State Board of Equalization

ECONOMIC PERSPECTIVE

Discussion of Recent Economic Developments
Publication 329

Volume XVI, Number 3
August 2010

Taxable Spending and Income

One of the most well established ideas in economics is that as income increases, consumer spending on most goods also increases. Such goods are called "normal goods" in economic terminology. However, how much spending increases as income increases is quite variable. Understanding the degree to which spending increases as incomes increase helps to determine which income groups are most affected by sales and use or excise tax changes. The U.S. Bureau of Labor Statistics (BLS) regularly publishes data that can be used to quantify how much spending varies for different income groups.

BLS Consumer Expenditures Survey

The BLS conducts an ongoing survey of thousands of U.S. households to collect information on the buying habits of American consumers. The data collected are used in the calculation of the consumer price index, among other purposes. The survey provides more detailed information than is available elsewhere on household incomes and spending. While the BLS survey does not publish California data, the regional and metropolitan area data that the survey does publish indicates that spending habits for California tends to be similar to those of the nation as a whole.

Household Income Quintiles

One way that the BLS publishes consumer survey expenditure data is by household income quintiles. The BLS defines income relatively broadly, including public assistance and the value of food stamps. After households are ranked from lowest to highest-earning ones, five income groups called quintiles are established. Each quintile has the same approximate number of households.

Income Variation by Quintile

The BLS data show an average household income of $63,563 in 2008.[1] The BLS data also show that the lowest-earning quintile of households had an average income of $10,263, while the highest-earning household quintile had an average income of $158,652. Thus, the highest-earning quintile of households had incomes that averaged over 15 times higher than the lowest-earning quintile.

California-Taxable U.S. Spending By Quintile

The BLS does not consider California sales and use taxes in how their data are displayed. However, with knowledge of the California sales and use tax law, it is possible to make a general approximation of California-taxable BLS expenditure categories. We have tabulated such an approximate breakout by household income quintile.[2]

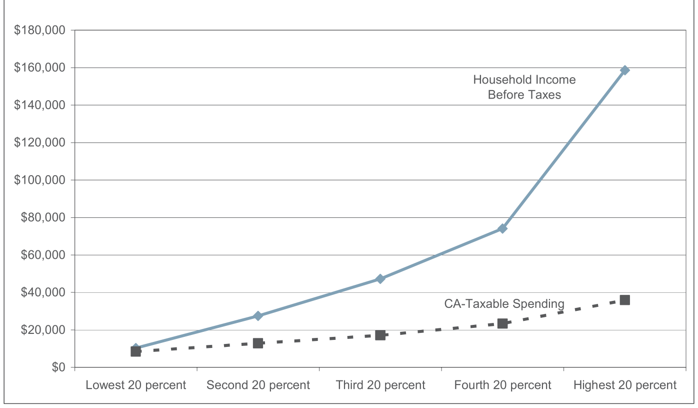
[1] In analyzing household incomes, averages are much higher than typical income, which is better represented by median income. High-earning households tend to bring the average up proportionally much more than the number of high-earning households would indicate. According to U.S. Census Bureau estimates, median income of U.S. households was estimated to have been $50,303 in 2008 (*Income, Poverty, and Health Insurance Coverage in the United States: 2008*, U.S. Census Bureau, September 2009).

[2] Spending in some BLS expenditure categories, such as "drugs" and "food away from home," cannot be accurately placed into taxable and nontaxable categories. Prescription drugs and certain types of food purchases are exempt, and we do not have more detailed data required to delineate taxable from nontaxable purchases. The data used to create the charts in this section are subject to these data limitations, and are meant only to analyze general trends.

Spending Increases With Incomes, but at a Much Lower Rate

Chart 1 shows income and California-taxable spending by quintile. As shown in the chart, spending increases as income increases for each quintile. However, incomes increase much faster than spending. As mentioned earlier, income in the highest quintile is over 15 times income in the lowest quintile. California-taxable spending goes from $8,422 in the lowest quintile to $35,883 in the highest quintile- about a four-fold increase.

Chart 1
U.S. Household Income and Spending on California-Taxable Goods in 2008 by Income Quintile



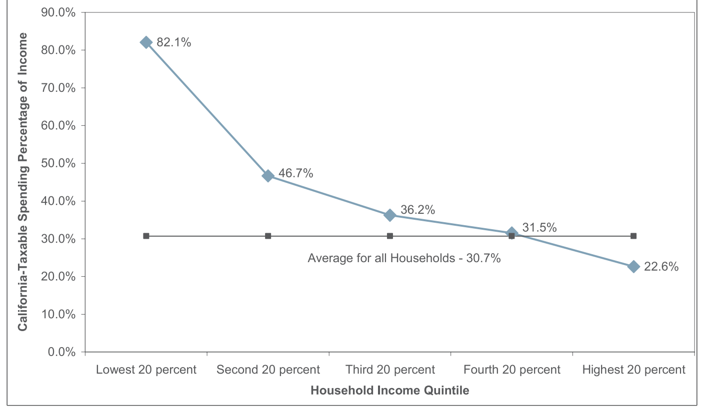
Percentages of Spending Fall as Incomes Rise

Chart 2 shows California-taxable spending as a proportion of income for each quintile. U.S. households on average spend 30.7 percent of their incomes on goods that are taxable in California. However, percentages of incomes spent on California-taxable items ranges from a high of 82.1 percent for the lowest-income quintile to a low of 22.6 percent for the highest-income quintile.

