

# Theories of Consumption

## Keynesian theory of Consumption

“The General Theory of Employment, Interest and Money”

John Maynard Keynes – 1936

Short term function

$$C = f(Y) \text{ -----} \rightarrow (1)$$

$$C = a + b Y_d$$

It's a Psychological Law

$$(Y_d = Y - T)$$

# Introduction

**The relation between aggregate consumption or aggregate savings and aggregate income.**

**The amount of aggregate consumption mainly depends on the amount of aggregate income.**

**Fundamental psychological rule of any modern community that, when its real income is increased, it will not increase its consumption by an equal absolute amount.**

# Introduction

Numerical consumption functions were estimated from two kinds of data.

time series data or cross sectional data on consumption, savings, income, prices and similar variables.

## **Keynes's Hypothesis**

Current consumption expenditure was highly correlated with income, the marginal propensity to consume was less than unity, and the marginal propensity was less than the average propensity to consume

$$b = \Delta C \div \Delta Y \text{ -----} \rightarrow (11)$$

$$b = \text{MPC}$$

Marginal Propensity to Consumption

$$(0 < \text{MPC} < 1)$$

MPC Ratio is Fixed

$$\text{APC} = C \div Y \text{ -----} \rightarrow (111)$$

Average Propensity to Consumption

$$C = Y \text{ -----} \rightarrow \text{APC} = 1$$

$$C > Y \text{ -----} \rightarrow \text{APC} > 1$$

$$C < Y \text{ -----} \rightarrow \text{APC} < 1$$

$$b = \Delta S \div \Delta Y \text{ -----} \rightarrow (1V)$$

$$b = \text{MPS}$$

Marginal Propensity to Savings

