.1 027 Fats and oils 0.385 0.335 14.9 11 Machinery and equipment 0.285 0.249 14.5 028 Miscelianeous processed foods 0.239 0.196 21.9 112 Construction machinery and equipment 0.285 0.2239 0.223 7.2 03 Textile products and apparel 4.700 5.042 -6.8 113 Metalworking machinery and equipment 0.239 0.2239 0.223 7.2 03 Textile products and apparel 4.700 5.042 -6.8 113 Metalworking machinery and equipment 0.239 0.223 7.2 03 Textile products and apparel 9.980 0.9 114 General purpose machinery and equipment 1.150 1.286 -10.6 031 Synthetic fibers 0.975 0.945 3.2 1143 Air conditioning and 0.414	0253	Refined sugar	0.338	0.677	-50.1	108	Miscellaneous metal products	3.622	4.030	-10.1
Octo Description 0.307 0.274 12.0 11 Madminely and equipment 15.779 12.413 27.1 027 Fats and oils 0.385 0.335 14.9 111 Agricultural machinery and equipment 0.285 0.249 14.5 028 Miscelianeous processed foods 0.239 0.196 21.9 112 Construction machinery and equipment 0.285 0.223 7.2 03 Textile products and apparel 4.700 5.042 -6.8 113 Metaworking machinery and equipment 0.239 0.223 7.2 03 Textile products and apparel 4.700 5.042 -6.8 113 Metaworking machinery and equipment 0.239 0.223 7.2 031 Synthetic fibers 0.650 0.750 -13.3 equipment 1.150 1.286 -10.6 032 Processed yarns and threads 0.989 0.980 0.9 114 General purpose machinery and equipment 3.558 3.504 1.5 033 Gray fabrics	0254	Beverages and beverage	0.256	0.172	40.0		Machinery and equipment	15 770	10 415	27.1
027 Fats and oils 0.385 0.335 14.9 equipment 0.285 0.249 14.5 028 Miscellaneous processed foods 0.239 0.196 21.9 112 Construction machinery and equipment 0.285 0.249 14.5 029 Prepared animal feeds 1.589 1.380 15.1 112 Construction machinery and equipment 0.239 0.223 7.2 03 Textile products and apparel 4.700 5.042 -6.8 113 Metalworking machinery and equipment 0.239 0.223 7.2 03 Textile products and apparel 4.700 5.042 -6.8 113 Metalworking machinery and equipment 0.239 0.223 7.2 031 Synthetic fibers 0.650 0.750 -13.3 Hits General purpose machinery and equipment 1.150 1.286 -10.6 032 Processed yarns and threads 0.975 0.945 3.2 and equipment 3.558 3.504 1.5 033 Gray fabrics 0.975 <	020	materials	0.307	0.274	12.0		Agricultural machinery and	15.779	12.415	27.1
028 Miscelaneous processed roots 0.239 0.1360 21.3 112 Construction machinery and equipment 0.239 0.223 7.2 03 Textile products and apparel 4.700 5.042 -6.8 113 Metabworking machinery and equipment 0.239 0.223 7.2 031 Synthetic fibers 0.650 0.750 -13.3 14 General purpose machinery and equipment 1.150 1.286 -10.6 032 Processed yarns and threads 0.975 0.945 3.2 and equipment 3.558 3.504 1.5 034 Finished fabrics 1.284 1.594 -19.4 1148	027	Fats and oils	0.385	0.335	14.9		equipment	0.285	0.249	14.5
O3 Textile products and apparel 4.700 5.042 -6.8 113 Metaworking machinery and equipment 0.239 0.223 7.2 03 Synthetic fibers 0.650 0.750 -13.3 113 Metaworking machinery and equipment 1.150 1.286 -10.6 031 Synthetic fibers 0.650 0.750 -13.3 114 General purpose machinery and equipment 1.150 1.286 -10.6 033 Gray fabrics 0.975 0.945 3.2 and equipment 3.558 3.504 1.5 034 Finished fabrics 1.284 1.594 -19.4 1143 Air conditioning and retrigeration equipment 0.877 1.107 -20.8 039 Textile products 0.653 0.675 -3.3 116 Special industry machinery and equipment 0.337 0.313 7.7 04 Hides, skins, leather, and related products 0.275 0.352 -21.9 117 Electrical machinery and equipment 6.802 4.339 56.8	028	Prepared animal feeds	1.589	1.380	15.1	112	Construction machinery and	0.000	0.000	70
