

Research Spotlight

Estimates of Categories of Personal Consumption Expenditures Adjusted for Net Foreign Travel Spending

By Michael Armah and Teresita Teensma

PERSONAL consumption expenditures (PCE) is one of the most closely monitored macroeconomic metrics in the United States, widely used to gauge U.S. consumer demand for goods and services and to track consumer spending patterns. At the aggregate level, PCE measures the spending by U.S. residents regardless of whether they purchase goods and services domestically (in the United States) or whether they purchase goods and services from nonresidents while traveling abroad. By definition, it does not include purchases by nonresidents who are visiting the United States for a limited time.¹ This distinction has important implications for macroeconomic analysis.²

Recently, BEA began a research project aimed at better separating spending by nonresidents from spending by U.S. residents in the detailed PCE statistics in order to provide a more detailed picture of consumer spending.

Because the measure of PCE is designed to capture spending by U.S. residents, it includes the payments by U.S. residents to nonresidents for passenger fares and travel services and the purchases of goods and services by U.S. residents while traveling, working, or attending school outside the United States. Capturing the spending by U.S. residents for goods and services while traveling outside the United States is important in order to accurately account for how U.S. residents spend and save their disposable income. However, these purchases by U.S. residents from nonresidents do not gen-

erally represent demand for U.S. products and thus are not included in the measure of final demand or GDP. As a result, these purchases are offset by subtracting their value as imports of goods and services when calculating GDP from the expenditures approach. Conversely, the payments by nonresidents to U.S. residents for travel services and the purchases by nonresidents of goods and services while traveling, working, attending school, or receiving medical treatment in the United States are not included in PCE. These purchases in the United States by nonresidents are out of scope in measuring saving and the saving rate of U.S. households, which requires tracking income and spending by U.S. residents only. However, the spending by nonresidents in the United States is an important component in measuring U.S. GDP from the expenditures approach because it represents nonresidents' final demand for U.S. goods and services and thus is recorded as exports in the calculation of GDP.

The source data used to estimate most of the PCE components is revenue (or sales) reported by businesses. These data combine purchases by both residents and nonresidents in the United States because most businesses cannot distinguish between purchases by U.S. residents and those by nonresidents. In order

1. In both the national income and product accounts and the international transactions accounts, residents of the United States are individuals who reside or expect to reside in the United States for 1 year or more. Nonresidents are foreign nationals who reside outside of the United States for more than 1 year or who reside permanently outside of the United States. The exceptions are U.S. students who study abroad and foreign students who study in the United States and U.S. government employees (and their families) who are stationed abroad.

2. By excluding nonresidents, spending by U.S. residents can be matched with their income flows so that the measure of U.S. personal saving, which is calculated as disposable personal income less personal outlays, is consistent. The personal saving rate, which is derived as the ratio of personal saving to disposable personal income, may be used to analyze the relationship between household income, household asset and debt accumulation, and household consumption patterns. By far, PCE represents the majority of these personal outlays used in the calculation of personal saving.

The research described in this article thus provides an important tool to better understand the borrowing behavior of U.S. households.

What is PCE?

PCE represents the amount of goods and services purchased by U.S. consumers in a specific period. Final demand, or gross domestic product (GDP), consists of PCE, business investment, government spending, and the amount of goods and services exported by the United States less the amount of goods and services imported into the United States; PCE accounts for approximately 70 percent of the value of GDP.

PCE statistics are used by policymakers and business decisionmakers for a variety of reasons, including measuring the effects of tax policy changes on consumer demand, identifying growing consumer markets for certain goods and services, and tracking changes in the U.S. saving rate.

to derive total PCE for the United States, the adjustment “net foreign travel” is made to accurately account for this distinction in the aggregate—but not in the detailed PCE categories. As a result, detailed PCE spending categories—such as gasoline, food and beverages (for example, food purchased from grocery stores), purchased meals and beverages (for example, restaurant meals), clothing and footwear, air transportation, recreation services, and hotel and motel services—include spending in the United States by both U.S. residents and nonresidents and exclude spending by U.S. residents abroad. However, in principle, these detailed categories should include spending by U.S. residents wherever the spending takes place and should exclude spending in the United States by nonresidents.

Nonresident travelers in the United States are important consumers of U.S. goods and services, especially U.S. services. Nonresident spending accounts for less than 2 percent of total PCE, but it accounts for a significant share of certain PCE categories. In addition, the goods and services that are sold to these nonresident travelers—such as hotel and motel services, air transportation services, and purchased meals and beverages—rely on a substantial share of direct and indirect output from other industries, which in turn helps support employment for a significant number of U.S. residents. Furthermore, because both travel by nonresidents in the United States and travel by U.S. residents abroad have grown dramatically in recent years, identifying the PCE products and services that are purchased by these two groups provides data users with additional analytical tools for evaluating the effect of nonresident spending on the U.S. economy.

