

Households & Consumption

Consumption

The Economic Importance of Consumption

- The household sector is the largest economic sector at 70% of GDP.
- Often changes in consumer spending trigger changes in production, and employment.
- The importance of this sector cannot be overstated.

Consumption

Personal Consumption Expenditures are divided into three categories:

- Durable Goods
- Non-durable Goods
- Services

Consumption

Durable Goods

- Goods that last three years or more
- Usually very sensitive to the business cycle.
- Includes autos, home appliances, boats, computers.

Consumption

Non-durable Goods

- Goods that do not last three years.
- Not as sensitive to the business cycle as durable goods.
- Includes food, fuel, clothing.

Consumption

Services

- Largest category of personal consumption expenditures.
- Includes health care, insurance, housing services (they impute a rent to owner occupied housing), etc.
- Typically, these expenditures remain steady through the business cycle.

Consumption

Personal Consumption Expenditures (PCE)

	2004	2005
Total	\$8,211.5	\$8,742.4
Durables	986.3	1,033.1
Non-durables	2,345.2	2,539.2
Services	4,880.1	5,170.0

Consumption

The Consumption Function

- Income
- Assets/Rate of Return
- Debt/Interest Rate cost

Consumption

Income

- Typically, as income increases, consumption goes up.
- It does not go up proportionately.
- The consumption that varies directly with income is called induced consumption.
- That part of consumption that does not directly vary with income is called autonomous consumption.

Consumption

Measurement of the relationship between income and consumption

- Average Propensity to Consume (APC)

$$APC = C / Y$$

- Marginal Propensity to Consume (MPC)

