Chapter 1

The Permanent Income Hypothesis

Suppose you believe your economy is in the doldrums because people are somehow not spending enough. How do you get them to open up their pocketbooks?

Start by perusing some data. You'll quickly discover that spending is highly correlated with income. It's well documented that if, in any given year, Alice out-earns Bob by a dollar, then on average she'll outspend him by at least 90 cents.[1]

Aha! Problem solved! If you want people to spend more, you should start by raising their incomes. Encourage your government to hire Alice and raise her salary by a dollar. She'll spend an extra 90 cents or so—and that's only the beginning. If she spends that 90 cents at the butcher shop or the hair salon or the craft brewery, then the butcher or the beautician or the brewer earns an extra 90 cents and probably spends about 90 percent of that, which raises yet someone else's income, and off we go. When all is said and done, one dollar of additional government spending can raise total spending (and total income) by $10 or more.

That's the story of the so-called "Keynesian multiplier." Once upon a time, pretty much all economists considered it a cornerstone of policymaking.

Here's the problem:

Income is indeed highly correlated with spending. But *correlation is not causation*. When Alice out-earns Bob by a dollar, she typically outspends him

[1] I'm using 90 cents as an illustration here and throughout the chapter. There is room for some quibbling about whether the correct number is a little lower or a little higher, but that doesn't matter here.

by 90 cents. But her current earning is not the cause of that spending. Instead, she outspends him (in most cases) because *she expects to continue to out-earn him* for many years to come.

As a general rule, people calibrate their spending not to their *current* incomes but to their *permanent* incomes—that is, to something like their expected lifetime earnings.[2]

Now if Alice gets a $1 yearly raise from her private employer, she's likely to believe—correctly!—that the raise is probably permanent. That's why she spends more, and that's why the data show that higher incomes usually go hand-in-hand with higher spending. But if, instead, Alice gets a $1 yearly raise from a government that has decided to temporarily ramp up spending, she'll probably want to squirrel most of that dollar away against the day when her salary returns to normal. The cycle of spending we called the Keynesian multiplier never gets off the ground.

Okay, then. Maybe the cure is for the government to hire Alice and *permanently* raise her salary by $1 a year. That sounds good until you start thinking about where the government is going to *get* that dollar every year:

- The government could raise Bob's taxes by a dollar a year. But then just as Alice's spending goes up, Bob's goes down. If you want to increase total spending, this gets you nowhere.
- The government could borrow a dollar from Bob every year. But eventually Bob is going to want to be paid back, at which point the government is going to have to raise Charlie's taxes to get the money. At that point, Charlie starts spending less. Worse yet, if Charlie follows the news, he's likely to realize today that the government is running up debt, that future taxes are likely to rise, and that his own permanent income has therefore a taken a hit, which means he'll reduce his spending immediately.

There, then, is the rub. If you want Alice to spend more, you have to increase her *permanent* income, not just her current income. But the government can't increase Alice's permanent income without decreasing Bob's

[2] I like to tell my college students that this is why economics majors often own cars while philosophy majors don't, even though their current incomes are pretty much identical. The economics majors expect to be employed someday.

or Charlie's permanent income by the same amount, which dooms the entire project to failure.[3]

That's one consequence of Milton Friedman's *permanent income hypothesis*. More precisely, Friedman hypothesized that:

- When your permanent income rises by, say, $100 a year, you'll typically increase your annual spending by something very close to $100.[4]
- When your non-permanent income rises or falls by $100 in a given year (because of an unexpected bonus at work, a lost wallet, a winning scratch-off ticket, or an illness) then you'll typically make only a small adjustment in your current spending.

If Alice out-earns Bob by $100 a year, then (for an average Alice and an average Bob) it's usually because her permanent income exceeds his by about $90 and her non-permanent income exceeds his by $10. Therefore, since only her permanent income affects her spending, she outspends him by about $90.[5]

Therefore it's very easy for an economist to notice that when Alice outearns Bob by $100, she outspends him by $90—while remaining entirely oblivious to what lies behind the numbers. In particular, that economist can easily make the mistake of believing that a $100 increase in *non*-permanent income can lead to a $90 increase in spending. But that inference, which underlies the entire theory of the Keynesian multiplier, is wrong.