As mentioned above, because of source data limitations, it is difficult to remove nonresident purchases from the detailed categories of goods and services and to add U.S. resident purchases abroad to the detailed categories of goods and services. As a result, aggregated PCE is adjusted for net spending for foreign travel (“net foreign travel”), which is calculated as spending by U.S. residents abroad less spending by nonresidents in the United States. However, using statistics from the travel and tourism satellite accounts, the benchmark input-output accounts, and the international transactions accounts, spending by U.S. residents and by nonresidents can be allocated to the detailed PCE categories.³

This article discusses the results of this reallocation for 2002–2008 and describes the source data and methods used. The tables in this article provide an alternative derivation of the detailed PCE categories that

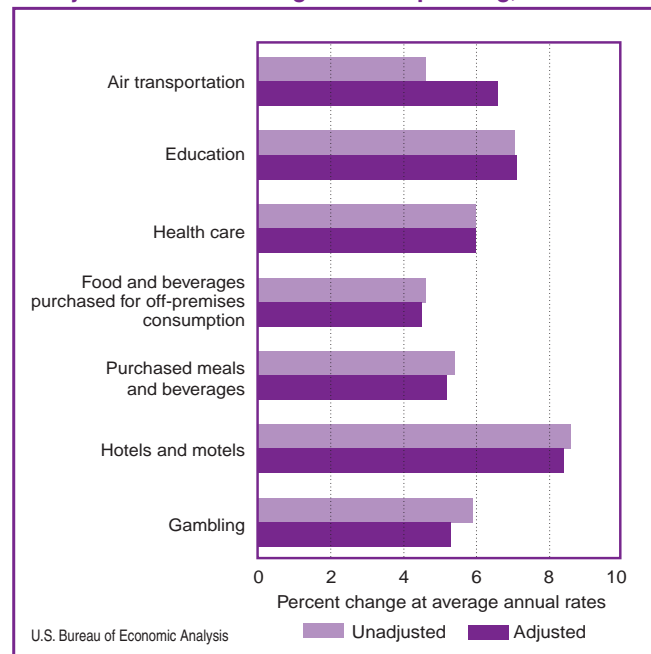
are adjusted for foreign travel spending. This analysis was done on the current-dollar measures of consumer spending (that is, the measures are not adjusted for inflation). Among the highlights of this reallocation are the following:

- Average growth in domestic spending on hotels and motels was boosted by spending by nonresidents traveling in the United States.
- Spending for health care services by U.S. residents outside the United States grew faster than spending for health care services by nonresidents in the United States.
- Spending for education services by U.S. residents abroad grew faster than spending by nonresidents in the United States, but total spending for education by nonresidents in the United States continues to be significantly higher than that by U.S. residents abroad.

These adjusted detailed PCE categories are more tightly aligned with national accounting concepts, but most of the adjustments did not meaningfully change the trends in BEA’s published, unadjusted categories of consumer spending. However, for a few categories, the adjustments did have a meaningful effect on published trends (chart 1).

For most of these categories, data for 2002–2008 showed that nonresident spending in the United States outpaced U.S. residents spending abroad (tables 1 and 2); however, nonresidents spent far less for air transportation services than U.S. residents spent abroad. The growth rate of the adjusted estimate of spending

Chart 1. Selected PCE Categories Adjusted and Unadjusted for Net Foreign Travel Spending, 2002–2008



3. For more information on the U.S. travel and tourism satellite accounts, see www.bea.gov/industry/index.htm#satellite.

that of the unadjusted category because spending by U.S. residents traveling abroad increased more than spending by nonresidents traveling in the United States and because U.S. residents spent significantly more for air transportation abroad than nonresidents in the United States.

- Adjusted spending for gambling grew at an average annual rate of 5.3 percent, compared with the 5.9 percent growth rate of the unadjusted spending, which reflects the increase in nonresident spending on gambling in the United States.

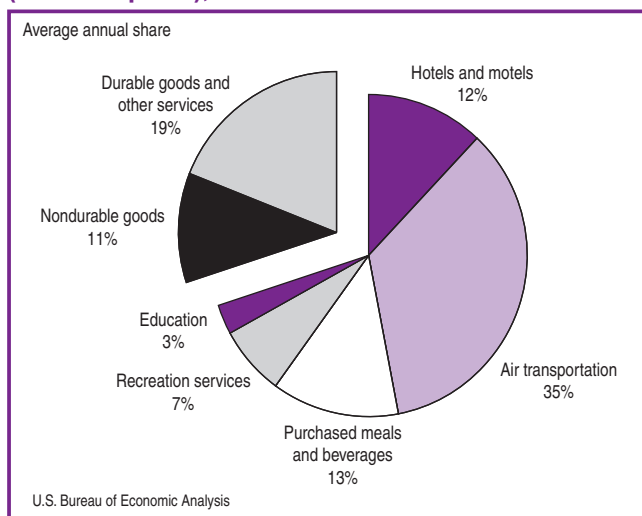
Spending patterns of U.S. residents abroad and nonresidents

As noted, total PCE includes total spending for foreign travel by U.S. residents and excludes total spending in the United States by nonresidents; therefore, total PCE is not affected by the adjustments to the estimates of the detailed categories that reflect spending by U.S. residents that is net of spending in the United States by nonresidents.

