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An Examination of the Difference Between the CPI and the PCE Deflator

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**AN EXAMINATION OF THE DIFFERENCE BETWEEN  
THE CPI AND THE PCE DEFLATOR**

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## **An Examination of the Difference Between the CPI and the PCE Deflator**

**Abstract:** Both the Bureau of Labor Statistics (BLS) and the Bureau of Economic Analysis (BEA) produce measures of the change in prices that consumers pay on the goods that they consume. While these measures tend to agree in broad historical trends in prices, they sometimes give different pictures of inflation over short horizons.

There are several reasons why these two indexes differ. First, the two indexes use different formulas. For the period in question, the CPI is a Laspeyres index, while the BEA product is a Fisher Ideal index. Second, the two indexes have different underlying concepts. The BLS product measures the prices paid by (urban) consumers, while the BEA product measures the prices of final consumption goods, wherever they are purchased. Finally, even when there is significant agreement across indexes in the broad outlines of coverage, differences in how the detailed components are implemented lead to differences in how prices are measured and differences in the weights attached to specific series.

We quantify the magnitudes of each of these factors. There is no one “smoking gun” that explains the discrepancy between the indexes. Rather, the overall discrepancy is the result of the accumulation of a number of small effects.

# **An Examination of the Difference Between the PCE Deflator and the CPI**

By Dennis Fixler and Ted Jaditz

## **Introduction**

In the U.S., there are two major index programs measuring the change in prices that consumers pay on the goods that they consume. One is the Consumer Price Index (CPI), produced by the Bureau of Labor Statistics. The other is comprised of two price indexes produced by the Bureau of Economic Analysis (BEA) to accompany the National Income Accounts for Personal Consumption Expenditures (PCE).

Recently, the BLS has received numerous inquiries regarding the differences in inflation rates measured by the Consumer Price Index for all urban consumers (CPI-U, or just CPI) and BEA's Implicit Price Deflator.<sup>1</sup> Accordingly, we seek to answer two questions: First, what accounts for this discrepancy? Second, is the discrepancy likely a transient phenomenon or a continuing trend?<sup>2</sup>

The discrepancy tends to vary over time. Figure 1 graphs the inflation rates of the two indexes from the second quarter of 1983 to the second quarter of 1997. There are several periods where the difference between the two inflation rates is large. Figure 1 also shows that in the past, these differences have tended to disappear after a few quarters. Over long periods, the two indexes give very similar measures of the trend in prices: At the highest level of aggregation, over the period from II 1983 to II 1997, the average difference between the CPI and PCE inflation rates has been less than 0.1 percent per year.

While these measures tend to agree in broad historical trends, there are reasons why the two indexes may not give the same measure of price change over a given interval. First, they are

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<sup>1</sup> The Implicit Price Deflator is one of two main BEA indexes of inflation. The other BEA product is the Chain Price Index. The BEA holds that the chain price index is their featured price index and therefore it should be viewed as the basis for any comparison to the CPI. In principle, we agree. Recently, the discrepancy between the CPI-U and the Deflator has been larger and attracted more attention from the public and the economics profession. Hence, that is the difference we address here.

<sup>2</sup> The magnitude of these discrepancies fell markedly with the July 1997 revision in methodology. Nevertheless, the change in methodology did not eliminate some fundamental reasons for a difference between the measured rate of inflation provided by these two indexes. These reasons are the focus of our attention.

constructed using different formulas. Because of this difference in formula, even if the two indexes were built out of the same components, they would not necessarily agree on the measure of changes in prices. Second, the two indexes do not have the same components: there are differences in measurement objectives across programs, and thus there are significant differences in how prices are measured and weighted across the two indexes.

We start with the difference in formula. The CPI is a fixed weight Laspeyres price index. The PCE Deflator is derived from deflation by a Fisher Ideal quantity index. The Deflator is in effect the average of a Laspeyres price index and a Paasche price index. Since the Paasche price index generally lies below a Laspeyres price index, one might expect that the Deflator will generally measure less inflation than the CPI.

The two indexes also differ in their underlying conceptual framework or to put it simply, their scope. The Personal Consumption Expenditures account in the National Income and Product framework measures the goods and services purchased by persons, individuals, and non-profit institutions.<sup>3</sup> In contrast the CPI measures the out-of-pocket expenditures of urban households. It follows that the goods and services in the PCE Deflator should be a superset of the goods and services in the CPI.<sup>4</sup> As a result, there are numerous items included in the PCE deflator which are completely out of scope of the CPI. Some examples are military clothing, final expenditures by museums and libraries, and food furnished and consumed on farms. Earlier papers also examine the importance of the differences in scope and item definition.<sup>5</sup>

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<sup>3</sup> See “Personal Consumption Expenditures” Methodology Paper Series MP-6, US Department of Commerce, June 1990.

<sup>4</sup> In practice, this is not quite the case. When one maps the prices and weights of the PCE into the CPI, there are a small number of items that receive positive weight in the CPI that receive no weight in the PCE Deflator. Two examples are SE6204 “Fees for Lessons and Instruction” and SE51, “Automobile Finance Charges.”

This occurs because the two indexes have different aggregation trees, and hence make different calls about how to organize economic activity. In the CPI, for example, automobile finance charges are included in the transportation section of the aggregation tree. BEA collects all financial services in the “Personal Business Services” section of the national accounts. In this particular case, BEA uses a CPI index SE6802 “Personal Financial Services” to deflate the relevant financial services section of the national accounts. That is a reasonable choice; however, note that the information used to calculate the BLS automobile finance charge index will not appear anywhere else in the BLS aggregation tree, and thus that information is lost to the national accounts.

In any event, the aggregate weight of the categories so affected in the CPI is quite small.

<sup>5</sup> See for example, Jack E. Triplett, “Reconciling the CPI and PCE Deflator,” Monthly Labor Review (September, 1981) pages 3-15, and “Reconciliation of Quarterly Changes in Measures of Prices Paid by Consumers,” Survey of Current Business, March 1978.

Appendix Table 4 presents the list of items that are included in the PCE but completely beyond the scope of the CPI. This list is taken from Parker (1994).<sup>6</sup> These items are not included, either in whole or in part, in the market basket which makes up the CPI.

There are several other items that are defined differently across programs and hence do not overlap perfectly. When there is significant overlap in category definition across indexes, we choose to treat the result as a difference in weighting and/or prices, rather than a difference in scope. We therefore do not exclude these items when calculating the scope correction. To illustrate, consider the CPI category “Physician Services” and the PCE category “Physicians.” The CPI focuses on the out-of-pocket expenditures of households as determined from the Consumer Expenditure Survey, though it makes an adjustment for expenditures paid for by third parties (insurers) by allocating their expenditures to the various CPI medical categories. In contrast, the current dollar value for PCE physicians includes third party payers (private and public) directly and comes from the Census of Service Industries, the Health Care Financing Administration, and the Census Bureau’s Annual Survey of Services.

As a result, the PCE category “Physicians” has a much greater weight in the PCE than “Physicians Services” has in the CPI. In 1996, the PCE category “Physicians” accounted for about 3.77% of the total spending that falls within the scope of the PCE Deflator. In the same year, “Physicians Services” spending accounted for a budget share of 1.89% of the CPI market basket.<sup>7</sup> Even if the two indexes used the same measure of price for this category, this difference in weights would mean that the two indexes would not track perfectly.

For many categories of items, the CPI and the PCE Deflator have similar conceptual definitions, and BEA often uses the corresponding CPI index for deflation. For the physicians services category, however, BEA uses the Producer Price Index for Physicians instead of the CPI “Physicians Services” index. Given the difference in coverage, this is valid and sensible choice. However, note that even if the two indexes had the same weight for this category, the use of different measures of price change means that the two indexes will not track perfectly.

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<sup>6</sup> Robert Parker, “Substitution Effects in Measures of Consumer Prices: From the CPI and Personal Consumption Expenditures.” Internal BEA Memo to Carol Carson, January 5, 1994.

<sup>7</sup> The figure for the CPI is the 1996 relative importance for Physicians Services. See Note 13 for a discussion of the difference between the relative importance and an actual expenditure weight.

Others might use different criteria to decide which categories warrant matching, and which are so dissimilar that they should be excluded as scope differences. Different assumptions will lead to different results. However, we can address questions such as: How much of the difference in the CPI and the PCE Deflator is due to differences in the weight placed on physicians services -- regardless of the differences in how physicians services are counted within each index? How much is due to different measures of prices for this category?

We find that there is no one “smoking gun” that accounts for the entire discrepancy between the two indexes. The discrepancy is caused by an accumulation of many small factors. All of the factors we discuss — differences in formula, differences in scope, and differences in weights and prices — contribute to the discrepancy in varying degrees.

Our analysis proceeds as follows. To quantify the formula effect, we use publicly available data from the National Income and Product Account tables to construct a fixed-weight Laspeyres price index out of the same data used to construct the PCE Deflator. The difference between the PCE Deflator and the Laspeyres construct is used to estimate how much of the difference between the two indexes is due to the difference in formula.

Second, we drop those items that are completely out of scope of the CPI, leaving a fixed weight index that is on the same conceptual footing as the CPI. Third, we construct an exact decomposition of the remaining difference between the CPI and our fixed weight, scope adjusted Laspeyres PCE price index. We identify every difference in the weights and sources of prices for similar items across the two indexes. It is important to keep in mind that this decomposition is a simple accounting of the difference between the two indexes; neither the validity of weight and price differences nor the relative merits of the two indexes is at issue.

### **Differences in Formula**

While the CPI is a Laspeyres price index, the PCE Deflator is a derived index. The PCE obtained by deflating the ratio of PCE expenditures from two periods with a quantity index. Until recently, the PCE Deflator was computed with by deflating with a Laspeyres quantity index. In 1995 the BEA moved from the Laspeyres index formula to a chain Fisher index formula for the quantity index.

The implicit PCE Deflator derives from a property of index numbers called the product test: between periods t and t+1, the product of a price index and a quantity index yields the ratio of expenditures in t+1 to expenditures in t. To illustrate, let the price of good i in period t be  $p_i^t$ , and the quantity of good i in period t be  $q_i^t$ . Total expenditures in period 1 would be  $\sum p_i^1 q_i^1$ , while total expenditures in period 2 would be  $\sum p_i^2 q_i^2$ . The Fisher Ideal index formula satisfies the product test:

$$\sum p_i^2 q_i^2 / \sum p_i^1 q_i^1 = F_p^{1,2} F_q^{1,2}$$

where  $F_p^{1,2}$  and  $F_q^{1,2}$  are the Fisher Ideal price and quantity indexes, respectively. The PCE deflator is the Fisher Ideal implicit price index obtained by dividing the ratio of expenditures by a Fisher Ideal quantity index. That is,

$$(\sum p_i^2 q_i^2 / \sum p_i^1 q_i^1) / F_q^{1,2} = F_p^{1,2}.$$

The Fisher Ideal quantity index is the geometric mean of a Laspeyres quantity index and a Paasche quantity index. Pursuing our example, we have the Laspeyres quantity index

$$L_q^{1,2} = \sum p_i^1 q_i^2 / \sum p_i^1 q_i^1.$$

Deflating revenues by a Laspeyres quantity index leads to the price index

$$(\sum p_i^2 q_i^2 / \sum p_i^1 q_i^1) / (\sum p_i^1 q_i^2 / \sum p_i^1 q_i^1) = \sum p_i^2 q_i^2 / \sum p_i^1 q_i^2,$$

which is the Paasche price index between periods 1 and 2. Similarly, one can show that deflating by the Paasche quantity index

$$P_q^{1,2} = \sum p_i^2 q_i^2 / \sum p_i^2 q_i^1,$$

yields a Laspeyres price index. The Fisher ideal quantity index is the geometric mean of the Laspeyres and Paasche quantity indexes:

$$F_q^{1,2} = (L_q^{1,2} P_q^{1,2})^{0.5}$$

and the corresponding price index will generally lie between a Paasche and a Laspeyres price index. Thus, inflation rates reported by a Fisher Ideal index is generally less than the inflation rates given by a Laspeyres index.<sup>8</sup>

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<sup>8</sup> Aizcorbe and Jackman “The Commodity Substitution Effect in CPI Data, 1982-91” Monthly Labor Review December 1993 showed that a Fisher based CPI showed a smaller rate of inflation than the Laspeyres based CPI.



To implement the Fisher Ideal index, both price and quantity data are required for both periods for which one wants to calculate the index. In practice, price information is available on a more timely basis than the current dollar information used to construct the quantity weights. To publish an index in a timely manner, the current index must be calculated using provisional data. In part to accommodate this, BEA indexes have a “tail period,” during which indexes are calculated using a slightly different approach than is used for the historical series. With the July, 1997 revision, the computation of indexes in the tail period was changed: the major difference concerns how current nominal value information is incorporated into the index.<sup>9</sup>

Typically, each summer, BEA revises the tail indexes. The earliest four quarters of the tail period are recalculated using updated nominal values data and using the methodology of the historical series. The remaining quarters are “re-chained” to the new values of the revised series. The current tail period, which will be revised in July, 1998, starts in quarter III 1996 and ends in quarter I 1998. At that time, the data from III 1996 to II 1997 will be revised and added to the historical series, and the new tail period will then run from III 1997 to I 1999.

The use of chaining is another way in which the PCE Deflator differs from the CPI-U. More specifically, the PCE Deflator is calculated by “chaining” one period indexes: the Fisher price index  $F_p^{1,3}$  is calculated by multiplying together two one-period Fisher price indexes:

$$F_p^{1,3} = F_p^{1,2} F_p^{2,3}.$$

In contrast, the CPI is a fixed-base-period index, though it is chained at decennial revisions. Thus the CPI index for comparing period 1 to period 3 prices would be calculated directly:

$$L_p^{1,3} = \sum p_i^3 q_i^1 / \sum p_i^1 q_i^1.$$

If the CPI were chained like the PCE, then there would be a substantive change in the underlying economic concept. The CPI attempts to measure the minimum level of expenditures needed by a representative consumer to achieve a given level of utility in a given base period. For a chained index, the reference utility level used to measure inflation is changing every period.