$$MPC = \Delta C / \Delta Y$$

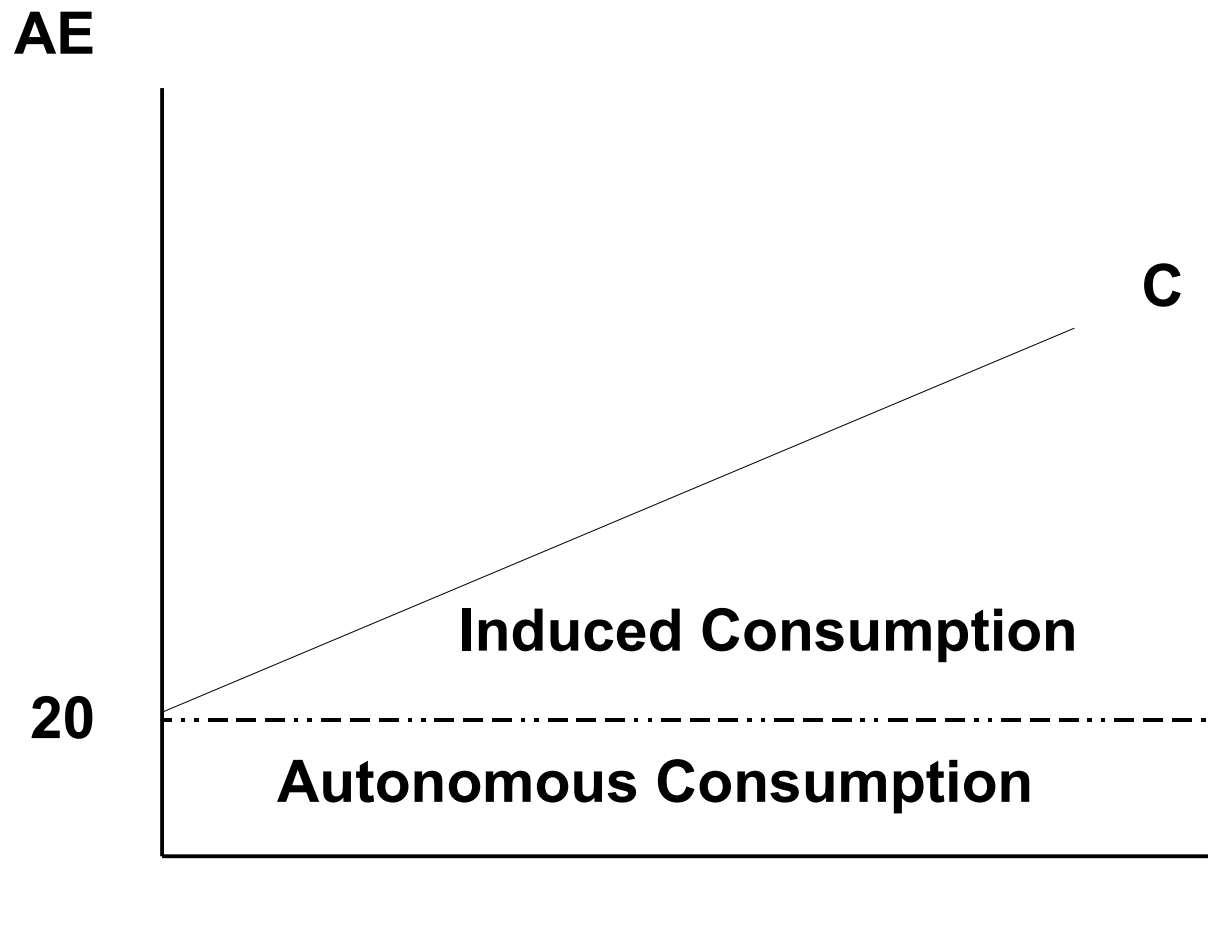
Consumption

Measurement of the relationship between income and consumption

- Average Propensity to Consume represent the percentage of income spent on consumption expenditures.
- Marginal Propensity to Consume represents the percentage of income spent on consumption for each additional dollar of income.

