

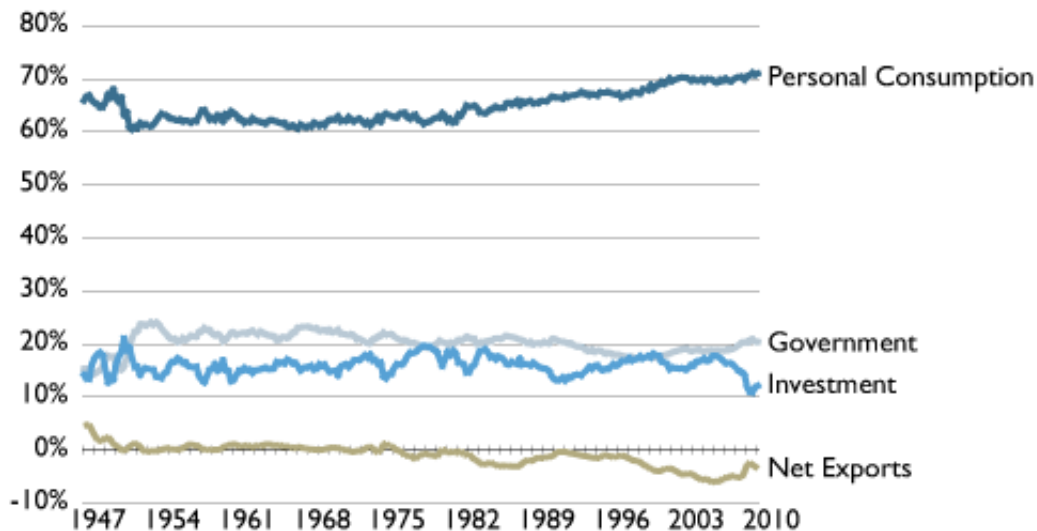
Has America’s Consumer Spending Bubble Popped?

July 9, 2010

Since the 1980s, Americans have generally been saving less and less of their income. In the third quarter of 2005 and again in the first quarter of 2008, consumers only saved 1.2% of their disposable income, the lowest level since the Great Depression. This long downward trend in savings occurred during a time of relative economic prosperity and was therefore coupled with increasing consumer spending.^[1]

A “wealth effect,” or situation where people’s assets become increasingly more valuable, may have contributed to this dramatic rise in spending.^[2] It is argued that individuals were saving less because their assets, primarily homes and 401(k) retirement accounts, were dramatically appreciating in value. With real estate and stock investments increasing in value for so long, many individuals chose to put less of their income into savings, and rely on their homes and investments to appreciate in value and serve as a substitute for saving.^[3] With less income being put into savings, more was available for spending, increasing the proportion of consumer spending relative to the rest of the economy.

Figure 1: GDP Components as a Percent of GDP



Source: U.S. Bureau of Economic Analysis (BEA).

Beginning in the early 1980s, consumption as a percent of Gross Domestic Product (GDP) steadily increased from 63% in 1980 to 70% in 2008 and the saving rate fell from about 10% in 1980 to 1.2% in the first quarter of 2008. Some economists believe this high rate of consumer spending is a “bubble” that developed over time, increasing the level of risk in the economy. During the recession that began in 2008, individuals began saving at a rate several times higher than before the recession, leading to a hope that the consumption bubble had begun to correct. However, at the same time that saving increased, consumer spending as a percent of GDP changed very little. This seems contradictory because if consumers are spending money then they cannot save it. It is also worrisome because some economists and financial experts argue the current recession is a necessary correction of the asset-dependent spending and saving strategies of the last two decades. Stephen Roach, chairman of Morgan Stanley Asia, points out that since the mid 1990s, consumption has grown much more quickly than household income, and argues that this increase

was fueled by asset appreciation and the ability of homeowners to take out home equity loans, which consumers viewed as a substitute for saving. This led to the steady decline in personal savings and pushed consumer spending in the United States up to more than 70% of GDP in 2007 and 2008, “a record for any large economy in the modern history of the world.”^[4]

The fact that consumption as a percent of GDP has not fallen could suggest that individuals are following old spending habits from before the recession. However, data show the personal saving rate has increased—suggesting that individuals *have* scaled back their consumption habits. In order to better understand how this seeming contradiction is possible, this brief explains the relationships between personal saving, consumption, and other components of GDP and shows what happened to GDP and saving during the recent economic recession.

