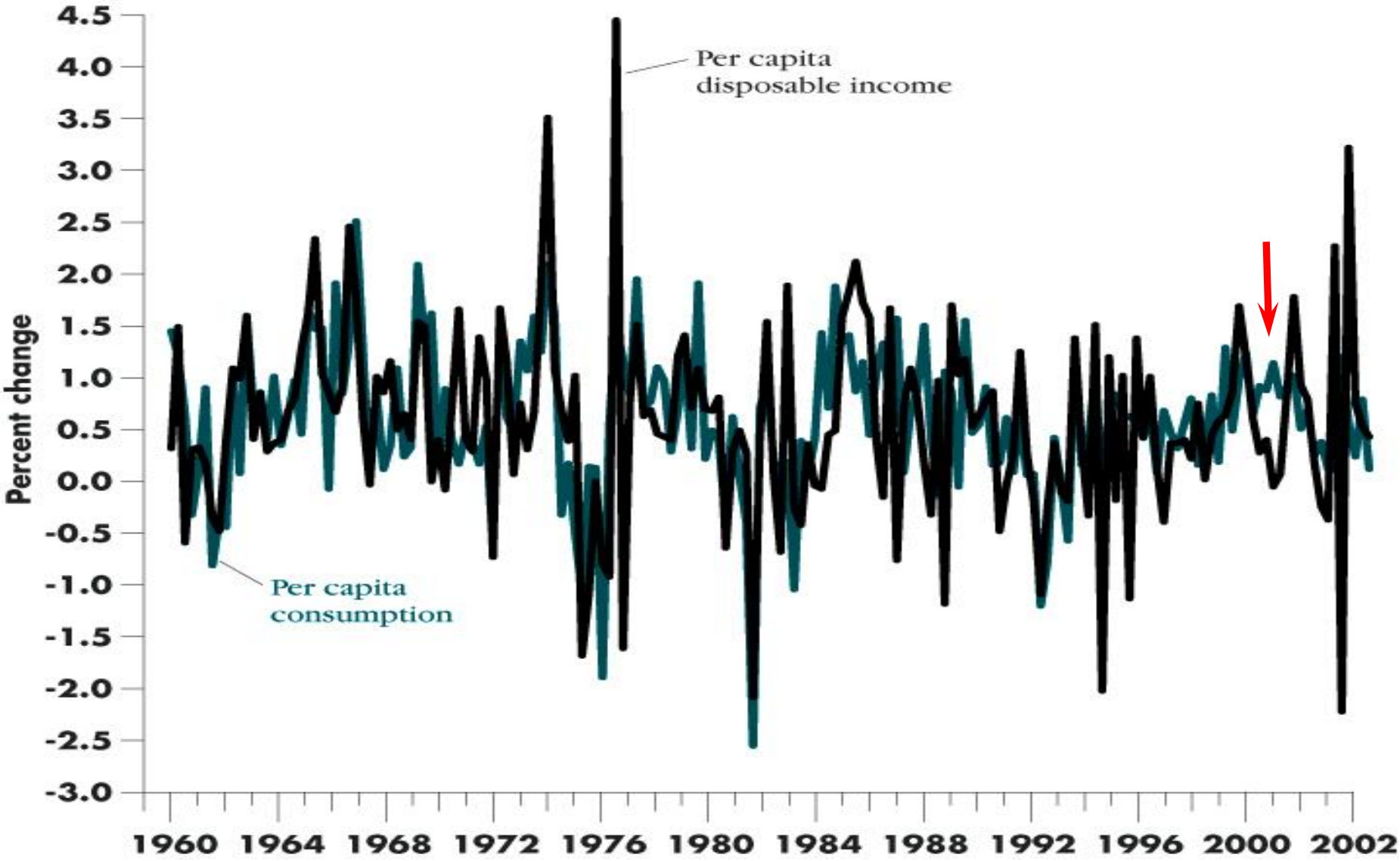
Theories of Consumption

Per Capita Consumption and Disposable Income in the US (1959-2002)



Consumption Function

(Behavioral Function)

Consumption constitutes a very high proportion of aggregate demand in the economy. And consumption demand in an economy is generally quite *stable* — fluctuations in consumption are proportionately *smaller* than the fluctuations in GDP.

MPC $\left[\frac{dC}{dY} \text{ or } \frac{\Delta C}{\Delta Y}\right]$: Increase in consumption due to per unit increase in income.

Keynesian model suggests a high value of MPC.

Keynes had put high importance on the consumption demand of an economy.

APC $\left[\frac{C}{Y}\right]$: Consumption per unit of income.