Consumption

Graphing the Consumption Function

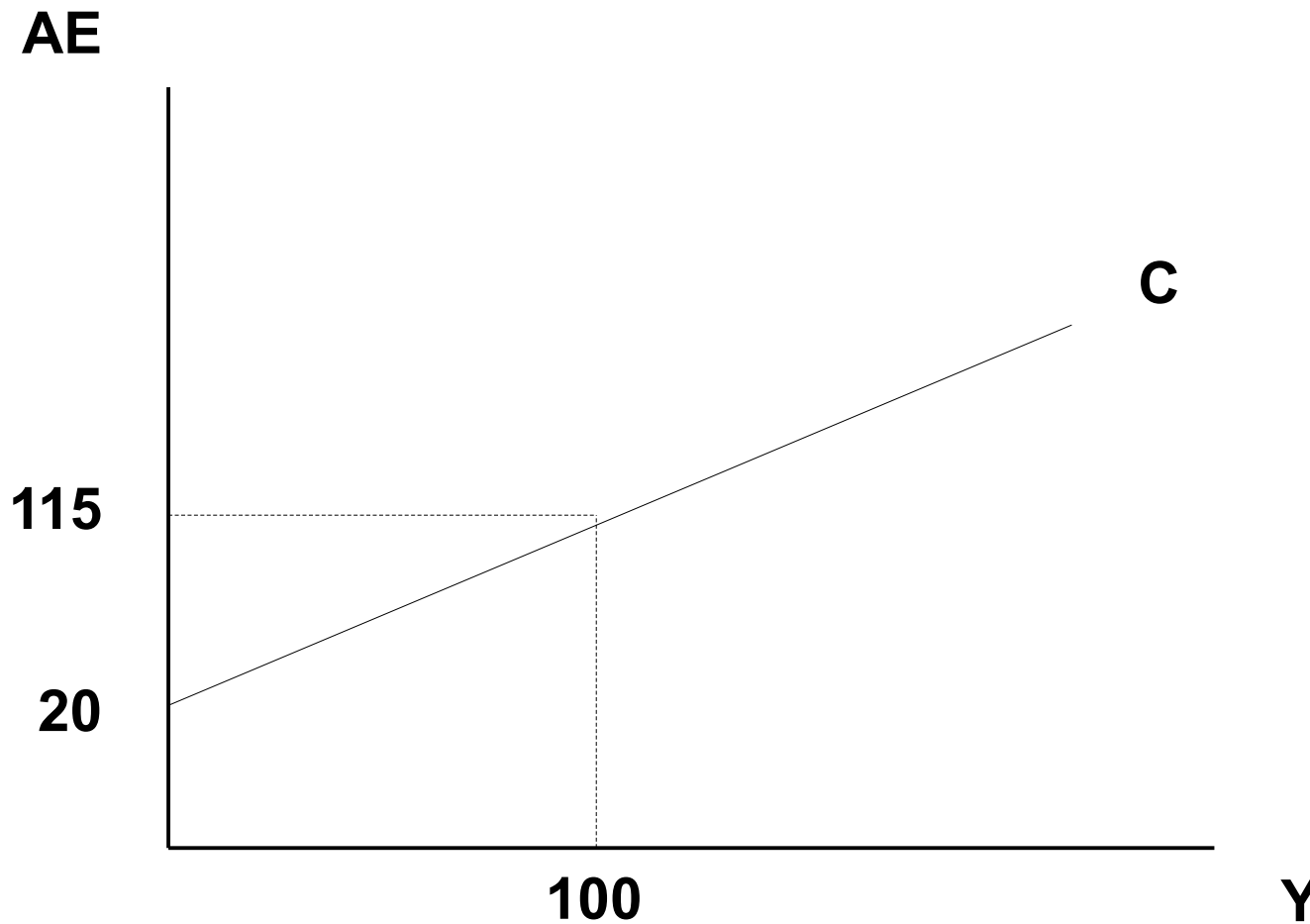


- Induced consumption varies with income.
- Autonomous consumption does not.
- Note $AE =$ Aggregate Expenditures
- The slope of the consumption line is the MPC.

Y

Consumption

Graphing the Consumption Function



MPC
= $(20-115)/(0-100)$
= $95/100$
= .95

Consumption

Notes to graph

- Slope of the consumption line is the Marginal Propensity to Consume(MPC).
- The level of autonomous consumption spending is 20.
- Higher MPC steepens the line.

Consumption

Assets (Wealth)

- Typically, as wealth increases, consumption goes up.
- It does not go up proportionately.

Consumption

Interest Rates

- Typically, as interest rates increases, consumption goes down.
- It depends on the amount of debt the household has outstanding.

Consumption Theories

The Relationship of Income to Consumption

- Permanent Income Hypothesis
- Life-Cycle Theory

Consumption Theories

Permanent Income Hypothesis

- That people consume based on an average expected income.
- Temporary increases or decreases in income do not affect average consumption.
- Theory by Milton Friedman.

