KEYNESIAN MODEL

ASSUMPTIONS

KEY

(1) $\bar{P}$ (SHORT RUN)

(2) SUPPLY ADJUSTS TO MEET DEMAND

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(3) $T = T_0 + \cancel{t_1 Y}$

Let $t_1 = 0$: $T = T_0$

(4) $M = M_0 + \cancel{M_1 Y}$

Let $M_1 = 0$: $M = M_0$

slope of AE = mpc

$$Y = \underbrace{C + I + G + NX}$$

AGG. DEMAND / AGG. EXPENDITURES

$$C = C_0 + C_1(Y-T) = 475 + \frac{3}{4}(Y-T)$$

$$\underline{I} = I_0 = 150$$

$$G = \overline{G} = 250$$

$$T = T_0 = 100$$

$$X = X_0 = 150$$

$$M = M_0 = 50$$

$$AE = C + I + G + X - M$$

$$= 475 + 3/4(Y - 100) + 150 + 250 + 150 - 50$$

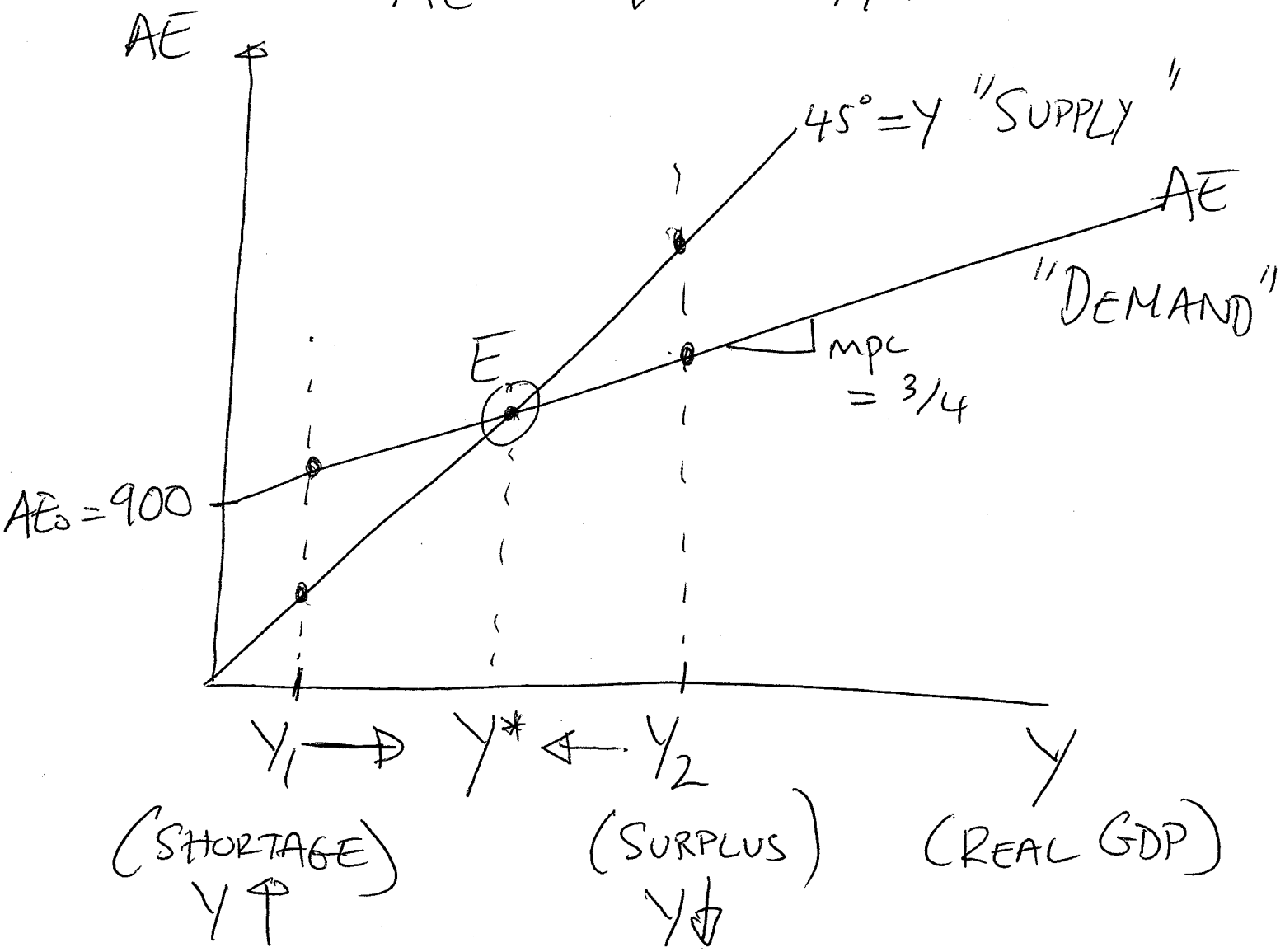
$$= [400 + 150 + 250 + 100] + 3/4\,Y$$

$$\boxed{AE = \underbrace{900}_{AE_0} + \underbrace{3/4\,Y}_{\text{Induced Expenditures}}}$$

AE_0 (Autonomous Expenditures)

slope of AE CURVE

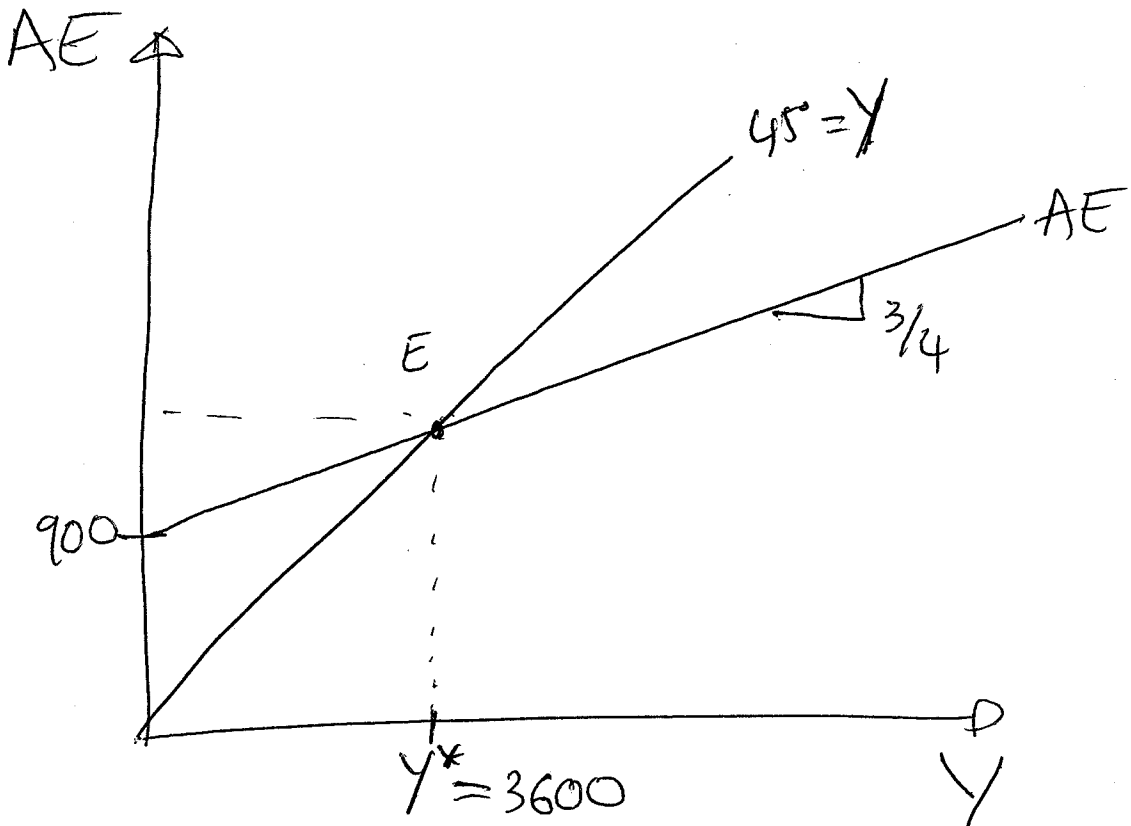
$$AE = 900 + 3/4\,Y$$



At E: No unplanned changes in inventory

At Y_1: Unplanned drop in inventory.