The allocations of net foreign travel to the detailed spending categories were primarily based on the assumption that the spending pattern of U.S. residents traveling abroad is similar to the spending pattern of nonresidents traveling in the United States. Because of this assumption, the spending pattern of U.S. residents traveling abroad for many detailed goods and services categories was similar to the spending pattern of nonresidents traveling in the United States.

Spending for air transportation accounted for more than 35 percent of the spending by U.S. residents abroad in 2002–2008 (chart 2), followed by the combination of durable goods and other services (19 percent), purchased meals and beverages (mainly

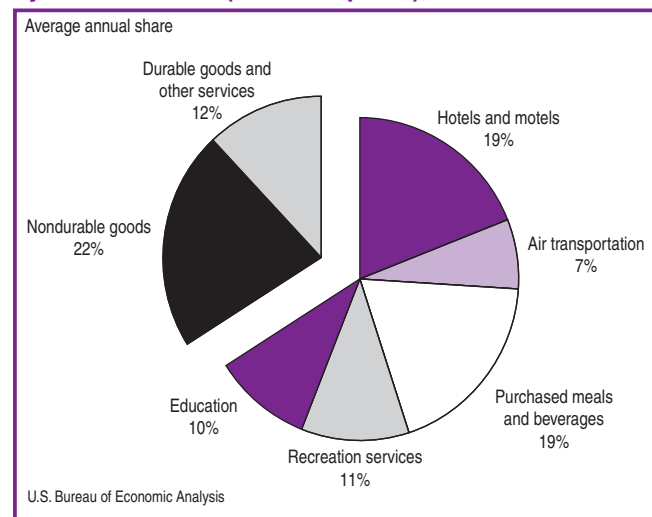
Chart 2. Foreign Travel by U.S. Residents (Travel Imports), 2002–2008



restaurant meals) (13 percent), hotels and motels (12 percent), nondurable goods (including food purchased at grocery stores) (11 percent), recreation services (7 percent), and education services (3 percent).

As for the spending by nonresidents in the United States in 2002–2008 (chart 3), spending for nondurable goods (including food purchased at grocery stores) accounted for 22 percent, followed by hotels and motels (19 percent), purchased meals and beverages (mainly restaurant meals) (19 percent), the combined durable goods and other services (12 percent), education services (10 percent), recreation services (11 percent), and air transportation (7 percent).

Chart 3. Expenditures in the United States by Nonresidents (Travel Exports), 2002–2008



The share of spending by U.S. residents traveling abroad for air transportation services is significantly larger than the share of spending by nonresidents traveling in the United States because the spending for air transportation services by U.S. residents consists of the more expensive international air fares of U.S. carriers and foreign carriers. The share of spending by nonresidents traveling in the United States for air transportation services is much smaller because their spending for air transportation services consists of the less expensive domestic air transportation services and excludes their spending for international air transportation services, which is also excluded from the unadjusted estimate of PCE for air transportation services.

The net effect of these purchases of travel-related goods and services on the U.S. balance of trade in 2002–2008 was positive. Average spending by nonresidents in the United States outpaced spending by U.S. residents abroad in all of the selected detailed goods and services categories except air transportation (tables 1 and 2). The sustained goods and services surplus

in net foreign travel spending reinforces the important role that nonresidents play in the U.S. economy, particularly in the demand for travel-related goods and services.

Methodology for Adjusting the Selected Categories

PCE for net foreign travel

The published estimate of PCE for net foreign travel is derived as the value of foreign travel expenditures by U.S. residents less expenditures in the United States by nonresidents. Foreign travel by U.S. residents (which is classified as travel imports) consists of (1) expenditures for goods and services by U.S. residents traveling outside the United States, (2) value of passenger fares purchased by U.S. residents traveling outside the United States, and (3) expenditures for goods and services by U.S. students studying abroad. Expenditures by nonresidents in the United States (which is classified as travel exports) consists of (1) expenditures for goods and services by nonresidents traveling in the United States, (2) medical expenditures by nonresidents traveling in the United States, and (3) expenditures for goods and services by foreign students studying in the United States.⁴

4. These estimates are from "Table 2.4.5U. Personal Consumption Expenditures by Type of Product," which is available at www.bea.gov. Under "National," select "Consumer Spending," and under "Estimates," click on "Underlying Detail Tables."

Using annual statistics on "Demand for Commodities by Type of Visitors" from table 3 of BEA's U.S. travel and tourism satellite accounts, detailed data from BEA's 2002 benchmark input-output accounts, and detailed data from BEA's international transactions accounts, BEA can now identify the types of products that U.S. residents are purchasing while traveling, working, or attending schools outside the United States. Thus, purchases that are currently recorded as "foreign travel by U.S. residents" in PCE can be allocated to specific spending categories of goods and services. Similarly, specific types of nonresident expenditures in the United States can be removed from the corresponding categories of goods and services spending rather than recorded as a negative adjustment to total PCE.