U3 Textue products and appare1 4.700 5.042 -0.5 1.15 equipment 1.150 1.286 -10.6 031 Synthetic fibers 0.650 0.750 -13.3 it equipment 1.150 1.286 -10.6 032 Processed yams and threads 0.999 0.980 0.9 114 General purpose machinery 3.558 3.504 1.5 033 Gray fabrics 0.975 0.945 3.2 and equipment 0.414 0.257 61.1 034 Finished fabrics 1.284 1.594 -19.4 1143 Air conditioning and 0.414 0.257 61.1 038 Apparel and other fabricated 0.653 0.675 -3.3 116 Special industry machinery and -20.8 039 Textile products 0.149 0.098 52.0 117 Electrical machinery and -3.37 0.313 7.7 04 Hides, skins, leather, and 0.275 0.352 -21.9 117 Electrical machinery and	020	Total and the sector of second	1 700	5.040		113	Metalworking machinery and	0.239	0.223	1.2
032 Processed yarns and threads 0.989 0.980 0.9 114 General purpose machinery and equipment 3.558 3.504 1.5 033 Gray fabrics 0.975 0.945 3.2 1 and equipment 3.558 3.504 1.5 034 Finished fabrics 1.284 1.594 -19.4 1143 Air conditioning and retrile products 0.414 0.257 61.1 038 Apparel and other fabricated textile products 0.653 0.675 -3.3 116 Special industry machinery and equipment 0.877 1.107 -20.8 039 Textile fibers, yarns, and fabrics, n.e.c. 0.149 0.098 52.0 117 Electrical machinery and equipment 0.337 0.313 7.7 04 Hides, skins, leather, and related products 0.275 0.352 -21.9 117 Electrical machinery and equipment 6.802 4.339 56.8	031	Synthetic fibers	0.650	0.750	-13.3		equipment	1.150	1.286	10.6
033 Gray fabrics 0.975 0.945 3.2 and equipment 3.36 3.364 1.33 034 Finished fabrics 1.284 1.594 -19.4 1143 Fluid power equipment 0.414 0.257 61.1 038 Apparel and other fabrics 0.653 0.675 -3.3 1148 Air conditioning and refrigeration equipment 0.877 1.107 -20.8 039 Textile products 0.653 0.675 -3.3 116 Special industry machinery and equipment 0.337 0.313 7.7 04 Hrides, skins, leather, and related products 0.275 0.352 -21.9 117 Electrical machinery and equipment 6.802 4.339 56.8	032	Processed yarns and threads	0.989	0.980	0.9	114	General purpose machinery	3 559	3 504	15
U34 Finitsmen labrics 1.204 1.394 -13.4 1148 Air conditioning and refrigeration equipment 0.877 1.107 -20.8 039 Textile products 0.653 0.675 -3.3 116 Special industry machinery and equipment 0.877 1.107 -20.8 039 Textile fibers, yams, and fabrics, n.e.c. 0.149 0.098 52.0 116 Special industry machinery and equipment 0.337 0.313 7.7 04 Hides, skins, leather, and related products 0.275 0.352 -21.9 117 Electrical machinery and equipment 6.802 4.339 56.8	033	Gray fabrics	0.975	0.945	3.2	1143	Fluid power equipment	0.414	0.257	61.1
