

Shoppers for the Long Haul

The past, present, and future of consumption

BY BETTY JOYCE NASH

Family Dollar Stores Inc. has changed its product mix to reflect preferences for consumables such as canned food or bread or paper towels. The efforts of the Mathews, N.C.-based retailer have paid off. December sales grew 4 percent above the same month in 2008, even in stores open for at least a year. They're now attracting higher-income shoppers they hope will return even when consumers start spending more freely.

In this recession, people have cut back on purchases of everything from new clothes to homes to refrigerators. In 2009, overall personal spending declined, particularly on vehicles and other household durable goods. Spending on services was more stable, but people ate out less and cut back on vacations, even though disposable income rose by 1.1 percent, largely because of tax cuts and rebates.

In contrast, savings rates for the year reached 4.3 percent, up from 2.6 in 2008. This makes economic sense after a shock. People will "rein in their spending aggressively in order to increase their buffer stock of savings," says Satyajit Chatterjee, an economist at the Philadelphia Fed.

Consumer activity still represents the biggest chunk of the nation's output, as it does in most countries. But today people are spending less for many reasons. Perceptions about future wealth are one of the biggest influences on spending.

Income and Consumption

How people view future income growth potential affects spending patterns. But for decades economists took a view of consumption that didn't account for these expectations.

John Maynard Keynes introduced the first "consumption function" in 1936 to chart the relationship between annual disposable income and consumer spending. His "absolute income hypothesis" suggested that consumption depends on current income only. Available household data at the time seemed to bear this out: Higher-earning households tended to spend more than poorer households although the portion of wealthier households' income consumed was smaller.

The real test of this theory would be whether it held for aggregate consumer spending and aggregate income at different points in time. In Keynes' day, data on aggregate spending and income for different years weren't available, explains Chatterjee. The spending-income relationship has since been studied as scholars have developed better datasets and statistical techniques. Two newer theories add important insights.

Both theories are based on assumptions of "rational choice." Both estimate how a household will act over time in the face of uncertainty about future income. Nobel Prize-

winning economist Franco Modigliani explained that people spend and save according to expected lifetime income, not current income. "In a rational choice context, current spending need not respond to a change in current income if that change is fully anticipated in a previous period," Chatterjee writes of Modigliani's research with his student Richard Brumberg. An implication of the model is that economic growth increases average lifetime incomes over time and this causes people to assume that over time they will get richer. This suggests that aggregate spending will grow proportionally.

Yet Milton Friedman may have been most responsible for showing how the relationship between consumption and income would be borne out in real life. In his 1957 book, *A Theory of the Consumption Function*, he developed the "permanent income hypothesis." People are more likely to consume more when permanent income — expected lifetime income — rises. He argued that if income jumps and there's a reason to believe it's temporary, people may consume more but not as much as if they had received a permanent raise. A similar relationship can be inferred from a drop in income: Becoming temporarily poorer may not inhibit consumption in the short-term as much as an expected long-term decline might.

In each of these theories, the relevant comparison is between consumption and expectations of lifetime income or total wealth. Empirical tests of these theories have yielded mixed results. But the element that survives in most studies is the underlying approach that recognizes household response to expectations about the future.

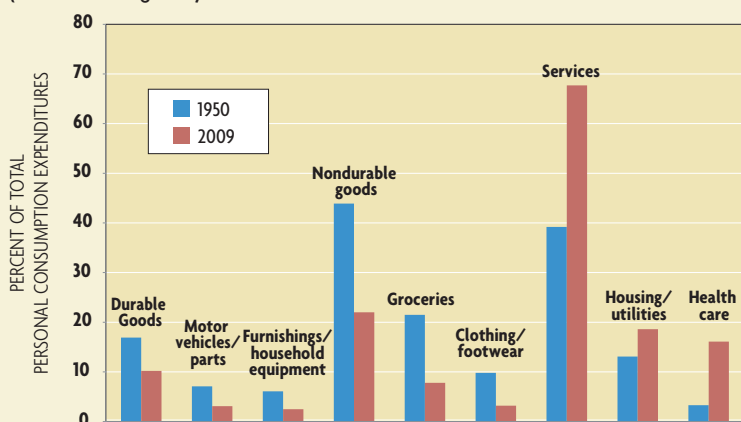
In the 1990s, work by economists Christopher Carroll of Johns Hopkins University and Angus Deaton of Princeton University has added the idea of "precautionary savings" into models. Simulations reveal that people often accumulate a buffer stock of savings to protect their households from unforeseen circumstances.