Allocation of foreign travel by U.S. residents

Table 1 shows the breakout of expenditures by U.S. residents traveling outside the United States into goods and services spending categories. Note that "total foreign travel by U.S. residents" (that is, travel imports) equals the currently published value.

Allocation of the expenditures by U.S. residents traveling outside the United States. Expenditures by U.S. residents traveling outside the United States were allocated to most of the selected, detailed categories of goods and services based on estimates of expenditures by tourists (nonresidents) in the United States from

Table 3. Categories of Personal Consumption Expenditures Adjusted for Net Foreign Travel Spending¹

[Billions of dollars]

	2002	2003	2004	2005	2006	2007	2008
Total personal consumption expenditures	7,439.2	7,804.1	8,270.6	8,803.5	9,301.0	9,772.3	10,035.5
Goods	2,600.0	2,718.4	2,880.2	3,063.1	3,211.2	3,346.3	3,359.8
Durable goods	991.4	1,019.2	1,072.0	1,122.4	1,154.1	1,187.3	1,107.5
Nondurable goods	1,608.6	1,699.2	1,808.2	1,940.6	2,057.2	2,159.0	2,252.3
<i>Of which:</i>							
Gasoline and other motor fuel	155.8	187.8	225.9	276.8	306.9	334.2	375.3
Food and beverages purchased for off-premises consumption	565.9	584.0	608.8	639.8	669.5	705.2	739.0
Clothing and footwear	277.0	284.4	296.6	311.7	325.1	332.6	327.6
Services	4,839.2	5,085.8	5,390.4	5,740.5	6,089.8	6,426.0	6,675.8
Household consumption expenditures (for services)	4,634.3	4,874.6	5,181.1	5,528.9	5,850.0	6,172.3	6,391.4
Housing and utilities	1,334.8	1,393.8	1,462.7	1,582.8	1,685.9	1,755.5	1,830.7
Health care	1,081.6	1,146.7	1,227.2	1,307.4	1,372.1	1,456.0	1,530.8
Transportation services	278.8	288.1	302.8	319.2	335.8	346.5	345.9
<i>Of which:</i>							
Public transportation	88.0	94.7	103.7	110.6	119.6	123.4	125.5
<i>Of which:</i>							
Air transportation	58.1	64.1	70.9	75.4	80.9	84.6	85.2
Recreation services	269.3	286.6	309.3	323.3	345.9	368.8	372.7
<i>Of which:</i>							
Membership clubs, sports centers, parks, theaters, and museums	96.9	102.1	108.0	114.4	122.1	130.9	133.3
Gambling	71.5	78.2	86.1	89.5	97.4	100.8	97.2
Food services and accommodations	428.3	455.5	489.0	522.1	558.2	585.7	597.6
<i>Of which:</i>							
Purchased meals and beverages	369.4	391.1	418.5	443.0	470.2	491.4	501.7
Hotels and motels	36.1	40.0	44.2	49.9	55.7	57.8	58.3
Other services (including financial services and insurance)	1,241.9	1,304.3	1,390.6	1,474.6	1,552.6	1,660.3	1,714.3
<i>Of which:</i>							
Education	132.9	142.4	151.8	163.3	175.3	187.8	200.3
Final consumption expenditures of nonprofit institutions serving households	204.9	211.1	209.2	211.6	239.8	253.7	284.4

1. These PCE categories are adjusted to include net spending for foreign travel, which is calculated as spending by U.S. residents abroad, minus spending by nonresidents in the United States.

the U.S. travel and tourism satellite accounts. These allocations are based on the major assumption that the spending patterns of U.S. residents traveling abroad are similar to the spending patterns of nonresidents traveling in the United States. Specifically, ratios of nonresident spending by type of goods and services to total nonresident spending were derived from the annual estimates in the satellite accounts to provide “commodity” shares.⁵ These commodity shares were then applied to the published estimate of expenditures by U.S. residents traveling abroad to derive estimates of U.S. resident spending abroad by major type of goods and services. The estimates by major categories were then broken down into detailed PCE commodities based on more detailed commodity shares derived from table 2.4.5.U in the national income and product accounts and from the 2002 benchmark input-output (I-O) accounts.⁶

The estimates of spending by U.S. residents traveling abroad for the following three detailed categories were based on different methodologies and indicators: hotel and motel services, health care services, and food and beverages purchased for off-premises consumption (nondurable goods). Estimates of spending for hotels and motels were based on private trade source data. Estimates of spending for health care services were based on data on medical services imports from BEA’s detailed statistics on cross-border trade in services.⁷ Estimates of spending for food and beverages for off-premises consumption were based on comparable private trade source data on meals purchased by nonresidents traveling in the United States.

Passenger fares by U.S. residents traveling abroad. Spending by U.S. residents on passenger fares for foreign travel was broken down into spending for air transportation and spending for water transportation. The estimates of spending for air transportation were based on data on scheduled international passenger revenue for U.S. carriers from the Department of Transportation and on data on passenger fares on foreign carriers (imports) from the international transactions accounts. The estimates of spending for water transportation were based on data on deep sea water passenger transportation from a trade source.