Itextile products 0.653 0.675 -3.3 refrigeration equipment 0.877 1.107 -20.8 039 Textile fibers, yams, and tabrics, n.e.c. 0.149 0.098 52.0 116 Special industry machinery and equipment 0.337 0.313 7.7 04 Hides, skins, leather, and related products 0.275 0.352 -21.9 117 Electrical machinery and equipment 6.802 4.339 56.8	034	Apparel and other fabricated	1.204	1.084	-13.4	1148	Air conditioning and			
039 Textile fibers, yarns, and fabrics, n.e.c. 0.149 0.098 52.0 116 Special industry machinery and equipment 0.337 0.313 7.7 04 Hides, skins, leather, and related products 0.275 0.352 -21.9 117 Electrical machinery and equipment 6.802 4.339 56.8		textile products	0.653	0.675	-3.3		retrigeration equipment	0.877	1.107	-20.8
04 Hides, skins, leading, and related products 0.145 0.050 0.275 0.352 -21.9 117 Electrical machinery and equipment 6.802 4.339 56.8	039	Textile fibers, yarns, and	0.140	0.009	52.0	116	Special industry machinery and equipment	0 337	0.313	77
related products	04	Hides, skins. leather, and	0.149	0.090	32.0	117	Electrical machinery and	0.007		
	- ·	related products	0.275	0.352	-21.9		equipment	6.802	4.339	56.8

See footnote at end of table.

Commodity code	Grouping	Relative importance December 19861		Percent	Commodity	Crowsing	Relative importance December 1986 ¹		Percent
		Revised (1982)	Former (1972)	(1962/1972) code		Grouping	Revised (1982)	Former (1972)	change (1982/1972)
178	Intermediate materials, Con't. Electronic components and				0382	Textile housefurnishings	0.691	0.850	-18.7
	accessories	2.812	1.266	122.1	04	Hides, skins, leather, and	0.000	1 000	07.4
18	Miscellaneous instruments	0.616	0.421	46.3	043	Footwear	0.990	0.985	-27.4
2	Furniture and household	2./92	2.080	34.2	044	Other leather and related products	0.300	0.378	~20.6
~	durables	0.897	0.978	-8.3	05	Fuels and related products and			
21	nousenoki turniture	0.053	0.069	-23.2		Dower	8.631	7.470	15.5
23	Floor coverings	0.143	0.139	89	051	Coal	0.002	0.002	0.0
24	Household appliances	0.204	0.243	-16.0	053	Gas fuels	3.777	2.464	53.3
25	Home electronic equipment	0.061	0.039	56.4	057	Gasoline	4./18	4.850	-2.7
26	Other household durable	0.400	0.000		057302	Fuel oil #2	0.580	0.632	-92
•		0.162	0.222	-27.0	058	Petroleum and coal	0.000	0.002	-0.2
3 31	Glass	4.301	5.897	-27.1		products, n.e.c.	0.134	0.154	-13.0
322	Cement	0.349	0.527	-33.8	06	Chemicals and allied products	4.816	4.533	6.2
33	Concrete products	1.313	1.854	-29.2	061	Industrial chemicals	0.023	0.013	76.9
34	Clay construction products		1.		062	Paints and allied products	0.032	0.034	-5.9
25	except refractories	0.132	0.226	-41.6	0635	Ethical preparations	1.91/	1./33	10.6
35	Asphalt felts and contings	0.133	0.202	-34.2	0000	(prescription)	1,430	1.213	17.9
37	Gypsum products	0.242	0.290	-16.7	0636	Proprietary preparations			
38 39	Glass containers	0.568	0.716	-20.7	065	(over-counter) Agricultural chemicals and	0.423	0.478	-11.5
4	Transportation equipment	5.450	4.947	10.2	067	chemical products Other chemicals and	0.106	0.124	-14.5
41	Motor vehicles and equipment	3.714	3.734	-0.5		allied products	2.738	2.629	4.1
42 13	Aircraft and aircraft equipment .	1.4/9	0.822	/9.9	07	Rubber and plastic products	1.462	1.396	4.7
44	Bailroad equioment	0.135	0.062	-61.0	071	Rubber and rubber products .	0.556	0.816	-31.9
