

Consumption Equation Estimation PI+ v1.7

July 2014

The consumption equation for REMI PI+ is an updated and improved version of an earlier formulation of Treyz and Petraglia (2001).¹ The equation uses comprehensive data sets and takes into account a variety of effects that influence regional consumption. The local consumption of commodity j for time period t can be expressed as the product of seven regional factors that are normalized to one.

$$C_{j,t}^k = 1[\text{calibration adjustment}] \times 2[\text{age composition effect}] \times 3[\text{regional effect}] \\ \times 4[\text{local income effect}] \times 5[\text{local relative price effect}] \\ \times 6[\text{national consumption per capital effect}] \times 7[\text{local population}]$$

More specifically, the equation can be written as

(1). Calibration Effect	(2). Age Composition Effect	(3). Regional Effect	(4). Marginal Income Effect	(5). Region- Specific Marginal Price Effect	(6). U.S. Forecast Effect	(7). Local Population
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$$C_{j,t}^k = \left[\frac{\left(\frac{YD_T^k}{N_T^k} \right)}{\left(\frac{YD_T^u}{N_T^u} \right)} \right] \times \left[\frac{\sum_l^7 (\%DG_{l,t}^R \times PC_{l,j}^u)}{\sum_l^7 (\%DG_{l,t}^u \times PC_{l,j}^u)} \right] \times \left[\frac{\frac{\bar{C}_j^R}{\bar{C}_j^u}}{\text{Age Comp Effect (2)}} \right] \times \left[\frac{\left(\frac{RYD_t^k}{N_t^k} \right)}{\left(\frac{RYD_T^k}{N_T^k} \right)} \right]^{\beta_j} \times \left[\frac{\left(\frac{CIFP_{j,t}^k}{\bar{P}_t^k} \right)}{\left(\frac{P_{j,t}^u}{\bar{P}_t^u} \right)} \right]^{Y_j} \times \left[\frac{C_{j,t}^u}{N_t^u} \right] \times N_t^k$$

where

YD = nominal disposable income;

N = population;

$\%DG$ = percentage of demographic age group;

PC = propensity to consume;

C = consumption;

\bar{C} = average household consumption;

RYD = real disposable income;

¹ Consumption Equations of a Multiregional Forecasting and Policy Analysis Model, G.I.Treyz and L.M.Petraglia, Regional Science Perspectives in Economic Analysis, Elsevier Science B.V. 287-300, 2001.

P = price = *CIFP*;

\bar{P} = average price of all the commodities that make up total consumption;

k = local region;

u = entire nation;

R = major region (northeast, Midwest, south, or west);

j = consumption commodity;

t = time period;

T = last history year time period;

l = seven age groups based on the age of the reference person;

β_j = marginal income elasticities (estimated separately for luxuries and necessities);

γ_j = marginal price elasticities (estimated separately for luxuries and necessities).

In this equation, the propensity to consume, the regional effect (3), the income elasticity β_j , and the price elasticity γ_j are predetermined. For PI+ v1.7, we re-estimated the income and price elasticities, adjusted the luxuries and necessities classification of consumption commodities, and updated the age composition effect and the regional effect using the latest available data.

Estimating Elasticities

(4) (5)

$$\left[\begin{array}{c} \left(\frac{RYD_t^k}{N_t^k} \right)^{-\beta_j} \\ \left(\frac{RYD_t^u}{N_t^u} \right) \\ \left(\frac{RYD_T^k}{N_T^k} \right) \\ \left(\frac{RYD_T^u}{N_T^u} \right) \end{array} \right] \times \left[\begin{array}{c} \left(\frac{CIFP_{j,t}^k}{\bar{P}_t^k} \right)^{\gamma_j} \\ \left(\frac{P_{j,t}^u}{\bar{P}_t^u} \right) \\ \left(\frac{P_{j,T}^k}{\bar{P}_T^k} \right) \\ \left(\frac{P_{j,T}^u}{\bar{P}_T^u} \right) \end{array} \right]$$

Term (4) and (5) from the consumption equation reflect the changes in relative average consumption of commodity j due to changes in relative real per capita disposable income and relative price index of the same commodity. Based on term (4) and (5), we estimate the income elasticity and the price elasticity for each consumption commodity. To do so, we need to transform term (4) and (5) of the consumption equation to an OLS regression equation, such that the change of per capita consumption expenditure on

commodity j relative to the national per capita consumption of j depends on changes in relative real per capita disposable income and relative price. β_j and γ_j are the coefficients of the independent variables, which need to be estimated.