To estimate the importance of differences in formula, we re-calculate the BEA index as a fixed-weight Laspeyres price index. For the weights, we use the 1992 average annual expenditures,

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<sup>9</sup> Prior to the July, 1997 revision, the BEA did not use the Fisher formula in the tail period. The price deflator for the tail period was calculated using a Laspeyres quantity index. This means that during the tail period, the deflator was essentially a chained Paasche index. Starting with the July, 1997 revision, the BEA now uses the Fisher formula throughout the series.

divided by total 1992 personal consumption expenditures.<sup>10</sup> We calculate this index using the same price data used by BEA to construct the PCE deflator. We chose 1992 because it is the benchmark year for the BEA data. As discussed below, we rebase the CPI to 1992 as well.

We performed the computation for highest level aggregate and for each of the major components: Durables, Non Durables, and Services. Tables 1 through 4 report the results of the analysis for each index in turn. In the “Inflation Rates” section of the table, Column 2 gives the (annualized) quarter to quarter inflation rate calculated from indexes reported by the BEA. Column 3 gives the inflation rate calculated from the fixed weight approximation to the PCE deflator. In the “Difference Analysis” section, column 2 gives the difference between the CPI index and the BEA PCE deflator. Column 3 gives the difference between the inflation rate calculated from the fixed weight PCE deflator and the inflation rate reported by BEA. The last two lines of the “Difference Analysis” section reports the averages of the quarterly differences over the entire period.

As one might expect, the fixed weight PCE is generally larger than the Fisher based PCE and so the difference between the CPI inflation rate and the PCE inflation rate falls with the use of a Laspeyres formula instead of a Fisher formula. As seen in Table 1, the average difference in the annualized overall inflation rates between the PCE Deflator and the CPI is 0.22% per year. Recalculating the PCE deflator as a fixed weight Laspeyres price index rather than a Fisher would increase the PCE deflator by an average of 0.14% per year—thus eliminating two thirds of the total difference (on average). Looking at Tables 2, 3 and 4, the impact on the sub-indexes is qualitatively the same, with the greatest difference observed in the durable goods sub-index.

Finally, as can be seen from Tables 3 and 4, the cases of Non Durable Goods and Services do not appear to have large differences between the BEA published deflator and the CPI. Consequently we do not discuss these two types of goods further.

### **Differences in Scope**

To estimate how scope differences contribute to the overall discrepancy between the PCE and the CPI, we remove from our fixed weight PCE all of the lines listed in Appendix Table 4. Column 4 in the “Inflation Rates” section of Tables 1 through 4 reports the inflation rate derived

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<sup>10</sup> The BEA also produces a quarterly fixed weight price index benchmarked to 1992. The difference between the BEA index and our constructed fixed weight index is small. Since we used BEA data to construct our indexes, any difference is most likely due to rounding and differences in precision of the underlying data.

from this scope-adjusted index. Column 4 in the “Difference Analysis” section reports the difference between the scope-adjusted inflation rate and inflation rate calculated from a fixed weight PCE.

As can be seen from the “Overall Average” line in Table 1, the average scope adjustment is -0.2% per year. In other words, at the highest level of aggregation, the effect of adjusting the fixed weight PCE for the difference in scope is to *increase* the difference between the fixed weight PCE and the CPI inflation rates. The price inflation for these items is on average closer to the rate of inflation of the all items CPI than it is to the PCE Deflator. An effect of similar magnitude is present in the durable goods index; see Table 2.

### Weights and Prices

The scope adjusted fixed weight PCE transforms the PCE as close as possible into an index with the same formula and objective as the CPI. The remaining differences can be essentially described as weight and price differences. Differences in how item definitions are implemented can lead to a difference in whether certain expenditures are included in the item category, and this leads to a difference in weights. These differences in definition can also lead the two agencies to use different measure of price change for similar categories.

Assuming that the same set of  $j$  commodities comprise each index, the difference between the CPI and the scope adjusted fixed weight PCE can be written as:

$$\text{CPI} - \text{PCE} = \sum w_{cpi}^j P_{cpi}^j - \sum w_{pce}^j P_{pce}^j$$

where  $w$  denotes the weight for the price relative  $P$ . Adding and subtracting  $\sum w_{pce}^j P_{cpi}^j$  from the right-hand side yields

$$\begin{aligned} \text{CPI} - \text{PCE} &= \sum w_{cpi}^j P_{cpi}^j - \sum w_{pce}^j P_{cpi}^j + \sum w_{pce}^j P_{cpi}^j - \sum w_{pce}^j P_{pce}^j \\ &= \sum (w_{cpi}^j - w_{pce}^j) P_{cpi}^j + \sum w_{pce}^j (P_{cpi}^j - P_{pce}^j). \end{aligned} \quad (1)$$

We refer to the first summand on the right-hand side as the *weight factor* and the second summand as the *price factor*.<sup>11</sup>

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<sup>11</sup> This decomposition is not unique. One could form other decompositions by adding and subtracting alternative constructions. This decomposition was selected because it was the easiest to implement.

Even if the two indexes had the same weights, the differences in measures of price movement means that the two indexes do not necessarily move together. Holding weights fixed, the price factor is a measure of how the difference in component price indexes is translated into differences in the aggregate indexes. For a given component category, if the BLS and the BEA use the same measure of prices, then that category will not contribute to the difference in the overall aggregate indexes. Some categories have large differences in prices, but small weights; thus, their net contribution to the difference between the two indexes is small. For a category with large weight, even a relatively small difference in price movements may provide a large contribution to the overall difference between the aggregate indexes.

Even if the two indexes used the same set of indexes to measure price movement, the difference in weights applied to these prices would mean that the two indexes would not necessarily move together. The weight factor is a measure of how the difference in weights is translated to differences in the two aggregate indexes. Obviously, the weight factor will be zero if all of the weights are identical across indexes. Less obviously, the weight factor will be zero if all component price indexes move in the same proportion.<sup>12</sup> Even if weights differ across indexes, the weight factor will be non-zero only if various component indexes move in different proportions.

Using 1992 as the base year, the CPI between 1992 and II 97 is computed to be 114.12 and the scope adjusted fixed weight PCE for the same period is computed to be 112.32, implying that a difference of 1.8 index points needs to be explained. From the above equation, we can decompose this difference into a portion that is attributable to differences in weights, given a common price index, and a portion that is attributable to differences in prices, given a common set of index weights.

Comparing indexes in this manner requires the construction of a concordance. One requires a mapping of the lowest level dis-aggregates from one index into comparable components of the other index. Our concordance uses as its starting point information supplied by BEA listing the sources of the price information used to construct the PCE Deflator. This listing is contained in

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<sup>12</sup> Recall that  $P_{cpi}^j$  is the CPI price index for good  $j$ . Suppose that the CPI index increases by the same proportion for all categories:  $P_{cpi}^j = 110$ , say, for all  $j$ . Then, since  $\sum w_{cpi}^j = \sum w_{pce}^j = 1$ ,  
 $\sum (w_{cpi}^j - w_{pce}^j) P_{cpi}^j = \sum (w_{cpi}^j - w_{pce}^j) 110 = \sum 110 * w_{cpi}^j - \sum 110 * w_{pce}^j = 110 - 110 = 0$ .

Appendix Table 1. Where BEA does not use a BLS CPI source for their prices, we made judgment calls as to the most comparable BLS index.

Completing the concordance required mapping the weights used in the fixed weight scope adjusted PCE index to the comparable CPI category. This task is not straightforward. In some cases, a line from the BEA index might map to a CPI aggregate, while a different BEA line might map to one of the component a CPI indexes underneath the previous index in the CPI aggregation tree. When a BEA line uses an CPI aggregate index as a source for prices, we use the CPI aggregation tree to allocate the BEA weight over the various CPI dis-aggregate series underneath that CPI aggregate.

For reasons of computational convenience, the price factor is reported relative to the BEA PCE index categories, while the weight factor is reported according to the CPI index categories.

To conduct the analysis, we re-based each CPI component index to 1992=100 and used the 1992 relative importances as weights. The relative importances are the expenditure weights from the 1982-1984 Consumer Expenditure Survey, moved by the changes in the respective price indexes. The relative importances for a given period are thus the percent of the total expenditures in the (fixed) CPI index market basket accounted for by a given category.<sup>13</sup>

Most of the item prices used in the computation of the PCE are derived from the CPI. Differences in seasonal adjustment, however, leads to cases where the price factors are not zero even though both programs obtain their price data from the same source.

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<sup>13</sup> Observe that the relative importances are not the same as an expenditure weight that is derived from the Consumer Expenditure Survey. The principal difference is that the relative importance represents the dollar share of the cost of the fixed (1982-84) market basket, whereas the expenditure weight represent the share of consumer spending. Some information about the magnitudes of the differences are presented in the following table.

Expenditure Class/Item	1992 CES Weight	1992 Relative Importance
Food and Beverage	16.428	17.396
Housing	43.654	41.404
Apparel	6.442	6.005
Transportation	17.462	17.012
Medical Care	5.844	6.931
Entertainment	4.778	4.350
Other Goods and Services	5.392	6.902
Inform. Processing (Computers)	0.352	0.124

*The Weight Factors.* By allocating the weight from the adjusted PCE to corresponding CPI lines, we identify many large differences between the two indexes. Table 5 lists the items that have the greatest difference in weight, without considering the price term. As can be seen from the table, Owner's Equivalent Rent provides the largest single difference in weight; the CPI gives much more weight to this item. The PCE places greater weight on most medical services. Appendix Table 5 provides the complete list of the difference in weights, item by item, for every line in the CPI.

Why are there such large differences in weights? One factor is the different base periods for the two indexes. The constructed fixed weight PCE index uses the patterns of expenditures current in 1992, while the CPI weights are based on the 1982 consumer expenditure survey. The PCE weights therefore reflect changes in consumption patterns over the decade 1982-1992 not reflected in the CPI weights.

Another contributing factor is the differences in measurement objectives between the two indexes. Many of the largest differences in weights occur where sectors where third party payors are important. In the medical services categories, large expenditures by non-profit and government agencies are in the scope of the PCE and out of scope of the CPI, and this certainly accounts for a large part of the difference.

The total weight factor for all items for the period to II 97 is -0.16. For the period from 1992 to II 97, if one used the same price indexes to calculate the CPI and the scope adjusted fixed weight PCE index, the differences in weights would result in the CPI being 0.16 points *lower* than the PCE, ignoring the price factor. This implies that on average, the CPI tends to place slightly greater weight on categories where prices are accelerating more slowly, and slightly less weight on categories where prices are accelerating more quickly – where “quickly” and “slowly” are measured using the CPI price indexes.

Calculating the contribution of individual items to the overall weight factor takes some care. If all prices change in the same proportion, individual lines will have non-zero weight factors, while the aggregate weight factor will be zero. To adjust for this effect, we measure the weight factor for line  $j$  of the CPI as

$$(w_{cpi}^j - w_{pce}^j) (P_{cpi}^j - \bar{P})$$

where  $\bar{P}$  is the (weighted) mean value of the CPI indexes in the comparison period.<sup>14</sup>

Table 6 contains the largest weight factors. (Appendix Table 5 lists the weight factors for every line of the CPI.) Table 6 contains every line in the CPI for which the weight factor contributes at least 0.05 index points to the difference in the CPI and the fixed weight scope adjusted PCE over the period 1992-II 1996.

*The Price Factors.* Consider now the role of differences in measures of prices.<sup>15</sup> In many cases, the BEA and BLS use different measures of prices for more or less comparable line items. Thus, even if the weights for the two indexes were the same, differences in measures of price change could lead to differences in the resulting indexes.

Table 7 lists the BEA categories with the largest differences in index points between the indexes used by the BEA to measure price movements and the comparable CPI indexes. For Airlines, Computers, and Private Higher Education, the BLS and BEA use different measures of price change and their indexes differ by 20 points over a period of a little less than four years. Table 7 contains every line in the PCE deflator where the difference in underlying indexes is greater than one index point over the period. (Appendix Table 5 contains a complete listing of the differences in index values for every line in the PCE deflator.)

The calculated price factor is a measure of how much these differences in prices contribute to the differences between the two indexes, given a common weight structure. Differences in measures of price movement account for 1.97 index points of the difference between the CPI and the

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<sup>14</sup> Since  $\sum w_{cpi}^j = \sum w_{pce}^j = 1$ ,  $\sum (w_{cpi}^j - w_{pce}^j) (P_{cpi}^j - \bar{P})$   
 $= \sum (w_{cpi}^j - w_{pce}^j) P_{cpi}^j - \sum (w_{cpi}^j - w_{pce}^j) \bar{P}$   
 $= \sum (w_{cpi}^j - w_{pce}^j) P_{cpi}^j - (\sum w_{cpi}^j - \sum w_{pce}^j) \bar{P}$   
 $= \sum (w_{cpi}^j - w_{pce}^j) P_{cpi}^j$

so that the sum of the weight factors does not change.

<sup>15</sup> Jack Triplett and Stephen Merchant in "The CPI and the PCE Deflator: An Econometric Analysis of Two Price Measures," *Annals of Economic and Social Measurement*, Vol.2/3, 1973, 263-282, also look at the differences in behavior between 21 PCE component prices that come from the CPI and the source CPI component. For 15 of the 21 components, they "reject, wholly or partly, the 'general hypothesis' that PCE components present the same economic picture drawn by their counterpart measures in the CPI."