These theories may explain why people who make more money are shopping at discount stores such as Family Dollar, and also may explain rising savings rates in the first half of 2009. Expectations about the future would have to be a part of any explanation for this renewed savings behavior. Theory helps explain consumer response in the current economic climate but can't forecast when people will start spending. That will occur as people pay down debt, accumulate rainy day funds, and regain confidence about future income.

The Contours of Consumer Spending

Decreases in consumer spending like this haven't been seen since the recession of the early 1980s. This time around, the

The Change in Goods and Services Consumption (Selected Categories)



SOURCE: Bureau of Economic Analysis

credit market conditions and the growing home equity that softened the 2001 recession are missing.

As people consumed consistent with anticipated wealth based on rising house prices, they helped fuel economic expansion until house prices fell and triggered the financial crisis. Then spending slowed and so did growth in the nation's gross domestic product (GDP). These personal consumption expenditures (PCE) dominate GDP and are said to drive the economy.

Consumers' share of GDP has grown over time. In 1951, PCE was 61.5 percent of GDP, where it stayed for three decades until it rose to 63 percent in 1980. By 2008, it comprised 70.1 percent. Today, spending on services (\$6.8 trillion) is almost twice as large as spending on goods (\$3.3 trillion). In 1950, services represented about 40 percent of spending, but today it hovers around 70 percent (see figure above).

Since that time, real incomes have grown, along with household wealth. From 1959 to 2000, real per-capita disposable personal income grew at an average annual rate of 2.3 percent. More women entered into the work force, which encouraged even more services purchases — think day care and eating out. During that time, there was also the addition of government payments for health care via Medicare and Medicaid. As workers matured, they also earned more to pay for such services. Increasing household wealth through homeownership and individual stock purchases also fueled discretionary spending on vacations, vehicles, and electronics. Technological change also expanded the field of consumer options for both goods and services.

Growth in services has partly come from sectors that have seen rapid technological innovation such as communications. In 1995 purchases of communications services accounted for \$89.3 billion (in 2005 dollars), or about 1.5 percent of PCE that year. In just 14 years, the category has grown to 2.4 percent of PCE, and more than doubled in real terms (\$231 billion).

Meanwhile, people spent less of their overall budget on nondurable goods such as food to prepare at home, and less

on durable goods like automobiles and furniture. The decline in clothing expenditures partly reflected falling relative prices.

By far the biggest services category is health care — \$1.4 trillion, or more than 15 percent of PCE in 2009. That's roughly the same share of PCE as it was in 1995, but more than five times what it was in 1950. That includes doctor and dental services as well as home health care and expenditures on medical labs.

The durable goods category is often considered a barometer of economic activity because it includes items such as appliances, cars, and electronics — goods that wear out over time. Purchases of durable goods tend to rise with economic expansions and fall in economic contractions. In fact, the variance in durable goods purchases is much higher than that of personal consumption expenditures generally. For example, spending on household durables went from \$820 million in 2000 to almost \$1.2 billion in 2007 in real terms, which reflects the run-up in housing, before declining in 2008 and 2009. During the recession of 1960, durable goods purchases fell by 12 percent. In the 1980 recession, they fell by 13.4 percent, and by 10 percent in 1990 through the first quarter of 1991 (see figure on page 19).

How Personal Are Consumption Expenditures?

Spending money on cell phones, on eating out, or on refrigerators is fairly easy to understand, but other elements of the PCE are less transparent. The PCE tracks money households pay for products such as carpets, tools and computers, cereal and meats, jewelry and therapeutic appliances to services such as health care and dry cleaners. The category also includes money consumers don't spend except indirectly through taxes.

Health care goods and services, for instance, includes government payments to physicians and hospitals. The total health care category represents about 15 percent of GDP. Yet about only 15 percent of that health care spending is out of pocket, according to economist Michael Mandel, formerly of *Business Week*. The remainder comes from government or employee health plans.

There's also the amount of "imputed rental value" for housing. The government assumes an imputed rent on housing even if a house is paid off. This figure is included to help capture in the PCE data the amount of money spent on shelter.

Then there's an amount imputed for financial services such as interest-free checking accounts. But that's not really an explicit cost but rather an opportunity cost because the bank doesn't pay interest but uses the money. Had customers invested savings elsewhere, they might have earned a return on the money. Other items, like the net income of nonprofits, are also not strictly consumer-driven but are included as consumption expenditures in the national accounts.

Another 12 percent of GDP is represented by imports such as computers and televisions. These are goods manufactured elsewhere and the only contribution to U.S. GDP is perhaps through the money spent to transport or sell those

goods. Taking that into account changes the math. Mandel suggests that domestically produced goods and services drive less economic activity than is often commonly cited.