The data used for these regressions are annual time series data from 1990 to 2012 for the U.S. The disposable income, population, and consumption expenditure and price indexes by commodity data are from the BEA National Income and Product Accounts. The regression variables are in the form of annual percentage change.

The estimated income elasticity β varies from -0.96 to 10.52. Because of the limited number of observations of the regressions by commodity, we divide the commodities into two categories and re-estimate the elasticities for each category. According to the values of β 's, we classify all commodities where income elasticity is greater than one as luxuries and those with income elasticities less than one as necessities. Then, we apply the panel data approach with that same regression settings to estimate the income and price elasticities for luxuries and necessities separately.

Last, the elasticities are normalized based on the following equation.

$$\beta_N \times W_N + \beta_L \times W_L = 1$$

where

β is the income elasticity;

W is the proportion of necessities/luxuries as share of total consumption expenditure;

N stands for necessities;

L stands for luxuries.

The elasticity estimation results and commodity classifications are shown in Table 1. The income elasticity for luxuries is 1.729, meaning that a one percentage change in relative per capita disposable income will cause the relative per capita consumption expenditure on the luxury commodities to increase 1.729 percent. The income elasticity for necessities is 0.614, which means a one percent change in relative per capita income will only raise the relative spending on necessities by 0.614 percent. Similarly, the price elasticity estimates indicate that a one percent change in relative price will decrease the relative expenditures on luxuries by 1.649 percent and necessities by 0.657 percent.

Table 1. Consumption Commodity Classification for PI+ v1.7

SectorID	Label	Classification	Income Elasticity	Price Elasticity
1	New motor vehicles	Luxuries	1.729	-1.649
2	Net purchases of used motor vehicles	Luxuries	1.729	-1.649
3	Motor vehicle parts and accessories	Necessities	0.614	-0.657
4	Furniture and furnishings	Luxuries	1.729	-1.649
5	Household appliances	Necessities	0.614	-0.657
6	Glassware, tableware, and household utensils	Luxuries	1.729	-1.649
7	Tools and equipment for house and garden	Luxuries	1.729	-1.649
8	Video, audio, photographic, and information processing equipment and media	Luxuries	1.729	-1.649
9	Sporting equipment, supplies, guns, and ammunition	Luxuries	1.729	-1.649
10	Sports and recreational vehicles	Luxuries	1.729	-1.649
11	Musical instruments	Luxuries	1.729	-1.649
12	Jewelry and watches	Luxuries	1.729	-1.649
13	Therapeutic appliances and equipment	Luxuries	1.729	-1.649
14	Books, educational and recreational	Necessities	0.614	-0.657
15	Luggage and similar personal items	Necessities	0.614	-0.657
16	Telephone and facsimile equipment	Luxuries	1.729	-1.649
17	Food and nonalcoholic beverages purchased for off-premises consumption	Necessities	0.614	-0.657
18	Alcoholic beverages purchased for off-premises consumption	Necessities	0.614	-0.657
19	Food produced and consumed on farms	Necessities	0.614	-0.657
20	Men's and boys' clothing	Necessities	0.614	-0.657
21	Women's and girls' clothing	Luxuries	1.729	-1.649
22	Children's and infants' clothing	Necessities	0.614	-0.657
23	Other clothing materials and footwear	Necessities	0.614	-0.657
24	Motor vehicle fuels, lubricants, and fluids	Necessities	0.614	-0.657
25	Fuel oil and other fuels	Necessities	0.614	-0.657
26	Pharmaceutical and other medical products	Luxuries	1.729	-1.649
27	Recreational items	Necessities	0.614	-0.657
28	Household supplies	Necessities	0.614	-0.657
29	Personal care products	Necessities	0.614	-0.657
30	Tobacco	Necessities	0.614	-0.657
31	Magazines, newspapers, and stationery	Necessities	0.614	-0.657
32	Net expenditures abroad by U.S. residents	Luxuries	1.729	-1.649
33	Rental of tenant-occupied nonfarm housing	Necessities	0.614	-0.657
34	Imputed rental of owner-occupied nonfarm housing	Necessities	0.614	-0.657
35	Rental value of farm dwellings	Necessities	0.614	-0.657
36	Group housing	Necessities	0.614	-0.657
37	Water supply and sanitation	Necessities	0.614	-0.657
38	Electricity	Necessities	0.614	-0.657
39	Natural gas	Necessities	0.614	-0.657
40	Physician services	Luxuries	1.729	-1.649