PCE. Relative to an average calculated using PCE weights, the price indexes used to calculate the CPI tend to grow faster than the price indexes used to calculate the scope adjusted fixed weight PCE index. Table 8 gives the largest price factors between 1992 and II 97. Every line with a price factor rounding to 0.01 or greater is included in Table 8.

Observe that although computers are listed in Table 7, the magnitude of its price factor is not that great; the computer price factor suggests that it is responsible for only 0.11 of the index point difference. Thus even though the differences in computer prices is the largest one in Table 7, the weight is so small that the net effect is small.

### **Summary and Conclusions**

We have sought to examine the difference between the CPI and the PCE with particular attention to the reported increase in the difference between the two price indexes. Generally the difference between them can be traced to differences in formula, differences in scope and differences in the component prices and weights. We have examined the impact of each of these sources of differences.

Our findings are summarized in Table 9. For the period 1992 to II 97, the difference between the CPI, 114.12, and the published (Fisher) PCE, 112.47, is 1.65 index points. We decompose this difference into formula, scope, price, and weight effects as follows:

If the PCE deflator was recalculated as a fixed weight, fixed base-period Laspeyres Index, the value of the index would be 113.33. Thus, about 0.86 of the difference between the two indexes over this period is attributable to the differences in formula used in each.

The scope-adjusted fixed weight PCE takes a value of 112.32 in II 1997. The figure -1.01 is an estimate of the difference in the two indexes attributable to differences in the scope of the indexes. If we dropped from a fixed weight analog of the PCE the items that are included in the PCE but have absolutely no counterpart in the CPI, the difference between the two indexes would be 1.01 points *larger*.

The difference between the CPI and the scope-adjusted fixed weight analog to the PCE Deflator is 1.80 index points. This difference can be decomposed into a weight effect and a price effect. If the two indexes had the same weights on the comparable categories, the difference between the two indexes would be a total of 0.16 points larger. If the two indexes had the same prices for



comparable categories, the difference would be 1.97 points smaller. The remaining residual, -0.01 index points, is an unexplained residual, likely attributable to rounding error.

We conclude that the discrepancy between the two indexes is due to the difference in formula and the difference in measures of price change. Empirically, over the period 1992 to II 1997, the scope effect and the weight effect worked to counter the formula effect and the price effect and attenuate the difference between the two indexes.

In our examination of weight and price effects we found that items related to medical care, such as hospitals, physicians, and health insurance, play a significant role within both the weight effect and the price effect for the time periods examined. We also showed that even in some instances where there happened to be relatively large price (weight) differences between items, as with computers, the effect on the difference between the CPI and the PCE tended to be small.

Figure 1.  
PCE Deflator v. CPI "All Items" Annualized Rates of Inflation over Time.

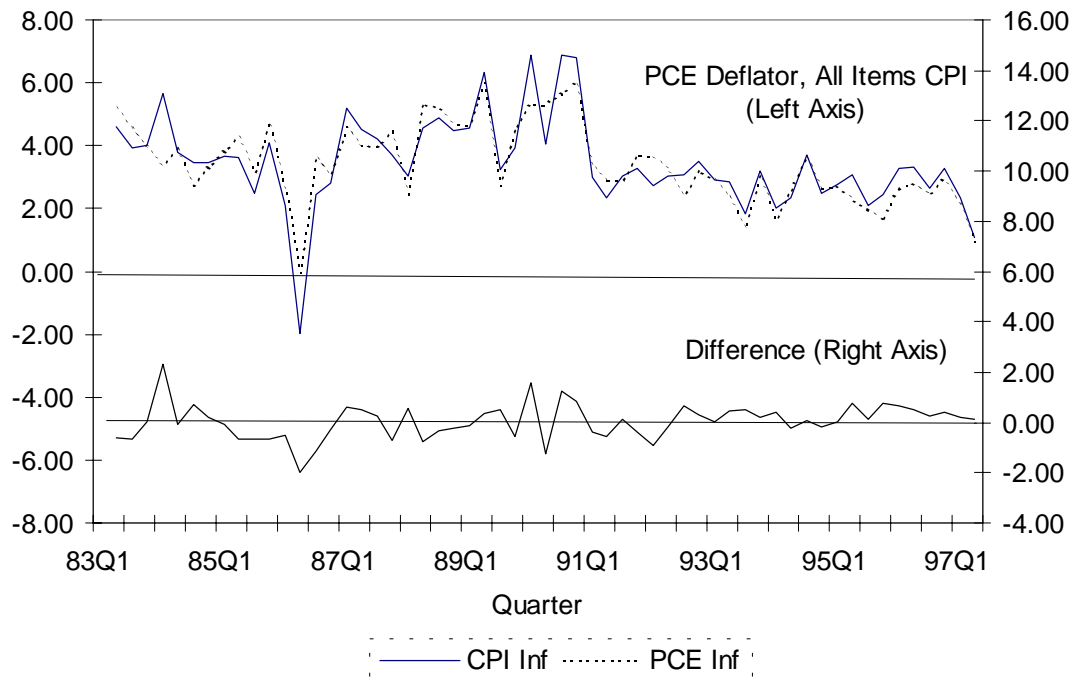


Table 1  
Summary of Adjustments to PCE Deflator (Line 1 of Table 206I)

		BEA	Fixed Weight	Scope Correction	CPI	
	(1)	(2)	(3)	(4)	(5)	
Inflation Rates	I 92	3.67	3.67	3.22	2.73	
	II 92	3.24	3.16	2.83	3.03	
	III 92	2.41	2.46	2.1	3.05	
	IV 92	3.19	3.23	3.48	3.51	
	I 93	2.89	2.93	3.13	2.92	
	II 93	2.4	2.47	2.37	2.90	
	III 93	1.37	1.42	1.6	1.83	
	IV 93	3.04	3.08	2.82	3.22	
	I 94	1.62	1.69	1.89	2.04	
	II 94	2.58	2.71	2.19	2.33	
	III 94	3.63	3.63	3.19	3.73	
	IV 94	2.65	2.84	1.93	2.49	
	I 95	2.75	2.92	2.7	2.77	
	II 95	2.32	2.59	2.19	3.09	
	III 95	1.97	2.05	1.98	2.10	
	IV 95	1.66	1.83	1.94	2.46	
	I 96	2.61	2.83	2.93	3.25	
	II 96	2.82	3.2	2.95	3.36	
	III 96	2.43	2.8	1.85	2.66	
	IV 96	2.92	3.24	3.07	3.31	
	I 97	2.15	2.39	2.49	2.33	
	II 97	0.96	1.13	1.05	1.09	
			Overall Difference	Fixed Weight	Scope Adjustment	Residual
		(1)	(2)	(3)	(4)	(5)
	Difference Analysis	I 92	-0.94	0.00	-0.45	-0.49
		II 92	-0.21	-0.08	-0.33	0.20
		III 92	0.64	0.05	-0.36	0.95
		IV 92	0.32	0.04	0.25	0.03
I 93		0.03	0.04	0.20	-0.21	
II 93		0.50	0.07	-0.10	0.53	
III 93		0.46	0.05	0.18	0.23	
IV 93		0.18	0.04	-0.26	0.40	
I 94		0.42	0.07	0.20	0.15	
II 94		-0.25	0.13	-0.52	0.14	
III 94		0.10	0.00	-0.44	0.54	
IV 94		-0.16	0.19	-0.91	0.56	
I 95		0.02	0.17	-0.22	0.07	
II 95		0.77	0.27	-0.40	0.90	
III 95		0.13	0.08	-0.07	0.12	
IV 95		0.80	0.17	0.11	0.52	
I 96		0.64	0.22	0.10	0.32	
II 96		0.54	0.38	-0.25	0.41	
III 96		0.23	0.37	-0.95	0.81	
IV 96		0.39	0.32	-0.17	0.24	
I 97		0.18	0.24	0.10	-0.16	
II 97		0.13	0.17	-0.08	0.04	
		Average	0.22	0.14	-0.20	0.29
		St. Dev.	0.40	0.13	0.34	0.36

Table 2.  
Summary of Adjustments to PCE Deflator Durable Goods (Line 36 of Table 206I)

		BEA	Fixed Weight	Scope Correction	CPI	
	(1)	(2)	(3)	(4)	(5)	
Inflation Rates	I 92	2.02	1.81	1.87	2.48	
	II 92	1.61	1.9	1.66	3.07	
	III 92	0.4	0.17	-0.04	2.04	
	IV 92	0.4	0.63	0.26	2.59	
	I 93	1.08	1.04	0.93	0.52	
	II 93	1.91	2.2	1.78	3.01	
	III 93	1.66	1.8	1.31	3.10	
	IV 93	2.56	2.83	2.54	3.74	
	I 94	1.02	1.11	1.15	1.08	
	II 94	2.78	3.05	2.86	3.54	
	III 94	3.3	3.6	3.17	4.09	
	IV 94	0.39	0.84	0.28	2.65	
	I 95	1.42	1.97	1.8	2.85	
	II 95	0.12	0.69	0.56	2.35	
	III 95	-0.23	0.4	0.61	0.63	
	IV 95	-0.42	0.29	0.15	1.41	
	I 96	0.65	1.61	1.23	1.59	
	II 96	-1.76	-0.4	-0.5	0.29	
	III 96	-0.73	0.38	0.12	0.73	
	IV 96	-1.08	0.03	-0.37	0.51	
	I 97	-0.66	0.33	0.14	-0.18	
	II 97	-2.98	-1.74	-1.57	-1.13	
			Overall Difference	Fixed Weight	Scope Adjustment	Residual
		(1)	(2)	(3)	(4)	(5)
	Difference Analysis	I 92	0.46	-0.21	0.06	0.61
		II 92	1.46	0.29	-0.24	1.41
		III 92	1.64	-0.23	-0.21	2.08
		IV 92	2.19	0.23	-0.37	2.33
I 93		-0.56	-0.04	-0.11	-0.41	
II 93		1.10	0.29	-0.42	1.23	
III 93		1.44	0.14	-0.49	1.79	
IV 93		1.18	0.27	-0.29	1.20	
I 94		0.06	0.09	0.04	-0.07	
II 94		0.76	0.27	-0.19	0.68	
III 94		0.79	0.30	-0.43	0.92	
IV 94		2.26	0.45	-0.56	2.37	
I 95		1.43	0.55	-0.17	1.05	
II 95		2.23	0.57	-0.13	1.79	
III 95		0.86	0.63	0.21	0.02	
IV 95		1.83	0.71	-0.14	1.26	
I 96		0.94	0.96	-0.38	0.36	
II 96		2.05	1.36	-0.10	0.79	
III 96		1.46	1.11	-0.26	0.61	
IV 96		1.59	1.11	-0.40	0.88	
I 97		0.48	0.99	-0.19	-0.32	
II 97		1.85	1.24	0.17	0.44	
		Average	1.25	0.50	-0.21	0.96
		St. Dev.	0.73	0.46	0.21	0.80

Table 3.  
Summary of Adjustments to PCE Deflator Nondurable Goods (Line 89 of Table 206I)

		BEA	Fixed Weight	Scope Correction	CPI	
	(1)	(2)	(3)	(4)	(5)	
Inflation Rates	I 92	1.62	1.67	1.67	1.74	
	II 92	2.42	2.39	2.42	2.75	
	III 92	2.81	2.64	2.56	2.93	
	IV 92	1.2	1.32	1.36	1.27	
	I 93	2.26	2.2	2.26	3.29	
	II 93	0.39	0.5	0.46	0.91	
	III 93	-0.43	-0.52	-0.54	-1.49	
	IV 93	2.65	2.51	2.57	2.29	
	I 94	-0.16	-0.04	-0.02	0.59	
	II 94	1.22	1.27	1.25	0.98	
	III 94	4.38	4.34	4.32	4.72	
	IV 94	1.28	1.37	1.35	1.16	
	I 95	0.77	0.84	0.81	1.42	
	II 95	1.77	1.9	1.83	1.84	
	III 95	1.5	1.44	1.47	1.53	
	IV 95	1.34	1.38	1.37	1.33	
	I 96	3.69	3.79	3.84	4.47	
	II 96	3.81	4.01	4.04	4.35	
	III 96	0.93	1.14	1.11	1.48	
	IV 96	3.62	3.85	3.86	4.62	
	I 97	2.36	2.28	2.34	2.04	
	II 97	0	-0.14	-0.16	-1.74	
			Overall Difference	Fixed Weight	Scope Adjustment	Residual
		(1)	(2)	(3)	(4)	(5)
	Difference Analysis	I 92	0.12	0.05	0.00	0.07
		II 92	0.33	-0.03	0.03	0.33
		III 92	0.12	-0.17	-0.08	0.37
		IV 92	0.07	0.12	0.04	-0.09
I 93		1.03	-0.06	0.06	1.03	
II 93		0.52	0.11	-0.04	0.45	
III 93		-1.06	-0.09	-0.02	-0.95	
IV 93		-0.36	-0.14	0.06	-0.28	
I 94		0.75	0.12	0.02	0.61	
II 94		-0.24	0.05	-0.02	-0.27	
III 94		0.34	-0.04	-0.02	0.40	
IV 94		-0.12	0.09	-0.02	-0.19	
I 95		0.65	0.07	-0.03	0.61	
II 95		0.07	0.13	-0.07	0.01	
III 95		0.03	-0.06	0.03	0.06	
IV 95		-0.01	0.04	-0.01	-0.04	
I 96		0.78	0.10	0.05	0.63	
II 96		0.54	0.20	0.03	0.31	
III 96		0.55	0.21	-0.03	0.37	
IV 96		1.00	0.23	0.01	0.76	
I 97		-0.32	-0.08	0.06	-0.30	
II 97		-1.74	-0.14	-0.02	-1.58	
		Average	0.14	0.03	0.00	0.10
		St. Dev.	0.65	0.12	0.04	0.58