$$(0 < \text{MPS} < 1)$$

MPS Ratio is Fixed

$$Y = C + S$$

$$\Delta Y = \Delta C + \Delta S$$

$$\Delta Y / \Delta Y = \Delta C / \Delta Y + \Delta S / \Delta Y$$

$$1 = \text{MPC} + \text{MPS}$$

$$1 - \text{MPC} = \text{MPS}$$

$$1 - \text{MPS} = \text{MPC}$$

$APS = S \div Y \text{ -----} \rightarrow (V)$   
Average Propensity to Savings

$$Y = C + S$$

$$Y/Y = C/Y + S/Y$$

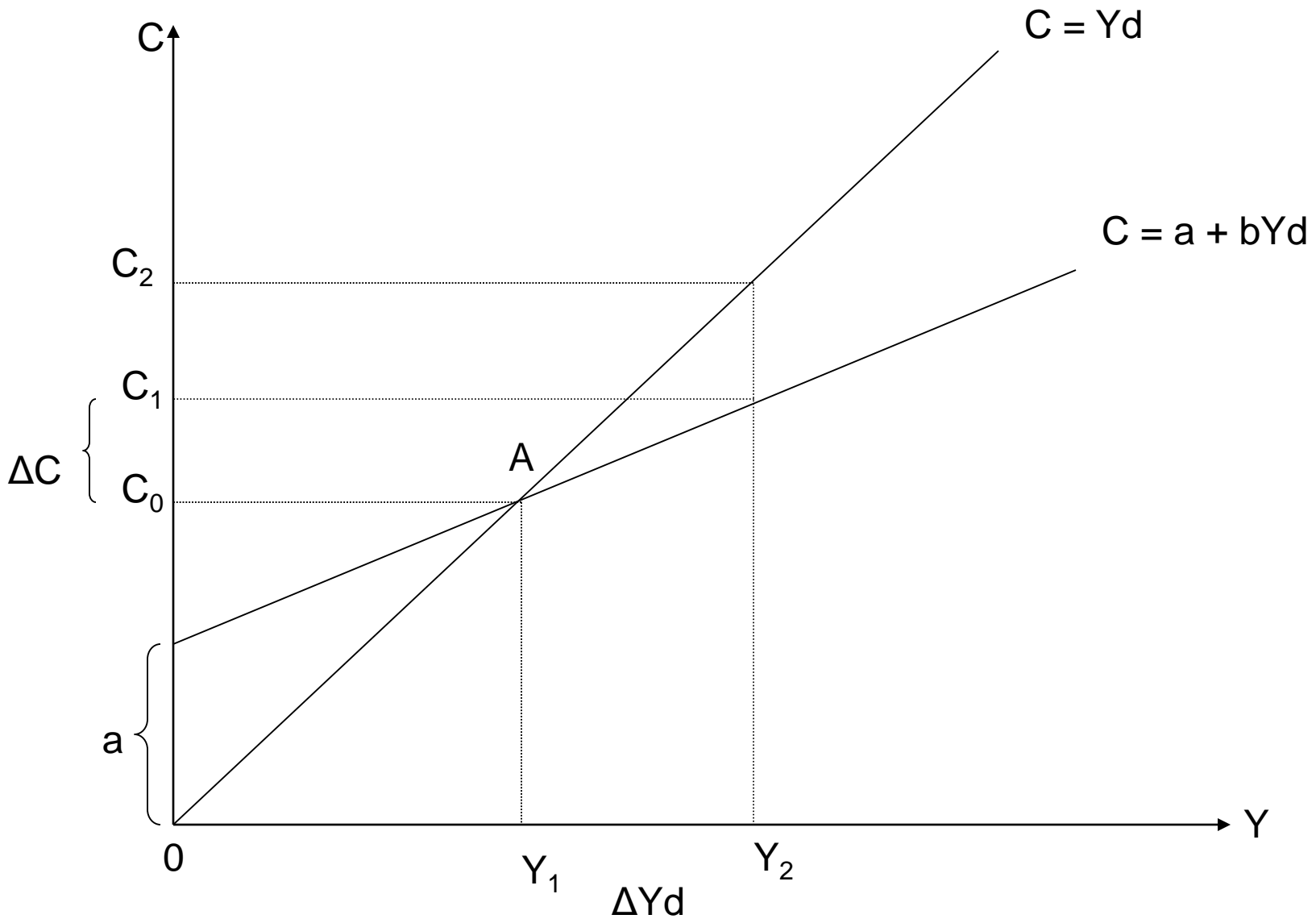
$$1 = APC + APS$$

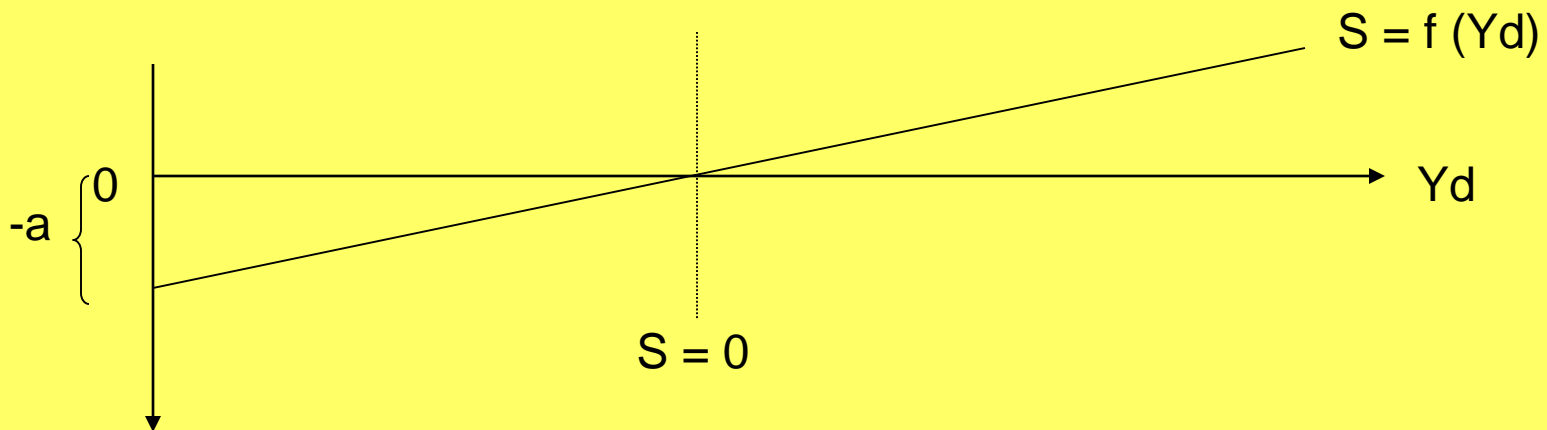
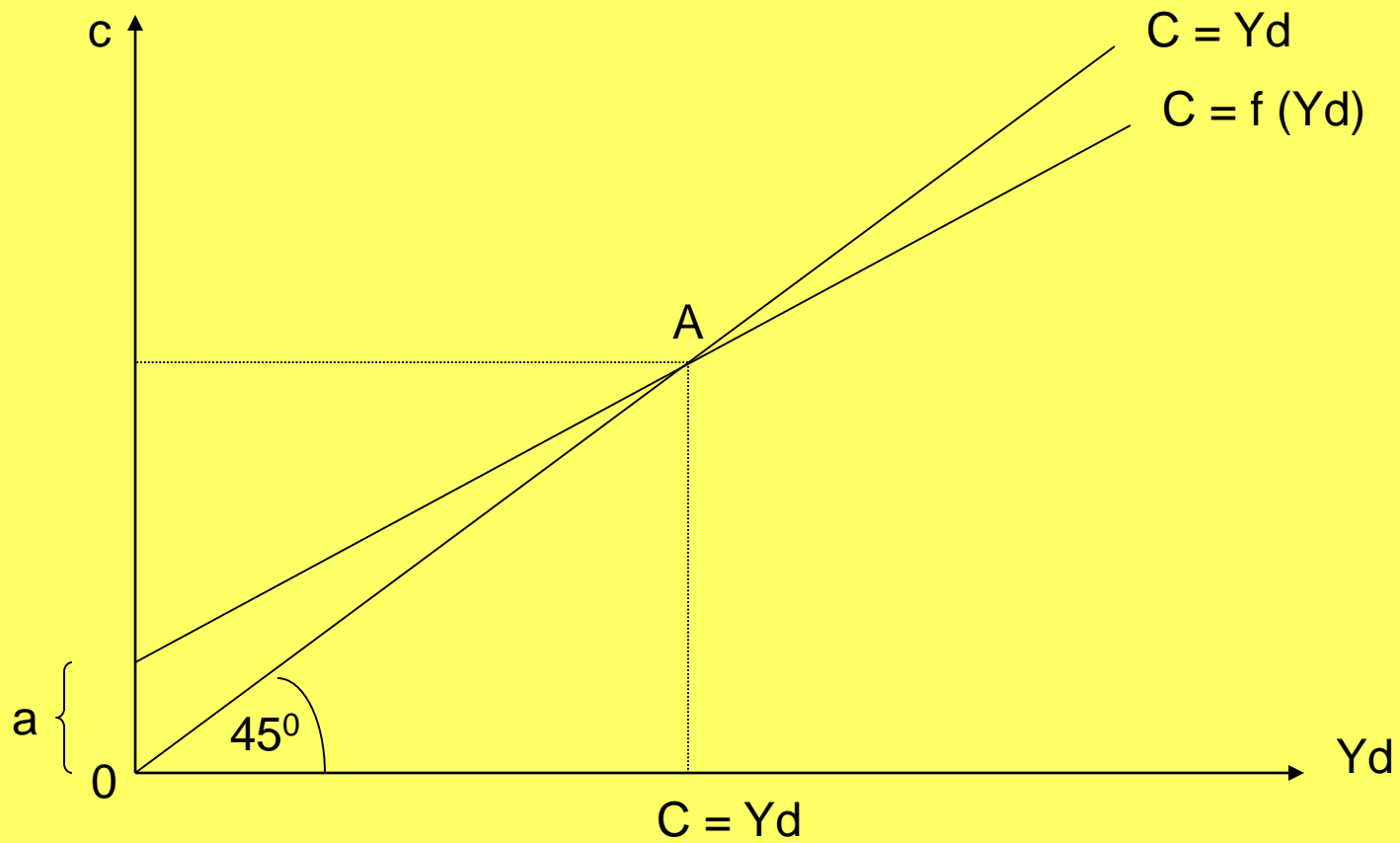
$$1 - APC = APS$$

$$1 - APS = APC$$

$$C = a + b Y_d \quad \rightarrow (V1)$$

$$S = -a + b Y_d \quad \rightarrow (V11)$$







# **Post Keynesian Consumption Analysis**

Brady and Friedman suggested that a consumer unit's consumption of income among consumer units in its community.