41	Dental services	Necessities	0.614	-0.657
42	Paramedical services	Necessities	0.614	-0.657
43	Hospitals	Necessities	0.614	-0.657
44	Nursing homes	Necessities	0.614	-0.657
45	Motor vehicle maintenance and repair	Luxuries	1.729	-1.649
46	Other motor vehicle services	Luxuries	1.729	-1.649
47	Ground transportation	Luxuries	1.729	-1.649
48	Air transportation	Luxuries	1.729	-1.649
49	Water transportation	Luxuries	1.729	-1.649
50	Membership clubs, sports centers, parks, theaters, and museums	Luxuries	1.729	-1.649
51	Audio-video, photographic, and information processing equipment services	Necessities	0.614	-0.657
52	Gambling	Luxuries	1.729	-1.649
53	Other recreational services	Luxuries	1.729	-1.649
54	Purchased meals and beverages	Necessities	0.614	-0.657
55	Food furnished to employees (including military)	Necessities	0.614	-0.657
56	Accommodations	Necessities	0.614	-0.657
57	Financial services furnished without payment	Luxuries	1.729	-1.649
58	Financial service charges, fees, and commissions	Luxuries	1.729	-1.649
59	Life insurance	Necessities	0.614	-0.657
60	Net household insurance	Luxuries	1.729	-1.649
61	Net health insurance	Luxuries	1.729	-1.649
62	Net motor vehicle and other transportation insurance	Necessities	0.614	-0.657
63	Telecommunication services	Luxuries	1.729	-1.649
64	Postal and delivery services	Necessities	0.614	-0.657
65	Internet access	Luxuries	1.729	-1.649
66	Higher education	Necessities	0.614	-0.657
67	Nursery, elementary, and secondary schools	Necessities	0.614	-0.657
68	Commercial and vocational schools	Luxuries	1.729	-1.649
69	Professional and other services	Necessities	0.614	-0.657
70	Personal care and clothing services	Luxuries	1.729	-1.649
71	Social services and religious activities	Necessities	0.614	-0.657
72	Household maintenance	Luxuries	1.729	-1.649
73	Foreign travel by U.S. residents	Luxuries	1.729	-1.649
74	Expenditures in the United States by nonresidents	Necessities	0.614	-0.657
75	Final consumption expenditures of nonprofit institutions serving households	Luxuries	1.729	-1.649

Estimating Age and Regional Effects

Age Composition Effect:

$$Age\ Composition\ Effect = \frac{\sum_l^7 (\%DG_{l,t}^R \times PC_{l,j}^u)}{\sum_l^7 (\%DG_{l,t}^u \times PC_{l,j}^u)}$$

Term (2) of the consumption equation reflects the age composition effect on regional consumption. The data divide consumers into 7 age group according to the age of the reference person. Table 2 shows the 2012 population proportion in major regions. The population in the west are relatively younger, while the northeast has relatively elder population.

Table 2. Population Proportion of the U.S. Total

	20 years and older	20-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	75 years and older
Northeast	75.40%	6.97%	13.08%	12.79%	14.97%	12.86%	7.85%	6.89%
Midwest	73.62%	7.05%	12.98%	12.42%	14.31%	12.73%	7.65%	6.48%
South	73.47%	7.22%	13.48%	13.04%	13.93%	12.08%	7.84%	5.88%
West	72.93%	7.46%	14.23%	13.23%	13.53%	11.80%	7.16%	5.51%
US	73.72%	7.19%	13.48%	12.91%	14.10%	12.29%	7.64%	6.10%

Propensity to consume $PC_{l,j}$ is determined by the average consumer expenditure by age group l on commodity j relative to the average expenditure of all age groups on commodity j in the U.S. Propensity to consume certain commodities differs largely by age group. For example, households under 25 years old spend 49.4% of the average expenditures on new motor vehicles, while households 25-34 years old spend 112.4% of the average expenditure in the same category. The relative propensity to consume is weighted by the age composition of the region, so that the regional age structure will make a difference endogenously for the consumption of each commodity.