Variation of Trends Among Spending Categories

While spending on California-taxable goods increases as incomes increase as we see in Chart 1, there is much variation for individual goods. Economists define goods as "normal" if spending increases proportionately less than income increases, "luxury" goods if the increase is proportionately more than income, and "inferior" goods if spending declines with increases in income. For the BLS spending categories there are no luxury goods for all five quintiles. However, spending for certain goods clearly increases for each quintile, even if it may not necessarily increase proportionately more than income.

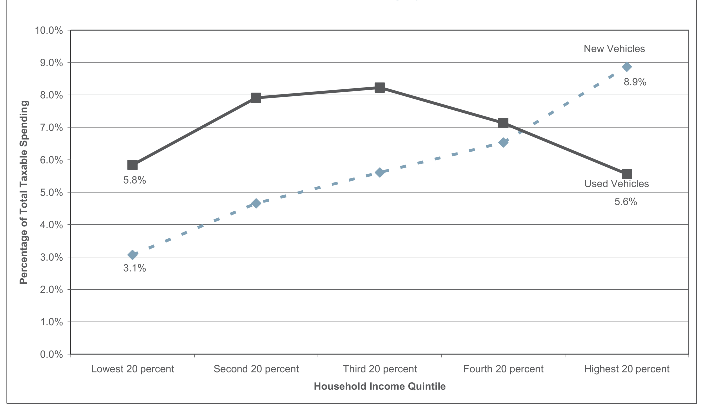
Chart 2
U.S. Taxable Spending to Income Ratios for California-Taxable Goods by Household Income Quintile



New Vehicles Substitute for Used Vehicles for Highest-Income Quintiles

New vehicles are an example of a good where spending increases for every quintile. As shown in Chart 3, spending on new vehicles increases from 3.1 percent of income for the lowest-earning quintile to 8.9 percent of income for the highest-earning quintile. Some of the spending increases may come from substitution of goods. For the two highest-income quintiles, as shown in Chart 3, the percentage of income spent on used cars goes down (from 8.2 percent in the third quintile to 5.6 percent in the highest-income quintile) while the percentage spent on new cars increases. It appears that some spending on new cars substitutes for spending on used cars.

Chart 3
U.S. 2008 Household Spending on New and Used Vehicles as Percentages of Total California-Taxable Spending by Income Quintile

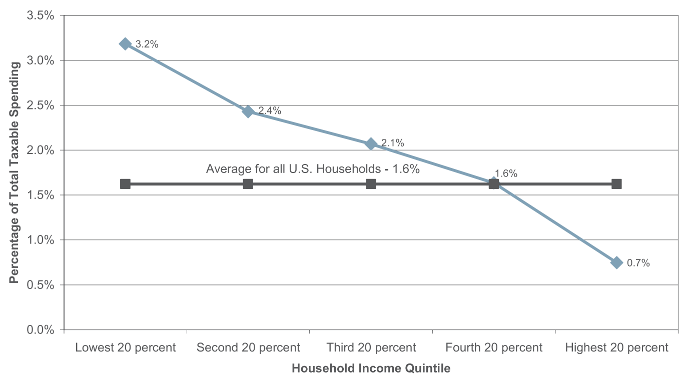


Cigarette and Tobacco Spending Show Unique Pattern

There is one BLS category of goods that is an inferior good in the highest-income quintile: spending on cigarette and tobacco products. Unlike any other BLS category, the percentage of income spent on cigarettes and tobacco products decreases with each quintile, as shown in Chart 4. The average U.S.

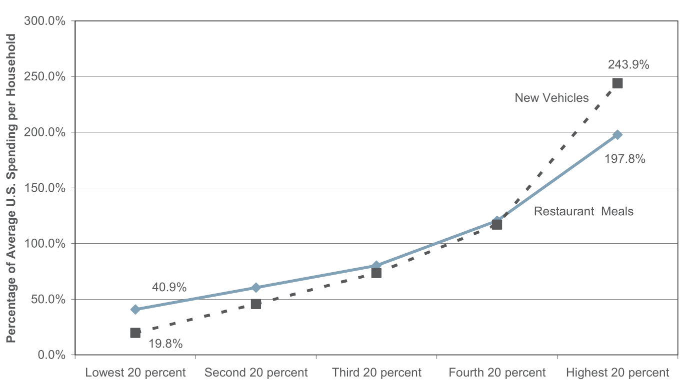
household spends 1.6 percent of their income on cigarettes and tobacco products. The lowest-income quintile spends 3.2 percent of their income on these products, while the highest-earning quintile spends only 0.7 percent of their income on them.