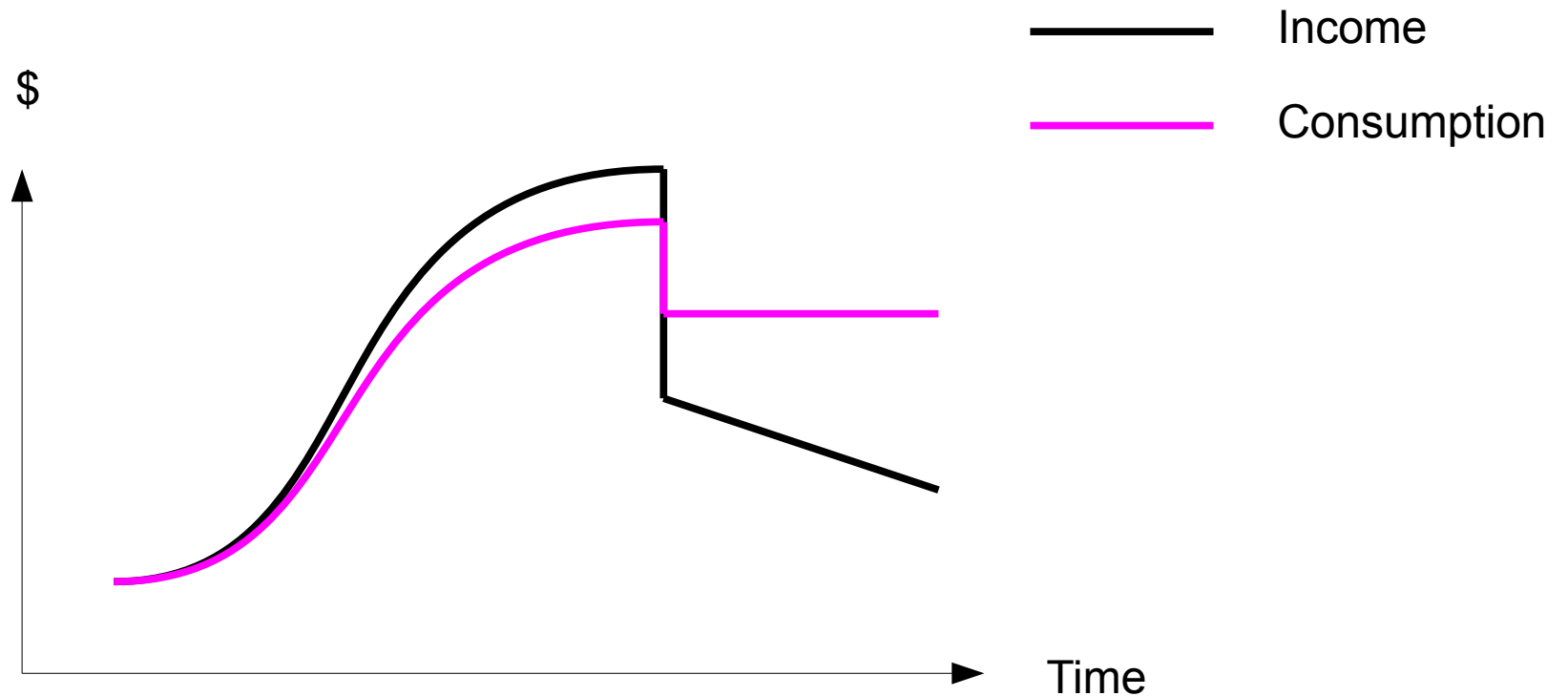
Consumption Theories

Life-Cycle Theory

- That people's income, expenditures, and savings follow a life cycle pattern.
- By Modigliani and Ando

Consumption Theories

Life-Cycle Theory Graph



Expenditure Multiplier

Economic Importance of Expenditure Multiplier

- Determines expansion and ultimate limit of economic activity resulting an injection.
- Used to justify projects of importance to the community.

Expenditure Multiplier

Definition

- How much economic activity changes from \$1 injection.
- Economic expansion or contraction from an initial economic event.

Expenditure Multiplier

Explanation

- Funds spent become revenue for seller who in turn uses them to buy from another seller thereby continuing the cycle.
- Expansion is not infinite as leakages occur in the form of savings.
- Aggregate expansion = injection times simple expenditure multiplier
- $EM = 1/(1-MPC)$ [Simple Version]

Expenditure Multiplier

Example

- Deriving the multiplier

$$1/(1-.8) = 1/.2 = 5$$

- Given an injection and multiplier, calculate the change in economic activity

$$\$100 * 5 = \$500$$

Expenditure Multiplier

Misuse

- Assume an injection that is not an injection.
- Overstate multiplier effects.

Expenditure Multiplier

Example

	Income	Expenditure
Alpha	100	80
Beta	80	64
Delta	64	51
Gamma	51	41
Total	500	400

Expenditure Multiplier

Problem

Given a leakage of \$200 and an expenditure multiplier of 3, calculate the effect on economic activity.

Expenditure Multiplier

Solution

Leakage * EM = Δ economic activity

$$-\$200 * 3 = -\$600$$

Economic activity decreases by \$600.

Savings

Savings

Economic Importance of savings

- Savings finances investment.
- Savings creates growth.
- Oversavings and undersavings are possible.

Savings

Categories of Savings

- Personal savings
- Business savings
- Gross Private Savings
- Government savings
- National Savings
- Foreign savings
- Total Savings

Savings

Personal Savings

- People save for a purpose, usually emergencies and retirement.
- Savings has declined in the last 7 years.

Savings

Business Savings

- Business savings are retained profits.
- Accumulated savings = retained earnings.
- Businesses use savings to finance assets.

Savings

Government Savings

- Government surpluses are savings.
- Deficits reduce savings.
- Savings finances capital projects.
- Social Security is one of the largest sources of government savings.

Savings

Foreign Savings

- Foreign savings is foreign investment in the United States.
- Foreign investment can be new plants and factories or purchases of financial assets such as US Treasury securities.

Savings

Categories of Savings 2005

Personal Savings	-102.8
Business Savings	1822.3
Gross Private Savings	1,719.5
Government Savings	114.7
National Savings	1834.2

Savings

The relationship among income, consumption, and savings

- $Y = C + S$
- $1 = MPC + MPS$
- Ultimately income determines both consumption and savings.

