Tuesday, February 2nd, 2010.

Aggregate demand and Aggregate Supply

GDP Measures:

(1) National output
(2) National income

Question:
How is national income determined?

Answer:
Where desired spending -> called "Aggregate Expenditure" (AE) equals national income (output)

Simple Model:

$$\mathbf{AE = C + I}$$

C: planned (desired) consumption by households
I: planned (desired) investment by firms

Consumption

1. Households' consumption (C) depends upon income (Y)
   Savings (S) = Income Not Consumed

2. Key Concepts
   Marginal – propensity – to – consume (mpc) = $\Delta C / \Delta Y$
   Marginal – propensity – to – save (mps) = $\Delta S / \Delta Y$

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

Investment

1. Firms undertake investment (I) in anticipation of earning a profit

2. Will treat I as fixed (I = 25 in first example)

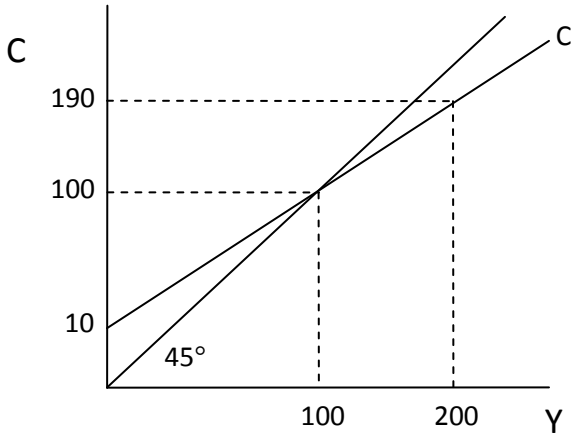
Example: Consumption Function

Y	C	S(=Y-C)	$\Delta C/\Delta Y$	$\Delta S/\Delta Y$
0	10	-10	-	-
100	100	0	0.9	0.1
200	190	10	0.9	0.1
300	280	20	0.9	0.1

C = 10 + 0.9Y mpc = 0.9

S = Y – C = Y – (10 + 0.9Y)
= -10 + 0.1Y mpc = 0.1

Consumption Function



C = 10 + 0.9Y

Induced consumption (changes due to change in disposable income)
Autonomous consumption (change not due to change in disposable income)

Example (text): changes in - wealth
- interest rates
- expectations about future

Insight

- Induced consumption = movement along consumption function
- Autonomous consumption = shift in consumption function

Autonomous Consumption

If there is no change in Y, but C changes, result is change in autonomous consumption.

C = 10 + 0.9Y
vs.
C' = 20 + 0.9Y

(1) Autonomous consumption has increased by 10
(2) Consumption function shift up by 10

Firm's Investment

1. New plant and equipment
2. Residential construction
3. Inventories

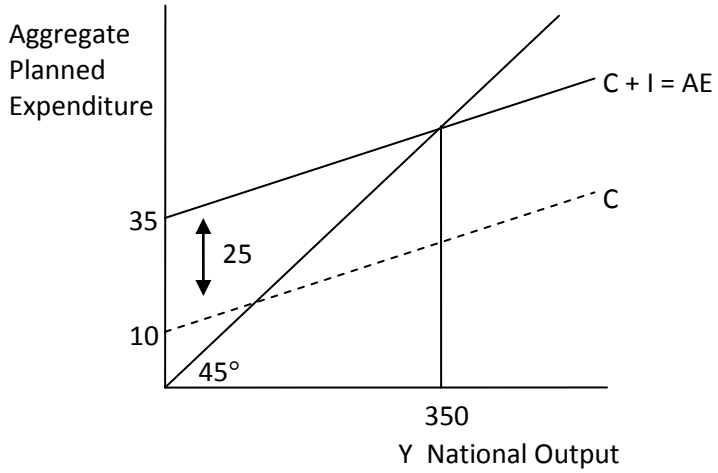
Insight

Undesired (unplanned) fluctuations in inventory investment cause firms to change production

Undesired inventory investment (actual sales < planned sales)
⇨ Reduce production

Undesired inventory disinvestment (actual sales > planned sales)
⇨ Expand production

National Income (Output) Determination



Y	C	I	AE (C+I)	National Income .
250	235	25	260	Expands
300	280	25	305	Expands
350	325	25	350	Equilibrium
400	370	25	395	Contracts
450	415	25	440	Contracts

Involuntary inventory investment

AE > Output → inventories involuntarily declines
→ firms increase production

AE < Output → inventories involuntarily rise
→ firms reduce production

AE = Output → inventories are at desired levels (so firms have no incentive to change production)

Question:
If firms increase investment [I] from 25 to 35:

Will Y increase by more than 10?
exactly 10?
less than 10?