49	Transportation equipment.	0.033	0.200	-01.3	072	Plastic products	0.906	0.580	56.2
	n.e.c	0.023	0.049	-53.1	08	Lumber and wood products	0 101	0 1 16	-129
5	Miscellaneous products	1 911	1 797	63	081	Lumber	0.024	0.035	-31.4
51	Toys, sporting goods.	1.011	1.1.57	0.0	082	Millwork	0.067	0.068	-1.5
	small arms	0.080	0.073	9.6	083	Plywood	0.010	0.013	-23.1
52	Tobacco products, including				09	Pulp, paper, and allied products	3.561	3.561	0.0
52	Stemmed and redried	0.246	0.100	146.0	091	Pulp, paper, and products,			
54 54	Photographic equipment and	0.001	0.155	-00.0	092	except building paper Building paper and building	1.355	1.127	20.2
	supplies	0.302	0.314	-3.8	002	board mill products	0.021	0.012	75.0
56	Medical, surgical, and personal		1		093	Publications, printed matter,		0.0.12	10.0
57	aid devices	0.529	0.258	105.0	{	and printing materials	2.185	2.422	-9.8
57 59	Other miscellaneous products	0.095	0.063	-28.3	10	Metals and metal products	1.036	1,182	-12.4
		0.000	0.004	20.0	101	Iron and steel	0.002	0.003	-33.3
	Finished goods	100.000	100.000		102	Nonferrous metals	0.019	0.020	-5.0
iı	Fresh and dried fruits and	1.723	1.014	-4.9	103	Metal containers	0.004	0.006	-33.3
	vegetables	1.226	1.290	-5.0	106	Heating equipment	0.139	0.176	-21.0
16	Fluid milk	0.074	0.081	-8.6	107	Fabricated structural metal	0.040	0.002	5.0
17	Eggs	0.392	0.425	-7.8		products	0.468	0.557	-16.0
19	Other farm products	0.033	0.018	83.3	108	Miscellaneous metal products .	0.355	0.368	-3.5
2	Processed foods and feeds	27.574	26.472	4.2	11	Machinery and equipment	15.332	14.006	9.5
21	Cereal and bakery products	3.333	3.724	-10.5	111	Agricultural machinery and			
221	Meats, poultry, and fish	7.046 4.827	7.149	-1.4	110	equipment	1.195	1.361	-12.2
222	Processed poultry	1.240	0.769	61.2	112	equipment	0.893	1.510	-40.9
223	Unprocessed and	0.070	0.000	4.0	113	Metalworking machinery			
23	packaged IIsn	0.979	0.962	1.8	4407	and equipment	1.759	1.837	-4.2
24	Processed fruits and vegetables	1.742	1.774	-1.8	113/	Metal cutting machine tools Metal forming machine tools	0.441	0.414	6.5
25	Sugar and confectionery	1.445	1.249	15.7	1139	Tools, dies, iids, fixtures.	0.139	0.223	-31.1
26	Beverages and beverage					and industrial molds	0.552	0.653	-15.5
	materials	5.674	5.113	11.0	114	General purpose machinery			
27	Miscellaneous processed foods	0.514	2 952	20.7	110	and equipment	1.959	1.827	7.2
29	Prepared animal feeds	0.662	0.451	46.8	110	Special industry machinery	1 004	2 200	140
	•				1161	Each producte machinon	0.179	2.209	-14.3
3	Textile products and apparel	7.500	6.890	8.9	1162	Textile machinery and	U.170	0.110	01.0
32	Processed yams and inreads	0.035	0.038	-7.9		equipment	0.084	0.146	-42.5
34	Finished fabrics	0.055	0.055	-92	1165	Printing trades machinery			
38	Apparel and other fabricated	0.120	0.14L	V.2	1 110-	and equipment	0.289	0.217	33.2
	textile products	7.283	6.657	9.4	1167	Packing and packaging	0.100	0.105	· · · -
38101	Women's apparel	3.389	2.431	39.4	117	Flectrical machinery and	0.106	0.185	-42.7
38102	Men's and boys' apparel	2.387	2.611	-8.6	[equipment	5.001	2 349	112 0
~~~	cans, cinuren s, and	0.544	0.469	16.0			2.00		

See footnote at end of table.

