

Anatomy of thrift

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What causes people to save and invest?

AT FIRST sight, the idea of a “saving glut”—an excess of saving over investment—seems odd. According to the economics textbooks, saving and investment are always equal. People cannot save without investing their money somewhere, and they cannot invest without using somebody's savings. Saving and investment are two sides of the same coin.

And indeed that is true for the world as a whole, but it is not true for individual countries. Capital can flow across borders, so the amount an individual country saves does not have to be the same as the amount it invests. The difference between the two is the amount borrowed from or lent to foreigners; this is called the current-account deficit or surplus. If a country's current-account surplus rises, it means that either its saving has increased or its investment has fallen, or both. Either way, that country has generated an excess of saving which it has exported.

Moreover, whereas it is true that at a global level saving must equal investment, the fact that saving and investment end up in balance does not mean that millions of households and individuals spontaneously desire to save and invest in equal measure. To use the language of economics, saving and investment are an “ex-post” identity, but the world's “ex-ante” appetite to save and invest may well be out of balance. Actual saving and investment must be equal. Desired saving and investment may not be.

Most of the time, mismatches between the desired levels of saving and investment are brought into line fairly easily through the interest-rate mechanism. If people's desire to save exceeds their desire to invest, interest rates will fall so that the incentive to save goes down and the willingness to invest goes up. Across borders, exchange rates have a similar effect. If a country has a saving deficit, its currency will fall to the point where its assets are cheap enough to lure foreign savings in.

But there is some uncertainty about how smoothly these adjustments are made. Classical economic theory suggests that interest rates automatically bring saving and investment into a productive balance. The central principle of Keynesianism, however, is that this alignment between saving and investment is not always automatic, and that a misalignment can have serious consequences.

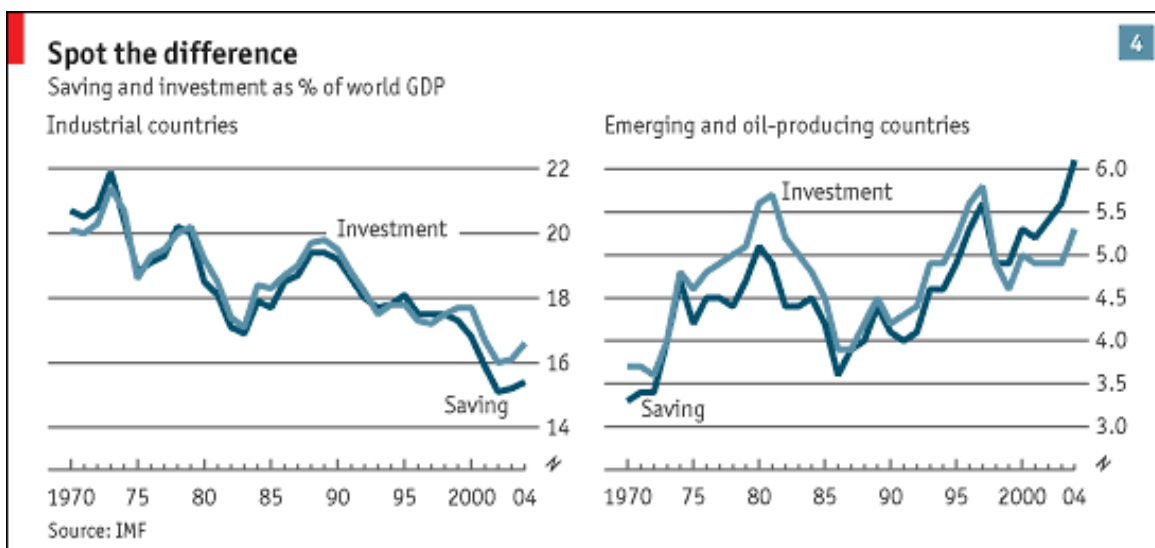
If an economy is not running at full capacity, John Maynard Keynes wrote in his “General Theory” in 1936, more saving might, paradoxically, result in less output rather than more. Companies' decisions to produce depend on the demand they expect for their products. More saving means less spending and hence less demand. Hence the idea that you can have too much thrift, and that there is a place for “Keynesian” government spending policies to boost demand.