5. The data are from “Table 3. Demand for Commodities by Type of Visitor,” which is available at www.bea.gov. Under Industry,” select “Travel and Tourism Satellite Accounts” and then “Travel and tourism data.”

6. Detailed commodity shares were derived from “Table 2.4.5.U–I–O, Personal Consumption Expenditures by Type of Product with 2002 Input-Output Commodity Composition” because the commodity groups are more detailed PCE categories than those in the satellite accounts. Estimates for this article were based on unpublished data for detailed items in the PCE–I–O bridge table.

7. These statistics are published in “Table 1. Trade in Services” on BEA’s Web site at www.bea.gov; under “International,” select “International Services” and then “International Services Statistics,” and then click on “Detailed statistics for cross-border trade.”

Expenditures by U.S. students studying abroad.

Detailed data on U.S. students’ expenditures abroad are not available; therefore, the share of the spending allocated to education (that is, tuition expenses) of U.S. students studying abroad was based primarily on the share of the spending of foreign students in the United States from BEA’s international transactions accounts that reflects the assumption that education accounts for about 70 percent of foreign students’ total expenditures in the United States.⁸ The basic assumption is that the consumption pattern of students studying in a foreign country is the same regardless of the country where the consumption takes place. The remaining 30 percent of foreign students’ expenditures in the United States was allocated to goods and other services based on published PCE data and judgmental adjustments based on an analysis of the spending patterns of foreign students in the United States.

Allocation of expenditures by nonresidents in the United States

Table 2 shows the breakdown of expenditures in the United States by nonresidents across the relevant goods and services spending categories. As with travel imports, the “total expenditures in the United States by nonresidents” (that is, travel exports) equal the currently published value.

Travel-related expenditures by nonresidents in the United States. Like expenditures by U.S. residents traveling abroad, total travel-related expenditures in the United States by nonresidents were allocated to specific categories of goods and services using the travel and tourism satellite accounts. Ratios of spending by nonresidents by type of goods and services to total nonresident spending in the travel and tourism satellite accounts provided the “commodity” shares that were applied to PCE total nonresident spending to derive estimates of all the spending categories by nonresidents except hotel and motel services, health care, and education. Because the commodity groups in the satellite accounts are less detailed than the PCE spending categories, the 2002 PCE and input-output accounts bridge table was used to further allocate the spending categories of the travel and tourism satellite accounts to the more detailed PCE categories.

For hotel and motel services purchased by nonresidents in the United States, data on nonresident spending for lodging from the international transactions accounts were used.

8. This assumption includes assumptions about participation rates of part-time and full-time attendance and the calculation of foreign students’ tuition expenses from the Department of Education data on the number of students multiplied by the average tuition rates of public and private schools.

Medical expenditures by nonresidents in the United States. Medical expenditures by nonresidents in the United States consists of expenditures for medical services provided to foreign residents admitted to U.S. hospitals as inpatients and as outpatients and to those who seek emergency room treatment. Outpatient prescription and nonprescription drugs are not included.⁹ Using data from BEA's international transaction accounts, these expenditures were directly allocated to the PCE health care category.

Expenditures by foreign students studying in the United States. As mentioned above, estimates of expenditures by foreign students in the United States were based on statistics from BEA's international transactions accounts, reflecting the assumption that the share of foreign students' education expenses in the United States is approximately 70 percent of their total expenditures in the United States. These education expenditures of foreign students in the United States were allocated to PCE education services purchased by nonresidents.

Adjusted detailed PCE estimates

The derivation of adjusted categories of PCE from the detailed estimates for foreign travel by U.S. residents and for expenditures in the United States by nonresidents is shown in table 4.

First, total consumer expenditures in the United States by U.S. residents and by nonresidents (line 1) is calculated as the published total PCE minus published foreign travel by U.S. residents (line 70) plus the published expenditures in the United States by nonresidents (line 24). The difference between total consumer expenditures in the United States and total published PCE is the value of published net foreign travel. Within PCE, household consumption expenditures (line 9) and other services (line 21) reflect the subtraction of

foreign travel by U.S. residents and the addition of expenditures in the United States by nonresidents. The PCE categories in lines 2–7, 10–20, and 22 and 23 are equal to their published values.

Second, spending by nonresidents in the United States and the corresponding categories in lines 24–46 is subtracted from the corresponding categories in lines 1–23 to yield consumer expenditures in the United States by U.S. residents and the corresponding categories in lines 47–69.

Third, PCE categories adjusted for net foreign travel spending in lines 93–115 are calculated as consumer expenditures in the United States by U.S. residents in lines 47–69 plus spending by U.S. residents abroad in lines 70–92.

References

Concepts and Methods of the U.S. Input-Output Accounts (Washington, DC: Bureau of Economic Analysis, 2009); www.bea.gov/industry/index.htm#benchmark_io.

Industry Economic Accounts Information Guide: U.S. Travel and Tourism Satellite Accounts (Washington, DC: Bureau of Economic Analysis, 2011); www.bea.gov/industry/iedguide.htm#TTSA.