Understanding GDP

Gross Domestic Product, or GDP, is a measure of the value of all goods and services produced by an entire economy during one year. GDP is calculated by measuring how much money is spent on final goods and services. If a partially completed good, half-completed shoes for example, is bought by one company and improved by adding final stitching to the shoes before being sold to consumers, it is the final amount the shoes are purchased for that is counted towards GDP. Additionally, if someone gives money to someone else but receives no good or service in return, for example, by paying taxes to the government, buying stock in a company, paying off a debt, making a donation to someone else, etc., this is considered a “transfer of wealth” and is not counted as part of GDP.

Total GDP is the sum of four major categories of spending: consumer spending, investment, government spending, and net exports. Consumer spending, also called personal consumption, comes from individuals’ disposable income or income available after paying taxes. Goods such as cars, computers and food, as well as services such as education, are all counted as part of consumer spending. Consumer spending accounts for the largest portion of GDP, recently accounting for 70%.

Investment, in the context of GDP, is money used by firms to buy capital or resources that will increase production in the future. Money spent on new houses or home improvements is also counted as investment. This definition of investment differs somewhat from how people use the word in other contexts. In the context of GDP, money spent buying stocks is not considered investment, but when a company uses money from the sale of stock to buy new capital, it is counted as investment.

Consumer saving is the amount of disposable income that individuals do not spend on goods and services, interest payments, or transfers of wealth, such as taxes.^[5] While not included in the calculation of GDP, saving is related to investment in that all investment must be purchased either from foreign capital, increasing the trade deficit, or with money not used for consumption, i.e. savings.

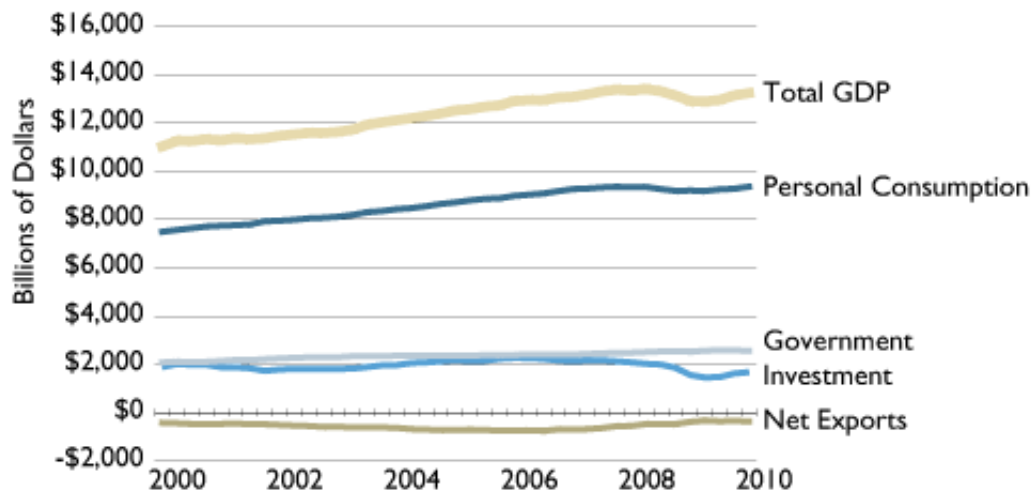
Government spending, in the context of U.S. GDP, accounts for spending by federal, state, and local governments. It includes defense spending and money spent on services such as public education. It also includes the money government spends investing in things such as infrastructure. Government investment is not part of private investment and is not part of the “investment” category used in this brief. Government spending also does not include transfer payments such as welfare and social security.

Net exports are the dollar value of goods and services that other countries buy from the United States minus the dollar value of goods and services the United States buys from other countries. Net exports have been negative since 1981, meaning the United States has been importing more goods than it has been exporting.

How GDP Has Changed

Since the end of WWII, GDP has grown by about 3% per year. Figure 2 shows that this growth resulted in an all time high GDP of \$13,415 billion in the second quarter of 2008.^[6] After this high value, GDP fell back down to \$12,902 billion in the second quarter of 2009, a 3.8% loss, before turning up again. Thus, the second quarter of 2009 was a low point relative to the quarters near it. By the end of the first quarter of 2010, GDP had increased to \$13,255 billion. The components of GDP reflect similarly significant points at or near the second quarters of 2008 and 2009.