Household Behavior

Overall spending barely dipped in the 2001 recession, as people were able to consume via credit card borrowing or home equity loans. “Interest rates were low and people were able to take advantage of that and borrow more; there was a lot of cash-out refinancing that made for a mild recession” in 2001, says Karen Dynan, currently of the Brookings Institution and formerly an economist at the Federal Reserve Board of Governors.

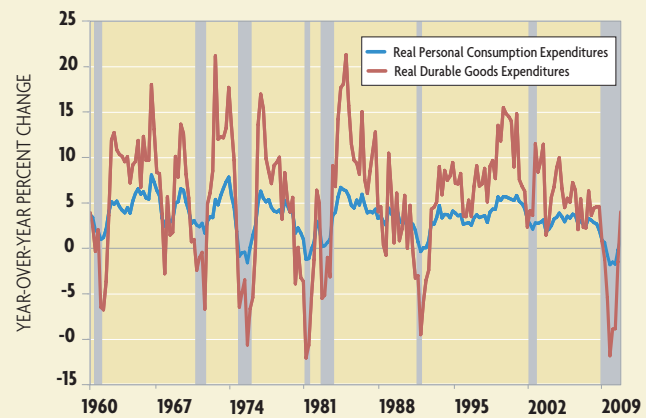
In the past two decades, credit innovation and increasing incomes allowed people to align spending with long-term income prospects. Wide participation in equity markets and increasing home prices added to household wealth. Aggregate household wealth stayed at about four times aggregate personal income from 1960 through the mid-1990s. It then grew to 5.25 and 5.5 times personal income in 1999 and 2006, respectively, according to Dynan in a 2009 paper published in the *Journal of Economic Perspectives*.

Meanwhile, the debt-to-income ratio has grown. Households as a group came into this recession more highly indebted than in other recent recessions, Chatterjee explains. And that’s worked against spending. Credit card firms have responded to the downturn “by slashing credit limits and raising interest rates because the loans look more risky to them now.” And that led to curtailed spending as households aggressively paid down debt, another way of increasing savings. Consumers are also saving another way: cash-in refinancing. That’s when people put more money on the mortgage to reduce payments. The government housing corporation, Freddie Mac, reported that in the final quarter of 2009, cash-in financing grew to a third of all refinancings.

Spending will certainly return, but how quickly? The drop in consumer spending in the early 1980s was followed by a spending spree. “After recession ended in 1982, we saw a real snapback in consumption — 5 percent or 6 percent growth in the first year. That is unlikely to happen in this episode,” Dynan says. The unemployment rate in that recession reached the same level as that of the current downturn, but the damage to household balance sheets will linger. While consumers “have recovered some, on net they are still down by a substantial amount, about 20 percent, and they lost tremendous wealth through their homes.”

Savings rates, however, are going up. Between 1959 and 1990, savings averaged almost 9 percent, but the rate went

Durable Goods Expenditures



NOTE: Shaded areas correspond to recessions.
SOURCE: Bureau of Economic Analysis

negative in the third quarter of 2005. Soon after, in the second quarter of 2006, household borrowing peaked at nearly \$1.4 trillion before falling to a negative \$279 billion by third quarter 2008. Households are now de-leveraging by paying down (or defaulting) on their debt, according to a 2009 paper by economist Riccardo DiCecio and research associate Charles Gascon of the St. Louis Fed. Savings rates have climbed since 2008.

That has an upside since long-term economic growth stems from innovation and capital investment. By examining savings rates relative to GDP growth since 1948, St. Louis Fed economist Daniel Thornton found that the savings rate grew from 6 percent in the late 1940s to 12.5 percent in second quarter of 1975, and fell to 1.2 percent by fourth quarter 2007. “Over these same periods, output grew at rates of 3.8 percent, 3.2 percent, and minus 2.4 percent respectively.” Personal savings and growth may correlate, and a higher savings rate may not hinder an economic expansion, although these results are not conclusive. More savings, besides buffering economic shocks to households, could flow to increased capital investment. Mainly, these results serve to underscore that the relationship between household savings and broader macroeconomic growth is more complicated.

As households rebuild wealth and feel secure about employment, spending will likely resume. But will the decline in current wealth be seen by households as a permanent change or a temporary one? Stores like Family Dollar aren’t waiting for an academic consensus on that. They are planning future product mixes on the assumption that they will keep their new customers in the future — the ones who traded down when the purse strings tightened. **RF**

READINGS

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