They presented a good deal of evidence, mostly from budget data, in support of this relative income hypothesis

# Post Keynesian Consumption Analysis

Simon Kuznets – 1942

From 1869 to 1929 time series data Analysis

Long term Consumption Function

$$APC = MPC$$

$$C = f(Y_d)$$

$$C = b Y_d$$

Empirical Studies on 1935-1936  
Cross Sectional Data Analysis

$$C = 1197 + 0.35 Y_d$$

Short term consumption function

Time Series Data Analysis

Long term consumption function  
1944, 1947, 1948

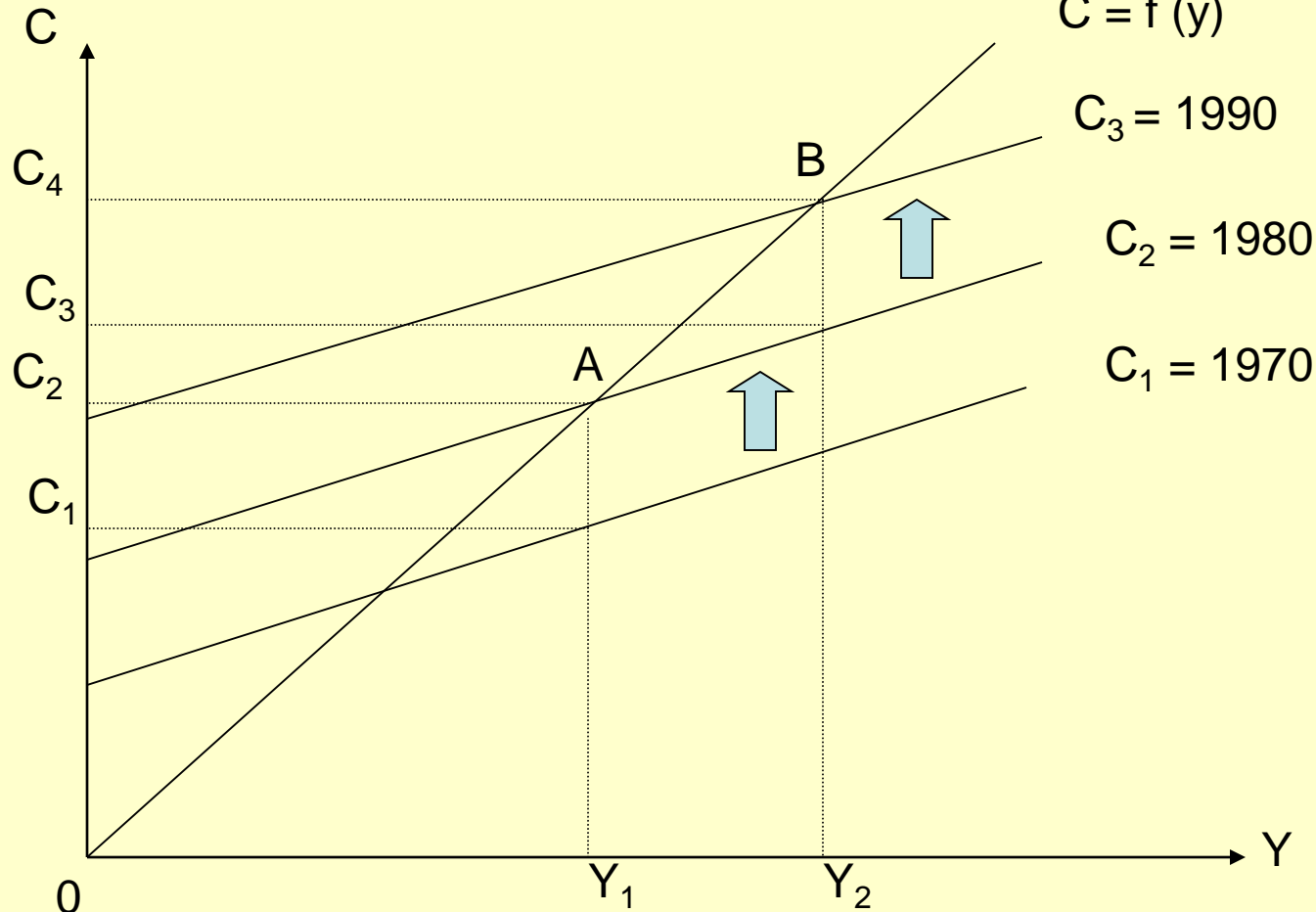
Different relationship between short term model