Table 1.—Continued Changes in relative importance of Producer Price Index commodity groupings by stage of processing, resulting from update of weight base year from 1972 to 1982

commodity		Relative in Decembe	Percent		
code	Grouping	Revised (1982)	Former (1972)	(1982/197)	
	Finished goods Con't				
1176	Communication and related				
1110	equipment	2 2 4 6	0.409	449.1	
118	Miscellaneous instruments	0.937	0.515	81.9	
119	Miscellaneous machinery	1.694	2.398	-29.4	
1191	Oil field and gas field				
	machinery	0.451	0.176	156.3	
1193	Office and store machines				
	and equipment	0.739	1.549	-52.3	
12	Furniture and household durables	6,171	6.675	-7.6	
121	Household furniture	1.689	2,157	-21.7	
122	Commercial furniture	1.061	0.927	14.5	
123	Floor coverings	0.550	0.612	-10.1	
124	Housebold appliances	1.407	1.636	-14.0	
125	Home electronic equipment	0.544	0.373	45.8	
126	Other household durable				
120	goods	0.920	0.970	-5.2	
13	Nonmetallic mineral products	0.113	0.170	-33.5	
131	Glass	0.037	0.040	-7.5	
133	Concrete products	0.026	0.021	23.8	
138	Glass containers	0.008	0.009	-11.1	
139	Other nonmetailic minerals	0.042	0.100	-58.0	
14	Transportation equipment	13.944	16.639	-16.2	
141	Motor vehicles and equipment	10.261	13.588	-24.5	
141101	Passenger cars	6.440	8.811	-26.9	
141105	Light trucks	2.221	2.099	5.8	
141106	Heavy trucks	0.308	1.195	-74.2	
142	Aircraft and aircraft equipment	1.798	1.329	35.3	
143	Ships and boats	1.570	1.004	56.4	
144	Railroad equipment	0.218	0.518	-57.9	
149	Transportation equipment,				
	n.e.c.	0.097	0.200	51.5	
15	Miscellaneous products	7.045	7.707	-8.6	
151	Toys, sporting goods,				
	small arms	1.139	1.146	-0.6	
152	Tobacco products, including	1			
	stemmed and redried	2.333	2.482	-6.0	
153	Notions	0.019	0.050	-62.0	
154	Photographic equipment and			i	
	supplies	1.122	0.723	55.2	
155	Mobile homes	0.484	0.987	-51.0	
156	Medical, surgical, and			<b></b>	
	personal aid devices	0.601	0.349	72.2	
157	Industrial safety equipment	0.009	0.008	12.5	
159	Other miscellaneous products .	1.338	1.962	-31.8	

allocated to the respective stage-of-processing grouping. The revised weight structure (based on 1982 shipment values) includes the effects of sample changes in January 1987, while the old weight structure does not include these sample changes. Because these figures are based on unrevised December 1986 index levels, they are subject to revision; final relative importance data will be published in the annual supplement to *Producer Price Indexes*.

n.e.c. = not elsewhere classified.

Metal ores rose very sharply, largely reflecting the inclusion of interplant transfers in the PPI weight universe. A majority of metal mines in the United States is owned by the firms that smelt or refine the ores themselves. Consequently, the weight of nonferrous ores nearly tripled, and the weight of iron ore more than quadrupled.

