

Macroeconomics: BSc Year One

Components of Basic Models - Consumption

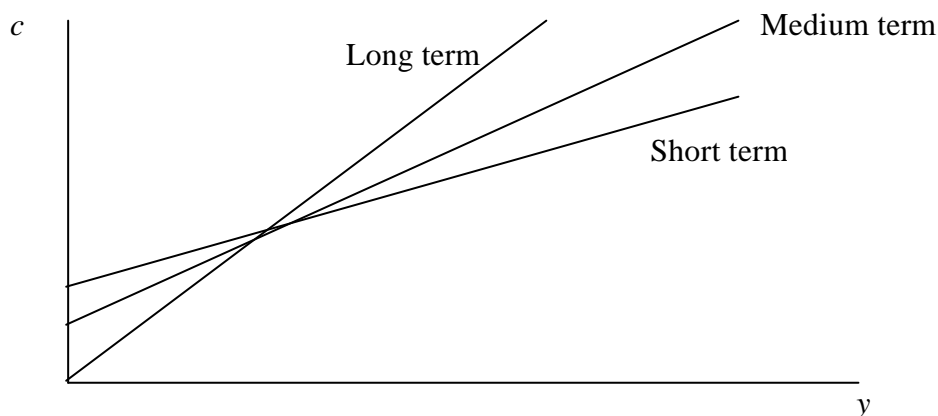
Keynes' General Theory

Consumption is often considered the most important element of a macroeconomic model, and is central to the work of John Maynard (later Lord) Keynes, especially in his General Theory; the basic premise of this is that the most important factor on consumption is income in real terms (y):

$$c = a + by$$

where $a > 0$ (autonomous consumption), and $0 < b < 1$ (the MPC - marginal propensity to consume).

Referring to a datasheet of consumption data against income, it can be seen that Keynes' theory is virtually true. However, it can be seen that using patterns with short periods, the constant value is higher and the MPC (and thus the gradient) is lower than for long-period points. In fact, for very long periods, $a \rightarrow 0$ and $b \rightarrow 1$:



Also, by looking at different periods of time (especially decades), the consumption curve also drifts upwards over time. Modifications to Keynes' theory hope to explain this through adjustments to the thinking behind consumption.

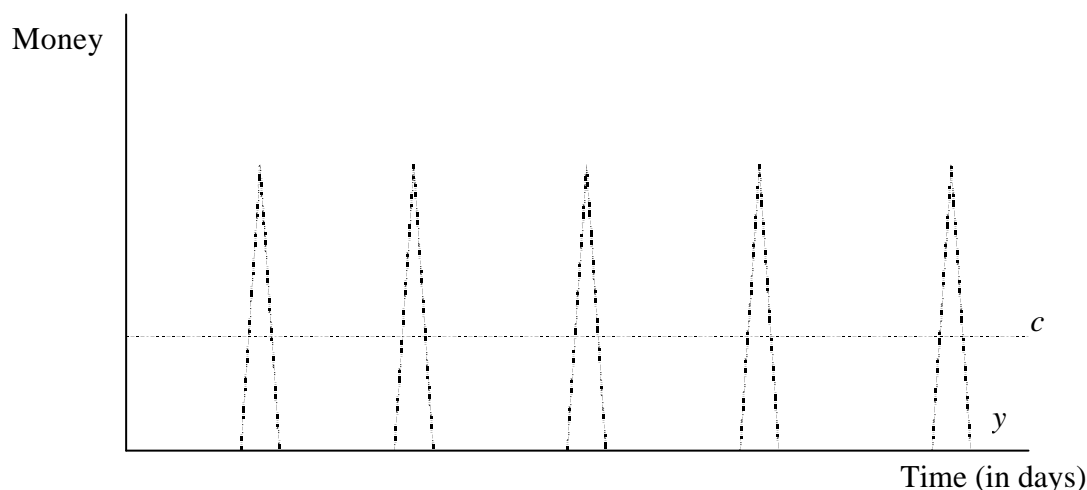
Friedman's Permanent Income Hypothesis

Friedman's hypothesis works on two main assumptions:

1. that people prefer smoothness in consumption rather than volatility,
2. that people should be regarded as rational and sensible problem solvers.

These two assumptions lead us to believe that people's objectives are primarily to achieve smoothness in consumption; if income is volatile, they will try and cut links with it, which explains the phenomena of saving and borrowing. Therefore, people have a long-term view of their income prospects (their 'permanent income') and adjust consumption to this.