Savings

Measurement of the relationship between income and savings

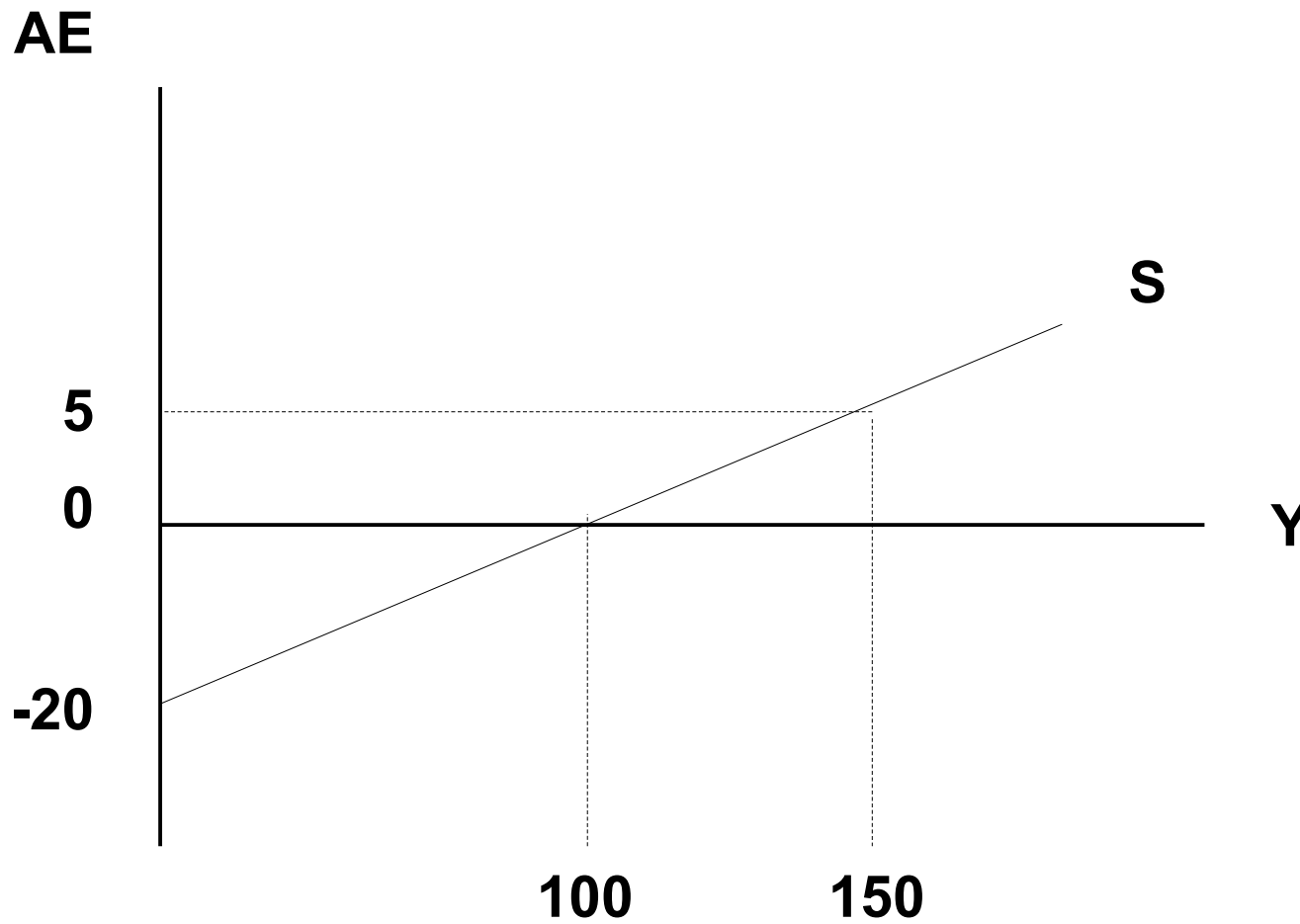
- Average Propensity to Save (APS)

$$APS = S / Y$$

- Marginal Propensity to Save (MPS)

$$MPS = \Delta S / \Delta Y$$

Savings



$$\begin{aligned} \text{MPS} &= (0-5)/(100-150) \\ &= 5/50 \\ &= .10 \end{aligned}$$