Figure 2: Real GDP and Components



Source: BEA.

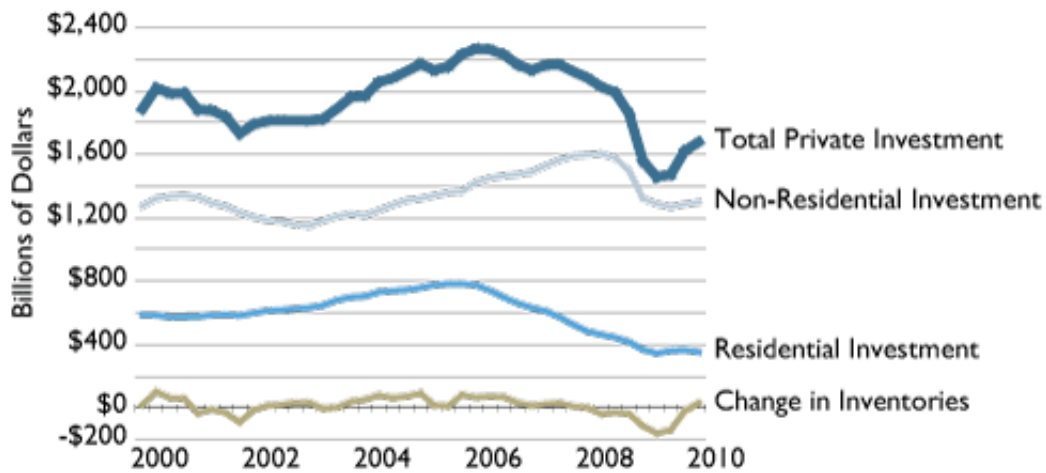
Both consumer spending and investment decreased between the second quarters of 2008 and 2009. Consumer spending reached a high of \$9,363 billion in the fourth quarter of 2007, and then declined to a relative low of \$9,189 billion in the second quarter of 2009. By the end of the first quarter of 2010 it increased to \$9,373 billion, which was higher than its previous high level reached in the fourth quarter of 2007.

Total government spending, including federal, state, and local government spending, has increased more or less smoothly throughout the recession. Net exports were already rising when the recession began and reached a recent high in the second quarter of 2009. Since then they have slowly decreased.

Investment reached its highest level of \$2,265 billion in the first quarter of 2006. After this, investment began to decline sharply in the fourth quarter of 2008 to reach a recent low point of \$1,457 billion in the second quarter of 2009. As shown in Figure 2, investment experienced the largest downturn during the recession and was the largest contributor to the decreases in GDP as a whole. As of first quarter 2010, investment had increased to \$1,678 billion.

Because construction of new homes is counted as part of private investment, one may suspect that the decline in investment was caused by a sudden collapse in the housing market. While residential investment, the construction of new homes, indeed decreased between the second quarters of 2008 and 2009, this decrease was actually part of a steady decrease that began in 2006. As seen in Figure 3, the suddenness of the investment drop resulted mainly from a *non-residential* decline in investment. Businesses chose to purchase less new capital during the recession, and also used up current inventories rather than adding to their inventories.

Figure 3: Real Investment and Components



Source: BEA.

As a percent of GDP, consumer spending was fairly constant, only fluctuating by 1.3% during the recession. Consumer spending dipped slightly to 69.8% of GDP in the fourth quarter of 2008 before reaching an all time high of 71.1% of GDP in the third quarter of 2009. While consumer spending remained a fairly consistent percent of GDP, investment dropped dramatically during the recession both in absolute terms and as a percent of GDP. Percentage wise, investment decreased more or less steadily between 2006 and 2008 to reach 14.1% of GDP in the fourth quarter of 2008. From there, investment declined dramatically to 11.9% of GDP in the first quarter of 2009, and lost another percentage point to arrive at a low of 10.9% of GDP in the third quarter of 2009.[\[7\]](#)

Personal Saving

Since 1980, a general trend emerged of Americans saving progressively less of their disposable income. During the recent recession, however, people began saving a greater percent of their incomes. Figure 4 shows that on average individuals saved 1.7% of their disposable income in 2007, 2.7% in 2008, and 4.2% in 2009. In the second quarter of 2009, individuals saved 5.4% of their income, giving this quarter the highest saving rate since the second quarter of 1998. Despite calls from government officials for policies to encourage greater consumer spending to boost the economy, the increased saving rate appears to be a benefit to the American economy for two reasons. First, business investment depends on domestic saving or foreign investment, and a greater saving rate provides more capital for investment. Second, increased saving provides greater security to households, helping to avoid future financial crises caused by widespread defaults on debt. These two benefits of increased saving could lead to stronger economic growth in future years, even while the current economy is slowed by lower consumption.