A good example of the groups affected by this is students - the income is lower than can reasonably be expected in the medium term, and so they are willing (not eager!) to go into debt.



We may then write:

$$c_t = b y_t^{per}$$

where: y^{per} = permanent income

$$b = MPC \approx 1$$

$$y_t = y_t^{per} + y_t^{tra}$$

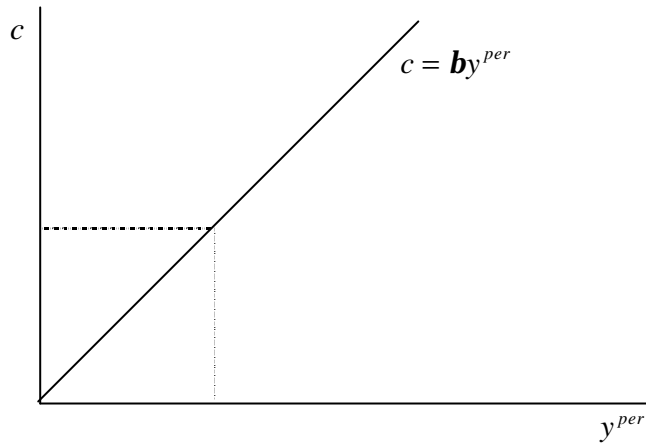
y^{tra} = transitory income

Transitory income is affected by factors such as accidents, illness, and so on (that is, factors that are not permanent).

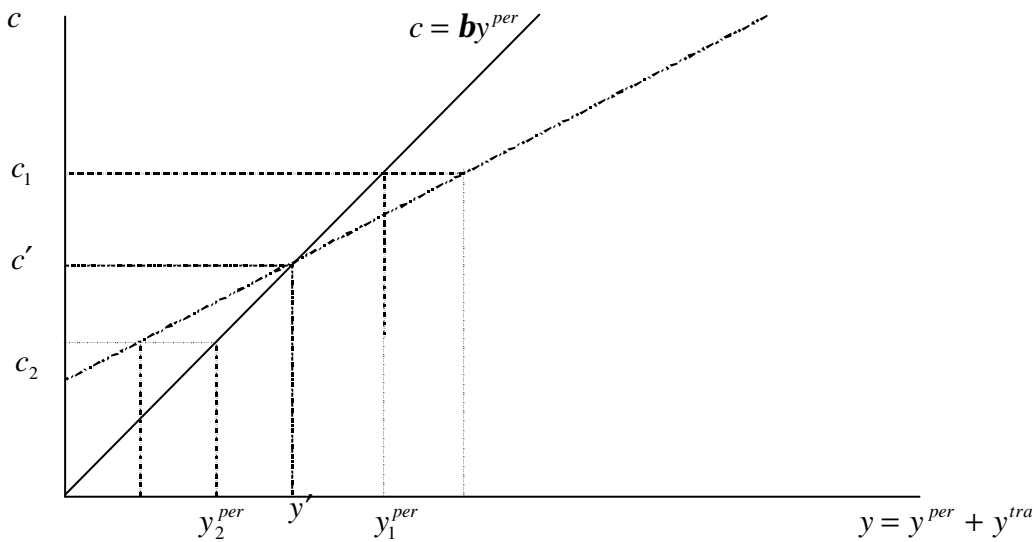
$$\frac{1}{n} \sum_{t=1}^n y_t^{tra} \rightarrow 0 \text{ as } n \text{ increases}$$

It's possible to have a bad month, but a bad decade is far less likely!

So, then, over a long period, $y \rightarrow y^{per}$, and we get a graph like:



However, if we use short-term data, we will get a graph cutting the y-axis:



Taking y' as the average value of income (this, incidentally, should give a good approximation of the average value of y_t^{per}), we can examine a level of income higher than y' . In this case, the high income will be a result of either high permanent or high transitory income, or both. The last option is the most likely, and y_t^{tra} is very likely to be positive. This leads us to conclude that y_t^{per} is lower than the value of y . People still consume at the level of y_t^{per} , however, so consumption remains at c_1 , below the $c = by$ line.

This applies to a value of income less than y' as well, where y_t^{tra} is likely to be negative. Overall, we can see a Keynesian graph appearing, although the permanent income hypothesis (PIH) remains true. It can be seen, by looking at long-term graphs for different decades, the consumption function has drifted upwards. Friedman explains this by explaining that permanent income is constantly rising.

Permanent income, however, relies on data that cannot be measured (or is very difficult to measure), so it is often necessary to use the basic Keynesian model of $c = a + by$.