### **Intermediate goods**

The weight shifts within the Intermediate Materials, Supplies, and Components Index appear consistent with the widespread perception that the structure of American industry has gained in the high technology and chemical-related sectors and retrenched in basic heavy industries. However, the significant declines that occurred in the relative importances of construction materials such as lumber and nonmetallic minerals were not due to such a fundamental structural change in the economy, but rather to the cyclical weakness of the construction sector in 1982. Neither the energy nor the food materials categories within the intermediate goods category showed much change in the weight revision. (See chart 2.)

The outstanding increase in relative importance among the intermediate goods category was for electronic components and accessories, which more than doubled, from 1.3 percent to 2.8 percent. The biggest jumps were for integrated circuits, of which some types registered 10- or 20fold gains between 1972 and 1982. Demand for some kinds of these semiconductor "chips" was boosted enormously by the microcomputer boom that began in the late 1970's; the household sound and video equipment and commercial communication equipment sectors also stimulated rapid growth in semiconductors. Nonetheless, the American semiconductor industry faced a growing threat from Japanese firms, which have excelled in producing on a massive scale at low cost the standardized memory chips used in computers. Many U.S. firms have responded in recent years by establishing "offshore" production facilities to reduce costs and avoid further erosion of their market share.

Growth in the aerospace industry was also reflected in the PPI weight revision, although part of the increase stemmed from the inclusion of military sales in the weight universe. The relative importance of aircraft engines and engine parts nearly tripled, while aircraft parts and auxiliary equipment rose 44 percent.

Medical and surgical instruments and appliances also showed substantial increases in their relative weights, as shipments grew in tandem with the increased proportion of medical expenses in household and public budgets. Growth in medical products was also evident among pharmaceuticals. Biological products more than doubled their relative importance, and medicinal and botanical chemicals (from which drugs are derived) showed an 83-percent advance in importance.

The chemical industry was given a tremendous stimulus by growth in plastic product markets. During the 1970's and 1980's, new types of plastic materials came to be used more and more frequently in durable goods. Plastic products used by businesses recorded a 37-percent increase because of the weight revision, while plastic resins and materials rose 34 percent. Because of demand that was derived from the plastics sector, the PPI for industrial chemicals moved up from 3.3 percent to 4.1 percent of the total intermediate goods category, a 26-percent increase.

Another area of notable increases was the pulp and paper industry. Paper's relative importance rose 41 percent, while that of paperboard moved up 28 percent. Although faced



with competition from plastics and other packaging materials, the paper industry managed to develop new types of containers made from corrugated paper. The long-term prospects for growth in the U.S. pulp and paper sector continued to be good, in spite of occasional trade disputes with the Canadian forestry sector.

An interesting substitution effect occurred in the intermediate foods and feeds category. Confectionery materials gained 49 percent in relative weight, reflecting increased use of corn sweeteners such as high-fructose corn syrup in candy and soft drinks. This resulted in less use of refined sugar, which fell 50 percent, and paralleled the previously mentioned drop in raw cane sugar's relative importance within the crude materials index. In addition, crude vegetable oils rose 36 percent, while prepared animal feeds showed a more modest increase, 15 percent.

Among industrial goods that exhibited major declines in relative importance were asbestos products, which fell 61 percent. Health concerns during the 1970's resulted in sharp restrictions on the use of asbestos as an insulation material.

Construction materials suffered a sharp drop in importance, because of the 1981-82 recession. Real total expenditures on residential construction in 1982 fell to their lowest level since the early 1960's. Consequently, the weight assigned to softwood lumber within the intermediate goods category dropped by nearly half, from 1.1 percent to 0.6 percent. (However, the relative importance of hardwood lumber, which is mainly used in making furniture and other durable goods rather than in construction, increased about 6 percent.) In addition, the relative weight of plywood fell nearly 30 percent and millwork registered a decrease of about 14 percent.

Among other construction materials, structural clay products showed substantial declines in importance, especially clay bricks and tiles, down nearly 50 percent. Concrete products fell about 30 percent, with the sharpest decreases occurring for block and brick. Likewise, large declines were observed for plumbing fixtures and brass fittings and for heating equipment, down 32 and 26 percent.