One possible explanation for the increase in saving is that people began saving more because of the economic uncertainty resulting from the recession. If people fear they may lose their jobs, they save more money so they will have a reserve to draw on while jobless. However, does this really explain why saving decreased when GDP began increasing again after the second quarter of 2009? Another possible explanation for the increase in saving is that when house prices fell, people no longer viewed asset appreciation as a substitute for saving, and therefore resumed saving money from their incomes again.

Figure 4: Saving as a Percent of Disposable Personal Income



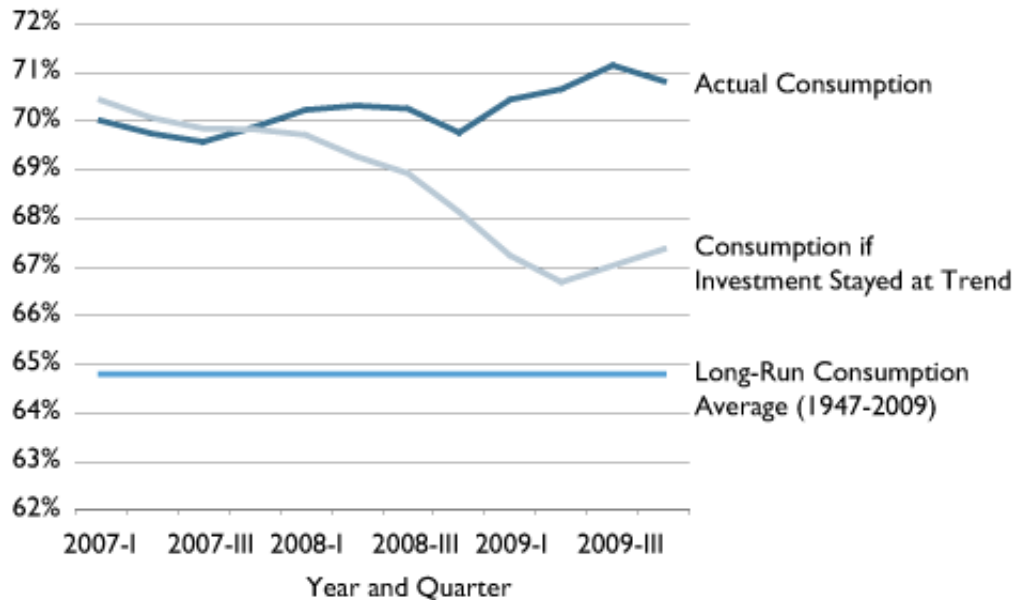
Source: BEA.

The fact that personal saving increased so much during 2009 raises the question of why this increase in saving didn't affect the percent of GDP from consumer spending. In other words, how is it possible that people were saving more of their income while consumer spending was contributing more to total GDP than ever before? This is the seeming contradiction presented in the introduction. As shown in Figure 2, consumption actually decreased slightly during the recession in absolute terms. It remained a high percent of GDP because overall GDP decreased much more than consumption. GDP as a whole decreased primarily because investment decreased by so much. Thus, while the GDP "pie" shrank significantly, the consumer spending slice of that pie shrank only a little, thereby composing a greater part of the whole relative to investment, government spending and net exports. This explains the apparent contradiction.

What Would Consumption Look Like if Investment Were at Normal Levels?

If economists like Stephen Roach are correct that the high proportion of consumption in GDP had a negative effect on the economy, one would hope that the recession would correct the pattern of over-consumption that weakened the economy in recent decades. Yet consumption remains at high levels relative to total GDP. On the other hand, GDP has been severely affected by the reduction in investment in recent quarters, and perhaps when investment recovers, consumption will constitute a smaller share of GDP. Knowing that consumption actually decreased, in absolute terms, during the recession leads to the question, "how would consumer spending as a percent of GDP have changed if investment had not decreased by so much?" One approach to this question is to examine the trend in investment during the years preceding the recession and estimate what GDP would have been without the investment decline.