## Post Keynesian Economist

- 1942 – Simon Kuznets
- 1949 – James Duesenberry
- 1952 - Davis
- 1954 – Richard Brumberg
- 1957 – Milton Friedman
- 1960 – James Tobin
- 1962 – Edward Spiro
- 1963 – Franco Modigliani
- 1963 – Albert Ando
- 1964 – Ball & Drake

# Post Keynesian Consumption Analysis

## Long term Consumption function



# Post Keynesian Consumption Analysis

01. අර්ථක්‍රමයේ ණය ලබාගැනීමේ පහසුකම් වැඩිවීම (වර්ධනය).
02. වත්කම්වල වර්ධනය (වැඩිවීම).
03. නව භාණ්ඩ වර්ග සොයාගැනීම (තාක්ෂණික ප්‍රගතිය).
04. වයස් සංයුතියේ සිදුවන වෙනස්වීම (කාලය).
05. ආදායම් ව්‍යාප්තියේ සිදුවන වෙනස්කම් (විසමතාව අඩුවීම).
06. කාලයත් සමඟම එතෙක් සුබෝපභෝගී වූ භාණ්ඩ පසුව සාමාන්‍ය භාණ්ඩ බවට පත්වීම.

# Post Keynesian Consumption Analysis

## **J. Duesenberry**

He based the same hypothesis on a theoretical structure that emphasizes the desire to emulate one's neighbors and the demonstration by neighbors of the qualities of hitherto unknown or unused consumption goods.

He suggested that the relative income hypothesis could be used to interpret aggregate data by expressing the ratio of consumption to income as a function of the ratio of current income to the highest level previously reached.

# Post Keynesian Consumption Analysis

The Relative Income Hypothesis

Jeams Dusenberry – 1949

$$APC = MPC$$

$$1869 - MPC = 0.84$$

$$1939 - MPC = 0.89$$

70 years MPC values changed between 0.05

$$C_t / Y_t d_t = a - b (Yd_t / Yd_o)$$

results of the analysis

$$C_t / Y_t d_t = 1.196 - 0.25 (Yd_t / Yd_o)$$



# Post Keynesian Consumption Analysis

$$C_t / Yd_t = 1.196 - 0.25 (Y_t d / Yd_o)$$

Economic Growth Rate 2.5%

$$Yd_o = 100 \text{ and } Yd_t = 102.5$$

$$\begin{aligned} Y_t d / Yd_o &= 102.5 \div 100 \\ &= 1.025 \end{aligned}$$

Apply above equation

$$C_t / Yd_t = 1.196 - 0.25 (1.025)$$

$$C_t / Yd_t = 0.94$$

$$C_t = 0.94 Yd_t$$

(Duesenberry computed such a regression for the US for 1929-1941 and obtained reasonably good results)