Table 4.  
Summary of Adjustments to PCE Deflator Services (Line 182 of Table 206I)

		BEA	Fixed Weight	Scope Correction	CPI	
	(1)	(2)	(3)	(4)	(5)	
Inflation Rates	I 92	4.93	5.09	4.54	3.89	
	II 92	4.06	3.8	3.38	3.57	
	III 92	2.81	2.81	2.29	3.09	
	IV 92	4.79	4.72	5.6	4.34	
	I 93	3.63	3.67	4.19	3.79	
	II 93	3.55	3.54	3.72	4.06	
	III 93	2.32	2.34	3.01	3.44	
	IV 93	3.31	3.42	3.03	3.53	
	I 94	2.71	2.67	3.25	3.34	
	II 94	3.22	3.37	2.63	2.90	
	III 94	3.35	3.29	2.5	3.03	
	IV 94	3.84	3.94	2.66	3.01	
	I 95	4.06	4.12	4.06	3.80	
	II 95	3.11	3.28	2.78	3.76	
	III 95	2.61	2.66	2.6	2.86	
	IV 95	2.27	2.33	2.68	3.23	
	I 96	2.47	2.58	2.75	3.06	
	II 96	3.31	3.46	3.03	3.32	
	III 96	3.85	4.04	2.68	3.44	
	IV 96	3.4	3.5	3.33	3.13	
	I 97	2.64	2.81	3.08	2.97	
	II 97	2.24	2.25	2.34	2.84	
			Overall Difference	Fixed Weight	Scope Adjustment	Residual
		(1)	(2)	(3)	(4)	(5)
	Difference Analysis	I 92	-1.04	0.16	-0.55	-0.65
		II 92	-0.49	-0.26	-0.42	0.19
		III 92	0.28	0.00	-0.52	0.80
		IV 92	-0.45	-0.07	0.88	-1.26
I 93		0.16	0.04	0.52	-0.40	
II 93		0.51	-0.01	0.18	0.34	
III 93		1.12	0.02	0.67	0.43	
IV 93		0.22	0.11	-0.39	0.50	
I 94		0.63	-0.04	0.58	0.09	
II 94		-0.32	0.15	-0.74	0.27	
III 94		-0.32	-0.06	-0.79	0.53	
IV 94		-0.83	0.10	-1.28	0.35	
I 95		-0.26	0.06	-0.06	-0.26	
II 95		0.65	0.17	-0.50	0.98	
III 95		0.25	0.05	-0.06	0.26	
IV 95		0.96	0.06	0.35	0.55	
I 96		0.59	0.11	0.17	0.31	
II 96		0.01	0.15	-0.43	0.29	
III 96		-0.41	0.19	-1.36	0.76	
IV 96		-0.27	0.10	-0.17	-0.20	
I 97		0.33	0.17	0.27	-0.11	
II 97		0.60	0.01	0.09	0.50	
		Average	0.09	0.06	-0.16	0.19
		St. Dev.	0.57	0.11	0.60	0.51

Table 5.  
Large Differences in Weights  
(in Percentage Points)

CPI ID	Title	100*dw
SE2201	OWNERS' EQUIVALENT RENT	7.22
SE4501	NEW CARS	1.86
SE50	AUTOMOBILE INSURANCE	1.83
SE2101	RENT OF DWELLING	1.66
SE2102	LODGING WHILE OUT OF TOWN	1.52
SE5604	SERVICES BY OTHER MED. PROFESSIONALS	-1.89
SE5601	PHYSICIANS' SERVICES	-2.63
SE57	HOSPITAL AND RELATED SERVICES	-6.39

Table 6.  
Largest Weight Effects  
(in Index Points)

CPI ID	Title	PdW
SE57	HOSPITAL AND RELATED SERVICES	-1.002
SE5601	PHYSICIANS' SERVICES	-0.228
SE6802	PERSONAL FINANCIAL SERVICES	-0.112
SE58	HEALTH INSURANCE	-0.080
SE4501	NEW CARS	-0.067
SE3103	SOUND EQUIPMENT	0.051
SE43	WATCHES AND JEWELRY	0.052
SE28	TEXTILE HOUSEFURNISHINGS	0.053
SE5301	AIRLINE FARE	0.054
SE6002	OTHER SPORTING GOODS	0.056
SE46	USED CARS	0.067
SE3101	TELEVISION	0.068
SE3102	OTHER VIDEO EQUIPMENT	0.082
SE69	INFORMATION PROCESSING EQUIPMENT	0.097
SE2102	LODGING WHILE OUT OF TOWN	0.110
SE50	AUTOMOBILE INSURANCE	0.148
SE2201	OWNERS' EQUIVALENT RENT	0.172

Table 7.  
Largest Differences in Component Price Indexes (in Index points)

BEA Line Number	BEA Line Title	dP
231	Intercity railways	-12.49
190	Tenant landlord durables	-10.65
155	Semi-durable house furnishings	-8.61
166	Stationery & school supplies	-6.46
167	Greeting cards	-6.46
282	Clubs & fraternal organizations	-5.32
88	Pleasure aircraft	-3.92
211	Domestic service, cash	-3.87
229	Taxicab	-2.96
214	Moving & storage	-2.00
222	Household operation NEC	-1.99
228	Net auto insurance premiums	-1.14
185	Owner occupied mobile home	0.96
186	Owner occupied station homes	0.97
196	Elem. & second education housing	1.24
93	Beef & veal	1.59
95	Other meat	1.73
110	Fish & seafood	1.79
98	Poultry	1.83
94	Pork	1.89
101	Fresh vegetables	1.94
174	Lighting supplies	1.98
100	Fresh fruit	2.05
99	Eggs	2.06
147	LP gas & other fuel	2.85
70	Textile products	5.32
236	Physicians	5.41
232	Intercity buses	6.17
244	Nursing homes	8.54
309	Commercial & vocational schools	10.06
307	Nursery schools	11.27
241	For-profit hospitals	12.00
243	Government hospitals	12.06
242	Nonprofit hospitals	15.21
299	Video cassette rental	16.50
306	Elementary & secondary schools	17.19
303	Private higher education	20.37
233	Airline	23.09
65	PCE computers	34.44



Table 8.  
Largest Price Effects (In Index Points)

BEA Line Number	BEA Line Title	WdP
155	Semi-durable house furnishings	-0.0526
189	Tenant occupied station homes	-0.0201
282	Clubs & fraternal organizations	-0.0144
190	Tenant landlord durables	-0.0118
166	Stationery & school supplies	-0.0115
167	Greeting cards	-0.0115
211	Domestic service, cash	-0.0100
94	Pork	0.0098
93	Beef & veal	0.0119
307	Nursery schools	0.0125
299	Video cassette rental	0.0262
309	Commercial & vocational schools	0.0363
306	Elementary & secondary schools	0.0681
241	For-profit hospitals	0.0951
65	PCE computers	0.1074
186	Owner occupied station homes	0.1126
244	Nursing homes	0.1148
233	Airline	0.1412
303	Private higher education	0.1521
243	Government hospitals	0.1749
236	Physicians	0.2380
242	Nonprofit hospitals	0.7343

Table 9.  
Cumulative Difference, 1992-II 97.

1	CPI, 1992 Annual Average:	140.32
2	CPI, II 97 (Ave. of SA)	160.13
3	Implied II 97 CPI, 1992=100	114.12
4	PCE Deflator, II 97	112.47
5	Total Difference in Index Points (3) - (4)	1.65
6	Fixed Weight Index Using 1992 PCE Weights	113.33
7	Formula Effect (6)-(4)	0.86
8	Scope Adjusted Fixed Weight Index	112.32
9	Scope Effect (8)-(6)	-1.01
10	CPI-Scope Adjusted FW Index (3) - (8)	1.80
11	Weight Effect	-0.16
12	Price Effect	1.97
13	Unexplained Residual	-0.01

Table A.1 CPI-PCE Concordance

PCE Line	TITLE	Source for Prices	Map To CPI Line:
39	New domestic autos	SE4501	SE4501
40	New foreign autos	SE4501	SE4501
42	Net transactions in used autos	SE46	SE46
46	Pce trucks	SE4502	SE4502
47	Recreational vehicles	SE6001	SE6001
49	Tires & tubes	SE4801	SE4801
50	Accessories & parts	SE4802	SE4802
52	Furniture	SE29	SE29
54	Major household appliances	SE30	SE30
55	Small electric appliances	SE3205	SE3205
56	China & glaswr, tablwr & ut	SE3203	SE3203
59	Televisions	SE3101	SE3101
60	Other video eqpt	SE3102	SE3102
62	Audio eqpt	SE3103	SE3103
63	Records, tapes, & disks	SE3103	SE3103
64	Musical instruments	SE6101	SE6101
65	Pce computers	BEA	SE69
67	Floor coverings	SE3201	SE3201
69	Clocks, lamps, & artwork	SE3202	SE3202
70	Textile products	SS2801a	SE28
71	Writing eqpt	SE66	SE66
73	Hardware, tools	SE3204	SE3204
74	Lawn & garden tools	SE3204	SE3204
76	Jewelry & watches	SE43	SE43
77	Ophthalmic & orthopedic eqpt	SE5603	SE5603
78	Books & maps	SE5902	SE5902
81	Guns	SE6002	SE6002
82	Sporting eqpt	SE6002	SE6002
83	Bicycles	SE6001	SE6001
84	Motorcycles	SE4503	SE4503
85	Cameras	SE6102	SE6102
87	Boats	SE6001	SE6001
88	Pleasure aircraft	SE6002	SE6002
93	Beef & veal	SE03	SE03
94	Pork	SE04	SE04
95	Other meat	SE05	SE05
96	Fresh milk & cream	SE09	SE09
97	Processed dairy products	SE10	SE10
98	Poultry	SE06	SE06
99	Eggs	SE08	SE08
100	Fresh fruit	SE11	SE11
101	Fresh vegetables	SE12	SE12
102	Processed fruit	SE13	SE13
103	Processed vegetables	SE14	SE14
104	Cereals	SE01	SE01
105	Bakery products	SE02	SE02
106	Fats & oils	SE16	SE16
107	Sugar & sweets	SE15	SE15
108	Nonalcoholic beverages	SE17	SE17

Table A.1 CPI-PCE Concordance

109	Other prepared food	SE18	SE18
110	Fish & seafood	SE07	SE07
111	Pet food	SE6103	SE6103
113	Distilled spirits	SE2002	SE2002
114	Wine & brandy	SE2003	SE2003
115	Beer & ale	SE2001	SE2001
118	Elem & second school lunch	SE19	SE19
119	Higher ed school lunch	SE19	SE19
120	Other purchased meals	SE19	SE19
121	Alcohol in purchased meals	SE2005	SE2005
128	Footwear	SE40	SE40
131	Women's & girls' clothing	SA3112	SA3112
132	Infants' clothing	SE41	SE41
133	Women's sewing goods	SE4201	SE42
134	Womens luggage	SE42013	SE42
137	Men's & boys' clothing	SA3111	SA3111
138	Men's sewing goods	SE4201	SE42
139	Mens luggage	SA42013	SE42
142	Gasoline & other motor fuel	SE4701	SE4701
143	Lubricants	SE4702	SE4702
146	Fuel oil	SE2501	SE2501
147	Lp gas & other fuel	SE2502	SE2502
150	Tobacco	SE63	SE63
155	Semi-durable house furnishi	SS2801b	SE28
157	Prescription drugs	SE54	SE54
158	Nonprescription drugs	SE5502	SE5502
159	Medical supplies	SE5503	SE5503
160	Gynecological products	SE6401	SE6401
162	Soap	SE3301	SE3301
163	Cosmetics	SE6403	SE6403
164	Other personal hygiene products	SE6401	SE6401
166	Stationery & school supplies	SE33032	SE3303
167	Greeting cards	SE33032	SE3303
169	Ammunition	SE6002	SE6002
170	Film	SE6102	SE6102
171	Toys, dolls, & games	SE6101	SE6101
172	Flowers seeds & potted plants	SE3206	SE3206
174	Lighting supplies	SE33051	SE3305
175	Cleaning preparations	SE3301	SE3301
176	Paper products	SE3303	SE3303
178	Newspapers	SE5901	SE5901
179	Magazines	SE5902	SE5902
185	Owner occupied mobile home	SE2201	SE2201
186	Owner occupied station homes	SE2201	SE2201
188	Tenant occupied mobile homes	SE2101	SE2101
189	Tenant occupied station homes	SE2101	SE2101
190	Tenant landlord durables	SE30	SE30
193	Hotels & motels	SE2102	SE2102
194	Clubs & fraternity housing	SE2101	SE2101
195	Higher education housing	SE2103	SE2103
196	Elem & second educat housing	SE2103	SE2103