**Figure 5: Consumption as a Percent of GDP
If Investment Had Stayed at Long-Run Trend**



Sources: BEA, U.S. Bureau of Labor Statistics.

Figure 5 shows how consumption would have fared as a share of GDP if investment had followed the long-term investment trend starting in 1980.^[8] In this scenario, total GDP would be higher, making consumer spending a smaller percent of GDP. When using the investment trend to estimate GDP, as shown in Figure 5, consumer spending becomes a smaller percent of GDP and begins to approach the long-run average level of consumer spending in relation to GDP.^[9] This is a somewhat simple model, assuming that consumer spending could act independently of investment or any other component of GDP. In reality, the decline in consumption is probably a primary reason for the decline in business investment as companies had to scale back plant and equipment purchases in response to dramatically lower sales to consumers. Even so, perhaps this simple model shows that the “bubble” in consumer spending may have actually begun to correct during this recession and when investment begins to grow again, if consumers continue to save some of their incomes, America’s economy may be on a more solid footing.

Conclusion

This brief has shown that saving in the United States has been declining since the early 1980s, but during the latest recession has suddenly increased. The recent recession, as measured by the large decline in GDP after the second quarter of 2008, is primarily due to a decrease in business investment. Consumer spending also decreased during the recession, but because it hasn’t dropped as much as overall GDP, it still composes a high percent of GDP.

Some effects of the current recession will continue to be felt even when the recession is determined to be over. Lost investment means the U.S. economy will have fewer resources for future production. On the other hand, people may have begun saving more of their disposable income, which could result in more investment. Will people retain a long-term inclination to save, or will saving drop back down to previously low levels? This may depend on whether the recent increase in saving was the result of temporary economic uncertainty or whether people have changed their beliefs about asset appreciation being a viable substitute for saving. It is too soon to know whether the change in the saving rate is a long-term or short-term trend.

Endnotes

[1] “Growth in Household Debt: An Analysis of Saving and Spending in Utah and the U.S.,” Utah Foundation 689 (2009), <http://www.utahfoundation.org/img/pdfs/rr689.pdf> (accessed 15 June 2010).

[2] Milt Marquis, “What’s Behind the Low U.S. Personal Saving Rate?” FRBSF Economic Letter

Number 2002-09 (San Francisco: Federal Reserve Bank of San Francisco, 2002).

[3] Brian W. Cashell, "The Fall and Rise of Household Saving" Congressional Research Service Report, September 1, 2009, http://assets.opencrs.com/rpts/R40647_20090901.pdf (accessed 14 June 2010).

[4] Stephen S. Roach "Dying of Consumption," *The New York Times*, 28 November 2008, <http://www.nytimes.com/2008/11/28/opinion/28roach.html?ref=opinion> (accessed 15 June 2010).

[5] The National Income and Product Account (NIPA), from which the reported figures were taken, breaks transfer payments into two categories: transfers to the government and transfers to the rest of the world.

Data available from the Bureau of Economic Analysis, NIPA Table 2.1.

[6] This figure is seasonally adjusted and at the annual rate, meaning that GDP for the year would have been the number reported if production had followed the trend reflected in the reported quarter. All absolute GDP numbers in this brief are seasonally adjusted at annual rates. All figures are adjusted for inflation and reported in terms of 2005 dollars.

[7] Data available from the Bureau of Economic Analysis, NIPA Table 1.1.10.

[8] The investment trend line is based on the trend from the first quarter of 1980 through the last quarter of 2007. From there the line was continued with the same slope through the first period of 2010 to show where investment would be had there been no recession.

[9] The BEA uses chain-weighted GDP to adjust for inflation, using weights from more than one period to adjust for inflation, but this causes the components of GDP to no longer sum to total GDP. In order to estimate a trend based on absolute numbers, and still be able to make statements about percentage contributions to GDP, data in this "investment effect" section was corrected for inflation using the CPI rather than chain-weighted indices. Estimates are still reported in 2005 dollars and seasonally adjusted at annual rates.

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