# Post Keynesian Consumption Analysis

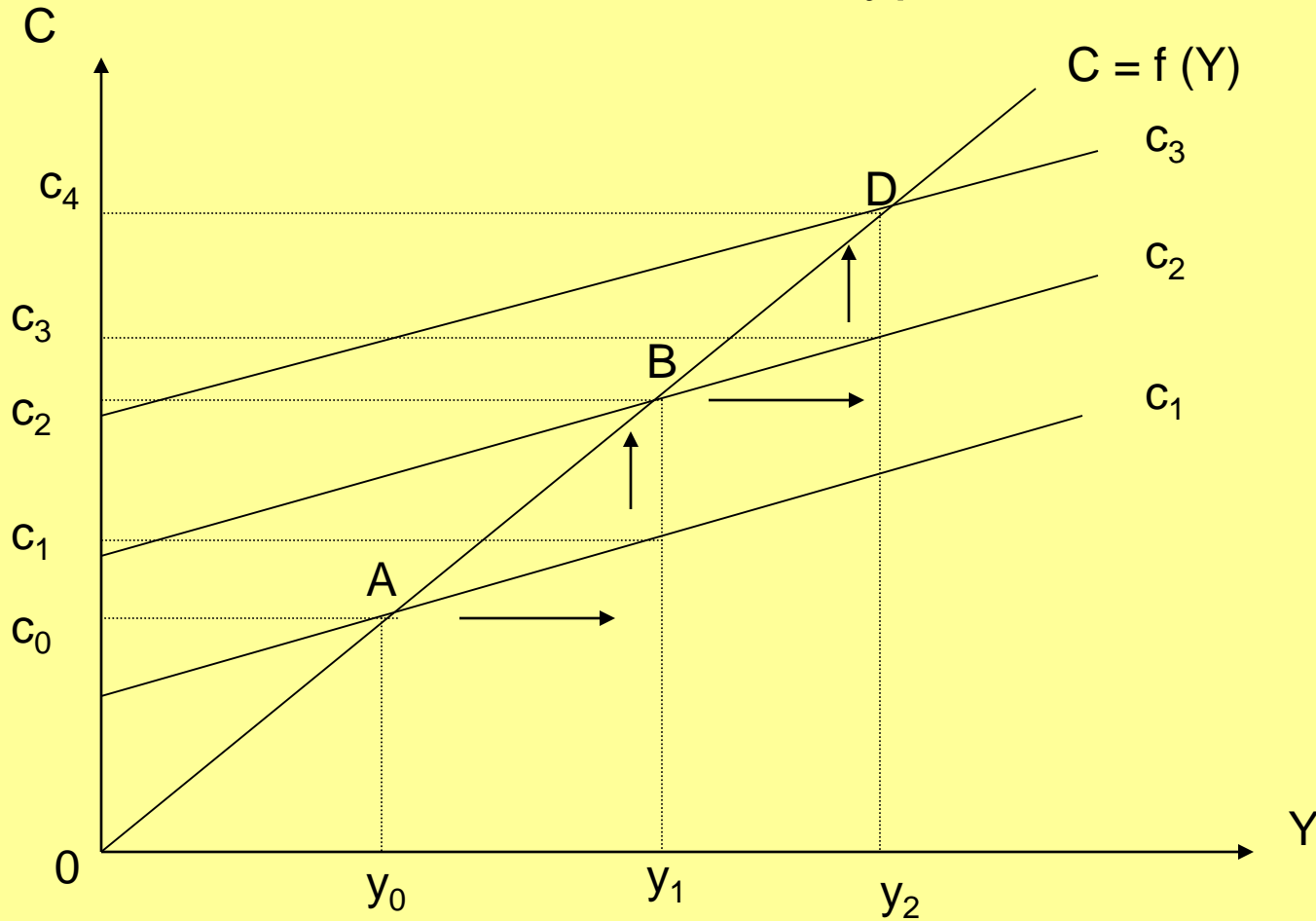
Tobin has examined the consistency of the relative income hypothesis and the earlier absolute income hypothesis with a limited body of empirical evidence.

He finds neither hypothesis entirely satisfactory, he concludes that the weight of evidence favors the absolute income hypothesis.

He tentatively suggests that changes in wealth may explain the rough constancy over time in the fraction of income saved.

# Post Keynesian Consumption Analysis

## The Relative Income Hypothesis



# Post Keynesian Consumption Analysis

## Permanent Income Hypothesis

Milton Friedman – 1957

$$C = f (Y_p + i)$$

$$Y_d = Y_p + Y_t$$

$$C = C_p + C_t$$

$$\mu (Y_t) = \mu (C_t) = 0$$

( $\mu$  = mean)

$$\rho(Y_{td}, Y_{pd}) = \rho(Y_{td}, C_p) = \rho(Y_{td}, C_t) = 0$$

( $\rho$  = Correlation Coefficient)