Basic metal industries were also particularly hard hit by the recessionary period of the early 1980's. Domestic output of raw steel in 1982 fell to the lowest level since 1958, and the steel industry reported financial losses exceeding \$3 billion. Besides having to deal with reduced demand for steel resulting from the downsizing of automobiles, use of other materials, and fewer purchases of heavy machinery by American industries, U.S. steel companies in the last decade have been confronted by technologically advanced low-cost foreign steel producers. As much as 20 percent of the diminished steel market was taken by imported steel as a consequence. Thus, the relative importance of both the PPI for steel mill products and for foundry and forge shop products fell roughly one-third following the weight revision; this was one case where not only cyclical but also long-term structural changes were evident.

No clear trend existed among nonferrous metals, which showed virtually no net change overall. Aluminum gained substantially in importance, because of increased use in beverage containers and aerospace equipment. However, zinc fell by about two-thirds and precious metals declined 18 percent.

Contrary to the pattern of petroleum-derived and pharmaceutical chemicals, certain chemical products moved down in importance. Inedible fats and oils, mixed fertilizers, and miscellaneous paint products all fell at least 30 percent. Various electric-related equipment categories also declined (between 10 and 25 percent), including electric lamps and bulbs, air conditioning and refrigeration equipment, motors and generators, and wiring devices. Finally, the relative weight of the glass containers category decreased by about 20 percent, as the increased popularity of aluminum, plastic, and paper containers (and stricter beverage container deposit legislation in some States) displaced much of the market once held by the glass container industry.

# **Finished** goods

Some of the sharpest changes in relative weights among the Finished Goods Index took place in the capital equipment area. (See chart 2.) The relative weight of communication and related equipment more than quintupled, reflecting the growing importance and increased applications of this technology. Among the most prominent examples of these are the entry into the market of new telephone service companies and new television enterprises, particularly cable TV. Oilfield and gasfield machinery almost tripled in importance, as deregulation of domestic oil and the partial decontrol of gas prices precipitated a high level of exploration and drilling activity and, in turn, sharp increases in demand for such machinery. Significant advances were also shown in the relative weights for photographic equipment, ships, and aircraft.

However, heavy trucks' share of the finished goods category dropped from 1.2 percent to only 0.3 percent, reflecting the poor state of demand for automotive products during the recession of 1981–82. In addition, the following types of capital goods declined in importance: locomotives, 79 percent; textile machinery and equipment, 42 percent; and railroad cars, 40 percent. Because of the change in imputation of computer prices to a higher level category, machinery and equipment, a substantial drop was also observed for office and store machines and equipment, 52 percent. Also, the relative weights for metal-forming machine tools, truck trailers, plastics machinery, and automotive maintenance equipment moved down.

Within consumer goods, one of the most dramatic shifts was the 27-percent decline for passenger cars, which now represents 6.4 percent of the finished goods category, compared to 8.8 percent under the previous weight structure. Sales of domestic cars fell to under 6 million in 1982, compared with over 9 million in 1972. During the same period, import sales steadily climbed. This was one of the most dramatic examples of the cyclical effect on recessionsensitive industries, but it also indicates the long-term problem of the U.S. auto industry in dealing with the increased market share of foreign producers. The stronger consumer preference for light-duty pickup trucks was reflected in the 6-percent increase for light trucks. Given the nearly disastrous conditions in the motor vehicle market in 1982, the fact that the relative importance for light trucks rose at all is significant.

Several other durable consumer goods declined in importance from 1972 to 1982. The largest decline was for travel trailers and campers, which fell 65 percent, mostly in response to curtailed vacation driving following the gasoline price hikes of the 1970's. Jewelry and jewelry products declined 48 percent, and mobile homes decreased 51 percent over the same period.