Chart 4
U.S. 2008 Household Spending on Cigarettes and Tobacco Products as a Percentage of Total California-Taxable Spending by Income Quintile



Another way to analyze these data is to calculate percentages of average spending for each quintile. For example, both restaurant meals and new vehicle spending increase for each quintile. As shown in Chart 5, the lowest-earning income quintile spends 19.8 percent of the average household on new cars and 40.9 percent of average spending on restaurant meals. These percentages both rise steadily for all income quintiles. The highest income quintile spends close to twice as much as the average household on restaurant meals and about 2.4 times as much on new cars and trucks.

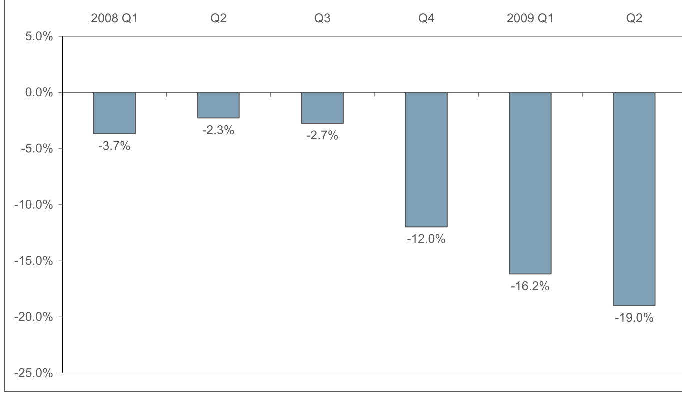
Chart 5
2008 U.S. Household Spending by Quintile in Relation to Average for Restaurant Meals and New Vehicles



California Taxable Sales Declines Continue

Turning to general economic indicators, data show that California taxable sales have declined every quarter since the recession started in December 2007. As shown in Chart 6, California taxable sales declined 19.0 percent in the second quarter 2009, which was one of the worst periods of the recession by many measures. (Taxable sales are compared to the same quarter a year earlier.) The decrease in taxable sales was unprecedented, steeper than the one in the first quarter of 2009. Prior to the current recession the steepest drop in taxable sales was the first quarter of 1958, when taxable sales dropped 7.3 percent.

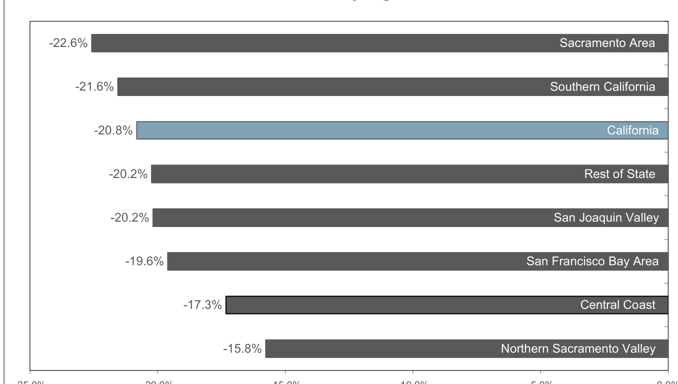
Chart 6
Trends in Quarterly California Taxable Sales Since the Recession Started
(Changes From Corresponding Quarter of Prior Year)



Taxable Sales by Region During the Recession

Most economists believe that the national recession ended sometime during the summer of 2009. If this is so, Chart 7 shows how regions of California fared during the recession as measured by changes in taxable sales. The chart measures changes in taxable sales by region from the second quarter of 2007 (the most recent comparable quarter before the recession started) through the second quarter of 2009. As shown in the chart, no major region escaped the Great Recession of 2009 unscathed. Declines in taxable sales ranged from 15.8 percent for the Northern Sacramento Valley to 22.6 percent for the Sacramento metropolitan area. For the state as a whole taxable sales dropped 20.8 percent, more than they have in any other recession since the Board of Equalization has kept records.

Chart 7
Changes in Second Quarter 2009 Taxable Sales Compared to Second Quarter 2007 by Region



Contact Us

Please contact us if you would like to be added to our mailing list, need additional copies, or have questions or comments.

Joe Fitz, Chief Economist, MIC:67
State Board of Equalization
PO Box 942879
Sacramento, CA 94279-0067
916-323-3802
research@boe.ca.gov

Current and past issues of this publication are on our website:
www.boe.ca.gov/news/epcont.htm

Taxpayers' Rights Advocate: 888-324-2798

To contact your Board Member, see
www.boe.ca.gov/members/board.htm

Online Resources

For more information about topics covered in this issue, please visit any of the websites listed below.

California Department of Finance
www.dof.ca.gov

California Employment Development Department (EDD), *Labor Market Conditions in California*
www.labormarketinfo.edd.ca.gov

Federal Reserve Bank of Philadelphia, *Survey of Professional Forecasters*
www.phil.frb.org/econ/spf/index.html

National Association for Business Economists
www.nabe.com

U.S. Bureau of Economic Analysis
www.bea.gov

U.S. Bureau of Labor Statistics
www.bls.gov/cpi/

U.S. Census Bureau
www.census.gov