At Y_2: " increase in inventory



$$AE = 900 + \tfrac{3}{4} Y \quad (1)$$

In Eqm: Demand = Supply

$$AE = Y$$

$$Y^* = 900 + \tfrac{3}{4} Y^*$$

$$\tfrac{1}{4} Y^* = 900$$

$$Y^* = 3600$$

$$C = C_0 + c_1(Y - T)$$

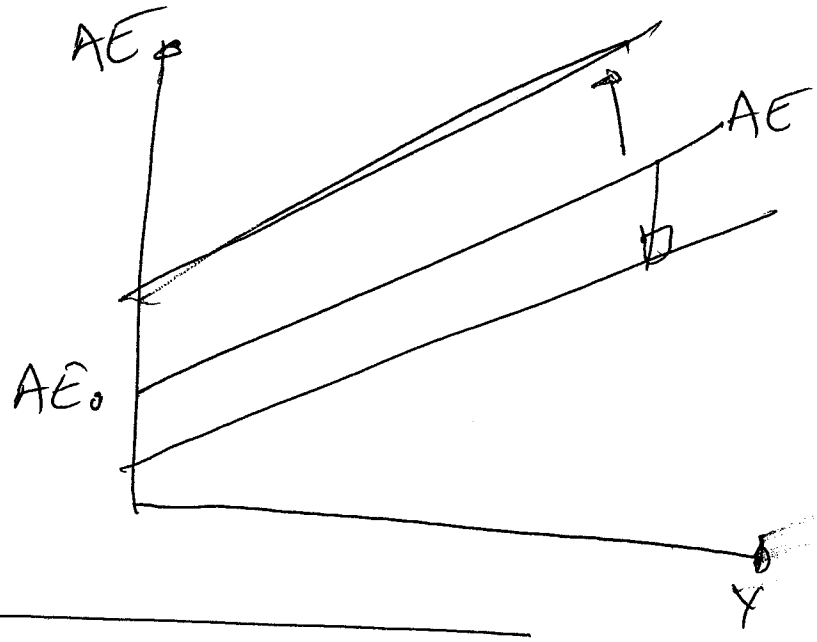
$$I = I_0$$

$$G = G_0$$

$$T = T_0$$

$$X = X_0$$

$$M = M_0$$



$$AE = C + I + G + X - M$$

$$= C_0 + c_1(Y - T_0) + I_0 + G_0 + X_0 - M_0$$

$$\boxed{AE = [C_0 - c_1 T_0 + I_0 + G_0 + X_0 - M_0] + c_1 Y} \quad (1)$$

$$= AE_0 + c_1 Y$$

(Intercept)

$$AE = [C_0 - C_1 T_0 + I_0 + G_0 + X_0 - M_0] + C_1 Y \quad (1)$$

To calculate equilibrium GDP:

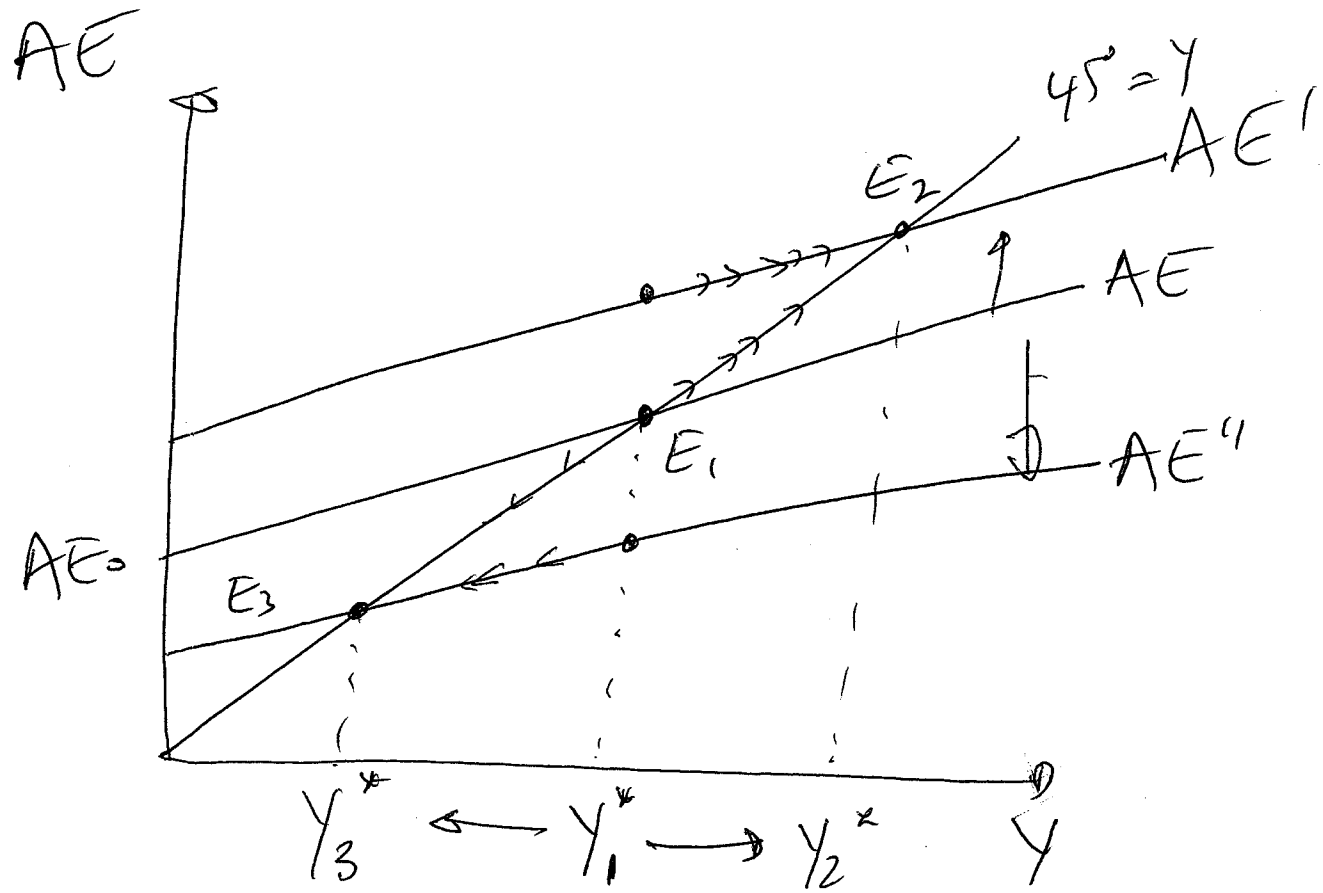
$$Y = AE$$

$$Y^* = [\ldots] + C_1 Y^*$$

$$Y^* - C_1 Y^* = [\ldots]$$

$$(1 - C_1) Y^* = [\ldots]$$

$$(2) \quad Y^* = \frac{C_0 - C_1 T_0 + I_0 + G_0 + X_0 - M_0}{1 - C_1}$$



$$AE = \underbrace{[C_0 - C_1 T_0 + I_0 + G_0 + X_0 - M_0]}_{= AE_0} + C_1 Y \qquad (1)$$

In Eqm: $$Y^* = \frac{[C_0 - C_1 T_0 + I_0 + G_0 + X_0 - M_0]}{1 - C_1} \qquad (2)$$

SUMMARY:

Change In	Impact on Y^*	
$C_0, I_0, G_0, X_0 \uparrow$	$Y^* \uparrow$	Injections
$S_0, T_0, M_0 \uparrow$	$Y^* \downarrow$	Leakages