Table A.1 CPI-PCE Concordance

201	Electricity	SE2601	SE2601
202	Natural gas	SE2602	SE2602
204	Water & sewerage maintenance	SE2702	SE2702
205	Refuse collection	SE2704	SE2704
207	Local telephone	SE2701	SE2701
208	Intrastate toll calls	SE2706	SE2706
209	Interstate toll calls	SE2705	SE2705
211	Domestic service, cash	BEA	SE3403
212	Domestic service, in kind	SA111	SA111
214	Moving & storage	Unpublished CPI	SE3404
216	HH insurance premiums	SE35	SE35
217	Less: HH insur benefits paid	SA231	SA231
218	Rug & furniture cleaning	SE4402	SE4402
219	Electrical repair	SE3406	SE3406
220	Reupholstery & furniture repair	SE3406	SE3406
221	Postage	SE3401	SE3401
222	Household operation nec	Unpublished CPI	SE3404
225	Auto repair	SE49	SE49
226	Auto rental, leasing & other	SE5205	SE5205
227	Bridge & road tolls	SE5205	SE5205
228	Net auto insurance premiums	BEA	SE50
229	Taxicab	SS53032	SE5303
230	Mass transit systems	SS53031	SE5303
231	Intercity railways	SS53022	SE5302
232	Intercity buses	SS53021	SE5302
233	Airline	BEA	SE5301
234	Other transportation services	SE53	SE53
236	Physicians	PPI "... Doctors ..."	SE5601
237	Dentists	SE5602	SE5602
238	Other professional medical	SE5604	SE5604
241	For-profit hospitals	PPI "Hospitals"	SE57
242	Nonprofit hospitals	BEA	SE57
243	Government hospitals	PPI "Hospitals"	SE57
244	Nursing homes	BEA	SE57
246	Medical & hospital insurance	BEA	SE58
250	Shoe repair	SE4401	SE4401
252	Drycleaning	SE4402	SE4402
253	Laundry & garment repair	SE4402	SE4402
255	Watch, clock, & jewelry repair	SE4401	SE4401
256	Miscellaneous personal services	SE4402	SE4402
258	Beauty shops, incl combination	SE6501	SE6501
259	Barber shops	SE6502	SE6502
262	Bank service charges	SE6802	SE6802
267	Legal services	SE6801	SE6801
268	Funeral & burial expenses	SE6803	SE6803
272	Employ agency fees	SE6802	SE6802
273	Money orders	SE6802	SE6802
274	Classified ads	SE6802	SE6802
275	Tax return prep services	SE6802	SE6802
276	Other personal business	SE6801	SE6801
278	Repair of audio & video eqpt	SE3406	SE3406

Table A.1 CPI-PCE Concordance

279	Motion picture admissions	SE6203	SE6203
280	Live entertain excl. sports	SE6203	SE6203
281	Spectator sports	SE6203	SE6203
282	Clubs & fraternal organizations	BEA	SE6201
284	Sightseeing	SE6205	SE6205
285	Private flying	SE6205	SE6205
286	Bowling & billiards	SE6202	SE6202
288	Other comml participant amuse	SE6205	SE6205
291	Pets & pets services excl. vets	SE6103	SE6103
292	Veterinarians	SE6103	SE6103
293	Cable tv	SE2703	SE2703
294	Film developing	SE6205	SE6205
295	Photo studios	SE6205	SE6205
296	Sporting & recreational camps	SE6205	SE6205
297	High school recreation	SE6205	SE6205
299	Video cassette rental	BEA	SE6205
300	Commercial amusements nec	SE6205	SE6205
303	Private higher education	BEA	SE6701
304	Public higher education	SE6701	SE6701
306	Elementary & secondary schools	BEA	SE6702
307	Nursery schools	BEA	SE6703
309	Commercial & vocational schools	BEA	SE6704

Table A.2 PCE Aggregation Tree

PCE Line	
1	All Items PCE
36	PCE durable goods
37	Motor vehicles & parts
38	New autos
39	New domestic autos
40	New foreign autos
41	Net purchases of used autos
42	Net transactions in used autos
43	Used auto margin
44	Employee reimbursement
45	Other motor vehicles
46	Pce trucks
47	Recreational vehicles
48	Tires tubes acc & parts
49	Tires & tubes
50	Accessories & parts
51	Furniture & household eqpt
52	Furniture
53	Kitchen & hh appliances
54	Major household appliances
55	Small electric appliances
56	China & glaswr, tablwr & ut
57	Video & audio, computers&m
58	Tvs, vcrrs, videotapes
59	Televisions
60	Other video eqpt
61	Audio eqpt, media, instrum
62	Audio eqpt
63	Records, tapes, & disks
64	Musical instruments
65	Pce computers
66	Other dur housefurnish
67	Floor coverings
68	Durable housefurnishing
69	Clocks, lamps, & artwork
70	Textile products
71	Writing eqpt
72	Hand tools
73	Hardware, tools
74	Lawn & garden tools
75	Other durables
76	Jewelry & watches
77	Ophthalmic & orthopedic eqpt
78	Books & maps
79	Wheel goods, sports, photo
80	Wheel goods
81	Guns
82	Sporting eqpt
83	Bicycles
84	Motorcycles

Table A.2 PCE Aggregation Tree

85	Cameras
86	Pce boats & aircraft
87	Boats
88	Pleasure aircraft
89	PCE nondurable goods
90	Food
91	Food pur for off-prem consum
92	Food in off prem food
93	Beef & veal
94	Pork
95	Other meat
96	Fresh milk & cream
97	Processed dairy products
98	Poultry
99	Eggs
100	Fresh fruit
101	Fresh vegetables
102	Processed fruit
103	Processed vegetables
104	Cereals
105	Bakery products
106	Fats & oils
107	Sugar & sweets
108	Nonalcoholic beverages
109	Other prepared food
110	Fish & seafood
111	Pet food
112	Alcohol in off premise
113	Distilled spirits
114	Wine & brandy
115	Beer & ale
116	Purchased meals & beverages
117	Food in purchased meals
118	Elem & second school lunch
119	Higher ed school lunch
120	Other purchased meals
121	Alcohol in purchased meals
122	Food furnished employees
123	Food supplied civilians
124	Food supplied military
125	Food on farms
126	Addenda: PCE food less alcohol
127	Total clothing & shoes
128	Footwear
129	Women's & girls' cloth & lugg
130	Women's & girls' clothing x lug
131	Women's & girls' clothing
132	Infants' clothing
133	Women's sewing goods
134	Womens luggage
135	Men's & boys' cloth & luggage

Table A.2 PCE Aggregation Tree

136	Men's & boys' clothing x luggage
137	Men's & boys' clothing
138	Men's sewing goods
139	Mens luggage
140	Military clothing
141	Gasoline & oil
142	Gasoline & other motor fuel
143	Lubricants
144	Fuel oil & coal
145	Purchased fuel
146	Fuel oil
147	Lp gas & other fuel
148	Farm fuel
149	Other nondurables
150	Tobacco
151	Expenditures abroad
152	Govt expenditures abroad
153	Nongovernment expenditures
154	Less: remittances in kind
155	Semi-durable house furnishi
156	Drug preps & sundries
157	Prescription drugs
158	Nonprescription drugs
159	Medical supplies
160	Gynecological products
161	Toilet articles & preps
162	Soap
163	Cosmetics
164	Other personal hygiene products
165	Stationery & writing supplies
166	Stationery & school supplies
167	Greeting cards
168	Nondurable toys & sport eqp
169	Ammunition
170	Film
171	Toys, dolls, & games
172	Flowers seeds & potted plants
173	Cleaning lighting paper
174	Lighting supplies
175	Cleaning preparations
176	Paper products
177	Magazines & newspapers
178	Newspapers
179	Magazines
180	Addenda: total goods
181	Addenda: pce control & gas
182	PCE services
183	Housing services
184	Owner occupied nonfrm space
185	Owner occupied mobile home
186	Owner occupied station homes



Table A.2 PCE Aggregation Tree

187	Tenant occupied nonfrm spac
188	Tenant occupied mobile homes
189	Tenant occupied station homes
190	Tenant landlord durables
191	Rental value farm housing
192	Other housing
193	Hotels & motels
194	Clubs & fraternity housing
195	Higher education housing
196	Elem & second educat housing
197	Tenant group room & board
198	Tenant group employee lodging
199	Household operation services
200	Electricity & gas
201	Electricity
202	Natural gas
203	Water & sanitary services
204	Water & sewerage maintenance
205	Refuse collection
206	Telephone & telegraph
207	Local telephone
208	Intrastate toll calls
209	Interstate toll calls
210	Domestic services
211	Domestic service, cash
212	Domestic service, in kind
213	Other household operation
214	Moving & storage
215	Household insurance
216	HH insurance premiums
217	Less: HH insur benefits paid
218	Rug & furniture cleaning
219	Electrical repair
220	Reupholstery & furniture repair
221	Postage
222	Household operation nec
223	Transportation services
224	Auto repair, rental & other
225	Auto repair
226	Auto rental, leasing & other
227	Bridge & road tolls
228	Net auto insurance premiums
229	Taxicab
230	Mass transit systems
231	Intercity railways
232	Intercity buses
233	Airline
234	Other transportation services
235	Medical care services
236	Physicians
237	Dentists

Table A.2 PCE Aggregation Tree

238	Other professional medical
239	Hospitals & nursing homes
240	Hospitals
241	For-profit hospitals
242	Nonprofit hospitals
243	Government hospitals
244	Nursing homes
245	Health insurance
246	Medical & hospital insurance
247	Income loss insurance
248	Workers' compensation
249	Personal care services
250	Shoe repair
251	Cleaning, laundering, & c
252	Drycleaning
253	Laundry & garment repair
254	Other clothing repair
255	Watch, clock, & jewelry repair
256	Miscellaneous personal services
257	Barbershops, beauty, & health
258	Beauty shops, incl combination
259	Barber shops
260	Personal business services
261	Brokerage & invest counsel
262	Bank service charges
263	Imputed service charges
264	Commercial banks
265	Other financial institutions
266	Expense of handling life ins
267	Legal services
268	Funeral & burial expenses
269	Other personal business
270	Labor union expenses
271	Profession. assoc. expenses
272	Employ agency fees
273	Money orders
274	Classified ads
275	Tax return prep services
276	Other personal business
277	Recreational services
278	Repair of audio & video eqpt
279	Motion picture admissions
280	Live entertain excl. sports
281	Spectator sports
282	Clubs & fraternal organizations
283	Commercial participant amuse
284	Sightseeing
285	Private flying
286	Bowling & billiards
287	Casino gambling
288	Other comml participant amuse

Table A.2 PCE Aggregation Tree

289	Pari-mutuel net receipts
290	Other recreation
291	Pets & pets services excl. vets
292	Veterinarians
293	Cable tv
294	Film developing
295	Photo studios
296	Sporting & recreational camps
297	High school recreation
298	Lotteries
299	Video cassette rental
300	Commercial amusements nec
301	Education & research
302	Higher education
303	Private higher education
304	Public higher education
305	Private lower education
306	Elementary & secondary schools
307	Nursery schools
308	Other education & research
309	Commercial & vocational schools
310	Foundations & nonprofit research
311	Religious & welfare
312	Political organizations
313	Museums & libraries
314	Foundations to religion & welfare
315	Social welfare
316	Religion
317	Net foreign travel
318	Foreign travel by U.S. residents
319	Air fares foreign travel
320	U.S. travel outside the U.S.
321	U.S. student expenditures
322	Less: exp in U.S. by foreig
323	Foreign travel in U.S.
324	Medical exp of foreigners
325	Exp of foreign students in U.S.

Table A.3 CPI Aggregation Tree

Line	Titles:
1	SA0 ALL ITEMS
2	SA1 FOOD AND BEVERAGES
3	SA11 FOOD
4	SA111 FOOD AT HOME
5	SA1111 CEREALS AND BAKERY PRODUCTS
6	SE01 CEREALS AND CEREAL PRODUCTS
7	SE0101 FLOUR,PREP FLOUR MIXES
8	SE0102 CEREAL
9	SE0103 RICE,PASTA,CORNMEAL
10	SE02 BAKERY PRODUCTS
11	SE0201 WHITE BREAD
12	SE0202 FRESH OTH BREADS/BISC/ROLLS/MUFFINS
13	SE0204 COOKIES, FRESH CAKES & CUPCAKES
14	SE0206 OTHER BAKERY PRODUCTS
15	SA1112 MEATS, POULTRY, FISH AND EGGS
16	SA11121 MEATS, POULTRY, AND FISH
17	SA111211 MEATS
18	SE03 BEEF AND VEAL
19	SE0301 GROUND BEEF EXCLUDE CANNED
20	SE0302 CHUCK ROAST
21	SE0303 ROUND ROAST
22	SE0304 OTHER BEEF AND VEAL
23	SE0305 ROUND STEAK
24	SE0306 SIRLOIN STEAK
25	SE04 PORK
26	SE0401 BACON
27	SE0402 PORK CHOPS
28	SE0403 HAM
29	SE0404 OTHER PORK INCL SAUSAGE
30	SE05 OTHER MEATS
31	SE0501 OTHER MEATS*
32	SE06 POULTRY
33	SE0601 FRESH WHOLE CHICKEN
34	SE0602 FRESH/FROZEN CHICKEN PARTS
35	SE0603 OTHER POULTRY
36	SE07 FISH AND SEAFOOD
37	SE0701 CANNED FISH,SEAFOOD
38	SE0702 FRESH/FROZEN FISH,SEAFOOD
39	SE08 EGGS
40	SE0801 EGGS*
41	SA1113 DAIRY PRODUCTS
42	SE09 FRESH MILK AND CREAM
43	SE0901 FRESH WHOLE MILK
44	SE0902 OTHER FRESH MILK AND CREAM
45	SE10 PROCESSED DAIRY PRODUCTS
46	SE1001 OTHER DAIRY PRODUCTS INCL BUTTER
47	SE1002 CHEESE
48	SE1004 ICE CREAM,RELATED PROD.
49	SA1114 FRUITS AND VEGETABLES
50	SA11141 FRESH FRUITS AND VEGETABLES