"Chapter 5: Personal Consumption Expenditures," in *Concepts and Methods of the U.S. National Income and Product Accounts* (Washington, DC: Bureau of Economic Analysis, 2010); www.bea.gov/methodologies/index.htm#national_meth.

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Steven L. Zemanek, "U.S. Travel and Tourism Satellite Accounts for 2007–2010," *SURVEY OF CURRENT BUSINESS* 91 (June 2011): 29–42; www.bea.gov.

9. This definition of medical services is in paragraph 1.5.8 of "Other private services," *U.S. International Transactions Accounts: Concepts and Estimation Methods* on BEA's Web site.

Table 4 follows.

Table 4. Derivation of Personal Consumption Expenditures (PCE) Categories Adjusted for Net Foreign Travel Spending—Continues

[Billions of dollars]

Line		2002	2003	2004	2005	2006	2007	2008
1	Total consumer expenditures in the United States by U.S. residents and nonresidents ¹	7,448.4	7,809.4	8,275.0	8,808.5	9,302.5	9,781.5	10,058.2
2	Goods	2,610.0	2,728.0	2,892.1	3,076.7	3,224.7	3,363.9	3,381.7
3	Durable goods	992.1	1,019.9	1,072.9	1,123.4	1,155.0	1,188.4	1,108.9
4	Nondurable goods	1,617.9	1,708.1	1,819.3	1,953.4	2,069.8	2,175.5	2,272.8
	<i>Of which:</i>							
5	Gasoline and other motor fuel	156.8	188.8	227.2	278.1	308.0	335.8	377.3
6	Food and beverages purchased for off-premises consumption	569.6	587.5	613.0	644.5	674.2	711.2	746.4
7	Clothing and footwear	278.8	286.2	298.7	314.0	327.3	335.4	330.9
8	Services	4,838.4	5,081.4	5,382.9	5,731.8	6,077.8	6,417.6	6,676.6
9	Household consumption expenditures (for services)	4,633.4	4,870.1	5,173.5	5,520.1	5,837.8	6,163.7	6,392.0
10	Housing and utilities	1,334.8	1,393.9	1,462.4	1,582.6	1,686.2	1,756.2	1,831.0
11	Health care	1,082.9	1,148.2	1,228.5	1,308.9	1,373.7	1,457.7	1,532.6
12	Transportation services	256.7	263.2	273.7	286.0	297.5	307.0	305.9
	<i>Of which:</i>							
13	Public transportation	64.9	69.0	73.8	76.3	80.2	82.7	84.0
	<i>Of which:</i>							
14	Air transportation	39.5	43.3	46.2	47.7	49.4	51.6	51.6
15	Recreation services	272.8	290.1	313.3	328.2	351.4	375.4	381.9
	<i>Of which:</i>							
16	Membership clubs, sports centers, parks, theaters, and museums	97.5	102.7	108.6	115.2	123.1	131.8	135.0
17	Gambling	74.1	80.7	89.0	92.9	101.1	105.7	103.8
18	Food services and accommodations	438.2	464.2	499.1	533.9	570.2	600.5	618.3
	<i>Of which:</i>							
19	Purchased meals and beverages	374.9	396.2	423.7	449.5	477.0	500.7	514.9
20	Hotels and motels	42.7	45.4	51.1	57.6	63.4	68.0	69.8
21	Other services (including financial services and insurance)	1,248.0	1,310.6	1,396.5	1,480.5	1,558.8	1,666.9	1,722.2
	<i>Of which:</i>							
22	Education	139.8	149.5	158.9	170.3	182.4	195.7	209.3
23	Final consumption expenditures of nonprofit institutions serving households	205.0	211.3	209.4	211.7	240.0	253.9	284.6