Regional Effect:

$$Regional\ Effect = \frac{\frac{\bar{C}_j^R}{\bar{C}_j^U}}{Age\ Comp\ Effect\ (2)}$$

Based on the available data, the nation is divided into 4 major regions: northeast, Midwest, south, and west. Data shows that families from different regions have different consumption patterns. For example, families in the Northeast spend 123.6% of the U.S. average expenditure on rental of nonfarm housing, while families in the Midwest spend 71.6% of the U.S. average expenditure in the same category. The regional effect term in the consumption equation is determined by the regional average consumption on commodity j relative to the national average expenditure, divided by the age composition effect computed in the last step. We divide the regional relative consumption expenditure by the age composition effect to avoid double-counting the age composition effect.

The consumption by commodity data used for these estimates are based on the annual calendar year 2012 tables from the BLS Consumer Expenditure Survey. The demographic composition data is from the Census 2012 population estimates. Table 3 and Table 4 present results of the age composition effect and regional effect estimates.

Table 3. Age Composition Effect

SectorID	Label	Northeast	Midwest	South	West
1	New motor vehicles	1.0223	0.9977	0.9975	0.9892
2	Net purchases of used motor vehicles	1.0087	0.9882	0.9992	1.0054
3	Motor vehicle parts and accessories	1.0087	0.9882	0.9992	1.0054
4	Furniture and furnishings	1.0169	0.9934	0.9977	0.9969
5	Household appliances	1.0239	0.9977	0.9980	0.9872
6	Glassware, tableware, and household utensils	1.0249	1.0016	0.9962	0.9858
7	Tools and equipment for house and garden	1.0220	0.9980	0.9964	0.9908
8	Video, audio, photographic, and information processing equipment and media	1.0220	0.9980	0.9964	0.9908
9	Sporting equipment, supplies, guns, and ammunition	1.0220	0.9980	0.9964	0.9908
10	Sports and recreational vehicles	1.0220	0.9980	0.9964	0.9908
11	Musical instruments	1.0220	0.9980	0.9964	0.9908
12	Jewelry and watches	1.0166	0.9930	0.9979	0.9971
13	Therapeutic appliances and equipment	1.0220	0.9980	0.9964	0.9908
14	Books, educational and recreational	1.0343	1.0063	0.9954	0.9756
15	Luggage and similar personal items	1.0280	1.0013	0.9969	0.9827

16	Telephone and facsimile equipment	1.0220	0.9980	0.9964	0.9908
17	Food and nonalcoholic beverages purchased for off-premises consumption	1.0234	0.9980	0.9969	0.9890
18	Alcoholic beverages purchased for off-premises consumption	1.0165	0.9945	0.9978	0.9960
19	Food produced and consumed on farms	1.0228	0.9977	0.9970	0.9895
20	Men's and boys' clothing	1.0163	0.9921	0.9982	0.9977
21	Women's and girls' clothing	1.0193	0.9953	0.9974	0.9938
22	Children's and infants' clothing	0.9927	0.9781	1.0013	1.0235
23	Other clothing materials and footwear	1.0163	0.9919	0.9980	0.9982
24	Motor vehicle fuels, lubricants, and fluids	1.0200	0.9958	0.9973	0.9929
25	Fuel oil and other fuels	1.0391	1.0087	0.9948	0.9707
26	Pharmaceutical and other medical products	1.0419	1.0122	0.9943	0.9663
27	Recreational items	1.0231	0.9978	0.9971	0.9891
28	Household supplies	1.0267	1.0011	0.9963	0.9846
29	Personal care products	1.0245	0.9991	0.9969	0.9872
30	Tobacco	1.0201	0.9966	0.9968	0.9930
31	Magazines, newspapers, and stationery	1.0343	1.0063	0.9954	0.9756
32	Net expenditures abroad by U.S. residents	1.0280	1.0013	0.9969	0.9827
33	Rental of tenant-occupied nonfarm housing	1.0058	0.9870	0.9984	1.0101
34	Imputed rental of owner-occupied nonfarm housing	1.0276	1.0001	0.9966	0.9843
35	Rental value of farm dwellings	1.0058	0.9870	0.9984	1.0101
36	Group housing	1.0357	1.0082	0.9951	0.9733
37	Water supply and sanitation	1.0297	1.0023	0.9959	0.9820
38	Electricity	1.0265	1.0003	0.9964	0.9854
39	Natural gas	1.0287	1.0014	0.9960	0.9834
40	Physician services	1.0331	1.0066	0.9948	0.9771
41	Dental services	1.0331	1.0066	0.9948	0.9771
42	Paramedical services	1.0331	1.0066	0.9948	0.9771
43	Hospitals	1.0331	1.0066	0.9948	0.9771
44	Nursing homes	1.0331	1.0066	0.9948	0.9771
45	Motor vehicle maintenance and repair	1.0247	0.9999	0.9967	0.9866
46	Other motor vehicle services	1.0255	1.0003	0.9963	0.9863
47	Ground transportation	1.0257	1.0009	0.9964	0.9854
48	Air transportation	1.0257	1.0009	0.9964	0.9854
49	Water transportation	1.0257	1.0009	0.9964	0.9854
50	Membership clubs, sports centers, parks, theaters, and museums	1.0217	0.9961	0.9977	0.9907
51	Audio-video, photographic, and information processing equipment services	1.0235	0.9983	0.9968	0.9888
52	Gambling	1.0207	0.9946	0.9975	0.9932
53	Other recreational services	1.0207	0.9946	0.9975	0.9932
54	Purchased meals and beverages	1.0202	0.9960	0.9971	0.9931
55	Food furnished to employees (including military)	1.0202	0.9960	0.9971	0.9931
56	Accommodations	1.0357	1.0082	0.9951	0.9733
57	Financial services furnished without payment	1.0280	1.0013	0.9969	0.9827
58	Financial service charges, fees, and commissions	1.0280	1.0013	0.9969	0.9827