Absolute Income Hypothesis (AIH)

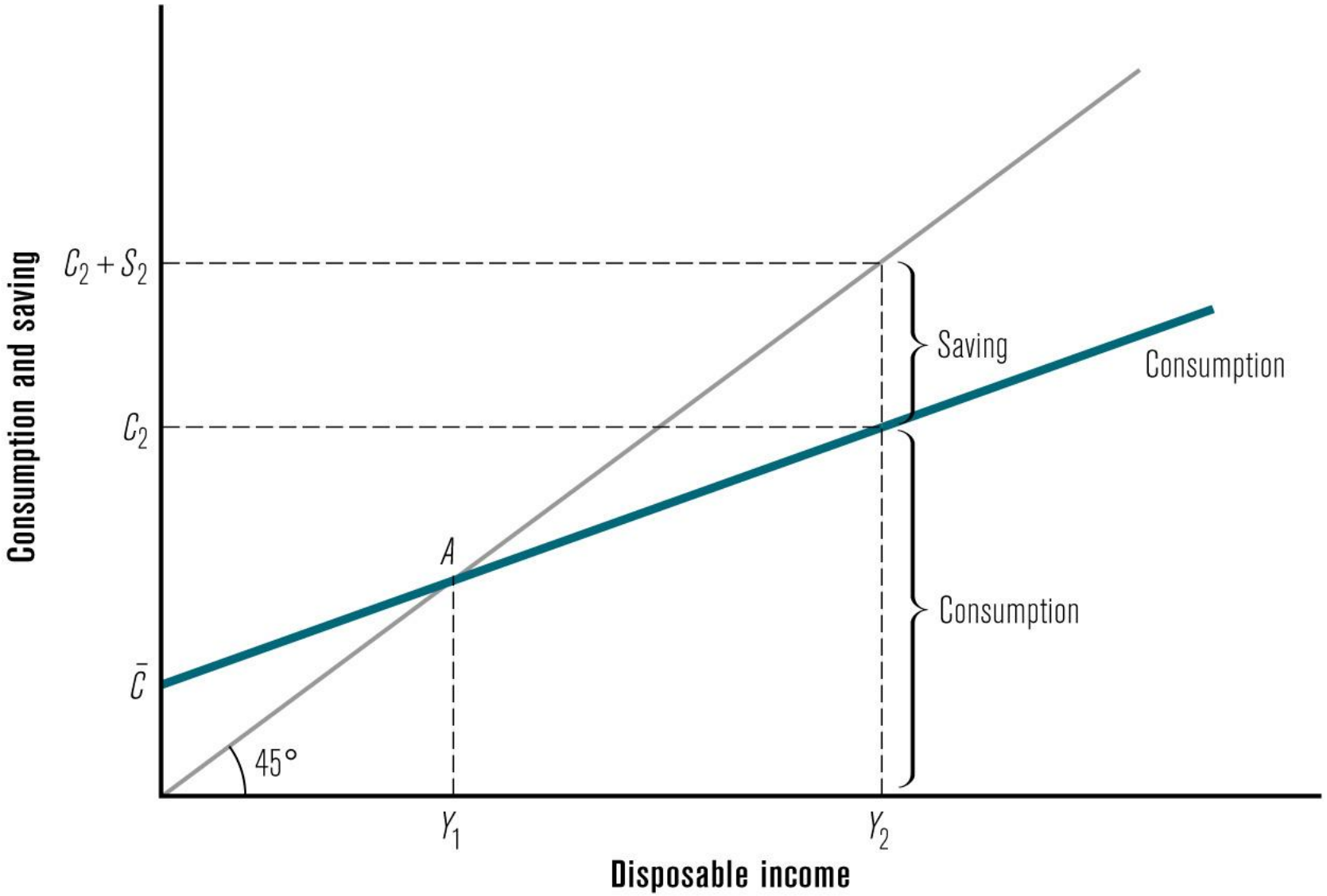
"The fundamental psychological law ... is that men are disposed, as a rule and on the average, to increase their consumption as their income increases, but not by as much as the increase in their income" — *John Maynard Keynes* **(1936, p. 96).**

Keynes's Conjectures

- APC falls as income rises. Rich people save a higher proportion of their income than the poor.
- MPC lies between 0 and 1; i.e. $0 < MPC < 1$. There is empirical evidence that wealthier people have a lower MPC than the poor.
- Income is the primary determinant of consumption and that the interest rate does not have any important role – stark contrast to the beliefs of the classical economists. Keynes did not have interest rate in his formulation of consumption function.

Keynes's conjectures were questioned and found erroneous.

Simon Kuznets (1942) found APC to be remarkably *stable* from decade to decade, despite large increases in income over his study period (1869-1929).