# Permanent Income Hypothesis

$C_p$  = Planned or permanent consumption

$Y_p$  = Planned or permanent income

That not depend on the size of permanent income but does depend on other variables, in particular, the interest rate ( $i$ ), the ratio of nonhuman wealth to income ( $w$ ), and other factors affecting the consumer unit's tastes for current consumption versus accumulation of assets ( $u$ ).

$$C_p = f(i, w, u) Y_p$$

# Post Keynesian Consumption Analysis

## **F. Modigliani**

Independently made essentially the same suggestion for the analysis of aggregate data, submitted it to extensive and detailed statistical tests, and concluded that it gave excellent results

# Post Keynesian Consumption Analysis

The Life cycle Hypothesis

Franco Modigliani

$$C_t = \alpha_1 Y_{tI} + \alpha_2 Y_{tE} + \alpha_3 w_t$$

$$C_t = \alpha_1 (Y_{tI}) + \alpha_3 (w_t)$$

$$C_t = \beta_1 (Y_{tL}) + \beta_2 (F_t / E_t) \cdot Y_{tL} + \beta_3 (w_t)$$

$F_t$  = Value of total labour force

$E_t$  = Value of activate labour force

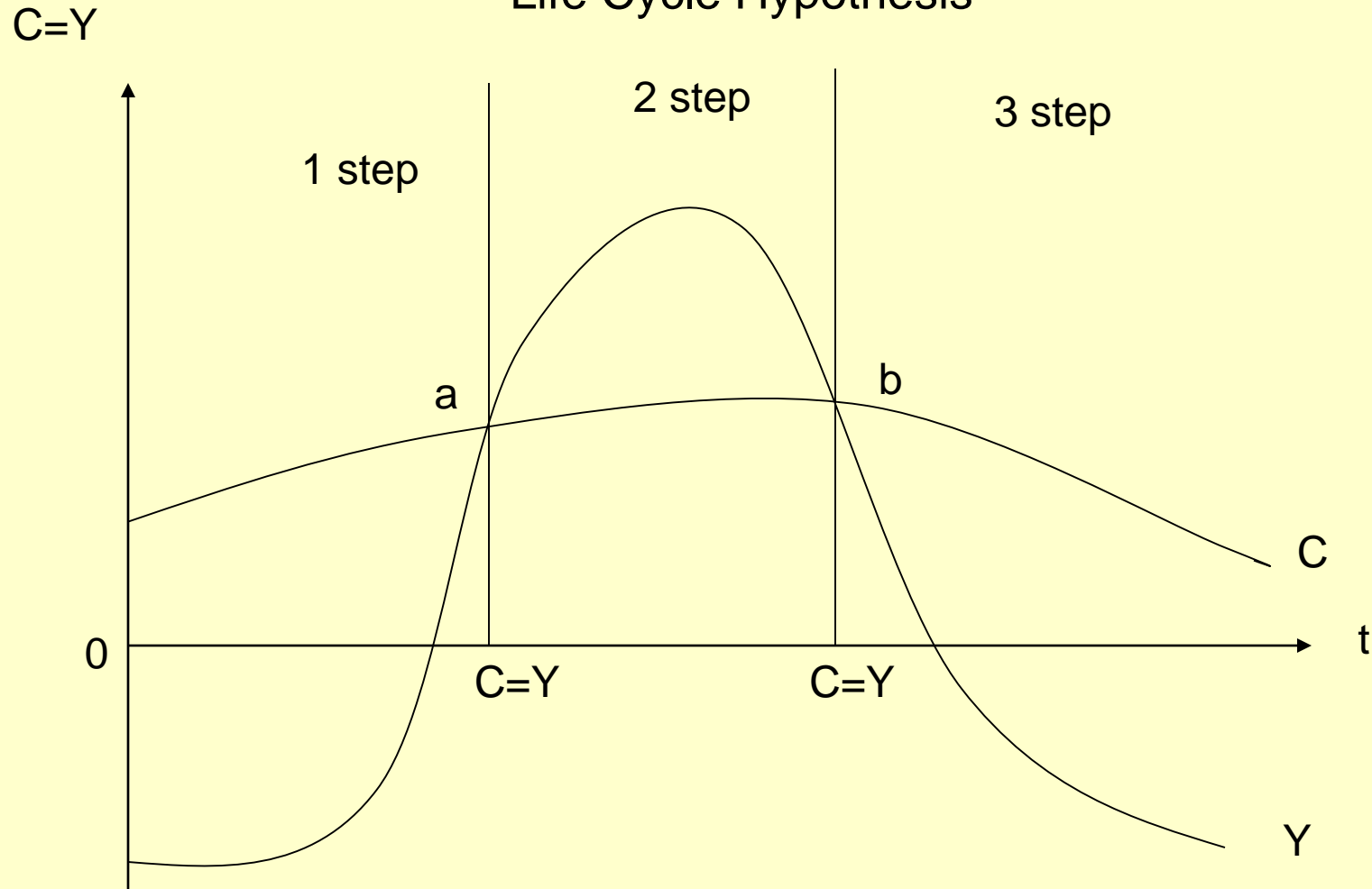
$B_1$  = MPC of labour income

$B_2$  = MPC of effected business cycle to the labour income

$B_3$  = Wealth of MPC

# Post Keynesian Consumption Analysis

## Life Cycle Hypothesis





# Summary and Conclusion

Consumption functions analysis accordingly distinguishes sharply between income as recorded-which we term measured income-and the income to which consumers adapt their behavior-which we term permanent income-and, similarly, between measured consumption and permanent consumption.

The concept of permanent income is easy to state in these general terms, hard to define precisely, Permanent income cannot be observed directly, it must be inferred from the behavior of consumer units.

This is equally true of permanent consumption and its relation to permanent income.

## Summary and Conclusion

The meaning of permanent income cannot be stated so simply. We can think of the factors affecting the consumer's receipts as having a range of time dimensions: some factors affect his receipts only for a day, others for a week, a year, two year and so on. We have approximated this continuum by a dichotomy. Effects lasting less than a certain time period are considered transitory, those lasting for a longer time, permanent. The length of this time period we call the consumer unit's horizon. A number of different pieces of evidence support the highly tentative conclusion that the horizon so defined is about three years.

## Summary and Conclusion

The transitory components of a consumer unit's income have no effect on his consumption except as they are translated into effects lasting beyond his horizon.

His consumption is determined by longer-range income considerations plus transitory factors affecting consumption directly.