59	Life insurance	1.0366	1.0081	0.9955	0.9721
60	Net household insurance	1.0366	1.0081	0.9955	0.9721
61	Net health insurance	1.0375	1.0076	0.9957	0.9715
62	Net motor vehicle and other transportation insurance	1.0303	1.0040	0.9950	0.9813
63	Telecommunication services	1.0229	0.9977	0.9967	0.9900
64	Postal and delivery services	1.0280	1.0013	0.9969	0.9827
65	Internet access	1.0280	1.0013	0.9969	0.9827
66	Higher education	1.0218	0.9977	0.9948	0.9938
67	Nursery, elementary, and secondary schools	1.0218	0.9977	0.9948	0.9938
68	Commercial and vocational schools	1.0218	0.9977	0.9948	0.9938
69	Professional and other services	1.0280	1.0013	0.9969	0.9827
70	Personal care and clothing services	1.0245	0.9991	0.9969	0.9872
71	Social services and religious activities	1.0280	1.0013	0.9969	0.9827
72	Household maintenance	1.0213	0.9956	0.9971	0.9925
73	Foreign travel by U.S. residents	1.0257	1.0009	0.9964	0.9854
74	Expenditures in the United States by nonresidents	1.0280	1.0013	0.9969	0.9827
75	Final consumption expenditures of nonprofit institutions serving households	1.0309	1.0030	0.9954	0.9811

Table 4. Regional Effect

SectorID	Label	Northeast	Midwest	South	West
1	New motor vehicles	0.9537	0.9345	1.0447	1.0264
2	Net purchases of used motor vehicles	0.8404	1.0973	1.0971	0.8752
3	Motor vehicle parts and accessories	0.8404	1.0973	1.0971	0.8752
4	Furniture and furnishings	0.9608	1.0092	1.0254	0.9877
5	Household appliances	1.0857	0.9870	0.9766	0.9924
6	Glassware, tableware, and household utensils	0.8164	0.9576	1.0141	1.1593
7	Tools and equipment for house and garden	0.8396	0.8904	1.0901	1.0976
8	Video, audio, photographic, and information processing equipment and media	0.8396	0.8904	1.0901	1.0976
9	Sporting equipment, supplies, guns, and ammunition	0.8396	0.8904	1.0901	1.0976
10	Sports and recreational vehicles	0.8396	0.8904	1.0901	1.0976
11	Musical instruments	0.8396	0.8904	1.0901	1.0976
12	Jewelry and watches	1.0387	0.9073	0.9594	1.1265
13	Therapeutic appliances and equipment	0.8396	0.8904	1.0901	1.0976
14	Books, educational and recreational	1.1886	0.9755	0.7558	1.2883
15	Luggage and similar personal items	1.1007	0.9734	0.8047	1.2681
16	Telephone and facsimile equipment	0.8396	0.8904	1.0901	1.0976
17	Food and nonalcoholic beverages purchased for off-premises consumption	1.0108	0.9982	0.9342	1.1016
18	Alcoholic beverages purchased for off-premises consumption	1.1670	0.9744	0.8333	1.1666
19	Food produced and consumed on farms	0.9402	1.0204	0.9477	1.1175
20	Men's and boys' clothing	1.0973	0.8770	0.9060	1.1989