It's all true

The modern consensus is that both classical and Keynesian theory can be right, but over different time frames. In the long term, saving and investment will be brought into line by the cost of capital. But in the short term, firms' appetite to invest is volatile, and policymakers may need to step in to shore up demand. Thus, although saving



and investment are equal ex-post, economic theory leaves plenty of room for an ex-ante saving glut. This glut could be caused by long-term changes in people's desire to save or firms' desire to invest, or it might be caused by short-term cyclical deviations from normal saving and investment patterns. In either case, the size and duration of mismatches can be influenced by government policy.



What might change people's desire to save or invest? That is a question about human behaviour which economists cannot answer with total confidence. Still, they have made some progress in explaining what motivates investment, and a little more in explaining what drives saving.

The most influential theory of household saving is the "life-cycle hypothesis", pioneered by Franco Modigliani, an Italian economist. It suggests that people try to smooth consumption over their lifetime: they save little or nothing when young but more in their middle years if they have a good income. They then draw down those savings in retirement. It follows that demographic shifts and economic growth are the most important drivers of thrift.

Another theory suggests that people save for "precautionary reasons", in case they need the money for a rainy day. This implies that people will save more if their income is variable. It also suggests that they will be more inclined to save if they have no access to credit.

A third possibility is that people save because they want to leave assets to their children, either because they love them or as a way to bribe the children to look after their parents in old age. (Economists are always reluctant to believe in altruism.) Whatever the motive, the bequest theory of thrift suggests that savings might not actually be drawn down in retirement.

A final possibility is that people save in response to their government's actions. This theory, known as "Ricardian equivalence", suggests that people save more if government saves less because they expect higher taxes later on.

How well do these theories fit with what has actually happened in the past? Saving rates differ dramatically between countries and over time, giving economists plenty of statistical ammunition with which to test their theses. Inevitably, there are differences among academics about which hypotheses are best supported by the data. But, in general, the following factors seem to play a role:

- **Demographics.** Although it is hard to confirm Modigliani's hypothesis by studying individual households, it seems to hold for entire countries. Saving rates do rise when the ratio of children in the population falls (as in China), and decline when the proportion of pensioners rises (as in Japan). Given that the world's population as a whole is ageing but, in most countries, most people are still working, global saving should currently be rising.

- **Economic growth.** Especially in poorer countries, saving rates rise as economies grow. That is probably

because people do not adjust their consumption patterns as quickly as their income rises. Rapid growth was an important reason behind the big rise in saving rates in East Asia in the 1970 and 1980s. It may account for much of the rise in saving by emerging economies today.

- **Terms-of-trade shock.** If a country's exports suddenly go up in price, its saving rate tends to go up too, at least temporarily. Oil exporters, for example, put on a saving spurt if oil prices rise. This effect also helps to explain the recent increase in saving in many emerging economies.

- **Financial development.** As an economy's financial system becomes more developed, saving rates tend to fall because people find it easier to borrow. This seems to be true for both rich and poor countries. It suggests that saving rates may be lower in countries with more sophisticated financial systems, such as America.

- **Capital gains.** In rich countries there is increasing evidence that capital gains influence saving rates. If the stockmarket or house prices rise, people feel richer and save less. A study by the OECD published late last year suggests that housing wealth has a bigger effect on saving than financial wealth, and that this effect is stronger in economies with flexible mortgage markets and high rates of home ownership.

- **Fiscal policy.** In some countries, people do appear to behave as Ricardian equivalence theory suggests: they save more when budget deficits expand, perhaps because they expect higher taxes in the future, although private-sector saving rises by less than the rise in budget deficits. The big exception is America, where the impact of fiscal deficits on private saving appears to be weakest.