The Keynesian Absolute Income Hypothesis

Failures of AIH

Empirical findings have not verified all of Keynes's three conjectures. For example, his statement that consumption is a stable function of income is true in the long run and has been established by the time series analysis. Keynes's conjecture that MPC is positive, but *less* than 1, is true in the short run as well as in the long run. But, his statement that APC falls as income increases has not been found valid in the long run.

Kuznets (1942): APC remains remarkably stable from decade to decade, despite large increases in income.

The failure of the *secular stagnation hypothesis* and the empirical findings of Simon Kuznets [supported by Goldsmith's study in 1955] presented a puzzle that motivated much of the subsequent research works on consumption.

Life - Cycle Hypothesis (LCH)

Albert Ando, Franco Modigliani & Richard Brumberg

(1963), (1966)

Individuals generally plan their consumption and savings behavior in the best possible way over their life times.

Consumption plans are made so as to achieve a smooth or even level of consumption by saving during periods of high income and dissaving during periods of low income.

Income varies *systematically* over people's life time — saving allows people to move income from those times in life when income is high to those times when it is low — this fact of consumer behavior forms the basis of LCH.

The LCH views savings as resulting mainly from individual's desires to provide for smooth consumption in old age. This theory identifies the *age structure of the population as an important determinant of consumption and saving behavior*.

LCH (contd.)

Consider a man who expects to live another T years. He has wealth of W amount and expects to work and earn income Y for another R years from now.

What level of consumption would the man choose to maintain a smooth level of consumption over his life time?

The man's life time resources are composed of his initial wealth W and lifetime earnings RY; i.e., [W + RY].

(For simplicity, we assume a zero or negligible interest rate. Otherwise, we need to take account of interest earned on savings).

LCH (contd.)

The individual divide his lifetime resources among his T remaining years such that he achieves smoothest possible path of consumption.

Therefore, he divides this total of [*W* + *RY*] equally among the T years and each year consumes

$$C = \frac{[W + RY]}{T}$$

Rewrite this consumption function as:

$$C = \left(\frac{1}{T}\right)W + \left(\frac{R}{T}\right)Y$$

Consumption depends on both income and wealth.

APC is $$\frac{C}{Y} = \alpha\left(\frac{W}{Y}\right) + \beta$$

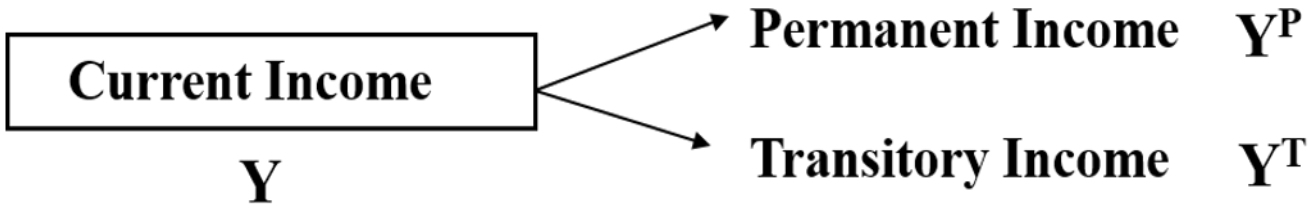
In the short run, high income corresponds to a low APC. But, over the long run wealth and income grow together, resulting in a constant wealth-income ratio and thus a constant APC — this way Modigliani solved Kuznet's consumption puzzle.

In the short run, wealth is constant. However, in the long run as wealth increases the consumption function shifts upward. This upward shift prevents the APC from falling as income increases.

Permanent Income Hypothesis

Milton Friedman (1957)

People experience ***random*** and ***temporary*** changes in their incomes from time to time.



Permanent income is the part of income that people expect to persist into the future.

Transitory income is the part of income that people do not expect to persist.

A good education provides a permanently higher income, whereas to a farmer good monsoon provides only transitorily higher income.

Friedman (1957): Consumption depends primarily on permanent income. For example, if a person receives a permanent raise of Rs. 10,000 per year, his consumption will rise by about as much. But if a person wins lottery of Rs. 10,000, he will not consume it all in one year. Instead, he will spread the extra consumption over the rest of his life time. **Thus, *people spend their permanent income, but they save rather than spend most of their transitory income.***

Friedman concluded that we should view the consumption function as approximately

$$C = \alpha Y^P$$

α measures the fraction of permanent income consumed.

Implications

Keynesian consumption function uses wrong variable. According to PIH, consumption depends on permanent income and *not* on current income. This ***errors-in-variables*** problem gives contradictory empirical findings.

Friedman's PIH: $$APC = \left(\frac{C}{Y}\right) = \alpha\left(\frac{Y^P}{Y}\right)$$

When current income temporarily rises above permanent income, the APC temporarily falls; however, when current income temporarily falls below permanent income, the APC temporarily rises.