The transitory components of income show up primarily in changes in the consumer units' assets and liabilities, that is, in his measured savings.

## Summary and Conclusion

This approach to the interpretation of consumption data and the particular hypothesis to which it has led have far-reaching implications.

The hypothesis more formally, summarizes the evidence adduced in support of it, lists generalizations about consumer behavior derived from it.

Outlines some of its implications for research, economic understanding, and economic policy.

## Summary and Conclusion

The permanent components of income and consumption can never be observed directly for an individual consumer unit.

The relation between aggregate consumption and aggregate income depends not only on the consumption function for individual consumer units but also on the distribution of consumer units by the variables affecting their behavior.

The distribution of consumer units by  $i$ ,  $w$ , and  $u$  or such summary measures of these distributions as their means and variances.

## Summary and Conclusion

Given the same assumptions of zero correlation between transitory and permanent components and between transitory components of consumption and income.

The hypothesis has the same implications for the regression of consumption on income computed from aggregate data as for the regression computed from data for individual consumer units.

In neither case is stability of the observed with respect to current consumption and current saving.

## Summary and Conclusion

### ***Evidence on the Acceptability of the Permanent Income Hypothesis***

The implications of the permanent income hypothesis explain the major apparent anomalies that arise if the observed regression between measured consumption and measured income is interpreted, as it generally has been, as a stable relation between permanent components-though, of course, this is not the name that has been attached to the measured magnitudes.

## Summary and Conclusion

### ***Generalizations about Consumer Behavior Based on the Hypothesis***

Empirical evidence has been considered in this study primarily from the standpoint of its consistency with the permanent income hypothesis rather than of its contribution to the understanding of consumer behavior.

In the process of using the evidence to test the hypothesis, however, we have necessarily been led to use the hypothesis to extract generalizations from the evidence.



## Summary and Conclusion

### ***Implications of the Hypothesis for Research***

The broader implications of acceptance of the permanent income hypothesis affect two very different areas of human effort:

- (1) research into consumption behavior and income structure.
- (2) economic understanding reserves and policy.