Table A.3 CPI Aggregation Tree

51	SE11 FRESH FRUITS
52	SE1101 APPLES
53	SE1102 BANANAS
54	SE1103 ORANGES INCLUDING TANGERINES
55	SE1104 OTHER FRESH FRUITS
56	SE12 FRESH VEGETABLES
57	SE1201 POTATOES
58	SE1202 LETTUCE
59	SE1203 TOMATOES
60	SE1204 OTHER FRESH VEGETABLES
61	SA11142 PROCESSED FRUITS AND VEGETABLES
62	SE13 PROCESSED FRUITS
63	SE1301 FRUIT JUICES, & FROZEN FRUIT
64	SE1303 CANNED AND DRIED FRUITS
65	SE14 PROCESSED VEGETABLES
66	SE1401 FROZEN VEGETABLES
67	SE1402 PROCESSED VEGETABLES EXCLUDING FROZEN
68	SA1115 OTHER FOOD AT HOME
69	SE15 SUGAR AND SWEETS
70	SE1501 SWEETS INCLUDING CANDY
71	SE1502 SUGAR AND ARTIFICIAL SWEETENERS
72	SE16 FATS AND OILS
73	SE1601 FATS AND OILS*
74	SE17 NONALCOHOLIC BEVERAGES
75	SE1701 CARBONATED DRINKS
76	SE1703 COFFEE
77	SE1705 OTHER NONCARBONATED DRINKS
78	SE18 OTHER PREPARED FOODS
79	SE1801 CANNED PACKAGED SOUP
80	SE1802 FROZEN PREPARED FOODS
81	SE1803 SNACKS
82	SE1804 SEASONINGS/CONDIMENTS/SAUCES/GRAVIES
83	SE1806 MISC. PREPARED FOODS INCL. BABY FOOD
84	SE19 FOOD AWAY FROM HOME
85	SE1901 LUNCH
86	SE1902 DINNER
87	SE1903 OTHER MEALS AND SNACKS
88	<b>SE1909 UNPRICED ITEMS</b>
89	SE20 ALCOHOLIC BEVERAGES
90	SE200A ALCOHOLIC BEVERAGES AT HOME
91	SE2001 BEER AND ALE AT HOME
92	SE2002 DISTILLED SPIRITS AT HOME
93	SE2003 WINE AT HOME
94	SE2005 ALCOHOLIC BEV AWAY FROM HOME
95	SA2 HOUSING
96	SA21 SHELTER
97	SA211 RENTERS' COSTS
98	SE2101 RENT OF DWELLING
99	SA2112 OTHER RENTERS' COSTS
100	SE2102 LODGING WHILE OUT OF TOWN
101	SE2103 LODGING WHILE AT SCHOOL

Table A.3 CPI Aggregation Tree

102	SE35 TENANTS' INSURANCE
103	<i>SE3501 TENANTS' INSURANCE*</i>
104	SE22 HOMEOWNERS' COSTS
105	SE2201 OWNERS' EQUIVALENT RENT
106	SE2202 HOUSEHOLD INSURANCE
107	SA213 MAINTENANCE AND REPAIRS
108	SE23 MAINTENANCE AND REPAIR SERVICES
109	<i>SE2301 MAINTENANCE AND REPAIR SERVICES*</i>
110	SE24 MAINTENANCE AND REPAIR COMMOD.
111	SE2401 MATERIALS, SUPP & EQUIP FOR HM REPS
112	SE2404 OTHER MAINTENANCE & REPAIR COMMOD.
113	SA22 HOUSEHOLD FUELS AND OTHER UTILITIES
114	SA221 HOUSEHOLD FUELS
115	SE25 FUEL OIL & OTHER HOUSEHOLD FUEL COMMODITIES
116	SE2501 FUEL OIL
117	SE2502 OTHER HOUSEHOLD FUEL COMMOD.
118	SE26 GAS (PIPED) AND ELECTRICITY
119	SE2601 ELECTRICITY
120	SE2602 UTILITY (PIPED) GAS
121	SE27 OTHER UTIL AND PUBLIC SERVICES
122	SE270A TELEPHONE SERVICES
123	SE2701 TELEPHONE- MAIN STATN SERV
124	<b><i>SE270B OTHER UTIL AND PUBLIC SER EXCL TELE</i></b>
125	SE2702 WATER/SEWERAGE MAINTENANCE
126	SE2703 COMMUNITY ANTENNA,CABLE TV
127	SE2704 GARBAGE/TRASH COLLECTION
128	SE2705 TELE.INTERSTATE TOLL CALL
129	SE2706 TELE.INTRASTATE TOLL CALL
130	SA23 HOUSEHOLD FURNISHINGS & OPERATION
131	SA231 HOUSEFURNISHINGS
132	SE28 TEXTILE HOUSEFURNISHINGS
133	<i>SE2801 TEXTILE HOUSEFURNISHINGS*</i>
134	SE29 FURNITURE AND BEDDING
135	SE2901 BEDROOM FURNITURE
136	SE2902 SOFAS
137	SE2903 LIVING ROOM CHAIRS, TABLES
138	SE2904 OTHER FURNITURE
139	SA2313 APPLIANCES & ELECTRONIC EQUIPMENT
140	SE31 TV AND SOUND EQUIPMENT
141	SE3101 TELEVISION
142	SE3102 OTHER VIDEO EQUIPMENT
143	SE3103 SOUND EQUIPMENT
144	<b><i>SE3109 UNPRICED ITEMS</i></b>
145	SE30 MAJOR HOUSEHOLD APPLIANCES
146	SE3001 REFRIGERATOR, HOME FREEZER
147	SE3002 LAUNDRY EQUIPMENT
148	SE3003 STOVES/OVENS/DSHWHRs/AIR CONDS
149	SE69 INFORMATION PROCESSING EQUIPMENT
150	<i>SE6901 INFORMATION PROCESSING EQUIPMENT*</i>
151	SE32 OTHER HOUSEFURNISHINGS
152	SE3201 FL/WDW CV,IN/LDY/CL/OD EQ

Table A.3 CPI Aggregation Tree

153	SE3202 CLOCKS,LAMPS, AND DECOR ITEMS
154	SE3203 TBLWR,SRV PCS,NONEL KTNWR
155	SE3204 LAWN EQ, POWER TOOLS & OTH HRDW
156	SE3205 SEWING MACH & PORTABLE HEATING EQUIP
157	SE3206 INDOOR PLANTS & FRESH CUT FLOWERS
158	<b>SE3209 UNPRICED ITEMS</b>
159	SE33 HOUSEKEEPING SUPPLIES
160	SE3301 LAUNDRY & CLNING PRODUCTS INCL SOAP
161	SE3303 HOUSEHOLD PAPER PROD & STNRY SUPPLIES
162	SE3305 MISC HOUSEHOLD PRODUCTS
163	SE34 HOUSEKEEPING SERVICES
164	SE3401 POSTAGE
165	<b>SE3402 BABYSITTING</b>
166	<b>SE3403 DOMESTIC SERVICE</b>
167	SE3404 GARDENING,OTH HOME SERV.
168	SE3406 APPLIANCE AND FURNITURE REPAIR
169	<b>SE3407 CARE OF INVALIDS/ELDERLY/CONVALES</b>
170	<b>SE3409 UNPRICED ITEMS</b>
171	SA3 APPAREL AND UPKEEP
172	SA31 APPAREL COMMODITIES
173	SA311 APPAREL COMMODITIES LESS FOOTWEAR
174	SA3111 MEN'S AND BOY'S APPAREL
175	SE36 MEN'S APPAREL
176	SE3601 MEN'S SUITS, SPT CTS, CTS & JCKTS
177	SE3603 MEN'S FURN. & SPEC. CLOTHING
178	SE3604 MEN'S SHIRTS
179	SE3605 MEN'S DNGREES, JEANS, TRSRS
180	<b>SE3609 UNPRICED ITEMS</b>
181	SE37 BOYS' APPAREL
182	<b>SE3701 BOYS' APPAREL</b>
183	<b>SE3709 UNPRICED ITEMS</b>
184	SA3112 WOMEN'S AND GIRL'S APPAREL
185	SE38 WOMEN'S APPAREL
186	SE3801 WOMEN'S COATS AND JACKETS
187	SE3802 WOMEN'S DRESSES
188	SE3803 WOMEN'S SEPARATES & SPORTSWEAR
189	SE3804 WOMEN'S NGHTWR,UNDWR,HSRY,ACCESSORIES
190	SE3805 WOMEN'S SUITS
191	<b>SE3809 UNPRICED ITEMS</b>
192	SE39 GIRLS' APPAREL
193	<b>SE3901 GIRLS' APPAREL</b>
194	<b>SE3909 UNPRICED ITEMS</b>
195	SE41 INFANTS',TODDLERS'APPAREL
196	<b>SE4101 INFANTS' &amp; TODDLERS' APPAREL</b>
197	<b>SE4109 UNPRICED ITEMS</b>
198	SA3114 OTHER APPAREL COMMODITIES
199	SE42 SEWING MATERIALS,NOTIONS & LUGGAGE
200	<i>SE4201 SEWING MATERIALS,NOTIONS &amp; LUGGAGE*</i>
201	SE43 WATCHES AND JEWELRY
202	SE4301 WATCHES
203	SE4302 JEWELRY

Table A.3 CPI Aggregation Tree

204	SE40 FOOTWEAR
205	SE4001 MEN'S FOOTWEAR
206	SE4002 BOYS' AND GIRLS' FOOTWEAR
207	SE4003 WOMEN'S FOOTWEAR
208	SE44 APPAREL SERVICES
209	SE4401 OTHER APPAREL SERVICES
210	SE4402 OTH LNDRY, DRY CL-APPAREL
211	SA4 TRANSPORTATION
212	SA41 PRIVATE TRANSPORTATION
213	SE45 NEW VEHICLES
214	SE4501 NEW CARS
215	SE4502 NEW TRUCKS
216	SE4503 NEW MOTORCYCLES
217	SE46 USED CARS
218	<b>SE4601 USED CARS</b>
219	<b>SE4609 UNPRICED ITEMS</b>
220	SE4701 MOTOR FUEL
221	SE49 AUTOMOBILE MAINTENANCE AND REPAIR
222	SE4901 AUTOMOTIVE BODY WORK
223	SE4902 AUTO DRIVE TRAIN, FRONT END REP.
224	SE4903 AUTO MAINTENANCE AND SERVICING
225	SE4904 AUTO POWER PLANT REPAIR
226	<b>SE4909 UNPRICED ITEMS</b>
227	SA415 OTHER PRIVATE TRANSPORTATION
228	SA4151 OTHER PRIVATE TRANS. COMMODITIES
229	SE4702 MOTOR OIL, COOLANT, AND OTHERS
230	SE48 AUTOMOBILE PARTS AND EQUIPMENT
231	SE4801 TIRES
232	SE4802 OTHER PARTS AND EQUIPMENT
233	SA4152 OTH PRIVATE TRANS. SERVICES
234	SE50 AUTOMOBILE INSURANCE
235	<i>SE5001 AUTOMOBILE INSURANCE*</i>
236	SE51 AUTOMOBILE FINANCE CHARGES
237	<b>SE5101 AUTO FINANCE CHARGES</b>
238	<b>SE5109 UNPRICED ITEMS</b>
239	SE52 VEHICL RENTL, REGISTR, OTHR
240	SE5201 AUTO REGISTR, LICEN & INSPEC FEES
241	SE5205 OTHER AUTOMOBILE RELATED FEES
242	<b>SE5209 UNPRICED ITEMS</b>
243	SE53 PUBLIC TRANSPORTATION
244	SE5301 AIRLINE FARE
245	SE5302 OTHER INTERCITY PUBLIC TRANSPORTATION
246	SE5303 INTRACITY PUBLIC TRANSPORTATION
247	<b>SE5309 UNPRICED ITEMS</b>
248	SA5 MEDICAL CARE
249	SA51 MEDICAL CARE COMMODITIES
250	SE54 PRESCRIPTION DRUGS
251	<i>SE5401 PRESCRIPTION DRUGS*</i>
252	SE55 NONPRESC DRUGS, MED SUPPLS
253	SE5502 INT & RESP OVER-THE-COUNTER ITEM
254	SE5503 NONPRSCRPT MED EQUIP, SUPP