This makes a great deal of sense when you think about it. If Alice and Bob each earn $1,000 a week, their permanent incomes are identical. But if she gets paid on Fridays and he gets paid on Wednesdays, then her Friday income is $1,000 and his Friday income is $0. If spending really depended on (daily) income, we'd expect every Friday to see Alice eating steak and Bob eating crumbs (and the reverse on Wednesday). It's only because spending actually depends on *permanent* income that they in fact both live about equally well each day.

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[3] There are occasional exceptions. Conceivably the government could build a highway that reduces transportation costs by so much that everyone's permanent income—even after factoring in the taxes they pay to build the highway—goes up. Unfortunately, most government projects are not that productive.

[4] Exactly *how* close depends on a variety of factors including the interest rate and how much you've already got in the bank. But for illustration, I'll suppose going forward that you increase your spending by the full $100.

[5] The $90 figure is for illustration, though the real-world number is probably not too far from this.

The permanent income hypothesis also settles a nagging riddle that had been troubling economists for a long time. If Alice earns $20,000 more than her neighbour Bob, she typically outspends him by about $18,000. But if Alice earns $20,000 more than her grandfather did at her age, she typically outspends him by almost the full $20,000. (We see this in real-world data.) Whence the discrepancy?

Answer: When Alice out-earns Bob, it's often partly because she's having an unusually good year. Unusually good years don't generally repeat themselves. So if she out-earns Bob by $20,000, she might expect to out-earn him by only about $18,000 going forward, and increases her spending by almost that amount.

But when Alice out-earns her grandfather, it's likely to be because times have changed. That's a permanent condition. She expects to continue out-earning him by about the same amount forever, and spends accordingly.

So the permanent income hypothesis explains a lot. There remains the question of whether it's true. Friedman proposed several tests. For example: farmers' income is heavily dependent on market and weather conditions (this was especially true in Friedman's time, when farmers didn't routinely hedge their bets through futures markets). Factory workers' income is far more predictable. So an upward spike in Frank the farmer's income is likely to be mostly temporary, whereas an upward spike in Mary the machinist's income is likely to be mostly permanent (maybe she got promoted!). Therefore we should (on average of course) see machinists with income spikes increasing their spending by more than farmers with income spikes. Real world data confirm this prediction.

Friedman carried out a great many such tests, comparing not just farmers versus machinists, but Swedes versus Englishmen, black Americans versus white Americans, young people versus old people, and more. The results in each case are consistent with the permanent income hypothesis. So while Friedman acknowledged that no single test can constitute a slam-dunk proof, he argued that the weight of all these tests taken together comes pretty close to being definitive.[6] Essentially all economists now agree.

[6] This sort of empirical strategy was a Friedman trademark. Instead of relying on traditional tests of statistical significance, Friedman generally preferred to judge his hypotheses by their ability to

In fact, essentially all economists now view the permanent income hypothesis or some close variant as so nearly self-evident that it's hard to imagine a time when it needed to be discovered.[7] But there was such a time. Prior to Friedman, a series of excellent economists, including Rose Director (later Rose Director Friedman), Dorothy Brady, and the remarkable Margaret Reid, developed indispensable techniques for the analysis and interpretation of household expenditure data, and Friedman always graciously acknowledged his debt to those pioneers. But he was the first to envision the permanent income economic theories, the first to confront the hypothesis with a meticulous analysis of the data, the first to tease out its policy implications, and the first to place it in a proper historical context by explaining how it complements, expands, and sometimes supplants the work of his predecessors. When the Nobel Prize committee listed the achievements for which Friedman was selected, the permanent income hypothesis was first on the list.

explain a great many diverse observations. Friedman, who made his mark as a theoretical statistician before he switched to economics, was acutely aware of the shortcomings of the traditional tests.

[7] As is always the case with good science, subsequent researchers have proposed and made good arguments for variations on Friedman's theme, but essentially all modern research on consumption behaviour has its roots in his approach.