Savings

Notes to graph

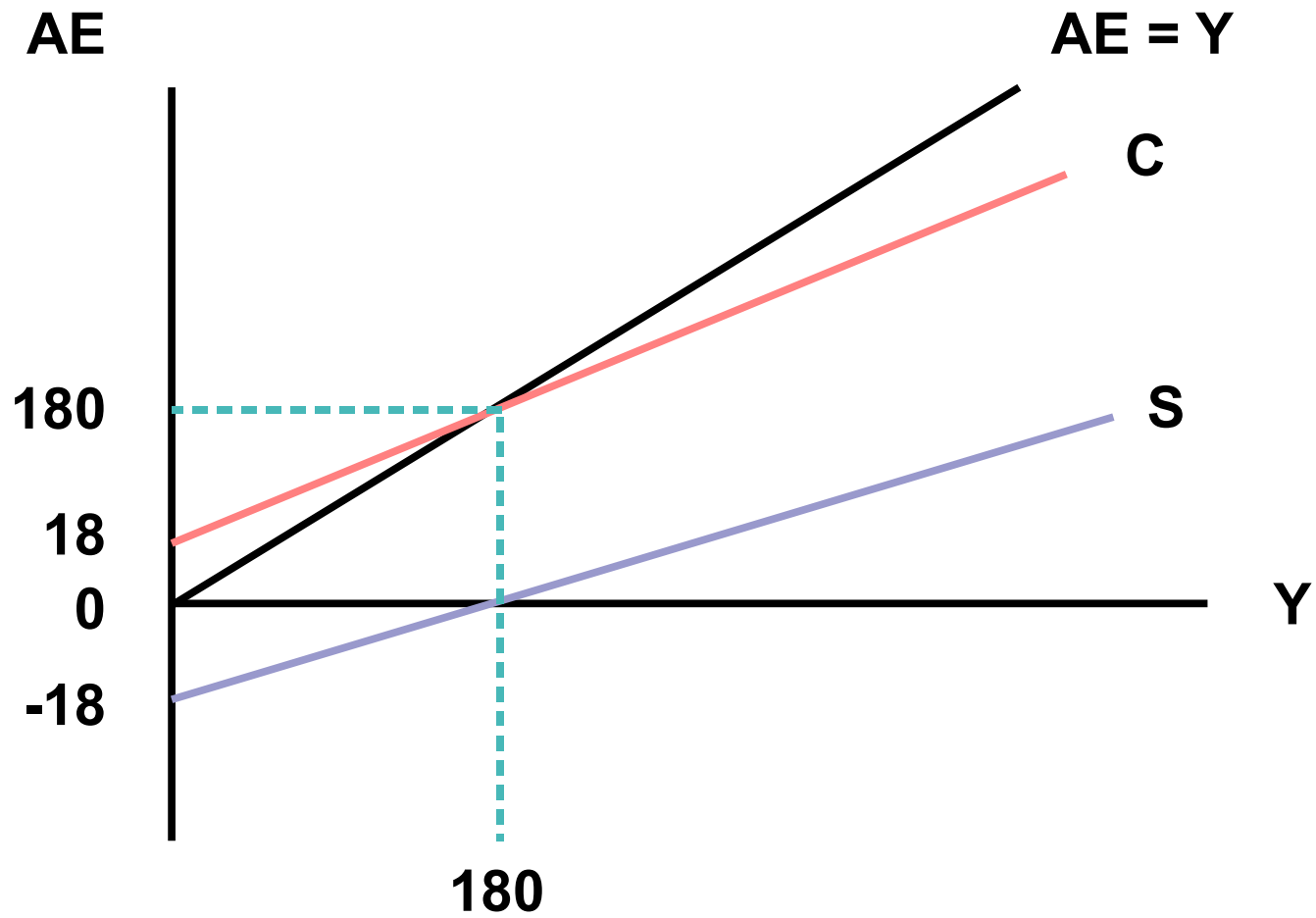
- The slope of the personal savings line is the Marginal Propensity to Save (MPS).
- The left triangular area bounded the vertical axis, horizontal axis, and Savings line is dis-savings. Savings being used to finance personal consumption.
- Anything that shifts consumption also shifts savings.