Table A.3 CPI Aggregation Tree

255	SA512 MEDICAL CARE SERVICES
256	SE56 PROFESSIONAL MEDICAL SERVICES
257	SE5601 PHYSICIANS' SERVICES
258	SE5602 DENTAL SERVICES
259	SE5603 EYE CARE
260	SE5604 SERVICES BY OTHER MED. PROFESSIONALS
261	SE57 HOSPITAL AND RELATED SERVICES
262	SE5701 HOSPITAL ROOM
263	SE5702 OTHER INPATIENT MEDICAL SERVICES
264	SE5703 OUTPATIENT SERVICES
265	<b>SE5709 UNPRICED ITEMS</b>
266	<b>SE58 HEALTH INSURANCE</b>
267	<b>SE581 COMM HLTH INS, RETND EARNG</b>
268	<b>SE5811 COMM HLTH INS, RETND-PRESCRIP DRUG</b>
269	<b>SE5812 COMM HLTH INS, RETND-PHYSICIANS' SER</b>
270	<b>SE5813 COMM HLTH INS, RETND-DENTAL SER</b>
271	<b>SE5814 COMM HLTH INS, RETND-EYECARE SER</b>
272	<b>SE5815 COMM HLTH INS, RETND-OTHER SER</b>
273	<b>SE5816 COMM HLTH INS, RETND-HOSP ROOM</b>
274	<b>SE5817 COMM HLTH INS, RETND-OTH IN HOSP SER</b>
275	<b>SE5818 COMM HLTH INS, RETND-OUT HOSP SER</b>
276	<b>SE582 BLUE CR HLTH INS, RETND EARNG</b>
277	<b>SE5821 BLUE CR RETND EARNG-PRESCRIP DRUG</b>
278	<b>SE5822 BLUE CR RETND EARNG-PHYSICIANS' SER</b>
279	<b>SE5823 BLUE CR RETND EARNG-DENTAL SER</b>
280	<b>SE5824 BLUE CR RETND EARNG-EYECARE SER</b>
281	<b>SE5825 BLUE CR RETND EARNG-OTHER SER</b>
282	<b>SE5826 BLUE CR RETND EARNG-HOSP ROOM</b>
283	<b>SE5827 BLUE CR RETND EARNG-OTHER IN HOSP SER</b>
284	<b>SE5828 BLUE CR RETND EARNG-OUT HOSP SER</b>
285	<b>SE583 HLTH MAINTENANCE PLAN, RETND EARNG</b>
286	<b>SE5831 HMO RETND EARNG-PRESCRIP DRUG</b>
287	<b>SE5832 HMO RETND EARNG-PHYSICIANS' SER</b>
288	<b>SE5833 HMO RETND EARNG-DENTAL SER</b>
289	<b>SE5834 HMO RETND EARNG-EYECARE SER</b>
290	<b>SE5835 HMO RETND EARNG-OTHER SER</b>
291	<b>SE5836 HMO RETND EARNG-HOSP ROOM</b>
292	<b>SE5837 HMO RETND EARNG-OTHER IN HOSP SER</b>
293	<b>SE5838 HMO RETND EARNG-OUT HOSP SER</b>
294	<b>SE584 MEDICARE &amp; COMM MEDI SUPP, RETND</b>
295	<b>SE5841 OTH HLTH INS, RETND-PRESCRIP DRUG</b>
296	<b>SE5842 OTH HLTH INS, RETND-PHYSICIANS' SER</b>
297	<b>SE5843 OTH HLTH INS, RETND-DENTAL SER</b>
298	<b>SE5844 OTH HLTH INS, RETND-EYECARE SER</b>
299	<b>SE5845 OTH HLTH INS, RETND-OTHER SER</b>
300	<b>SE5846 OTH HLTH INS, RETND-HOSP ROOM</b>
301	<b>SE5847 OTH HLTH INS, RETND-OTHER IN HOSP SER</b>
302	<b>SE5848 OTH HLTH INS, RETND-OUT HOSP SER</b>
303	SA6 ENTERTAINMENT
304	SA61 ENTERTAINMENT COMMODITIES

Table A.3 CPI Aggregation Tree

305	SE59 READING MATERIALS
306	SE5901 NEWSPAPERS
307	SE5902 MAGAZINES,PERIODICALS, AND BOOKS
308	<b>SE5909 UNPRICED ITEMS</b>
309	SE60 SPORTING GOODS, EQUIPMENT
310	SE6001 SPORT VEHICLES INCLUDING BICYCLES
311	SE6002 OTHER SPORTING GOODS
312	SE61 TOYS, HOBBIES, OTHER ENTERTAINMENT
313	SE6101 TOYS,HOBBIES, & MUSIC EQUIPMENT
314	SE6102 PHOTO SUPPLIES, EQUIPMENT
315	SE6103 PET EXPENSE
316	<b>SE6109 UNPRICED ITEMS</b>
317	SE62 ENTERTAINMENT SERVICES
318	SE6201 CLUB MEMBERSHIPS
319	SE6202 FEES FOR PARTICIPANT SPORTS EXCL CLUB
320	SE6203 ADMISSIONS
321	SE6204 FEES FOR LSSNS OR INSTRUCTION
322	SE6205 PHTGR FEES/FLM PRC/PET & VET SER/OTH
323	<b>SE6209 UNPRICED ITEMS</b>
324	SA7 OTHER GOODS AND SERVICES
325	SE63 TOBACCO AND SMOKING PRODUCTS
326	<b>SE6301 TOBACCO AND SMOKING PRODUCTS</b>
327	<b>SE6309 UNPRICED ITEMS</b>
328	SA712 PERSONAL CARE
329	SE64 TOILET GDS,PERS CARE APPL
330	SE6401 OTH TLT GDS, SM PCARE APPL INCL H & D
331	SE6403 COS,BATH & NAIL PREP/MANICURE & EYE
332	SE65 PERSONAL CARE SERVICES
333	SE6501 BEAUTY PARLOR SVC-FEMALES
334	SE6502 HAIRCTS,OTH BRBR SVC-MALE
335	<b>SE6509 UNPRICED ITEMS</b>
336	SA713 PERSONAL AND EDUCATIONAL EXPENSES
337	SE66 SCHOOL BOOKS AND SUPPLIES
338	<b>SE6601 SCHOOL BOOKS,SUPP-COLLEGE</b>
339	<b>SE6602 ELEM/HIGH SCHL BOOKS,SUPP</b>
340	<b>SE6609 UNPRICED ITEMS</b>
341	SA7132 PERSONAL AND EDUCATIONAL SERVICES
342	SE67 TUITION,OTHER SCHOOL FEES
343	SE6701 COLLEGE TUITION
344	SE6702 ELEM,HIGH SCHOOL TUITION
345	SE6703 DAY CARE & NURSERY SCHOOL
346	<b>SE6704 TUITION FOR TECH, BUSINESS &amp; OTH SCH</b>
347	<b>SE6709 UNPRICED ITEMS</b>
348	SE68 PERSONAL EXPENSES
349	SE6801 LEGAL SERVICE FEES
350	SE6802 PERSONAL FINANCIAL SERVICES
351	SE6803 FUNERAL EXPENSES
352	<b>SE6809 UNPRICED ITEMS</b>

Note: **Bold Italics** indicates that index is not publicly available.

Table A.4 Marginal Effects

Items Included in the PCE Which are Not in the Scope of the CPI.

Total Percent Inflation in PCE from I 1992 to II 1997: 15.631

PCE Marginal effect on PCE Inflation of dropping the  
LN given line:

43	Used auto margin	-0.103
44	Employee reimbursement	0.002
123	Food supplied civilians	0.006
124	Food supplied military	0.000
125	Food on farms	0.002
140	Military clothing	0.001
148	Farm fuel	0.000
152	Govt expenditures abroad	0.007
153	Nongovernment expenditures	0.000
154	Less: remittances in kind	0.001
191	Rental value farm housing	-0.019
197	Tenant group room & board	0.000
198	Tenant group employee lodging	0.000
247	Income loss insurance	-0.013
248	Workers' compensation	-0.512
261	Brokerage & invest counsel	0.178
264	Commercial banks	-0.599
265	Other financial institutions	0.022
266	Expense of handling life ins	-0.136
270	Labor union expenses	0.005
271	Profession. assoc. expenses	0.001
287	Casino gambling	-0.002
289	Pari-mutuel net receipts	-0.002
298	Lotteries	-0.001
310	Foundations & nonprofit research	0.001
312	Political organizations	0.003
313	Museums & libraries	0.003
314	Foundations to religion & welfare	0.000
315	Social welfare	0.042
316	Religion	0.013
319	Air fares foreign travel	0.000
320	U.S. travel outside the U.S.	0.033
321	U.S. student expenditures	0.001
323	Foreign travel in U.S.	-0.021
324	Medical exp of foreigners	-0.003
325	Exp of foreign students in U.S.	-0.024

Table A.5 Weight Effects

CPI ID	Title	100*dw	PdW
SE01	CEREALS AND CEREAL PRODUCTS	-0.0523	0.002
SE02	BAKERY PRODUCTS	0.0155	0.001
SE03	BEEF AND VEAL	0.2716	-0.030
SE04	PORK	0.0425	0.004
SE05	OTHER MEATS	0.1625	-0.003
SE06	POULTRY	-0.0291	-0.001
SE07	FISH AND SEAFOOD	0.1279	0.003
SE08	EGGS	0.1041	0.015
SE09	FRESH MILK AND CREAM	0.2415	-0.001
SE10	PROCESSED DAIRY PRODUCTS	0.1142	-0.002
SE11	FRESH FRUITS	0.3375	0.046
SE12	FRESH VEGETABLES	0.1512	0.003
SE13	PROCESSED FRUITS	-0.0158	0.001
SE14	PROCESSED VEGETABLES	-0.0468	0.000
SE15	SUGAR AND SWEETS	-0.3394	0.011
SE16	FATS AND OILS	0.0072	0.000
SE17	NONALCOHOLIC BEVERAGES	-0.3351	-0.008
SE18	OTHER PREPARED FOODS	-0.4643	-0.002
SE19	FOOD AWAY FROM HOME	0.6349	-0.019
SE2001	BEER AND ALE AT HOME	-0.4176	0.046
SE2002	DISTILLED SPIRITS AT HOME	-0.0063	0.000
SE2003	WINE AT HOME	-0.0336	0.002
SE2005	ALCOHOLIC BEV AWAY FROM HOME	0.0724	0.001
SE2101	RENT OF DWELLING	1.6615	-0.018
SE2102	LODGING WHILE OUT OF TOWN	1.5230	0.110
SE2103	LODGING WHILE AT SCHOOL	0.0466	0.004
SE2201	OWNERS' EQUIVALENT RENT	7.2197	0.172
SE2202	HOUSEHOLD INSURANCE	0.3804	0.007
SE23	MAINTENANCE AND REPAIR SERVICES	0.1253	-0.002
SE24	MAINTENANCE AND REPAIR COMMOD.	0.0787	-0.004
SE2501	FUEL OIL	0.0818	-0.003
SE2502	OTHER HOUSEHOLD FUEL COMMOD.	0.0255	-0.001
SE2601	ELECTRICITY	0.4582	-0.032
SE2602	UTILITY (PIPED) GAS	0.3615	-0.015
SE2701	TELEPHONE- MAIN STATN SERV	0.2717	-0.026
SE2702	WATER/SEWERAGE MAINTENANCE	0.0691	0.005
SE2703	COMMUNITY ANTENNA,CABLE TV	0.0627	0.005
SE2704	GARBAGE/TRASH COLLECTION	0.0686	0.004
SE2705	TELE.INTERSTATE TOLL CALL	-0.3362	-0.006
SE2706	TELE.INTRASTATE TOLL CALL	-0.0261	0.003
SE28	TEXTILE HOUSEFURNISHINGS	-0.3870	0.053
SE29	FURNITURE AND BEDDING	0.1480	-0.002
SE30	MAJOR HOUSEHOLD APPLIANCES	-0.3287	0.037
SE3101	TELEVISION	-0.2421	0.068
SE3102	OTHER VIDEO EQUIPMENT	-0.2316	0.082
SE3103	SOUND EQUIPMENT	-0.2477	0.051
SE3201	FL/WDW CV,IN/LDY/CL/OD EQ	-0.1483	0.005
SE3202	CLOCKS,LAMPS, AND DECOR ITEMS	-0.2218	0.028
SE3203	TBLWR,SRV PCS,NONEL KTNWR	-0.3153	0.037
SE3204	LAWN EQ, POWER TOOLS & OTH HRDW	0.0253	-0.002

Table A.5 Weight Effects

SE3205	SEWING MACH & PORTABLE HEATING EQUIP	0.1038	-0.022
SE3206	INDOOR PLANTS & FRESH CUT FLOWERS	-0.1327	0.015
SE3209	UNPRICED ITEMS	0.0935	-0.010
SE3301	LAUNDRY & CLNING PRODUCTS INCL SOAP	-0.3924	0.029
SE3303	HOUSEHOLD PAPER PROD & STNRY SUPPLIE\$	-0.3970	-0.001
SE3305	MISC HOUSEHOLD PRODUCTS	0.2124	-0.008
SE3401	POSTAGE	0.0163	-0.001
SE3402	BABYSITTING	0.2486	0.021
SE3403	DOMESTIC SERVICE	-0.0255	0.000
SE3404	GARDENING,OTH HOME SERV.	0.0150	0.000
SE3406	APPLIANCE AND FURNITURE REPAIR	-0.0709	-0.002
SE3407	CARE OF INVALIDS/ELDERLY/CONVALES	0.0520	0.001
SE3409	UNPRICED ITEMS	0.1156	0.000
SE35	TENANTS' INSURANCE	-0.1963	-0.004
SE36	MEN'S APPAREL	-0.2379	0.026
SE37	BOYS' APPAREL	-0.0506	0.007
SE38	WOMEN'S APPAREL	-0.2770	0.046
SE39	GIRLS' APPAREL	-0.0500	0.008
SE40	FOOTWEAR	-0.0878	0.011
SE41	INFANTS',TODDLERS' APPAREL	-0.1419	0.015
SE42	SEWING MATERIALS,NOTIONS & LUGGAGE	-0.1141	0.009
SE43	WATCHES AND JEWELRY	-0.4230	0.052
SE4401	OTHER APPAREL SERVICES	0.2233	-0.014
SE4402	OTH LNDRY,DRY CL-APPAREL	-0.3342	0.007
SE4501	NEW CARS	1.8599	-0.067
SE4502	NEW TRUCKS	-0.5232	-0.008
SE4503	NEW MOTORCYCLES	0.0292	0.005
SE46	USED CARS	0.6518	0.067
SE4701	MOTOR FUEL	0.5155	-0.049
SE4702	MOTOR OIL, COOLANT, AND OTHERS	-0.0018	0.000
SE4801	TIRES	-0.0722	0.010
SE4802	OTHER PARTS AND EQUIPMENT	-0.1188	0.019
SE49	AUTOMOBILE MAINTENANCE AND REPAIR	-0.4422	-0.003
SE50	AUTOMOBILE INSURANCE	1.8253	0.148
SE51	AUTOMOBILE FINANCE CHARGES	0.5772	-0.026
SE5201	AUTO REGISTR, LICEN & INSPEC FEES	0.3902	-0.030
SE5205	OTHER AUTOMOBILE RELATED FEES	-0.2255	-0.016
SE5209	UNPRICED ITEMS	0.0271	0.000
SE5301	AIRLINE FARE	0.3411	0.054
SE5302	OTHER INTERCITY PUBLIC TRANSPORTATION	0.0979	-0.012
SE5303	INTRACITY PUBLIC TRANSPORTATION	0.1308	0.007
SE5309	UNPRICED ITEMS	0.0109	0.001
SE54	PRESCRIPTION DRUGS	-0.3885	-0.008
SE5502	INT & RESP OVER-THE-COUNTER ITEM	-0.2331	0.011
SE5503	NONPRSCRPT MED EQUIP, SUPP	0.0108	0.000
SE5601	PHYSICIANS' SERVICES	-2.6289	-0.228
SE5602	DENTAL SERVICES	-0.0152	-0.002
SE5603	EYE CARE	0.0368	-0.001
SE5604	SERVICES BY OTHER MED. PROFESSIONALS	-1.8945	-0.016
SE57	HOSPITAL AND RELATED SERVICES	-6.3891	-1.002
SE58	HEALTH INSURANCE	-0.6797	-0.080