One of the largest gains among consumer goods was for the home electronic equipment category, where an increase of 93 percent was noted for hi-fidelity components and speakers. Sharp increases were also registered for phonograph records and prerecorded tapes, 62 percent, and televisions, 46 percent. Long-term strength in consumer demand for these products outweighed the cyclical weakness that afflicted other consumer durable goods.

Changing consumer tastes led to a sharp change in the consumer foods category. Consumption of beef and pork declined because of consumer reaction to the sharp price hikes during the 1970's, and because of health concerns. In the PPI, the relative importances of both the beef and veal and the pork categories fell by 10 percent; beef and veal now accounts for under 2.2 percent of the total finished goods category, while pork accounts for about 1.5 percent.

Many Americans substituted poultry and fish for meats in their diets. The increased consumption of poultry was partly due to its relatively low prices compared to other meats. The poultry industry gained a greater share of the market by reducing costs through improved efficiency in production. Poultry presently accounts for 1.2 percent of the finished goods index, an increase of over 61 percent compared to the 1972 weight structure. The relative importance of fish showed only a small increase.

Weights for confectionery end products rose 27 percent, compared to the 1972 structure, partly as a result of increased costs for ingredients, particularly sugar. Alcoholic beverages increased 29 percent, while soft drinks advanced 11 percent. Among other foods, the proportion accounted for by salad dressings rose significantly, due in part to recent dietary trends as well as higher prices for reduced-calorie varieties. Increases also occurred for spices, frozen packaged sandwiches, and snack foods, while bakery products were 17 percent lower under the 1982 weight structure.

Because prices for finished energy goods more than quadrupled from 1972 to 1982, declines were experienced in per capita consumption. The net effect was little change in energy's relative share of consumer expenditures. The growing prevalence of new cars with greater fuel efficiency, coupled with the imposition of a nationwide 55-mile-perhour speed limit, reduced demand for motor vehicle fuels from its long-term growth trend. Gasoline still accounts for about 3.6 percent of the weight of the finished goods index on the 1982 scheme, the same as under the previous weight structure. A substantial increase in home insulation efforts likewise reduced demand for home heating oil, which now represents 0.6 percent of the finished goods category, about the same as before. However, the relative importance of natural gas rose to 3.3 percent of the finished goods category, compared with 2.1 percent previously; this reflected the inclusion of interplant transfers in the PPI universe.

From 1972 to 1982, athletic footwear rose 33 percent in importance, as more costly shoes were marketed to both fitness- and fashion-conscious consumers. Increases for plastic dinnerware and tableware reflected the growing importance and acceptance of these alternatives to chinaware and metal dining utensils. Women's and children's apparel also gained in importance, while men's apparel declined. Cosmetics and soaps both moved up about 9 percent in importance.

Prices and Living Conditions, Bureau of Labor Statistics.

² The assumption of fixed quantities imparts to the Laspeyres formula a tendency to overstate the importance of items whose prices have risen sharply since the weight base period, and understate the importance of items experiencing declines in prices. See, for example, William Mendenhall and James E. Reinmuth, *Statistics for Management and Economics*, (Duxbury Press, 1974), p. 421.

³ Base year quantities could be computed if base year prices were known. However, the Bureau of Labor Statistics does not maintain files of dollar prices on a historical basis.

¹ The program to revise the methodology of the PPI and to expand its coverage began in the late 1970's. By January 1986, nearly all mining and manufacturing industries were represented in the PPI by indexes under the Standard Industrial Classification code (sic) system. Unlike the traditional commodity grouping structure of the PPI, the sic-based indexes of the PPI Revision system pay special attention to where each product is produced. Every business establishment in the United States is assigned an sic code based on the establishment's primary source of revenue. For more information on the methodological difference between commodity-classified and industry-classified indexes or updated information on the PPI, please see the upcoming issue of the *BLS Handbook of Methods* or contact the Office of

[—] FOOTNOTES —