Some of these factors work in opposite directions, and gauging which matters most is difficult. But there are indications that in rich countries the biggest disincentives to saving have been capital gains and the ability to borrow. National saving rates in rich countries have been falling gradually for more than two decades, and particularly steeply since the mid-1990s (see chart 4, previous page). In a recent study for the *World Economic Outlook*, Marco Terrones and Roberto Cardarelli, two economists at the IMF, looked at saving patterns in 46 countries between 1972 and 2004 and found that easier credit (thanks, probably, to higher house prices), along with bigger budget deficits, were the most important reasons for the overall drop in saving in rich countries since 1997.

In emerging markets, on the other hand, the most powerful factors pushed in the opposite direction. Fast economic growth and increases in government saving, thanks partly to terms-of-trade shocks, have increased total national saving.

These opposing movements show up clearly in global statistics. Over the past 35 years, the emerging economies' share of global saving has doubled, from 15% to 30%. In 2004, emerging economies saved the equivalent of 6% of global GDP. If there is a glut of saving, it is likely to be found in emerging economies and oil-exporting countries.

The investment puzzle

If it is hard to find out why people save, it is even harder to discover why they invest. In theory, firms should invest if the expected return on their investment exceeds the cost of the capital they are using. In the short term, firms need to worry about the state of overall demand. But in the long term, returns on capital depend on how much capital an economy already has, how productively it is used, and how fast the workforce is growing. If there is little capital available or the workforce is growing rapidly, firms would usually expect a high return on investment.

The evidence supports these theories, up to a point. Statistical analyses suggest that investment rises when economies grow, when productivity increases or when the share of workers in the population goes up, and that it slows when capital becomes more expensive. The IMF's analysis, for instance, suggests that a 1% increase in the cost of capital in rich countries will lead to a drop in investment rates of 0.4% of GDP.

However, in recent years these statistical relationships have failed to hold. Both in rich countries and in emerging economies (except China), investment levels have been lower than economists had expected at the levels of

interest and growth rates prevailing at the time. Much of Mr Bernanke's saving glut is due to this unexpectedly low rate of investment. This shortfall could simply be the unwinding of earlier excesses as firms repair their balance sheets, but several "structural" explanations have gained support:

- **Demographics.** A young and growing workforce boosts the level of investment, just like a mature workforce boosts the saving rate. So the world economy is likely to move through a cycle in which investment peaks first and saving peaks a bit later. With rising life expectancy and falling birth rates, the world economy may be moving into the high-saving phase. But although demographics are important, they change slowly. It is hard to ascribe the recent sharp drop in investment demand in regions such as Japan or East Asia to demographic change alone.

- **Declining capital intensity.** Firms in rich countries may not need to invest as much as they used to because the share of capital-intensive industries in their economies is shrinking. In a recent analysis, economists at UBS, a bank, pointed out that in America the share of corporate profits that is generated by investment-heavy industries (oil, gas and chemicals, for instance) has fallen from 55% of the total in 1948 to 21% in 2004. This long-term trend may have accelerated over the past decade. But it does not explain investment busts in poor countries.

- **Deflation of capital-goods prices.** In recent years prices of capital goods have fallen sharply relative to prices of other goods and services, thanks largely to cheaper computers, so companies are able to achieve the desired level of real investment for a smaller outlay. Calculations in the IMF's *World Economic Outlook* show that in real terms, the fall in average investment rates in industrial countries has been much more modest than it appears at first sight. This may help to explain some of the recent weakness in investment, particularly in rich countries. But it is unlikely to last. Relative price shifts tend to run their course and then stop. More important, computers depreciate more quickly than other capital goods, so eventually firms will need to invest more to maintain the same level of net investment.

- **The rise of China.** This may have prompted a geographic shift in global investment patterns. As firms move their production to China to take advantage of its huge pool of untapped labour, investment elsewhere slackens. But investment flows to China from America, Europe and Japan are not yet big enough to explain the sluggish investment in those countries. Besides, the rise-of-China thesis is about the location of investment more than about changes in its global level.

In sum, none of these explanations for a structural, global decline in investment is altogether convincing. To understand the pattern of global saving and investment properly, you have to look in detail at what is going on within the world's main saving and borrowing countries. The best place to start is the biggest net saver of all, Japan.