Table A.5 Weight Effects

SE5901	NEWSPAPERS	0.0695	0.007
SE5902	MAGAZINES,PERIODICALS, AND BOOKS	-0.4019	0.004
SE6001	SPORT VEHICLES INCLUDING BICYCLES	-0.2176	0.022
SE6002	OTHER SPORTING GOODS	-0.3961	0.056
SE6101	TOYS,HOBBIES, & MUSIC EQUIPMENT	-0.2050	0.019
SE6102	PHOTO SUPPLIES, EQUIPMENT	-0.0670	0.009
SE6103	PET EXPENSE	-0.2800	0.008
SE6109	UNPRICED ITEMS	0.0104	-0.001
SE6201	CLUB MEMBERSHIPS	0.1066	-0.009
SE6202	FEES FOR PARTICIPANT SPORTS EXCL CLUB	0.3151	0.031
SE6203	ADMISSIONS	0.2521	0.016
SE6204	FEES FOR LSSNS OR INSTRUCTION	0.2323	0.023
SE6205	PHTGR FEES/FLM PRC/PET & VET SER/OTH	-0.5901	-0.014
SE6209	UNPRICED ITEMS	0.0219	0.001
SE63	TOBACCO AND SMOKING PRODUCTS	0.4388	-0.017
SE6401	OTH TLT GDS, SM PCARE APPL INCL H & D	-0.1688	0.021
SE6403	COS,BATH & NAIL PREP/MANICURE & EYE	-0.2660	0.008
SE6501	BEAUTY PARLOR SVC-FEMALES	-0.0877	-0.001
SE6502	HAIRCTS,OTH BRBR SVC-MALE	0.0649	0.002
SE6509	UNPRICED ITEMS	0.0005	0.000
SE66	SCHOOL BOOKS AND SUPPLIES	0.1950	0.020
SE6701	COLLEGE TUITION	0.0594	0.014
SE6702	ELEM,HIGH SCHOOL TUITION	0.0408	0.008
SE6703	DAY CARE & NURSERY SCHOOL	0.2437	0.023
SE6704	TUITION FOR TECH, BUSINESS & OTH SCH	0.1380	0.016
SE6709	UNPRICED ITEMS	0.0996	0.019
SE6801	LEGAL SERVICE FEES	-0.7948	-0.039
SE6802	PERSONAL FINANCIAL SERVICES	-0.5269	-0.112
SE6803	FUNERAL EXPENSES	0.0888	0.013
SE6809	UNPRICED ITEMS	0.0986	0.012
SE69	INFORMATION PROCESSING EQUIPMENT	-0.1808	0.097

Table A.6 Price Effects

BEA Line Number	BEA Line Title	Difference in Prices	Price Effect
39	New domestic autos	0.16	0.0022
40	New foreign autos	0.16	0.0013
42	Net transactions in used autos	-0.10	-0.0006
46	Pce trucks	0.00	-0.0001
47	Recreational vehicles	0.00	0.0000
49	Tires & tubes	-0.01	0.0000
50	Accessories & parts	0.00	0.0000
52	Furniture	-0.01	-0.0001
54	Major household appliances	0.00	0.0000
55	Small electric appliances	-0.01	0.0000
56	China & glaswr, tablwr & ut	0.00	0.0000
59	Televisions	0.00	0.0000
60	Other video eqpt	0.01	0.0000
62	Audio eqpt	0.00	0.0000
63	Records, tapes, & disks	0.00	0.0000
64	Musical instruments	0.00	0.0000
65	Pce computers	34.44	0.1074
67	Floor coverings	0.00	0.0000
69	Clocks, lamps, & artwork	0.01	0.0000
70	Textile products	5.32	0.0082
71	Writing eqpt	0.02	0.0000
73	Hardware, tools	0.00	0.0000
74	Lawn & garden tools	0.00	0.0000
76	Jewelry & watches	-0.01	-0.0001
77	Ophthalmic & orthopedic eqpt	0.00	0.0000
78	Books & maps	0.00	0.0000
81	Guns	0.00	0.0000
82	Sporting eqpt	0.00	0.0000
83	Bicycles	0.00	0.0000
84	Motorcycles	0.03	0.0000
85	Cameras	0.01	0.0000
87	Boats	0.00	0.0000
88	Pleasure aircraft	-3.92	-0.0006
93	Beef & veal	1.59	0.0119
94	Pork	1.89	0.0098
95	Other meat	1.73	0.0041
96	Fresh milk & cream	0.37	0.0013
97	Processed dairy products	0.36	0.0018
98	Poultry	1.83	0.0083
99	Eggs	2.06	0.0013
100	Fresh fruit	2.05	0.0061
101	Fresh vegetables	1.94	0.0083
102	Processed fruit	0.50	0.0019
103	Processed vegetables	0.55	0.0017
104	Cereals	0.47	0.0024
105	Bakery products	0.49	0.0047
106	Fats & oils	0.34	0.0008
107	Sugar & sweets	0.36	0.0024
108	Nonalcoholic beverages	0.36	0.0038

Table A.6 Price Effects

109	Other prepared food	0.37	0.0055
110	Fish & seafood	1.79	0.0042
111	Pet food	0.00	0.0000
113	Distilled spirits	0.01	0.0000
114	Wine & brandy	0.00	0.0000
115	Beer & ale	0.01	0.0001
118	Elem & second school lunch	0.00	0.0000
119	Higher ed school lunch	0.00	0.0000
120	Other purchased meals	0.00	-0.0001
121	Alcohol in purchased meals	0.00	0.0000
128	Footwear	0.03	0.0003
131	Women's & girls' clothing	-0.02	-0.0005
132	Infants' clothing	0.01	0.0000
133	Women's sewing goods	-0.75	-0.0007
134	Womens luggage	-0.72	-0.0006
137	Men's & boys' clothing	0.00	0.0000
138	Men's sewing goods	-0.75	-0.0001
139	Mens luggage	-0.72	-0.0002
142	Gasoline & other motor fuel	0.01	0.0001
143	Lubricants	0.00	0.0000
146	Fuel oil	0.05	0.0001
147	Lp gas & other fuel	2.85	0.0027
150	Tobacco	0.00	0.0001
155	Semi-durable house furnishi	-8.61	-0.0526
157	Prescription drugs	-0.01	-0.0001
158	Nonprescription drugs	0.00	0.0000
159	Medical supplies	0.00	0.0000
160	Gynecological products	0.01	0.0000
162	Soap	0.01	0.0000
163	Cosmetics	0.00	0.0000
164	Other personal hygiene products	0.01	0.0000
166	Stationery & school supplies	-6.46	-0.0115
167	Greeting cards	-6.46	-0.0115
169	Ammunition	0.00	0.0000
170	Film	0.01	0.0000
171	Toys, dolls, & games	0.01	0.0000
172	Flowers seeds & potted plants	0.02	0.0001
174	Lighting supplies	1.98	0.0028
175	Cleaning preparations	0.01	0.0001
176	Paper products	0.00	0.0000
178	Newspapers	0.00	0.0000
179	Magazines	0.00	0.0000
185	Owner occupied mobile home	0.96	0.0047
186	Owner occupied station homes	0.97	0.1126
188	Tenant occupied mobile homes	-0.56	-0.0007
189	Tenant occupied station homes	-0.51	-0.0201
190	Tenant landlord durables	-10.65	-0.0118
193	Hotels & motels	0.04	0.0002
194	Clubs & fraternity housing	-0.79	-0.0001
195	Higher education housing	0.01	0.0000
196	Elem & second educat housing	1.24	0.0000



Table A.6 Price Effects

201	Electricity	0.00	-0.0001
202	Natural gas	0.08	0.0006
204	Water & sewerage maintenance	0.00	0.0000
205	Refuse collection	0.00	0.0000
207	Local telephone	-0.01	-0.0001
208	Intrastate toll calls	-0.01	0.0000
209	Interstate toll calls	-0.04	-0.0003
211	Domestic service, cash	-3.87	-0.0100
212	Domestic service, in kind	0.13	0.0000
214	Moving & storage	-2.00	-0.0040
216	HH insurance premiums	0.00	0.0000
217	Less: HH insur benefits paid	0.01	0.0000
218	Rug & furniture cleaning	-0.05	0.0000
219	Electrical repair	-0.06	0.0000
220	Reupholstery & furniture repair	-0.05	0.0000
221	Postage	0.00	0.0000
222	Household operation nec	-1.99	-0.0034
225	Auto repair	0.01	0.0001
226	Auto rental, leasing & other	0.18	0.0009
227	Bridge & road tolls	0.11	0.0001
228	Net auto insurance premiums	-1.14	-0.0076
229	Taxicab	-2.96	-0.0020
230	Mass transit systems	-0.23	-0.0003
231	Intercity railways	-12.49	-0.0026
232	Intercity buses	6.17	0.0017
233	Airline	23.09	0.1412
234	Other transportation services	-0.05	0.0000
236	Physicians	5.41	0.2380
237	Dentists	0.01	0.0001
238	Other professional medical	0.03	0.0006
241	For-profit hospitals	12.00	0.0951
242	Nonprofit hospitals	15.21	0.7343
243	Government hospitals	12.06	0.1749
244	Nursing homes	8.54	0.1148
246	Medical & hospital insurance	0.32	0.0031
250	Shoe repair	0.03	0.0000
252	Drycleaning	0.04	0.0000
253	Laundry & garment repair	-0.01	0.0000
255	Watch, clock, & jewelry repair	0.03	0.0000
256	Miscellaneous personal services	0.07	0.0002
258	Beauty shops, incl combination	0.01	0.0001
259	Barber shops	0.00	0.0000
262	Bank service charges	0.02	0.0001
267	Legal services	0.25	0.0031
268	Funeral & burial expenses	0.00	0.0000
272	Employ agency fees	-0.11	0.0000
273	Money orders	-0.02	0.0000
274	Classified ads	-0.04	0.0000
275	Tax return prep services	0.04	0.0000
276	Other personal business	0.42	0.0001
278	Repair of audio & video eqpt	-0.02	0.0000

Table A.6 Price Effects

279	Motion picture admissions	0.07	0.0001
280	Live entertain excl. sports	0.00	0.0000
281	Spectator sports	0.03	0.0000
282	Clubs & fraternal organizations	-5.32	-0.0144
284	Sightseeing	-0.23	-0.0001
285	Private flying	0.52	0.0000
286	Bowling & billiards	0.13	0.0001
288	Other comml participant amuse	0.02	0.0000
291	Pets & pets services excl. vets	0.01	0.0000
292	Veterinarians	-0.01	0.0000
293	Cable tv	0.02	0.0001
294	Film developing	-0.03	0.0000
295	Photo studios	0.03	0.0000
296	Sporting & recreational camps	-0.08	0.0000
297	High school recreation	0.09	0.0000
299	Video cassette rental	16.50	0.0262
300	Commercial amusements nec	0.04	0.0002
303	Private higher education	20.37	0.1521
304	Public higher education	-0.02	-0.0001
306	Elementary & secondary schools	17.19	0.0681
307	Nursery schools	11.27	0.0125
309	Commercial & vocational schools	10.06	0.0363

Table A.7 Time Series

Date (1)	Price Effect (2)	Weight Effect (3)	Sum of (2) and (3) (4)	Index Difference (5)	Unexplaine d Residual (6)
A 1992	0.0000	0.0000	0.0000	0.0000	0.0000
I 93	0.2547	-0.1178	0.1369	0.1500	0.0131
II 93	0.4587	-0.2127	0.2460	0.2800	0.0340
III 93	0.5850	-0.2842	0.3008	0.3500	0.0492
IV 93	0.7462	-0.3333	0.4129	0.4500	0.0371
I 94	0.8693	-0.3546	0.5147	0.4900	-0.0247
II 94	0.9939	-0.4734	0.5205	0.5300	0.0095
III 94	1.1351	-0.4754	0.6597	0.6800	0.0203
IV 94	1.2460	-0.4661	0.7800	0.8300	0.0500
I 95	1.2638	-0.3898	0.8740	0.8500	-0.0240
II 95	1.3822	-0.2919	1.0903	1.1000	0.0097
III 95	1.5061	-0.3557	1.1504	1.1400	-0.0104
IV 95	1.6296	-0.3794	1.2502	1.2800	0.0298
I 96	1.7930	-0.3817	1.4114	1.3800	-0.0314
II 96	1.8319	-0.2872	1.5447	1.5100	-0.0347
III 96	1.9028	-0.1783	1.7245	1.7400	0.0155
IV 96	1.8645	-0.0768	1.7877	1.8200	0.0323
I 97	1.8988	-0.1008	1.7980	1.7900	-0.0080
II 97	1.9709	-0.1591	1.8117	1.8000	-0.0117