24	Less: Expenditures in the United States by nonresidents (travel exports) ²	87.3	85.7	96.7	104.7	110.1	123.1	142.5
25	Goods	20.2	20.1	24.3	26.0	25.5	30.6	34.3
26	Durable goods	1.3	1.3	1.5	1.6	1.6	1.9	2.1
27	Nondurable goods	18.8	18.7	22.8	24.3	23.9	28.7	32.1
	<i>Of which:</i>							
28	Gasoline and other motor fuel	1.9	1.9	2.3	2.4	2.4	2.9	3.2
29	Food and beverages purchased for off-premises consumption	7.1	6.9	8.1	8.5	8.3	9.9	11.2
30	Clothing and footwear	3.5	3.4	4.0	4.1	4.0	4.7	5.0
31	Services	67.1	65.7	72.4	78.8	84.5	92.6	108.3
32	Household consumption expenditures (for services)	66.8	65.4	72.1	78.5	84.3	92.3	107.9
33	Housing and utilities	2.8	2.7	2.5	2.9	3.9	4.0	4.0
34	Health care	1.5	1.6	1.7	2.0	2.2	2.3	2.5
35	Transportation services	10.7	10.3	11.2	11.6	12.5	13.1	14.8
	<i>Of which:</i>							
36	Public transportation	8.6	8.4	9.3	9.5	10.3	10.9	12.4
	<i>Of which:</i>							
37	Air transportation	6.2	6.1	6.7	7.5	8.0	8.5	9.8
38	Recreation services	9.7	9.6	11.0	12.0	13.1	14.0	16.7
	<i>Of which:</i>							
39	Membership clubs, sports centers, parks, theaters, and museums	3.4	3.2	3.4	3.8	4.2	3.8	4.9
40	Gambling	5.4	5.4	6.4	6.9	7.3	8.8	10.6
41	Food services and accommodations	32.3	31.0	35.3	39.1	40.7	46.6	55.6
	<i>Of which:</i>							
42	Purchased meals and beverages	16.3	15.9	17.6	19.5	20.2	23.4	27.5
43	Hotels and motels	16.0	15.2	17.7	19.6	20.6	24.7	28.1
44	Other services (including financial services and insurance)	9.9	10.3	10.5	11.0	11.9	12.3	14.2
	<i>Of which:</i>							
45	Education	8.8	9.3	9.5	9.8	10.3	11.2	12.6
46	Final consumption expenditures of nonprofit institutions serving households	0.3	0.3	0.3	0.3	0.3	0.3	0.4
47	Equals: Total consumer expenditures in the United States by U.S. residents	7,361.1	7,723.7	8,178.3	8,703.8	9,192.5	9,658.4	9,915.7
48	Goods	2,589.8	2,708.0	2,867.8	3,050.8	3,199.2	3,333.4	3,347.4
49	Durable goods	990.8	1,018.6	1,071.3	1,121.7	1,153.3	1,186.5	1,106.7
50	Nondurable goods	1,599.0	1,689.4	1,796.5	1,929.0	2,045.9	2,146.8	2,240.7
	<i>Of which:</i>							
51	Gasoline and other motor fuel	154.9	186.9	224.9	275.7	305.6	332.9	374.1
52	Food and beverages purchased for off-premises consumption	562.5	580.6	604.8	636.0	665.9	701.3	735.2
53	Clothing and footwear	275.4	282.8	294.7	309.9	323.3	330.7	325.9
54	Services	4,771.3	5,015.7	5,310.5	5,653.0	5,993.2	6,325.0	6,568.3
55	Household consumption expenditures (for services)	4,566.6	4,804.7	5,101.4	5,441.6	5,753.6	6,071.4	6,284.1
56	Housing and utilities	1,332.0	1,391.2	1,459.8	1,579.6	1,682.3	1,752.2	1,827.0
57	Health care	1,081.4	1,146.6	1,226.8	1,306.9	1,371.5	1,455.4	1,530.1
58	Transportation services	246.0	252.9	262.5	274.4	285.0	294.0	291.2
	<i>Of which:</i>							
59	Public transportation	56.4	60.6	64.5	66.8	69.9	71.8	71.6
	<i>Of which:</i>							
60	Air transportation	33.3	37.2	39.4	40.2	41.4	43.1	41.8

