

Life Cycle Hypothesis

BY TIM SABLİK

What determines how individuals save and spend their income over their lifetimes? It may seem like simply a question of personal preference, but the answer can have big implications for the economy as a whole. The life cycle hypothesis, which argues that people seek to maintain the same level of consumption throughout their lifetimes, is one way that economists have answered the question — but it was not the first.

An early theory of saving came from John Maynard Keynes' *General Theory of Employment, Interest and Money* in 1936. Keynes viewed saving as simply another type of good that individuals could “purchase.” As with other goods, Keynes reasoned that expenditures on saving would increase with income. This posed a potential problem. When individuals allocate income toward saving, it means they aren't using that income for consumption. This reduction in demand for goods and services could have negative effects on economic output.

To be sure, the negative impact of a decline in consumption is offset by the fact that savings are often channeled into productive investments. But what if there aren't enough investment opportunities to absorb people's desire to save? Keynes and other economists like Alvin Hansen of Harvard University worried that this was a very real possibility as national incomes grew in the postwar era. Hansen coined the term “secular stagnation” to describe the economic slowdown that would result from a “savings glut” with too few investment opportunities.

Studies in the 1940s called Keynes' saving theory into question, however. In 1946, Simon Kuznets of Harvard University examined national income in the United States between 1869 and 1938 and found that the saving ratio in America had barely changed across that period, despite large increases in per capita income. And in a 1947 paper published by the National Bureau of Economic Research, Dorothy Brady and Rose Friedman found that the savings ratio for families at different income levels depended on their income relative to the mean rather than on their absolute income.

To explain these findings, in the 1950s Franco Modigliani of MIT and his student Richard Brumberg developed a new theory for saving. The life cycle hypothesis argued that people seek to maintain roughly the same level of consumption throughout their lifetimes by taking on debt or liquidating assets early and late in life (when their income is low) and saving during their prime earning years when their income is high. This hypothesis predicts that wealth

accumulation will follow a “hump-shaped” pattern — that is, low near the beginning of adulthood and in old age, and peaking in the middle.

Modigliani and Brumberg's theory has important implications for the broader economy. In contrast to the Keynesian view that a country's aggregate saving rate is driven by its total level of income, the life cycle hypothesis implies that the savings ratio depends on the growth rate of income. When income in a country is growing, each new generation has higher consumption expectations than the previous one. To maintain their higher consumption when they get older, prime-age workers in a growing economy will save more than past cohorts of prime-age workers, and the dissaving of those

past cohorts (who are now retirees) will be less than the current workers' savings rate.

Over the years, empirical studies have called into question some of the conclusions of the simple life cycle hypothesis. Data suggest that retirees do not draw down their wealth as quickly as the model would predict. Moreover, studies in the United States and the United Kingdom find that consumption, too, is not smooth over people's lifetimes; instead, it tends to rise through middle age and fall after retirement.

There are different possible explanations for these findings. Consumption may be lower for young people than the model predicts if they are credit constrained. They may wish to borrow against expected higher future earnings but can do so only if lenders extend the credit to them. Uncertainty may play a role as well. Since young individuals don't know exactly what their future earnings potential will be, they may hesitate to accumulate a lot of debt for fear that they won't be able to pay it off.

Uncertainty plays a role at the end of life as well. Since individuals do not know exactly how long they will live, it is hard for them to smoothly draw down their wealth throughout retirement. Retirees may also save more than predicted because they wish to leave some of their wealth to their descendants. Finally, the drop in consumption at the end of the life cycle could be due to “hyperbolic discounting.” Behavioral economists have advanced the idea that individuals have trouble planning for the future, which leads them to save too little to maintain their level of consumption after retirement.

The life cycle hypothesis has evolved in the decades since Modigliani and Brumberg first developed it, but despite challenges to it, it remains a key part of modern economic theory.