Savings

Paradox of Thrift

- As personal savings increase (MPS increases)
- Consumption decreases
- Production decreases
- Labor decreases
- Income decreases
- Savings decrease

Consumption & Savings

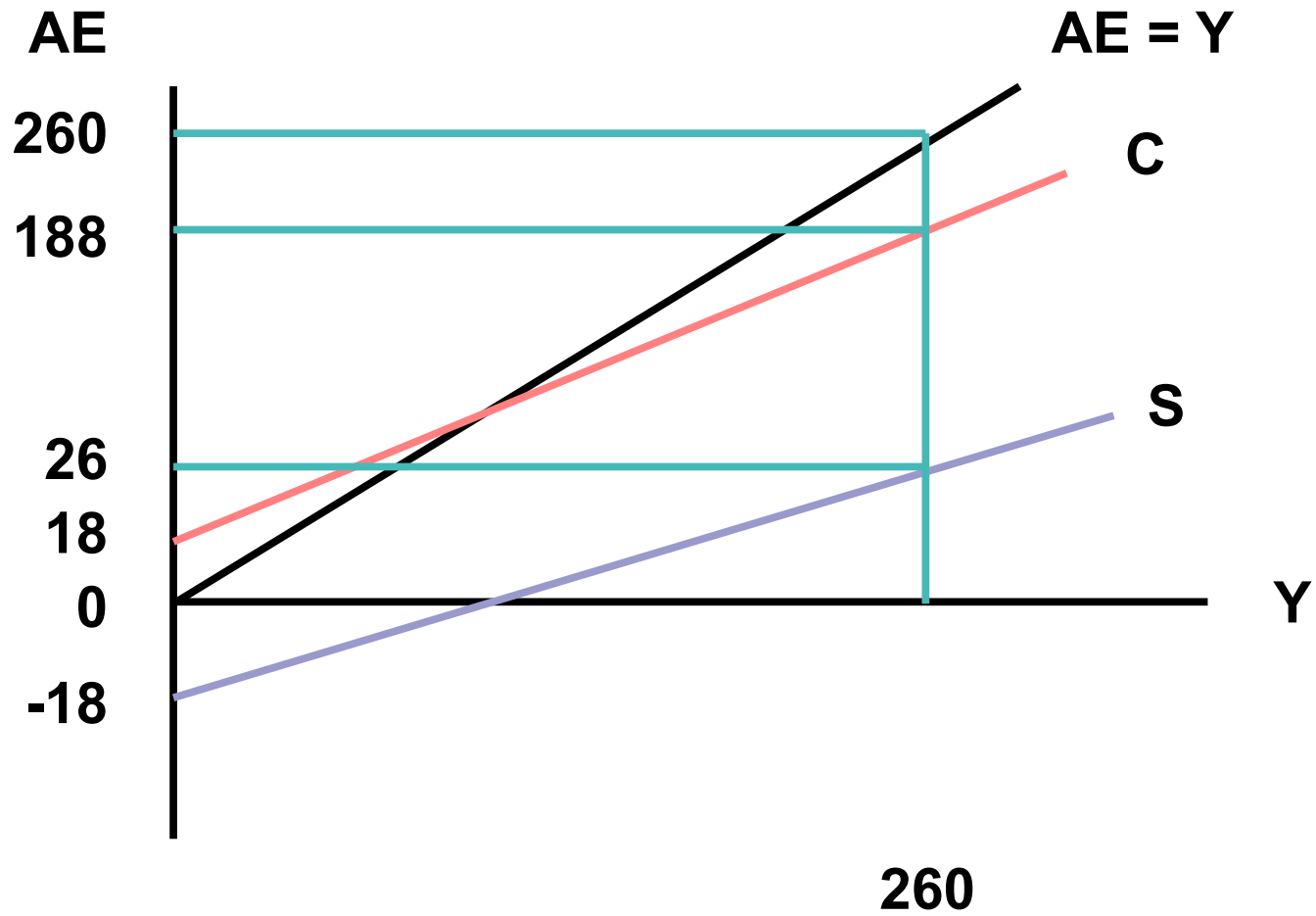


Consumption & Savings

Notes to graph

- Model is called a Keynesian Cross, so named as the $AE=Y$ line crosses the consumption line.
- At $Y = 180$, $S = 0$, $C = 180$.

Consumption & Savings



The End