1. Total consumer expenditures is equal to currently published total PCE excluding net foreign travel.

2. The estimates are from line 110 in NIPA table 2.4.5 and line 130 in NIPA table 2.5.5.

Table 4. Derivation of Personal Consumption Expenditures (PCE) Categories Adjusted for Net Foreign Travel Spending—Table Ends
[Billions of dollars]

Line		2002	2003	2004	2005	2006	2007	2008
61	Recreation services	263.1	280.5	302.3	316.2	338.3	361.4	365.2
	<i>Of which:</i>							
62	Membership clubs, sports centers, parks, theaters, and museums	94.1	99.5	105.2	111.4	118.9	128.0	130.2
63	Gambling.....	68.7	75.2	82.6	86.0	93.7	96.9	93.2
64	Food services and accommodations	405.9	433.1	463.8	494.8	529.5	553.9	562.6
	<i>Of which:</i>							
65	Purchased meals and beverages.....	358.6	380.4	406.1	430.0	456.8	477.4	487.3
66	Hotels and motels	26.7	30.3	33.4	38.0	42.8	43.3	41.7
67	Other services (including financial services and insurance)	1,238.1	1,300.3	1,386.1	1,469.5	1,546.9	1,654.6	1,708.0
	<i>Of which:</i>							
68	Education	131.0	140.2	149.4	160.5	172.1	184.5	196.7
69	Final consumption expenditures of nonprofit institutions serving households	204.7	211.0	209.1	211.4	239.7	253.6	284.2
70	Plus: Expenditures of U.S. residents abroad (travel imports) ³	78.1	80.5	92.3	99.8	108.5	113.9	119.8
71	Goods	10.2	10.4	12.4	12.3	12.0	12.9	12.3
72	Durable goods	0.6	0.6	0.7	0.7	0.7	0.8	0.7
73	Nondurable goods	9.6	9.8	11.7	11.6	11.3	12.1	11.6
	<i>Of which:</i>							
74	Gasoline and other motor fuel.....	0.9	0.9	1.0	1.1	1.2	1.2	1.2
75	Food and beverages purchased for off-premises consumption	3.4	3.3	3.9	3.8	3.6	3.9	3.8
76	Clothing and footwear	1.7	1.6	1.9	1.9	1.8	1.9	1.7
77	Services	67.9	70.1	79.9	87.5	96.5	101.0	107.5
78	Household consumption expenditures (for services)	67.8	70.0	79.8	87.3	96.4	100.9	107.3
79	Housing and utilities	2.9	2.6	2.9	3.1	3.6	3.3	3.7
80	Health care	0.2	0.2	0.4	0.5	0.6	0.7	0.8
81	Transportation services	32.7	35.1	40.3	44.8	50.7	52.5	54.8
	<i>Of which:</i>							
82	Public transportation	31.6	34.1	39.2	43.8	49.7	51.6	53.9
	<i>Of which:</i>							
83	Air transportation.....	24.8	26.9	31.5	35.2	39.6	41.4	43.3
84	Recreation services	6.2	6.1	7.0	7.1	7.6	7.4	7.5
	<i>Of which:</i>							
85	Membership clubs, sports centers, parks, theaters, and museums	2.8	2.6	2.9	3.0	3.2	3.0	3.1
86	Gambling.....	2.9	3.0	3.5	3.4	3.6	3.9	4.0
87	Food services and accommodations	22.3	22.4	25.2	27.3	28.7	31.8	34.9
	<i>Of which:</i>							
88	Purchased meals and beverages.....	10.8	10.7	12.4	13.0	13.4	14.0	14.4
89	Hotels and motels	9.4	9.7	10.9	11.8	12.9	14.5	16.5
90	Other services (including financial services and insurance)	3.8	4.0	4.5	5.0	5.7	5.7	6.2
	<i>Of which:</i>							
91	Education	1.9	2.2	2.5	2.8	3.1	3.3	3.6
92	Final consumption expenditures of nonprofit institutions serving households	0.1	0.1	0.1	0.1	0.1	0.1	0.1
93	Equals: PCE categories adjusted for net foreign travel spending ⁴	7,439.2	7,804.1	8,270.6	8,803.5	9,301.0	9,772.3	10,035.5
94	Goods	2,600.0	2,718.4	2,880.2	3,063.1	3,211.2	3,346.3	3,359.8
95	Durable goods	991.4	1,019.2	1,072.0	1,122.4	1,154.1	1,187.3	1,107.5
96	Nondurable goods	1,608.6	1,699.2	1,808.2	1,940.6	2,057.2	2,159.0	2,252.3
	<i>Of which:</i>							
97	Gasoline and other motor fuel.....	155.8	187.8	225.9	276.8	306.9	334.2	375.3
98	Food and beverages purchased for off-premises consumption	565.9	584.0	608.8	639.8	669.5	705.2	739.0
99	Clothing and footwear	277.0	284.4	296.6	311.7	325.1	332.6	327.6
100	Services	4,839.2	5,085.8	5,390.4	5,740.5	6,089.8	6,426.0	6,675.8
101	Household consumption expenditures (for services)	4,634.3	4,874.6	5,181.1	5,528.9	5,850.0	6,172.3	6,391.4
102	Housing and utilities	1,334.8	1,393.8	1,462.7	1,582.8	1,685.9	1,755.5	1,830.7
103	Health care	1,081.6	1,146.7	1,227.2	1,307.4	1,372.1	1,456.0	1,530.8
104	Transportation services	278.8	288.1	302.8	319.2	335.8	346.5	345.9
	<i>Of which:</i>							
105	Public transportation	88.0	94.7	103.7	110.6	119.6	123.4	125.5
	<i>Of which:</i>							
106	Air transportation.....	58.1	64.1	70.9	75.4	80.9	84.6	85.2
107	Recreation services	269.3	286.6	309.3	323.3	345.9	368.8	372.7
	<i>Of which:</i>							
108	Membership clubs, sports centers, parks, theaters, and museums	96.9	102.1	108.0	114.4	122.1	130.9	133.3
109	Gambling.....	71.5	78.2	86.1	89.5	97.4	100.8	97.2
110	Food services and accommodations	428.3	455.5	489.0	522.1	558.2	585.7	597.6
	<i>Of which:</i>							
111	Purchased meals and beverages.....	369.4	391.1	418.5	443.0	470.2	491.4	501.7
112	Hotels and motels	36.1	40.0	44.2	49.9	55.7	57.8	58.3
113	Other services (including financial services and insurance)	1,241.9	1,304.3	1,390.6	1,474.6	1,552.6	1,660.3	1,714.3
	<i>Of which:</i>							
114	Education	132.9	142.4	151.8	163.3	175.3	187.8	200.3
115	Final consumption expenditures of nonprofit institutions serving households	204.9	211.1	209.2	211.6	239.8	253.7	284.4

3. The estimates are from line 109 in NIPA table 2.4.5 and line 129 in NIPA table 2.5.5.

4. These PCE categories are adjusted to include net spending for foreign travel, which is calculated as spending by U.S. residents abroad, minus spending by nonresidents in the United States.