21	Women's and girls' clothing	0.9597	0.9712	0.9676	1.1189
22	Children's and infants' clothing	1.1513	0.9737	1.0621	0.8375
23	Other clothing materials and footwear	1.0492	0.8803	1.0135	1.0567
24	Motor vehicle fuels, lubricants, and fluids	0.8904	0.9885	1.0416	1.0320
25	Fuel oil and other fuels	3.2525	0.6875	0.4182	0.3684
26	Pharmaceutical and other medical products	0.8424	1.0551	0.9921	1.0872
27	Recreational items	1.0217	0.9811	0.9267	1.1232
28	Household supplies	0.9532	0.9629	1.0020	1.0723
29	Personal care products	0.9870	0.9116	1.0031	1.0968
30	Tobacco	1.0453	1.0307	1.0999	0.7583
31	Magazines, newspapers, and stationery	1.1886	0.9755	0.7558	1.2883
32	Net expenditures abroad by U.S. residents	1.1007	0.9734	0.8047	1.2681
33	Rental of tenant-occupied nonfarm housing	1.2289	0.7257	0.8227	1.3723
34	Imputed rental of owner-occupied nonfarm housing	1.2020	0.9318	0.8528	1.1446
35	Rental value of farm dwellings	1.2289	0.7257	0.8227	1.3723
36	Group housing	1.2734	0.9231	0.8269	1.1319
37	Water supply and sanitation	0.7844	0.8229	1.0519	1.2705
38	Electricity	0.8984	0.9097	1.1750	0.8818
39	Natural gas	1.3648	1.3992	0.5901	0.9829
40	Physician services	0.9241	1.0159	0.8890	1.2308
41	Dental services	0.9241	1.0159	0.8890	1.2308
42	Paramedical services	0.9241	1.0159	0.8890	1.2308
43	Hospitals	0.9241	1.0159	0.8890	1.2308
44	Nursing homes	0.9241	1.0159	0.8890	1.2308
45	Motor vehicle maintenance and repair	0.9771	0.9706	0.8961	1.2228
46	Other motor vehicle services	1.0229	0.9001	0.9812	1.1116
47	Ground transportation	1.5038	0.7963	0.6870	1.3069
48	Air transportation	1.5038	0.7963	0.6870	1.3069
49	Water transportation	1.5038	0.7963	0.6870	1.3069
50	Membership clubs, sports centers, parks, theaters, and museums	1.1541	1.0791	0.7117	1.2757
51	Audio-video, photographic, and information processing equipment services	1.0938	0.9249	1.0022	0.9917
52	Gambling	0.7395	0.9417	1.0163	1.2537
53	Other recreational services	0.7395	0.9417	1.0163	1.2537
54	Purchased meals and beverages	1.0637	0.9320	0.9378	1.1183
55	Food furnished to employees (including military)	1.0637	0.9320	0.9378	1.1183
56	Accommodations	1.2734	0.9231	0.8269	1.1319
57	Financial services furnished without payment	1.1007	0.9734	0.8047	1.2681
58	Financial service charges, fees, and commissions	1.1007	0.9734	0.8047	1.2681
59	Life insurance	0.9073	0.9386	1.1183	0.9326
60	Net household insurance	0.9073	0.9386	1.1183	0.9326
61	Net health insurance	1.0111	1.1051	0.9069	1.0384
62	Net motor vehicle and other transportation insurance	0.8982	0.8443	1.1047	1.0671
63	Telecommunication services	1.0329	0.9392	1.0211	0.9979

64	Postal and delivery services	1.1007	0.9734	0.8047	1.2681
65	Internet access	1.1007	0.9734	0.8047	1.2681
66	Higher education	1.4506	0.9799	0.7087	1.1321
67	Nursery, elementary, and secondary schools	1.4506	0.9799	0.7087	1.1321
68	Commercial and vocational schools	1.4506	0.9799	0.7087	1.1321
69	Professional and other services	1.1007	0.9734	0.8047	1.2681
70	Personal care and clothing services	0.9870	0.9116	1.0031	1.0968
71	Social services and religious activities	1.1007	0.9734	0.8047	1.2681
72	Household maintenance	1.2123	0.8433	0.8913	1.1588
73	Foreign travel by U.S. residents	1.5038	0.7963	0.6870	1.3069
74	Expenditures in the United States by nonresidents	1.1007	0.9734	0.8047	1.2681
75	Final consumption expenditures of nonprofit institutions serving households	0.8694	1.1280	0.9792	0.8176
